

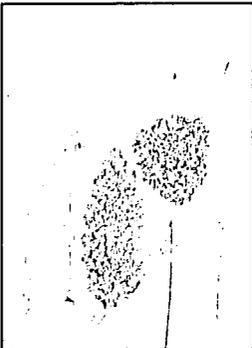
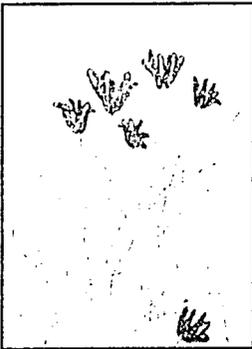
-PN 08F-706

3.

CEREALS

AVENA, HORDEUM,  
MILLETS, ORYZA,  
SECALE, SOGHUM,  
TRITICUM, ZEA  
and PSEUDOCEREALS

E. Bettencourt  
J. Konopka



## IBPGR DIRECTORIES OF GERMPLASM COLLECTIONS

1. I Food Legumes: *Arachis, Cajanus, Cicer, Lens, Lupinus, Phaseolus, Pisum, Psophocarpus, Vicia* and *Vigna* (1989)<sup>1/</sup>
  1. II Soyabean<sup>1/</sup>
  2. Root and Tuber Crops: Aroids, Cassava, Potato, Sweet Potato, Yams and Others (2nd edition, 1986)
  3. Cereals: *Avena, Hordeum*, Millets, *Oryza, Secale, Sorghum, Triticum, Zea* and Pseudocereals (1990)
  4. Vegetables (*Abelmoschus, Allium, Amaranthus*, Brassicaceae, *Capsicum*, Cucurbitaceae, *Lycopersicon, Solanum* and other vegetables (1990)<sup>2/</sup>
  5. I Industrial Crops: Cacao, Coconut, *Piper*, Sugarcane and Tea (1981)
  5. II Industrial Crops: Beet, Coffee, Cotton, Oil Palm and Rubber (1989)
  6. I Tropical and Sub-Tropical Fruits and Tree Nuts (1984)
  6. II Temperate Fruits and Tree Nuts (1989)
  7. Forages (Grasses, Legumes, etc.) (1984)
- 1/ The first, general, Food Legumes Directory was published in 1980 and is now out of print. It has been revised and divided into these two volumes
- 2/ Replacing the volumes 3. I. Cereals: Wheat (1980); 3. II. Cereals: Maize (1980); 3. III. Cereals: Rice (1980); 3. IV. Cereals: Sorghum and Millets (1981); 3. V. Cereals: Barley (1982)
- 3/ Replacing the 1980 publication

DIRECTORY OF GERMPLOSM COLLECTIONS

# 3. CEREALS

*AVENA, HORDEUM,  
MILLETS, ORYZA,  
SECALE, SORGHUM,  
TRITICUM, ZEA*  
and PSEUDOCEREALS

*E. Bettencourt  
J. Konopka*

IBPGR  
ROME, 1990

The International Board for Plant Genetic Resources (IBPGR) is an autonomous international scientific organization under the aegis of the Consultative Group on International Agricultural Research (CGIAR). IBPGR was established by the CGIAR in 1974. The basic function of IBPGR is to promote and coordinate an international network of genetic resources centres to further the collecting, conservation, documentation, evaluation and use of plant germplasm and thereby contribute to raising the standard of living and welfare of people throughout the world. Financial support for the core programme is provided by the Governments of Australia, Austria, Belgium, Canada, China, Denmark, France, FRG, India, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland, the UK and the USA as well as the United Nations Environment Programme and the World Bank.

**Citation:**

IBPGR. (1990) Directory of Crop Germplasm Collections. 3. Cereals: *Avena*, *Hordeum*, Millets, *Oryza*, *Secale*, *Sorghum*, *Triticum*, *Zea* and Pseudocereals. Bettencourt, E. and Konopka, J. International Board for Plant Genetic Resources, Rome

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IBPGR Headquarters  
Via delle Sette Chiese 142  
00145 Rome  
Italy

## FOREWORD TO THE SECOND EDITION

This directory replaces volumes 3. I. Cereals: Wheat (1980); 3. II. Cereals: Maize (1980); 3. III. Cereals: Rice (1980); 3. IV. Cereals: Sorghum and Millets (1981); and 3. V. Cereals: Barley (1982). The format differs from these earlier editions in several respects. Most obvious is the use of a standard set of headings for each entry, with each being included even where no information was available to IBPGR. It is hoped that there will be feedback to IBPGR from the users to fill in these gaps. Individual readers may also wish to treat their directory as a 'working copy' by filling in the information as it becomes available to them.

In those cases where it has not been possible to verify all the taxonomic names used, they have been included as cited by curators. In some cases where a name has been used that is generally regarded as no longer valid for that species, it has been retained as being the name still used by curators and, hence, to identify accessions in collections.

It is the hope of IBPGR that this directory will prove useful, and that it will act as a catalyst in stimulating interest in the conservation and use of the genetic resources of cereals.

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*Avena*

**AUSTRALIA**

Australian Winter Cereals Collection  
RMB 944  
Calala Lane  
Tamworth, New South Wales 2340

Telephone: (067) 64 14 49  
Telex:  
Cable:  
Telefax: (067) 67 93 70

Curator/person in charge: M.C. Mackay

Details of collection: *Avena* spp., approx. 4000 accessions  
The collection includes cultivars, genetic stocks, landraces and species with world-wide representation and is currently being established from local breeders collections

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in aluminium laminated foil packets

Duplication of collection: Duplicated in small samples at CSIRO, Canberra, Australia

Availability: Freely available for research purposes

Quarantine: Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate

Evaluation: Morphological and limited agronomic (plant height, ear emergence, growth habit) descriptors are held for all accessions. Other agronomical and disease descriptors are held for many accessions, but it is not a policy to evaluate all accessions for all descriptors

Documentation: Computerized for all data held (passport, morphological, agronomical and disease descriptors)

**AUSTRIA**

Agricultural-Chemical Research  
& Testing Institute Linz  
Wieningstrasse, 8  
A-4025 Linz

Telephone: (0732) 812 61  
Telex:  
Cable:

Curator/person in charge: R. Schachl / W. Kainz

Details of collection: *Avena nuda*, 2 landraces from Nepal and 5 cultivars from Austria (2), FRG (2) and France (1)  
*A. sativa*, 178 total accessions. 65 landraces from Austria (59) and FRG (6) and 113 cultivars from Austria (17), Belgium (6), Brazil (12), Czechoslovakia (2), FRG (63), France (3), Netherlands (6) and Sweden (4)

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 8% m.c.  
Short-term seed storage at 15°C and 30% RH. Seeds in glass containers of 250 cc

Duplication of collection: ZIGuK, Gatersleben, DDR and NGB, Alnarp, Sweden

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate needed

Evaluation: On-going for botanical characteristics

Documentation: Computerized

**AUSTRIA**

National Establishment for Plant  
Cultivation and Seed Testing Rinn  
A-6074 Rinn, Tirol

Telephone: (05223) 81 17  
Telex:  
Cable:

Curator/person in charge: L. Koeck  
Details of collection: *Avena sativa*, 5 landraces and 8 old cultivars  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Evaluation for botanical characteristics  
Documentation: No information

**AUSTRIA**

Federal Institute for Plant Production  
P.O. Box 64  
Alliiertenstrasse, 1  
A-1201 Vienna

Telephone: 24 15 11  
Telex: 35259 banst a  
Cable:

Curator/person in charge: R. Hron  
Details of collection: *Avena sativa*, 73 old cultivars  
Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Evaluation for botanical characteristics  
Documentation: No information

**BELGIUM**

Station d'Amélioration des Plantes  
Centre de Recherches Agronomiques de l'Etat  
Rue du Bordia, 4  
B-5800 Gembloux

Telephone: (081) 661 24 91  
Telex: 59165 Centragro GBX  
Cable:  
Telefax: (081) 61 49 41

Curator/person in charge: J. Vandam  
Details of collection: *Avena* spp., 540 old cultivars and 85 wild/weedy  
Maintenance of collection: Medium-term seed storage  
Duplication of collection: No information  
Availability: Available on exchange basis  
Quarantine: No known restrictions

**BELGIUM (cont.)**

Evaluation: Information not available  
 Documentation: Information not available

**BELGIUM**

V.Z.W. Centrum voor Toegepaste Biologie  
 Langstraat, 130  
 B-3434 Linter

Telephone: (016) 78 96 22  
 Telex:  
 Cable:

Curator/person in charge: J. Niclaes  
 Details of collection: *Avena sativa*, 5 landraces and 262 cultivars  
 Maintenance of collection: Short-term seed storage at ambient temperatures  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease resistance  
 Documentation: No information

**BULGARIA**

Institute of Introduction and  
 Plant Genetic Resources "K. Malkov"  
 District of Plovdiv  
 BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
 Telex: 44444 ZOS BG  
 Cable:

Curator/person in charge: B. Matsov / M. Zaharieva  
 Details of collection: *Avena sativa*, 1026 breeding material and landraces  
*Avena* spp., 7 accessions  
 All accessions from Czechoslovakia, DDR and USA  
 Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
 Medium-term seed storage at 5°C and 50% RH  
 Duplication of collection: Czechoslovakia, DDR, Hungary, USA and USSR  
 Availability: Available on exchange basis  
 Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo  
 Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economic characters, chemical composition and technological evaluation). Genetic and ecological studies  
 Documentation: Computerized for passport and evaluation data

## CANADA

Central Office for the Plant Gene Resources  
of Canada (PGRC)  
Plant Research Centre  
Central Experimental Farm  
Building 99  
Ottawa, Ontario K1A 0C6

Telephone: (613) 995 94 28  
Telex:  
Cable:

Curator/person in charge: R.S. Pandeya

Details of collection: *Avena* spp.

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 7-8% m.c. in aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a global collection of *Avena* for long-term conservation

Duplication of collection: Many research stations throughout Canada hold active collections of part of this material

Availability: No information

Quarantine: No information

Evaluation: Evaluation is carried out by canadian breeders

Documentation: Compilation and computerization of data is in progress at PGRC Office

## CZECHOSLOVAKIA

Cereal Research and Breeding Institute  
Havlickova 2787  
767 41 Kromeriz

Telephone: (634) 42 61 11  
Telex: 62940 VSUOB C  
Cable:

Curator/person in charge: P. Mikoska

Details of collection: *Avena* spp., 14 landraces, 1648 cultivars and 2 mutant/genetic stocks

Maintenance of collection: Short-term seed storage

Duplication of collection: To be duplicated in a near future at National Gene Bank, Prague

Availability: Freely available

Quarantine: No known restrictions

Evaluation: On-going work

Documentation: Complete and computerized for passport data. On-going for characterization and evaluation data

## DENMARK

Crop Husbandry and Plant Breeding Department  
Royal Veterinary and Agricultural University  
Thorvaldsensvej, 40  
DK-1871 Copenhagen V

Telephone: (01) 35 17 88  
Telex:  
Cable:

Curator/person in charge: S. Andersen

**DENMARK (cont.)**

Details of collection:	<i>Avena sativa</i> , 20 landraces, 200 old cultivars, 10 wild and 170 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 0 <sup>o</sup> -4 <sup>o</sup> C and 30-60% RH. Seeds in glass jars
Duplication of collection:	NGB, Alnarp, Sweden
Availability:	No information
Quarantine:	No information
Evaluation:	Characterization and evaluation of physiological factors
Documentation:	No information

**ETHIOPIA**

Plant Genetic Resources Centre/Ethiopia (PGRC/E) P.O. Box 30726 Addis Ababa	Telephone: 18 03 81 Telex: 21460 GTZFP ET Cable: GENE BANK
Curator/person in charge:	Melaku Worede
Details of collection:	<i>Avena</i> spp., 24 landraces and wild
Maintenance of collection:	Long-term seed storage at -10 <sup>o</sup> C. Seeds with 5-7% m.c. in aluminium laminated foil packets Medium-term seed storage at 4 <sup>o</sup> C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage
Duplication of collection:	No information
Availability:	Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage
Quarantine:	Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture
Evaluation:	Nor evaluated
Documentation:	On-going and computerized for passport data

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenbau und Pflanzenzüchtung der FAL Bundesallee, 50 D-3300 Braunschweig	Telephone: (531) 59 66 00 Telex: Cable: LANDFORSCHUNG, Völknerode Telefax: (531) 59 68 14
Curator/person in charge:	L. Seidewitz
Details of collection:	<i>Avena abyssinica</i> , 1 cultivar from Ethiopia and 23 wild from Balkans (1), Ethiopia (20), Canary Is. (Spain) (1) and 1 of unknown origin <i>A. barbata</i> , 18 wild from Israel <i>A. biaristata</i> , 1 primitive cultivar <i>A. brevis</i> , 4 cultivars from Africa (1), Brazil (1), Portugal (1) and 1 of unknown origin; 2 primitive cultivars and 2 wild from Portugal (1) and Uruguay (1)

Details of collection:  
(cont.)

*Avena byzantina*, 245 total accessions:

- 106 cultivars from Algeria (1), Belgium (1), Canada (3), Czechoslovakia (1), Morocco (1), Spain (1), Turkey (1), UK (2), USA (93), USSR (1) and 1 of unknown origin
- 1 landrace of unknown origin
- 4 lines from Israel (2), Spain (1), and 1 of unknown origin
- 1 mutant
- 72 primitive cultivars from Austria (1), DDR (4), Israel (1), Turkey (14), USA (51) and 1 of unknown origin
- 4 wild from Algeria (1), Balkans (1), Israel (1) and 1 of unknown origin
- 57 accessions from Argentina (1), Greece (1), India (1), Poland (1), Turkey (2) and USA (51)

*A. canariensis*, 10 from Canary Is. (Spain)

*A. clauda*, 9 wild from Algeria (1), Iran (1), Iraq (2), Morocco (2), Syria (1) and Turkey (2)

*A. damascena*, 3 wild from Syria

*A. fatua*, 23 wild from Algeria (2), Afghanistan (1), Austria (1), Canary Is. (Spain) (2), Ethiopia (2), Hungary (1), Iran (2), Iraq (2), Israel (1), Kenya (2), Lebanon (1), Turkey (3), USSR (1) and 2 of unknown origin

*A. hirtula*, 4 wild from Greece (1), Spain (1), Tunisia (1) and Turkey (1)

*A. longiglumis*, 3 wild from Canada (1) and Israel (2)

*A. macrostachya*, 1 wild from Algeria

*A. maroccana*, 16 wild from Morocco (14), USA (1) and 1 of unknown origin

*A. murphyi*, 1 wild from Spain

*A. nuda*, 1 wild from Turkey

*A. nuda* var. *biaristata*, 1 wild

*A. occidentalis*, 7 wild from Canary Is. (Spain)

*A. prostrata*, 1 wild from Spain

*A. sativa*, 1073 total accessions

- 4 landraces from FRG (1), USSR (1) and 2 of unknown origin

- 11 hybrids from DDR (2), USA (1), USSR (7) and 1 of unknown origin

- 204 lines from Algeria (2), Argentina (3), Canada (1), PR China (3), Cyprus (1), FRG (86), Finland (2), France (3), Hungary (6), Poland (2), Spain (2), Sweden (6), Syria (1), Taiwan (China) (1), Turkey (2), UK (4), Uruguay (2), USA (42), USSR (32) and 3 of unknown origin

- 6 hybrids

- 51 accessions from Argentina (1), Benelux (4), France (10), India (1), Romania (2), Turkey (8), UK (1), USA (21) and Yugoslavia (3)

- 778 cultivars from Africa (4), Argentina (14), Australia (29), Austria (12), Belgium (3), Benelux (2), Bolivia (1), Brazil (1), Bulgaria (2), Canada (31), PR China (1), Colombia (1), Czechoslovakia (2), DDR (1), Denmark (1), FRG (293), Finland (12), France (21), Greece (1), Hungary (1), Italy (2), Kenya (1), Lybia (3), Netherlands (21), New Zealand (1), Peru (1), Poland (1), Rep. of South Africa (1), Sweden (50), Turkey (32), UK (37), USA (117), USSR (22), Yugoslavia (14) and 42 of unknown origin

*A. sterilis*, 301 wild from Algeria (4), Balkans (2), Greece (5), Iran (47), Israel (101), Italy (4), Lybia (2), Portugal (1), Romania (1), Tunisia (2), Turkey (124), USSR (3) and 5 of unknown origin

*A. strigosa*, 30 total accessions:

- 10 cultivars from Balkans (1), FRG (3), Spain (2), Uruguay (1) and 3 of unknown origin

- 20 lines from Austria (1), Belgium (5), FRG (1), Hungary (1), Poland (2), Portugal (1), Spain (2), Uruguay (1), USSR (2), Yugoslavia (1) and 3 of unknown origin

*A. ventricosa*, 2 wild from Algeria (1) and Cyprus (1)

*A. wiestii*, 8 wild from Algeria (2), Canada (1), Iran (3) and Israel (2)

*Avena* spp., 12 accessions from FRG (1), Greece (1), Italy (1), Sweden (1), UK (1), Yugoslavia (2) and 5 of unknown origin

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins Medium-term seed storage at 3°C and 30% RH
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Complete for 35 descriptors
Documentation:	All available data computerized. Passport data are available for practically all accessions

**FINLAND**

Agricultural Research Centre  
Department of Plant Breeding  
SF-31600 Jokioinen

Telephone: (916) 881 11  
Telex: 6741 mtk sf  
Cable:  
Telefax: (916) 884 91

Curator/person in charge:	S. Pulli
Details of collection:	<i>Avena sativa</i> , 815 breeding lines
Maintenance of collection:	Medium-term seed storage at -4°C. Seeds with 5-7% m.c. in glass jars
Duplication of collection:	Partially duplicated at NGB, Alnarp, Sweden
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Partial
Documentation:	No information

**FRANCE**

Station d'Amélioration des Plantes de Rennes  
Institut National de la Recherche Agronomique (INRA)  
B.P. 29  
Domaine de la Motte-au-Vicomte  
F-35650 Le Rheu

Telephone: (99) 28 50 00  
Telex: 740060 INRALR F  
Cable:

Curator/person in charge:	L. Saur
Details of collection:	<i>Avena</i> spp., 50 landraces, 300 old cultivars and 600 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 2 <sup>o</sup> -4°C
Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Disease resistance and earliness
Documentation:	Computerized for passport data and on-going for evaluation data

## FRANCE

Ets A. Momont & Fils  
rue de Martival, 7  
F-59246 Mons-en-Pévèle

Telephone: (20) 59 20 11  
Telex: 120763 F  
Cable:

Curator/person in charge: D. Louchart  
Details of collection: *Avena* spp.  
Maintenance of collection: Short-term seed storage at 8°C  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Diseases resistance, quality and heterosis  
Documentation: No information

## FRANCE

Station Expérimentale du Magnéraud  
Institut National de la Recherche Agronomique (INRA-GEVES)  
B.P. 52  
Domaine du Magnéraud  
F-17700 Surgères

Telephone: (46) 68 30 00  
Telex: 790737 F  
Cable:

Curator/person in charge: G. Sauvion  
Details of collection: *Avena* spp., 240 old cultivars and 176 mutant/genetic stocks  
Maintenance of collection: Medium-term seed storage at 4<sup>o</sup>-6<sup>o</sup>C and 30-40% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

## GERMAN DEMOCRATIC REPUBLIC

Zentralinstitut für Genetik  
und Kulturpflanzenforschung (ZIGuK)  
Corrensstrasse, 3  
DDR-4325 Gatersleben

Telephone: Gatersleben 50  
Telex: 48558 kupfga DDR  
Cable:

Curator/person in charge: Ch. Lehmann  
Details of collection: *Avena sativa*  
*Avena* spp.  
2459 total accessions  
Maintenance of collection: Long-term seed storage at -15<sup>o</sup> to -18<sup>o</sup>C  
Medium-term seed storage at 0°C. Seeds in sealed glass jars  
Duplication of collection: Partially duplicated at Small Grains Collection, Beltsville, USA and VIR,  
Leningrad, USSR  
Availability: Freely available. Index Seminum issued

**GERMAN DEMOCRATIC REPUBLIC (cont.)**

Quarantine: No known restrictions  
 Evaluation: Disease resistance and protein quantity and quality  
 Documentation: Computerized for passport data

**GREECE**

Cereals Institute  
 North Greek Agricultural Research Centre  
 P.O. Box 10514  
 54110 Thessaloniki

Telephone: (3031) 47 15 44  
 Telex: 412130 asni gr  
 Cable:

Curator/person in charge: D. Gogas  
 Details of collection: *Avena sativa*, 18 landraces and 180 breeding material  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at 0°-2°C and 30% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Frost, disease and lodging resistance  
 Documentation: No information

**HUNGARY**

Research Centre for Agrobotany  
 I.A.Q.  
 H-2766 Tápiószéle

Telephone: Tápiószéle 41  
 Telex: 226981 agbot H  
 Cable:

Curator/person in charge: I. Karsai  
 Details of collection: *Avena barbata*, 2  
*A. brevis*, 1  
*A. byzantina*, 4  
*A. fatua*, 731  
*A. nuda*, 7  
*A. paniculata*, 1  
*A. sativa*, 1696 total accessions, including 116 landraces and 1430 cultivars from Argentina (3), Australia (174), Austria (7), Bulgaria (155), Canada (6), PR China (3), Czechoslovakia (24), DDR (138), Denmark (16), FRG (25), France (50), Hungary (791), India (4), Italy (12), Japan (13), Netherlands (22), Poland (17), Portugal (3), Romania (15), Rep. of South Africa (7), Sweden (2), UK (34), USA (16), USSR (94), Yugoslavia (17) and 66 of unknown origin  
*A. sterilis*, 20  
*A. strigosa*, 20  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at ±0°C. Seeds with 5% m.c. in airtight containers  
 Duplication of collection: Partially duplicated  
 Availability: Freely available provided there is sufficient seed. Index Seminum periodically issued

Quarantine: Phytosanitary certificate required  
 Evaluation: On-going work  
 Documentation: Passport data complete. On-going work for characterization. Data complete for 211 accessions (41 characters)

## INDIA

National Bureau of Plant Genetic Resources (NBPGR)  
 Indian Agricultural Research Institute (IARI)  
 Pusa Campus  
 New Delhi 110012

Telephone: 586908 / 589211  
 Telex: 31-63390 NBPGR IN  
 Cable:

Curator/person in charge: R.S. Rana  
 Details of collection: *Avena nuda*, 1 from Hungary  
*A. sativa*, 660 from Hungary and USA  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## IRELAND

Department of Agriculture & Food  
 Backweston Farm  
 Leixlip  
 Co. Kildare

Telephone: (01) 28 06 08/9  
 Telex: 25118 AGRI EI  
 Cable:

Curator/person in charge: T. Wright  
 Details of collection: *Avena nuda*, 2 cultivars from France  
*A. sativa*, 140 cultivars from Belgium (1), FRG (2), France (1), Ireland (1), Netherlands (12), Sweden (7), UK (16) and 100 of unknown origin  
 Maintenance of collection: Long-term seed storage at -10°C. Seeds with 7% m.c. in sealed plastic bags  
 Duplication of collection: Not known  
 Availability: Freely available  
 Quarantine: No known restrictions  
 Evaluation: On-going work  
 Documentation: Partial, manual and on-going for passport, characterization and evaluation data

**ISRAEL**

Israel Gene Bank for Agricultural Crops  
Volcani Centre  
ARO  
P.O. Box 6  
50-250 Bet Dagan

Telephone: (03) 968 34 58  
Telex: 381476 AROVC IL  
Cable:  
Telefax: 972-3-993998

Curator/person in charge: M. Zur  
Details of collection: *Avena sativa*, 2000 breeders' lines from USA, donated by USDA, USA  
Maintenance of collection: Long-term seed storage at -10°C. Seeds in aluminium boxes of 1 kg capacity. Storage area 50 m<sup>2</sup>  
Duplication of collection: No information  
Availability: Available in limited quantity  
Quarantine: Special conditions and treatment according to Plant Protection Law  
Evaluation: Drought, salinity and disease resistance. High nutrition level  
Documentation: Complete and computerized

**ITALY**

Istituto Sperimentale per la Cerealicoltura  
Via Vittorio Veneto, 274  
I-45021 Badia Polesine (RO)

Telephone: (0425) 514 05  
Telex:  
Cable:

Curator/person in charge: M. Pezzali  
Details of collection: *Avena sativa*, 151 commercial cultivars from Australia (7), Austria (2), Belgium (3), Bulgaria (1), Canada (30), Chile (3), Czechoslovakia (1), DDR (1), Denmark (3), FRG (18), Finland (4), Greece (1), Italy (10), Netherlands (9), New Zealand (1), Norway (3), Portugal (2), Sweden (10), UK (23), Uruguay (2), USA (8) and USSR (9)  
Maintenance of collection: Medium-term seed storage at 4°C. Regeneration done every two years  
Duplication of collection: No information  
Availability: Available on exchange basis  
Quarantine: No known restrictions  
Evaluation: On-going work  
Documentation: On-going work

**ITALY**

Istituto del Germoplasma  
CNR  
Via G. Amendola, 165/A  
I-70126 Bari

Telephone: (080) 58 34 63  
Telex: 810565 CNR/BA I  
Cable:

Curator/person in charge: P. Perrino  
Details of collection: *Avena* spp., 114 landraces

Maintenance of collection:	Long-term seed storage at -18°C. Seeds in airtight metal cans with silica gel Medium-term seed storage at 0°C and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Complete and computerized

## ITALY

Institute of Agronomy  
Faculty of Agricultural Sciences  
University of Pisa  
Via San Michele degli Scalzi, 2  
I-56100 Pisa

Telephone: (050) 57 15 65/6  
Telex: 590035 UNIVPI I  
Cable:

Curator/person in charge:	A. Benvenuti
Details of collection:	<i>Avena sativa</i> , 2 cultivars from Argentina, 3 of unknown origin and 3 mutant/genetic stocks
Maintenance of collection:	Short-term seed storage. Regeneration done yearly
Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work, mainly for yield, according to the list of "Ministero dell'Agricoltura e Foreste - Registro Nazionale delle Varietà"
Documentation:	Computerized. On-going work for characterization and evaluation data

## JAPAN

National Institute of Agrobiological Resources (NIAR)  
Kannon-dai 2-1-2  
Tsukuba, Ibaraki 305

Telephone: 02975-6-7050  
Telex:  
Cable: NIARTSUKUBA YATABE  
Telefax: 02975-6-7408

Curator/person in charge:	Head, Germplasm Storage Center
Details of collection:	<i>Avena sativa</i> , 426 cultivars, landraces and elite lines from Europe, Japan and North America
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at -1°C and 30% RH Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml
Duplication of collection:	No information
Availability:	Freely available for research purposes. A fee is applicable for private institutions
Quarantine:	No information

**JAPAN (cont.)**

Evaluation: Standard manual published by specialists' consent  
 Documentation: Computerized for passport data

**NETHERLANDS**

Landbouwbureau Wiersum BV Telephone: (032) 10 21 43  
 Kweekbedrijf voor Landbouwgewassen  
 P.O. Box 94  
 NL-8250 AB Dronten

Curator/person in charge: R.M. Ten Kate  
 Details of collection: *Avena sativa*, 15 old cultivars  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**NETHERLANDS**

Veredelingsbedryf Cebeco-Handelsraad Telephone: (03202) 244  
 P.O. Box 139  
 NL-8200 AC Lelystad

Curator/person in charge: R.H. Reiling  
 Details of collection: *Avena sativa*, 100 accessions, including 20 old cultivars  
 Maintenance of collection: Medium-term seed storage at 3°C and 40% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease and lodging resistance, quality and winter hardiness  
 Documentation: No information

**NETHERLANDS**

Centre for Genetic Resources, Telephone: (08370) 229 25  
 The Netherlands (CGN) Telex: 75044 DLOWA NL  
 P.O. Box 224  
 NL-6700 AE Wageningen  
 Telefax: (08370) 16513

Curator/person in charge: L.J.M. van Soest / M. Dik  
 Details of collection: *Avena sativa*, 521 mainly cultivars and landraces from Africa, Australia, Europe, USA and USSR, donated by Foundation for Agricultural Plant Breeding (SVP)  
*Avena* spp., 21 wild of unknown origin, donated by SVP

Maintenance of collection:	Long-term seed storage at -20°C. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets Medium-term seed storage at 4°C and 30% RH. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets Short-term seed storage at ambient temperatures. Seeds in paper envelopes
Duplication of collection:	Partially at several other genebanks
Availability:	Available on exchange basis provided there is sufficient seed
Quarantine:	No known restrictions
Evaluation:	Not evaluated
Documentation:	Complete for passport data

## NIGERIA

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70/312622  
Telex:  
Cable: GENE BANK

Curator/person in charge:	P.E. Onuorah
Details of collection:	<i>Avena</i> spp., 146 accessions
Maintenance of collection:	Long-term seed storage
Duplication of collection:	No information
Availability:	Available in limited quantity
Quarantine:	No information
Evaluation:	No information
Documentation:	Manual. Passport data available

## NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND NORWAY, SWEDEN)

Nordic Gene Bank  
for Agricultural and Horticultural Plants  
Smedjevägen 2 B  
P.O. Box 41  
S-23053 Alnarp  
Sweden

Telephone: (4640) 41 50 00  
Telex: 32727 NGB S  
Cable:  
Telefax: (4640) 46 21 88

Curator/person in charge:	S. Blixt
Details of collection:	<i>Avena abyssinica</i> <i>A. brevis</i> <i>A. byzantina</i> <i>A. fatua</i> <i>A. nuda</i> <i>A. sativa</i> , 400 landraces, commercial and local cultivars and breeders' lines from Denmark, Finland, Norway and Sweden <i>A. sterilis</i> <i>A. strigosa</i> 1 or 2 accessions of each other species

**NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND  
NORWAY, SWEDEN) (cont.)**

Maintenance of collection:	Long-term seed storage at -20°C  The Institute has agreed to accept responsibility for maintaining a global collection of <i>Avena</i> for long-term conservation
Duplication of collection:	In permafrost at Svalbard, Norway
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work within the participating countries
Documentation:	Computerized for passport and evaluation data

**NORWAY**

Vaagones Agricultural Research Station  
N-8000 Bodo

Telephone: (081) 255 86  
Telex:  
Cable:

Curator/person in charge:	B. Volden
Details of collection:	<i>Avena sativa</i> , 1 old cultivar
Maintenance of collection:	Medium-term seed storage at 0°-10°C. Seeds in plastic boxes and plastic bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**NORWAY**

State Agricultural Research Station Apelsvoll  
N-2858 Kapp

Telephone: (061) 600 55  
Telex:  
Cable:

Curator/person in charge:	M. Gullord
Details of collection:	<i>Avena sativa</i> , 200 old cultivars
Maintenance of collection:	Medium-term seed storage at -2°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Maturity, straw quality and disease resistance
Documentation:	No information

**PAKISTAN**

Plant Genetic Resources Laboratory  
National Agricultural Research Centre  
Pakistan Agricultural Research Council (PARC)  
P.O. Box 1031  
Islamabad

Telephone: 82 00 53 33  
Telex: 5604 PARC PAK  
Cable: AGRESCOUNCIL

Curator/person in charge: R. Anwar  
Details of collection: *Avena sativa*, 106 local cultivars from Pakistan  
Maintenance of collection: Medium-term seed storage at 5°C ±1°C. Seeds in cans  
Duplication of collection: At several International Research Centres  
Availability: Freely available provided there is sufficient seed  
Quarantine: Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate  
Evaluation: Partial  
Documentation: Manual

**PAKISTAN**

New Seed Farm  
Fodder Research Institute  
P.O. Box 43  
Sargodha

Telephone: 656 53  
Telex:  
Cable:

Curator/person in charge: A.R. Chaudhry  
Details of collection: *Avena sativa*, 6 elite lines from USA and 15 crosses locally developed  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: Not duplicated  
Availability: Freely available  
Quarantine: Imported material must go through quarantine  
Evaluation: On-going work  
Documentation: On-going work

**POLAND**

National Department of Plant Genetic Resources  
Plant Breeding and Acclimatization Institute  
Radzików n/ Warsaw  
05-870 Blonie

Telephone: (22) 55 26 11/4  
Telex: 812914 IHAR PL  
Cable:

Curator/person in charge: St. Goral / W. Podyma  
Details of collection: *Avena* spp., ca. 1600 accessions, including 56 landraces, 373 old cultivars, 8 wild and 375 mutant/genetic stocks  
Maintenance of collection: Long-term seed storage at -15°C  
Medium-term seed storage at 0°C  
Seeds with 5-7% m.c. in glass containers under vacuum

**POLAND (cont.)**

Duplication of collection:	No information
Availability:	Available on exchange basis. Index Seminum and Avena Catalogue issued
Quarantine:	No known restrictions
Evaluation:	Taxonomic classification, botanical evaluation, resistance to diseases and agronomical characters
Documentation:	Computerized for passport data

**POLAND**

Botanical Garden of the Polish Academy  
of Sciences  
ul. Prawdziwka, 2  
02-973 Warsaw

Telephone: 42 79 01/42 79 27  
Telex: 817219 OB PAN  
Cable:

Curator/person in charge:	J. Puchalski
Details of collection:	<i>Avena</i> spp., 79 wild
Maintenance of collection:	Short-term seed storage at ambient temperatures. Seeds with 7% m.c.
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Mutagenesis, protein content and nutritional value of seeds, specific diseases resistance and taxonomic relationships
Documentation:	No information

**PORTUGAL**

Estação Nacional de Melhoramento de Plantas (ENMP)  
Instituto Nacional de Investigação Agrária (INIA)  
Apartado 6  
P-7351 Elvas Codex

Telephone: 628 44 / 628 47/62734  
Telex: 40189 ENMP P  
Cable:

Curator/person in charge:	A.F. Raimundo
Details of collection:	<i>Avena sativa</i> , 40 All accessions are landraces/primitive cultivars from Portugal, donated by Ex-Estação Agrária Central and ISA, Portugal
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 6% m.c.
Duplication of collection:	Not duplicated
Availability:	Available in limited quantity
Quarantine:	No restrictions for export but import material must possess phytosanitary certificate
Evaluation:	On-going for: stature; habit; flowering date; days to maturation; length of vegetative period; type of grain and cold, lodging, drought and disease resistance Characterization/regeneration according to IBPGR descriptor list
Documentation:	Partial and manual

## ROMANIA

Gene Bank of Suceava  
Agricultural Research Station of Suceava  
Bulevardul 1 May, 15  
R-5800 Judetul Suceava

Telephone: (987) 158 47  
Telex: 23268  
Cable:

- Curator/person in charge: M. Cristea
- Details of collection: *Avena sativa*, 2 populations from the District of Suceava, Romania
- Maintenance of collection: Long-term seed storage at -20°C. Four rooms with the total storage capacity of 172.5 m<sup>3</sup>  
Medium-term seed storage at 4°C. Four rooms with the total storage capacity of 273.6 m<sup>3</sup>. Seeds with 8-10% m.c. in sealed glass containers of 50, 100, 150, 350, 400, 750, 800 and 1000 ml capacity
- Duplication of collection: Research Institute for Cereals and Technical Plants, Fundulea and Agricultural Research Station of Simnic, Romania
- Availability: Available on exchange basis
- Quarantine: In conformity with international quarantine regulations
- Evaluation: On-going work for field and laboratorial evaluation
- Documentation: Characterization data computerized

## SOUTH AFRICA, REPUBLIC OF

Small Grain Centre  
Grain Crops Research Institute  
Department of Agricultural and Water Supply  
Private Bag X29  
9700 Bethlehem

Telephone: (01431) 356 86  
Telex: 322150  
Cable: SATIVA PRETORIA

- Curator/person in charge: M. Labuschagne
- Details of collection: *Avena abyssinica*, 3 accessions from Ethiopia (2) and USSR (1)  
*A. fatua*, 1  
*A. sativa*, 239 total accessions from Argentina (1), Australia (3), Canada (38), Colombia (1), Czechoslovakia (5), Finland (6), Mexico (3), Rep. of South Africa (14), Sweden (5), USA (116) and USSR (1)  
- 8 breeder's lines from Rep. of South Africa  
- 38 commercial cultivars from Australia (3) and USA (35)  
*A. sterilis*, 1  
*A. strigosa*, 1  
*Avena* spp., 134
- Maintenance of collection: Medium-term seed storage at 5°C and 50% RH. Seeds in pouches each containing 100 g. Storage area 50 m<sup>2</sup>
- Duplication of collection: Partially (20%) at Genebank, Pretoria, Rep. of South Africa
- Availability: Available in limited quantity (10-30 g)
- Quarantine: For export, phytosanitary certificate issued upon inspection. Import seed must possess phytosanitary certificate or being subject to quarantine
- Evaluation: On-going in greenhouse and field for agronomical, pathological, entomological and quality characteristics using own developed descriptor list based on IBPGR and UPOV descriptor lists
- Documentation: Computerized. On-going work

**SOUTH AFRICA, REPUBLIC OF**

Department of Agricultural Economics and Marketing  
 Directorate of Plant and Liquor Control  
 Private Bag X 179  
 0001 Pretoria

Telephone: (012) 206 24 06  
 Telex: 3-23264  
 Cable: SATIVA PRETORIA  
 Telefax: (012) 206 27 86

Curator/person in charge: H. Chamberlain

Details of collection: *Arrhenatherum elatius*, 1 landrace from Australia

*Avena brevis*, 1 landrace from Israel

*A. fatua*, 3 landraces of unknown origin

*A. sativa*, 348 landraces from Australia, Brazil, Canada, Chile, Denmark, Israel, Rep. of South Africa (43) and USA

Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
 Short-term seed storage at 6<sup>o</sup>-7°C and 45% RH. Seeds in plastic containers

Duplication of collection: At different Crop Research Institutes in the Republic of South Africa

Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
 Requests to: The Plant Introduction Officer  
 (same address)

Quarantine: Seed for planting:  
 Additional declaration on the phytosanitary certificate that the parent plants were inspected during active growth and found to be free from *Anguina tritici* or that this organism does not occur in the area of production

Evaluation: On-going work

Documentation: Complete and computerized

**SPAIN**

Banco de Germoplasma  
 Finca "El Encin"  
 Instituto Nacional de Investigaciones Agrarias (INIA)  
 P.O. Box 127  
 Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
 Telex: 48989 INIA E  
 Cable:

Curator/person in charge: R. Ponce

Details of collection: *Avena sativa*, 436 landraces and 20 old cultivars

Maintenance of collection: Long-term seed storage at -18°C  
 Medium-term seed storage at -2°C and 30% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

## SYRIA

Genetic Resources Unit  
Agriculture Research Directorate  
P.O. Box 113  
Douma - Damascus

Telephone: 75 04 01  
Telex: 411634 SYR  
Cable: MINAGRI DAMS

Curator/person in charge: K.S. Obari  
Details of collection: *Avena sativa*, 15 primitive cultivars from Syria  
Maintenance of collection: Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)  
Duplication of collection: Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK  
Availability: Available on exchange basis  
Quarantine: No known restrictions  
Evaluation: On-going work using IBPGR descriptor list  
Documentation: Manual. On-going work

## TURKEY

Aegean Agricultural Research Institute (AARI)  
P.O. Box 9  
35661 Menemen - Izmir

Telephone: '51) 14 91 31  
Telex:  
Cable:

Curator/person in charge: The Directorate  
Details of collection: *Avena* spp., 177 landraces, 4 old cultivars and 365 wild  
Maintenance of collection: Long-term seed storage at -20°C. Seeds in metal cans. Medium-term seed storage at 0°C  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Stripe and stem rust resistance  
Documentation: No information

## UNION OF SOVIET SOCIALIST REPUBLICS

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge: V.I. Krivchenko  
Details of collection: *Avena sativa*, 12792 local and breeding varieties, local populations and wild forms, including 10842 accessions in the main catalogue and 1950 in the temporary catalogue. World-wide representation  
Maintenance of collection: Long-term seed storage at -10°C  
Medium-term seed storage at 4°C. Seeds with 7-8% m.c. in sealed glass jars

**UNION OF SOVIET SOCIALIST REPUBLICS (cont.)**

Duplication of collection:	Partially at ZIGuK, Gatersleben, DDR; NGB, Sweden and in many other Genebanks
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Computerized for passport data of samples included in the main catalogue. Manual for other data

*NB - Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines*

**UNITED KINGDOM**

National Institute of Agricultural Botany (NIAB)  
Huntingdon Road  
Cambridge CB3 0LE

Telephone: (0223) 27 63 81  
Telex: 817455 NIAB G  
Cable:

Curator/person in charge:	A.J. Eade
Details of collection:	<i>Avena sativa</i> , 35 UK Definitive Seed Stock of the cultivars currently on the official National List (tested and added under EC Directives), donated by various breeders in UK and EC and other European countries, e.g. Sweden
Maintenance of collection:	Short-term seed storage at 10°C. Seeds with 10% m.c. in airtight metal or plastic containers of 1.25 kg capacity. Storage capacity 96 m <sup>3</sup> . Retained for 6 seasons; if cultivar still on National List seed is replaced with authentic stock from breeder/maintainer checked for identity by growing in adjacent small plots
Duplication of collection:	DAFS, Agricultural Scientific Services, East Craigs, Edinburgh, UK
Availability:	Available in limited quantity. Applicable a small handling fee
Quarantine:	No known restrictions
Evaluation:	All entries grown each year at NIAB for DUS (Distinctness, Uniformity and Stability) Testing of new cultivars under EC Directives. Recorded for morphological characters in small drilled plots International List: UPOV and UK DUS Character Schedules
Documentation:	Administrative and test record data computerized

**UNITED KINGDOM**

Cambridge Laboratory  
Institute of Plant Science Research (IPSR)  
Agricultural & Food Research Council (AFRC)  
Maris Lane  
Trumpington  
Cambridge CB2 2JB

Telephone: (0223) 84 09 32  
Telex: 818280 PBICAM G  
Cable:  
Telefax: (0223) 84 01 67

Curator/person in charge: R.J. Giles

Details of collection:	<i>Arrhenatherum elatius</i> , 1  <i>Avena abyssinica</i> , 65 <i>A. barbata</i> , 11 <i>A. byzantina</i> , 159 accessions, including 30 named varieties, 7 breeders' lines, 2 old varieties and 118 landraces or selections from landraces <i>A. clauda</i> , 1 <i>A. fatua</i> , 59 <i>A. hirtula</i> , 2 <i>A. longiglumis</i> , 1 <i>A. maroccana</i> , 1 <i>A. pilosa</i> , 1 <i>A. sativa</i> , 1867 accessions, including 1047 named varieties, 454 breeders' lines, 194 old varieties and 160 landraces <i>A. sativa</i> var. <i>nuda</i> , 168 accessions, including 54 named varieties, 75 breeders' lines, 7 old varieties and 28 landraces <i>A. strigosa</i> , 47 <i>A. sterilis</i> (incl. <i>A. ludoviciana</i> ), 74 <i>A. vaviloviana</i> , 15 <i>A. ventricosa</i> , 2 2n hybrids, 3 6n hybrids, 82
Maintenance of collection:	Medium-term seed storage at 0°-1°C. Seeds with 5-6% m.c. in paper packets
Duplication of collection:	Not duplicated
Availability:	Freely available for most of the accessions, normally 5 g/sample or 10 seeds of wild types
Quarantine:	No known restrictions
Evaluation:	Partial and on-going but restricted
Documentation:	Complete and computerized. Institute germplasm catalogue in press

NB - This collection is an amalgamation of those formerly maintained by the Scottish Crop Research Institute and the Plant Breeding Institute, UK

#### UNITED KINGDOM

Welsh Plant Breeding Station (WPBS)  
Institute for Grassland and Animal Production  
Plas Gogerddan  
Near Aberystwyth  
Dyfed SY23 3EB, Wales

Telephone: (0970) 82 82 55  
Telex: 35181 ABYUCW G  
Cable:  
Telefax: (0970) 82 83 57

Curator/person in charge: J.M. Leggett

Details of collection: *Avena agadiriana*, 5\* wild from Morocco  
*A. atlantica*, 10\* wild from Morocco  
*A. barbata*, 3 wild from Algeria (1\*\*), Canary Is. (Spain) (1\*) and Morocco (1\*)  
*A. byzantina*, 1\*\* wild from Tunisia  
*A. canariensis*, 20 (19\* and 1\*\*) wild from Canary Is. (Spain)  
*A. clauda*, 4 wild from Algeria (1\*\*), Iran (2\*\*) and Morocco (1\*)  
*A. damascena*, 2 wild from Morocco (1\*) and Syria (1\*\*)   
*A. eriantha*, 6 wild from Algeria (1\*\*), Iran (1\*\*), Iraq (1\*\*), Morocco (1\*), Spain (1\*\*) and Turkey (1\*\*)   
*A. fatua*, 5\* wild from Canary Is. (Spain)

## UNITED KINGDOM (cont.)

Details of collection: (cont.)	<p><i>Avena hirtula</i>, 16 wild from Algeria (1**), Corsica (France) (1**), Crete (Greece) (1**), Morocco (9*), Spain (1* and 1**), Tunisia (1**) and Turkey (1**)</p> <p><i>A. hybrida</i>, 1** wild from Afghanistan</p> <p><i>A. longiglumis</i>, 12 wild from Algeria (2**), Israel (1**), Lybia (1**) and Morocco (6* and 2**)</p> <p><i>A. macrostachya</i>, 1** wild from Algeria</p> <p><i>A. maroccana</i>, 17 (12* and 5**) wild from Morocco</p> <p><i>A. murphyi</i>, 14 wild from Morocco (3*) and Spain (10* and 1**)</p> <p><i>A. occidentalis</i>, 3** wild from Canary Is. (Spain)</p> <p><i>A. prostrata</i>, 9 wild from Morocco (1*) and Spain (7* and 1**)</p> <p><i>A. sativa</i>, 103 naked spring primitive cultivars, 45 husked spring breeders' lines, 2 naked winter breeders' lines and 25 covered winter (1 landrace, 21 varieties and 3 breeders' lines)</p> <p><i>A. sterilis</i>, 30 wild from Canary Is. (Spain) (5*), Cyprus (1**), Greece (1**), Iran (1**), Morocco (17* and 1**), Spain (1**), Turkey (1**), USA (1**) and 1** of unknown origin</p> <p><i>A. strigosa</i>, 4** wild from Portugal (1), Spain (1), Uruguay (1) and 1 cultivar</p> <p><i>A. wiestii</i>, 3** wild from Algeria (1), Iran (1) and Israel (1)</p>
Maintenance of collection:	Medium-term seed storage at 2°C and 12-15% RH
Duplication of collection:	PGR, Canada with the exception of few samples of <i>A. barbata</i> , <i>A. hirtula</i> , <i>A. hybrida</i> , <i>A. longiglumis</i> , <i>A. sterilis</i> and <i>A. strigosa</i> ; IPSR, Cambridge, UK and USDA, USA and <i>A. maroccana</i> at NGB, Alnarp, Sweden
Availability:	Freely available provided there is sufficient seed
Quarantine:	No restrictions for export. Imported seed from Argentina, Australia and New Zealand, requires a phytosanitary certificate
Evaluation:	On-going for the populations not duplicated
Documentation:	Manual for passport data. Computerized for evaluation data where available

NB - (\*) These accessions are population samples containing a number of individual and unique plants  
 (\*\*) These are individual plant accessions

## UNITED KINGDOM

DAFS Cereal Cultivar Reference Collection Agricultural Scientific Services Department of Agriculture and Fisheries for Scotland (DAFS) East Craigs Edinburgh EH12 8NJ	Telephone: (031) 244 88 22 Telex: 727348 DAFASS G Cable: Telefax: (031) 244 89 40
Curator/person in charge:	G.R. Chadwick
Details of collection:	<i>Avena sativa</i> , 410 accessions, including 365 old cultivars
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 10-12% m.c. in airtight screw-top bottles
Duplication of collection:	Not duplicated
Availability:	Available in limited quantity (100 seeds)
Quarantine:	No known restrictions

Evaluation: Morphological and physiological description. 100 descriptors. On-going work

Documentation: Data held on card index. On-going work

#### UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)	Telephone: (303) 484 04 02
US Department of Agriculture (USDA)	Telex: 237401714 DNPA UC
Agricultural Research Service (ARS)	Cable:
Colorado State University Campus	Telefax: (303) 221 14 27
Fort Collins, Colorado 80523	

Curator/person in charge: S.A. Eberhart

Details of collection: *Avena byzantina*, 725 accessions  
*A. sativa*, 9912 accessions  
*A. sterilis*, 3021 accessions  
*Avena* spp., 7670 accessions of 9 species

Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets

Duplication of collection: As an active collection at National Small Grain Collection, Aberdeen, Idaho, USA

Availability: Freely available only if not available from the active collection

Quarantine: No information

Evaluation: Responsibility of the Station holding the active collection

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

#### UNITED STATES OF AMERICA

National Small Grain Collection Telephone:	(208) 397 41 62
US Department of Agriculture (USDA)	Telex:
Agricultural Research Service (ARS)	Cable:
P.O. Box 307	Telefax: (208) 397 41 62
Aberdeen, Idaho 83210	

Curator/person in charge: Harold E. Bockelman

Details of collection: *Avena abyssinica*, 228 accessions  
*A. barbata*, 764 accessions  
*A. barbata* var. *wiestii*, 1 accession  
*A. brevis*, 15 accessions  
*A. bromoides*, 2 accessions  
*A. byzantina* var. *anopla*, 792 accessions  
*A. eriantha*, 7 accessions  
*A. fatua*, 506 accessions  
*A. hybrida*, 1 accession  
*A. longiglumis*, 12 accessions  
*A. maroccana*, 2 accessions  
*A. murphyi*, 1 accession

**UNITED STATES OF AMERICA (cont.)**

Details of collection: *A. nuda*, 178 accessions  
(cont.) *A. sativa*, 2813 accessions  
*A. sterilis*, 6861 accessions  
*A. strigosa*, 73 accessions  
*A. vaviloviana*, 44 accessions  
*Avena* spp., 8820 accessions

World-wide representation

Maintenance of collection: As seeds; medium-term seed storage at 7°C, 40 % RH. Seeds in paper envelopes

Duplication of collection: National Seed Storage Laboratory (long-term storage), Fort Collins, Colorado, USA

Availability: Freely available; reciprocal exchange encouraged

Quarantine: Export: none  
Import: restrictions apply to *Aegilops*, *Oryza*, *Triticum* and *x Triticosecale*

Evaluation: In progress

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

*Hordeum*

**AFGHANISTAN**

Plant Genetic Resources Unit  
Ministry of Agriculture and Land Reform  
Darul Aman Research Station  
Kabul

Telephone:  
Telex:  
Cable:

Curator/person in charge: M.A. Rashid

Details of collection: *Hordeum vulgare*, 110 landraces and wild species

Maintenance of collection: Medium-term seed storage at 2°C and 35-45% RH. Seeds in cans. Active collection

Duplication of collection: Partially duplicated in base storage at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, USA

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**ALGERIA**

Institut de Développement des Grandes Cultures  
B.P. 16  
El Harrach  
Algiers

Telephone:  
Telex:  
Cable:

Curator/person in charge: N. Kadra

Details of collection: *Hordeum vulgare*, 100 landraces from Algeria

Maintenance of collection: Active collection

Duplication of collection: As a base collection at Istituto del Germoplasma, Bari, Italy

Availability: No information

Quarantine: No information

Evaluation: Partial

Documentation: Manual

**ARGENTINA**

Centro Nacional de Investigaciones  
Agropecuarias (CNIA)  
Villa Udaondo  
Castelar  
Buenos Aires

Telephone:  
Telex:  
Cable:

Curator/person in charge:

Details of collection: *Hordeum* spp., 1275 landraces and introductions

Maintenance of collection: Active collection

Duplication of collection: INTA, Pergamino, Argentina and NSSL, Fort Collins, USA

Availability: No information

Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

## AUSTRALIA

Commonwealth Scientific and Industrial Research  
 Organization (CSIRO)  
 Division of Plant Industry  
 P.O. Box 1600  
 Canberra City  
 Canberra A.C.T. 2601

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: A.H.D. Brown  
 Details of collection: *Hordeum* spp., 2000 landraces, cultivars and wild species. Worldwide representation  
 Maintenance of collection: Medium-term seed storage at -2°C. Seeds with 7% m.c. in aluminium laminated foil packets  
 Duplication of collection: Swedish Seed Association, Svalöv, Sweden; Beltsville, USA and VIR, Leningrad, USSR  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease and pest resistance and yield components  
 Documentation: Computerized

## AUSTRALIA

Australian Winter Cereals Collection  
 RMB 944  
 Calala Lane  
 Tamworth, New South Wales 2340

Telephone: (067) 64 14 49  
 Telex:  
 Cable:  
 Telefax: (067) 67 93 70

Curator/person in charge: M.C. Mackay  
 Details of collection: *Hordeum* spp., 6000 accessions (estimated number)  
 The collection includes cultivars, genetic stocks, landraces and species with world-wide representation and is currently being established from local breeders collections  
 Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in aluminium laminated foil packets  
 Duplication of collection: Duplicated in small samples at CSIRO, Canberra, Australia  
 Availability: Freely available for research use  
 Quarantine: Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate  
 Evaluation: Morphological and limited agronomical (plant height, ear emergence, growth habit) descriptors are held for all accessions. Other agronomical and disease descriptors are held for many accessions, but it is not a policy to evaluate all accessions for all descriptors  
 Documentation: Computerized for all data held (passport, morphological, agronomical and disease descriptors)

**AUSTRIA**

Agricultural-Chemical Research  
& Testing Institute Linz  
Wieningstrasse, 8  
A-4025 Linz

Telephone: (0732) 812 61  
Telex:  
Cable:

Curator/person in charge: R. Schachl / W. Kainz

Details of collection: *Hordeum aegiceras*, 4 landraces from Nepal (1) and 3 of unknown origin and 8 cultivars from Austria (2), FRG (5) and Switzerland (1)  
*H. vulgare*, 442 total accessions:  
- 244 landraces from Austria (116), Brazil (2), Ethiopia (65), FRG (11) and Pakistan (50)  
- 198 cultivars from Australia (4), Austria (38), Brazil (4), Canada (2), PR China (1), Czechoslovakia (4), DDR (2), Denmark (2), FRG (71), France (7), Greece (2), Japan (2), Netherlands (9), Sweden (7), UK (8), USSR (3), Yugoslavia (2) and 30 of unknown origin

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 8% m.c.  
Short-term seed storage at 15°C and 30% RH. Seeds in glass containers of 250 cc

Duplication of collection: ZIGuK, Gatersleben, DDR and NGB, Alnarp, Sweden

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate required

Evaluation: On-going for botanical characteristics

Documentation: Computerized

**AUSTRIA**

National Establishment for Plant  
Cultivation and Seed Testing Rinn  
A-6074 Rinn, Tirol

Telephone: (05223) 81 17  
Telex:  
Cable:

Curator/person in charge: L. Koeck

Details of collection: *Hordeum vulgare*, 20 landraces

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Evaluation for botanical characteristics

Documentation: No information

**AUSTRIA**

Federal Institute for Plant Production  
P.O. Box 64  
Alliiertenstrasse, 1  
A-1201 Vienna

Telephone: 24 15 11  
Telex: 35259 banst a  
Cable:

Curator/person in charge: R. Hron

Details of collection:	<i>Hordeum vulgare</i> , 184 old cultivars
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation for botanical characteristics
Documentation:	No information

**BELGIUM**

Station d'Amélioration des Plantes  
 Centre de Recherches Agronomiques de l'Etat  
 Rue du Bordia, 4  
 B-5800 Gembloux

Telephone: (081) 661 24 91  
 Telex: 59165 Centragro GBX  
 Cable:  
 Telefax: (081) 61 49 41

Curator/person in charge:	J. Vandam
Details of collection:	<i>Hordeum</i> spp., 300 cultivars, including 12 from Belgium
Maintenance of collection:	Medium-term seed storage
Duplication of collection:	No information
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Information not available
Documentation:	Information not available

**BELGIUM**

V.Z.W. Centrum voor Toegepaste Biologie  
 Langstraat, 130  
 B-3434 Linter

Telephone: (016) 78 96 22  
 Telex:  
 Cable:

Curator/person in charge:	J. Niclaes
Details of collection:	<i>Hordeum vulgare</i> , 9 landraces and 379 cultivars
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Disease resistance
Documentation:	No information

**BELGIUM**

n.v. Clovis Matton  
Veredelingsbedrijf  
Nærkouter, 5  
B-8573 Anzegem-Tiegem

Telephone: (056) 68 93 20  
Telex: 85275  
Cable:

Curator/person in charge: L. Matton

Details of collection: *Hordeum vulgare* (winter type), 36 landraces and 132 old cultivars  
*H. vulgare* (spring type), 45 landraces and 138 old cultivars

Maintenance of collection: No information

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Screening for resistance to *Helminthosporium teres*

Documentation: No information

**BOLIVIA**

Estación Experimental de Patacamaya  
Instituto Boliviano de Tecnología  
Agropecuaria (IBTA)  
Patacamaya

Telephone:  
Telex:  
Cable:

Curator/person in charge: M. Tapia

Details of collection: *Hordeum vulgare*, 108 accessions

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: Freely available

Quarantine: No information

Evaluation: No information

Documentation: Manual

**BRAZIL**

Centro Nacional de Pesquisa de Trigo (CNPT)  
Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
Passo Fundo, Rio Grande do Sul

Telephone:  
Telex:  
Cable:

Curator/person in charge: A.C.A. Zanatta

Details of collection: *Hordeum distichum*  
*H. spontaneum*  
*H. vulgare*  
19500 landraces, cultivars and wild species. World-wide representation

Maintenance of collection: Short-term seed storage at 10°C and 30% RH

Duplication of collection: Centro Nacional de Recursos Genéticos (CENARGEN), Brasília, Brazil

Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

## BULGARIA

Institute of Introduction and  
 Plant Genetic Resources "K. Malkov"  
 District of Plovdiv  
 BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
 Telex: 44444 ZOS BG  
 Cable:

Curator/person in charge: B. Matsov / M. Zaharieva

Details of collection: *Hordeum bulbosum*, 3 accessions  
*H. vulgare*, 3200 total accessions. Breeding material (3180) and landraces (20) from Belgium, Canada, Czechoslovakia, FRG, France, Hungary, UK and USSR  
*H. spontaneum*, 4 accessions

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
 Medium-term seed storage at 5°C and 50% RH

Duplication of collection: Belgium, Canada, Czechoslovakia, FRG, France, Hungary, UK and USSR

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo

Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economic characters, chemical composition and technological evaluation). Genetic and ecological studies

Documentation: Computerized for passport and evaluation data

## CANADA

Central Office for the Plant Gene Resources  
 of Canada (PGRC)  
 Plant Research Centre  
 Central Experimental Farm  
 Building 99  
 Ottawa, Ontario K1A 0C6

Telephone: (613) 995 94 28  
 Telex:  
 Cable:

Curator/person in charge: R.S. Pandeya

Details of collection: *Hordeum* spp., 21000 landraces, cultivars and wild species from Algeria, Arabian Peninsula, Argentina, Australia, Austria, Canada, PR China, Czechoslovakia, Denmark, Egypt, Ethiopia, Finland, France, FRG, Hungary, India, Italy, Japan, Korea, Mexico, Morocco, Nepal, Netherlands, Norway, Pakistan, Poland, Sweden, Switzerland, Turkey, UK, USA and USSR. About 16000 accessions donated by USDA

The Institute has agreed to accept responsibility for maintaining a global collection of *Hordeum* for long-term conservation

**CANADA (cont.)**

Maintenance of collection:	Long-term seed storage at -20°C. Seeds with 7-8% m.c. in aluminium laminated foil packets
Duplication of collection:	Many research stations throughout Canada hold active collections of part of this material Partially duplicated at Royal Veterinary and Agricultural University, Copenhagen, Denmark and Small Grain Collection, Beltsville, USA
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation is carried out by canadian breeders. Partial for 43 descriptors
Documentation:	Compilation and computerization of data is in progress at PGRC Office

**COLOMBIA**

Instituto Colombiano Agropecuario (ICA)  
Tibaitatá  
A.A. 151123  
El Dorado - Bogotá

Telephone:  
Telex:  
Cable:

Curator/person in charge:

Details of collection:	<i>Hordeum vulgare</i> , 200 cultivars from Colombia and Mexico, donated by USDA, USA
Maintenance of collection:	Short-term seed storage at 15°C and 65% RH. Long-term seed storage facilities planned
Duplication of collection:	CIMMYT, Mexico
Availability:	No information
Quarantine:	No information
Evaluation:	Complete for 33 descriptors
Documentation:	Partial and computerized

**CYPRUS**

Agricultural Research Institute (ARI)  
P.O. Box 2016  
Nicosia

Telephone: (02) 30 34 31  
Telex: 4660 MINAGRI  
Cable: ARI, Nicosia

Curator/person in charge:

Details of collection:	<i>Hordeum vulgare</i> , 26 landraces from Cyprus
Maintenance of collection:	Medium-term seed storage at 4°C and 50% RH. Seeds in aluminium laminated foil packets
Duplication of collection:	Istituto del Germoplasma, Bari, Italy and ICARDA, Aleppo, Syria
Availability:	Freely available
Quarantine:	Phytosanitary certificate required
Evaluation:	Partial
Documentation:	Passport and some evaluation data computerized

## CZECHOSLOVAKIA

Cereal Research and Breeding Institute  
Havlíckova 2787  
767 41 Kromeriz

Telephone: (634) 42 61 11  
Telex: 62940 VSUOB C  
Cable:

Curator/person in charge: M. Sevcík

Details of collection: *Hordeum* spp. (spring type), 37 landraces, 2045 cultivars, 17 wild and 16 mutant/genetic stocks

Maintenance of collection: Short-term seed storage

Duplication of collection: To be duplicated in a near future at National Gene Bank, Prague

Availability: Freely available

Quarantine: No known restrictions

Evaluation: On-going work

Documentation: Complete and computerized for passport data. On-going for characterization and evaluation data

## CZECHOSLOVAKIA

Research Institute of Plant Production  
Bratislavská cesta, 122  
921 68 Piešťany

Telephone: (838) 223 11  
Telex: 71212 VURV C  
Cable:

Curator/person in charge: A. Zofajová

Details of collection: *Hordeum vulgare*, 108 cultivars from Austria (1), Canada (13), DDR (5), Denmark (8), FRG (5), France (10), Hungary (2), Iceland (1), Netherlands (6), Poland (3), Scotland (UK) (6), Sweden (14), UK (18), USA (12) and USSR (12)

Maintenance of collection: Medium-term seed storage at -5°C and in short-term seed storage

Duplication of collection: Partially at:  
Cereal Research and Breeding Institute  
Havlíckova, 2787  
76741 Kromeriz - Czechoslovakia

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work

Documentation: Manual. Computerization due to commence soon

## CZECHOSLOVAKIA

Genebank  
Research Institute for Plant Production  
161 06 Praha 6 - Ruzyně

Telephone: (2) 36 08 51  
Telex: 123093 VURV C  
Cable:

Curator/person in charge: M. Vlasak

Details of collection: *Hordeum vulgare*, 902 cultivars from Algeria (3), Argentina (1), Australia (2), Austria (9), Belgium (4), Bulgaria (29), Canada (4), Czechoslovakia (173), DDR (128), Denmark (2),

**CZECHOSLOVAKIA (cont.)**

Details of collection:	Ethiopia (1), FRG (61), Finland (1), France (44), Hungary (45), Iran (2), Ireland (2), Israel (1), Italy (4), Japan (2), Korea, DPR (3), Mexico (1), Mongolia (1), Netherlands (17), Poland (29), Romania (47), Spain (4), Sweden (4), Switzerland (2), Turkey (1), UK (3), USA (93), USSR (121), Yugoslavia (15) and 45 of unknown origin
Maintenance of collection:	Long-term seed storage at -18°C Medium-term seed storage at 2°C Seed with 5-8% m.c. in glass containers
Duplication of collection:	No information
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Yield and yield structure, grain quality, earliness, disease resistance and gliadin spectrum. About 70% of the collection evaluated using national descriptor list
Documentation:	Computerized for passport data and on-going for evaluation data. Data held at Czechoslovak Information System for Genetic Resources (EVIGEZ). For further information see: Rogalewicz, V. and Bares, I. (1987). Czechoslovak Information System for Genetic Resources. FAO/IBPGR Pl. Genet. Resources Newsletter, 72: 14-16

**DENMARK**

Crop Husbandry and Plant Breeding Department  
Royal Veterinary and Agricultural University  
Thorvaldsensvej, 40  
DK-1871 Copenhagen V

Telephone: (01) 35 17 88  
Telex:  
Cable:

Curator/person in charge:	S. Andersen
Details of collection:	<i>Hordeum</i> spp., 40 landraces, 300 old cultivars, 20 wild and 490 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 0°-4°C and 30-60% RH. Seeds in glass jars
Duplication of collection:	PGR, Ottawa, Canada
Availability:	No information
Quarantine:	No information
Evaluation:	Characterization and evaluation of physiological factors
Documentation:	No information

**DENMARK**

Agricultural Research Department  
Riso National Laboratory  
DK- 4000 Roskilde

Telephone: (02) 37 12 12  
Telex: 43116  
Cable:  
Telefax: (02) 360609

Curator/person in charge:	A.J. Andersen
Details of collection:	<i>Hordeum vulgare</i> subsp. <i>vulgare</i> , 200 lines/genetic stocks with disease resistance genes and genetic and cytological markers mainly from Europe

Maintenance of collection:	Short-term seed storage
Duplication of collection:	NGB, Alnarp, Sweden
Availability:	Freely available. Requests should be addressed to: NGB, Alnarp, Sweden
Quarantine:	No known restrictions
Evaluation:	Genetics, allelism and chromosomal location of many genetic markers
Documentation:	Computerized. Data centralized at NGB, Alnarp, Sweden

## ETHIOPIA

Plant Genetic Resources Centre/Ethiopia (PGRC/E)  
P.O. Box 30726  
Addis Ababa

Telephone: 18 03 81  
Telex: 21460 GTZFP ET  
Cable: GENE BANK

Curator/person in charge:	Melaku Worede
Details of collection:	<i>Hordeum vulgare</i> , 12648 landraces, including from Czechoslovakia (12), FRG (15), Israel (15) and Sudan (4)
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 5-7% m.c. in aluminium laminated foil packets Medium-term seed storage at 4°C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage  The Institute has agreed to accept responsibility for maintaining an African regional collection of <i>Hordeum</i> for long-term conservation
Duplication of collection:	Partially (1200 accessions) at FAL, Braunschweig, FRG and 1029 accessions in USA
Availability:	Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage
Quarantine:	Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture
Evaluation:	On-going work, for 18 characters, using modified IBPGR descriptor list
Documentation:	On-going and computerized for passport, characterization and evaluation data

## FEDERAL REPUBLIC OF GERMANY

Institute of Applied Genetics  
Free University of Berlin  
Albrecht-Thear-Weg, 6  
1000 Berlin 33

Telephone:  
Telex:  
Cable:

Curator/person in charge:	W. Odenbach
Details of collection:	<i>Hordeum agriocrithon</i> <i>H. spontaneum</i> <i>H. vulgare</i> 580 landraces, cultivars and wild species

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Maintenance of collection:	Active and base collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and computerized

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50

D-3300 Braunschweig

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völkrode  
Telefax: (531) 59 68 14

Curator/person in charge: L. Seidewitz

Details of collection:

*Hordeum agriocrithon*, 15 wild from PR China (10), Israel (1), USSR (2) and 2 of unknown origin

*H. maritimum*, 4 wild from Belgium (1), Israel (1), Portugal (1) and USSR (1)

*H. spontaneum*, 3 cultivars from Asia Minor (1), Iraq (1) and USSR (1) and 98 wild from Iran (2), Israel (79) and USSR (17)

*H. vulgare*, 8324 total accessions:

- 1961 cultivars from Afghanistan (45), Africa (1), Algeria (1), Alpine countries (48), Asia (9), Australia (6), Austria (27), Balkans (27), Belgium (2), Benelux (62), Bulgaria (9), Canada (7), Canary Is. (Spain) (1), PR China (7), Czechoslovakia (31), DDR (6), Denmark (9), East Asia (28), Egypt (3), Ethiopia (56), FRG (598), Finland (66), France (21), Greece (1), Hungary (4), Iberian Peninsula (14), India (121), Iran (9), Israel (3), Italy (8), Japan (33), DPR Korea (2), Korea, Republic of (1), Near Asia (23), North Africa (119), Netherlands (6), Nepal (35), Pakistan (8), Poland (6), Romania (14), Spain (83), Sweden (67), Switzerland (1); Tunisia (1), Turkey (11), UK (51), USA (43), USSR (6); Yugoslavia (6) and 216 of unknown origin

- 161 hybrids from Australia (1), Austria (2), Czechoslovakia (1), Ethiopia (1), FRG (15), Near Asia (15), Poland (1), Sweden (1), Turkey (9), USA (9) and 106 of unknown origin

- 3497 landraces from Afghanistan (163), Africa (3), Algeria (6), Alpine countries (24), Argentina (2), Asia (15), Australia (8), Austria (61), Balkans (20), Belgium (4), Bolivia (18), Bulgaria (7), Canada (12), Central Asia (15), Chad (19), Chile (5), PR China (34), Colombia (7), Cyprus (2), Czechoslovakia (22), DDR (3), Denmark (3), Egypt (6), Ethiopia (1167), Finland (11), FRG (253), France (16), Greece (14), Hungary (4), Iberian Peninsula (1), India (78), Iran (178), Israel (10), Italy (20), Japan (109), Jordan (13), Kenya (1), Korea (1), Morocco (2), Norway (12), North Africa (12), Nepal (104), Netherlands (3), Pakistan (114), Peru (5), Poland (14), Portugal (7), Romania (5), Rep. of South Africa (6), Spain (11), Sudan (7), Sweden (12), Syria (104), Tunisia (1), Turkey (351), Uruguay (12), USA (41), USSR (131), Yemen (55), Yugoslavia (7) and 146 of unknown origin

- 621 lines from Africa (1), Alpine countries (1), Australia (1), Austria (12), Balkans (12), Bolivia (2), Canada (5), PR China (1), Colombia (1), Czechoslovakia (4), DDR (1), Egypt (3), Ethiopia (236), FRG (48), Finland (3), France (16), Greece (1), Hungary (8), Iberian Peninsula (16), India (11), Israel (14), Japan (39), Lebanon (1), Morocco (2), Nepal (2), Pakistan (2), Peru (1), Portugal (1), Romania (2), Sweden (2), Syria (1), Turkey (1), UK (1), Uruguay (4), USA (14), USSR (20), Yugoslavia (2) and 129 of unknown origin

Details of collection: (cont.)	- 206 mutants from DDR (1), FRG (10), Pakistan (1), Sweden (3), Switzerland (2), USSR (1), and 188 of unknown origin - 1044 populations from Austria (20), Ethiopia (847), Iran (4) and Pakistan (173) - 9 wild from Ethiopia (1) and India (8) - 834 other accessions <i>Hordeum</i> spp., 579 total accessions, including 23 cultivars from Afghanistan (1), Denmark (1), FRG (11), France (1), Poland (1), Portugal (1), Spain (2), Sweden (2) and 3 of unknown origin
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins Medium-term seed storage at 3°C and 30% RH
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Complete for 35 descriptors
Documentation:	All available data computerized. Passport data are available for practically all accessions

#### FEDERAL REPUBLIC OF GERMANY

Arbeitskreis Pflanzengenetik  
Botanisches Institut  
J. W. Goethe-Universität  
Postfach 111 932  
Siesmayerstr., 70  
D-6000 Frankfurt am Main 11

Telephone: (069) 798 47 34  
Telex: 413932 unif  
Cable:

Curator/person in charge:	H. Becela
Details of collection:	<i>Hordeum</i> spp., 4 wild
Maintenance of collection:	Long-term seed storage and in short-term seed storage at ambient temperatures, depending on the species. Seeds in paper and/or plastic bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Research work in radiation and cytogenetics (crop plant evolution)
Documentation:	No information

#### FEDERAL REPUBLIC OF GERMANY

Lehrstuhl für Pflanzenbau und Züchtung  
Technische Universität München Freising  
Weißenstephan  
D-8050 Freising Weißenstephan

Telephone: (08161) 714 87  
Telex:  
Cable:

Curator/person in charge:	G. Fischbeck
Details of collection:	<i>Hordeum vulgare</i> , 80 landraces, 100 wild and 50 mutant/genetic stocks

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Maintenance of collection:	Long-term seed storage at -20°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Disease resistance, genetic and cytogenetic analysis
Documentation:	No information

**FEDERAL REPUBLIC OF GERMANY**

Institut für Resistenzgenetik  
Biologische Bundesanstalt für Land und  
Forstwirtschaft  
D-8059 Grünbach

Telephone: (08122) 16 51  
Telex:  
Cable:

Curator/person in charge:	G. Schuhmann
Details of collection:	<i>Hordeum vulgare</i> , 100 old cultivars, 4000 doubled haploids from anther culture and 250 mutant/genetic stocks
Maintenance of collection:	Long-term seed storage at -20°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Identification and localization of diseases resistance: BaYMV, <i>Septoria</i> , <i>Fusarium</i> , <i>Pseudocercospora</i> , <i>Erwinia</i> , PSTV, PVY and powdery mildew
Documentation:	No information

**FEDERAL REPUBLIC OF GERMANY**

Saatzucht Engelen Büchling oHG  
Büchling, 8  
D-8441 Oberschneiding

Telephone: (09933) 82 17  
Telex:  
Cable:

Curator/person in charge:	F. Stoiber
Details of collection:	<i>Hordeum</i> spp. (winter type), 6-row forage barley and 2-row brewery barley
Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Virus, mildew, rust and fly resistance
Documentation:	No information

## FEDERAL REPUBLIC OF GERMANY

Landessaatzuchtanstalt  
Universität Hohenheim  
P.O. Box 700562  
D-7000 Stuttgart 70

Telephone: (0711) 45 01  
Telex: 722959 uniho D  
Cable:

Curator/person in charge: W. Schmuetz  
Details of collection: *Hordeum vulgare*, 625 old cultivars  
Maintenance of collection: Long-term seed storage at -20°C. Seeds in plastic bags  
Duplication of collection: Not duplicated  
Availability: Available on exchange basis  
Quarantine: No known restrictions  
Evaluation: Disease resistance, quality traits and plant type  
Documentation: Complete. Manual

## FINLAND

Agricultural Research Centre  
Department of Plant Breeding  
SF-31600 Jokioinen

Telephone: (916) 881 11  
Telex: 6741 mtk sf  
Cable:  
Telefax: (916) 884 91

Curator/person in charge: S. Pulli  
Details of collection: *Hordeum vulgare*, 1240 breeding lines  
Maintenance of collection: Medium-term seed storage at -4°C. Seeds with 5-7% m.c. in glass jars  
Duplication of collection: Partially duplicated at NGB, Alnarp, Sweden  
Availability: Available on exchange basis  
Quarantine: No known restrictions  
Evaluation: Partial  
Documentation: No information

## FRANCE

ORSEM S.A.  
rue de Touraine, 9  
F-59112 Annoeullin

Telephone: (20) 85 63 33  
Telex: 110332 F  
Cable:

Curator/person in charge: J.L. Goffart  
Details of collection: *Hordeum vulgare*, 1000 accessions  
Maintenance of collection: Cold chamber  
Duplication of collection: No information  
Availability: Available for ORSEM breeding lines and varieties listed in the National Catalogue  
Quarantine: No known restrictions

**FRANCE (cont.)**

Evaluation: No information  
 Documentation: No information

**FRANCE**

Station d'Amélioration des Plantes  
 Institut National de la Recherche Agronomique (INRA)  
 Domaine de Crouëlle  
 F-63039 Clermont-Ferrand Cedex

Telephone: (73) 62 40 00  
 Telex: 392207 F  
 Cable:

Curator/person in charge: L. Jestin  
 Details of collection: *Hordeum* spp., 3000 accessions, including 50 landraces and 100 old cultivars  
 Maintenance of collection: Short-term seed storage at 6°C and 30% RH  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: According to enforced phytosanitary regulations  
 Evaluation: On-going according to IBPGR descriptor list plus breeding methodology, selection for yield and utilization value. Selection for disease resistance. Research on biochemical and agronomical markers  
 Documentation: Computerized for passport data

**FRANCE**

Groupement Agricole Essonnois  
 B.P. 7  
 rue de Rivière  
 F-91720 Maisse

Telephone: (1) 64 99 46 05  
 Telex: 690561 F  
 Cable:

Curator/person in charge: M. Yvon  
 Details of collection: *Hordeum* spp., 3 landraces and 1 old cultivar  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Technological value  
 Documentation: No information

**FRANCE**

Ets. A. Momor & Fils  
 rue de Martin  
 F-59246 Mons - Pévèle

Telephone: (20) 59 20 11  
 Telex: 120763 F  
 Cable:

Curator/person in charge: D. Louchart  
 Details of collection: *Hordeum* spp.

Maintenance of collection:	Short-term seed storage at 8°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Disease resistance, quality and heterosis
Documentation:	No information

## FRANCE

Chaire de Phytotechnie et d'Amélioration des Plantes  
Ecole Nationale Supérieure Agronomique  
Station de Génétique et d'Amélioration des Plantes  
Institut National de la Recherche Agronomique (INRA)  
Place Viala, 9  
F-34060 Montpellier Cedex

Telephone: (67) 61 22 96  
Telex: 490818 INRAMON F  
Cable:  
Telefax: (67) 29 29 90

Curator/person in charge:	J. Chéry
Details of collection:	<i>Hordeum vulgare</i> , 1200 cultivars, landraces, mutants and elite lines; and 200 populations of naked barleys <i>H. spontaneum</i> , 15 lines with cytoplasm male sterility
Maintenance of collection:	Medium-term seed storage at 4°C and 30% RH
Duplication of collection:	Partially at INRA, Clermont-Ferrand
Availability:	Available on exchange basis
Quarantine:	No restrictions
Evaluation:	On-going work using IBPGR descriptor list
Documentation:	On-going for agronomic and characterization data

## FRANCE

Station Expérimentale du Magneraud  
Institut National de la Recherche Agronomique (INRA-GEVES)  
B.P. 52  
Domaine du Magneraud  
F-17700 Surgères

Telephone: (46) 68 30 00  
Telex: 790737 F  
Cable:

Curator/person in charge:	G. Sauvion
Details of collection:	<i>Hordeum vulgare</i> , 575 old cultivars and 652 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 4°-6°C and 30-40% RH
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**GERMAN DEMOCRATIC REPUBLIC**

Zentralinstitut für Genetik  
und Kulturpflanzenforschung (ZIGuK)  
Corrensstrasse 3  
DDR-4325 Gatersleben

Telephone: Gatersleben 50  
Telex: 48558 kupfga DDR  
Cable:

Curator/person in charge: Ch. Lehmann

Details of collection: *Hordeum vulgare*, 10969 accessions, including 858 mutants  
*Hordeum* spp., 250

Maintenance of collection: Long-term seed storage at -15° to -18°C  
Medium-term seed storage at 0°C. Seeds in sealed glass jars

Duplication of collection: Partially duplicated at Istituto del Germoplasma, Bari, Italy; Small Grains  
Collection, Beltsville, USA and VIR, Leningrad, USSR

Availability: Freely available

Quarantine: No known restrictions

Evaluation: Disease resistance and protein quantity and quality

Documentation: Computerized for passport data. Acting as the ECP/GR European Barley  
Database. European Barley List and Index Seminum issued in 1987

**GREECE**

Cereals Institute  
North Greek Agricultural Research Centre  
P.O. Box 10514  
54110 Thessaloniki

Telephone: (3031) 47 15 44  
Telex: 412130 asni gr  
Cable:

Curator/person in charge: D. Gogas

Details of collection: *Hordeum vulgare*, 14 landraces, 59 wild and 920 breeding material

Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at 0°-2°C and 30% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Frost, disease and lodging resistance

Documentation: No information

**GREECE**

Greek Gene Bank  
North Greek Agricultural Research Centre  
P.O. Box 105 14  
541 10 Thessaloniki

Telephone: (031) 471544  
Telex: 412130 asni gr  
Cable:

Curator/person in charge: A. Zamanis

Details of collection: *Hordeum* spp., 14 landraces and 59 wild

Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at 0°-2°C and 30% RH

Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Rust, frost and drought resistance  
 Documentation: No information

### HUNGARY

Agricultural Research Institute of the  
 Hungarian Academy of Sciences  
 P.O. Box 19  
 H-2462 Martonvásár

Telephone: (26) 457 74  
 Telex: 224008  
 Cable:

Curator/person in charge: B. Gyorffy  
 Details of collection: *Hordeum vulgare*, 5 landraces and 3 old cultivars  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

### HUNGARY

Cereals Research Institute  
 P.O. Box 391  
 Szeged

Telephone: (62) 130 11  
 Telex: 82450  
 Cable:

Curator/person in charge: I. Szaniel  
 Details of collection: *Hordeum vulgare*, 60 accessions  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

### HUNGARY

Research Centre for Agrobotany  
 I.A.Q.  
 H-2766 Táplószéle

Telephone: Táplószéle 41  
 Telex: 226981 agbot H  
 Cable:

Curator/person in charge: I. Karsai

**HUNGARY (cont.)**

Details of collection:	<i>Hordeum vulgare</i> , 2899 total accessions, including 50 landraces and 2627 cultivars from Argentina (5), Australia (112), Austria (41), Belgium (4), Bulgaria (291), Canada (12), PR China (1), Czechoslovakia (104), DDR (517), Denmark (79), FRG (52), Finland (2), France (86), Hungary (1159), Iran (2), Italy (7), Netherlands (46), Poland (16), Portugal (1), Romania (17), Rep. of South Africa (3), Spain (1), Sweden (13), Turkey (15), UK (31), USA (19), USSR (78), Yugoslavia (20) and 165 of unknown origin
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at ±0°C Seeds with 5% m.c. in airtight containers
Duplication of collection:	Partially duplicated
Availability:	Freely available provided there is sufficient seed. Index Seminum periodically issued
Quarantine:	Phytosanitary certificate required
Evaluation:	On-going work
Documentation:	Passport data complete. On-going work for characterization. Data complete for 822 accessions (63 characters)

**INDIA**

National Bureau of Plant Genetic Resources (NBPGR) Indian Agricultural Research Institute (IARI) Pusa Campus New Delhi 110012	Telephone: 586908 / 589211 Telex: 31-63390 NBPGR IN Cable:
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Curator/person in charge:	R.S. Rana
Details of collection:	<i>Hordeum</i> spp., 500 landraces and cultivars from Australia, Canada, France, Germany, India, Scandinavia, UK, USA and USSR
Maintenance of collection:	Medium-term seed storage at -5°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

**INDIA**

Indian Agricultural Research Institute (IARI) New Delhi 110012	Telephone: Telex: Cable:
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Curator/person in charge:	H.K. Jain
Details of collection:	<i>Hordeum</i> spp., 3000 landraces and cultivars from India
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information

Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**IRAN**

Plant Genetic Resources Division  
 Seed and Plant Improvement Institute (SPPi)  
 Karaj

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: P. Vojdani  
 Details of collection: *Hordeum vulgare*  
*Hordeum* spp.  
 50 landraces and wild species from Iran  
 Maintenance of collection: Active collection  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Partial  
 Documentation: Partial and manual

**IRAQ**

Plant Genetic Resources Unit  
 Agricultural Research Centre (ARC)  
 Abu Ghraib - Baghdad

Telephone: (01) 511 22 01  
 Telex:  
 Cable: SBAAR - IRAQ

Curator/person in charge: A.T. Sharif  
 Details of collection: *Hordeum bulbosum*, 4 wild  
*H. spontaneum*, 25 wild  
*H. vulgare*, 121 cultivated  
 All accessions from Iraq  
 Maintenance of collection: Short-term seed storage at 5°-10°C. Seeds in airtight cans. Storage capacity  
 40 m<sup>3</sup>  
 Duplication of collection: Istituto del Germoplasma, Bari, Italy  
 Availability: Freely available  
 Quarantine: No known restrictions  
 Evaluation: Partial  
 Documentation: Manual. On-going

**IRELAND**

Department of Agriculture & Food  
 Backweston Farm  
 Leixlip  
 Co. Kildare

Telephone: (01) 28 06 08/9  
 Telex: 25118 AGRI EI  
 Cable:

Curator/person in charge: T. Wright

**IRELAND (cont.)**

Details of collection:	<i>Hordeum vulgare</i> , 300 cultivars
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 7% m.c. in sealed plastic bags
Duplication of collection:	Not known
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	Partial, manual and on-going for passport, characterization and evaluation data

**IRELAND**

Plant Science Department  
University College of Cork  
Co. Cork

Telephone: (021) 27 68 71  
Telex: 26050 UNIC EI  
Cable:

Curator/person in charge:	J.P. Cullinane
Details of collection:	<i>Hordeum</i> spp., 80 old cultivars, 30 wild and 20 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 4°C. Seeds in sealed plastic bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Disease and aphid resistance
Documentation:	No information

**IRELAND**

Department of Agriculture  
Cereals Station  
Ballinacurra  
Middleton  
Co. Cork

Telephone:  
Telex:  
Cable:

Curator/person in charge:	B. Devlin
Details of collection:	<i>Hordeum vulgare</i> , 500 accessions
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

## ITALY

Istituto del Germoplasma  
CNR  
Via G. Amendola, 165/A  
I-70126 Bari

Telephone:  
Telex:  
Cable:

(080) 58 34 63  
810565 CNR/BA I

Curator/person in charge: P. Perrino  
 Details of collection: *Hordeum* spp., 1000 landraces  
 Maintenance of collection: Long-term seed storage at -18°C. Seeds in airtight metal cans with silica gel  
 Medium-term seed storage at 0°C and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets  
 Duplication of collection: Largely duplicated at other base collections  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Complete and computerized

## ITALY

Experimental Institute of Cereal Crops  
Via San Protaso, 308  
I-29017 Fiorenzuola d'Arda

Telephone: (0523) 98 26 68  
Telex:  
Cable:

Curator/person in charge: A.M. Stanca  
 Details of collection: *Hordeum vulgare*, 600 accessions  
 Maintenance of collection: Short-term seed storage at ambient temperatures  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## ITALY

Department of Agrobiotechnology  
National Agency for Atomic Energy (ENEA)  
P.O. Box 2400  
C.R.E. Casaccia  
I-00100 Roma A.D.

Telephone: (06) 694 81  
Telex: 613296 ENEACA I  
Cable: CASACCIA ENEA

Curator/person in charge: L. Rossi  
 Details of collection: *Hordeum vulgare*, 300 accessions  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at 0°C  
 Duplication of collection: No information  
 Availability: No information

**ITALY (cont.)**

Quarantine:	No information
Evaluation:	Disease resistance, short stature, quality, mechanical harvest and stress resistance
Documentation:	No information

**JAPAN**

National Institute of Agrobiological Resources (NIAR) Kannon-dai 2-1-2 Tsukuba, Ibaraki 305	Telephone: 02975-6-7050 Telex: Cable: NIARTSUKUBA YATABE Telefax: 02975-6-7408
Curator/person in charge:	Head, Germplasm Storage Center
Details of collection:	<i>Hordeum leiorrhynchum</i> , 1 <i>H. spontaneum</i> , 4 <i>H. tetrastichum</i> , 1 <i>H. vulgare</i> , 6236 Old and commercial cultivars, landraces, elite lines and related species from Africa, East and South Asia, Europe, Japan, North America and Mediterranean regions
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at -1°C and 30% RH Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml  The Institute has agreed to accept responsibility for maintaining an Asian collection of <i>Hordeum</i> for long-term conservation
Duplication of collection:	No information
Availability:	Freely available for research purposes. A fee is applicable for private institutions
Quarantine:	No information
Evaluation:	Standard manual published by specialists' consent
Documentation:	Computerized for passport data

**JAPAN**

Barley Germplasm Centre Research Institute for Bioresources Okayama University Kurashiki 710	Telephone: (0864) 24 16 61 Telex: Cable: Telefax: (0864) 21 06 99
Curator/person in charge:	T. Konishi
Details of collection:	<i>Hordeum agriocrithon</i> , 4 wild from Tibet <i>H. arizonicum</i> , 1 wild from USA <i>H. brachyantherum</i> , 1 wild from USSR <i>H. brevisubulatum</i> , 1 wild from Turkey <i>H. bulbosum</i> , 33 wild from Iran (1), Iraq (19), Turkey (3), USSR (8) and others (2) <i>H. compressum</i> , 1 wild from USA <i>H. depressum</i> , 1 wild from USA <i>H. euclaston</i> , 1 wild from Canada <i>H. geniculatum</i> , 16 wild from Iran (2), Iraq (9), Turkey (4) and USSR (1) <i>H. glaucum</i> , 26 wild from Iran (11), Iraq (13), Turkey (1) and USA (1)

Details of collection: (cont.)	<i>Hordeum gussoneanum</i> , 2 wild from Iran (1) and USA (1) <i>H. jubatum</i> , 2 wild from DDR (1) and USSR (1) <i>H. murinum</i> , 31 wild from Afghanistan (3), Argentina (2), Canada (1), Egypt (2), Iran (9), Iraq (1), Japan (3), Jordan (1), Lebanon (2), Netherlands (1), Turkey (1), USA (3) and USSR (2) <i>H. nodosum</i> , 1 wild from USA <i>H. spontaneum</i> , 179 wild from Afghanistan (24), Cyprus (2), Iran (12), Iraq (66), Jordan (1), Lybia (2), Morocco (8), Nepal (1), Pakistan (2), Syria (1), Turkey (7), USSR (49) and 4 of unknown origin <i>H. turkestanicum</i> , 2 wild from USSR (1) and 1 of unknown origin <i>H. violaceum</i> , 3 wild from USSR (1) and 2 of unknown origin <i>H. vulgare</i> , 5130 landraces and cultivars from PR China (196), Ethiopia (990), Europe (525), Korea (439), India and S.W. Asia (557), Japan (742), Nepal (404), North Africa (287), Turkey (836) and 154 of unknown origin
Maintenance of collection:	Long-term seed storage at -18°C Short-term seed storage at 15°C Seeds with 7-9% m.c. in plastic containers
Duplication of collection:	NIAR, Tsukuba, Japan
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	30 morphological, physiological and genetic characteristics. On-going for the remaining cultivars and wild species
Documentation:	Computerized. "Catalogue of Barley Germplasm Preserved in Okayama University" issued in 1983 which included 30 characteristics for 4023 cultivars

## JAPAN

Plant Germplasm Institute  
Faculty of Agriculture  
Kyoto University  
Mukoshi  
Kyoto 617

Telephone:  
Telex:  
Cable:

Curator/person in charge:	M. Tanaka
Details of collection:	<i>Hordeum agriocrithon</i> <i>H. bulbosum</i> <i>H. geniculatum</i> <i>H. leporinum</i> <i>H. pusillum</i> <i>H. spontanicum</i> <i>H. vulgare</i> <i>Hordeum</i> spp. 325 landraces, cultivars and wild species
Maintenance of collection:	Medium-term seed storage at 5°C and 50-70% RH. Seeds in vacuum sealed cans
Duplication of collection:	Barley Germplasm Centre, Kurashiki, Japan and AARI, Izmir, Turkey
Availability:	No information
Quarantine:	No information
Evaluation:	Partial
Documentation:	Complete

**MEXICO**

Banco de Germoplasma de Maíz  
 Campo Agrícola Experimental  
 del Valle de México  
 Chapingo

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: F. Cardenas Ramos  
 Details of collection: *Hordeum vulgare*, 305 introduced cultivars  
 Maintenance of collection: Medium-term seed storage at 5°C and 10% RH. Seeds in sealed paper bags  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**MEXICO**

Centro Internacional de Mejoramiento  
 de Maíz y Trigo (CIMMYT)  
 (905) 761 33 11  
 Apartado Postal 6-64 :  
 Mexico 0600, D.F.

Telephone: (52-5) 954 21 00

Telex: 1772023 CIMTME  
 Cable: CENCIMMYT  
 E-Mail:

57:CGI201

Curator/person in charge: B. Skovmand  
 Details of collection: *Hordeum vulgare*, 6503 accessions  
 Maintenance of collection: Long-term seed storage at -15°C and 25% RH  
 Medium-term seed storage at 0°C and 30-35% RH  
 Seeds in tins  
 Duplication of collection: NSSL, Fort Collins, USA  
 Availability: Freely available  
 Quarantine: Phytosanitary certificate requested for import/export of seed  
 Evaluation: Evaluation is the responsibility of the breeding programme. The genebank only does disease screening and stress tolerance evaluation  
 Documentation: Computerization in progress

**NETHERLANDS**

Landbouwbureau Wiersum BV  
 Kweekbedrijf voor Landbouwgewassen  
 P.O. Box 94  
 NL-8250 AB Dronten

Telephone: (032) 10 21 43  
 Telex:  
 Cable:

Curator/person in charge: R.M. Ten Kate  
 Details of collection: *Hordeum* spp., 15 old cultivars and 5 mutant/genetic stocks  
 Maintenance of collection: No information

Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## NETHERLANDS

Veredelingsbedryf Cebeco-Handelsraad  
 P.O. Box 139  
 NL-8200 AC Lelystad

Telephone: (03202) 244  
 Telex:  
 Cable:

Curator/person in charge: R.H. Reiling  
 Details of collection: *Hordeum vulgare*, 200 accessions, including 50 old cultivars  
 Maintenance of collection: Medium-term seed storage at 3°C and 40% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease and lodging resistance, quality and winter hardiness  
 Documentation: No information

## NETHERLANDS

Zelder B.V.  
 Landgoed Zelder  
 NL-6595 NW Ottersum

Telephone: (08851) 181 44  
 Telex: 37311  
 Cable:

Curator/person in charge: L. J. Groenewegen  
 Details of collection: *Hordeum* spp., 10 old cultivars  
 Maintenance of collection: Medium-term seed storage at 5°C and 30% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Genotype testing  
 Documentation: No information

## NETHERLANDS

Centre for Genetic Resources,  
 The Netherlands (CGN)  
 P.O. Box 224  
 NL-6700 AE Wageningen

Telephone: (08370) 229 25  
 Telex: 75044 DLOWA NL  
 Cable:  
 Telefax: (08370) 165 13

Curator/person in charge: L.J.M. van Soest / M. Dik

**NETHERLANDS (cont.)**

- Details of collection: *Hordeum vulgare*, 1300 mainly cultivars and some old landraces from Asia, Europe and USA, donated by mainly the Foundation for Agricultural Plant Breeding (SVP) and some by Institute for Plant Protection (IPO) and Agricultural University (LU), Netherlands and 1500 landraces from India, Iran, Nepal and Pakistan, donated by SVP
- Maintenance of collection: Long-term seed storage at -20°C. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Medium-term seed storage at 4°C and 30% RH. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Short-term seed storage at ambient temperatures. Seeds in paper envelopes
- Duplication of collection: Partially at several other genebanks
- Availability: Available on exchange basis provided there is sufficient seed
- Quarantine: No known restrictions
- Evaluation: Partial and on-going for:  
Mandatory:  
Earliness, plant height, row number, hoodedness/awnedness, spike density, lodging, brittleness of spike, lemma colour, seed colour, kernel covering and mildew, yellow rust, dwarf rust, net blotch and scald resistance  
Optional:  
Auricle's flagleaf colour, spike density, winter susceptibility, tendency to second growth, tendency to neck break, seed shape, length of rachilla hairs and 1000 grain weight
- Documentation: Complete for passport data and on-going for evaluation data

**NIGERIA**

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70 / 31 26 22  
Telex:  
Cable: GENE BANK

- Curator/person in charge: P.E. Onuorah
- Details of collection: *Hordeum* spp., 47 accessions
- Maintenance of collection: Long-term seed storage
- Duplication of collection: No information
- Availability: Available in limited quantity
- Quarantine: No information
- Evaluation: No information
- Documentation: Manual. Passport data available

**NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND  
NORWAY, SWEDEN)**

Nordic Gene Bank  
for Agricultural and Horticultural Plants  
Smedjevägen 2 B  
P.O. Box 41  
S-23053 Alnarp  
Sweden

Telephone: (4640) 41 50 00  
Telex: 32727 NGB S  
Cable:  
Telefax: (4640) 46 21 88

Curator/person in charge: S. Blixt

Details of collection: *Hordeum* spp., 14100 total accessions. Cultivars (1500), isogenic lines (200), marker genes (500), mutants (9700) and wild (2200) from Denmark, Finland, Iceland, Norway, Sweden and introductions relevant to the climatic zones of the Nordic countries

Maintenance of collection: Long-term seed storage at -20°C

The Institute has agreed to accept responsibility for maintaining an European collection of *Hordeum* for long-term conservation

Duplication of collection: In permafrost at Svalbard, Norway

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work within the participating countries

Documentation: Computerized for passport and evaluation data

**NORWAY**

Vaagones Agricultural Research Station  
N-8000 Bodo

Telephone: (081) 255 86  
Telex:  
Cable:

Curator/person in charge: B. Volden

Details of collection: *Hordeum vulgare*, 2 old cultivars

Maintenance of collection: Medium-term seed storage at 0°-10°C. Seeds in plastic boxes and plastic bags

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

**NORWAY**

Holt Agricultural Research Station  
P.O. Box 100  
N-9001 Tromsø

Telephone: (4783) 848 75  
Telex:  
Cable:  
Telefax: (4783) 80173

Curator/person in charge: H. Bakke

**NORWAY (cont.)**

Details of collection:	<i>Hordeum vulgare</i> , 1 landrace "Flöya"
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	NGB, Alnarp, Sweden
Availability:	From NGB on request
Quarantine:	No known restrictions
Evaluation:	Early growing under low temperatures and grain quality
Documentation:	No information

**PAKISTAN**

Plant Genetic Resources Laboratory National Agricultural Research Centre Pakistan Agricultural Research Council (PARC) P.O. Box 1031 Islamabad	Telephone: 82 00 53 33 Telex: 5604 PARC PAK Cable: AGRESCOUNCIL
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Curator/person in charge:	R. Anwar
Details of collection:	<i>Hordeum vulgare</i> , 357 primitive cultivars from Pakistan
Maintenance of collection:	Medium-term seed storage at 5°C ±1°C. Seeds in cans
Duplication of collection:	At several International Research Centres
Availability:	Freely available provided there is sufficient seed
Quarantine:	Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate
Evaluation:	Partial
Documentation:	Manual

**POLAND**

Experimental Breeding Station 46-233 Baków near Kluczbork	Telephone: (48) Baków 92 Telex: 0732327 ZDH PL Cable:
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Curator/person in charge:	E. Gacek
Details of collection:	<i>Hordeum vulgare</i> , 2201 total accessions: Winter - 314 primitive cultivars - 35 landraces - 246 cultivars Spring - 1032 primitive cultivars - 40 landraces - 544 cultivars World-wide origin, donated by IHAR, Radzików, Poland and Beltsville, USA
Maintenance of collection:	Short-term seed storage at 8-10°C. Seeds in glass containers
Duplication of collection:	ZIGuK, Gatersleben, DDR and IHAR, Radzików, Poland
Availability:	Available on exchange basis

Quarantine: No known restrictions  
 Evaluation: On-going work for disease resistance and agronomical traits  
 Documentation: Partial

**POLAND**

National Department of Plant Genetic Resources  
 Plant Breeding and Acclimatization Institute  
 Radzików n/ Warsaw  
 05-870 Blonie

Telephone: (22) 55 26 11/4  
 Telex: 812914 IHAR PL  
 Cable:

Curator/person in charge: St. Goral  
 Details of collection: *Hordeum* spp., 4500 landraces, cultivars and mutant genetic/stocks.  
 World-wide representation  
 Maintenance of collection: Long-term seed storage at -15°C  
 Medium-term seed storage at 0°C  
 Seeds with 5-7% m.c. in glass containers under vacuum  
 Duplication of collection: No information  
 Availability: Available on exchange basis. Index Seminum issued  
 Quarantine: No known restrictions  
 Evaluation: Taxonomic classification, botanical evaluation, resistance to diseases and agronomical characters  
 Documentation: Computerized for passport data

**POLAND**

Botanical Garden of the Polish Academy  
 of Sciences  
 ul. Prawdziwka, 2  
 02-973 Warsaw

Telephone: 42 79 01/42 79 27  
 Telex: 817219 OB PAN  
 Cable:

Curator/person in charge: J. Puchalski  
 Details of collection: *Hordeum* spp., 110 wild  
 Maintenance of collection: Short-term seed storage at ambient temperatures. Seeds with 7% m.c.  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Mutagenesis, protein content and nutritional value of seeds, specific diseases resistance and taxonomic relationships  
 Documentation: No information

**PORTUGAL**

Estação Nacional de Melhoramento de Plantas (ENMP)  
 Instituto Nacional de Investigação Agrária (INIA)  
 Apartado 6  
 P-7351 Elvas Codex

Telephone: 628 44 7628 47  
 Telex: 40189 ENMP P  
 Cable:

- Curator/person in charge: A.F. Raimundo
- Details of collection: *Hordeum vulgare*, 26  
 All accessions are landraces/primitive cultivars from Portugal, donated by Ex-Estação Agrária Central and ISA, Portugal
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 6% m.c.
- Duplication of collection: Not duplicated
- Availability: Available in limited quantity
- Quarantine: No restrictions for export but import material must possess phytosanitary certificate
- Evaluation: On-going for: stature; habit; flowering date; days to maturation; length of vegetative period; type of grain and cold, lodging, drought and disease resistance  
 Characterization/regeneration according to IBPGR descriptor list
- Documentation: Partial and manual

**ROMANIA**

Genetic Resources Department  
 Research Institute for Cereals  
 and Technical Crops  
 Jud. Călărași  
 R-8264 Fundulea

Telephone: (90) 15 08 05  
 Telex: 11349 ASAS R  
 Cable: ICCPT Fundulea 8264 R

- Curator/person in charge: P. Varga
- Details of collection: *Hordeum vulgare*, 382 landraces, 1895 old cultivars, 3 wild and 814 mutant/genetic stocks
- Maintenance of collection: Short-term seed storage at ambient temperatures
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Specific disease resistance, precocity, quality, lodging resistance and stress reaction
- Documentation: No information

**SOUTH AFRICA, REPUBLIC OF**

Small Grain Centre  
 Grain Crops Research Institute  
 Department of Agricultural and Water Supply  
 Private Bag X29  
 9700 Bethlehem

Telephone: (01431) 356 86  
 Telex: 322150  
 Cable: SATIVA PRETORIA

- Curator/person in charge: M. Labuschagne

Details of collection:	<i>Hordeum vulgare</i> , 475 accessions from Australia (27), Austria (16), Brazil (9), PR China (19), Czechoslovakia (18), DDR (98), Denmark (4), FRG (32), Finland (7), France (13), Greece (7), Hungary (8), India (4), Israel (1), Italy (1), Japan (2), Korea (3), Mexico (3), Morocco (3), Netherlands (2), Norway (2), Poland (30), Romania (3), Rep. of South Africa (3), Spain (4), Sweden (1), UK (124), Yugoslavia (1) and 18 of unknown origin - 12 commercial cultivars from Mexico (6) and Rep. of South Africa (6), donated by CIMMYT
Maintenance of collection:	Medium-term seed storage at 5°C, and 50% RH. Seeds in pouches each containing 100 g. Storage area 50 m <sup>2</sup>
Duplication of collection:	Partially (20%) at Genebank, Pretoria, Rep. of South Africa
Availability:	Available in limited quantity (10-30 g)
Quarantine:	For export, phytosanitary certificate issued upon inspection. Import seed must possess phytosanitary certificate or being subject to quarantine
Evaluation:	On-going in greenhouse and field for agronomical, pathological, entomological and quality characteristics using own developed descriptor list based on IBPGR and UPOV descriptor lists
Documentation:	Computerized. On-going work

#### SOUTH AFRICA, REPUBLIC OF

Department of Agricultural Economics and Marketing  
Directorate of Plant and Liquor Control  
Private Bag X 179  
0001 Pretoria

Telephone: (012) 206 24 06  
Telex: 3-23264  
Cable: SATIVA PRETORIA  
Telefax: (012) 206 27 86

Curator/person in charge:	H. Chamberlain
Details of collection:	<i>Hordeum deficiens</i> , 41 landraces and cultivars from USA <i>H. vulgare</i> , 509 landraces and cultivars from Bolivia, Canada, Denmark, FRG, France, Hungary, Italy, Japan, Netherlands, Rep. of South Africa (97), Tunisia, UK and USA (26) <i>Hordeum</i> spp., 14 landraces and cultivars from Australia and Pakistan
Maintenance of collection:	Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection) Short-term seed storage at 6°-7°C and 45% RH. Seeds in plastic containers
Duplication of collection:	At different Crop Research Institutes in the Rep. of South Africa
Availability:	Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly Requests to: The Plant Introduction Officer (same address)
Quarantine:	Seed for planting: Additional declaration on the phytosanitary certificate that the parent plants were inspected during active growth and found to be free from <i>Ustilago nuda</i> or that this organism does not occur in the area of production
Evaluation:	On-going work
Documentation:	Complete and computerized

## SPAIN

Banco de Germoplasma  
Finca "El Encin"  
Instituto Nacional de Investigaciones Agrarias (INIA)  
P.O. Box 127  
Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
Telex: 48989 INIA E  
Cable:

Curator/person in charge: R. Ponce

Details of collection: *Hordeum vulgare*, 1399 landraces and 65 old cultivars

Maintenance of collection: Long-term seed storage at -18°C  
Medium-term seed storage at -2°C and 30% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

## SPAIN

Compañía Española de Cultivos  
Oleaginosos S.A. (CECOSA)  
C/ Genova, 9  
28004 Madrid

Telephone: (1) 419 12 31  
Telex: 41076 CECOS  
Cable:

Curator/person in charge: E. Sobrino

Details of collection: *Hordeum vulgare*, 20 landraces and 100 mutant/genetic stocks

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

## SPAIN

Dep. de Mejora de Cebada  
Fabricas de Cerveza y Malte  
La Cruz del Campo S.A.  
P.O. Box 53  
Sevilla

Telephone: ESP16  
(54) 25 81 00  
Telex: 72239 CAMPO E  
Cable:

Curator/person in charge: J.L. Molina Cano

Details of collection: *Hordeum vulgare*, 150 landraces, 50 old cultivars, 20 wild and 20 mutant/genetic stocks

Maintenance of collection: No information

Duplication of collection: No information

Availability: No information

Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**SPAIN**

Estación Experimental de Aula Del  
 Consejo Superior de Investigaciones Científicas (CSIC)  
 P.O. Box 202  
 Montañana 177

Telephone: (976) 70 95 11  
 Telex:  
 Cable:

Zaragoza

Curator/person in charge: J. Lasa  
 Details of collection: *Hordeum vulgare*, 99 landraces and 177 old cultivars  
 Maintenance of collection: Seeds in sealed bags  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Drought and salinity tolerance  
 Documentation: No information

**SWEDEN**

Department of Crop Genetics and Breeding  
 Swedish University of Agricultural Sciences  
 S-26800 Svalöv

Telephone: (0418) 650 25  
 Telex:  
 Cable:

Curator/person in charge: M. Gustafsson  
 Details of collection: *Hordeum vulgare*, 10 old cultivars and 2500 wild  
 Maintenance of collection: Long-term seed storage at -16° to -18°C. Dehydrated seeds in plastic boxes  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**SWEDEN**

Department of Plant Breeding  
 Swedish University of Agricultural Sciences  
 P.O. Box 4003  
 750 07 Uppsala

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: J. Mackey  
 Details of collection: *Hordeum distichon*, 200 accessions

**SWEDEN (cont.)**

Maintenance of collection:	Active and base collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**SWITZERLAND**

Station Fédérale de Recherches Agronomiques  
de Changins  
Route de Duillier  
CH-1260 Nyon

Telephone: (022) 61 54 51  
Telax: 419975  
Cable:  
Telefax: (022) 62 13 25

Curator/person in charge:	G. Kleijer
Details of collection:	<i>Hordeum vulgare</i> (spring), 783 landraces from Afghanistan (10), Austria (21), Switzerland (710) and 43 of unknown origin
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 6-7% m.c. in aluminium laminated foil packets
Duplication of collection:	FAL, Braunschweig, FRG and Beltsville, USA
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Some data available on plant height and disease resistance
Documentation:	Complete and computerized

**SWITZERLAND**

Eidg. Forschungsanstalt für landw.  
Pflanzenbau Zürich-Reckenholz  
Reckenholzstr., 191/211  
CH-8046 Zürich

Telephone: (01) 57 88 00  
Telex:  
Cable: Elvatest Zürich

Curator/person in charge:	F. Weilenmann
Details of collection:	<i>Hordeum vulgare</i> , 800 landraces
Maintenance of collection:	No information
Duplication of collection:	FAL, Braunschweig, FRG and NSSL, Fort Collins, USA
Availability:	No information
Quarantine:	No information
Evaluation:	Yield and disease resistance
Documentation:	No information

**SYRIA**

International Center for Agricultural Research  
in the Dry Areas (ICARDA)  
P.O. Box 5466  
Aleppo

Telephone: (21) 21 34 33/21 3477  
Telex: 331206 SY / 331208 SY  
Cable: ICARDA, Aleppo

Curator/person in charge: J. Valkoun

Details of collection: *Hordeum spontaneum*, 1252 accessions from Mediterranean and West Asia regions  
*H. vulgare*, 15942 total accessions. Landraces and cultivars (13683) of world-wide representation and breeding material (2259)

Maintenance of collection: Medium-term seed storage at 2°C and 20-25% RH

Duplication of collection: 12133 accessions of barley and 1155 accessions of *H. spontaneum* duplicated at USDA Small Grain Collection, Beltsville, Maryland, USA

Availability: Available to bona fide users and on exchange basis

Quarantine: No known restrictions

Evaluation: 95% of the barley landraces and cultivars has been evaluated according to IBPGR descriptor list.  
*H. spontaneum* accessions have been evaluated for growth habit, number of days to heading and for cold tolerance

Documentation: Computerized for passport and evaluation data

**SYRIA**

Genetic Resources Unit  
Agriculture Research Directorate  
P.O. Box 113  
Douma - Damascus

Telephone: 75 04 01  
Telex: 411634 SYR  
Cable: MINAGRI DAMS

Curator/person in charge: K.S. Obari

Details of collection: *Hordeum spontaneum*, 161 wild from Syria  
*H. vulgare*, 582 primitive cultivars from Syria

Maintenance of collection: Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)

Duplication of collection: Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work using IBPGR descriptor list

Documentation: Manual. On-going work

**TUNISIA**

Laboratoire de Génétique  
 Institut National Agronomique de Tunisie (INAT)  
 Ministère de l'Agriculture  
 43 Avenue Charles Nicolle  
 1002 Tunis - Belvédère

Telephone: 28 09 50  
 Telex:  
 Cable:

Curator/person in charge: A. Daaloul  
 Details of collection: *Hordeum vulgare*  
 Accessions from Tunisia  
 Maintenance of collection: Active collection  
 Duplication of collection: Istituto del Germoplasma, Bari, Italy  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**TURKEY**

Aegean Agricultural Research Institute (AARI)  
 P.O. Box 9  
 35661 Menemen - Izmir

Telephone: (51) 14 91 31  
 Telex:  
 Cable:

Curator/person in charge: The Directorate  
 Details of collection: *Hordeum* spp., 489 landraces, 7 old cultivars and 247 wild  
 Maintenance of collection: Long-term seed storage at -20°C. Seeds in metal cans. Medium-term seed  
 storage at 0°C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Stripe and stem rust resistance  
 Documentation: No information

**UNION OF SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR)  
 44, Herzen str.  
 Leningrad 190000

Telephone: (314) 48 48  
 Telex:  
 Cable:

Curator/person in charge: V.I. Krivchenko  
 Details of collection: *Hordeum spontaneum*  
*H. vulgare*  
 24082 local and breeding varieties and wild forms, including 17888  
 accessions in the main catalogue and 6194 in the temporary catalogue  
 from 74 countries  
 Maintenance of collection: Long-term seed storage at -10°C. Seeds with 5-7% m.c. in sealed glass  
 Short-term seed storage (working collection) at ambient temperatures.  
 Regeneration done every five years

Duplication of collection:	PGR, Ottawa, Canada; ZIGuK, Gatersleben, DDR; NSSL, Fort Collins, USA and in many other countries
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Passport data almost completely computerized. On-going for evaluation data

NB - *Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines*

## UNITED KINGDOM

National Institute of Agricultural Botany (NIAB)  
Huntingdon Road  
Cambridge CB3 0LE

Telephone: (0223) 27 63 81  
Telex: 817455 NIAB G  
Cable:

Curator/person in charge:	A.J. Eade
Details of collection:	<i>Hordeum vulgare</i> , 100 UK Definitive Seed Stock of the cultivars currently on the official National List (tested and added under EC Directives), donated by various breeders in UK and EC and other European countries, e.g. Sweden
Maintenance of collection:	Short-term seed storage at 10°C. Seeds with 10% m.c. in airtight metal or plastic containers of 1.25 kg. Storage capacity 96 m <sup>3</sup> . Retained for 6 seasons; if cultivar still on National List seed is replaced with authentic stock from breeder/maintainer checked for identity by growing in adjacent small plots
Duplication of collection:	DAFS, Agricultural Scientific Services, East Craigs, Edinburgh, UK
Availability:	Available in limited quantity. Applicable a small handling fee
Quarantine:	No known restrictions
Evaluation:	All entries grown each year at NIAB for DUS (Distinctness, Uniformity and Stability) Testing of new cultivars under EC Directives. Recorded for morphological characters in small drilled plots Descriptor List: UPOV and UK DUS Character Schedules
Documentation:	Administrative and test record data computerized

**UNITED KINGDOM**

Cambridge Laboratory  
 Institute of Plant Science Research (IPSR)  
 Agricultural & Food Research Council (AFRC)  
 Maris Lane  
 Trumpington  
 Cambridge CB2 2JB

Telephone: (0223) 84 09 32  
 Telex: 818280 PBICAM G  
 Cable:  
 Telefax: (0223) 84 01 67

Curator/person in charge: R.J. Giles

Details of collection: *Hordeum agriocrithon*, 18  
*H. chilense*, 4  
*H. spontaneum*, 13668 regenerated progenies and 980 lots of unregenerated single seeds from Israel  
*H. vulgare*, 10281 accessions, including 1926 named varieties, 2045 breeders' lines, 289 old varieties, 4453 landraces or selections from landraces and 383 genetic stocks

Maintenance of collection: Medium-term seed storage at 0°-1°C. Seeds with 5-6% m.c. in paper packets

Duplication of collection: A few British landraces at IHR, Wellesbourne, UK

Availability: Freely available for most of the accessions, normally 5 g/sample or 10 seeds of shattering rachis types

Quarantine: No known restrictions

Evaluation: Partial and on-going but restricted

Documentation: Complete and computerized. Institute germplasm catalogue in press

NB - *This collection is an amalgamation of those formerly maintained by the Scottish Crop Research Institute and the Plant Breeding Institute, UK*

**UNITED KINGDOM**

DAFS Cereal Cultivar Reference Collection  
 Agricultural Scientific Services  
 Department of Agriculture and Fisheries  
 for Scotland (DAFS)  
 East Craigs  
 Edinburgh EH 12 8NJ

Telephone: (031) 244 88 22  
 Telex: 727348 DAFASS G  
 Cable:  
 Telefax: (031) 244 89 40

Curator/person in charge: G.R. Chadwick

Details of collection: *Hordeum vulgare*, 960 accessions, including 860 old cultivars

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 10-12% m.c. in airtight screw-top bottles

Duplication of collection: Not duplicated

Availability: Available in limited quantity (100 seeds)

Quarantine: No known restrictions

Evaluation: Morphological and physiological description. 100 descriptors. On-going work

Documentation: Data held on card index. On-going work

## UNITED KINGDOM

Joseph Nickerson Research Centre  
 Nickerson RPB Ltd.  
 Rothwell  
 Lincoln LN7 5DT

Telephone: (0472) 894 71  
 Telex: 527072 AGSERV G  
 Cable:

Curator/person in charge: P.T. Gymer  
 Details of collection: *Hordeum vulgare*, 2500 accessions  
 Maintenance of collection: Medium-term seed storage at 5°C and 25% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## UNITED STATES OF AMERICA

National Small Grain Collection  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 P.O. Box 307  
 (208) 397 41 62  
 Aberdeen, Idaho 83210

Telephone: (208) 397 41 62  
 Telex:  
 Cable:  
 Telefax:

Curator/person in charge: Harold E. Bockelman  
 Details of collection: *Hordeum vulgare*, 12104 landraces and cultivars.  
*Hordeum* spp., 12928 accessions of other species.  
 World-wide representation  
 Maintenance of collection: As seeds; medium-term seed storage at 7°C, 40 % RH. Seeds in paper envelopes  
 Duplication of collection: National Seed Storage Laboratory (long-term storage), Fort Collins, Colorado, USA  
 Availability: Freely available; reciprocal exchange encouraged  
 Quarantine: Export: none  
 Import: restrictions apply to *Aegilops*, *Oryza*, *Triticum* and *x Triticosecale*  
 Evaluation: In progress  
 Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

## UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 Colorado State University Campus  
 Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
 Telex: 237401714 DNPA UC  
 Cable:  
 Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

**UNITED STATES OF AMERICA (cont.)**

Details of collection:	<i>Hordeum vulgare</i> , 9435 landraces and cultivars. World-wide representation <i>Hordeum</i> spp., 6916 accessions of 16 species
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets
Duplication of collection:	As an active collection at the National Small Grain Collection, Aberdeen, Idaho, USA
Availability:	Freely available only if not available from the active collection
Quarantine:	No information
Evaluation:	Responsibility of the Station holding the active collection
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

**YEMEN, PEOPLE'S DEMOCRATIC REPUBLIC**

Department of Research & Extension  
El-Kod Agricultural Research Centre  
Ministry of Agriculture & Agrarian Reform  
Abyan Gov

Telephone: 325 09 / 45 55  
Telex: 2243 AD FAO  
Cable: FOODAGRI ADEN

Curator/person in charge:	AB. S. Mu' Allem
Details of collection:	<i>Hordeum vulgare</i> , 4 landraces from PDR Yemen
Maintenance of collection:	Short-term seed storage at 25°C and 75% RH. Seeds with >8% m.c. in tin containers. Regeneration done yearly
Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	Phytosanitary certificate is required for import of material
Evaluation:	Due to start soon
Documentation:	Partial and manual

**YUGOSLAVIA**

Institute for Small Grains  
Save Kovacevica 31  
34000 Kragujevac

Telephone:  
Telex:  
Cable:

Curator/person in charge:	Z. Jestrovic
Details of collection:	<i>Hordeum vulgare</i> , 417 winter types and 588 spring types
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

# Millets

**AUSTRALIA**

Australian Tropical Field Crops  
Genetic Resources Centre  
Department of Primary Industries  
P.O. Box 201  
Biloela, Queensland 4715

Telephone: (61) 079-92 10 44  
Telex: 41620 AA  
Cable: QLDPRIMIND, Biloela

Curator/person in charge: P. Lawrence

Details of collection: *Pennisetum glaucum*, 300  
*Setaria italica*, 50  
All accessions are cultivars and elite lines

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 6% m.c. in aluminium laminated foil packets

Duplication of collection: No information

Availability: Available on exchange basis

Quarantine: Import, one generation in quarantine. No restrictions for export

Evaluation: Due to commence soon using modified IBPGR descriptor list

Documentation: Computerized

**AUSTRALIA**

Australian Tropical Forages Genetic  
Resources Centre  
CSIRO  
306 Carmody Road  
Sta. Lucia, Queensland 4067

Telephone: (07) 377 02 09  
Telex: 42159 AA  
Cable:  
Telefax: (07) 371 39 46

Curator/person in charge: R.J. Williams

Details of collection: *Echinochloa colona*, 2 accessions  
*E. crus-galli*, 1 accession  
*E. frumentacea*, 25 accessions  
*E. pyramidalis*, 12 accessions  
*E. turneriana*, 2 accessions  
*E. utilis*, 1 accession  
*Echinochloa* spp., 10 accessions

*Eleusine compressa*, 1 accession  
*E. coracana*, 14 accessions  
*Eleusine* spp., 2 accessions

*Eragrostis tef*, 5 accessions  
*Eragrostis* spp., 14 accessions

*Panicum miliaceum*, 160 accessions  
*P. sonorum*, 1 accession

*Paspalum scrobiculatum*, 22 accessions

*Pennisetum glaucum*, 212 accessions

*Setaria italica*, 119 accessions

Maintenance of collection: Long-term seed storage at -20°C. Storage capacity 12 m<sup>3</sup>  
Short-term seed storage at 5° to 10°C and 25% RH. Storage capacity 60 m<sup>3</sup>  
Seeds in aluminium laminated foil packets and plastic bottles

Duplication of collection:	No information
Availability:	Available provided there is sufficient seed
Quarantine:	Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate
Evaluation:	On-going work
Documentation:	Passport data complete and computerized

**BELGIUM**

Laboratoire de Phytotechnie Tropicale  
Faculté des Sciences Agronomiques  
Université Catholique de Louvain  
Place Croix du Sud, 3 - Sciences 15 D.  
B-1348 Louvain-La-Neuve

Telephone: (010) 43 37 39/41  
Telex: 59037 UCL B  
Cable:

Curator/person in charge:	B.-P. Louant
Details of collection:	<i>Eragrostis curvula</i> , 14 wild <i>E. tef</i> , 9 wild from Ethiopia  <i>Pennisetum glaucum</i> , 200 cultivars from Burkina Faso (3), Cameroon (22), Central African Republic (5), India (71), Mali (29), Niger (43), Nigeria (10) and Senegal (17)
Maintenance of collection:	Short-term seed storage at ambient temperatures. Seeds in plastic bags with silica gel
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	No information

**BULGARIA**

Institute of Introduction and  
Plant Genetic Resources "K. Malkov"  
District of Plovdiv  
BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
Telex: 44444 ZOS BG  
Cable:

Curator/person in charge:	B. Matsov / M. Zaharieva
Details of collection:	<i>Panicum miliaceum</i> , 97 breeding material from Hungary and USSR
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars Medium-term seed storage at 5°C and 50% RH
Duplication of collection:	Hungary, USA and USSR
Availability:	Available on exchange basis
Quarantine:	Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo

**BULGARIA (cont.)**

- Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economic characters, chemical composition and technological evaluation). Genetic and ecological studies
- Documentation: Computerized for passport and evaluation data

**CANADA**

Central Office for the Plant Gene Resources of Canada (PGRC)  
 Plant Research Centre  
 Central Experimental Farm  
 Building 99  
 Ottawa, Ontario K1A 0C6

Telephone: (613) 995 94 28  
 Telex:  
 Cable:

- Curator/person in charge: R.S. Pandeya
- Details of collection: *Pennisetum glaucum*, 500 landraces, wild and weedy types from Botswana, Kenya, Malawi, Nigeria, Yemen Arab Republic and Zambia
- Maintenance of collection: Long-term seed storage at -20°C. Seeds with 7-8% m.c. in aluminium laminated foil packets
- The Institute has agreed to accept responsibility for maintaining a global collection of *Pennisetum* for long-term conservation
- Duplication of collection: Duplicates at ICRISAT, India; Chitedze Agricultural Research Station, Lilongwe, Malawi and Mount Makulu Agricultural Research Station, Chilanga, Zambia
- Availability: No information
- Quarantine: No information
- Evaluation: In progress
- Documentation: Computerized

**CHINA, PEOPLE'S REPUBLIC OF**

Institute of Crop Germplasm Resources (ICGR)  
 Chinese Academy of Agricultural Sciences (CAAS)  
 Beijing

Telephone:  
 Telex:  
 Cable:

- Curator/person in charge: Xu Yun-tian
- Details of collection: *Panicum miliaceum*
- Setaria italica*, 3226 landraces  
 All accessions from China
- Maintenance of collection: Active at institutes of CAAS and at Provincial Agricultural Academies where storage conditions vary from room temperature to -10°C. The ICRG aims to coordinate the national germplasm activities. A medium-term seed storage is under construction in Beijing and a long-term seed storage is planned. This National Genebank will hold duplicates of all collections in China
- Duplication of collection: No information

Availability:	No information
Quarantine:	No information
Evaluation:	Plant height, leafiness, head size and compactedness, drought tolerance, pest resistance, glutinous or non glutinous endosperm. Cytoplasmic-genic male sterility found in collections from Hsinhsiang, Henan province
Documentation:	Manual

## CZECHOSLOVAKIA

Department of Genetic Resources  
Institute of Genetics and Plant Breeding  
16106 Prague 6 - Ruzyně 507

Telephone:  
Telex:  
Cable:

Curator/person in charge:	A. Drozdova
Details of collection:	<i>Echinochloa frumentacea</i> <i>Eleusine coracana</i> <i>E. indica</i> <i>Panicum miliaceum</i> <i>Setaria italica</i> <i>S. viridis</i> From Czechoslovakia and other countries
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at 3 <sup>o</sup> -4°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and in process of computerization

## ETHIOPIA

Plant Genetic Resources Centre/Ethiopia (PGRC/E)  
P.O. Box 30726  
Addis Ababa

Telephone: 18 03 81  
Telex: 21460 GTZFP ET  
Cable: GENE BANK

Curator/person in charge:	Melaku Worede
Details of collection:	<i>Eleusine coracana</i> , 939 landraces, including from Burundi (12), Nepal (70), Zambia (11) and Zimbabwe (353) <i>Eragrostis tef</i> , 3109 landraces <i>Pennisetum glaucum</i> , 130 landraces
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 5-7% m.c. in aluminium laminated foil packets Medium-term seed storage at 4°C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage

**ETHIOPIA (cont.)**

- Maintenance of collection: The Institute has agreed to accept responsibility for maintaining a global collection (*Eleusine* and *Eragrostis*) for long-term conservation
- Duplication of collection: Partially (337 samples of *Eragrostis*) in USA
- Availability: Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage
- Quarantine: Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture
- Evaluation: On-going work using modified IBPGR descriptor lists. *Eleusine*, evaluated for 19 characters, *Eragrostis*, 18 and *Pennisetum*, 25
- Documentation: On-going and computerized for passport, characterization and evaluation data

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völkrode  
Telefax: (531) 59 68 14

D-3300 Braunschweig

Curator/person in charge: L. Seidewitz

Details of collection: *Eragrostis pilosa*, 1 ecotype and 1 wild  
*E. tef*, 30 total accessions:  
- 17 ecotypes from Ethiopia (10), France (1) and 6 of unknown origin  
- 1 line  
- 6 selections from Ethiopia  
- 6 wild from Ethiopia (4) and 2 of unknown origin

*Pennisetum glaucum*, 5 lines and 24 ecotypes from Yemen

- Maintenance of collection: Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins  
Medium-term seed storage at 3°C and 30% RH
- Duplication of collection: Not duplicated
- Availability: Freely available
- Quarantine: No known restrictions
- Evaluation: Complete for 35 descriptors
- Documentation: All available data computerized. Passport data are available for practically all accessions

**FRANCE**

Office de la Recherches Scientifique  
et Technique d'Outre-Mer (ORSTOM)  
Services Scientifiques Centraux  
70-74 Route d'Aulnay  
F-93140 Bondy

Telephone:  
Telex:  
Cable:

Curator/person in charge: M.J. Pernes

Details of collection:	<i>Digitaria exilis</i> , 215 <i>Pennisetum glaucum</i> , 2100 Landraces, wild and weedy types from Benin, Burkina Faso, Cameroon, Central African Republic, Mali, Niger, Nigeria, Senegal and Togo
Maintenance of collection:	Medium-term seed storage at 5°C and 30% RH
Duplication of collection:	At Agricultural Institutes in the country of origin, except for Togo. Pearl millet collection, duplicated at ICRISAT, Hyderabad, India
Availability:	No information
Quarantine:	No information
Evaluation:	Agronomical characters, adaptation and disease resistance and notably resistance to <i>Sclerospora</i>
Documentation:	No information

### GERMAN DEMOCRATIC REPUBLIC

Zentralinstitut für Genetik  
und Kulturpflanzenforschung (ZIGuK)  
Corrensstrasse, 3  
DDR-4325 Gatersleben

Telephone: Gatersleben 50  
Telex: 48558 kupfga DDR  
Cable:

Curator/person in charge: Ch. Lehmann

Details of collection: *Echinochloa colona*  
*E. crus-galli*  
*E. frumentacea*

*Eleusine coracana*  
*E. indica*

*Panicum miliaceum*  
*P. spontaneum*

*Setaria italica*  
*S. viridis*

Total of 350 landraces, cultivars, wild and weedy types

Medium-term seed storage at -5° to 0°C and 30% RH

ass jars with silica gel

Duplication of collection: No information

Availability: Freely available. Index Seminum issued

Quarantine: No known restrictions

Evaluation: None

Documentation: Computerized for passport data

### HUNGARY

Research Centre for Agrobotany  
I.A.Q.  
H-2766 Tápiószele

Telephone: Tápiószele 41  
Telex: 226981 agbot H  
Cable:

Curator/person in charge: L. Banyai

**HUNGARY (cont.)**

- Details of collection: *Panicum* spp., 145 total accessions, including 42 landraces, 98 cultivars and 1 wild from Australia (1), Czechoslovakia (9), DDR (15), Hungary (72), Israel (1), Italy (1), Japan (4), Poland (2), Romania (3), USSR (35) and 2 of unknown origin
- Setaria italica*, 101 total accessions. Landraces (34) and cultivars (66) from China (12), Czechoslovakia (5), DDR (4), Hungary (56), Japan (2), Poland (12), Romania (2), Spain (1), USSR (6) and 1 of unknown origin
- Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at ±0°C. Seeds with 5% m.c. in airtight containers
- Duplication of collection: Partially duplicated
- Availability: Freely available provided there is sufficient seed. Index Seminum periodically issued
- Quarantine: Phytosanitary certificate required
- Evaluation: On-going work
- Documentation: Complete for passport data. Characterization data partial computerized

**INDIA**

Small Millets Germplasm Unit  
Project Coordinating Unit  
All India Coordinated Small Millets  
Improvement Project  
University of Agricultural Sciences  
GKVK Campus  
Bangalore 560065, Karnataka

Telephone: 33 23 87  
Telex:  
Cable:

- Curator/person in charge: A. Seetharam
- Details of collection: *Brachiaria ramosa*, 50 landraces from India
- Echinochloa frumentacea*, 646 landraces from India (5 States) (612), Japan (6) and 28 of unknown origin
- Eleusine coracana*, 4490 landraces and cultivars from Ethiopia (15), India (14 States) (2776), Kenya (243), Malawi (208), Sri Lanka (12), Tanzania (15), Uganda (29), Zambia (15), Zimbabwe (15) and 1162 of unknown origin
- Panicum miliaceum*, 577 landraces from Afghanistan (13), Bangladesh (1), India (7 States) (196), Japan (12), Romania (1), USSR (75) and 279 of unknown origin
- P. sumatrense*, 544 landraces and cultivars from India (9 States) (526), Romania (1) and 17 of unknown origin
- Paspalum scrobiculatum*, 965 landraces from India (8 States) (937), USA (10) and 18 of unknown origin
- Setaria italica*, 1300 landraces and cultivars from Afghanistan (1), African countries (3), France (1), India (13 States) (1175), Japan (16), Pakistan (2), Taiwan (China) (2), Turkey (5), USA (48), USSR (5) and 42 of unknown origin
- Maintenance of collection: Short-term seed storage at 20°C and 40% RH. Seeds with 10-12% m.c. in screw-top plastic containers
- Duplication of collection: As base collection at NBPGR, New Delhi, India

Availability:	Available on exchange basis. Requests through: The Director, NBPGR, Pusa Campus, New Delhi, India
Quarantine:	NBPGR will handle all material (import/export) and takes care of all quarantine requirements
Evaluation:	Full scale evaluation of all finger millet accessions in progress at 4 locations. For other crops partial evaluation on-going. IBPGR descriptors lists are followed
Documentation:	Manual

## INDIA

National Bureau of Plant Genetic Resources (NBPGR)  
 Indian Agricultural Research Institute (IARI)  
 Pusa Campus  
 New Delhi 110012

Telephone: 586908 / 589211  
 Telex: 31-63390 NBPGR IN  
 Cable:

Curator/person in charge: R.S. Rana

Details of collection: *Echinochloa* spp.

*Eleusine coracana*, 3 from Bhutan and Nepal  
*E. indica*, 3 from UK  
*Eleusine* spp., 14 from Tanzania

*Panicum coloratum*, 1 from Argentina  
*P. maximum*, 1  
*P. miliaceum*, 82 from Hungary and USSR

*Paspalum* spp.

*Pennisetum alopecuroides*, 1 from USA  
*P. glaucum*, 188 from Italy, Niger, USA and Zimbabwe  
*P. mollissimum*, 1 from USA  
*P. pedicellatum*, 16 from Italy  
*P. ramosum*, 1 from USA  
*P. violaceum*, 37 from Nigeria

*Setaria glauca*, 242 from Tanzania  
*S. italica*, 3 from Bangladesh and Buthan  
*S. sphacelata*, 1 from Argentina

Maintenance of collection: No information

The Institute has agreed to accept responsibility for maintaining a regional collection of "Minor Indian millets" for long-term conservation

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

## INDIA

Genetic Resources Unit  
International Crops Research Institute  
for the Semi-Arid Tropics (ICRISAT)  
Patancheru P.O.  
Andhra Pradesh 502 324

Telephone: (842) 22 40 16  
Telex: 0422-203 / 0425-6366  
Cable: CRISAT, Hyderabad  
Telefax: 91-842-24 12 39  
E-Mail Dialcom: 157:CGI505

Curator/person in charge: M.H. Mengesha

Details of collection: *Echinochloa* spp., 582 primitive cultivars, landraces, cultivars and a few wild species from 8 countries, donated by Agricultural Universities in India

*Eleusine coracana*, 2848 primitive cultivars, landraces, cultivars and a few wild species from 18 countries, donated by All India Coordinated Sorghum Improvement Project, India

*Panicum miliaceum*, 831 primitive cultivars, landraces, cultivars and a few wild species from 26 countries, donated by University of Illinois, USA  
*riense*, 401 primitive cultivars, landraces, cultivars and a few wild species from 1 country, donated by Agricultural Universities in India

*Paspalum scrobiculatum*, 544 primitive cultivars, landraces, cultivars and a few wild species from 2 countries, donated by Agricultural Universities in India

*Pennisetum glaucum*

*Pennisetum* spp.

21602 primitive cultivars, landraces, genetic stocks, breeders' lines, wild and spontaneous species and races, donated by All India Coordinated Millet Improvement Project, India; ORSTOM, France and Agricultural Universities in India

*Setaria italica*, 1404 primitive cultivars, landraces, cultivars and a few wild species from 22 countries, donated by Regional Plant Introduction Station, Ames, Iowa, USA

Maintenance of collection: Medium-term seed storage at 4°C and 20% RH. Seeds with 10% m.c. in aluminium cans

The Institute has agreed to accept responsibility for maintaining global collections (*Eleusine*, *Panicum miliaceum*, *Pennisetum* and *Setaria italica*) for long-term conservation

Duplication of collection: PGR, Ottawa, Canada (*P. glaucum*); ORSTOM, Bondy, France (West African *P. glaucum*); NBPGR, New Delhi and Bangalore, India; Chitedze Agricultural Research Station, Lilongwe, Malawi and Mount Makulu Agricultural Research Station, Chilanga, Zambia

Availability: Available in limited quantity (8-20 g) depending on crop

Quarantine: Import permit, additional declarations are required for export for some countries. Phytosanitary certificate and import permit are required for import

Evaluation: Partial for *P. glaucum* for plant height, head characters, maturity, grain type, environmental adaptation, disease resistance (rust, downy mildew, ergot and smut), pest resistance (stem borers, aphids, grasshoppers, ear-head caterpillar and spider mites) yield range. Partial for other millets: plant height, days to 50% flowering, pigmentation, lodging, peduncle exertion, panicle type, grain colour, glume length (for *Eleusine*) and bristling (for *Setaria*)

Documentation: On-going. Passport, characterization and evaluation data computerized

**ISRAEL**

Israel Gene Bank for Agricultural Crops  
 Volcani Centre  
 ARO  
 P.O. Box 6  
 50-250 Bet Dagan

Telephone: (03) 968 34 58  
 Telex: 381476 AROVC IL  
 Cable:  
 Telefax: 972-3-993398

Curator/person in charge: M. Zur  
 Details of collection: *Pennisetum* spp., 50 breeders' lines from USA  
 Maintenance of collection: Long-term seed storage at -10°C. Seeds in aluminium boxes of 1 kg capacity. Storage area 50 m<sup>2</sup>  
 Duplication of collection: No information  
 Availability: Available in limited quantity  
 Quarantine: Special conditions and treatment according to Plant Protection Law  
 Evaluation: Drought, salinity and disease resistance. High nutrition level  
 Documentation: Complete and computerized

**ITALY**

Istituto del Germoplasma  
 CNR  
 Via G. Amendola, 165/A  
 I-70126 Bari

Telephone: (080) 58 34 63  
 Telex: 810565 CNR/BA I  
 Cable:

Curator/person in charge: P. Perrino  
 Details of collection: *Pennisetum glaucum*, 32 landraces from Tunisia  
 Maintenance of collection: Long-term seed storage at -18°C. Seeds in airtight metal cans with silica gel  
 Medium-term seed storage at 0°C and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets  
 Duplication of collection: Tunis, Tunisia  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Complete and computerized

**JAPAN**

National Institute of Agrobiological Resources (NIAR)  
 Kannon-dai 2-1-2  
 Tsukuba, Ibaraki 305

Telephone: 02975-6-7050  
 Telex:  
 Cable: NIARTSUKUBA YATABE  
 Telefax: 02975-6-7408

Curator/person in charge: Head, Germplasm Storage Center

**JAPAN (cont.)**

- Details of collection: *Echinochloa crus-galli*, 254  
*E. oryzoides*, 39  
*E. utilis*, 126
- Eleusine coracana*, 75
- Panicum miliaceum*, 64
- Setaria italica*, 225  
 Old and commercial cultivars, landraces and wild from East Asia, Japan and South Asia
- Maintenance of collection: Long-term seed storage at -10°C  
 Medium-term seed storage at -1°C and 30% RH  
 Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml
- Duplication of collection: No information
- Availability: Freely available for research purposes. A fee is applicable for private institutions
- Quarantine: No information
- Evaluation: Standard manual published by specialists' consent
- Documentation: Computerized for passport data

**JAPAN**

Plant Germplasm Institute  
 Faculty of Agriculture  
 Kyoto University  
 Mukoshi  
 Kyoto 617

Telephone:  
 Telex:  
 Cable:

- Curator/person in charge: M. Tanaka
- Details of collection: *Echinochloa utilis*, 65  
*Eleusine coracana*, 58  
*Panicum miliaceum*, 62  
*Setaria italica*, 274
- All accessions are landraces
- Maintenance of collection: Medium-term seed storage at 5°C and 50-70% RH. Seeds in vacuum sealed cans
- Duplication of collection: NIAR, Tsukuba, Japan
- Availability: No information
- Quarantine: No information
- Evaluation: No information
- Documentation: Computerized

**KENYA**

National Dryland Farming Research Centre  
 P.O. Box 340  
 Katumani - Machakos

Telephone: 215 06/7  
 Telex:  
 Cable:

- Curator/person in charge: J.W. Kamau

Details of collection:	<p><i>Echinochloa crus-galli</i>, 17 landraces from India, donated by ICRISAT, India</p> <p><i>Eleusine coracana</i>, 1280 landraces from Kenya (280) and Uganda (1000), donated by Serere Research Station, Uganda and 246 elite lines from India, donated by ICRISAT, India</p> <p><i>Eragrostis superba</i>, 2 landraces from Kenya, donated by Kitale Research Station, Kenya</p> <p><i>Panicum maximum</i>, 19 landraces from Kenya, donated by Kitale Research Station, Kenya</p> <p><i>P. miliaceum</i>, 216 landraces from India, donated by ICRISAT, India</p> <p><i>Pennisetum glaucum</i>, 490 landraces from Kenya (468) and Uganda (22), donated by Serere Research Station, Uganda and 75 elite lines from India (69), donated by ICRISAT, Western Africa (5) and Zimbabwe (1), donated by KARI, Muguga</p> <p><i>P. purpureum</i>, 2 elite lines from the Rep. of South Africa, donated by Kitale Research Station, Kenya</p> <p><i>P. purpureum</i> x <i>P. glaucum</i>, 1 elite line from Pakistan, donated by PARC, Islamabad, Pakistan</p> <p><i>Setaria italica</i>, 435 landraces from India (430), donated by ICRISAT, India and Uganda (5), donated by Serere Research Station, Uganda. Primitive cultivars from Kenya (16)</p>
Maintenance of collection:	Medium-term seed storage at 4°C and no controlled humidity. Seeds in aluminium laminated foil packets
Duplication of collection:	Kitale Research Station, Kenya and PARC, Islamabad, Pakistan <i>Setaria</i> at ICRISAT, India and Serere Research Station, Uganda
Availability:	Requests through the Ministry of Research Science and Technology
Quarantine:	Normal plant quarantine procedures for import and export
Evaluation:	<i>Echinochloa</i> , <i>Panicum</i> and <i>Setaria</i> : On-going work according to IBPGR descriptor lists
Documentation:	Manual. On-going work

## MALAWI

Chitedze Agricultural Research Station  
P.O. Box 158  
Lilongwe

Telephone:  
Telex:  
Cable:

Curator/person in charge ::	P. Sibale
Details of collection:	<p><i>Eleusine coracana</i>, 277</p> <p><i>E. indica</i>, 12</p> <p><i>Pennisetum glaucum</i>, 291</p> <p>All accessions are landraces, wild and weedy types from Malawi</p>
Maintenance of collection:	Short-term seed storage at 6°-10°C and 50% RH. Seeds in tins, jars or packets
Duplication of collection:	PGR, Ottawa, Canada; NBPGR, New Delhi and ICRISAT, Hyderabad, India
Availability:	No information
Quarantine:	No information

**MALAWI (cont.)**

Evaluation: No information

Documentation: No information

**NIGERIA**

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70 / 31 26 22

Telex:

Cable: GENE BANK

Curator/person in charge: P.E. Onuorah

Details of collection: *Echinochloa* spp., 21 accessions*Panicum* spp., 50 accessions*Paspalum* spp., 294 accessions*Pennisetum* spp., 21 accessions*Setaria* spp., 45 accessions

Maintenance of collection: Long-term seed storage

Duplication of collection: No information

Availability: Available in limited quantity

Quarantine: No information

Evaluation: No information

Documentation: Manual. Passport data available

**PAKISTAN**

Plant Genetic Resources Laboratory  
National Agricultural Research Centre  
Pakistan Agricultural Research Council (PARC)  
P.O. Box 1031  
Islamabad

Telephone: 82 00 53 33

Telex: 5604 PARC PAK

Cable: AGRESCOUNCIL

Curator/person in charge: R. Anwar

Details of collection: *Pennisetum glaucum*, 104 local cultivars from Pakistan*Setaria italica*, 46 local cultivars from Pakistan

Maintenance of collection: Medium-term seed storage at 5°C ± 1°C. Seeds in cans

Duplication of collection: At several International Research Centres

Availability: Freely available provided there is sufficient seed

Quarantine: Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate

Evaluation: Partial

Documentation: Manual

## PAKISTAN

New Seed Farm  
Fodder Research Institute  
P.O. Box 43  
Sargodha

Telephone: 656 53  
Telex:  
Cable:

Curator/person in charge: A.R. Chaudhry  
Details of collection: *Pennisetum glaucum*, 6 elite lines, donated by ICRISAT and USA and 14 crosses locally developed  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: Not duplicated  
Availability: Freely available  
Quarantine: Imported material must go through quarantine  
Evaluation: On-going work  
Documentation: On-going work

## POLAND

Plant Breeding and Acclimatization Institute  
National Department of Plant Genetic Resources  
Radzików n/ Warsaw  
05-870 Blonie

Telephone: (22) 55 26 11/4  
Telex: 812914 IHAR PL  
Cable:

Curator/person in charge: St. Goral / B. Osinski  
Details of collection: *Pennisetum* spp., 228 landraces and wild types  
Maintenance of collection: Long-term seed storage at -15°C  
Medium-term seed storage at 0°C  
Seeds with 5-7% m.c. in glass containers under vacuum  
Duplication of collection: No information  
Availability: Available on exchange basis. Index Seminum issued  
Quarantine: No known restrictions  
Evaluation: Partial for adaptation, yield components and disease resistance  
Documentation: Computerized for passport data

## SRI LANKA

Agricultural Research Centre  
Maha Illuppallma

Telephone:  
Telex:  
Cable:

Curator/person in charge: J. Fernando  
Details of collection: *Eleusine coracana*, 31  
*Panicum miliaceum*, 4  
*Paspalum scrobiculatum*, 2  
All accessions from Sri Lanka  
Maintenance of collection: Active collection

**SRI LANKA (cont.)**

Duplication of collection: ICRISAT, Hyderabad, India  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**THAILAND**

National Corn and Sorghum Research Center  
 Kasetsart University  
 Pak Chong  
 30130 Nakorn Ratchasima  
 Telephone: (044) 31 17 70/312081  
 Telex:  
 Cable:

Curator/person in charge: R. Thiraporn

Details of collection: *Eleusine coracana*, 5 accessions  
*Panicum sumatrense*, 1 accessions  
*Pennisetum glaucum*, 63 accessions  
*Setaria italica*, 12 accessions  
 All accessions donated by ICRISAT, Hyderabad, India

Maintenance of collection: Short-term seed storage at 18°-19°C and 70% RH

Duplication of collection: Not duplicated

Availability: Available with the exception of elite lines

Quarantine: No known restrictions

Evaluation: Partial

Documentation: Manual

**TUNISIA**

Laboratoire de Génétique  
 Institut National Agronomique de Tunisie (INAT)  
 Ministère de l'Agriculture  
 43, Avenue Charles Nicolle  
 1002 Tunis - Belvédère  
 Telephone: 28 09 50  
 Telex:  
 Cable:

Curator/person in charge: A. Daaloul

Details of collection: *Pennisetum glaucum*, 32 landraces from Tunisia

Maintenance of collection: Active collection

Duplication of collection: Istituto del Germoplasma, Bari, Italy

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

## UNION OF SOVIET SOCIALIST REPUBLICS

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge: V.I. Krivchenko

Details of collection: *Echinochloa utilis*, 90 landraces and cultivars from PR China, India, USA and USSR

*Eleusine coracana*, 220 landraces and cultivars from Africa and India

*Panicum antidotale*, 10 primitive cultivars from Australia and Mali

*P. capillare*, 3 primitive cultivars and wild from DDR

*P. maximum*, 5 landraces from Australia

*P. miliaceum*, 8733 landraces and cultivars. World-wide representation

*P. virgatum*, 5 landraces from Australia and USA

*Paspalum dilatatum*, 5 wild from Australia and Uruguay

*P. notatum*, 5 wild and primitive cultivars from Brazil and USA

*Pennisetum glaucum*, 515 landraces and cultivars from Africa, India and USA

*Setaria italica*, 4720 landraces and cultivars. World-wide representation

*S. verticillata*, 5 wild from DDR

*S. viridis*, 5 wild from Bulgaria, Czechoslovakia and USSR

Maintenance of collection: Long-term seed storage at -10°C  
Medium-term seed storage at 4°C. Seeds with 6-7% m.c. in sealed glass containers

Duplication of collection: Partially at ZIGuK, Gatersleben, DDR; ICRISAT, India and NSSL, Fort Collins, USA

Availability: Available in accordance with the Exchange Catalogue regularly issued

Quarantine: According to the International Convention on Phytosanitary Plant Protection

Evaluation: Field and laboratory evaluation using the International COMECON descriptors list

Documentation: Manual. Passport data available

## UNITED STATES OF AMERICA

North Central Regional Plant Introduction Station  
Iowa State University  
USDA - ARS  
Ames, Iowa 50011

Telephone: (515) 294-32 55  
Telex:  
Cable:

Curator/person in charge: R.L. Clark / B.C. Abel

Details of collection: *Panicum miliaceum*, 631  
*P. sumatrense*, 336

*Setaria italica*, 734

*Setaria* spp., 199

All accessions are populations from various countries

Maintenance of collection: Medium-term seed storage at 4°C and 35-40% RH. Seeds in glass jars with screw-on lids

**UNITED STATES OF AMERICA (cont.)**

Duplication of collection:	NSSL, Fort Collins, USA
Availability:	Freely available
Quarantine:	No restrictions for export but restrictions on incoming seeds from Southern Asia
Evaluation:	Evaluation data on 14 plant descriptors are being collected as accessions are grown for increase
Documentation:	Computerized and complete. Database for Germplasm Resources Information Network (GRIN), National Agricultural Library, Beltsville, USA

**UNITED STATES OF AMERICA**

Southern Regional Plant Introduction Station  
1109 Experiment Street  
Griffin, Georgia 30223

Telephone:  
Telex:  
Cable:

Curator/person in charge:	W.R. Longford
Details of collection:	<i>Digitaria exilis</i> , 1 <i>D. iburua</i> , 1  <i>Echinochloa colona</i> , 5 <i>E. crus-galli</i> , 22 <i>E. frumentacea</i> , 2  <i>Eleusine coracana</i> , 43 <i>E. indica</i> , 4  <i>Panicum miliaceum</i> , 8  <i>Paspalum scrobiculatum</i> , 16  <i>Pennisetum glaucum</i> , 232  <i>Setaria italica</i> , 16 <i>S. viridis</i> , 1 World-wide representation
Maintenance of collection:	Medium-term seed storage
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Complete for morphological and agronomical characters
Documentation:	Computerized

**UNITED STATES OF AMERICA**

National Seed Storage Laboratory (NSSL)  
US Department of Agriculture (USDA)  
Agricultural Research Service (ARS)  
Colorado State University Campus  
Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
Telex: 237401714 DNPA UC  
Cable:  
Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

Details of collection:	<i>Eleusine coracana</i> , 1212 landraces and cultivars <i>Eragrostis tef</i> , 341 accessions <i>Panicum miliaceum</i> , 472 accessions <i>Pennisetum glaucum</i> , 475 landraces, cultivars, wild and weedy types <i>Setaria italica</i> , 507 accessions
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets The Institute has agreed to accept responsibility for maintaining a global collection of <i>Pennisetum</i> for long-term conservation
Duplication of collection:	As active collections at the Regional Plant Introduction Stations: <i>Eleusine</i> and <i>Pennisetum</i> , at Griffin, Georgia, USA <i>Eragrostis</i> , at Pullman, Washington, USA <i>Panicum</i> and <i>Setaria</i> , at Ames, Iowa, USA
Availability:	Freely available only if not available from the active collection
Quarantine:	No information
Evaluation:	Responsibility of the Station holding the active collection
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

#### UNITED STATES OF AMERICA

Coastal Plain Experiment Station  
USDA-ARS  
P.O. Box 748  
Tifton, Georgia 31793

Telephone: (912) 386 33 53  
Telex: 7401872 FORG UC  
Cable:  
Telefax: (912) 382 80 92

Curator/person in charge:	W.W. Hanna
Details of collection:	<i>Paspalum</i> spp., 300 accessions representing various species (mainly <i>P. notatum</i> ) from South America <i>Pennisetum glaucum</i> , 4550 accessions from Africa and India <i>Pennisetum</i> spp., 678 wild species and subspecies from various countries but mainly from Africa
Maintenance of collection:	Long-term seed storage at -5°C. Seeds with >10% m.c. in glass vials Medium-term seed storage at 5°C and 50% RH. Seeds in kraft envelopes As vegetative in the field: <i>P. purpureum</i> , <i>P. orientale</i> and <i>P. flaccidum</i>
Duplication of collection:	Partially at: <i>Paspalum</i> : Southern Plant Introduction Station, Experiment, GA and USDA-ARS, Temple, TX, USA <i>Pennisetum</i> : ICRISAT, Hyderabad, India and Southern Plant Introduction Station, Griffin, GA, USA
Availability:	Freely available
Quarantine:	Phytosanitary certificate and import permit (where required)
Evaluation:	On-going work
Documentation:	Computerization in progress for passport and evaluation data

**YEMEN, PEOPLE'S DEMOCRATIC REPUBLIC**

Department of Research & Extension  
 El-Kod Agricultural Research Centre  
 Ministry of Agriculture & Agrarian Reform  
 Abyan Gov

Telephone: 325 09 / 45 55  
 Telex: 2243 AD FAO  
 Cable: FOODAGRI ADEN

Curator/person in charge: AB. S. Mu' Allem

Details of collection: *Eleusine coracana*, 1  
*Panicum rigidum*, 1  
*Pennisetum glaucum*, 1  
*P. setaceum*, 1  
 All accessions are landraces from PDR Yeren

Maintenance of collection: Short-term seed storage at 25°C and 75% RH. Seeds with >8% m.c. in tin containers. Regeneration done yearly

Duplication of collection: Not duplicated

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate is required for import of material

Evaluation: Due to start soon

Documentation: Partial and manual

**ZAMBIA**

Mount Makulu Research Station  
 Private Bag 7  
 Chilanga

Telephone: 27 86 55  
 Telex:  
 Cable: Research Chilanga

Curator/person in charge: C. Nkhoma

Details of collection: *Eleusine coracana*, 8 landraces and primitive cultivars from Zambia  
*Pennisetum glaucum*, 83 landraces and primitive cultivars from Zambia

Maintenance of collection: Short-term seed storage at 10°C and no controlled humidity. Seeds in aluminium laminated foil packets of 10 cm x 20 cm

Duplication of collection: NSSL, Fort Collins, USA

Availability: Available with the only condition of information feed-back

Quarantine: Import and export seeds must be accompanied with phytosanitary certificate

Evaluation: Partial for yield components

Documentation: Partial and manual



**AFGHANISTAN**

Plant Genetic Resources Unit  
Ministry of Agriculture and Land Reform  
Darul Aman Research Station  
Kabul

Telephone:  
Telex:  
Cable:

- Curator/person in charge: M.A. Rashid
- Details of collection: *Oryza sativa*, 102 landraces
- Maintenance of collection: Medium-term seed storage at 0°C and 35% RH. Seeds in cans. Active collection
- Duplication of collection: Partially duplicated in base storage at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, USA
- Availability: No information
- Quarantine: No information
- Evaluation: No information
- Documentation: Partial and manual

**ARGENTINA**

Estación Experimental Agropecuaria  
Instituto Nacional de Tecnología Agropecuaria (INTA)  
C.P. 5988  
Manfredi - Córdoba

Telephone:  
Telex:  
Cable:

- Curator/person in charge: R. Mantironi / J.H. Larocca
- Details of collection: *Oryza sativa*, 3200 accessions
- Maintenance of collection: Active collection
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: No information
- Documentation: Partial and manual

**AUSTRALIA**

Australian Tropical Field Crops  
Genetic Resources Centre  
Department of Primary Industries  
P.O. Box 201  
Biloela, Queensland 4715

Telephone: (61) 079-92 10 44  
Telex: 41620 AA  
Cable: QLDPRIMIND, Biloela

- Curator/person in charge: P. Lawrence
- Details of collection: *Oryza sativa*, 2500 cultivars and elite lines
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 6% m.c. in aluminium laminated foil packets
- Duplication of collection: No information
- Availability: Available on exchange basis

Quarantine:	Import, one generation in quarantine. No restrictions for export
Evaluation:	Due to commence soon using modified IBPGR descriptor list
Documentation:	Computerized

**BANGLADESH**

Bangladesh Rice Research Institute Joydebpur Dhaka	Telephone: 40 30 98 / 69 12 00 Telex: Cable: RICERES, Dhaka
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Curator/person in charge:	N.M. Miah
Details of collection:	<i>Oryza glaberrima</i> , 200 exotic varieties from W. Africa, donated by WARDA, Bouake, Côte d'Ivoire <i>O. sativa</i> subsp. <i>indica</i> , 3950 total accessions. Landraces from Bangladesh (3700); breeding lines from Bangladesh (100) and exotic varieties and breeding lines from India and The Philippines (150), donated by IRRI <i>O. sativa</i> subsp. <i>japonica</i> , 75 exotic varieties from Japan <i>Oryza</i> spp., 40 wild, donated by IRRI
Maintenance of collection:	Medium-term seed storage at 0°-5°C. Seeds with 10% m.c. in aluminium laminated foil packets inside airtight glass jars with silica gel Short-term seed storage at 20°C. Seeds with 10% m.c. in paper envelopes in glass jars with silica gel
Duplication of collection:	IRRI, The Philippines
Availability:	Available on exchange basis
Quarantine:	Import material must be insect pests and pathogen free
Evaluation:	On-going work according to IRRI standards
Documentation:	On-going work

**BRAZIL**

Centro Nacional de Recursos Genéticos (CENARGEN) Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA) Cx. P. 102372 70000 Brasília D.F.	Telephone: Telex: Cable:
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Curator/person in charge:	E.A. Vilela Morales
Details of collection:	<i>Oryza sativa</i> , 463 landraces
Maintenance of collection:	Long-term seed storage at -18°C Medium-term seed storage at -1°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Computerized

**BULGARIA**

Institute of Introduction and  
Plant Genetic Resources "K. Malkov"  
District of Plovdiv  
BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
Telex: 44444 ZOS BG  
Cable:

- Curator/person in charge: B. Matsov / M. Zaharieva
- Details of collection: *Oryza sativa*, 10 landraces, 185 breeding material and 10 breeding lines from France, Hungary, Italy, Japan, Spain and USSR
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
Medium-term seed storage at 5°C and 50% RH
- Duplication of collection: France, Hungary, Italy, Japan, Spain and USSR
- Availability: Available on exchange basis
- Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo
- Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economical characters, chemical composition and technological evaluation). Genetic and ecological studies
- Documentation: Computerized for passport and evaluation data

**BURMA**

Agricultural Research Institute  
Central Farm  
Hwambi Extension Service  
Yezin

Telephone:  
Telex:  
Cable:

- Curator/person in charge: U. Ohn Kyan
- Details of collection: *Oryza sativa*, from Burma
- Maintenance of collection: Medium-term seed storage at 4<sup>o</sup>-5<sup>o</sup>C
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Partial for adaptability
- Documentation: No information

**CHINA, PEOPLE'S REPUBLIC OF**

Institute of Crop Germplasm Resources (ICGR)  
Chinese Academy of Agricultural Sciences (CAAS)  
Beijing

Telephone:  
Telex:  
Cable:

- Curator/person in charge: Xu Yun-tian
- Details of collection: *Oryza sativa*  
*O. officinalis*  
*O. meyeriana*  
*O. sativa* var. *spontaneum*

Details of collection: (cont.)	1000 wild from the provinces of Guangdong, Guangxi and Yunnan, China
Maintenance of collection:	Active at institutes of CAAS and at Provincial Agricultural Academies where storage conditions vary from room temperature to -10°C. The ICRG aims to coordinate the national germplasm activities. A medium-term seed storage is under construction in Beijing and a long-term seed storage in the National Genebank will hold duplicates of all collections in China
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Partial for quality, tolerance to low temperatures and resistance to lodging and rice blast
Documentation:	Manual

## CHINA

Taiwan Agricultural Research Institute  
189 Chung-Cheng Road  
Wufeng, Taichung  
Taiwan 41301

Telephone: (04) 330 23 01  
Telex: 3338162  
Cable:

Curator/person in charge:	C.C. Tu
Details of collection:	<i>Oryza sativa</i> , 3984 mostly cultivars mainly from China and Southeast Asia
Maintenance of collection:	Medium-term seed storage at 5°C and 40-50% RH. Seeds in PVC containers of 60 cm <sup>3</sup>
Duplication of collection:	No information
Availability:	Available in limited quantity and on exchange basis (5-10 g)
Quarantine:	Phytosanitary certificate required for export or import of material
Evaluation:	On-going work for 72 characters
Documentation:	Partial and computerized

## COLOMBIA

Instituto Colombiano Agropecuario (ICA)  
Tibaitatá  
A.A. 151123  
El Dorado - Bogotá

Telephone:  
Telex:  
Cable:

Curator/person in charge:	
Details of collection:	<i>Oryza</i> spp., 500 cultivars and 500 breeding lines About 10% of the cultivars from Colombia and the rest from many other countries
Maintenance of collection:	Short-term seed storage at 12°C and 65% RH. Long-term seed storage facilities planned
Duplication of collection:	IRRI, Manila, Philippines

**COLOMBIA (cont.)**

Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and computerized

**COTE D'IVOIRE**

West Africa Rice Development  
Association (WARDA)  
01 B.P. 2551 Bouaké 01

Telephone: (225) 63 45 14/633242  
Telex: 69138 ADRAO CI,BOUAKE  
Cable: ADRAO BOUAKE CI  
E-Mail: 157:CGI125  
Telefax: (225) 63 47 14

Curator/person in charge:	A.O. Abifarin
Details of collection:	<i>Oryza barthii</i> <i>O. longistaminata</i> <i>O. sativa</i> <i>Oryza</i> spp. 5400 accessions from Côte d'Ivoire, France, Gambia, Guinea-Bissau, India, Japan, Liberia, Mali, Nigeria, Philippines, Senegal and Sierra Leone
Maintenance of collection:	Medium-term seed storage at 0 <sup>o</sup> -5 <sup>o</sup> C and 65-75% RH Short-term seed storage at 5 <sup>o</sup> -10 <sup>o</sup> C Seeds with 9-1% m.c. in plastic bottles with rubber-lined metal caps. Storage capacity 59 m <sup>3</sup>
Duplication of collection:	Partially at IRRI, Philippines (618 accessions) and IITA, Nigeria (988 accessions)
Availability:	No information
Quarantine:	No information
Evaluation:	Done under non-toxic and iron-toxic soil conditions for: Plant type, yield potential, tolerance to salinity, acid sulphate soil conditions, upland soil acidity, cold, heat and pests and disease (blast, stem borers, spider mites, etc.)
Documentation:	Computerized

**ETHIOPIA**

Plant Genetic Resources Centre/Ethiopia (PGRC/E)  
P.O. Box 30726  
Addis Ababa

Telephone: 18 03 81  
Telex: 21460 GTZFP ET  
Cable: GENE BANK

Curator/person in charge:	Melaku Worede
Details of collection:	<i>Oryza</i> spp., 129 wild, including from Burundi (50) and Philippines (55)
Maintenance of collection:	Long-term seed storage at -10 <sup>o</sup> C. Seeds with 5-7% m.c. in aluminium laminated foil packets Medium-term seed storage at 4 <sup>o</sup> C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage
Duplication of collection:	No information

Availability:	Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage
Quarantine:	Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture
Evaluation:	No information
Documentation:	On-going and computerized for passport, characterization and evaluation data

## FRANCE

Institut de Recherches Agronomiques Tropicales et des Cultures Vivrières (IRAT) Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) B.P. 5035 F-34032 Montpellier Cedex 1	Telephone: (67) 61 58 00 Telex: 49080762 F Cable: Telefax: (67) 61 59 88
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Curator/person in charge:	R. Vandevenne
Details of collection:	<i>Oryza sativa</i> , 4825 landraces and cultivars from 62 different countries <i>Oryza</i> spp., 2000 landraces and wild from Africa
Maintenance of collection:	Medium-term seed storage at 5°C
Duplication of collection:	IRRI, Manila, Philippines
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	Partial and computerized for passport data

## FRANCE

Institut de Recherches Agronomiques Tropicales (IRAT) 110 rue de l'Université 75340 Paris Cedex 07 - and - Office de la Recherche Scientifique et Technique d'Outre-Mer (ORSTOM) 24 rue Bayard 75008 Paris	Telephone: Telex: Cable:
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Curator/person in charge:	M. Jacquot (IRAT) M.J. Pernes (ORSTOM)
Details of collection:	<i>Oryza barthii</i> , 292 <i>O. glaberrima</i> , 636 <i>O. longistaminata</i> , 158 <i>O. sativa</i> , 996 <i>Oryza</i> spp., 36 Landraces, wild and weedy species from Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Mali, Senegal, Tanzania and Zambia (including bordering areas of Botswana and Malawi)

**FRANCE (cont.)**

Maintenance of collection:	Medium-term seed storage at 5°C and 30% RH at ORSTOM, Bondy, France
Duplication of collection:	ORSTOM, Abidjan and IRAT, Bouake, Côte d'Ivoire; WARDA, Bouake, Côte d'Ivoire; IITA, Ibadan, Nigeria and IRRI, Manila, Philippines
Availability:	No information
Quarantine:	No information
Evaluation:	In progress in Côte d'Ivoire and France for agronomical characters and disease resistance
Documentation:	No information

**GHANA**

Plant Introduction and Exploration Section:  
Agricultural Research Station  
Crops Research Institute  
Bunso

Telephone:  
Telex:  
Cable:

Curator/person in charge:	H.L.O. Holloway
Details of collection:	<i>Oryza spp.</i> , 358 landraces from Ghana
Maintenance of collection:	Active collection
Duplication of collection:	Agricultural Research Station, Okumaning, Ghana and IITA, Ibadan, Nigeria
Availability:	Available in limited quantity
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

**HUNGARY**

Irrigation Research Institute  
Szabadság u. 2  
H-5540 Szarvas

Telephone: Szarvas 214  
Telex: 82471  
Cable:

Curator/person in charge:	G. Marjai
Details of collection:	<i>Oryza sativa</i> , 15 old cultivars and 80 mutant/genetic stocks
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

## INDIA

Central Rice Research Institute (CRRI)  
Cuttack - 6

Telephone:  
Telex:  
Cable:

Curator/person in charge: J.K. Roy

Details of collection: *Oryza* spp., 14905 landraces, cultivars and wild species mainly from India

Maintenance of collection: Medium-term seed storage at 1<sup>st</sup>-5°C and 50% RH

Duplication of collection: WARDA, Bouake, Côte d'Ivoire; IRRI, Manila, Philippines; VIR, Leningrad, USSR; USA and Vietnam

Availability: No information

Quarantine: No information

Evaluation: Complete for 6000 samples for environmental stresses, protein level and partial for disease and pest resistance (in total 60 characters)

Documentation: No information

## INDIA

National Bureau of Plant Genetic Resources (NBPGR)  
Indian Agricultural Research Institute (IARI)  
Pusa Campus  
New Delhi 110012

Telephone: 586908 / 589211  
Telex: 31-63390 NBPGR IN  
Cable:

Curator/person in charge: R.S. Rana

Details of collection: *Oryza australiensis*, 1  
*O. barthii*, 1  
*O. brachyantha*, 1  
*O. coarctata*, 1  
*O. eichingeri*, 1  
*O. glaberrima*, 22  
*O. granulata*, 3  
*O. longiglumis*, 1  
*O. longistaminata*, 2  
*O. latifolia*, 2  
*O. meridionalis*, 3  
*O. japonica*, 5  
*O. meyeriana*, 3  
*O. minuta*, 1  
*O. nivara*, 9  
*O. officinalis*, 8  
*O. perennis*, 2  
*O. ridleyi*, 2  
*O. rufipogon*, 4  
*O. sativa*, 12790 from Bhutan, France, Indonesia, Japan, Nigeria and Philippines  
*O. nivara* x *O. rufipogon*, 2  
*O. rufipogon* x *O. nivara*, 2  
*O. rufipogon* x *O. sativa*, 1  
*O. sativa* x *O. spontanea*, 1  
*O. sativa* x *O. nivara*, 4  
All accessions but *O. sativa*, from the Philippines

Maintenance of collection: No information

Duplication of collection: No information

Availability: No information

**INDIA (cont.)**

Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**INDONESIA**

Central Research Institute for Agriculture  
 Jalan Merdeka 99  
 Bogor

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: B.H. Siwi  
 Details of collection: *Oryza sativa*, 5917 landraces and cultivars, including races *indica* and *javanica* from Indonesia and other southeast Asian countries  
 Maintenance of collection: Medium-term seed storage at 4°C  
 Duplication of collection: IRRI, Manila, The Philippines  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Partial for resistance to brown plant hopper  
 Documentation: No information

**IRAN**

Plant Genetic Resources Division  
 Seed and Plant Improvement Institute (SPPI)  
 Karaj

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: P. Vojdani  
 Details of collection: *Oryza sativa*, 495 landraces and cultivars from Iran  
 Maintenance of collection: Short-term seed storage at ambient temperatures  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Partial for blast resistance  
 Documentation: No information

**IRAQ**

Plant Genetic Resources Unit  
 Agricultural Research Centre  
 Abu Ghraib - Baghdad

Telephone: (01) 511 22 01  
 Telex:  
 Cable: SBAAR - IRAQ

Curator/person in charge: A.T. Sharif  
 Details of collection: *Oryza sativa*, 29 cultivated from Iraq  
 Maintenance of collection: Short-term seed storage at 5°-10°C. Seeds in airtight cans. Storage capacity 40 m<sup>3</sup>

Duplication of collection: Istituto del Germoplasma, Bari, Italy  
 Availability: Freely available  
 Quarantine: No known restrictions  
 Evaluation: Partial  
 Documentation: Manual. On-going

**JAPAN**

National Institute of Agrobiological Resources (NIAR)  
 Kannon-dai 2-1-2  
 Tsukuba, Ibaraki 305

Telephone: 02975 6-7050  
 Telex:  
 Cable: NIARTSUKUBA YATABE  
 Telefax: 02975-6-7408

Curator/person in charge: Head, Germplasm Storage Center

Details of collection: *Oryza sativa*  
*O. sativa f. spontanea*  
 11559 old and commercial cultivars, landraces, elite lines and wild species from East, South and Southeast Asia, Europe, Japan and North America

Maintenance of collection: Long-term seed storage at -10°C  
 Medium-term seed storage at -1°C and 30% RH  
 Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml

The Institute has agreed to accept responsibility for maintaining a global collection of *Oryza sativa* race *japonica* for long-term conservation

Duplication of collection: No information

Availability: Freely available for research purposes. A fee is applicable for private institutions

Quarantine: Import unhulled rice should undergo inspection following quarantine regulations

Evaluation: Standard manual published by specialists' consent

Documentation: Computerized for passport data

**KOREA, REPUBLIC OF**

Agricultural Experiment Station  
 249 Seodun dong  
 Suwon 6191-3

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: G.S. Chung

Details of collection: *Oryza* spp., 4227 landraces and introduced cultivars

Maintenance of collection: Long-term seed storage at -10°C and 50% RH. Seeds in aluminium cans  
 Medium-term seed storage at -1°C and 60% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information

**KOREA, REPUBLIC OF (cont.)**

Evaluation: Korean material complete for blast resistance and cold tolerance  
 Documentation: No information

**LIBERIA**

Central Agricultural Experiment Station (CAES) Telephone:  
 Suakoko Telex:  
 Bong County Cable:

Curator/person in charge:

Details of collection: *Oryza glaberrima*, 60  
*O. sativa*, 409  
 All accessions are landraces from Liberia

Maintenance of collection: Active collection

Duplication of collection: IITA, Ibadan, Nigeria

Availability: No information

Quarantine: No information

Evaluation: Complete for plant height, tillering, growth period, photoperiod sensitivity and grain size and shape

Documentation: No information

**MADAGASCAR**

Institut de Recherches Agronomiques Telephone:  
 B.P. 1444 Telex:  
 Tananarivo Cable:

Curator/person in charge: M. Arrandeu

Details of collection: *Oryza sativa*, 2000 accessions

Maintenance of collection: Active collection

Duplication of collection: IRAT, France

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**MALAWI**

Chitedze Agricultural Research Station Telephone:  
 P.O. Box 158 Telex:  
 Lilongwe Cable:

Curator/person in charge: P. Sibale

Details of collection: *Oryza* spp., 1400 landraces and cultivars, including 550 indigenous varieties from Bangladesh, China, Côte d'Ivoire, El Salvador, India, Indonesia, Japan, Kenya, Malawi, Malaysia, Pakistan, Senegal, Sierra Leone, Sri Lanka, Surinam, Thailand and USA

Maintenance of collection:	Short-term seed storage at 6°-10°C and 50% RH. Seeds in tins, jars or packets
Duplication of collection:	Partially at IITA, Ibadan, Nigeria
Availability:	No information
Quarantine:	No information
Evaluation:	Partial for yield components and disease resistance
Documentation:	No information

## MALAYSIA

Rice Genebank  
MARDI Seberang Prai  
Bertan  
P.O. Box 203  
Kepala Batas

Telephone: (04) 35 11 95  
Telex: 37115 MA  
Cable:

Curator/person in charge: A.Md. Zain

Details of collection: *Oryza sativa*, 5333 old and modern varieties, pure lines, elite breeding lines and special purpose types from Bangladesh (55), Burma (23), PR China (9), India (177), Indonesia (75), Japan (149), Malaysia (2897), Pakistan (28), Peru (30), Philippines (14), Sri Lanka (39), Surinam (21), Taiwan (China) (59), Thailand (68), USA (28), 592 donated by IRRI, Philippines and 991 of unknown origin  
*Oryza* spp., 12 wild types being 2 local and 10 donated by IRRI, Philippines

Maintenance of collection: Long-term seed storage at -10°C. Seeds with <9% m.c. in vacuum sealed aluminium laminated foil packets  
Medium-term seed storage at 5°-10°C and 50-60% RH. Seeds with <12 m.c. in plastic bottles with screw cap  
New cold rooms for medium-term seed storage at 4°C and 30%RH with the capacity of 40.7 m<sup>3</sup> and 30 m<sup>3</sup> in process of installation  
An air-conditioned room which houses the cold rooms, maintained at 20 ±1°C and 50-60% RH, will be used for short-term seed storage

Duplication of collection: Almost all the accessions at MARDI Headquarters, Serdang, Selangor, Malaysia and International Rice Germplasm Centre (IRGC), Philippines  
In a near future a full duplication will be sent to Koitotron Seed Bank, Bambang Lima, Malaysia

Availability: Available on exchange basis

Quarantine: Normal procedures as adopted by most countries

Evaluation: About 63% of the collection have been evaluated for 36 descriptors. Complete for screening for Blast and Brown planthopper resistance and on-going for Bacterial Leaf Blight (BLB), PMV and Green leafhopper (GLH), according to IBPGR-IRRI descriptor list

Documentation: Computerization planned

**NEPAL**

Agricultural Development Office  
Kathmandu

Telephone:  
Telex:  
Cable:

Curator/person in charge: G.L. Shrestha  
 Details of collection: *Oryza sativa*, 780 landraces from Nepal  
 Maintenance of collection: Short-term seed storage at ambient temperatures. Seeds in cloth bags  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Partial for photoperiod sensitivity, bacterial blight resistance and protein content  
 Documentation: No information

**NICARAGUA**

Programa de Recursos Genéticos Nicaragüenses (REGEN)  
 Instituto Superior de Ciencias Agropecuarias (ISCA)  
 Apartado 453  
 Carretera Norte km 12,5  
 Managua

Telephone: 319 68 / 316 19 Ext. 14  
 Telex:  
 Cable:

Curator/person in charge: C. Henry Loáisiga C.  
 Details of collection: *Oryza sativa*, 47 from Nicaragua  
 Maintenance of collection: Medium-term seed storage at 0°C and 55-60% RH. Seeds in aluminium laminated foil packets  
 Duplication of collection: No information  
 Availability: Freely available  
 Quarantine: Phytosanitary certificate required  
 Evaluation: No information  
 Documentation: Computerized for passport, characterization and evaluation data

**NIGERIA**

National Cereals Research Institute  
 Badeggi  
 P.M.B. 8  
 Bida

Telephone: (066) 46 12 33  
 Telex:  
 Cable: CERESARCH

Curator/person in charge: J.A. Akinremi  
 Details of collection: *Oryza glaberrima*, 21 landraces  
*O. sativa*, 3498 cultivars, elite lines and improved varieties  
 Accessions from Indonesia, Philippines, USA and West African Sub-regions

Maintenance of collection:	Long-term seed storage at -10° to -16°C and 45% RH. Seeds with 13% m.c. in polythene bags Short-term seed storage at ambient temperatures. Seeds in cloth bags
Duplication of collection:	National Centre for Genetic Resources and Biotechnology, Moor Plantation, P.M.B. 5382, Ibadan, Nigeria
Availability:	Available
Quarantine:	Import permit required
Evaluation:	On-going work
Documentation:	Partial for passport data

**NIGERIA**

Genetic Resources Unit (GRU)  
International Institute of Tropical  
Agriculture (IITA)  
PMB 5320, Oyo Road  
10074:CGU 018  
Ibadan

Telephone: (234-22) 40 03 00-317  
Telex: 31417 TROPIB NG  
Cable: TROPFOUND, IKEJA  
E-Mail:  
Telefax: (234-1) 66 91 85

Curator/person in charge:	N.Q. Ng
Details of collection:	<i>O. glaberrima</i> , 2557 <i>O. sativa</i> , 9600 <i>Oryza</i> spp., 183 wild
Maintenance of collection:	Long-term seed storage at -20°C. Seeds with 6-7% m.c. in aluminium cans Medium-term seed storage at 5°C and 30-35% RH. About one kg of seeds in plastic screw-top jars  The Institute has agreed to accept responsibility for maintaining an African collection of <i>Oryza sativa</i> for long-term conservation
Duplication of collection:	NIAR, Tsukuba, Japan and IRRJ, Los Baños, Philippines
Availability:	Freely available
Quarantine:	Import seeds must pass post-entry observation by the Nigeria Federal Department of Agriculture, Plant Quarantine Service
Evaluation:	On-going work for 44 characters on agrobotanical characteristics; disease, insect and pest resistance and resistance to physiological stresses
Documentation:	Complete and computerized

**NIGERIA**

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70/312622  
Telex:  
Cable: GENE BANK

Curator/person in charge:	P.E. Onuorah
Details of collection:	<i>Oryza</i> spp., 30 accessions

**NIGERIA (cont.)**

Maintenance of collection:	Long-term seed storage
Duplication of collection:	No information
Availability:	Available in limited quantity
Quarantine:	No information
Evaluation:	No information
Documentation:	Manual. Passport data available

**PAKISTAN**

Plant Genetic Resources Laboratory  
National Agricultural Research Centre  
Pakistan Agricultural Research Council (PARC)  
P.O. Box 1031  
Islamabad

Telephone: 82 00 53 33  
Telex: 5604 PARC PAK  
Cable: AGRESCOUNCIL

Curator/person in charge:	R. Anwar
Details of collection:	<i>Oryza sativa</i> , 1558 primitive cultivars and elite lines from Pakistan, donated by Rice Research Institute, Kala Shah Kaku and Dokri, Pakistan
Maintenance of collection:	Medium-term seed storage at 5°C ±1°C. Seeds in cans
Duplication of collection:	At several International Research Centres
Availability:	Freely available provided there is sufficient seed
Quarantine:	Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate
Evaluation:	Partial
Documentation:	Manual

**PHILIPPINES**

Maligaya Rice Research and Training Centre  
Bureau of Plant Industry (BPI)  
Maligaya

Telephone:  
Telex:  
Cable:

Curator/person in charge:	T.M. Masajo
Details of collection:	<i>Oryza sativa</i> , 735 lowland varieties and 108 upland varieties
Maintenance of collection:	Short-term seed storage at ambient temperatures. Seeds in galvanized iron cans
Duplication of collection:	IRRI, Manila, Philippines
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

## PHILIPPINES

International Rice Germplasm Center (IRGC)  
 International Rice Research Institute (IRRI)  
 P.O. Box 933  
 Manila

Telephone: 742-0717 / 742-0580  
 Telex: 45365 RICE INST PM  
 Cable: RICEFOUND MANILA  
 Telefax: (63-2) 817-8470  
 E-Mail: (57) CGI-401

Curator/person in charge: T.T. Chang / K.A. Gomez / D.A. Vaughan

Details of collection: *Oryza glaberrima*, 2412 landraces from Africa  
*O. sativa*, 76498 mainly landraces. World-wide representation  
*Oryza* spp., 2375 wild types of 19 species. World-wide representation  
 In addition 995 genetic testers and mutants from many countries  
 11 accessions of wild species in genera related to *Oryza*, belonging to 3  
 species in 6 related genera: *Chikusichloa*, *Hygroryza*, *Leersia*, *Porteresia*,  
*Potamophila* and *Rhynchoryza*

Maintenance of collection: Long-term seed storage at -10°C and 37% RH. Seeds with 6% m.c. in  
 vacuum sealed aluminium cans. 2 cans of 60 g each. Storage area 50 m<sup>2</sup>  
 Medium-term seed storage at 2°C and 40% RH. 8 cans of 60 g each. Older  
 seed stocks, ca. 30000, with 8% m.c. stored in glass jars. Storage area 178  
 m<sup>2</sup>  
 Short-term seed storage at 18°-20°C and 50% RH. Seeds with 10% m.c.,  
 fumigated and in paper bags. Storage area 165 m<sup>2</sup>  
 The long and medium-term storages have a capacity to accommodate  
 130000 accessions

The Institute has agreed to accept responsibility for maintaining a global  
 collection of *Oryza sativa* races *indica*, *javanica* and wild species for  
 long-term conservation

Duplication of collection: NSSL, Fort Collins, USA

Availability: Freely available

Quarantine: All official Philippine quarantine procedures are followed regarding the  
 import and export of rice germplasm

Evaluation: All accessions are characterized for 50 descriptors following standard  
 descriptors for rice (IBPGR-IRRI Rice Advisory Committee, 1980).  
 Comprehensive and continually updated evaluation for physiological,  
 biochemical, pest, disease and soil stress factors encompassing 37 traits  
 are part of the rice collections database (IRRI, 1980). In addition, partial  
 evaluation of germplasm for many other traits, such as tolerance to  
 aluminium toxicity and isozyme analysis, have been undertaken

Documentation: Complete and computerized  
 For more information see:  
 Chang, T.T., 1976. Manual on genetic conservation of rice germplasm for  
 evaluation and utilization. 77 pp. IRRI, Los Baños, Philippines

Chang, T.T., 1985. Crop history and genetic conservation: rice - a case  
 study. Iowa State J. Res. 59(4):425-455

IBPGR-IRRI Rice Advisory Committee, 1980. Descriptors for rice, *Oryza*  
*sativa* L. 21 pp. IRRI-IBPGR. Los Baños, Philippines

IRRI, 1980. Standard evaluation system for rice. 44 pp. Los Baños,  
 Philippines

**ROMANIA**

Genetic Resources Department  
 Research Institute for Cereals  
 and Technical Crops  
 Jud. Călărași  
 R-8264 Fundulea

Telephone: (90) 15 08 05  
 Telex: 11349 ASAS R  
 Cable: ICCPT Fundulea 8264 R

Curator/person in charge: P. Varga  
 Details of collection: *Oryza sativa*, 750 mutant/genetic stocks  
 Maintenance of collection: Short-term seed storage at ambient temperatures  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Specific disease resistance, precocity, quality, lodging resistance and stress reaction  
 Documentation: No information

**SIERRA LEONE**

Rice Research Station  
 Rokupr

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: Sama S. Monde  
 Details of collection: *Oryza sativa*, 500 accessions  
 Maintenance of collection: Active collection  
 Duplication of collection: WARDA, Bouake, Côte d'Ivoire and IRRI, Manila, Philippines  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**SOUTH AFRICA, REPUBLIC OF**

Department of Agricultural Economics and Marketing  
 Directorate of Plant and Liquor Control  
 Private Bag X 179  
 0001 Pretoria

Telephone: (012) 206 24 06  
 Telex: 3-23264  
 Cable: SATIVA PRETORIA  
 Telefax: (012) 206 27 86

Curator/person in charge: H. Chamberlain  
 Details of collection: *Oryza bartlpii*, 1 landrace from Zambia  
*O. longistaminata*, 1 cultivar of unknown origin  
*O. sativa*, 180 landraces and cultivars from Malawi, Philippines, Swaziland, USA and Uruguay  
 Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
 Short-term seed storage at 6°-7°C and 45% RH. Seeds in plastic containers

- Duplication of collection: At different Crop Research Institutes in the Rep. of South Africa
- Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
Requests to: The Plant Introduction Officer  
(same address)
- Quarantine: Seed of paddy or rough rice:  
Additional declaration on the phytosanitary certificate that:  
1. a) *Aphelenchoides besseyi*  
b) *Anguina* spp.  
do not occur in the area of production  
  
2. The parent plants were inspected during active growth and found to be free from:  
a) *Xanthomonas oryzae*  
b) *Xanthomonas oryzaicola*  
c) *Ephelis pallida*  
d) *Magnaporthe salvinii*  
e) *Tilletia barclayana*  
f) *Ustilagoideae virens*  
g) *Cochliobolus miyabeanus*  
h) *Alternaria padwickii*  
i) *Balansia oryzae*  
or that these organisms do not occur in the area of production  
3. The seed has been treated with an appropriate fumigant or wide spectrum insecticide, especially against Curculionidae
- Evaluation: On-going work
- Documentation: Complete and computerized

## SPAIN

Banco de Germoplasma  
Finca "El Encin"  
Instituto Nacional de Investigaciones Agrarias (INIA)  
P.O. Box 127  
Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
Telex: 48989 INIA E  
Cable:

- Curator/person in charge: R. Ponce
- Details of collection: *Oryza sativa*, 50 cultivars
- Maintenance of collection: Long-term seed storage at -18°C  
Medium-term seed storage at -2°C and 30% RH
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Partial
- Documentation: Complete and computerized

## SPAIN

Instituto Valenciano de Investigaciones  
Agrarias (IVIA)  
Apartado Oficial  
Carretera de Moncada a Náquera, km 4,5  
Moncada - Valencia

Telephone: (6) 139 10 00  
Telex: 61440 IVIA E  
Cable:

- Curator/person in charge: L. Navarro

**SPAIN (cont.)**

Details of collection:	<i>Oryza sativa</i> , 9 landraces and 133 old cultivars
Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**SRI LANKA**

Central Agricultural Research Institute  
P.O. Box 11  
Gannoruwa  
Peradeniya

Telephone:  
Telex:  
Cable:

Curator/person in charge:	I.E. Gunawardene
Details of collection:	<i>Oryza sativa</i> , 2516 landraces from Sri Lanka
Maintenance of collection:	Medium-term seed storage
Duplication of collection:	IRRI, Manila, Philippines
Availability:	No information
Quarantine:	No information
Evaluation:	Complete for resistance to iron toxicity, low phosphorous, cold, drought, salinity, flooding, bacterial leaf blight, leaf roller, brown plant hopper and other characters
Documentation:	No information

**SYRIA**

Genetic Resources Unit  
Agriculture Research Directorate  
P.O. Box 113  
Douma - Damascus

Telephone: 75 04 01  
Telex: 411634 SYR  
Cable: MINAGRI DAMS

Curator/person in charge:	K.S. Obari
Details of collection:	<i>Oryza sativa</i> , 3 primitive cultivars from Syria
Maintenance of collection:	Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)
Duplication of collection:	Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work using IBPGR descriptor list
Documentation:	Manual. On-going work

## THAILAND

Rice Cultural Improvement and Seed  
Storage Branch  
Bangkhen Rice Station  
Bangkhen  
Bangkok 9

Telephone:  
Telex:  
Cable:

Curator/person in charge: S. Awakul

Details of collection: *Oryza sativa*, 2000 landraces (majority *indica*) and some wild species from Thailand

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Complete and manual

## THAILAND

The National Rice Seed Storage Laboratory  
for Genetic Resources  
Phatum Thani Rice Research Centre  
12110 Prathum Thani

Telephone:  
Telex:  
Cable:

Curator/person in charge: S. Chitrakon

Details of collection: *Oryza alta*, 1  
*O. australiensis*, 1  
*O. barthii*, 4  
*O. brachyantha*, 1  
*O. eichingeri*, 1  
*O. glaberrima*, 17  
*O. grandiglumis*, 2  
*O. granulata*, 13  
*O. latifolia*, 1  
*O. longiglumis*, 1  
*O. longistaminata*, 4  
*O. meyeriana*, 3  
*O. minuta*, 4  
*O. nivara*, 11  
*O. officinalis*, 12  
*O. punctata*, 1  
*O. perennis*, 1  
*O. perrieri*, 2 from Japan  
*O. ridleyi*, 7  
*O. rufipogon*, 60  
*O. sativa*, 15000  
*O. spontanea*, 203  
All accessions are donations from Thailand and IRRI, Manila, Philippines

Maintenance of collection: Long-term seed storage at -10°C and 60% RH. Seeds with 8% m.c. in sealed cans of 80 g capacity  
Medium-term seed storage at 5°C and 60% RH. Seeds with 8% m.c. in sealed cans of 80 g capacity  
Short-term seed storage at 15°C and 60% RH. Seeds with 11% m.c. in glass jars of 300 g capacity

Duplication of collection: IRRI, Manila, The Philippines

**THAILAND (cont.)**

Availability:	Available on exchange basis. Requests should be addressed to: Director General of the Dep. of Agriculture Bangkhen, Bangkok 10900
Quarantine:	Export: Approval of the Director General of the Dep. of Agriculture Import: Import permit, hot water treatment, seeds dressed with benomyl and plant quarantine
Evaluation:	On-going according to IBPGR descriptor list
Documentation:	Partial and manual

**TURKEY**

Aegean Agricultural Research Institute (AARI)  
P.O. Box 9  
35661 Menemen - Izmir

Telephone: (51) 14 91 31  
Telex:  
Cable:

Curator/person in charge:	The Directorate
Details of collection:	<i>Oryza sativa</i> , 86 landraces and 7 old cultivars
Maintenance of collection:	Long-term seed storage at -20°C. Seeds in metal cans. Medium-term seed storage at 0°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Stripe and stem rust resistance
Documentation:	No information

**UNION OF SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge:	V.I. Krivchenko
Details of collection:	<i>Oryza sativa</i> , 5900 landraces, cultivars and wild species, including 5100 accessions in the main catalogue and 800 in the temporary catalogue. World-wide representation
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at 4°C. Seeds with 6-7% m.c. in sealed glass containers
Duplication of collection:	Partially at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, Fort Collins, USA
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation
Documentation:	Manual. Passport data available

NB - Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines

## UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 Colorado State University Campus  
 Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
 Telex: 237401714 DNPA UC  
 Cable:  
 Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

Details of collection: *Oryza glaberrima*, 71 accessions  
*O. sativa*, 10762 landraces, cultivars and wild species. World-wide representation

Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a regional collection *Oryza sativa* for long-term conservation

Duplication of collection: As an active collection at National Small Grain Collection, Aberdeen, Idaho, USA

Availability: Freely available only if not available from the active collection

Quarantine: No information

Evaluation: Responsibility of the Station holding the active collection

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

## UNITED STATES OF AMERICA

National Small Grain Collection  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 P.O. Box 307  
 Aberdeen, Idaho 83210

Telephone: (208) 397 41 62  
 Telex:  
 Cable:  
 Telefax: (208) 397 41 62

Curator/person in charge: Harold E. Bockelman

Details of collection: *Oryza alta*, 2 accessions  
*O. glaberrima*, 391 accessions  
*O. nivara*, 3 accessions  
*O. perennis*, 1 accession  
*O. rufipogon*, 20 accessions  
*O. sativa*, 19225 accessions. World-wide representation  
*Oryza* spp., 4 accessions

Maintenance of collection: As seeds; medium-term seed storage at 7°C, 40 % RH. Seeds in paper envelopes

Duplication of collection: IRRI, Manila, Philippines and NSSL, Fort Collins, USA

Availability: Freely available; reciprocal exchange encouraged

Quarantine: Export: none  
 Import: restrictions apply to *Aegilops*, *Oryza*, *Triticum* and *x Triticosecale*

Evaluation: Virtually complete for disease resistance, cold tolerance and other desirable traits

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

**VENEZUELA**

Fondo Nacional de Investigaciones  
Agropecuarias (FONAIAP)  
Apartado 4653  
2101 Maracay

Telephone:  
Telex:  
Cable:

Curator/person in charge: Arnoldo Bejarano M.  
Details of collection: *Oryza sativa*, 352 accessions  
Maintenance of collection: Short-term seed storage at 8°C and 45% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: Partial and manual

**ZAMBIA**

Mount Makulu Research Station  
Private Bag 7  
Chilanga

Telephone: 27 86 55  
Telex:  
Cable: Research Chilanga

Curator/person in charge: C. Nkhoma  
Details of collection: *Oryza* spp., 99 landraces, wild and primitive cultivars from Zambia  
Maintenance of collection: Short-term seed storage at 10°C and no controlled humidity. Seeds in aluminium laminated foil packets of 10 cm x 20 cm  
Duplication of collection: NSSL, Fort Collins, USA  
Availability: Available with the only condition of information feed-back  
Quarantine: Import and export seeds must be accompanied with phytosanitary certificate  
Evaluation: Partial for yield components  
Documentation: Partial and manual

*Secale*

**AUSTRALIA**

Australian Winter Cereals Collection  
RMB 944  
Calala Lane  
Tamworth, New South Wales 2340

Telephone: (067) 64 14 49  
Telex:  
Cable:  
Telefax: (067) 67 93 70

Curator/person in charge: M.C. Mackay  
Details of collection: *Secale* spp., 116  
Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in aluminium laminated foil packets  
Duplication of collection: Duplicated in small samples at CSIRO, Canberra, Australia  
Availability: Freely available for research use  
Quarantine: Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate  
Evaluation: Morphological and limited agronomical (plant height, ear emergence, growth habit) descriptors are held for all accessions. Other agronomical and disease descriptors are held for many accessions, but it is not a policy to evaluate all accessions for all descriptors  
Documentation: Computerized for all data held (passport, morphological, agronomical and disease descriptors)

**AUSTRIA**

Agricultural-Chemical Research  
& Testing Institute Linz  
Wieningstrasse, 8  
A-4025 Linz

Telephone: (0732) 812 61  
Telex:  
Cable:

Curator/person in charge: R. Schachl / W. Kainz  
Details of collection: *Secale cereale*, 20 cultivars from Austria (12), Canada (2), DDR (1), FRG (4) and Poland (1) and 27 landraces from Austria  
Maintenance of collection: Long-term seed storage at -20°C. Seeds with 8% m.c. Short-term seed storage at 15°C and 30% RH. Seeds in glass containers of 250 cc capacity  
Duplication of collection: ZIGuK, Gatersleben, DDR and NGB, Alnarp, Sweden  
Availability: Available on exchange basis  
Quarantine: Phytosanitary certificate needed  
Evaluation: On-going for botanical characteristics  
Documentation: Computerized

**AUSTRIA**

National Establishment for Plant  
Cultivation and Seed Testing Rinn  
A-6074 Rinn, Tirol

Telephone: (05223) 81 17  
Telex:  
Cable:

Curator/person in charge: L. Koeck  
Details of collection: *Secale cereale*, 5 landraces

Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation for botanical characteristics
Documentation:	No information

## BULGARIA

Institute of Introduction and  
Plant Genetic Resources "K. Malkov"  
District of Plovdiv  
BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
Telex: 44444 ZOS BG  
Cable:

Curator/person in charge:	B. Matsov / M. Zaharieva
Details of collection:	<i>Secale cereale</i> , 14 landraces and 248 breeding material from DDR, Hungary and USSR
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars Medium-term seed storage at 5°C and 50% RH
Duplication of collection:	Czechoslovakia, DDR, Hungary, USA and USSR
Availability:	Available on exchange basis
Quarantine:	Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo
Evaluation:	Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economical characters, chemical composition and technological evaluation). Genetic and ecological studies
Documentation:	Computerized for passport and evaluation data

## CZECHOSLOVAKIA

Cereal Research and Breeding Institute  
Havlickova 2787  
767 41 Kromeriz

Telephone: (634) 42 61 11  
Telex: 62940 VSUOB C  
Cable:

Curator/person in charge:	P. Mikoska
Details of collection:	<i>Secale</i> spp., 8 landraces, 493 cultivars, 16 wild and 1 mutant/genetic stocks
Maintenance of collection:	Short-term seed storage
Duplication of collection:	To be duplicated in a near future at National Gene Bank, Prague
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	Computerization. On-going for passport data

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50  
D-3300 Braunschweig

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völkenrode  
Telefax: (531) 59 68 14

Curator/person in charge: L. Seidewitz

Details of collection: *Secale cereale*, 497 total accessions:  
- 39 cultivars from Austria (5), Belgium (1), Bulgaria (1), FRG (7), Finland (2), Poland (5), Sweden (1), Switzerland (1), Turkey (2), USSR (12), and 2 of unknown origin  
- 1 hybrid from USSR  
- 357 landraces from FRG (1), Pakistan (120), Turkey (233) and 3 of unknown origin  
- 9 lines of unknown origin  
- 49 populations from Iran (43) and Turkey (6)  
- 34 bulk lines from FRG (11), Poland (4) and 19 of unknown origin  
- 8 accessions from Iran (7) and USA (1)  
*S. kuprijanovii*, 1 wild from USSR  
*S. montanum*, 1 wild  
*S. sylvestre*, 1 wild  
*S. vavilovii*, 2 wild from Iran

Maintenance of collection: Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins  
Medium-term seed storage at 3°C and 30% RH

Duplication of collection: Not duplicated

Availability: Freely available

Quarantine: No known restrictions

Evaluation: Complete for 35 descriptors

Documentation: All available data computerized. Passport data are available for practically all accessions

**FEDERAL REPUBLIC OF GERMANY**

Arbeitskreis Pflanzengenetik  
Botanisches Institut  
J. W. Goethe-Universität  
Postfach 111 932  
Siesmayerstr., 70  
D-6000 Frankfurt am Main 11

Telephone: (069) 798 47 34  
Telex: 413932 unif  
Cable:

Curator/person in charge: H. Becela

Details of collection: *Secale* spp., 7 wild

Maintenance of collection: Long-term seed storage and in short-term seed storage at ambient temperatures, depending on the species. Seeds in paper and/or plastic bags

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Research work in radiation and cytogenetics (crop plant evolution)

Documentation: No information

## FEDERAL REPUBLIC OF GERMANY

Institut für Resistenzgenetik  
Biologische Bundesanstalt für Land und  
Forstwirtschaft  
D-8059 Grünbach

Telephone: (08122) 16 51  
Telex:  
Cable:

Curator/person in charge: G. Schuhmann

Details of collection: *Secale cereale*, 50 landraces, 50 old cultivars, 200 populations with powdery mildew resistance and 250 mutant/genetic stocks

Maintenance of collection: Long-term seed storage at -20°C

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Identification and localization of diseases resistance: BaYMV, *Septoria*, *Fusarium*, *Pseudocercospora*, *Erwinia*, PSTV, PVY and powdery mildew

Documentation: No information

## FEDERAL REPUBLIC OF GERMANY

Institut für Pflanzenzüchtung  
Saatgutforschung und Populationsgenetik  
Universität Hohenheim  
P.O. Box 700562 (350)  
Garbenstrasse, 9  
D-7000 Stuttgart 70

Telephone: (0711) 45 01  
Telex: 7-22 959 UNIHO D  
Cable:

Curator/person in charge: H. Geiger

Details of collection: *Secale cereale*, 1 landrace and 25 mutant/genetic stocks

Maintenance of collection: Medium-term seed storage at 4°C and 65% RH. Seeds in paper bags

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Mildew and *Fusarium* spp.

Documentation: No information

## FEDERAL REPUBLIC OF GERMANY

Landessaatzuchtanstalt  
Universität Hohenheim  
P.O. Box 700562  
D-7000 Stuttgart 70

Telephone: (0711) 45 01  
Telex: 722959 uniho D  
Cable:

Curator/person in charge: W. Schmuetz / Th. Miedaner

Details of collection: *Secale cereale*, 100 inbred lines from Denmark and FRG; 10 hybrids and 25 old cultivars from FRG

Maintenance of collection: Long-term seed storage at -20°C. Seeds in plastic bags

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Disease resistance, quality traits and plant type
Documentation:	Complete. Manual

**FINLAND**

Agricultural Research Centre  
Department of Plant Breeding  
SF-31600 Jokioinen

Telephone: (916) 881 11  
Telex: 6741 mtlk sf  
Cable:  
Telefax: (916) 884 91

Curator/person in charge:	S. Pulli
Details of collection:	<i>Secale cereale</i> , 210 breeding lines
Maintenance of collection:	Medium-term seed storage at -4°C. Seeds with 5-7% m.c. in glass jars
Duplication of collection:	Partially at NGB, Alnarp, Sweden
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Partial
Documentation:	No information

**GERMAN DEMOCRATIC REPUBLIC**

Zentralinstitut für Genetik  
und Kulturpflanzenforschung (ZIGuK)  
Corrensstrasse, 3  
DDR-4325 Gatersleben

Telephone: Gatersleben 50  
Telex: 48558 kupfga DDR  
Cable:

Curator/person in charge:	Ch. Lehmann
Details of collection:	<i>Secale cereale</i> , 600 <i>S. strictum</i> , 50 <i>S. sylvestre</i> , 20
Maintenance of collection:	Long-term seed storage at -15° to -18°C Medium-term seed storage at 0°C. Seeds in sealed glass jars
Duplication of collection:	Partially at Istituto del Germoplasma, Bari, Italy and VIR, Leningrad, USSR
Availability:	Freely available. Index Seminum issued
Quarantine:	No known restrictions
Evaluation:	Disease resistance and protein quantity and quality
Documentation:	Computerized for passport data

## GREECE

Greek Gene Bank  
 North Greek Agricultural Research Centre  
 P.O. Box 105 14  
 541 10 Thessaloniki

Telephone: (031) 47 15 44  
 Telex: 412130 asni gr  
 Cable:

Curator/person in charge: A. Zamanis  
 Details of collection: *Secale cereale*, 8 landraces  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at 0°-2°C and 30% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Rust, frost and drought resistance  
 Documentation: No information

## ISRAEL

Israel Gene Bank for Agricultural Crops  
 Volcani Centre  
 ARO  
 P.O. Box 6  
 50-250 Bet Dagan

Telephone: (03) 968 34 58  
 Telex: 381476 AROVC IL  
 Cable:  
 Telefax: 972-3-993998

Curator/person in charge: M. Zur  
 Details of collection: *Secale* spp., 20 breeders' lines and cultivars from USA, donated by USDA, USA  
 Maintenance of collection: Long-term seed storage at -10°C. Seeds in aluminium boxes of 1 kg capacity. Storage area 50 m<sup>2</sup>  
 Duplication of collection: No information  
 Availability: Available in limited quantity  
 Quarantine: Special conditions and treatment according to Plant Protection Law  
 Evaluation: Drought, salinity and disease resistance. High nutrition level  
 Documentation: Complete and computerized

## ITALY

Department of Agrobiotechnology  
 National Agency for Atomic Energy (ENEA)  
 P.O. Box 2400  
 C.R.E. Casaccia  
 I-00100 Roma A.D.

Telephone: (06) 694 81  
 Telex: 613296 ENEACA I  
 Cable: CASACCIA ENEA

Curator/person in charge: L. Rossi  
 Details of collection: *Secale cereale*, 100 accessions  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at 0°C  
 Duplication of collection: No information

**ITALY (cont.)**

Availability:	No information
Quarantine:	No information
Evaluation:	Disease resistance, short stature, quality, mechanical harvest and stress resistance
Documentation:	No information

**JAPAN**

National Institute of Agrobiological Resources (NIAR) Kannon-dai 2-1-2 Tsukuba, Ibaraki 305	Telephone: 02975-6-7050 Telex: Cable: NIARTSUKUBA YATABE Telefax: 02975-6-7408
Curator/person in charge:	Head, Germplasm Storage Center
Details of collection:	<i>Secale cereale</i> , 31 cultivars and lines from Europe, Japan and North America
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at -1°C and 30% RH Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml
Duplication of collection:	No information
Availability:	Freely available for research purposes. A fee is applicable for private institutions
Quarantine:	No information
Evaluation:	Standard manual published by specialists' consent
Documentation:	Computerized for passport data

**MEXICO**

Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT) (905) 761 33 11 Apartado Postal 6-641 Mexico 0600, D.F.	Telephone: (52-5) 954 21 00  Telex: 1772023 CIMTME Cable: CENCIMMYT E-Mail:
57:CGI201	
Curator/person in charge:	B. Skovmand
Details of collection:	<i>Secale cereale</i> , 131 accessions
Maintenance of collection:	Long-term seed storage at -15°C and 25% RH Medium-term seed storage at 0°C and 30-35% RH Seeds in tins
Duplication of collection:	NSSL, Fort Collins, USA
Availability:	Freely available
Quarantine:	Phytosanitary certificate requested for import/export of seed
Evaluation:	Evaluation is the responsibility of the breeding programme. The genebank only does disease screening and stress tolerance evaluation
Documentation:	Computerization in progress

## NETHERLANDS

Veredelingsbedrijf Cebeco-Handelsraad  
P.O. Box 139  
NL-8200 AC Lelystad

Telephone: (03202) 244  
Telex:  
Cable:

Curator/person in charge: R.H. Reiling  
Details of collection: *Secale cereale*, 2 accessions  
Maintenance of collection: Medium-term seed storage at 3°C and 40% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Disease and lodging resistance, quality and winter hardiness  
Documentation: No information

## NETHERLANDS

Zelder B.V.  
Landgoed Zelder  
NL-6595 NW Ottersum

Telephone: (08851) 181 44  
Telex: 37311  
Cable:

Curator/person in charge: L. J. Groenewegen  
Details of collection: *Secale* spp., 5 old cultivars  
Maintenance of collection: Medium-term seed storage at 5°C and 30% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Genotype testing  
Documentation: No information

## NIGERIA

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70/312622  
Telex:  
Cable: GENE BANK

Curator/person in charge: P.E. Onuorah  
Details of collection: *Secale* spp., 39 accessions  
Maintenance of collection: Long-term seed storage  
Duplication of collection: No information  
Availability: Available in limited quantity  
Quarantine: No information  
Evaluation: No information  
Documentation: Manual. Passport data available

**NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND  
NORWAY, SWEDEN)**

Nordic Gene Bank  
for Agricultural and Horticultural Plants  
Smedjevägen 2 B  
P.O. Box 41  
S-23053 Alnarp  
Sweden

Telephone: (4640) 41 50 00  
Telex: 32727 NGB S  
Cable:  
Telefax: (4640) 46 21 88

Curator/person in charge: S. Blixt

Details of collection: *Secale cereale*, 210 total accessions. Landraces (101), commercial varieties (52), breeders' lines (32) and other collected material (25), including from Denmark (6), Finland (165), Norway (10) and Sweden (27)

Maintenance of collection: Long-term seed storage at -20°C

The Institute has agreed to accept responsibility for maintaining a global collection of *Secale* for long-term conservation

Duplication of collection: Duplicated in permafrost at Svalbard, Norway

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work within the participating countries

Documentation: Computerized for passport and evaluation data

**NORWAY**

Vaagones Agricultural Research Station  
N-8000 Bodo

Telephone: (081) 255 86  
Telex:  
Cable:

Curator/person in charge: B. Volden

Details of collection: *Secale cereale*, 2 landraces

Maintenance of collection: Medium-term seed storage at 0°-10°C. Seeds in plastic boxes and plastic bags

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

**POLAND**

National Department of Plant Genetic Resources  
Plant Breeding and Acclimatization Institute  
Radzików n/ Warsaw  
05-870 Blonie

Telephone: (22) 55 26 11/4  
Telex: 812914 IHAR PL  
Cable:

Curator/person in charge: St. Goral / Z. Urbaniak

Details of collection:	<p><i>Secale anatolicum</i>, 2  <i>S. ancestrale</i>, 2  <i>S. cereale</i>, 1353 landraces and cultivars from Afghanistan (5), Argentina (9), Austria (2), Belgium (8), Bulgaria (21), Canada (31), PR China (1), Czechoslovakia (43), DDR (135), FRG (73), Finland (50), France (8), Greece (1), Hungary (18), Italy (5), Japan (1), Kenya (1), Korea (1), Morocco (1), Mexico (1), Mongolia (1), Netherlands (32), Norway (2), Poland (208), Portugal (10), Rep. of South Africa (9), Romania (8), Spain (6), Sweden (46), Turkey (166), UK (3), Uruguay (1), USA (57), USSR (204) and Yugoslavia (8)  <i>S. montanum</i>, 1  <i>S. segetale</i>, 1  <i>S. sylvestre</i>, 1  <i>S. smaragdicum</i>, 1  <i>S. turkestanicum</i>, 1  <i>S. vavilovii</i>, 1  All other accessions are wild</p>
Maintenance of collection:	<p>Long-term seed storage at -15°C  Medium-term seed storage at 0°C  Seeds with 5-7% m.c. in glass containers under vacuum</p> <p>The Institute has agreed to accept responsibility for maintaining a global collection of <i>Secale</i> for long-term conservation</p>
Duplication of collection:	No information
Availability:	Available on exchange basis. Index Seminum issued
Quarantine:	No known restrictions
Evaluation:	Taxonomic classification, botanical evaluation, resistance to diseases and agronomical characters
Documentation:	Computerized for passport data

## POLAND

Botanical Garden of the Polish Academy  
of Sciences  
ul. Prawdziwka, 2  
02-973 Warsaw

Telephone: 42 79 01/42 79 27  
Telex: 817219 OB PAN  
Cable:

Curator/person in charge:	J. Puchalski
Details of collection:	<p><i>Secale cereale</i>, 1218 total accessions. Cultivars (773) and landraces (445)  <i>Secale</i> spp., 76 wild</p>
Maintenance of collection:	Short-term seed storage at ambient temperatures. Seeds with 7-8% m.c. in air tight containers
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going for: Winterhardiness, tillering, lodging, plant height, disease resistance (powdery mildew, rust, ergot), spike length, number of kernels/spike, length of vegetative period, days from flowering/maturity and protein content
Documentation:	On-going work using manual and computerized methods

**POLAND**

Department of Plant Breeding and Seed Research  
 University of Agriculture  
 ul. Nowoursynowska, 166  
 02-766 Warsaw

Telephone: 43 90 41  
 Telex: 814790 SGGW PL  
 Cable:

Curator/person in charge: J. Jakubiec  
 Details of collection: *Secale cereale*  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**PORTUGAL**

Núcleo de Melhoramento de Milho (NUMI)  
 Estação Nacional de Melhoramento de Plantas (ENMP)  
 Instituto Nacional de Investigação Agrária (INIA)  
 Quinta dos Peões - Gualtar  
 P-4700 Braga

Telephone: (53) 245 51  
 Telex: 33506 NUMI P  
 Cable:

Curator/person in charge: Rena M. Farias  
 Details of collection: *Secale cereale*, 17 landraces and old cultivars from Portugal  
 Maintenance of collection: Long-term seed storage at -16°C  
 Medium-term seed storage at -2° to 0°C and 45% RH  
 Seeds with 5-6% m.c. in aluminium laminated foil packets. Storage area 56,6 m<sup>2</sup>  
 Duplication of collection: Istituto del Germoplasma, Bari, Italy  
 Availability: Available in limited quantity and on exchange basis  
 Quarantine: No restrictions for export but imported material must possess phytosanitary certificate  
 Evaluation: Not evaluated  
 Documentation: Computerized for passport

**PORTUGAL**

Secção de Genética  
 Estação Agronómica Nacional (EAN)  
 Instituto Nacional de Investigação Agrária (INIA)  
 P-2780 Oeiras

Telephone: (1) 443 15 05/4430442  
 Telex: 63698 EAN P  
 Cable:

Curator/person in charge: M. Mota  
 Details of collection: *Secale cereale*, 580 landraces from Portugal (394) and from Spain (186)  
 Maintenance of collection: Long-term seed storage at -16°C in deep-freezers

Duplication of collection:	Banco de Germoplasma, Alcalá de Henares, Spain
Availability:	Available in limited quantity
Quarantine:	No restrictions for export but imported material must possess phytosanitary certificate
Evaluation:	None
Documentation:	Computerized for passport data

## ROMANIA

Gene Bank of Suceava  
Agricultural Research Station of Suceava  
Bulevardul 1 May, 15  
R-5800 Judetul Suceava

Telephone: (987) 158 47  
Telex: 23268  
Cable:

Curator/person in charge:	M. Cristea
Details of collection:	<i>Secale cereale</i> , 5 lines from Romania, donated by Research Institute for Cereals and Technical Plants, Fundulea, Romania
Maintenance of collection:	Long-term seed storage at -20°C. Four rooms with the total storage capacity of 172.5 m <sup>3</sup> Medium-term seed storage at 4°C. Four rooms with the total storage capacity of 273.6 m <sup>3</sup> . Seeds with 8-10% m.c. in sealed glass containers of 50, 100, 150, 350, 400, 750, 800 and 1000 ml capacity
Duplication of collection:	Research Institute for Cereals and Technical Plants, Fundulea and Agricultural Research Station of Simnic, Romania
Availability:	Available on exchange basis
Quarantine:	In conformity with international quarantine regulations
Evaluation:	On-going work for field and laboratorial evaluation
Documentation:	Characterization data computerized

## SOUTH AFRICA, REPUBLIC OF

Small Grain Centre  
Grain Crops Research Institute  
Department of Agricultural and Water Supply  
Private Bag X29  
9700 Bethlehem

Telephone: (01431) 356 86  
Telex: 322150  
Cable: SATIVA PRETORIA

Curator/person in charge:	M. Aartsma
Details of collection:	<i>Secale cereale</i> , 52 accessions from Australia (4), Austria (7), Canada (1), Czechoslovakia (1), FRG (6), Finland (2), France (1), Korea (1), Poland (3), Portugal (1), Rep. of South Africa (2), Spain (2), Tunisia (1), Turkey (1), USA (14) and USSR (3)
Maintenance of collection:	Medium-term seed storage at 5°C, and 50% RH. Seeds in pouches each containing 100 g. Storage area 50 m <sup>2</sup>
Duplication of collection:	Partially (20%) at Genebank, Pretoria, Rep. of South Africa
Availability:	Available in limited quantity (10-30 g)
Quarantine:	For export, phytosanitary certificate issued upon inspection. Import seed must possess phytosanitary certificate or being subject to quarantine

**SOUTH AFRICA, REPUBLIC OF (cont.)**

Evaluation: On-going in greenhouse and field for agronomical, pathological, entomological and quality characteristics using own developed descriptor list based on IBPGR and UPOV descriptor lists

Documentation: Computerized. On-going work

**SOUTH AFRICA, REPUBLIC OF**

Department of Agricultural Economics and Marketing  
 Directorate of Plant and Liquor Control  
 Private Bag X 179  
 0001 Pretoria

Telephone: (012) 206 24 06  
 Telex: 3-23264  
 Cable: SATIVA PRETORIA  
 Telefax: (012) 206 27 86

Curator/person in charge: H. Chamberlain

Details of collection: *Secale africanum*, 2 cultivars from Rep. of South Africa  
*S. cereale*, 178 landraces and cultivars from Czechoslovakia, DDR, Denmark, Mexico, Poland, Rep. of South Africa (14), USA and Yugoslavia

Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
 Short-term seed storage at 6°-7°C and 45% RH. Seeds in plastic containers

Duplication of collection: At different Crop Research Institutes in the Rep. of South Africa

Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
 Requests to: The Plant Introduction Officer  
 (same address)

Quarantine: Seeds for planting:  
 Additional declaration on the phytosanitary certificate that the seed is free from:  
 a) *Anguina tritici*  
 b) *Tilletia contraversa*  
 c) *Ustilago nuda*  
 d) *Gloeotinia temulenta*  
 or that these organisms do not occur in the area of production

Evaluation: On-going work

Documentation: Complete and computerized

**SPAIN**

Banco de Germoplasma  
 Finca "El Encin"  
 Instituto Nacional de Investigaciones Agrarias (INIA)  
 P.O. Box 127  
 Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
 Telex: 48989 INIA E  
 Cable:

Curator/person in charge: R. Ponce

Details of collection: *Secale cereale*, 366 landraces

Maintenance of collection: Long-term seed storage at -18°C  
 Medium-term seed storage at -2°C and 30% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**SWEDEN**

Institute of Genetics  
 University of Lund  
 Sölvegatan, 29  
 S-223 62 Lund

Telephone: (046) 10 98 90  
 Telex:  
 Cable:

Curator/person in charge: B.O. Bengtsson  
 Details of collection: *Secale cereale*, 150 breeding material  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**SWITZERLAND**

Station Fédérale de Recherches Agronomiques  
 de Changins  
 Route de Duillier  
 CH-1260 Nyon

Telephone: (022) 61 54 51  
 Telex: 419975  
 Cable:  
 Telefax: (022) 62 13 25

Curator/person in charge: G. Kleijer  
 Details of collection: *Secale cereale*, 35 accessions from Austria (5), Germany (1), Poland (2), Switzerland (6), USA (4), USSR (11), Yugoslavia (1) and 5 of unknown origin  
 Maintenance of collection: Medium-term seed storage at 4°C and 30% RH  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: On-going work  
 Documentation: Complete and computerized

**TURKEY**

Aegean Agricultural Research Institute (AARI)  
 P.O. Box 9  
 35661 Menemen - Izmir

Telephone: (51) 14 91 31  
 Telex:  
 Cable:

Curator/person in charge: The Directorate  
 Details of collection: *Secale* spp., 201 landraces and 120 wild

**TURKEY (cont.)**

Maintenance of collection:	Long-term seed storage at -20°C. Seeds in metal cans. Medium-term seed storage at 0°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Stripe and stem rust resistance
Documentation:	No information

**UNION OF SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge:	V.I. Krivchenko
Details of collection:	<i>Secale</i> spp., 2992 breeding varieties, primitive cultivars, landraces and wild forms from 42 countries, including 2689 accessions in the main catalogue and 303 in the temporary catalogue
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at 4°C. Seeds with 5-7% m.c. in sealed glass jars
Duplication of collection:	Some duplicates at ZIGuK, Gatersleben, DDR and Poland
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Computerized for passport data of samples included in the main catalogue. Manual for other data

NB - *Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines*

**UNITED KINGDOM**

Cambridge Laboratory  
Institute of Plant Science Research (IPSR)  
Agricultural & Food Research Council (AFRC)  
Maris Lane  
Trumpington  
Cambridge CB2 2JB

Telephone: (0223) 84 09 32  
Telex: 818280 PBICAM G  
Cable:  
Telefax: (0223) 84 01 67

Curator/person in charge:	T.E. Miller / S.M. Reader
Details of collection:	<i>Secale</i> spp., 105 accessions
Maintenance of collection:	Medium-term seed storage at 0°-1°C. Seeds with 5-6% m.c. in paper packets Part of the collection is also kept at -20°C in a deep-freeze. Seeds in aluminium laminated foil packets

Duplication of collection:	Not duplicated
Availability:	Freely available normally in 5 g samples. Lines involved in current research may be withheld for all/part of the duration of that research project
Quarantine:	No known restrictions
Evaluation:	Partial and on-going but restricted
Documentation:	Complete and manual. Computerization on-going for passport data

#### UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)	Telephone:	(303) 484 04 02
US Department of Agriculture (USDA)	Telex:	237401714 DNPA UC
Agricultural Research Service (ARS)	Cable:	
Colorado State University Campus	Telefax:	(303) 221 14 27
Fort Collins, Colorado 80523		

Curator/person in charge:	S.A. Eberhart
Details of collection:	<i>Secale cereale</i> , 1243 accessions <i>Secale</i> spp., 44 accessions of 6 species
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets
Duplication of collection:	As an active collection at National Small Grain Collection, Aberdeen, Idaho, USA
Availability:	Freely available only if not available from the active collection
Quarantine:	No information
Evaluation:	Responsibility of the Station holding the active collection
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

#### UNITED STATES OF AMERICA

National Small Grain Collection	Telephone:	(208) 397 41 62
US Department of Agriculture (USDA)	Telex:	
Agricultural Research Service (ARS)	Cable:	
P.O. Box 307	Telefax:	(208) 397 41 62
Aberdeen, Idaho 83210		

Curator/person in charge:	Harold E. Bockelman
Details of collection:	<i>Secale africanum</i> , 2 accessions <i>S. ancestrale</i> , 5 accessions <i>S. cereale</i> , 2435 accession <i>S. montanum</i> , 18 accessions <i>S. montanum</i> subsp. <i>anatolicum</i> , 2 accessions <i>S. montanum</i> subsp. <i>kuprijanovii</i> , 5 accessions <i>S. montanum</i> subsp. <i>montanum</i> , 2 accessions <i>S. segetale</i> , 16 accessions <i>S. segetale</i> subsp. <i>dighoricum</i> , 2 accessions <i>S. sylvestre</i> , 9 accessions <i>S. vavilovii</i> , 5 accessions <i>Secale</i> spp., 7 accessions
	World-wide representation

**UNITED STATES OF AMERICA (cont.)**

- Maintenance of collection: As seeds; medium-term seed storage at 7°C, 40 % RH. Seeds in paper envelopes
- Duplication of collection: National Seed Storage Laboratory (long-term storage), Fort Collins, Colorado, USA
- Availability: Freely available; reciprocal exchange encouraged
- Quarantine: Export: none  
Import: restrictions apply to *Aegilops*, *Oryza*, *Triticum* and *x Triticosecale*
- Evaluation: In progress
- Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

*Sorghum*

**ALGERIA**

Institut de Développement des Grandes Cultures  
B.P. 16  
El Harrach  
Algiers

Telephone:  
Telex:  
Cable:

Curator/person in charge: N. Kadra  
Details of collection: *Sorghum bicolor*, 35 landraces from Algeria  
Maintenance of collection: Active collection  
Duplication of collection: As base collection at Istituto del Germoplasma, Bari, Italy  
Availability: No information  
Quarantine: No information  
Evaluation: Partial  
Documentation: Manual

**ARGENTINA**

Banco de Germoplasma  
Estación Experimental Agropecuaria (EEA)  
Instituto Nacional de Tecnología Agropecuaria (INTA)  
5988 - Manfredi (Cba.)

Telephone: (0572) 664 49  
Telex: 17518 INTA AR  
Cable:

Curator/person in charge: José L. Scantamburlo  
Details of collection: *Sorghum bicolor*, 3790 accessions from Africa (720), Argentina (280), Australia (70), India (280), Turkey (140), USA (2080) and 220 from 22 other countries  
Maintenance of collection: Short-term seed storage at 8°C. Seeds with 10-12% m.c.  
Duplication of collection: Not duplicated  
Availability: Available on exchange basis  
Quarantine: No known restrictions  
Evaluation: On-going work  
Documentation: Computerized for evaluation data at EEA, INTA, Pergamino, Argentina

**AUSTRALIA**

Australian Tropical Field Crops  
Genetic Resources Centre  
Department of Primary Industries  
P.O. Box 201  
Biloela, Queensland 4715

Telephone: (61) 079-92 10 44  
Telex: 41620 AA  
Cable: QLDPRIMIND, Biloela

Curator/person in charge: P. Lawrence  
Details of collection: *Sorghum bicolor*, 7000 cultivars and elite lines  
Maintenance of collection: Long-term seed storage at -18°C. Seeds with 6% m.c. in aluminium laminated foil packets  
Duplication of collection: No information

Availability:	Available on exchange basis
Quarantine:	Import, one generation in quarantine. No restrictions for export
Evaluation:	Due to commence soon using modified IBPGR descriptor list
Documentation:	Computerized

### AUSTRALIA

Division of Tropical Crops and Pastures Commonwealth Scientific and Industrial Research Organization (CSIRO) Cunningham Laboratory Mill Road St. Lucia, Queensland 4067	Telephone: Telex: Cable:
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Curator/person in charge:	E.F. Henzell
Details of collection:	<i>Sorghum bicolor</i> , 1000 accessions
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

### AUSTRALIA

Australian Tropical Forages Genetic Resources Centre CSIRO 306 Carmody Road Sta. Lucia, Queensland 4067	Telephone: (07) 377 02 09 Telex: 42159 AA Cable: Telefax: (07) 371 39 46
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Curator/person in charge:	R.J. Williams
Details of collection:	<i>Sorghum angustum</i> , 1 accession <i>S. arundinaceum</i> , 3 accessions <i>S. australiense</i> , 2 accessions <i>S. bicolor</i> , 178 accessions <i>S. intrans</i> , 1 accession <i>S. laxiflorum</i> , 2 accessions <i>S. margaritiflorum</i> , 1 accession <i>S. nitidum</i> , 2 accessions <i>S. purpureo-sericeum</i> , 1 accession <i>S. roxburghii</i> , 1 accession <i>S. saccharatum</i> , 1 accession <i>S. stipoides</i> , 3 accessions <i>S. subglabrescens</i> , 3 accessions <i>S. timorensis</i> , 2 accessions <i>Sorghum</i> × <i>almum</i> , 6 accessions <i>Sorghum</i> × <i>drummondii</i> , 17 accessions
Maintenance of collection:	Long-term seed storage at -20°C. Storage capacity 12 m <sup>3</sup> Short-term seed storage at 5° to 10°C and 25% RH. Storage capacity 60 m <sup>3</sup> Seeds in aluminium laminated foil packets and plastic bottles
Duplication of collection:	No information

**AUSTRALIA (cont.)**

Availability:	Available provided there is sufficient seed
Quarantine:	Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate
Evaluation:	On-going work
Documentation:	Passport data complete and computerized

**BELGIUM**

Laboratoire de Phytotechnie Tropicale  
Faculté des Sciences Agronomiques  
Université Catholique de Louvain  
Place Croix du Sud, 3, Sciences 15 D.  
B-1348 Louvain-La-Neuve

Telephone: (010) 43 37 39/41  
Telex: 59037 UCL B  
Cable:

Curator/person in charge:	B.-P. Louant
Details of collection:	<i>Sorghum bicolor</i> , 1486 cultivars from Burundi (125), Cameroon (16), France (8), Guinea (9), India (1171), Mali (118), Nigeria (2), Rwanda (26), Rep. of South Africa (6), Sudan (3) and Zaire (2), donated by ICRISAT, India and CIPEA
Maintenance of collection:	Short-term seed storage at ambient temperatures. Seeds in plastic bags with silica gel
Duplication of collection:	Project Zaire "Agrostologie et aide aux petites Eleveurs du Bas-Zaire et du Bandundu", Kinshasa, Zaire
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	No information

**BRAZIL**

Centro Nacional de Recursos Genéticos (CENARGEN)  
Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
C.x. P. 102372  
70000 Brasília D.F.

Telephone:  
Telex:  
Cable:

Curator/person in charge:	E.A. Vilela Morales
Details of collection:	<i>Sorghum bicolor</i>
Maintenance of collection:	Long-term seed storage at -18°C Medium-term seed storage at -1°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Computerized

**BRAZIL**

Banco Activo de Germoplasma de Milho  
 Centro Nacional de Pesquisa de Milho e Sorgo (CNPMS)  
 Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
 Rodovia MG 424 - km 65  
 Caixa Postal 151/285  
 35700 Sete Lagoas (MG)

Telephone: (031) 921-5644  
 Telex: 31-2099 EBPA  
 Cable:

- Curator/person in charge: R.V. de Andrade
- Details of collection: *Sorghum bicolor*, 6409 accessions  
*S. caudatum*, 4 accessions  
*S. nigricans*, 2 accessions  
*S. saccharatum*, 4 accessions
- Maintenance of collection: Long-term seed storage at -18°C. Seeds in sealed cans (at CENARGEN)  
 Medium-term seed storage at 10°C and 30% RH (at Sete Lagoas)
- Duplication of collection: CENARGEN, Brasília, Brazil
- Availability: Available on exchange basis
- Quarantine: Export: phytosanitary certificate  
 Import: certificate stating that seeds were produced in areas free of downy mildew (*Peronosclerospora sorghii*) and other downy mildews
- Evaluation: 1640 accessions being evaluated according to Latin America Maize Project (LAMP)
- Documentation: Computerized for passport data

**BULGARIA**

Institute of Introduction and  
 Plant Genetic Resources "K. Malkov"  
 District of Plovdiv  
 BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
 Telex: 44444 ZOS BG  
 Cable:

- Curator/person in charge: B. Matsov / M. Zaharieva
- Details of collection: *Sorghum bicolor*, 600 breeding material and 9 landraces from Hungary, USA and USSR
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
 Medium-term seed storage at 5°C and 50% RH
- Duplication of collection: Canada, Czechoslovakia, DDR, FRG, France, Greece, Hungary, Italy, Japan, Mexico, Poland, Spain, Sweden, USA and USSR
- Availability: Available on exchange basis
- Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo
- Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economical characters, chemical composition and technological evaluation). Genetic and ecological studies
- Documentation: Computerized for passport and evaluation data

**CHINA, PEOPLE'S REPUBLIC OF**

Institute of Crop Germplasm Resources (ICGR)  
 Chinese Academy of Agricultural Sciences (CAAS)  
 Beijing

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: Xu Yun-tian

Details of collection: *Sorghum bicolor*, 3000 landraces and introductions. Kaoliang and Broom Corn types

Maintenance of collection: Active at institutes of CAAS and at Provincial Agricultural Academies where storage conditions vary from room temperature to -10°C. The ICRG aims to coordinate the national germplasm activities. A medium-term seed storage is under construction in Beijing and a long-term seed storage is planned. This National Genebank will hold duplicates of all collections in China

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Manual

**COLOMBIA**

Instituto Colombiano Agropecuario (ICA)  
 Tibaitatá  
 A.A. 151123  
 El Dorado - Bogotá

Telephone:  
 Telex:  
 Cable:

Curator/person in charge:

Details of collection: *Sorghum* spp., 912 cultivars

Maintenance of collection: Medium-term seed storage at 5°C. Long-term seed storage facilities planned

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and computerized

**CUBA**

Instituto de Investigaciones Fundamentales  
 en Agricultura Tropical "Alejandro Humboldt" (INIFAT)  
 Calle 1 esq. 2, Santiago de las Vegas  
 Ciudad Habana

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: Miguel A. Esquivel Perez

Details of collection: *Sorghum bicolor*, 22 primitive cultivars from Cuba

Maintenance of collection:	Long-term seed storage at -18°C Medium-term seed storage at 0 <sup>o</sup> -4°C. Seeds with 4-6% m.c. in sealed glass containers and/or in aluminium laminated foil packets
Duplication of collection:	ZIGuK, Gatersleben, DDR and VIR, Leningrad, USSR
Availability:	Available in limited quantity
Quarantine:	Imported material must possess phytosanitary certificate. Seeds to export should pass quarantine inspection and a phytosanitary certificate is given
Evaluation:	On-going work using IBPGR descriptor list and/or descriptors selected according breeding programmes
Documentation:	Passport and characterization data complete. Manual and computerized

## ETHIOPIA

Plant Genetic Resources Centre/Ethiopia (PGRC/E)  
P.O. Box 30726  
Addis Ababa

Telephone: 18 03 81  
Telex: 21460 GTZFP ET  
Cable: GENE BANK

Curator/person in charge:	Melaku Worede
Details of collection:	<i>Sorghum bicolor</i> , 7260 landraces and wild, including 96 accessions from Somalia
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 5-7% m.c. in aluminium laminated foil packets Medium-term seed storage at 4°C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage
Duplication of collection:	Partially (650 accessions) in ICRISAT, India
Availability:	Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage
Quarantine:	Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture
Evaluation:	On-going work, for 23 characters, using modified IBPGR descriptor list
Documentation:	On-going and computerized for passport, characterization and evaluation data

## FEDERAL REPUBLIC OF GERMANY

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völknerode  
Telefax: (531) 59 68 14

D-3300 Braunschweig

Curator/person in charge:	L. Seidewitz
Details of collection:	<i>Sorghum bicolor</i> , 20 total accessions: - 4 cultivars from USA - 2 landraces from USA (1) and 1 of unknown origin - 14 lines from USA (3) and 11 of unknown origin

## FEDERAL REPUBLIC OF GERMANY (cont.)

Details of collection: (cont.)	<i>S. cernuum</i> , 1 cultivar <i>S. saccharatum</i> , 2 cultivars <i>Sorghum</i> spp., 163 total accessions: - 24 lines from Mexico (18) and Yemen (6) - 138 landraces from Yemen - 1 accession from Mexico
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins Medium-term seed storage at 3°C and 30% RH
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Complete for 35 descriptors
Documentation:	All available data computerized. Passport data are available for practically all accessions

## FRANCE

Office de la Recherche Scientifique  
et Technique d'Outre-Mer (ORSTOM)  
Services Scientifiques Centraux  
70-74 Route d'Aulnay  
F-93140 Bondy

Telephone:  
Telex:  
Cable:

Curator/person in charge:	M.J. Pernes
Details of collection:	<i>Sorghum bicolor</i> , 2626 landraces, wild and weedy types from Benin, Mali, Niger, Nigeria, Senegal and Togo
Maintenance of collection:	Medium-term seed storage at 5°C and 30% RH
Duplication of collection:	At Agricultural Institutes in the country of origin, except for Togo and some at ICRISAT, Hyderabad, India
Availability:	No information
Quarantine:	No information
Evaluation:	Agronomical characters, disease resistance and climatic and edaphic adaptation
Documentation:	No information

## FRANCE

Centre de Recherches Agronomiques  
des Antilles et de la Guyana  
Institut National de la Recherche Agronomique (INRA)  
B.P. 1232  
F-97184 Pointe-à-Pitre Cedex  
Guadeloupe

Telephone: (590) 25 59 45/255999  
Telex: 919867 GL  
Cable:  
Telefax: (590) 25 59 24

Curator/person in charge:	H. Touvin / J. Sabine
Details of collection:	<i>Sorghum bicolor</i> , 143 landraces, cultivars and breeding lines from France, India, Haiti, Senegal and USA, donated by INRA, France; ICRISAT, India and IRAT, Senegal

Maintenance of collection:	Medium-term seed storage at 5°C and 50% RH
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Dwarf, forage and grain types: Adaptation, grain quality and disease resistance (rust, <i>Helminthosporium</i> and <i>Rhizoctonia</i> )
Documentation:	Data held in card-index

## FRANCE

Institut de Recherches Agronomiques Tropicales et des Cultures Vivrières (IRAT) Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) B.P. 5035 F-34032 Montpellier Cedex 1	Telephone: (67) 61 58 00 Telex: 49080762 F Cable: Telefax: (67) 61 59 88
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Curator/person in charge:	R. Vandevenne
Details of collection:	<i>Sorghum bicolor</i> , 1490 landraces, cultivars and wild from 32 different countries
Maintenance of collection:	Medium-term seed storage at 5°C
Duplication of collection:	Partially at ICRISAT, India
Availability:	Available on exchange basis. There are restrictions for some cultivars
Quarantine:	No known restrictions
Evaluation:	No information
Documentation:	Partial and computerized for passport data

## GERMAN DEMOCRATIC REPUBLIC

Zentralinstitut für Genetik und Kulturpflanzenforschung (ZIGuK) Corrensstrasse, 3 DDR-4325 Gatersleben	Telephone: Gatersleben 50 Telex: 48558 kupfga DDR Cable:
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Curator/person in charge:	Ch. Lehmann
Details of collection:	<i>Sorghum bicolor</i> <i>Sorghum x aluum</i> Total of 25 samples including cultivated and wild races: <i>Bicolor</i> , <i>Kafir</i> , <i>Kafir-bicolor</i> and <i>Durra</i> from PR China and other countries
Maintenance of collection:	Long-term seed storage at -15° to -18°C. Seeds with 8-9% m.c. in glass jars with silica gel Medium-term seed storage at -5° to 0°C and 30% RH
Duplication of collection:	No information
Availability:	Freely available. Index Seminum issued
Quarantine:	No known restrictions
Evaluation:	None
Documentation:	Computerized for passport data

**GHANA**

Plant Introduction and Exploration Section  
 Agricultural Research Station  
 Crops Research Institute  
 Bunso

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: H.L.O. Holloway  
 Details of collection: *Sorghum bicolor*, 67 accessions  
 Maintenance of collection: Active collection  
 Duplication of collection: Agricultural Research Station, Okumaning, Ghana and IITA, Ibadan, Nigeria  
 Availability: Available in limited quantity  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**GHANA**

Faculty of Agriculture  
 University of Ghana  
 Legon

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: M. Quarshie  
 Details of collection: *Sorghum bicolor*, 160 accessions  
 Maintenance of collection: Active collection  
 Duplication of collection: No information  
 Availability: Not available  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**HUNGARY**

Research Centre for Agrobotany  
 I.A.Q.  
 H-2766 Tápiószéle

Telephone: Tápiószéle 41  
 Telex: 226981 agbot H  
 Cable:

Curator/person in charge: L. Banyai  
 Details of collection: *Sorghum arundinaceum*, 1  
*S. bantutorum*, 3  
*S. besutorum*, 1  
*S. bicolor*, 484  
*S. cernuum*, 4  
*S. guineense*, 4  
*Sorghum* spp., 314  
*Sorghum* × *almum*, 2  
*Sorghum* × *drummondii*, 22  
 835 total accessions, including 89 landraces and 738 cultivars from Argentina (6), Australia (8), Austria (6), Belgium (1), Bulgaria (1),

Details of collection:	PR China (12), Czechoslovakia (8), DDR (4), Egypt (1), FRG (4), France (298), Hungary (202), India (4), Iran (2), Italy (2), Japan (1), Morocco (25), Poland (4), Portugal (2), Rep. of South Africa (62), Switzerland (1), Turkey (20), UK (10), USA (28), USSR (103) and 20 of unknown origin
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at +0°C. Seeds with 5% m.c. in airtight containers
Duplication of collection:	Partially duplicated (49 accessions)
Availability:	Freely available provided there is sufficient seed. Index Seminum periodically issued
Quarantine:	Phytosanitary certificate required
Evaluation:	No information
Documentation:	Passport data complete. Partially computerized

## INDIA

All India Coordinated Sorghum  
Improvement Project  
Rajandranagar  
Hyderabad 500030 (AP)

Telephone: 245349  
Telex: 0425-6758 NRCS IN  
Cable: G SORGHUM

Curator/person in charge:	B.S. Rana
Details of collection:	<i>Sorghum bicolor</i> , 2000 landraces and cultivars. World-wide representation
Maintenance of collection:	Seeds in room temperature
Duplication of collection:	ICRISAT, Hyderabad, India
Availability:	Through NBPGR, Pusa Campus, New Delhi 110012, India
Quarantine:	Required
Evaluation:	Partial for days to flower, plant height, grain yield, seed characteristics, insect and disease resistance
Documentation:	Manual

## INDIA

National Bureau of Plant Genetic Resources (NBPGR)  
Indian Agricultural Research Institute (IARI)  
Pusa Campus  
New Delhi 110012

Telephone: 586908 / 589211  
Telex: 31-63390 NBPGR IN  
Cable:

Curator/person in charge:	R.S. Rana
Details of collection:	<i>Sorghum bicolor</i> , 2000 landraces. World-wide representation <i>S. laxiflorum</i> , 1 from Australia <i>Sorghum</i> spp., 1200 from Australia, Italy, Philippines, Tanzania, Somalia, Uganda, USA and USSR
Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information

**INDIA (cont.)**

Evaluation: No information  
 Documentation: Partial and manual

**INDIA**

Genetic Resources Unit  
 International Crops Research Institute  
 for the Semi-Arid Tropics (ICRISAT)  
 Patancheru P.O.  
 Andhra Pradesh 502 324

Telephone: (842) 22 40 16  
 Telex: 0422-203 / 0425-6366  
 Cable: CRISAT, Hyderabad  
 Telefax: 91-842-24 12 39  
 E-Mail: Dialcom: 157:CGI505

Curator/person in charge: M.H. Mengesha

Details of collection: *Sorghum bicolor*  
*Sorghum* spp.  
 31030 primitive cultivars, landraces, genetic stocks, cultivars, breeders' lines, wild and spontaneous races from 87 countries, donated by All India Coordinated Sorghum Improvement Project, India; Agricultural Universities in India; NSSL, USA; Ethiopian Sorghum Improvement Project, Ethiopia; Gezira Agricultural Research Station, Sudan and ORSTOM, France

Maintenance of collection: Medium-term seed storage at 4°C and 20% RH. Seeds with 10% m.c. in aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a global collection of *Sorghum* for long-term conservation

Duplication of collection: ICARDA, Syria and NSSL, Fort Collins, USA

Availability: Available in limited quantity (8-20 g) depending on crop

Quarantine: Import permit, additional declarations are required for export for some countries. Phytosanitary certificate and import permit are required for import

Evaluation: Complete for 19 descriptors: days to 50% flowering, plant height, tillering, pigmentation, peduncle exertion, ear length, width, compactness and shape, glume colour and covering, grain colour and size, 100 seeds weight, threshability, lusture, presence of subcoat (endosperm texture), insect and disease resistance, striga and drought resistance

Documentation: On-going. Passport, characterization and evaluation data computerized

**IRAQ**

Plant Genetic Resources Unit  
 Agricultural Research Centre  
 Abu Ghraib - Baghdad

Telephone: (01) 511 22 01  
 Telex:  
 Cable: SBAAR - IRAQ

Curator/person in charge: A.T. Sharif

Details of collection: *Sorghum bicolor*, 5 landraces from Iraq

Maintenance of collection: Short-term seed storage at 5°-10°C. Seeds in airtight cans. Storage capacity 40 m<sup>3</sup>

Duplication of collection: Istituto del Germoplasma, Bari, Italy

Availability: Freely available  
 Quarantine: No known restrictions  
 Evaluation: Partial  
 Documentation: Manual. On-going

## ISRAEL

Israel Gene Bank for Agricultural Crops  
 Volcani Centre  
 ARO  
 P.O. Box 6  
 50-250 Bet Dagan

Telephone: (03) 968 34 58  
 Telex: 381476 AROVC IL  
 Cable:  
 Telefax: 972-3-993998

Curator/person in charge: M. Zur  
 Details of collection: *Sorghum bicolor*, 150 breeders' lines from Africa, India and USA, donated by American Universities and various Institutes  
 Maintenance of collection: Long-term seed storage at  $-10^{\circ}\text{C}$ . Seeds in aluminium boxes of 1 kg capacity. Storage area  $50\text{ m}^2$   
 Duplication of collection: No information  
 Availability: Available in limited quantity  
 Quarantine: Special conditions and treatment according to Plant Protection Law  
 Evaluation: Drought, salinity and disease resistance. High nutrition level  
 Documentation: Complete and computerized

## ITALY

Istituto del Germoplasma  
 CNR  
 Via G. Amendola, 165/A  
 I-70126 Bari

Telephone: (080) 58 34 63  
 Telex: 810565 CNR/BA I  
 Cable:

Curator/person in charge: P. Perrino  
 Details of collection: *Sorghum bicolor*, 50 landraces and cultivars from Algeria, Spain and Tunisia  
 Maintenance of collection: Long-term seed storage at  $-18^{\circ}\text{C}$ . Seeds in airtight metal cans with silica gel. Medium-term seed storage at  $0^{\circ}\text{C}$  and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets  
 Duplication of collection: El Harrach, Algeria; Institute of Agronomy, Tunis, Tunisia and Banco de Germoplasma, Alcalá de Henares, Spain  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Complete and computerized

**JAPAN**

National Institute of Agrobiological Resources (NIAR)  
Kannon-dai 2-1-2  
Tsukuba, Ibaraki 305

Telephone: 02975-6-7050  
Telex:  
Cable: NIARTSUKUBA YATABE  
Telefax: 02975-6-7408

- Curator/person in charge: Head, Germplasm Storage Center
- Details of collection: *Sorghum bicolor*, 659 cultivars, landraces and elite lines from Africa, Japan and North America
- Maintenance of collection: Long-term seed storage at -10°C  
Medium-term seed storage at -1°C and 30% RH  
Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml
- Duplication of collection: No information
- Availability: Freely available for research purposes. A fee is applicable for private institutions
- Quarantine: No information
- Evaluation: Standard manual published by specialists' consent
- Documentation: Computerized for passport data

**KENYA**

National Dryland Farming Research Centre  
P.O. Box 340  
Katumani - Machakos

Telephone: 215 06/7  
Telex:  
Cable:

- Curator/person in charge: J.W. Kamau / A. Shakoor
- Details of collection: *Sorghum bicolor*, landraces from Kenya (84) and 439 elite lines from Eastern and Southern Africa (116), India (161), Middle East (2) and USA (160), donated by ICRISAT, Hyderabad, India and KARI, Muguga, Kenya
- Maintenance of collection: Medium-term seed storage at 4°C
- Duplication of collection: ICRISAT, India and KARI, Kenya
- Availability: Requests through the Ministry of Research Science and Technology
- Quarantine: Normal plant quarantine procedures for import and export
- Evaluation: Partially, according to IBPGR descriptor list
- Documentation: Manual. On-going work

**MADAGASCAR**

Institut de Recherches Agronomiques  
B.P. 1444  
Tananarive

Telephone:  
Telex:  
Cable:

- Curator/person in charge: M. Arrandeau
- Details of collection: *Sorghum bicolor*, 300 accessions
- Maintenance of collection: Active collection
- Duplication of collection: No information

Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**MALAWI**

Chitedze Agricultural Research Station  
 P.O. Box 158  
 Lilongwe

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: P. Sibale  
 Details of collection: *Sorghum bicolor*, 483 landraces and wild types from Malawi  
 Maintenance of collection: Short-term seed storage at 6°-10°C and 50% RH. Seeds in tins, jars or packets  
 Duplication of collection: ICRIAT, Hyderabad, India and NSSL, Fort Collins, USA  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**MEXICO**

Banco de Germoplasma de Maíz  
 Campo Agrícola Experimental  
 del Valle de México  
 Chapingo

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: F. Cardenas Ramos  
 Details of collection: *Sorghum bicolor*, 3000 introduced cultivars  
 Maintenance of collection: Medium-term seed storage at 5°C and 10% RH. Seeds in sealed paper bags  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**NICARAGUA**

Programa de Recursos Genéticos Nicaragüenses (REGEN)  
 Instituto Superior de Ciencias Agropecuarias (ISCA)  
 Apartado 453  
 Carretera Norte km 12,5  
 Managua

Telephone: 319 68 / 316 19 Ext. 14  
 Telex:  
 Cable:

Curator/person in charge: C. Henry Loáisiga C.

**NICARAGUA (cont.)**

Details of collection:	<i>Sorghum bicolor</i> , 200 accessions, including 140 donated by ICRISAT, India
Maintenance of collection:	Medium-term seed storage at 0°C and 55-60% RH. Seeds in aluminium laminated foil packets
Duplication of collection:	No information
Availability:	Freely available
Quarantine:	Phytosanitary certificate required
Evaluation:	No information
Documentation:	Computerized for passport, characterization and evaluation data

**NIGERIA**

National Centre for Genetic Resources and Biotechnology (NACGRAB) Moor Plantation PMB 5382 Ibadan	Telephone: (022) 31 26 70 / 31 26 22 Telex: Cable: GENE BANK
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Curator/person in charge:	P.E. Onuorah
Details of collection:	<i>Sorghum</i> spp., 115 accessions
Maintenance of collection:	Long-term seed storage
Duplication of collection:	No information
Availability:	Available in limited quantity
Quarantine:	No information
Evaluation:	No information
Documentation:	Manual. Passport data available

**PAKISTAN**

Plant Genetic Resources Laboratory National Agricultural Research Centre Pakistan Agricultural Research Council (PARC) P.O. Box 1031 Islamabad	Telephone: 82 00 53 33 Telex: 5604 PARC PAK Cable: AGRESCOUNCIL
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Curator/person in charge:	R. Anwar
Details of collection:	<i>Sorghum bicolor</i> , 146 local cultivars from Pakistan
Maintenance of collection:	Medium-term seed storage at 5°C ±1°C. Seeds in cans
Duplication of collection:	At several International Research Centres
Availability:	Freely available provided there is sufficient seed
Quarantine:	Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate
Evaluation:	Partial
Documentation:	Manual

**PAKISTAN**

New Seed Farm  
Fodder Research Institute  
P.O. Box 43  
Sargodha

Telephone: 656 53  
Telex:  
Cable:

Curator/person in charge: A.R. Chaudhry

Details of collection: *Sorghum bicolor*, 14 elite lines donated by ICRISAT and USA and 16 crosses locally developed

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: Not duplicated

Availability: Freely available

Quarantine: Imported material must go through quarantine

Evaluation: On-going work

Documentation: On-going work

**ROMANIA**

Genetic Resources Department  
Research Institute for Cereals  
and Technical Crops  
Jud. Călărași  
R- 8264 Fundulea

Telephone: (90) 15 08 05  
Telex: 11349 ASAS R  
Cable: ICCPT Fundulea 8264 R

Curator/person in charge: P. Varga

Details of collection: *Sorghum bicolor*, 4900 landraces, wild and weedy races

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**SOMALIA**

Central Agricultural Research Station  
AFGOI  
Lower Shabele Region

Telephone:  
Telex:  
Cable:

Curator/person in charge: A.A. Majan

Details of collection: *Sorghum bicolor*, 94 landraces from Somalia

Maintenance of collection: Active collection

Duplication of collection: ICRISAT, Hyderabad, India

Availability: No information

Quarantine: No information

## SOMALIA (cont.)

Evaluation: No information  
 Documentation: Partial and manual

## SOUTH AFRICA, REPUBLIC OF

Department of Agricultural Economics and Marketing  
 Directorate of Plant and Liquor Control  
 Private Bag X 179  
 0001 Pretoria

Telephone: (012) 206 24 06  
 Telex: 3-23264  
 Cable: SATIVA PRETORIA  
 Telefax: (012) 206 27 86

Curator/person in charge: H. Chamberlain

Details of collection: *Sorghum arundinaceum*, 2 cultivars and 1 landrace from India and 3 landraces from Rep. of South Africa  
*S. basulorum*, 1 cultivar from Rep. of South Africa  
*S. bicolor*, 212 landraces and cultivars from PR China, Hungary (7), India, Rep. of South Africa (127), Sudan, USA (8) and Zimbabwe  
*S. caudatum*, 1 landrace from Hungary  
*S. guineensis*, 2 landraces from Hungary  
*S. halepense*, 4 landraces from Afghanistan (1) and Rep. of South Africa (3)  
*S. nigricans*, 2 landraces from Hungary  
*S. nitidum*, 1 landrace from Taiwan (China)  
*S. propinquum*, 1 landrace from Botswana  
*S. versicolor*, 2 landraces from Rep. of South Africa  
*Sorghum* spp., 185 landraces and cultivars from Botswana and USA (61) and Rep. of South Africa (124)  
*Sorghum* x *almum*, 5 cultivars from Rep. of South Africa (3) and 2 of unknown origin  
*Sorghum* x *drummondii*, 5 landraces and cultivars from Australia and USA

Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
 Short-term seed storage at 6°-7°C and 45% RH. Seeds in plastic containers

Duplication of collection: At different Crop Research Institutes in the Rep. of South Africa

Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
 Requests to: The Plant Introduction Officer  
 (same address)

Quarantine: Seeds for planting (excluding *S. halepense*)  
 1. Additional declaration on the phytosanitary certificate that the seed is free from *Pseudomonas andrapogonis*  
 2. Declaration on the phytosanitary certificate that the seed was treated with an appropriate:  
 a) fungicide; and  
 b) fumigant or wide spectrum insecticide

Evaluation: On-going work

Documentation: Complete and computerized

**SPAIN**

Banco de Germoplasma  
Finca "El Encin"  
Instituto Nacional de Investigaciones Agrarias (INIA)  
P.O. Box 127  
Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
Telex: 48989 INIA E  
Cable:

Curator/person in charge: R. Ponce  
Details of collection: *Sorghum bicolor*, cultivars  
Maintenance of collection: Long-term seed storage at -18°C  
Medium-term seed storage at -2°C and 30% RH  
Duplication of collection: Istituto del Germoplasma, Bari, Italy and VIR, Leningrad, USSR  
Availability: No information  
Quarantine: No information  
Evaluation: Partial  
Documentation: Complete and computerized

**SRI LANKA**

Agricultural Research Centre  
Maha Illuppallma

Telephone:  
Telex:  
Cable:

Curator/person in charge: J. Fernando  
Details of collection: *Sorghum bicolor*, 28 landraces from Sri Lanka  
Maintenance of collection: Active collection  
Duplication of collection: ICRI SAT, Hyderabad, India  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

**SYRIA**

Genetic Resources Unit  
Agriculture Research Directorate  
P.O. Box 113  
Douma - Damascus

Telephone: 75 04 01  
Telex: 411634 SYR  
Cable: MINAGRI DAMS

Curator/person in charge: K.S. Obari  
Details of collection: *Sorghum bicolor*, 50 primitive cultivars from Syria  
Maintenance of collection: Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)  
Duplication of collection: Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK  
Availability: Available on exchange basis

**SYRIA (cont.)**

Quarantine:	No known restrictions
Evaluation:	On-going work using IBPGR descriptor list
Documentation:	Manual. On-going work

**THAILAND**

Faculty of Agriculture  
Kasetsart University  
Bangkhen  
Bangkok 9

Telephone:  
Telex:  
Cable:

Curator/person in charge:	S. Jinahyon
Details of collection:	<i>Sorghum</i> spp., 1500 accessions
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

**THAILAND**

National Corn and Sorghum Research Center  
Kasetsart University  
Pak Chong  
30130 Nakorn Ratchasima

Telephone: (044) 31 17 70 / 31 20 81  
Telex:  
Cable:

Curator/person in charge:	R. Thiraporn
Details of collection:	<i>Sorghum bicolor</i> , 117 total accessions. Grain sorghum, pure lines (982); male sterile lines, A-b lines (254); broomcorn (13); sweet sorghum (20) and populations (8)
Maintenance of collection:	Short-term seed storage at 18 <sup>o</sup> -19 <sup>o</sup> C and 70% RH
Duplication of collection:	Not duplicated
Availability:	Available with the exception of elite lines
Quarantine:	Import restrictions
Evaluation:	Partial
Documentation:	Manual

**UNION OF SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge:	V.I. Krivchenko
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Details of collection:	<i>Sorghum arundinaceum</i> , 100 <i>S. bicolor</i> , 6200 <i>S. saccharatum</i> , 200 <i>S. technicum</i> , 200 <i>Sorghum</i> × <i>drummondii</i> , 300 All accessions are landraces, cultivars and wild species. World-wide representation
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at 4°C. Seeds with 6-7% m.c. in sealed glass containers
Duplication of collection:	Partially at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, Fort Collins, USA
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation
Documentation:	Manual. Passport data available

#### UNITED STATES OF AMERICA

Southern Regional Plant Introduction Station  
1109 Experiment Street  
Griffin, Georgia 30223

Telephone:  
Telex:  
Cable:

Curator/person in charge: W.R. Longford

Details of collection: *Sorghum arundinaceum*  
*S. bicolor*  
*S. halepense*  
*S. plumosum*  
*S. propinquum*  
*Sorghum* × *almuum*  
3365 landraces and 255 cultivars and hybrids. World-wide representation

Maintenance of collection: Medium-term seed storage

Duplication of collection: ICR, Hyderabad, India and NSSL, Fort Collins, USA

Availability: No information

Quarantine: No information

Evaluation: Complete for morphological and agronomical characters

Documentation: Computerized

#### UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)  
US Department of Agriculture (USDA)  
Agricultural Research Service (ARS)  
Colorado State University Campus  
Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
Telex: 237401714 DNPA UC  
Cable:  
Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

Details of collection: *Sorghum bicolor*, 18971 landraces, cultivars and wild species. World-wide representation

**UNITED STATES OF AMERICA (cont.)**

Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets The Institute has agreed to accept responsibility for maintaining a global collection of <i>Sorghum</i> for long-term conservation
Duplication of collection:	As an active collection at ICRISAT, Hyderabad, India and at Regional Plant Introduction Station, Griffin, Georgia, USA
Availability:	Freely available only if not available from the active collection
Quarantine:	No information
Evaluation:	Responsibility of the Station holding the active collection
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

**UNITED STATES OF AMERICA**

Mayagüez Institute of Tropical Agriculture  
USDA, SEA-AR  
P.O. Box 70  
Mayagüez, Puerto Rico 00708

Telephone:  
Telex:  
Cable:

Curator/person in charge:	A.R. Sotomayor
Details of collection:	<i>Sorghum bicolor</i> , 4000 landraces and cultivars. World-wide representation
Maintenance of collection:	Active collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

**VENEZUELA**

Centro Nacional de Investigaciones  
Agropecuarias (CENIAP)  
Apartado 4653  
2101 Maracay

Telephone:  
Telex:  
Cable:

Curator/person in charge:	H. Mena
Details of collection:	<i>Sorghum bicolor</i> , 494 landraces and cultivars from Venezuela and introductions
Maintenance of collection:	Short-term seed storage at 8°C and 45% RH
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information

Evaluation: No information  
 Documentation: Partial and manual

**YEMEN ARAB REPUBLIC**

American Sorghum Project  
 Tihama

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: K. Mansour  
 Details of collection: *Sorghum bicolor*, 4000 landraces and cultivars from Yemen and introductions  
 Maintenance of collection: Active collection  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**YEMEN, PEOPLE'S DEMOCRATIC REPUBLIC**

Department of Research & Extension  
 El-Kod Agricultural Research Centre  
 Ministry of Agriculture & Agrarian Reform  
 Abyan Gov

Telephone: 325 09 / 45 55  
 Telex: 2243 AD FAO  
 Cable: FOODAGRI ADEN

Curator/person in charge: AB. S. Mu' Allem  
 Details of collection: *Sorghum bicolor*, 24 landraces from PDR Yemen  
 Maintenance of collection: Short-term seed storage at 25°C and 75% RH. Seeds with >8% m.c. in tin containers. Regeneration done yearly  
 Duplication of collection: ICRISAT, India and NSSL, Fort Collins, USA  
 Availability: Available on exchange basis  
 Quarantine: Phytosanitary certificate is required for import of material  
 Evaluation: Partial  
 Documentation: Partial and manual

**ZAMBIA**

Mount Makulu Research Station  
 Private Bag 7  
 Chilanga

Telephone: 27 86 55  
 Telex:  
 Cable: Research Chilanga

Curator/person in charge: C. Nkhoma  
 Details of collection: *Sorghum bicolor*, 62 landraces and primitive cultivars from Zambia  
 Maintenance of collection: Short-term seed storage at 10°C and no controlled humidity. Seeds in aluminium laminated foil packets of 10 cm x 20 cm

**ZAMBIA (cont.)**

Duplication of collection:	NSSL, Fort Collins, USA
Availability:	Available with the only condition of information feed-back
Quarantine:	Import and export seeds must be accompanied with phitosanitary certificate
Evaluation:	Partial for yield components
Documentation:	Partial and manual

*Triticum*

**AFGHANISTAN**

Plant Genetic Resources Unit  
 Crop Improvement Division  
 Plant Research and Soil Department  
 Ministry of Agriculture and Land Reform  
 Darul Aman Research Station  
 Kabul

Telephone:  
 Telex:  
 Cable:

- Curator/person in charge: M.A. Rashid
- Details of collection: *Triticum* spp., 1276 landraces and wild species mainly from Afghanistan, and some introductions
- Maintenance of collection: Medium-term seed storage at 0°C and 35% RH. Seeds in cans
- Duplication of collection: Partially duplicated as base collection at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, Fort Collins, USA
- Availability: No information
- Quarantine: No information
- Evaluation: About 300 samples have been evaluated for disease and insect resistance and winter and spring types have been identified
- Documentation: Manual

**ALGERIA**

Institut de Développement des Grandes Cultures  
 B.P. 16  
 El Harrach  
 Algiers

Telephone:  
 Telex:  
 Cable:

- Curator/person in charge: N. Kadra
- Details of collection: *Aegilops* spp.  
  
*Triticum* spp.  
 Total of 200 landraces from Algeria, some introduced cultivars and wild species
- Maintenance of collection: Active collection
- Duplication of collection: As a base collection at Istituto del Germoplasma, Bari, Italy
- Availability: No information
- Quarantine: No information
- Evaluation: Partial
- Documentation: Manual

**ARGENTINA**

Estación Experimental Agropecuaria  
 Instituto Nacional de Tecnología Agropecuaria (INTA)  
 Bordenave

Telephone:  
 Telex:  
 Cable:

- Curator/person in charge: J.R. Lopez
- Details of collection: *Triticum* spp., (mainly *aestivum*) 974 accessions. World-wide representation, but majority from Argentina

Maintenance of collection:	Short-term seed storage. Seeds maintained in paper bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Partial
Documentation:	Manual

## ARGENTINA

Estación Experimental Agropecuaria  
 Instituto Nacional de Tecnología Agropecuaria (INTA)  
 Casilla de Correos 21  
 2580 Marcos Juárez (Cba.)

Telephone:  
 Telex:  
 Cable:

Curator/person in charge:	M.B. Formica
Details of collection:	<i>Triticum</i> spp.
Maintenance of collection:	Short-term seed storage at 7°C. Seeds with <10% m.c. in glass jars
Duplication of collection:	As a base collection at Castelar, Argentina
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

N.B. - *The Argentinian National Genetic Resources Programme has recently been created. The collections are in process of being assembled!*

## AUSTRALIA

Australian Winter Cereals Collection  
 RMB 944  
 Calala Lane  
 Tamworth, New South Wales 2340

Telephone: (067) 64 14 49  
 Telex:  
 Cable:  
 Telefax: (067) 67 93 70

Curator/person in charge:	M.C. Mackay
Details of collection:	<i>Aegilops</i> spp., 811 <i>Agropyron</i> spp., 37 <i>Triticum</i> spp., 22686 total accessions: (2n), 78 wild and 176 cultivated (4n), 291 wild and 5655 cultivated (6n), 16176 cultivated 310 unclassified or mixtures The <i>Triticum</i> collection includes cultivars, genetic stocks, landraces and species, world-wide representation x <i>Triticosecale</i> , 765 cultivars
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 5-7% m.c. in aluminium laminated foil packets
Duplication of collection:	Duplicated in small samples at CSIRO, Canberra, Australia

**AUSTRALIA (cont.)**

- Availability: Freely available for research use
- Quarantine: Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate
- Evaluation: Morphological and limited agronomical (plant height, ear emergence and growth habit) descriptors are held for all accessions. Other agronomical and disease descriptors are held for many accessions, but it is not a policy to evaluate all accessions for all descriptors
- Documentation: Computerized for all data held (passport, morphological, agronomical and disease descriptors)

**AUSTRIA**

Agricultural-Chemical Research  
& Testing Institute Linz  
Wieningstrasse 8  
A-4025 Linz

Telephone: (0732) 812 61  
Telex:  
Cable:

Curator/person in charge: R. Schachl / W. Kainz

Details of collection: *Aegilops* spp., 21 accessions from DDR (4), France (7), Italy (2), Netherlands (1), USSR (3) and Yugoslavia (4)

*Triticum aestivum*, 691 total accessions:

- 296 landraces from Austria (195), Ethiopia (34), FRG (10), Pakistan (50) and Yugoslavia (7)

- 359 cultivars from Austria (64), Belgium (2), Bulgaria (5), Canada (5), PR China (3), Czechoslovakia (4), DDR (3), FRG (125), France (21), Hungary (4), India (1), Italy (3), Kenya (1), Mexico (16), Netherlands (19), Romania (9), Spain (9), Sweden (7), Switzerland (2), Tunisia (15), Turkey (2), UK (16), USA (7), USSR (4) and Yugoslavia (12)

*T. dicoccon*, 8 accessions from Austria (4), DDR (2), FRG (1) and Morocco (1)

*T. monococcum*, 17 from DDR

*T. spelta*, 10 cultivars from Austria (2), DDR (2), FRG (1), Netherlands (1) and Switzerland (4)

x *Triticosecale*, 14 cultivars from Austria (1), Hungary (6), Mexico (3), Poland (1), USSR (1) and Yugoslavia (2)

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 8% m.c. Short-term seed storage at 15°C and 30% RH. Seeds in glass containers of 250 cc

Duplication of collection: ZIGuK, Gatersleben, DDR and NGB, Alnarp, Sweden

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate required

Evaluation: On-going for botanical characteristics

Documentation: Computerized

**AUSTRIA**

National Establishment for Plant  
Cultivation and Seed Testing Rinn  
A-6074 Rinn, Tirol

Telephone: (05223) 81 17  
Telex:  
Cable:

Curator/person in charge: L. Koeck

Details of collection:	<i>Triticum aestivum</i> , 173 landraces, 23 old cultivars and 14 wild/weedy
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation for botanical characteristics
Documentation:	No information

**AUSTRIA**

Federal Institute for Plant Production  
P.O. Box 64  
Alliiertenstrasse 1  
A-1201 Vienna

Telephone: 24 15 11  
Telex: 35259 banst a  
Cable:

Curator/person in charge:	R. Hron
Details of collection:	<i>Triticum aestivum</i> , 123 old cultivars and 290 mutant/genetic stocks <i>T. durum</i> , 186 old cultivars and 150 mutant/genetic stocks
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation for botanical characteristics
Documentation:	No information

**AUSTRIA**

Institute for Agronomy  
and Plant Breeding  
University of Agriculture  
Gregor Mendelstrasse 33  
A-1180 Vienna

Telephone: (0222) 34 25 00  
Telex:  
Cable:

Curator/person in charge:	L. Tanasch
Details of collection:	<i>Aegilops</i> spp., 5 wild  <i>Triticum aestivum</i> , 10 landraces and 10 old cultivars <i>T. durum</i> , 10 landraces and 10 old cultivars <i>T. turgidum</i> , 5 landraces and 10 old cultivars
Maintenance of collection:	Short-term seed storage at ambient temperatures Regeneration done yearly. Single spike maintenance
Duplication of collection:	Federal Institute for Agronomy and Crop Sciences, Fuchsenbigl, Lower Austria
Availability:	Available in limited quantity
Quarantine:	International regulations apply

**AUSTRIA (cont.)**

- Evaluation: Comparison trials, hybridization for genetic analysis and selection for different purposes
- Documentation: Manual. On-going computerization

**BELGIUM**

Station d'Amélioration des Plantes  
Centre de Recherches Agronomiques de l'Etat  
Rue du Bordia, 4  
B-5800 Gembloux

Telephone: (081) 661 24 91  
Telex: 59165 Centragro GBX  
Cable:  
Telefax: (081) 61 49 41

- Curator/person in charge: J. Vandam
- Details of collection: *Triticum aestivum*, 514 old cultivars and 154 wild/weedy  
*T. spelta*, 90 landraces and 70 old cultivars
- Maintenance of collection: Medium-term seed storage
- Duplication of collection: No information
- Availability: Available on exchange basis
- Quarantine: No known restrictions
- Evaluation: Information not available
- Documentation: Information not available

**BELGIUM**

V.Z.W. Centrum voor Toegepaste Biologie  
Langstraat, 130  
B-3434 Linter

Telephone: (016) 78 96 22  
Telex:  
Cable:

- Curator/person in charge: J. Niclaes
- Details of collection: *Triticum aestivum*, 981 total accessions. Old cultivars (5) and cultivars (976)
- Maintenance of collection: Short-term seed storage at ambient temperatures
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Disease resistance
- Documentation: No information

**BELGIUM**

n.v. Clovis Matton  
Veredelingsbedrijf  
Neerkouter, 5  
B-8573 Anzegem-Tiegem

Telephone: (056) 68 93 20  
Telex: 85275  
Cable:

- Curator/person in charge: L. Matton
- Details of collection: *Triticum aestivum* (winter type), 45 landraces, 169 old cultivars and 41 wild/weedy  
*T. aestivum* (spring type), 26 landraces and 74 old cultivars

Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Screening for resistance to <i>Helminthosporium teres</i>
Documentation:	No information

## BRAZIL

Centro Nacional de Pesquisa de Trigo (CNPT)  
 Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
 Passo Fundo - Rio Grande do Sul

Telephone: (313) 12 44 / 14 02  
 Telex:  
 Cable:

Curator/person in charge: A.C.A. Zanatta / P.L. Scheeren

Details of collection: *Aegilops bicornis*  
*Ae. caudata*  
*Ae. crassa*  
*Ae. cylindrica*  
*Ae. kotschyi*  
*Ae. longissima*  
*Ae. ovata*  
*Ae. speltoides*  
*Ae. squarrosa*  
*Ae. triaristata*  
*Ae. triuncialis*  
*Ae. umbellulata*  
*Ae. ventricosa*

*Triticum aestivum*  
*T. boeoticum*  
*T. carthlicum*  
*T. compactum*  
*T. dicoccoides*  
*T. dicoccon*  
*T. karamyshevii*  
*T. monococcum*  
*T. polonicum*  
*T. spelta*  
*T. sphaerococcum*  
*T. timonovum*  
*T. timopheevii*  
*T. turanicum*  
*T. turgidum* subsp. *turgidum* convar. *durum*  
*T. turgidum* subsp. *turgidum* convar. *turgidum*  
*T. vavilovii*  
*T. zhukovskyi*  
 Total of 9000 landraces, cultivars, wild and weedy species. World-wide representation

Maintenance of collection: Long-term seed storage at -18°C at the Centro Nacional de Recursos Genéticos (CENARGEN), Brasília, which coordinates national germplasm activities (Director J. Silva)  
 Medium-term seed storage at 2°-4°C and 25% RH.  
 Short-term seed storage at 10°C and 30% RH at the CNPT which maintains the active collection

Duplication of collection: CENARGEN, Brasília, Brazil

**BRAZIL (cont.)**

Availability:	No information
Quarantine:	No information
Evaluation:	Complete for 50 descriptors
Documentation:	No information

**BULGARIA**

Institute of Introduction and  
Plant Genetic Resources "K. Malkov"  
District of Plovdiv  
BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
Telex: 44444 ZOS BG  
Cable:

Curator/person in charge: B. Matsov / M. Zaharieva

Details of collection: *Aegilops* spp., 46 wild and 26 breeding material from Bulgaria and USSR

*Triticum aestivum*, 5428 total accessions. Landraces (4), breeding lines (128) and breeding material (5296) from Canada, Czechoslovakia, FRG, France, Hungary, Italy, Japan, Poland, Sweden and USSR

*T. carthlicum*, 8 accessions

*T. compactum*, 7 accessions

*T. dicoccoides*, 14 accessions

*T. dicoccon*, 32 accessions

*T. durum*, 1641 total accessions. Landraces (1148), breeding material (487) and old cultivars (6) from Canada, DDR, FRG, France, Greece, Italy, Mexico, Spain, Syria, USA and USSR

*T. macha*, 9 accessions

*T. monococcum*, 37 accessions

*T. polonicum*, 12 accessions

*T. spelta*, 37 accessions

*T. sphaerococcum*, 47 accessions

*T. timopheevii*, 6 accessions

*T. turgidum*, 57 accessions

*Triticum* spp., 53 accessions

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
Medium-term seed storage at 5°C and 50% RH

Duplication of collection: Canada, Czechoslovakia, DDR, FRG, France, Greece, Hungary, Italy, Japan, Mexico, Poland, Spain, Sweden, USA and USSR

Availability: Available on exchange basis

Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo

Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economic characters, chemical composition and technological evaluation). Genetic and ecological studies

Documentation: Computerized for passport and evaluation data

## CANADA

Central Office for the Plant Gene Resources  
of Canada (PGRC)  
Plant Research Centre  
Central Experimental Farm  
Building 99  
Ottawa, Ontario K1A 0C6

Telephone: (613) 995 94 28  
Telex:  
Cable:

Curator/person in charge: R.S. Pandeya

Details of collection: *Aegilops* spp.

*Triticum aestivum*

*T. dicoccon*

*Triticum* spp.

Total of 7500 landraces, cultivars and wild species. World-wide representation

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 5-6% m.c. in aluminium laminated foil packets

Duplication of collection: Many research stations throughout Canada hold active collections of part of this material

Availability: No information

Quarantine: No information

Evaluation: Evaluation is carried out by canadian breeders

Documentation: Compilation and computerization of data is in progress at PGRC Office

## CHINA, PEOPLE'S REPUBLIC OF

Institute of Crop Germplasm Resources (ICGR)  
Chinese Academy of Agricultural Sciences (CAAS)  
Beijing

Telephone:  
Telex:  
Cable:

Curator/person in charge: Xu Yun-tian

Details of collection: *Aegilops* spp.

*Triticum* spp. (mainly *T. aestivum*)

9400 total accessions from all provinces of China and also introductions

Maintenance of collection: Active at institutes of CAAS and at Provincial Agricultural Academies where storage conditions vary from room temperature to -10°C. The ICRG aims to coordinate the national germplasm activities. A medium-term seed storage is under construction in Beijing and a long-term seed storage is planned. This National Genebank will hold duplicates of all collections in China

The Institute has agreed to accept responsibility for maintaining a regional collection of cultivated species of *Triticum* for long-term conservation

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: 2000 accessions evaluated for 98 descriptors

Documentation: Manual

**COLOMBIA**

Instituto Colombiano Agropecuario (ICA)  
Tibaitatá  
A.A. 151123  
El Dorado - Bogotá

Telephone:  
Telex:  
Cable:

Curator/person in charge:

Details of collection: *Triticum* spp., 500 accessions  
Maintenance of collection: Short-term seed storage at 12°C. Long-term seed storage facilities planned  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Complete for 33 descriptors  
Documentation: Computerized

**CYPRUS**

Agricultural Research Institute (ARI)  
P.O. Box 2016  
Nicosia

Telephone: (02) 30 34 31  
Telex: 4660 MINAGRI  
Cable: ARI, Nicosia

Curator/person in charge:

A. Della

Details of collection:

*Aegilops biuncialis*, 3  
*Ae. cylindrica*, 1  
*Ae. geniculata*, 5  
*Ae. triuncialis*, 21  
*Aegilops* spp., 136  
All accessions are wild from Cyprus

*Triticum durum*, 80 landraces from Cyprus

Maintenance of collection:

Medium-term seed storage at 4°C and 50% RH. Seeds in aluminium laminated foil packets

Duplication of collection:

*Aegilops*: Istituto del Germoplasma, Bari, Italy; Kyoto University, Japan; USDA Small Grains Collection, Beltsville and NSSL, Fort Collins, USA  
*Triticum*: Istituto del Germoplasma, Bari, Italy and ICARDA, Aleppo, Syria

Availability:

Freely available

Quarantine:

No regulations apart from phytosanitary certificate

Evaluation:

Partial

Documentation:

Passport and some evaluation data computerized

**CZECHOSLOVAKIA**

Cereal Research and Breeding Institute  
Havlickova 2787  
767 41 Kromeriz

Telephone: (634) 42 61 11  
Telex: 62940 VSUOB C  
Cable:

Curator/person in charge:

Z. Krystof

Details of collection:	<i>Triticum</i> spp.. 2530 spring type and 4400 winter type
Maintenance of collection:	Short-term seed storage
Duplication of collection:	To be duplicated in a near future at National Gene Bank, Prague
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	On-going computerization for passport, characterization and evaluation data

## CZECHOSLOVAKIA

Research Institute of Plant Production Bratislavská cesta, 122 921 68 Piestany	Telephone: (838) 223 11 Telex: 71212 VURV C Cable:
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Curator/person in charge: J. Rychtárik / V. Tisová / D. Magdolen

Details of collection: *Triticum aestivum*, 544 cultivars from Australia (1), Austria (9), Belgium (6), Bulgaria (40), Canada (1), Czechoslovakia (39), DDR (22), Denmark (2), FRG (35), France (29), Hungary (56), Italy (1), Netherlands (6), Poland (20), Romania (41), Sweden (10), UK (54), USA (30), USSR (131) and Yugoslavia (41)

x *Triticosecale*, 424 cultivars

Maintenance of collection: Medium-term seed storage at -5°C and in short-term seed storage

Duplication of collection: Partially at:  
Cereal Research and Breeding Institute  
Havlickova, 2787  
76741 Kromeriz - Czechoslovakia  
and:  
Research Institute of Plant Production  
Drnovská, 507  
Praha - Ruzyně - Czechoslovakia

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work

Documentation: Manual. Computerization due to commence soon

## CZECHOSLOVAKIA

Genebank Research Institute of Plant Production 161 06 Praha 6 - Ruzyně	Telephone: (2) 36 08 51 Telex: 123093 VURV C Cable:
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Curator/person in charge: V. Holubec - *Aegilops*  
J. Sehnalova - *Triticum*, wild species  
Z. Stehno - *Triticum*, spring types  
M. Vlasak - *Triticum*, winter types

Details of collection: *Aegilops bicornis*, 4  
*Ae. columnaris*, 12  
*Ae. comosa*, 3

## CZECHOSLOVAKIA (cont.)

Details of collection: (cont.)	<p><i>Aegilops crassa</i>, 27  <i>Ae. cylindrica</i>, 43 accessions, including 5 from Bulgaria and 8 from USSR  <i>Ae. geniculata</i>, 77 accessions, including 9 from Bulgaria  <i>Ae. juvenalis</i>, 10  <i>Ae. kotschyi</i>, 12 accessions, including 3 from USSR  <i>Ae. longissima</i>, 33  <i>Ae. lorentii</i>, 27 accessions, including 10 from Bulgaria and 5 from USSR  <i>Ae. markgrafii</i>, 5  <i>Ae. mutica</i>, 5 accessions, including 2 from USSR  <i>Ae. neglecta</i>, 40 accessions, including 10 from Bulgaria  <i>Ae. peregrina</i>, 10  <i>Ae. searsii</i>, 4  <i>Ae. speltoides</i>, 64  <i>Ae. tauschii</i>, 151 accessions, including 12 from USSR  <i>Ae. triuncialis</i>, 81 accessions, including 7 from Bulgaria and 11 from USSR  <i>Ae. umbellulata</i>, 9  <i>Ae. uniaristata</i>, 4  <i>Ae. ventricosa</i>, 20 accessions, including 1 from USSR</p> <p><i>Triticum aestivum</i>, 7300 landraces and cultivars, including 300 accessions from Czechoslovakia  <i>T. aethiopicum</i>, 6  <i>T. araraticum</i>, 5  <i>T. boeoticum</i>, 5  <i>T. carthlicum</i>, 9  <i>T. dicoccoides</i>, 4  <i>T. dicoccon</i>, 94  <i>T. durum</i>, 580 cultivars  <i>T. ispahanicum</i>, 1  <i>T. karamyshevii</i>, 2  <i>T. macha</i>, 7  <i>T. militinae</i>, 1  <i>T. monococcum</i>, 23  <i>T. palmovae</i>, 1  <i>T. petropavlovskyi</i>, 2  <i>T. polonicum</i>, 12  <i>T. sinskafae</i>, 1  <i>T. spelta</i>, 19  <i>T. sphaerococcum</i>, 9  <i>T. timococcum</i>, 1  <i>T. timonovum</i>, 1  <i>T. timopheevii</i>, 4  <i>T. turanicum</i>, 4  <i>T. turgidum</i>, 40  <i>T. urartu</i>, 2  <i>T. vavilovii</i>, 1  <i>T. zhukovskyi</i>, 1</p>
Maintenance of collection:	<p>Long-term seed storage at -18°C  Medium-term seed storage at 2°C  Seed with 5-8% m.c. in glass containers</p>
Duplication of collection:	<p><i>Aegilops</i>, partially at ZIGuK, Gatersleben, DDR  <i>Triticum</i>, partially at Cereal Research and Breeding Institute, Kromeriz and Research Institute of Plant Production, Piestany, Czechoslovakia</p>
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	<p><i>Aegilops</i>, on-going work  <i>Triticum</i>, yield and yield structure, grain quality, earliness, disease resistance and gliadin spectrum. About 70% of the collection evaluated using national descriptor list</p>

Documentation: Computerized for passport data and on-going for evaluation data. Data held at Czechoslovak Information System for Genetic Resources (EVIGEZ). For further information see: Rogalewicz, V. and Bares, I. (1987). Czechoslovak Information System for Genetic Resources. FAO/IBPGR Pl. Genet. Resources Newsletter, 22: 14-16

## DENMARK

Crop Husbandry and Plant Breeding Department  
Royal Veterinary and Agricultural University  
Thorvaldsensvej, 40  
DK-1871 Copenhagen V

Telephone: (01) 35 17 88  
Telex:  
Cable:

Curator/person in charge: S. Andersen

Details of collection: *Triticum* spp., 20 landraces, 100 old cultivars, 20 wild and 360 mutant/genetic stocks

Maintenance of collection: Medium-term seed storage at 0<sup>o</sup>-4<sup>o</sup>C and 30-60% RH. Seeds in glass jars

Duplication of collection: NGB, Alnarp, Sweden

Availability: No information

Quarantine: No information

Evaluation: Characterization and evaluation of physiological factors

Documentation: No information

## ETHIOPIA

Plant Genetic Resources Centre/Ethiopia (PGRC/E)  
P.O. Box 30726  
Addis Ababa

Telephone: 18 03 81  
Telex: 21460 GTZFP ET  
Cable: GENE BANK

Curator/person in charge: Melaku Worede

Details of collection: *Triticum* spp., 10745 landraces, including from FRG (100), Israel (16), Italy (100) and 10 of unknown origin

Maintenance of collection: Long-term seed storage at -10<sup>o</sup>C. Seeds with 5-7% m.c. in aluminium laminated foil packets  
Medium-term seed storage at 4<sup>o</sup>C and 35% RH. Seeds in aluminium laminated foil packets. Provisionally storage for samples awaiting multiplication and/or samples for long-term seed storage

Duplication of collection: Partially (1672 accessions) in USA

Availability: Available, in consultation with Ethiopian breeders, scientists from the co-operating institutes and PGRC/E, whenever there is mutual advantage

Quarantine: Import of seeds through the Institute of Agricultural Research, Quarantine Unit. Export seeds accompanied with phytosanitary certificate issued by the Ministry of Agriculture

Evaluation: On-going work, for 19 characters, using modified IBPGR descriptor list

Documentation: On-going and computerized for passport, characterization and evaluation data

## FEDERAL REPUBLIC OF GERMANY

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völknerode  
Telefax: (531) 59 68 14

D-3300 Braunschweig

Curator/person in charge: L. Seidewitz

## Details of collection:

*Aegilops caudata*, 2 wild from Czechoslovakia (1) and FRG (1)  
*Ae. crassa*, 8 wild from Morocco (1), Romania (1) and 6 of unknown origin  
*Ae. cylindrica*, 7 wild and 1 hybrid from FRG  
*Ae. kotschyi*, 1 ecotype from UK  
*Ae. lorentii*, 9 wild from FRG (1) and 8 of unknown origin  
*Ae. ovata*, 6 wild from Czechoslovakia (1), DDR (1), FRG (1), Romania (2) and UK (1)  
*Ae. speltooides*, 12 wild from Czechoslovakia (2), FRG (1), Morocco (1), USSR (2) and 6 of unknown origin  
*Ae. squarrosa*, 10 wild from Iran (6), Morocco (1) and 3 of unknown origin  
*Ae. triaristata*, 2 wild from UK (1) and 1 of unknown origin  
*Ae. triuncialis*, 79 wild from Czechoslovakia (1), DDR (1), FRG (1), Iran (2), Morocco (1), Poland (1), UK (1), 71 of unknown origin; and 1 hybrid  
*Ae. umbellulata*, 4 ecotypes from FRG (1) and 3 of unknown origin  
*Ae. vavilovii*, 5 wild from USSR (3) and 2 of unknown origin  
*Ae. ventricosa*, 3 wild from FRG (1), Morocco (1), UK (1); and 2 hybrids

*Triticum aestivum*, 9144 total accessions:

- 5189 cultivars from Afghanistan (13), Africa (1), Algeria (1), Alpine countries (60), Argentina (70), Australia (40), Austria (51), Balkans (17), Belgium (20), Benelux (15), Bolivia (4), Brazil (14), Bulgaria (8), Canada (46), Chad (3), Chile (16), Colombia (1), Czechoslovakia (30), DDR (3), Denmark (4), Egypt (1), Europe (4), Finland (17), FRG (557), France (273), Greece (13), Hungary (14), Iberian Peninsula (19), India (5), Iran (13), Iraq (2), Ireland (1), Italy (169), Japan (5), Kenya (2), Korea (3), Mexico (11), Nepal (64), Netherlands (31), New Zealand (12), Norway (15), Pakistan (3), Peru (2), Poland (20), Portugal (33), Romania (11), Rep. of South Africa (1), Spain (15), Sweden (119), Taiwan (China) (7), Tunisia (2), Turkey (7), Uruguay (2), USA (294), USSR (75), Yemen (3), Yugoslavia (19) and 638 of unknown origin  
- 371 hybrids from Algeria (1), Alpine countries (1), Argentina (15), Australia (1), Austria (5), Belgium (1), Canada (5), Chile (4), Colombia (6), Ecuador (13), Europe (2), FRG (5), France (40), India (1), Italy (20), Ireland (1), Mexico (32), Nepal (2), Norway (2), Peru (3), Portugal (2), Spain (1), Switzerland (95), UK (2), USA (98), USSR (11) and Yugoslavia (2)  
- 1990 landraces from Afghanistan (105), Africa (1), Algeria (2), Alpine countries (45), Argentina (20), Australia (24), Austria (50), Balkans (19), Belgium (3), Bolivia (5), Brazil (5), Bulgaria (13), Canada (21), Canary Is. (Spain) (4), Chad (4), Chile (12), PR China (19), Cyprus (2), Czechoslovakia (15), DDR (2), Denmark (2), Egypt (3), Ethiopia (47), Europe (3), FRG (89), Finland (8), France (69), Greece (26), Guatemala (1), Hungary (15), Iberian Peninsula (12), India (171), Iran (15), Israel (4), Italy (42), Japan (9), Kenya (3), Mexico (106), Nepal (135), Netherlands (5), New Zealand (7), Norway (2), Pakistan (42), Poland (57), Portugal (68), Romania (13), Rep. of South Africa (3), Spain (30), Sweden (27), Switzerland (41), Syria (2), Taiwan (China) (58), Tibet (PR China) (4), Tunisia (1), Turkey (61), UK (5), Uruguay (5), USA (63), USSR (140), Yemen (44), Yugoslavia (12), Zimbabwe (2) and 129 of unknown origin

Details of collection:  
(cont.)

- 2920 lines from Afghanistan (1), Algeria (1), Alpine countries (6), Argentina (56), Australia (45), Austria (36), Balkans (18), Belgium (13), Benelux (5), Brazil (5), Bulgaria (35), Canada (32), Central African Republic (2), Chile (22), PR China (19), Colombia (11), Congo (10), Czechoslovakia (9), Denmark (3), Egypt (1), Ethiopia (9), Europe (2), FRG (150), Finland (15), France (65), Greece (1), Hungary (51), Iberian Peninsula (26), India (28), Iran (84), Israel (4), Italy (75), Japan (9), Kenya (18), Mexico (57), Near Asia (15), Netherlands (1), New Zealand (3), Norway (4), Pakistan (2), Paraguay (1), Peru (1), Poland (3), Portugal (30), Romania (38), Rep. of South Africa (11), Spain (42), Sweden (46), Switzerland (811), Taiwan (China) (3), Tunisia (1), Turkey (35), UK (11), Uruguay (22), USA (130), USSR (184), Yemen (1), Yugoslavia (39), Zimbabwe (2) and 543 of unknown origin
- 17 mutants from FRG (3), France (4), Switzerland (9) and 1 of unknown origin
- 2 ecotypes from FRG (1) and Spain (1)
- 390 populations from Austria (167), Iran (196) and 27 of unknown origin
- 126 selections from Argentina (1), Australia (4), Canada (4), Central Asia (1), Czechoslovakia (3), FRG (4), France (4), Italy (2), Mexico (2), Poland (2), Switzerland (125), USA (8) and USSR (2)
- 103 accessions of unknown origin
- T. aethiopicum*, 2 landraces from USSR
- T. araraticum*, 7
- T. boeoticum*, 67 total accessions:
  - 6 cultivars
  - 52 landraces from Balkans (4), Belgium (1), DDR (2), FRG (2), Iran (2), Turkey (8) and 33 of unknown origin
  - 7 lines
  - 1 selection
  - 1 wild
- T. carthlicum*, 27 total accessions:
  - 20 landraces from Iran (2), USSR (13) and 5 of unknown origin
  - 4 lines from FRG (1) and USSR (3)
  - 2 ecotypes from Turkey (1) and UK (1)
  - 1 selection from FRG
- T. compactum*, 232 total accessions:
  - 9 cultivars from Austria (1), France (1), Italy (1), Portugal (3), Switzerland (1), Turkey (1) and USA (1)
  - 3 hybrids from Italy (1) and USA (2)
  - 78 landraces from Afghanistan (5), Austria (8), Balkans (1), FRG (6), France (1), Hungary (1), Italy (2), Israel (3), Pakistan (3), Portugal (3), Sweden (4), Tunisia (1), Turkey (25), USA (5) and 10 of unknown origin
  - 134 lines from Asia Minor (1), India (123), Italy (1), Portugal (2), Spain (1), Switzerland (1), Turkey (3) and USSR (2)
  - 1 population from Iran
  - 1 selection from FRG
- T. dicoccoides*, 40 total accessions:
  - 33 landraces from Asia Minor (4), Ethiopia (1), Israel (6), Jordan (1), Palestine (3), Syria (3), USSR (1) and 14 of unknown origin
  - 7 lines
- T. dicoccon*, 323 total accessions:
  - 9 cultivars from Ethiopia (1), India (1), Switzerland (1) and 6 of unknown origin
  - 221 landraces from Austria (1), Belgium (5), Bolivia (1), Bulgaria (1), DDR (8), Egypt (1), Ethiopia (10), FRG (46), France (6), India (6), Iran (2), Israel (3), Italy (6), Poland (1), Romania (1), Spain (7), Sweden (2), Switzerland (4), Syria (2), Turkey (1), USA (5), USSR (15), Yemen (5) and 82 of unknown origin
  - 43 lines from Ethiopia (1), FRG (1), France (3), Italy (1), Spain (11), Switzerland (6) and 10 of unknown origin
  - 25 mutants

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Details of collection:  
(cont.)

- 13 selections from Ethiopia (1), FRG (5), France (1), Spain (3), Turkey (1), USSR (1) and 1 of unknown origin
- 12 other accessions
- T. dimococcum*, 2 selections
- T. durum*, 1426 total accessions:
  - 203 cultivars from Africa (1), Asia (3), Austria (2), Balkans (9), Bulgaria (11), Chile (4), Cyprus (1), FRG (2), France (2), Greece (6), Iberian Peninsula (40), Italy (33), Portugal (24), Spain (4), Turkey (10), USA (14), USSR (23) and 14 of unknown origin
  - 13 hybrids from Africa (2), Italy (4), Portugal (2), Turkey (4) and Yugoslavia (1)
  - 769 landraces from Afghanistan (3), Africa (4), Albania (1), Algeria (15), Argentina (1), Austria (2), Asia (8), Asia Minor (5), Balkans (2), Belgium (1), Bolivia (1), Bulgaria (12), Canada (1), Chile (2), PR China (3), Cyprus (7), Ethiopia (86), FRG (3), France (1), Greece (36), Hungary (2), India (7), Iran (5), Israel (17), Italy (42), Jordan (2), Malta (2), Morocco (6), Pakistan (3), Peru (1), Poland (1), Portugal (38), Romania (1), Saudi Arabia (3), Spain (5), Syria (10), Tunisia (1), Turkey (346), USA (8), USSR (24), Yugoslavia (5) and 46 of unknown origin
  - 411 lines from Afghanistan (2), Africa (3), Algeria (3), Argentina (1), Asia (4), Belgium (1), Bulgaria (4), Colombia (1), Czechoslovakia (13), Ethiopia (40), FRG (6), France (1), Greece (5), Hungary (4), India (1), Israel (14), Italy (26), Morocco (1), Pakistan (3), Portugal (20), Romania (9), Spain (106), Switzerland (4), Turkey (100), Uruguay (1), USSR (8), Yugoslavia (2) and 28 of unknown origin
  - 6 mutants
  - 8 ecotypes from Afghanistan (1), Algeria (1), Egypt (2), Morocco (1), Pakistan (1), Turkey (1) and Yugoslavia (1)
  - 10 selections from Ethiopia (3), Greece (1), Portugal (3), Tunisia (2) and Turkey (1)
  - 6 bulk populations
  - T. ispahanicum*, 4 landraces from Iran (2), Iraq (1) and France (1)
  - T. karamyshevii*, 2 landraces from USSR
  - T. macha*, 44 total accessions:
    - 28 landraces from Turkey (2), USSR (13) and 13 of unknown origin
    - 12 lines from USSR (6) and 5 of unknown origin
    - 4 mutants
  - T. monococcum*, 203 total accessions:
    - 4 cultivars from Switzerland (1), USA (1) and 2 of unknown origin
    - 1 landrace from India
    - 10 lines from Austria (4), Italy (5) and USA (1)
    - 184 ecotypes from Albania (19), Austria (4), Balkans (25), Belgium (1), Bulgaria (8), Canada (1), DDR (5), FRG (29), France (2), Greece (6), India (2), Japan (1), Morocco (10), Romania (1), Spain (5), Sweden (1), Switzerland (8), Syria (1), Turkey (7), USA (2) and 46 of unknown origin
  - T. persicum*, 1 landrace
  - T. polonicum*, 65 total accessions:
    - 1 hybrid
    - 1 landrace from Austria
    - 62 ecotypes from Cyprus (2), DDR (4), Ethiopia (5), FRG (5), Israel (4), Italy (1), Poland (1), Spain (6), Syria (10), Taiwan (China) (1), Turkey (2), USA (2) and 19 of unknown origin
    - 1 selection
  - T. spelta*, 2290 total accessions:
    - 58 cultivars from FRG (5), Italy (1), Switzerland (22) and 30 of unknown origin
    - 3 hybrids from FRG (1) and 2 of unknown origin
    - 167 landraces from Austria (8), DDR (1), FRG (62), Iran (5), Israel (1), Spain (8), Sweden (2), Switzerland (21), USA (3), Yugoslavia (1) and 55 of unknown origin

Details of collection: (cont.)	<ul style="list-style-type: none"> <li>- 2001 lines from Austria (37), Belgium (14), Bulgaria (2), FRG (1181), Iran (55), Italy (1), Luxembourg (122), Spain (350), Switzerland (217), UK (1), Turkey (2), USA (1) and 18 of unknown origin</li> <li>- 7 mutants from Switzerland (3) and 7 of unknown origin</li> <li>- 51 ecotypes from Algeria (1), DDR (2), FRG (34), Portugal (1), Spain (1), Turkey (1), USSR (4) and 7 of unknown origin</li> <li><i>T. sphaerococcum</i>, 19 total accessions: <ul style="list-style-type: none"> <li>- 4 landraces from India</li> <li>- 15 ecotypes from India (9), Pakistan (4) and 2 of unknown origin</li> </ul> </li> <li><i>T. turanicum</i>, 7 ecotypes from Iran (4), Turkey (1) and 2 of unknown origin</li> <li><i>T. turgidum</i>, 175 total accessions: <ul style="list-style-type: none"> <li>- 42 cultivars from Balkans (1), Canada (1), Italy (3), Portugal (4), USA (1), and 32 of unknown origin</li> <li>- 116 landraces from Algeria (2), Australia (1), Bulgaria (2), Chile (1), Ethiopia (5), FRG (4), France (6), Greece (2), Italy (3), Portugal (12), Romania (4), Spain (18), Switzerland (3), Taiwan (China) (3), Turkey (2), UK (2), USA (2), USSR (9), Yugoslavia (5) and 30 of unknown origin</li> <li>- 9 lines from France (1), Italy (1), Pakistan (3), Spain (1), USSR (1) and 2 of unknown origin</li> <li>- 3 ecotypes from Portugal (1), USSR (1) and 1 of unknown origin</li> <li>- 1 population from Iran</li> <li>- 3 selections from Ethiopia (2) and France (1)</li> </ul> </li> <li><i>T. zhukovskyi</i>, 3 ecotypes from USSR</li> <li><i>Triticum</i> spp., 1386 total accessions: <ul style="list-style-type: none"> <li>- 139 cultivars from Argentina (6), Austria (3), Belgium (1), Bulgaria (1), Chile (1), Colombia (1), Egypt (33), FRG (5), Finland (1), France (2), India (2), Iran (2), Israel (3), Italy (1), Kenya (3), Mexico (10), Netherlands (2), Portugal (2), Sudan (1), Sweden (6), Taiwan (China) (1), UK (2), USA (10) and 40 of unknown origin</li> <li>- 13 hybrids from Colombia (1), FRG (1), Mexico (1), USA (6) and 4 of unknown origin</li> <li>- 325 landraces from Austria (1), Bolivia (1), Czechoslovakia (1), Egypt (1), Ethiopia (1), Finland (3), FRG (4), Greece (1), India (4), Iran (32), Iraq (1), Israel (1), Italy (1), Japan (2), Nepal (23), Spain (2), Taiwan (China) (1), Turkey (211), USA (1) and 33 of unknown origin</li> <li>- 473 lines from Belgium (3), Bulgaria (1), Chile (3), Cyprus (1), Egypt (1), Ethiopia (2), Egypt (1), Finland (2), FRG (5), France (1), India (1), Iran (290), Mexico (4), Morocco (1), Netherlands (1), Pakistan (30), Sweden (1), Switzerland (15), Turkey (10), USA (9), USSR (1) and 90 of unknown origin</li> <li>- 431 populations from Iran (223) and Pakistan (208)</li> <li>- 3 selections from USA (1) and 2 of unknown origin</li> <li>- 2 wild</li> </ul> </li> <li>x <i>Triticosecale</i>, 256 total accessions: <ul style="list-style-type: none"> <li>- 22 cultivars from Australia (9), New Zealand (11) and 2 of unknown origin</li> <li>- 2 hybrids</li> <li>- 227 lines from Bulgaria (9), Canada (2), FRG (64), France (4), Hungary (3), Poland (29), USA (55), USSR (1) and 60 of unknown origin</li> <li>- 3 bulk selections</li> <li>- 2 accessions of unknown origin</li> </ul> </li> </ul>
Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins Medium-term seed storage at 3°C and 30% RH
Duplication of collection:	Not duplicated
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Complete for 35 descriptors
Documentation:	All available data computerized. Passport data are available for practically all accessions

**FEDERAL REPUBLIC OF GERMANY**

Arbeitskreis Pflanzengenetik  
 Botanisches Institut  
 J. W. Goethe-Universität  
 Postfach 111 932  
 Siesmayerstr., 70  
 D-6000 Frankfurt am Main 11

Telephone: (069) 798 47 34  
 Telex: 413932 unif  
 Cable:

Curator/person in charge: H. Becela  
 Details of collection: *Triticum aestivum*, 10 accessions  
 Maintenance of collection: Long-term seed storage and in short-term seed storage at ambient temperatures, depending on the species. Seeds in paper and/or-plastic bags  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Research work in radiation and cytogenetics (crop plant evolution)  
 Documentation: No information

**FEDERAL REPUBLIC OF GERMANY**

Lehrstuhl für Pflanzenbau und Züchtung  
 Technische Universität München Freising  
 Weißenstephan  
 D-8050 Freising Weißenstephan

Telephone: (08161) 714 87  
 Telex:  
 Cable:

Curator/person in charge: G. Fischbeck  
 Details of collection: *Triticum aestivum*, 50 mutant/genetic stocks  
 Maintenance of collection: Long-term seed storage at -20°C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease resistance, genetic and cytogenetic analysis  
 Documentation: No information

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenbau und  
 Pflanzenzüchtung  
 Georg-August-Universität Göttingen  
 von-Sieboldstr., 8  
 D-3400 Göttingen

Telephone: (0551) 39 43 61  
 Telex: 96703 unigoe D  
 Cable:

Curator/person in charge: G. Röbbelen

Details of collection: x *Triticosecale*, 400 accessions  
 Maintenance of collection: Active collection  
 Duplication of collection: FAL, Braunschweig, FRG  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: Local adaptation and field performance  
 Documentation: Computerized for passport data

#### FEDERAL REPUBLIC OF GERMANY

Institut für Resistenzgenetik  
 Biologische Bundesanstalt für Land und  
 Forstwirtschaft  
 D-8059 Grünbach

Telephone: (08122) 16 51  
 Telex:  
 Cable:

Curator/person in charge: G. Schuhmann  
 Details of collection: *Triticum aestivum*, 10 landraces, 4 old cultivars, 50 breeding lines and 1 mutant/genetic stock  
 Maintenance of collection: Long-term seed storage at -20°C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Identification and localization of diseases resistance: BaYMV, *Septoria*, *Fusarium*, *Pseudocercospora*, *Erwinia*, PSTV, PVY and powdery mildew  
 Documentation: No information

#### FEDERAL REPUBLIC OF GERMANY

Saatzucht Engelen Büchling oHG  
 Büchling, 8  
 D-8441 Oberschneiding

Telephone: (09933) 82 17  
 Telex:  
 Cable:

Curator/person in charge: F. Stoiber  
 Details of collection: *Triticum* spp., winter and spring types  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Virus, mildew, rust, fly resistance and baking quality  
 Documentation: No information

**FEDERAL REPUBLIC OF GERMANY**

Landessaatzuchtanstalt  
 Universität Hohenheim  
 P.O. Box 700562  
 D-7000 Stuttgart 70

Telephone: (0711) 45 01  
 Telex: 722959 uniho D  
 Cable:

Curator/person in charge: W. Schmuetz  
 Details of collection: *Triticum aestivum*, 150 old cultivars  
*T. durum*, 70 old cultivars  
 x *Triticosecale*, 20 accessions  
 Maintenance of collection: Long-term seed storage at -20°C. Seeds in plastic bags  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: Disease resistance, quality traits and plant type  
 Documentation: Complete. Manual

**FINLAND**

Plant Laboratory  
 Institute of Biotechnology  
 University of Helsinki  
 Valimotie 7  
 SF-00380 Helsinki

Telephone: (3580) 434 60 32  
 Telex:  
 Cable:

Curator/person in charge: P. Ryöppy  
 Details of collection: x *Triticosecale*, 200 doubled haploids and 100 lines from Finland  
 Maintenance of collection: No information  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: No information  
 Evaluation: On-going work  
 Documentation: No information

**FINLAND**

Department of Plant Breeding  
 Agricultural Research Centre  
 SF-31600 Jokioinen

Telephone: (916) 881 11  
 Telex: 6741 mttk sf  
 Cable:  
 Telefax: (916) 884 91

Curator/person in charge: S. Pulli  
 Details of collection: *Triticum aestivum*, 1240 breeding lines, mainly spring types  
 Maintenance of collection: Medium-term seed storage at -4°C. Seeds with 5-7% m.c. in glass jars  
 Duplication of collection: Partially at NGB, Alnarp, Sweden

Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: Partial  
 Documentation: No information

## FRANCE

ORSEM S.A.  
 rue de Touraine, 9  
 F-59112 Annoëullin

Telephone: (20) 85 63 33  
 Telex: 110332 F  
 Cable:

Curator/person in charge: J.L. Goffart  
 Details of collection: *Triticum aestivum*, 1500 accessions  
 Maintenance of collection: Cold chamber  
 Duplication of collection: No information  
 Availability: Available for ORSEM breeding lines and varieties listed in the National Catalogue  
 Quarantine: No known restrictions  
 Evaluation: No information  
 Documentation: No information

## FRANCE

Station d'Amélioration des Plantes  
 Institut National de la Recherche Agronomique (INRA)  
 Domaine de Crouëlle  
 F-63039 Clermont-Ferrand Cedex

Telephone: (73) 62 40 00  
 Telex: 392207 F  
 Cable:

Curator/person in charge: M. Bernard (Triticale) / J. Koenig (Wheat)  
 Details of collection: *Aegilops* spp.  
*Triticum* spp., 1500 accessions, including 50 landraces and 400 old cultivars  
*x Triticosecale*, 100  
 Maintenance of collection: Medium-term seed storage  
 Duplication of collection: *Triticum*: partially at others INRA Stations and private breeders  
*x Triticosecale*: not duplicated  
 Availability: Available on exchange basis  
 Quarantine: According to enforced phytosanitary regulations (up to the present no quarantine required)  
 Evaluation: Breeding methodology, selection for yield and utilization value, research on biochemical and agronomical markers, adaptation to French conditions, disease and pests tolerance and gliadin and glutenin patterns  
 Documentation: Catalogue with passport and primarily evaluation data on INRA available genetic resources. Available on request

**FRANCE**

Station d'Amélioration des Plantes  
 Institut National de la Recherche Agronomique (INRA)  
 B.P. 1540  
 F-21034 Dijon Cedex

Telephone: (80) 39 72 21  
 Telex:  
 Cable:

Curator/person in charge: A. Cornu  
 Details of collection: *Triticum aestivum*, 1200 accessions  
 Maintenance of collection: Long-term seed storage at -20°C  
 Medium term seed storage at -6°C and 40% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**FRANCE**

Station d'Amélioration des Plantes  
 Centre de Recherches de Rennes  
 Institut National de la Recherche Agronomique (INRA)  
 B.P. 29  
 Domaine de la Motte-au-Vicomte  
 F-35650 Le Rheu

Telephone: (99) 28 51 00  
 Telex: 740060 INRA LR F  
 Cable:  
 Telefax: (99) 28 52 50

Curator/person in charge: G. Doussinault  
 Details of collection: *Triticum* spp., 2300 total accessions. Landraces (350), old cultivars (300), wild (800) and mutant/genetic stocks (850)  
 Maintenance of collection: Medium-term seed storage at 2°-4°C  
 Duplication of collection: No information  
 Availability: Available in limited quantity  
 Quarantine: No known restrictions  
 Evaluation: Disease resistance and adaptation to different ecological conditions  
 Documentation: No information

**FRANCE**

Groupement Agricole Essonnois  
 B.P. 7  
 rue de Rivière  
 F-91720 Maisse

Telephone: (1) 64 99 46 05  
 Telex: 690561 F  
 Cable:

Curator/person in charge: M. Yvon  
 Details of collection: *Triticum durum*, 4 landraces, 4 old cultivars and 250 breeders' lines  
 Maintenance of collection: No information  
 Duplication of collection: No information

Availability: No information  
 Qu- : No information  
 Evaluation: Diseases resistance and "pasta" qualities  
 Documentation: No information

## FRANCE

Station d'Amélioration des Plantes  
 Centre de Recherches de Montpellier  
 Institut National de la Recherche Agronomique (INRA)  
 Place Viala, 9  
 F-34060 Montpellier Cedex 1

Telephone: (67) 61 22 33  
 Telex: 490818 INRAMON F  
 Cable:  
 Telefax: (67) 29 39 90

Curator/person in charge: F. Kaan / P. Monneveux / J.C. Dusautoir  
 Details of collection: *Triticum durum*, 1000 accessions majority landraces from Middle East and North Africa  
 Maintenance of collection: Medium-term seed storage at 5°C and 35% RH  
 Duplication of collection: INRA, Clermont-Ferrand, France  
 Availability: Available  
 Quarantine: Phytosanitary certificate required  
 Evaluation: On-going work  
 Documentation: On-going work

## FRANCE

Station Expérimentale du Magneraud  
 Institut National de la Recherche Agronomique (INRA-GEVES)  
 B.P. 52  
 Domaine du Magneraud  
 F-17700 Surgères

Telephone: (46) 68 30 00  
 Telex: 790737 F  
 Cable:

Curator/person in charge: G. Sauvion  
 Details of collection: *Triticum aestivum*, 858 old cultivars and 678 mutant/genetic stocks  
*T. durum*, 93 old cultivars and 116 mutant/genetic stocks  
*x Triticosecale*, 50 cultivars and 49 mutant/genetic stocks  
 Maintenance of collection: Medium-term seed storage at 4°-6°C and 30-40% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**FRANCE**

Station d'Amélioration des Plantes  
 Institut National de la Recherche Agronomique (INRA)  
 Route de Saint-Cyr  
 F-78000 Versailles

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: R. Cassini

Details of collection: *Triticum* spp., (mainly *T. aestivum*), 2500 cultivars and breeding lines but some landraces and primitive species  
 World-wide representation

Maintenance of collection: Active collection

Duplication of collection: Clermont-Ferrand, Dijon, Montpellier, Rennes and Versailles, France

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**GERMAN DEMOCRATIC REPUBLIC**

Zentralinstitut für Genetik  
 und Kulturpflanzenforschung (ZIGuK)  
 Corrensstrasse, 3  
 DDR-4325 Gatersleben

Telephone: Gatersleben 50  
 Telex: 40558 kupfga DDR  
 Cable:

Curator/person in charge: Ch. Lehmann

Details of collection: *Aegilops* spp., 849  
*Triticum aestivum*  
*T. durum*  
*Triticum* spp.  
 14562 total accessions

Maintenance of collection: Long-term seed storage at -15° to -18°C  
 Medium-term seed storage at 0°C. Seeds in sealed glass jars

Duplication of collection: Partially duplicated at Istituto del Germoplasma, Bari, Italy; Small Grains Collection, Beltsville, USA and VIR, Leningrad, USSR

Availability: Freely available. Index Seminum issued

Quarantine: No known restrictions

Evaluation: Disease resistance and protein quantity and quality

Documentation: Computerized for passport data

**GREECE**

Cereals Institute  
 North Greek Agricultural Research Centre  
 P.O. Box 10514  
 54110 Thessaloniki

Telephone: (3031) 47 15 44  
 Telex: 412130 asni gr  
 Cable:

Curator/person in charge: D. Gogas

Details of collection:	<i>Triticum aestivum</i> , 30 landraces, 21 wild and 985 breeding material <i>T. durum</i> , 36 landraces and 520 breeding material
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at 0°-2°C and 30% RH
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Frost, disease and lodging resistance
Documentation:	No information

## GREECE

Cereals Institute  
North Greek Agricultural Research Centre  
P.O. Box 10514  
54110 Thessaloniki

Telephone: (031)47 15 44  
Telex: 412130 asni gr  
Cable:

Curator/person in charge:	J. Karayannis
Details of collection:	<i>Triticum aestivum</i> <i>durum</i> Total of 1440 landraces from Greece and world-wide introductions
Maintenance of collection:	Long-term seed storage at -20°C. Seeds with 6% m.c. in sealed cans Medium-term seed storage at 0°-3°C. Seeds with 6% m.c. in aluminium laminated foil packets
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Collection completely characterized
Documentation:	Computerization in progress

## GREECE

Greek Gene Bank  
North Greek Agricultural Research Centre  
P.O. Box 10514  
54110 Thessaloniki

Telephone: (031) 47 15 44  
Telex: 412130 asni gr  
Cable:

Curator/person in charge:	A. Zamanis
Details of collection:	<i>Aegilops</i> spp., 541 wild <i>Triticum</i> spp., 66 landraces and 21 wild
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at 0°-2°C and 30% RH
Duplication of collection:	No information
Availability:	No information

**GREECE (cont.)**

Quarantine: No information  
Evaluation: Rust, frost and drought resistance  
Documentation: No information

**HUNGARY**

Agricultural Research Institute of the  
Hungarian Academy of Sciences  
P.O. Box 19  
H-2462 Martonvásár

Telephone: (26) 457 74  
Telex: 224008  
Cable:

Curator/person in charge: B. Gyorffy  
Details of collection: *Triticum aestivum*, 30 landraces, 20 wild, 10 old cultivars and 250 mutant/genetic stocks  
Maintenance of collection: No information  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

**HUNGARY**

Cereals Research Institute  
P.O. Box 391  
Szeged

Telephone: (62) 130 11  
Telex: 82450  
Cable:

Curator/person in charge: I. Szaniel  
Details of collection: *Triticum aestivum*, 2045 accessions, including 50 mutant/genetic stocks  
*T. durum*, 36 accessions  
Maintenance of collection: No information  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

**HUNGARY**

Research Centre for Agrobotany  
I.A.Q.  
H-2766 Tápiószéle

Telephone: Tápiószéle 41  
Telex: 226981 agbot H  
Cable:

Curator/person in charge: Gy. Matók

Details of collection:	<p><i>Triticum abyssinicum</i>, 1  <i>T. aestivum</i>, 277 landraces and 7043 cultivars  <i>T. amyleum</i>, 1  <i>T. boeoticum</i>, 4  <i>T. carthlicum</i>, 3  <i>T. dicoccon</i>, 39  <i>T. dicoccoides</i>, 4  <i>T. durum</i>, 153  <i>T. karamyschevii</i>, 1  <i>T. macha</i>, 4  <i>T. monococcum</i>, 32  <i>T. ovatum</i>, 1  <i>T. persicum</i>, 1  <i>T. polonicum</i>, 1  <i>T. spelta</i>, 45  <i>T. timopheevii</i>, 5  <i>T. turanicum</i>, 5  <i>T. turgidum</i>, 25  <i>T. vavilovii</i>, 1  Accessions from Argentina (16), Australia (143), Austria (65), Belgium (68), Bulgaria (287), Canada (37), PR China (54), Czechoslovakia (874), DDR (1194), Denmark (157), FRG (70), Finland (6), France (127), Greece (1), Hungary (1945), Iraq (7), Iran (3), Israel (1), Italy (105), Japan (18), Kenya (1), Mexico (12), Netherlands (28), New Zealand (1), Norway (5), Poland (122), Portugal (9), Romania (85), Rep. of South Africa (8), Spain (33), Sweden (11), Switzerland (1), Turkey (4), UK (37), USA (147), USSR (794), Yugoslavia (256) and 839 of unknown origin</p>
Maintenance of collection:	<p>Long-term seed storage at -20C  Medium-term seed storage at <math>\pm 0^{\circ}\text{C}</math>. Seeds with 5% m.c. in airtight containers</p>
Duplication of collection:	Partially duplicated
Availability:	Freely available provided there is sufficient seed. Index Seminum periodically issued
Quarantine:	Phytosanitary certificate required
Evaluation:	On-going work
Documentation:	Complete for passport data. On-going work for characterization. Data complete for 3021 accessions (41 characters)

## INDIA

Department of Genetics  
Punjab Agricultural University  
Ludhiana 141004

Telephone: 519 60  
Telex: 386473 COAE IN  
Cable: GENET / AGRIVARSITY

Curator/person in charge:	A.K. Gupta
Details of collection:	<p><i>Aegilops</i> spp.  <i>Agropyron</i> spp.  <i>Triticum aestivum</i>, 2265  <i>T. dicoccoides</i>, 91 accessions  <i>Triticum</i> spp., 222</p>
Maintenance of collection:	No information
Duplication of collection:	NBPGR, India
Availability:	No information
Quarantine:	No information

**INDIA (cont.)**

Evaluation: *T. dicoccoides*: leaf rust reaction, maturity, thrashability, height and grain colour

Documentation: Computerized

**INDIA**

National Bureau of Plant Genetic Resources (NBPGR)  
Indian Agricultural Research Institute (IARI)  
Pusa Campus  
New Delhi 110012

Telephone: 586908 / 589211  
Telex: 31-63390 NBPGR IN  
Cable:

Curator/person in charge: R.S. Rana

Details of collection: *Triticum aestivum*, 14610 accessions from Australia, Chile Italy and Mexico  
*T. boeoticum*, 1 from Syria  
*T. carthlicum*, 1 from Syria  
*T. compactum*, 120 from Bulgaria, FRG, Poland, Syria, USA and USSR  
*T. dicoccoides*, 2 from Syria and UK  
*T. dicoccon*, 2 from Syria and UK  
*T. durum*, 1445 from Canada and Mexico  
*T. monococcum*, 1 from Syria  
*T. polonicum*, 1 from Syria  
*T. spelta*, 2 from Syria and UK  
*T. spelta-album*, 5 from UK  
*T. sphaerococcum*, 250 from Bulgaria, FRG, Poland, Romania, USA and USSR

\* *Triticosecale*, 125 from Mexico and USSR

Maintenance of collection: Active collection. Long-term seed storage planned. The NBPGR coordinates the Indian genetic resources activities

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: In progress for 14 descriptors

Documentation: Computerized

**INDIA**

All Indian Coordinated Wheat Programme  
Indian Agricultural Research Institute (IARI)  
New Delhi 110012

Telephone:  
Telex:  
Cable:

Curator/person in charge: M.V. Rao / J.P. Tandon

Details of collection: *Triticum* spp., 16000 cultivars from India

Maintenance of collection: Active collection. Head of Division of Genetics IARI is responsible for the maintenance of the germplasm

Duplication of collection: No information

Availability: No information

Quarantine: No information

Documentation: Partial and manual

### IRAN

Plant Genetic Resources Division  
Seed and Plant Improvement Institute (SPPI)  
Karaj

Telephone:  
Telex:  
Cable:

Curator/person in charge: P. Vojdani

Details of collection: *Aegilops bicornis*, 2  
*Ae. columnaris*, 1  
*Ae. crassa*, 19  
*Ae. cylindrica*, 26  
*Ae. kotschyi*, 3  
*Ae. longissima*, 6  
*Ae. speltoides*, 4  
*Ae. squarrosa*, 27  
*Ae. triuncialis*, 82  
*Ae. umbellulata*, 10  
*Ae. uniaristata*, 20  
*Ae. ventricosa*, 2  
*Aegilops* spp., 20  
  
*Triticum araraticum*, 5  
*T. boeoticum*, 44  
*T. dicoccoides*, 2  
*T. dicoccon*, 1  
*T. urartu*, 13  
*Triticum* spp., 10  
All accessions from Iran and introductions

Maintenance of collection: Long-term seed storage at -16°C  
Medium-term seed storage at 4°C. Seeds in screw top cans

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Partial

Documentation: No information

### IRAQ

Plant Genetic Resources Unit  
Agricultural Research Centre (ARC)  
Abu Ghraib - Baghdad

Telephone: (01) 511 22 01  
Telex:  
Cable: SBAAR - IRAQ

Curator/person in charge: A.T. Sharif

Details of collection: *Aegilops caudata*, 1  
*Ae. crassa*, 25  
*Ae. cylindrica*, 2  
*Ae. juvenalis*, 2  
*Ae. kotschyi*, 4  
*Ae. ligustica*, 9  
*Ae. lorentii*, 10  
*Ae. speltoides*, 24  
*Ae. tauschii*, 4  
*Ae. triaristata*, 3  
*Ae. triuncialis*, 41  
*Ae. umbellulata*, 10  
All accessions are wild from Iraq

**IRAQ (cont.)**

Details of collection: (cont.)	<i>Triticum aestivum</i> , 115 <i>T. araraticum</i> , 48 <i>T. boeoticum</i> , 90 <i>T. dicoccoides</i> , 2 <i>T. durum</i> , 55 All accessions are cultivated from Iraq
Maintenance of collection:	Short-term seed storage at 5 <sup>a</sup> -10 <sup>a</sup> C. Seeds in airtight cans. Storage capacity 40 m <sup>3</sup>
Duplication of collection:	Istituto del Germoplasma, Bari, Italy
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Partial
Documentation:	Manual. On-going

**IRELAND**

Department of Agriculture & Food  
Backweston Farm  
Leixlip  
Co. Kildare

Telephone: (01) 28 06 08/9  
Telex: 25118 AGRI EI  
Cable:

Curator/person in charge:	T. Wright
Details of collection:	<i>Triticum aestivum</i> , 200 cultivars
Maintenance of collection:	Long-term seed storage at -10 <sup>a</sup> C. Seeds with 7% m.c. in sealed plastic bags
Duplication of collection:	Not known
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	Partial, manual and on-going for passport, characterization and evaluation data

**IRELAND**

Plant Science Department  
University College of Cork  
Co. Cork

Telephone: (021) 27 68 71  
Telex: 26050 UNIC EI  
Cable:

Curator/person in charge:	J.P. Cullinane
Details of collection:	<i>Aegilops</i> spp.  <i>Triticum</i> spp. 270 total accessions. Old cultivars (60), wild (50) and mutant/genetic stocks (160)
Maintenance of collection:	Medium-term seed storage at 4 <sup>a</sup> C. Seeds in sealed plastic bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information

Evaluation: Disease and aphid resistance

Documentation: No information

## IRELAND

Faculty of Agriculture  
University College  
Lyons Estate  
Newcastle  
Co. Dublin

Telephone: (01) 28 83 85  
Telex: 32693 UCD EI  
Cable:

Curator/person in charge: E.J. Walsh

Details of collection: *Triticum aestivum*, 30 old cultivars and 20 mutant/genetic stocks

Maintenance of collection: Medium-term seed storage at -5°C and at 5°C

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Resistance to powdery mildew, early maturity and good milling and baking quality

Documentation: No information

## ISRAEL

Israel Gene Bank for Agricultural Crops  
Volcani Centre  
ARO  
P.O. Box 6  
50-250 Bet Dagan

Telephone: (03) 968 34 58  
Telex: 381476 AROVC IL  
Cable:  
Telefax: 972-3-993998

Curator/person in charge: N. Zur

Details of collection: *Triticum aestivum*, 3000 accessions. World-wide representation but emphasis on Near East, donated by USDA, USA  
*T. c. compactum*, 100 accessions. World-wide representation but emphasis on Near East, donated by USDA, USA  
*T. dicoccoides*, 700 accessions, donated by Israeli institutes and USDA, USA  
*T. durum*, 10250 total accessions. Landraces (400), old cultivars (150), wild (4200) and mutant/genetic stocks (5500), donated by Israeli institutes and USDA, USA  
*T. spelta*, 100 landraces and cultivars from Near East and introductions, donated by USDA, USA

Maintenance of collection: Long-term seed storage at -10°C. Seeds in aluminium boxes of 1 kg capacity. Storage area 50 m<sup>2</sup>

Duplication of collection: No information

Availability: Available in limited quantity

Quarantine: Special conditions and treatment according to Plant Protection Law

Evaluation: Drought, salinity and disease resistance. High nutrition level

Documentation: Complete and computerized

**ITALY**

Istituto del Germoplasma  
CNR  
Via G. Amendola, 165/A  
I-70126 Bari

Telephone: (080) 58 34 63  
Telex: 810565 CNR/BA I  
Cable:

Curator/person in charge: P. Perrino

Details of collection: *Triticum* spp., 32000 landraces

Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-6% m.c. in airtight metal cans with silica gel  
Medium-term seed storage at 0°C and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a global collection of cultivated species of *Triticum* for long-term conservation

Duplication of collection: Many samples duplicated at NSSL, Fort Collins, USA and VIR, Leningrad, USSR

Availability: No information

Quarantine: No information

Evaluation: 1600 samples evaluated for 75 descriptors and 39 samples for 49 descriptors

Documentation: Complete and computerized

**ITALY**

Institute of Agronomy and Field Crops  
Via Valdisavoia, 5  
I-95123 Catania

Telephone: (95) 35 14 20  
Telex:  
Cable:

Curator/person in charge: S. Foti

Details of collection: *Triticum durum*, 10 old cultivars

Maintenance of collection: No information

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

**ITALY**

Centro Ricerche DeKalb Italiana SpA  
I-31040 Chiarano (Treviso)

Telephone: (0422) 74 61 33  
Telex: 41507  
Cable:

Curator/person in charge: G.A. Prosdocimi

Details of collection: *Triticum aestivum*, 2225 accessions  
*T. durum*, 600 old cultivars

Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## ITALY

Institute of Plant Breeding and Agricultural  
 Research "Nazareno Strampelli"  
 Via Marconi, 1  
 I-36045 Lonigo (VI)

Telephone: (0444) 83 00 88  
 Telex:  
 Cable:

Curator/person in charge: S. Giuliari  
 Details of collection: *Aegilops* spp., 10 wild  
*Triticum* spp., 26 landraces, 649 old cultivars and 38 wild  
 Maintenance of collection: Medium-term seed storage at 4°C and 40% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Frost resistance  
 Documentation: No information

## ITALY

Institute of Agronomy  
 Faculty of Agricultural Sciences  
 University of Pisa  
 Via San Michele degli Scalzi, 2  
 I-56100 Pisa

Telephone: (050) 57 15 65/6  
 Telex: 590035 UNIVPI I  
 Cable:

Curator/person in charge: A. Benvenuti  
 Details of collection: *Triticum aestivum*, 3 cultivars from Argentina and 17 mutant/genetic  
 stocks  
*T. durum*, 2 old cultivars and 23 mutant/genetic stocks  
 Maintenance of collection: Short-term seed storage. Regeneration done yearly  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: On-going work, mainly for yield, according to the list of "Ministero  
 dell'Agricoltura e Foreste - Registro Nazionale delle Varietà"  
 Documentation: Computerized. On-going work for characterization and evaluation data

**ITALY**

Department of Agrobiotechnology  
National Agency for Atomic Energy (ENEA)  
P.O. Box 2400  
C.R.E. Casaccia  
I-00100 Roma A.D.

Telephone: (06) 694 81  
Telex: 613296 ENEACA I  
Cable: CASACCIA ENEA

Curator/person in charge: L. Rossi

Details of collection: *Triticum aestivum*, 500  
*T. durum*, 500  
× *Triticosecale*, 200

Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at 0°C

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Disease resistance, short stature, quality, mechanical harvest and stress resistance

Documentation: No information

**JAPAN**

National Institute of Agrobiological Resources (NIAR)  
Kannon-dai 2-1-2  
Tsukuba, Ibaraki 305

Telephone: 02975-6-7050  
Telex:  
Cable: NIARTSUKUBA YATABE  
Telefax: 02975-6-7408

Curator/person in charge: Head, Germplasm Storage Center

Details of collection: *Triticum aestivum*, 7000  
*T. compactum*, 48  
*T. dicoccon*, 5  
*T. durum*, 75  
*T. monococcum*, 1  
*T. polonicum*, 1  
*T. spelta*, 13  
*T. turgidum*, 5  
Old and commercial cultivars, landraces, elite lines and related species from Central America, Europe, Japan, Mediterranean regions, North America and South Asia, donated by CIMMYT  
× *Triticosecale*, 34 cultivars and lines from Central America and Japan

Maintenance of collection: Long-term seed storage at -10°C  
Medium-term seed storage at -1°C and 30% RH  
Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml

Duplication of collection: No information

Availability: Freely available for research purposes. A fee is applicable for private institutions

Quarantine: No information

Evaluation: Standard manual published by specialists' consent

Documentation: Computerized for passport data

## JAPAN

Plant Germplasm Institute  
Faculty of Agriculture  
Kyoto University  
Mukoshi  
Kyoto 617

Telephone:  
Telex:  
Cable:

- Curator/person in charge: S. Sakamoto
- Details of collection: *Aegilops* spp., 2396 accessions largely collected by missions to Southwest Asia, North and East Africa and Southern Europe  
*Triticum* spp., 4378 cultivated, weedy and wild species
- Maintenance of collection: Medium-term seed storage at 5°C. Seeds in paper packets and polyethylene jars with silica gel  
The Institute has agreed to accept responsibility for maintaining a global collection of wild species (*Aegilops* and *Triticum*) for long-term conservation
- Duplication of collection: Entire collection duplicated at NIAR, Tsukuba. In addition, some duplicates at AARI, Izmir, Turkey and *Aegilops* spp. at VIR, Leningrad, USSR
- Availability: No information
- Quarantine: No information
- Evaluation: The wheat collection is evaluated for: awn length, empty glume hairiness and colour, seed colour, earliness and flowering type, ear variation, ear maturity date, inflated glume type, ear maturity date and pollen and seed fertility of early and late maturing ears.  
The *Aegilops* collection is evaluated for: variation of ears, width/length ratio of sterile glume, variation in plant height and tillering ears, shooting date, seed fertility, growing habit, resistance to yellow, brown and black rusts and seed fertility relationships among inter-regional hybrids
- Documentation: Manual. Catalogue available (in English). Data being computerized

## NEW ZEALAND (see ADDENDUM on page 212)

## MEXICO

Programa de Recursos Genéticos  
Instituto Nacional de Investigaciones  
Agrícolas (INIA)  
Apartado Postal 10, C.P. 56230  
Chapingo

Telephone: 585 45 55 ext. 5411  
Telex:  
Cable:

- Curator/person in charge: J. Héctor Esparza Martínez
- Details of collection: *Triticum* spp., 134 spring cultivars
- Maintenance of collection: Medium-term seed storage at 5°C and 10% RH. Seeds in sealed paper bags
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: 95% of the collection has wide adaptation from 0 to 1600 masl, short days and under irrigated conditions. The remaining part is adapted from 1700 to 2800 masl under rainfed conditions
- Documentation: Manual

**MEXICO**

Centro Internacional de Mejoramiento  
de Maíz y Trigo (CIMMYT)  
Apartado Postal 6-641  
Mexico 0600, D.F.

Telephone: (52-5) 954 21 00  
(905) 761 33 11  
Telex: 1772023 CIMTME  
Cable: CENCIMMYT  
E-Mail: 57:CGI201

Curator/person in charge: B. Skovmand

Details of collection: *Aegilops* spp., 388

*Triticum aestivum*, 29695 total accessions. Landraces and old cultivars (9601) and breeders' lines, parental material and cultivars (20094)

*T. durum*, 12728 total accessions. Landraces and old cultivars (3920) and breeders' lines, parental material and cultivars (8808)

*T. monococcum*

*T. spelta*

*T. timopheevii*

*T. turgidum*

3605 total accessions of primitive wheats

*Triticum* spp., 2099 wild types

x *Triticosecale*, 7012

Maintenance of collection: Long-term seed storage at -15°C and 25% RH  
Medium-term seed storage at 0°C and 30-35% RH  
Seeds in tins

Duplication of collection: NSSL, Fort Collins, USA

Availability: Freely available

Quarantine: Phytosanitary certificate requested for import/export of seed

Evaluation: Evaluation is the responsibility of the breeding programme. The genebank only does disease screening and stress tolerance evaluation

Documentation: Computerization in progress

**NETHERLANDS**

Veredelingsbedrijf Cebeco-Handelsraad  
P.O. Box 139  
NL-8200 AC Lelystad

Telephone: (03202) 244  
Telex:  
Cable:

Curator/person in charge: R.H. Reiling

Details of collection: *Triticum aestivum*, 1000 accessions, including 100 old cultivars

Maintenance of collection: Medium-term seed storage at 3°C and 40% RH

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Disease and lodging resistance, quality and winter hardiness

Documentation: No information

## NETHERLANDS

Zelder B.V.  
Landgoed Zelder  
NL-6595 NW Ottersum

Telephone: (08851) 181 44  
Telex: 37311  
Cable:

Curator/person in charge: L. J. Groenewegen  
Details of collection: *Triticum* spp., 20 old cultivars  
Maintenance of collection: Medium-term seed storage at 5°C and 30% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Genotype testing  
Documentation: No information

## NETHERLANDS

Department of Plant Breeding  
Agricultural University  
P.O. Box 386  
6700 AJ Wageningen

Telephone: (08370) 828 36  
Telex:  
Cable:

Curator/person in charge: M. van Loosdrecht  
Details of collection: *Aegilops* spp.  
*Triticum aestivum*  
*T. boeoticum*  
*T. compactum*  
*T. dicoccoides*  
*T. dicoccon*  
*T. macha*  
*T. monococcum*  
*T. spelta*  
*T. sphaerococcum*  
Total 2440 total accessions including cytogenetic stocks. World-wide representation  
Maintenance of collection: Short-term seed storage  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Evaluation for N%, *Septoria*, powdery mildew, *Fusarium* and yellow rust  
Documentation: Manual. Computerization in progress

**NETHERLANDS**

Centre for Genetic Resources,  
The Netherlands (CGN)  
P.O. Box 224  
NL-6700 AE Wageningen

Telephone: (08370) 229 25  
Telex: 75044 DLOWA NL  
Cable:  
Telefax: (08370) 16513

Curator/person in charge: L.J.M. van Soest / M. Dik

Details of collection: *Aegilops* spp., 170 wild from Afghanistan, Iran, Israel, Pakistan and USSR, donated by Agricultural University (LU), Netherlands

*Triticum aestivum*, 1900 landraces and cultivars from Asia, Europe, USA and USSR and 2300 landraces from India, Iran, Pakistan and Turkey, donated by Foundation for Agricultural Plant Breeding (SVB), Institute for Plant Production (IPO) and Agricultural University (LU), Netherlands

*T. monococcum*

*T. timopheevii*

*T. turgidum*

2000 landraces and old cultivars from Africa, Asia, Europe, USA and USSR, donated by Agricultural University (LU), Netherlands

Maintenance of collection: Long-term seed storage at -20°C. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Medium-term seed storage at 4°C and 30% RH. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Short-term seed storage at ambient temperatures. Seeds in paper envelopes

Duplication of collection: Partially at several other genebanks

Availability: Available on exchange basis provided there is sufficient seed

Quarantine: No known restrictions

Evaluation: On-going for:  
Mandatory:  
Hoodedness/awnedness, seed size and colour, glume colour, ear emergence, plant height, growth class and yellow rust and mildew resistance  
Optional:  
Spike length and density, awns length and attitude, seed shape, glume hairiness, cold susceptibility, sprouting and shattering tendency, lodging resistance, tendency of culm breaking and 1000 grain weight  
Special:  
Rachis strength and threshing ability

Documentation: On-going for passport and evaluation data

**NIGERIA**

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70/312622  
Telex:  
Cable: GENE BANK

Curator/person in charge: P.E. Onuorah

Details of collection: *Triticum* spp., 847 accessions

x *Triticosecale*, 45 accessions

Maintenance of collection: Long-term seed storage  
 Duplication of collection: No information  
 Availability: Available in limited quantity  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Manual. Passport data available

**NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND  
 NORWAY, SWEDEN)**

Nordic Gene Bank  
 for Agricultural and Horticultural Plants  
 Smedjevägen 2 B  
 P.O. Box 41  
 S-23053 Alnarp  
 Sweden

Telephone: (4640) 41 50 00  
 Telex: 32727 NGB S  
 Cable:  
 Telefax: (4640) 46 21 88

Curator/person in charge: S. Blixt

Details of collection: *Triticum* spp., landraces, cultivars and genetic stocks including mutants. Varieties from Denmark, Finland, Iceland, Norway and Sweden and introductions relevant to the climatic zones of the nordic countries

Maintenance of collection: Long-term seed storage at -20°C

Duplication of collection: In permafrost at Svalbard, Norway

Availability: Available on exchange basis

Quarantine: No known restrictions

Evaluation: On-going work within the participating countries

Documentation: Computerized for passport and evaluation data

**PAKISTAN**

Plant Genetic Resources Laboratory  
 National Agricultural Research Centre  
 Pakistan Agricultural Research Council (PARC)  
 P.O. Box 1031  
 Islamabad

Telephone: 82 00 53 33  
 Telex: 5604 PARC PAK  
 Cable: AGRESCOUNCIL

Curator/person in charge: R. Anwar

Details of collection: *Aegilops squarrosa*  
*Ae. triuncialis*  
 Total of 49 wild from Pakistan

*Triticum aestivum*, 1447 primitive cultivars from India (31), donated by NBPGR, India; Mexico (24), donated by CIMMYT, Mexico; Pakistan (1325) and Syria (67), donated by ICARDA, Syria

Maintenance of collection: Medium-term seed storage at 5°C ±1°C. Seeds in cans

Duplication of collection: At several International Research Centres

Availability: Freely available provided there is sufficient seed

**PAKISTAN (cont.)**

Quarantine:	Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate
Evaluation:	Partial
Documentation:	Manual

**POLAND**

Plant Breeding Station 37-220 Kanczuga Krzeczowice	Telephone: Przeworsk 22 84 Telex: 0632577 PI UMG Kanczuga Cable:
Curator/person in charge:	H. Joniec
Details of collection:	<i>Triticum aestivum</i> , 8 landraces, 2 old cultivars and 2 wild
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Frost resistance
Documentation:	No information

**POLAND**

Institute of Genetics and Plant Breeding Academy of Agriculture Akademicka, 15 20-934 Lublin	Telephone: Lublin 37 69 42 Telex: 0643176 ARPL Cable:
Curator/person in charge:	K. Szwed-Urbas
Details of collection:	<i>Triticum durum</i> , 1065 landraces, cultivars and breeding lines from Asia (80), Europe (353), North Africa (151), North America (159), South America (12), USSR (103) and 207 of unknown origin, donated by Institute of Crop Germplasm Resources, Beijing, P.R. China; Research Institute of Plant Production, Ruzyně, Czechoslovakia; ZIGuK, Gatersleben, DDR; FAL, Braunschweig, FRG; Istituto del Germoplasma, Bari, Italy; AARI, Izmir, Turkey and VIR, Leningrad, USSR  x <i>Triticosecale</i> , 1384 cultivars and breeding lines from Asia (12), Europe (299), North America (471), Rep. of South Africa (58), USSR (118) and 426 of unknown origin, donated by ZIGuK, Gatersleben, DDR; Beltsville, USA and VIR, Leningrad, USSR
Maintenance of collection:	Long-term seed storage at -15°C Medium-term seed storage at 0°C Seeds with 5-7% m.c. in glass containers under vacuum
Duplication of collection:	Institute of Crop Germplasm Resources, Beijing, P.R. China; Research Institute of Plant Production, Ruzyně, Czechoslovakia; ZIGuK, Gatersleben, DDR; FAL, Braunschweig, FRG; Istituto del Germoplasma, Bari, Italy; AARI, Izmir, Turkey and VIR, Leningrad, USSR
Availability:	Available on exchange basis

Quarantine:	No known restrictions
Evaluation:	Length of vegetation period, disease and lodging resistance, plant height, spike length, number of spikelets, number of kernels, weight of kernels in one spike, 1000 grain weight and protein content
Documentation:	Complete and computerized. Data stored at National Department of Plant Genetic Resources, Plant Breeding and Acclimatization Institute, Radzików, Poland

## POLAND

Plant Breeding and Acclimatization Institute  
National Department of Plant Genetic Resources  
Radzików n/ Warsaw  
05-870 Blonie

Telephone: (22) 55 26 11/4  
Telex: 812914 IHAR PL  
Cable:

Curator/person in charge:	St. Goral / W. Podyma
Details of collection:	<i>Aegilops</i> spp., 300  <i>Triticum</i> spp., 3000 spring type and 4500 winter type, landraces, cultivars, wild and genetic stocks. World-wide representation
Maintenance of collection:	Long-term seed storage at -15°C Medium-term seed storage at 0°C Seeds with 5-7% m.c. in glass containers under vacuum
Duplication of collection:	ZIGuK, Gatersleben, DDR and VIR, Leningrad, USSR
Availability:	Available on exchange basis. Index Seminum issued
Quarantine:	No known restrictions
Evaluation:	Partial for ecological tolerance, disease resistance and yield components
Documentation:	Computerized for passport data

## PORTUGAL

Estação Nacional de Melhoramento de Plantas (ENMP)  
Instituto Nacional de Investigação Agrária (INIA)  
Apartado 6  
P-7351 Elvas Codex

Telephone: 628 44 7628 47  
Telex: 40189 ENMP P  
Cable:

Curator/person in charge:	A.F. Raimundo
Details of collection:	<i>Triticum aestivum</i> , 94 <i>T. compactum</i> , 2 <i>T. durum</i> , 88 <i>T. turgidum</i> , 30 <i>Triticum</i> spp., 14 All accessions are landraces/primitive cultivars from Portugal, donated by Ex-Estação Agrária Central and ISA, Portugal
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 6% m.c.
Duplication of collection:	Not duplicated
Availability:	Available in limited quantity
Quarantine:	No restrictions for export but imported material must possess phytosanitary certificate

**PORTUGAL (cont.)**

Evaluation: On-going for: stature; habit; flowering date; days to maturation; length of vegetative period; type of grain and cold, lodging, drought and disease resistance  
Characterization/regeneration according to IBPGR descriptor list

Documentation: Partial and manual

**PORTUGAL**

Secção de Genética  
Estação Agronómica Nacional (EAN)  
Instituto Nacional de Investigação Agrária (INIA)  
P-2780 Oeiras

Telephone: (1) 443 15 05 / 443 04 42  
Telex: 63698 EAN P  
Cable:

Curator/person in charge: M. Mota

Details of collection: *Aegilops cylindrica*, 1  
*Ae. geniculata*, 125  
*Ae. neglecta*, 15  
*Ae. triuncialis*, 88  
*Aegilops* spp., 1  
All wild from Portugal  
  
*Triticum aestivum*, 83  
*T. durum*, 4  
*T. spelta*, 2  
*Triticum* spp., 162  
All accessions are landraces and old cultivars from Portugal and Spain

Maintenance of collection: Long-term seed storage at -16°C in deep-freezers

Duplication of collection: Partially duplicated at Banco de Germoplasma, Braga, Portugal and Banco de Germoplasma, Alcalá de Henares, Spain

Availability: Freely available

Quarantine: No restrictions for export but imported material must possess phytosanitary certificate

Evaluation: None

Documentation: Computerized for passport data

**ROMANIA**

Genetic Resources Department  
Research Institute for Cereals  
and Technical Crops  
Jud. Călărași  
R-8264 Fundulea

Telephone: (90) 15 08 05  
Telex: 11349 ASAS R  
Cable: ICCPT Fundulea 8264 R

Curator/person in charge: P. Varga

Details of collection: *Triticum aestivum*, 185 landraces, 463 old cultivars, 15 wild and 5387 mutant/genetic stocks

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: Specific disease resistance, precocity, quality, lodging resistance and stress reaction

Documentation: No information

## ROMANIA

Gene Bank of Suceava  
Agricultural Research Station of Suceava  
Bulevardul 1 May, 15  
R-5800 Judetul Suceava

Telephone: (987) 158 47  
Telex: 23268  
Cable:

Curator/person in charge: M. Cristea

Details of collection: *Triticum aestivum*, 236 varieties and lines from Romania and other countries

Maintenance of collection: Long-term seed storage at -20°C. Four rooms with the total storage capacity of 172.5 m<sup>3</sup>  
Medium-term seed storage at 4°C. Four rooms with the total storage capacity of 273.6 m<sup>3</sup>. Seeds with 8-10% m.c. in sealed glass containers of 50, 100, 150, 350, 400, 750, 800 and 1000 ml capacity

Duplication of collection: Research Institute for Cereals and Technical Plants, Fundulea and Agricultural Research Station of Simnic, Romania

Availability: Available on exchange basis

Quarantine: In conformity with international quarantine regulations

Evaluation: On-going work for field and laboratorial evaluation

Documentation: Characterization data computerized

## SOUTH AFRICA, REPUBLIC OF

Small Grain Centre  
Grain Crops Research Institute  
Department of Agricultural and Water Supply  
Private Bag X29  
9700 Bethlehem

Telephone: (01431) 356 86  
Telex: 322150  
Cable: SATIVA PRETORIA

Curator/person in charge: M. Labuschagne

Details of collection: *Triticum aestivum*, 1956 accessions from Afghanistan (3), Algeria (1), Angola (5), Argentina (47), Australia (138), Bolivia (4), Brazil (8), Bulgaria (52), Canada (57), Chile (22), PR China (76), Colombia (6), Cyprus (1), Czechoslovakia (4), Denmark (6), Ecuador (5), Egypt (14), France (41), Greece (14), Hungary (20), Iceland (1), India (33), Iran (6), Italy (38), Japan (3), Kenya (60), Korea (3), Lebanon (2), Mexico (213), Nepal (2), Netherlands (8), New Zealand (6), Pakistan (7), Peru (20), Poland (7), Portugal (31), Romania (19), Rep. of South Africa (225), Spain (23), Sudan (1), Sweden (3), Switzerland (12), Tunisia (2), Turkey (26), UK (28), USA (394), USSR (31), Yugoslavia (25), Zimbabwe (20) and 183 of unknown origin  
*T. carthlicum*, 1 from USSR  
*T. dicoccon*, 7 accessions from Greece (1), India (3), Switzerland (1) and USSR (2)  
*T. durum*, 199 accessions from Algeria (2), Argentina (2), Australia (4), Austria (4), Bulgaria (4), Canada (6), Chile (2), Cyprus (1), Egypt (5), Ethiopia (7), France (5), Hungary (4), India (1), Israel (1), Italy (63), Japan (1), Jordan (2), Kenya (1), Mexico (7), Morocco (2), New Zealand (1),

**SOUTH AFRICA, REPUBLIC OF (cont.)**

- Details of collection: Peru (1), Poland (1), Portugal (7), Spain (1), Tunisia (3), Turkey (22), USA (29) and USSR (10)  
*Triticum monococcum*, 4 accessions from Hungary (3) and 1 of unknown origin  
*T. persicum*, 2 from USA  
*T. timopheevii*, 12 accessions from Argentina (1), Australia (2), Greece (1), Hungary (4) and USSR (3)  
*T. turgidum*, 7 accessions from Bulgaria (1), Hungary (2), Italy (1), Peru (1), Poland (1) and Turkey (1)  
*Triticum* spp., 295 accessions  
 x *Triticosecale*, 7 commercial cultivars from Mexico, donated by CIMMYT
- Maintenance of collection: Medium-term seed storage at 5°C and 50% RH. Seeds in pouches each containing 100 g. Storage area 50 m<sup>2</sup>
- Duplication of collection: Partially (20%) at Genebank, Pretoria, Rep. of South Africa
- Availability: Available in limited quantity (10-30 g)
- Quarantine: For export, phytosanitary certificate issued upon inspection. Import seed must possess phytosanitary certificate or being subject to quarantine
- Evaluation: On-going in greenhouse and field for agronomical, pathological, entomological and quality characteristics using own developed descriptor list based on IBPGR and UPOV descriptor lists
- Documentation: Computerized. On-going work

**SOUTH AFRICA, REPUBLIC OF**

- Department of Agricultural Economics and Marketing  
 Directorate of Plant and Liquor Control  
 Private Bag X 179  
 0001 Pretoria
- Telephone: (012) 206 24 06  
 Telex: 3-23264  
 Cable: SATIVA PRETORIA  
 Telefax: (012) 206 27 86
- Curator/person in charge: H. Chamberlain
- Details of collection: *Triticum aestivum*, 563 landraces and cultivars from Australia, Brazil, Canada, DDR, Hungary, India, Lesotho, Malawi, Mexico, Romania, Rep. of South Africa (83), Turkey, UK, USA and Zimbabwe  
*T. durum*, 27 landraces and cultivars from Australia, Israel, Turkey and USA  
*T. turgidum*, 75 landraces and cultivars from Brazil and USA
- Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
 Short-term seed storage at 6<sup>o</sup>-7<sup>o</sup>C and 45% RH. Seeds in plastic containers
- Duplication of collection: At different Crop Research Institutes in the Rep. of South Africa
- Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
 Requests to: The Plant Introduction Officer  
 (same address)
- Quarantine: Seed for planting:  
 Additional declaration on the phytosanitary certificate that the seed is free from:  
 a) *Anguina tritici*  
 b) *Claviceps purpurea*  
 c) *Neovossia indica*  
 d) *Tilletia controversa*  
 e) *Urocystis agropyri*

Evaluation: On-going work  
 Documentation: Complete and computerized

## SPAIN

Banco de Germoplasma  
 Finca "El Encin"  
 Instituto Nacional de Investigaciones Agrarias (INIA)  
 P.O. Box 127  
 Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
 Telex: 48989 INIA E  
 Cable:

Curator/person in charge: R. Ponce

Details of collection: *Aegilops ovata*  
*Ae. triuncialis*  
*Ae. ventricosa*

*Traestivium*  
*T. durum*  
*T. monococcum*  
*T. turgidum*

500 landraces, cultivars and wild species from Spain and other Mediterranean countries

Maintenance of collection: Long-term seed storage at -18°C  
 Medium-term seed storage at -2°C and 30% RH

Duplication of collection: Istituto del Germoplasma, Bari, Italy and VIR, Leningrad, USSR

Availability: No information

Quarantine: No information

Evaluation: Partial

Documentation: Computerized

## SPAIN

Centro de Investigación y Desarrollo  
 Agrario de Córdoba - DGIEA  
 Junta de Andalucía  
 Apartado 240  
 Córdoba

Telephone: (57) 29 33 33  
 Telex: 76686 INIA E  
 Cable:

Curator/person in charge: A. Martín

Details of collection: *Triticum aestivum*, 100  
*T. turgidum*, 300  
 All accessions mostly elite lines and primitive cultivars

Maintenance of collection: Medium-term seed storage at 4 C and 5% RH

Duplication of collection: CIMMYT, Mexico; Banco de Germoplasma, Alcalá de Henares, Spain and ICARDA, Syria

Availability: Available

Quarantine: No information

Evaluation: On-going work

Documentation: Manual

**SPAIN**

Compañía Española de Cultivos  
Oleaginosos S.A. (CECOSA)  
C/ Genova, 9  
28004 Madrid

Telephone: (1) 419 12 31  
Telex: 41076 CECOS  
Cable:

Curator/person in charge: E. Sobrino  
Details of collection: *Triticum aestivum*, 30 landraces and 250 mutant/genetic stocks  
*T. durum*, 2 landraces and 70 mutant/genetic stocks  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

**SPAIN**

Estación Experimental de Aula Dei  
Consejo Superior de Investigaciones Científicas (CSIC)  
P.O. Box 202  
Montañana 177  
Zaragoza

Telephone: (976) 70 95 11  
Telex:  
Cable:

Curator/person in charge: J. Lasa  
Details of collection: *Triticum* spp., 272 accessions  
Maintenance of collection: Seeds in sealed bags  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Drought and salinity tolerance  
Documentation: No information

**SWITZERLAND**

Station Fédérale de Recherches Agronomiques  
de Changins  
Route de Duillier  
CH-1260 Nyon

Telephone: (022) 61 54 51  
Telex: 419975  
Cable:  
Telefax: (022) 62 13 25

Curator/person in charge: G. Kleijer  
Details of collection: *Aegilops* spp., 29  
*Triticum aestivum*, 4097  
*T. boeoticum*, 19  
*T. carthlicum*, 4  
*T. compactum*, 4  
*T. dicocoides*, 12  
*T. dicoccon*, 57

Details of collection: (cont.)	<i>Triticum durum</i> , 119 <i>T. macha</i> , 6 <i>T. monococcum</i> , 16 <i>T. polonicum</i> , 5 <i>T. spelta</i> , 1984 landraces and breeding lines from Austria (37), Belgium (13), Bulgaria (2), FRG (1187), Luxembourg (122), Spain (359), Switzerland (238) and 35 of unknown origin <i>T. sphaerococcum</i> , 2 <i>T. timopheevii</i> , 9 <i>T. turgidum</i> , 46 <i>T. zhukowskyi</i> , 2 World-wide representation  x <i>Triticosecale</i> , 300 hexa and octoploid forms
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at 4°C and 30% RH
Duplication of collection:	FAL, Braunschweig, FRG <i>T. spelta</i> is at the moment jointly held with: Eidgenössische Forschungsanstalt für Landwirtschaft, Pflanzenbau Reckenholzstrasse, 191-211 CH-8046 Reckenholz - Zürich
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	Winter hardiness, flowering time, maturity time, lodging and disease resistance (mildew, stripe, stem and leaf rust and <i>Septoria</i> ), height, sprouting resistance, yield, 1000 kernel weight and protein content
Documentation:	Computerized. Complete for passport data and partial for agronomical data

## SWITZERLAND

SZV-FSS Schweiz. Saatzuchverband  
P.O. Box 929  
Pststrasse, 10  
CH-4502 Solothurn

Telephone: (065) 22 56 66  
Telex: 934795 SAAT CH  
Cable:

Curator/person in charge:	O. Steinemann
Details of collection:	<i>Triticum aestivum</i> <i>T. spelta</i>
Maintenance of collection:	Medium-term seed storage at 3°C and 35% RH
Duplication of collection:	Nyon and Zürich, Switzerland
Availability:	No information
Quarantine:	No information
Evaluation:	Disease resistance, baking quality and early ripening
Documentation:	No information

**SWITZERLAND**

Eidg. Forschungsanstalt für landw.  
Pflanzenbau Zürich-Reckenholz  
Reckenholzstr., 191/211  
CH-8046 Zürich

Telephone: (01) 57 88 00  
Telex:  
Cable: Elvatest Zürich

Curator/person in charge: F. Weilenmann  
Details of collection: *Triticum aestivum*, 300 landraces  
*T. spelta*, 2100 landraces  
Maintenance of collection: No information  
Duplication of collection: FAL, Braunschweig, FRG and NSSL, Fort Collins, USA  
Availability: No information  
Quarantine: No information  
Evaluation: Yield and disease resistance  
Documentation: No information

**SYRIA**

International Center for Agricultural Research  
in the Dry Areas (ICARDA)  
P.O. Box 5466  
Aleppo

Telephone: (21) 21 34 33/213477  
Telex: 331206 SY / 331208 SY  
Cable: ICARDA, Aleppo

Curator/person in charge: J. Valkoun  
Details of collection: *Aegilops* spp., 695 accessions representing 25 taxa from Jordan (20), Morocco (5), Pakistan (52), Portugal (104), Syria (83) and duplicates from USDA (431)  
*Triticum aestivum*, 10419 total accessions. Landraces from Turkey, including single spike samples (5656); Egypt, Jordan, Morocco and Pakistan (1077) and duplicates from Bari, Italy (2780). Breeding lines from ICARDA (819), Canada (2) and USA (85)  
*T. dicoccoides*, 894 total accessions. Populations and single spike samples from Jordan (444), Lebanon (3), Syria (177) and Turkey (198). Other accessions from Italy (19), Japan (5) and USA (48)  
*T. durum*, 20085 total accessions. Duplicates from Bari, Italy (13825); USDA (3534); North Africa and West Asia (1295); ICARDA breeding material (734); CIMMYT breeding material (14); Greece (636); Japan (2); Pakistan (10); Spain (1) and Turkey (34)  
Maintenance of collection: Medium-term seed storage at 2°C and 20-25% RH  
Duplication of collection: Partially at Istituto del Germoplasma, Bari, Italy and USDA Small Grain Collection, Beltsville, Maryland, USA  
Availability: Available for bona fide users and on exchange basis  
Quarantine: No known restrictions  
Evaluation: A total of 16155 durum wheat accessions have been evaluated. All *T. dicoccoides* collection evaluated for 27 traits and *Aegilops* accessions evaluated for 18 characters according to IBPGR descriptor list  
Documentation: Computerized for passport and evaluation data

## SYRIA

Genetic Resources Unit  
Agriculture Research Directorate  
P.O. Box 113  
Douma - Damascus

Telephone: 75 04 01  
Telex: 411634 SYR  
Cable: MINAGRI DAMS

- Curator/person in charge: K.S. Obari
- Details of collection: *Aegilops* spp., 743 wild from Syria and other countries  
*Triticum aestivum*  
*T. durum*  
1132 primitive cultivars, landraces and elite li from Syria and other countries
- Maintenance of collection: Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)
- Duplication of collection: Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK
- Availability: Available on exchange basis
- Quarantine: No known restrictions
- Evaluation: On-going work using IBPGR descriptor list
- Documentation: Manual. On-going work

## TUNISIA

Laboratoire de Génétique  
Institut National Agronomique de Tunisie (INAT)  
Ministère de l'Agriculture  
43 Avenue Charles Nicolle  
1002 Tunis - Belvédère

Telephone: 28 09 50  
Telex:  
Cable:

- Curator/person in charge: A. Daaloul
- Details of collection: *Triticum* spp., 148 accessions
- Maintenance of collection: Active collection
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Drought tolerance and cold and *Septoria* resistance
- Documentation: No information

## TURKEY

Aegean Agricultural Research Institute (AARI)  
P.O. Box 9  
35661 Menemen - Izmir

Telephone: (51) 14 91 31  
Telex:  
Cable:

- Curator/person in charge: The Directorate
- Details of collection: *Aegilops* spp.

**TURKEY (cont.)**

Details of collection: (cont.)	<i>Triticum</i> spp. 4186 populations of landraces, cultivars and wild species representing ca. 6500 samples. There are 3216 populations of cultivated species and 970 populations of wild taxa from Austria, Canary Is. (Spain), Ethiopia, Iran, Iraq, Nepal and Tunisia but majority from Turkey
Maintenance of collection:	Long-term seed storage at -20°C. Seeds in metal cans Medium-term seed storage at 0°C
Duplication of collection:	PGRC, Ottawa, Canada; Istituto del Germoplasma, Bari, Italy and Germplasm Institute, Kyoto, Japan
Availability:	No information
Quarantine:	No information
Evaluation:	Stripe and stem rust resistance. Partial for 44 descriptors
Documentation:	Computerized. Index Seminum of part of the collection available

**UNION OF SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR)  
44, Herzen str.  
Leningrad 190000

Telephone: (314) 48 48  
Telex:  
Cable:

Curator/person in charge:	V.I. Krivchenko
Details of collection:	<i>Aegilops</i> spp., 3488 wild forms, populations, including 2338 accessions in the main catalogue and 1150 in the temporary catalogue. The collection includes the diversity from the main <i>Aegilops</i> distribution areas  <i>Triticum</i> spp., 73082 local and breeding varieties, local populations and wild forms, including 32980 accessions in the main catalogue and 40102 in the temporary catalogue. World-wide collection  x <i>Triticosecale</i> , 4859 primary triticale, breeding varieties and lines, including 1379 accessions in the main catalogue and 3480 in the temporary catalogue
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at 4°C. Seeds with 7-9% m.c. in sealed glass containers  The Institute has agreed to accept responsibility for maintaining a global collection of cultivated species of <i>Triticum</i> for long-term conservation
Duplication of collection:	Partially in the world collections of USA, FAO and in many other countries
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Passport data almost completely computerized. Manual for the rest

NB - *Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines*

## UNITED KINGDOM

National Institute of Agricultural Botany (NIAB)  
Huntingdon Road  
Cambridge CB3 0LE

Telephone: (0223) 27 63 81  
Telex: 817455 NIAB G  
Cable:

Curator/person in charge: A.J. Eade

Details of collection: *Triticum aestivum*, 115 obsolete cultivars from NW Europe and 75 UK Definitive Seed Stock of the cultivars currently on the official National List (tested and added under EC Directives), donated by various breeders in UK and EC and other European countries, e.g. Sweden

Maintenance of collection: Obsolete cultivars: Short-term seed storage at ambient temperatures. Grown in small plots every 4th season and seed harvested. Quantity retained varies from ca. 100 g to ca. 400g  
Cultivars: Short-term seed storage at 10°C. Seeds with 10% m.c. in airtight metal or plastic containers of 1.25 kg capacity. Storage capacity 96 m<sup>3</sup>  
Retained for 6 seasons; if cultivar still on National List seed is replaced with authentic stock from breeder/maintainer checked for identity by growing in adjacent small plots

Duplication of collection: Obsolete cultivars: Not formally duplicated. Most cultivars probably contained in genebank at PBI, Cambridge, UK  
Cultivars: DAFS, Agricultural Scientific Services, East Craigs, Edinburgh, UK

Availability: Available in limited quantity. Applicable a small handling fee

Quarantine: No known restrictions

Evaluation: Obsolete cultivars: Archive morphological descriptions available for some cultivars  
Cultivars: All entries grown each year at NIAB for DUS (Distinctness, Uniformity and Stability) Testing of new cultivars under EC Directives. Recorded for morphological characters in small drilled plots  
Descriptor List: UPOV and UK DUS Character Schedules

Documentation: Obsolete cultivars: Partial and manual  
Cultivars: Administrative and test record data computerized

## UNITED KINGDOM

Cambridge Laboratory  
Institute of Plant Science Research (IPSR)  
Agricultural & Food Research Council (AFRC)  
Maris Lane  
Trumpington  
Cambridge CB2 2JB

Telephone: (0223) 84 09 32  
Telex: 818280 PBICAM G  
Cable:  
Telefax: (0223) 84 01 67

Curator/person in charge: R.J. Giles, Curator AFRC Cereals Collection  
T.E. Miller / S.M. Reader, Curators IPSR Wheat and related species collection

Details of collection: *Aegilops* spp., 314  
*Dasypyrum villosum*, 5  
*Eremopyrum* spp., 17

**UNITED KINGDOM (cont.)**

Details of collection:	<i>Triticum aestivum</i> , 7971 accessions, including 1787 named varieties, 2135 breeders' lines, 71 old varieties, 3658 landraces or selections from landraces <i>T. aethiopicum</i> , 6 <i>T. carthlicum</i> , 10 <i>T. compactum</i> , 2 <i>T. dicoccon</i> , 6 <i>T. durum</i> , 201 accessions, including 89 named varieties, 49 breeders' lines and 45 landraces or selections from landraces <i>T. karamyshevii</i> , 2 <i>T. macha</i> , 1 <i>T. persicum</i> , 1 <i>T. polonicum</i> , 1 <i>T. sphaerococcum</i> , 1 <i>T. spelta</i> , 1 <i>T. tauschii</i> , 1 <i>T. turanicum</i> , 1 <i>T. turgidum</i> , 13 <i>T. vavilovii</i> , 1 <i>T. zhukovskyi</i> , 1 <i>Triticum</i> spp., 1597
Maintenance of collection:	Medium-term seed storage at 0°-1°C. Seeds with 5-6% m.c. in paper packets Part of the collection is also kept at -20°C in a deep-freeze. Seeds in aluminium laminated foil packets
Duplication of collection:	Not duplicated
Availability:	Freely available normally in 5 g samples. Lines involved in current research may be withheld for all/part of the duration of that research project
Quarantine:	No known restrictions
Evaluation:	Partial and on-going but restricted
Documentation:	Complete and computerized for the <i>Triticum</i> and complete and manual, on-going computerization for passport data for the related species

NB - This collection was formerly maintained by the Plant Breeding Institute (PBI), UK

**UNITED KINGDOM**

DAFS Cereal Cultivar Reference Collection  
Agricultural Scientific Services  
Department of Agriculture and Fisheries  
for Scotland (DAFS)  
East Craigs  
Edinburgh EH12 8NJ

Telephone: (031) 244 88 22  
Telex: 727348 DAFASS G  
Cable:  
Telefax: (031) 244 89 40

Curator/person in charge:	G.R. Chadwick
Details of collection:	<i>Triticum aestivum</i> , 840 accessions, including 780 old cultivars
Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 10-12% m.c. in airtight screw-top bottles
Duplication of collection:	Not duplicated
Availability:	Available in limited quantity (100 seeds)

Quarantine: No known restrictions  
 Evaluation: Morphological and physiological description. 100 descriptors. On-going work  
 Documentation: Data held on card index. On-going work

#### UNITED KINGDOM

Joseph Nickerson Research Centre  
 Nickerson RPB Ltd.  
 Rothwell  
 Lincoln LN7 6DT

Telephone: (0472) 894 71  
 Telex: 527072 AGSERV G  
 Cable:

Curator/person in charge: P.T. Gymer  
 Details of collection: *Triticum aestivum*, 1400 accessions  
 Maintenance of collection: Medium-term seed storage at 5°C and 25% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

#### UNITED STATES OF AMERICA

National Small Grain Collection  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 P.O. Box 307  
 Aberdeen, Idaho 83210

Telephone: (208) 397 41 62  
 Telex:  
 Cable:  
 Telefax: (208) 397 41 62

Curator/person in charge: Harold E. Bockelman  
 Details of collection: *Aegilops bicornis*, 2  
*Ae. biuncialis*, 39  
*Ae. caudata*, 7  
*Ae. caudata* var. *polyathera*, 2  
*Ae. columnaris*, 7  
*Ae. comosa*, 5  
*Ae. comosa* var. *comosa*, 2  
*Ae. crassa*, 16  
*Ae. cylindrica*, 62  
*Ae. geniculata*, 55  
*Ae. geniculata* subsp. *gibberosa*, 1  
*Ae. juvenalis*, 4  
*Ae. kotschyj*, 12  
*Ae. longissima*, 3  
*Ae. neglecta*, 67  
*Ae. peregrina*, 19  
*Ae. searsii*, 1  
*Ae. sharonensis*, 1  
*Ae. speltooides*, 89  
*Ae. tauschii*, 85  
*Ae. tauschii* var. *anathera*, 2  
*Ae. tauschii* var. *meyerii*, 1  
*Ae. tauschii* subsp. *strangulata*, 7  
*Ae. tauschii* subsp. *tauschii*, 11

## UNITED STATES OF AMERICA (cont.)

Details of collection: (cont.)	<p><i>Ae. triuncialis</i>, 160  <i>Ae. triuncialis</i> subsp. <i>persica</i>, 13  <i>Ae. unbellulata</i>, 19  <i>Ae. ventricosa</i>, 19  <i>Aegilops</i> spp., 51</p> <p><i>Triticum aestivum</i>, 31586  <i>T. araraticum</i>, 162  <i>T. boeoticum</i>, 32  <i>T. boeoticum</i> subsp. <i>boeoticum</i>, 617  <i>T. boeoticum</i> subsp. <i>thaoudar</i>, 6  <i>T. carthlicum</i>, 100  <i>T. compactum</i>, 37  <i>T. dicoccoides</i>, 808  <i>T. dicoccon</i>, 498  <i>T. durum</i>, 5657  <i>T. ispahanicum</i>, 5  <i>T. karamyshevii</i>, 3  <i>T. macha</i>, 49  <i>T. militinae</i>, 1  <i>T. monoccocum</i>, 172  <i>T. polonicum</i>, 172  <i>T. spelta</i>, 1150  <i>T. sphaerococum</i>, 31  <i>T. timopheevii</i>, 43  <i>T. turanicum</i>, 56  <i>T. turgidum</i>, 875  <i>T. urartu</i>, 172  <i>T. vavilovii</i>, 2</p> <p><i>Triticum</i> spp., 1051</p> <p>x <i>Triticosecale</i>, 1015</p> <p>Landraces, breeders' lines, cultivars and wild species  World-wide representation</p>
Maintenance of collection:	As seeds; medium-term seed storage at 7°C, 40 % RH. Seeds in paper envelopes
Duplication of collection:	National Seed Storage Laboratory (long-term storage), Fort Collins, Colorado, USA
Availability:	Freely available; reciprocal exchange encouraged
Quarantine:	Export: none Import: restrictions apply to <i>Aegilops</i> , <i>Oryza</i> , <i>Triticum</i> and x <i>Triticosecale</i>
Evaluation:	In progress
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

## UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)  
 US Department of Agriculture (USDA)  
 Agricultural Research Service (ARS)  
 Colorado State University Campus  
 Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
 Telex: 237401714DNPAUC  
 Cable:  
 Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

Details of collection: *Aegilops* spp., 333 accessions of 20 species

*Triticum aestivum*, 29082  
*T. durum*, 5463  
 Landraces, cultivars, wild and weedy species  
 World-wide representation

Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a global collection of cultivated species of *Triticum* for long-term conservation

Duplication of collection: Partially at Istituto del Germoplasma, Bari, Italy and VIR, Leningrad, USSR  
 As an active collection in CIMMYT, Mexico and the National Small Grain Collection, Aberdeen, Idaho, USA

Availability: Freely available only if not available from the active collection

Quarantine: No information

Evaluation: Responsibility of the Station holding the active collection

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

## UNITED STATES OF AMERICA

Department of Botany and Plant Sciences  
 University of California  
 Riverside, California 92521

Telephone: (714)787 37 06  
 Telex: 676427 IPM 45 CA  
 Cable:

Curator/person in charge: J.G. Waines

Details of collection: *Aegilops bicornis*, 17 wild from Egypt (7), Israel (4) and 6 of unknown origin  
*Ae. biuncialis*, 14 wild from Iran (1), Iraq (1), Turkey (7) and 5 of unknown origin  
*Ae. caudata*, 12 wild from Greece (1), Turkey (3) and 8 of unknown origin  
*Ae. columnaris*, 9 wild from Iraq (1), Syria (2), Turkey (4) and 2 of unknown origin  
*Ae. comosa*, 15 wild from Greece (8), Turkey (3) and 4 of unknown origin  
*Ae. crassa*, 22 wild from Afghanistan (1), Iran (5), Iraq (5), Israel (1), Syria (1), Turkey (1), USSR (1) and 7 of unknown origin  
*Ae. cylindrica*, 30 wild from Iran (3), Turkey (17), USSR (1) and 9 of unknown origin  
*Ae. juvenalis*, 8 wild from Iran (1), Iraq (1) and 6 of unknown origin  
*Ae. kotschyi*, 13 wild from Iran (1), Israel (5), Syria (3) and 4 of unknown origin  
*Ae. ligustica*, 16 wild from Iraq (2), Israel (1), Turkey (10) and 3 of unknown origin  
*Ae. longissima*, 17 wild from Iraq (1), Israel (10), Jordan (2) and 4 of unknown origin

## UNITED STATES OF AMERICA (cont.)

Details of collection:  
(cont.)

- Ae. lorentii*, 4 wild from Syria  
*Ae. mutica*, 3 wild from Turkey  
*Ae. ovata*, 38 wild from Israel (2), Portugal (2), Syria (3), Turkey (9) and 22 of unknown origin  
*Ae. searsii*, 11 wild from Israel (6), Jordan (1) and Syria (4)  
*Ae. sharonensis*, 8 wild from Israel (5) and 3 of unknown origin  
*Ae. speltooides*, 102 wild from Iran (1), Iraq (7), Israel (5), Syria (3), Turkey (32) and 54 of unknown origin  
*Ae. squarrosa*, 126 wild from Afghanistan (10), Armenia (2), Azerbaidzhan (27), Dagestan (3), Iran (32), Pakistan (2), Tadzhikistan (3), Turkmenia (3), USSR (1) and 43 of unknown origin  
*Ae. triaristata*, 46 wild from Iran (4), Portugal (1), Turkey (25) and 16 of unknown origin  
*Ae. triuncialis*, 115 wild from Afghanistan (6), Iran (10), Iraq (6), Portugal (1), Syria (5), Turkey (51) and 36 of unknown origin  
*Ae. turcomanica*, 1 wild  
*Ae. umbellulata*, 23 wild from FRG (1), Iran (5), Turkey (10) and 7 of unknown origin  
*Ae. uniaristata*, 6 wild from Greece (3) and Turkey (3)  
*Ae. variabilis*, 18 wild from Israel (10), Syria (1), Turkey (1) and 6 of unknown origin  
*Ae. ventricosa*, 18 wild  
*Aegilops* spp., 79 wild from Iran (1), Iraq (6), Israel (4), Japan (1), Lebanon (9), Morocco (4), Turkey (8), USSR (2), Yugoslavia (27) and 17 of unknown origin
- Triticum abyssinicum*, 3 landraces  
*T. aestivum*, 105 landraces and cultivars from PR China (2), Greece (3), Kenya (1), Lybia (2), Tibet (3), Turkey (6), USA (3), and 85 of unknown origin  
*T. amyleum*, 2 landraces  
*T. araraticum*, 290 wild from Armenia (6), Azerbaidzhan (10), Iran (8), Iraq (252), Nakhichevan (3), Transcaucasus (3), Turkey (2) and 6 of unknown origin  
*T. boeoticum*, 738 wild from Armenia (7), Azerbaidzhan (11), Crimea (2), FRG (1), Greece (1), Iran (34), Iraq (383), Lebanon (13), Transcaucasus (1), Turkey (265), USSR (1) and 19 of unknown origin  
*T. carthlicum*, 65 landraces from PR China (1), Ethiopia (1), Georgia (5), Iran (4), Turkey (1), USSR (5) and 48 of unknown origin  
*T. compactum*, 10 landraces from Turkey (4) and 6 of unknown origin  
*T. dicoccoides*, 246 wild from Iran (3), Iraq (4), Israel (80), Syria (1), Turkey (129) and 29 of unknown origin  
*T. dicoccon*, 427 primitive cultivars from Afghanistan (1), Armenia (1), Belgium (4), Bulgaria (4), Canada (1), PR China (1), Czechoslovakia (2), Ethiopia (41), France (1), FRG (25), Greece (1), India (5), Iran (12), Israel (2), Italy (8), Morocco (2), Portugal (1), Saudi Arabia (1), Spain (12), Switzerland (1), Syria (7), Turkey (4), USA (1), USSR (38), Yugoslavia (5) and 246 of unknown origin  
*T. durum*, 169 landraces and cultivars from Afghanistan (6), Algeria (10), PR China (9), Cyprus (4), Ethiopia (13), Greece (5), India (4), Iran (10), Iraq (5), Israel (1), Italy (9), Lebanon (8), Lybia (1), Morocco (1), Tunisia (7), Turkey (10), United Arab Rep. (3), USSR (4) and 59 of unknown origin  
*T. ispahanicum*, 2 landraces  
*T. karamyshevii*, 3 landraces from Georgia and 2 wild  
*T. macha*, 7 landraces  
*T. militinae*, 1 landrace from Georgia  
*T. monococcum*, 381 primitive cultivars from Albania (1), Armenia (2), Austria (4), Azerbaidzhan (4), Belgium (3), Czech-Hungarian region (1), Cyprus (1), Ethiopia (1), Georgia (5), FRG (16), Greece (1), Israel (1), Italy (7), Spain (6), Switzerland (1), Syria (1), Turkey (52), Ukraine (1), USSR (5), Yugoslavia (9) and 259 of unknown origin  
*T. orientale*, 1 landrace

Details of collection: (cont.)	<i>Triticum ovatum</i> , 1 landrace <i>T. polonicum</i> , 10 landraces <i>T. sinskafae</i> , 1 wild <i>T. spelta</i> , 35 landraces from Afghanistan (5), Iran (7) and 23 of unknown origin <i>T. sphaerococcum</i> , 7 landraces and cultivars <i>T. timopheevii</i> , 25 primitive cultivars from Turkey (1), USSR (5) and 19 of unknown origin <i>T. turanicum</i> , 2 landraces <i>T. turgidum</i> , 8 landraces <i>T. urartu</i> , 203 wild from Armenia (11), Austria (1), Azerbaidzhan (1), Iran (4), Iraq (1), Lebanon (97), Syria (1), Turkey (85) and 2 of unknown origin <i>T. zavitovii</i> , 4 landraces from Syria (1) and 3 of unknown origin <i>T. zhukovskiyi</i> , 2 landraces from Georgia <i>Triticum</i> spp., 32 accessions from Israel (4), Lebanon (9), Turkey (2) and 17 of unknown origin
Maintenance of collection:	Long-term seed storage at -20°C. Seeds in aluminium laminated foil packets (10 cm x 15 cm), paper envelopes and bags of various sizes
Duplication of collection:	Partially duplicated at: PGR, Ottawa, Canada; NSSL, Fort Collins and Kansas State University, USA Full duplication at: University of Kyoto, Japan and NSGC, Aberdeen, USA
Availability:	Available in limited quantity
Quarantine:	Phytosanitary certificate a possible requirement
Evaluation:	Complete for: seed protein and lysine content for selected collections Partial for: solid stem, <i>Meloidogyne incognita</i> and <i>M. javanica</i> nematode resistance; <i>Gaeumannomyces graminis</i> , <i>Fusarium</i> and <i>Helminthosporium</i> root rots; leaf rust PRTUS 6 <i>Puccinia recondita</i> ; Hessin fly biotype D ( <i>Mayetiola destructor</i> ); greenbug biotype E ( <i>Schizaphis graminum</i> ) and wheat streak mosaic virus isolate KS1
Documentation:	Manual. Complete for passport data

#### YEMEN, PEOPLE'S DEMOCRATIC REPUBLIC

Department of Research & Extension  
El-Kod Agricultural Research Centre  
Ministry of Agriculture & Agrarian Reform  
Abyan Gov

Telephone: 325 09 / 45 55  
Telex: 2243 AD FAO  
Cable: FCODAGRI ADEN

Curator/person in charge:	AB. S. Mu' Allem
Details of collection:	<i>Triticum aestivum</i> , 10 landraces from PDR Yemen
Maintenance of collection:	Short-term seed storage at 25°C and 75% RH. Seeds with >8% m.c. in tin containers. Regeneration done yearly
Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	Phytosanitary certificate is required for import of material
Evaluation:	Due to start soon
Documentation:	Partial and manual

**YUGOSLAVIA**

Institute for Breeding and Production  
of Field Crops  
Faculty of Agricultural Sciences  
University of Zagreb  
Marulićev trg 5/1  
4100 Zagreb

Telephone: (041) 44 65 45  
Telex: 21404 YUBILJE  
Cable: CROPINSTITUTE

Curator/person in charge: B. Kolic

Details of collection: *Triticum aestivum*, 3336 accessions, including 282 landraces, 55 old cultivars and 366 mutant/genetic stocks

Maintenance of collection: Medium-term seed storage at 2°C and at 4°-6°C

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

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**ADDENDUM****NEW ZEALAND**

Crop Research Division  
Department of Scientific and Industrial Research (DSIR)  
Private Bag  
Christchurch

Telephone:  
Telex:  
Cable:

Curator/person in charge: R. Cross

Details of collection: *Triticum aestivum*  
*T. compactum*  
*T. durum*  
*T. polonicum*

Total 2717 accessions, mostly primitive cultivars and landraces. World-wide representation. The samples have been maintained by "ear-row" procedures so they are genetically uniform

Maintenance of collection: Small samples (20-30) seeds

Duplication of collection: No information

Availability: Seeds will be available after further seed increase and preliminary evaluation, 1992-1995

Quarantine: No information

Evaluation: No information

Documentation: No information

*Zea*

**AFGHANISTAN**

Plant Genetic Resources Unit  
Ministry of Agriculture and Land Reform  
Darul Aman Research Station  
Kabul

Telephone:  
Telex:  
Cable:

Curator/person in charge: M.A. Rashid

Details of collection: *Zea mays*, 101 landraces from Afghanistan

Maintenance of collection: Medium-term seed storage at 0°C and 35% RH. Seeds in cans

Duplication of collection: Partially duplicate in base storage at Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, USA

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**ARGENTINA**

Sección Maíz  
Estación Experimental Agropecuaria (EEA)  
Instituto Nacional de Tecnología Agropecuaria (INTA)  
Casilla de Correos 31  
2700 Pergamino

Telephone: (0477) 220 57/8  
Telex: 17518 INTA AR  
Cable:

Curator/person in charge: M.E. Ferrer / T. Rosales

Details of collection: *Zea mays*, 2201 local varieties, 38 composites, 150 populations and synthetics, 171 lines and 25 breeding material, all from Argentina; and 859 from Uruguay

Maintenance of collection: Long-term seed storage at -15°C. Seeds with 7% m.c. in aluminium laminated foil packets  
Medium-term seed storage at 0°C

Duplication of collection: CIMMYT, Mexico and at several centres in South America

Availability: No information

Quarantine: No information

Evaluation: About 2000 Argentinian collections evaluated for 79 descriptors (inflorescence, cob and grain characteristics and pest and disease resistance), following IBPGR descriptor list

Documentation: Computerization in progress

**AUSTRALIA**

Australian Tropical Field Crops  
Genetic Resources Centre  
Department of Primary Industries  
P.O. Box 201  
Biloela, Queensland 4715

Telephone: (61) 079-92 10 44  
Telex: 41620 AA  
Cable: QLDPRIMIND, Biloela

Curator/person in charge: P. Lawrence

Details of collection: *Zea mays*, 2000 cultivars and elite lines

Maintenance of collection:	Long-term seed storage at -18°C. Seeds with 6% m.c. in aluminium laminated foil packets
Duplication of collection:	No information
Availability:	Available on exchange basis
Quarantine:	Import, one generation in quarantine. No restrictions for export
Evaluation:	Due to commence soon using modified IBPGR descriptor list
Documentation:	Computerized

## AUSTRALIA

Australian Tropical Forages Genetic  
Resources Centre  
CSIRO  
306 Carmody Road  
Sta. Lucia, Queensland 4067

Telephone: (07) 377 02 09  
Telex: 42159 AA  
Cable:  
Telefax: (07) 371 39 46

Curator/person in charge:	R.J. Williams
Details of collection:	<i>Tripsacum dactyloides</i> , 1 accession <i>T. laxum</i> , 1 accession  <i>Zea mays</i> , 4 accessions
Maintenance of collection:	Long-term seed storage at -20°C. Storage capacity 12 m <sup>3</sup> Short-term seed storage at 5° to 10°C and 25% RH. Storage capacity 60 m <sup>3</sup> Seeds in aluminium laminated foil packets and plastic bottles
Duplication of collection:	No information
Availability:	Available provided there is sufficient seed
Quarantine:	Import seeds must have phytosanitary certificate. Seeds treated and quarantined on arrival. Despatch of seeds will include a phytosanitary certificate
Evaluation:	On-going work
Documentation:	Passport data complete and computerized

## AUSTRIA

National Establishment for Plant  
Cultivation and Seed Testing Rinn  
A-6074 Rinn, Tirol

Telephone: (05223) 81 17  
Telex:  
Cable:

Curator/person in charge:	L. Koeck
Details of collection:	<i>Zea mays</i> , 6 landraces
Maintenance of collection:	Short-term seed storage at ambient temperatures
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Evaluation for botanical characteristics
Documentation:	No information

**AUSTRIA**

Saatzucht Gleisdorf  
 Ges. M. B. M. & Co., KG  
 Am Tieberhof, 33  
 A-8200 Gleisdorf

Telephone: (03112) 21 05  
 Telex: 03-2753  
 Cable:

Curator/person in charge: J. Rath  
 Details of collection: *Zea mays*, 300 accessions  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**BELGIUM**

Leerstoel voor Plantenteelt  
 Faculteit der Landbouwwetenschappen  
 Rijksuniversiteit Gent  
 Coupure Links, 653  
 B-9000 Gent

Telephone: (091) 69 61  
 Telex: 12754 RUGENT  
 Cable:

Curator/person in charge: J. Stryckers  
 Details of collection: *Zea mays*, 8 landraces and 600 mutant/genetic stocks  
 Maintenance of collection: Short-term seed storage at ambient temperatures  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Cold resistance  
 Documentation: No information

**BOLIVIA**

Centro de Investigaciones Fitotécnicas  
 y Ecogenéticas de Pairumani  
 Casilla 128  
 Cochabamba

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: M. Crespo  
 Details of collection: *Zea mays*, 1300 landraces and cultivars  
 Maintenance of collection: Medium-term seed storage at 0°-4°C. Seeds with 8% m.c. in aluminium laminated foil packets  
 Duplication of collection: CIMMYT, Mexico  
 Availability: No information  
 Quarantine: No information

Evaluation: On-going, according to IBPGR descriptor list. 90% of collection characterized

Documentation: Partial and manual

## BRAZIL

Centro Nacional de Recursos Genéticos (CENARGEN)  
 Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
 C.P. 102372  
 70000 Brasília D.F.

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: E.A. Vilela Morales

Details of collection: *Zea mays*, 620 landraces and cultivars

Maintenance of collection: Long-term seed storage at -18°C  
 Medium-term seed storage at -1°C

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: On-going, according to IBPGR descriptor list

Documentation: Computerized

## BRAZIL

Banco Activo de Germoplasma de Milho  
 Centro Nacional de Pesquisa de Milho e Sorgo (CNPMS)  
 Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)  
 Rodovia MG 424 - km 65  
 C.P. 151/285  
 35700 Sete Lagoas (MG)

Telephone: (031) 921-5644  
 Telex: 31-2099 EBPA  
 Cable:

Curator/person in charge: R. de O. Feldmann

Details of collection: *Zea diploperennis*, 1 accession  
*Z. mays*, 2256 accessions  
*Z. mexicana*, 3 accessions  
*Tripsacum dactyloides*, 2 accessions

Maintenance of collection: Long-term seed storage at -18°C. Seeds in sealed cans (at CENARGEN)  
 Medium-term seed storage at 10°C and 30% RH (at Sete Lagoas)

Duplication of collection: CENARGEN, Brasília, Brazil

Availability: Available on exchange basis

Quarantine: Export: phytosanitary certificate  
 Import: certificate stating that seeds were produced in areas free of downy mildew (*Peronospora sorghii*) and other downy mildews

Evaluation: 1640 accessions being evaluated according to Latin America Maize Project (LAMP)

Documentation: Computerized for passport data

**BULGARIA**

Institute of Introduction and  
Plant Genetic Resources "K. Malkov"  
District of Plovdiv  
BG-4122 Sadovo

Telephone: (99) 22 21 / 22 51  
Telex: 44444 ZOS BG  
Cable:

- Curator/person in charge: B. Matsov / M. Zaharieva
- Details of collection: *Zea mays*, 3043 total accessions. Self-pollinating lines (1692), synthetic populations (106), cultivars and populations (600) and landraces (645) from Austria, Argentina, Czechoslovakia, France, Hungary, Italy, Japan, USA, USSR and Yugoslavia
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-7% m.c. in glass jars  
Medium-term seed storage at 5°C and 50% RH
- Duplication of collection: Argentina, Australia, Czechoslovakia, France, Hungary, Italy, Japan, USA and USSR
- Availability: Available on exchange basis
- Quarantine: Phytosanitary certificate required. All import material must go through a year trial in the quarantine nursery of IIPGR, Sadovo
- Evaluation: Characterization and evaluation according to unified descriptor lists - COMECON (morphological traits, biological properties, resistance to diseases and pests, economical characters, chemical composition and technological evaluation). Genetic and ecological studies
- Documentation: Computerized for passport and evaluation data

**CANADA**

Central Office for the Plant Gene Resources  
of Canada (PGRC)  
Plant Research Centre  
Central Experimental Farm  
Building 99  
Ottawa, Ontario K1A 0C6

Telephone: (613) 995 94 28  
Telex:  
Cable:

- Curator/person in charge: R.S. Pandeya
- Details of collection: *Zea mays*, 2800 landraces and cultivars
- Maintenance of collection: Long-term seed storage at -20°C. Seeds with 7-8% m.c. in aluminium laminated foil packets
- Duplication of collection: Many research stations throughout Canada hold active collections of part of this material
- Availability: No information
- Quarantine: No information
- Evaluation: Evaluation is carried out by canadian breeders
- Documentation: Compilation and computerization of data is in progress at PGRC Office

**CHILE**

Estación Experimental La Platina  
 Instituto de Investigaciones Agropecuarias (INIA)  
 Casilla 439/3  
 Santiago

Telephone: 558 60 61  
 Telex: 242207 INIA CL  
 Cable:

Curator/person in charge: Orlando Paratori B.  
 Details of collection: *Zea mays*, 914 primitive cultivars from Chile  
 Maintenance of collection: Short-term seed storage at 10°-15°C and no RH control. Seeds with 8-10% m.c. in polythene bags  
 Duplication of collection: Partially at NSSL, Fort Collins, USA  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: On-going according to IBPGR and LAMP (Latin America Maize Project) descriptor list. 22 descriptors for plant and 18 for kernel and ear  
 Documentation: Computerization in progress for passport and evaluation data

**CHINA, PEOPLE'S REPUBLIC OF**

National Crop Gene Bank  
 Institute of Crop Germplasm Resources (ICGR)  
 Chinese Academy of Agricultural Sciences (CAAS)  
 Beijing

Telephone:  
 Telex:  
 Cable:

Curator/person in charge:  
 Details of collection: *Zea mays*, 5000 accessions  
 Maintenance of collection: Long-term seed storage at -18° to -10°C and 50% RH. Seeds with 7% m.c. in screw-cap metal cans  
 Medium-term seed storage at 0°C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: In progress. Catalogue on 11000 accessions for 18 to 20 descriptors in preparation  
 Documentation: Complete and computerized

**CHINA**

Taiwan Agricultural Research Institute  
 189 Chung-Cheng Road  
 Wufeng, Taichung  
 Taiwan 41301

Telephone: (04) 330 23 01  
 Telex: 3338162  
 Cable:

Curator/person in charge: C.C. Tu  
 Details of collection: *Zea mays*, 230 populations and inbreds from Southeast Asia, Mexico and USA  
 Maintenance of collection: Medium-term seed storage at 5°C and 40-50% RH. Seeds in PVC containers of 10 kg for populations and 500 g for inbreds

**CHINA (cont.)**

Duplication of collection:	No information
Availability:	Available in limited quantity (200-300 seeds)
Quarantine:	Phytosanitary certificate required for export or import of material
Evaluation:	On-going work for 10/20 characters
Documentation:	Partial and computerized

**COLOMBIA**

Banco Colombiano de Maíz  
Estación Experimental Tulio Ospina  
Instituto Colombiano Agropecuario (ICA)  
Apartado Aéreo 51764 Medellín (Antioquia)  
Bello (Antioquia)

Telephone: 275 12 00 Ext. 30  
Telex: 66752  
Cable:

Curator/person in charge:	C. Díaz Amaris
Details of collection:	<i>Zea mays</i> , 5043 accessions (123 races) from Africa (2), Argentina (12), Bolivia (519), Brazil (2), Central America and Caribe (Antigua, Barbados, Cuba, Dominican Republic, Guadeloupe, Grenada, Haiti, Jamaica, Martinique, Puerto Rico, Santa Croix, Santa Lucia, San Vicente and Trinidad and Tobago) (299), Colombia (2097), Chile (99), Ecuador (576), India (3), Indonesia (2), Mexico (36 <sup>8</sup> ), Panama (150), Peru (225), Thailand (2), USA (19) and Venezuela (668)
Maintenance of collection:	Short-term seed storage at 8°C and 60% RH. Seeds with 10% m.c. in plastic containers
Duplication of collection:	CIMMYT, Mexico and USA
Availability:	Available
Quarantine:	No known restrictions
Evaluation:	On-going for agronomical and morphological characteristics
Documentation:	Complete and computerized for passport data. On-going for evaluation data

**COLOMBIA**

Instituto Colombiano Agropecuario (ICA)  
Tibaitatá  
A.A. 151123  
El Dorado - Bogotá

Telephone:  
Telex:  
Cable:

Curator/person in charge:	
Details of collection:	<i>Zea spp.</i> , 4890 landraces, cultivars and wild types
Maintenance of collection:	Short-term seed storage at 12°C. Long-term seed storage facilities planned
Duplication of collection:	CIMMYT, Mexico
Availability:	No information
Quarantine:	No information
Evaluation:	Complete for 33 descriptors
Documentation:	Partial and computerized

**COSTA RICA**

Facultad de Agronomía  
San José

Telephone:  
Telex:  
Cable:

Curator/person in charge:

Details of collection: *Zea mays*, 300 landraces

Maintenance of collection: Active collection

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: Partial and manual

**COSTA RICA**

Recursos Fitogenéticos  
Programa de Mejoramiento de Cultivos Tropicales  
Centro Agronómico Tropical de  
Investigación y Enseñanza (CATIE)  
Turrialba

Telephone: 56 02 32 / 56 64 31  
Telex: 8005 CATIE CR  
Cable: CATIE, Turrialba

Curator/person in charge: V. Villalobos / J. Arce

Details of collection: *Zea mays*, 60 landraces from Central America

Maintenance of collection: Long-term seed storage at -17°C. Seeds with 5-7% m.c. in aluminium laminated foil packets  
Medium-term seed storage at 5°C and 30-40% RH. Seeds in paper or plastic bags

Duplication of collection: CIMMYT, Mexico

Availability: Freely available

Quarantine: Phytosanitary certificate and import permit required

Evaluation: No information

Documentation: Computerized for passport and characterization data

**CUBA**

Instituto de Investigaciones Fundamentales  
en Agricultura Tropical "Alejandro Humboldt" (INIFAT)  
Calle 1 esq. 2, Santiago de las Vegas  
Ciudad Habana

Telephone:  
Telex:  
Cable:

Curator/person in charge: Miguel A. Esquivel Perez

Details of collection: *Zea mays*, 254 primitive cultivars and breeding lines from Cuba

Maintenance of collection: Long-term seed storage at -18°C  
Medium-term seed storage at 0°-4°C. Seeds with 4-6% m.c. in sealed glass containers and/or in aluminium laminated foil packets

**CUBA (cont.)**

- Duplication of collection: ZIGuK, Gatersleben, DDR and VIR, Leningrad, USSR
- Availability: Available in limited quantity
- Quarantine: Imported material must possess phytosanitary certificate. Seeds to export should pass quarantine inspection and a phytosanitary certificate is given
- Evaluation: On-going work using IBPGR descriptor list and/or descriptors selected according breeding programmes
- Documentation: Passport and characterization data complete. Manual and computerized

**CZECHOSLOVAKIA**

Maize Research Institute  
Trsténská, 1  
917 52 Trnava

Telephone: (805) 230 51  
Telex: 92475 VUKUK C  
Cable:

- Curator/person in charge: B. Rysava
- Details of collection: *Zea mays*, 102 cultivars, including from Albania (1), Czechoslovakia (15), Hungary (8), Korea, DPR (1), Poland (7), USSR (10) and Yugoslavia (8) 707 lines, including from Austria (5), Bulgaria (2), Canada (81), Czechoslovakia (137), DDR (5), France (85), Hungary (12), Japan (2), Netherlands (5), Poland (54), Romania (9), Spain (10), USA (221), USSR (22), Yugoslavia (23) and 2 of unknown origin 131 landraces from Czechoslovakia
- Maintenance of collection: Long-term seed storage at -18°C. Seeds with 5-8% m.c in glass containers. Base collection maintained at Czechoslovak Genebank, Research Institute of Plant Production, Prague-Ruzyne  
Medium-term seed storage at 3°-4°C
- Duplication of collection: Czechoslovak Genebank, Prague-Ruzyne
- Availability: Available on exchange basis
- Quarantine: No known restrictions
- Evaluation: Yield, yield structure, grain quality, earliness, disease resistance, physiological and biochemical characters according to national descriptor list. About 80% of the collection evaluated
- Documentation: Computerized for passport data and on-going for evaluation data. Data held at Czechoslovak Information System for Genetic Resources (EVIGEZ). For further information see: Rogalewicz, V. and Bares, I. (1987). Czechoslovak Information System for Genetic Resources. FAO/IBPGR Pl. Genet. Resources Newsletter, 22: 14-16

**ECUADOR**

Unidad de Recursos Fitogenéticos  
Instituto Nacional de Investigaciones  
Agropecuarias (INIAP)  
Casilla 340  
Quito

Telephone: 629-691  
Telex: 2532 INIAP ED  
Cable:

- Curator/person in charge: R. Castillo Torres
- Details of collection: *Zea mays*, 40 local material collected in the highlands, mainly from Ecuador; and 330 donated by CIMMYT

Maintenance of collection:	Long-term seed storage at -12°C. Seeds with 6-8% m.c. in aluminium laminated foil packets
Duplication of collection:	Partially (330 accessions) at CIMMYT, Mexico
Availability:	Not available at the moment. Multiplication in progress
Quarantine:	No restrictions for export but imported material must possess a phytosanitary certificate
Evaluation:	On-going. Complete for 330 accessions
Documentation:	Manual. Partial for passport data for 40 samples

## EGYPT

Field Crops Research Institute  
Agricultural Research Centre  
Cairo University Road  
Giza

Telephone:  
Telex: 20332 FCRI UN  
Cable:

Curator/person in charge: H.Y. Shehata

Details of collection: *Zea mays*, 1599 accessions: 152 white endosperm and 35 yellow endosperm, locally obtained and imported inbred lines; 307 locally collected including, 5 obsolete cultivars and 5 composites; 295 exotic white endosperm varieties, composites and populations; 433 exotic yellow endosperm introductions; 59 white endosperm introductions from India; 92 donated by CIMMYT; 116 from USA; and 100 yellow endosperm introductions from India, Morocco, Spain, USA and USSR, donated by CIMMYT

Maintenance of collection:	Short-term seed storage at 17°-22°C. Seeds in cloth bags
Duplication of collection:	No information
Availability:	Available in limited quantity
Quarantine:	No information
Evaluation:	No information
Documentation:	Computerized. Complete for passport data

## FEDERAL REPUBLIC OF GERMANY

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50  
D-3300 Braunschweig

Telephone: (531) 59 66 00  
Telex:  
Cable: LANDFORSCHUNG,  
Völkenrode  
Telefax: (531) 59 68 14

Curator/person in charge: L. Seidewitz

Details of collection: *Zea mays*, 20 landraces from FRG (1) and Yemen (19), 8 lines from Mexico; and 5 synthetics

Maintenance of collection:	Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins Medium-term seed storage at 3°C and 30% RH
Duplication of collection:	Not duplicated

**FEDERAL REPUBLIC OF GERMANY (cont.)**

Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Complete for 35 descriptors
Documentation:	All available data computerized. Passport data are available for practically all accessions

**FEDERAL REPUBLIC OF GERMANY**

Arbeitskreis Pflanzengenetik  
 Botanisches Institut  
 J. W. Goethe-Universität  
 Postfach 111 932  
 Siesmayerstr., 70  
 D-6000 Frankfurt am Main 11

Telephone: (069) 798 47 34  
 Telex: 413932 unif  
 Cable:

Curator/person in charge:	H. Becela
Details of collection:	<i>Zea mays</i> , 8 old cultivars
Maintenance of collection:	Long-term seed storage and in short-term seed storage at ambient temperatures, depending on the species. Seeds in paper and/or plastic bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Research work in radiation and cytogenetics (crop plant evolution)
Documentation:	No information

**FEDERAL REPUBLIC OF GERMANY**

Institut für Pflanzenzüchtung  
 Saatgutforschung und Populationsgenetik  
 Universität Hohenheim  
 P.O. Box 700562 (350)  
 Garbenstrasse, 9  
 D-7000 Stuttgart 70

Telephone: (0711) 45 01  
 Telex: 7-22 959 UNIHO D  
 Cable:

Curator/person in charge:	H. Geiger
Details of collection:	<i>Zea mays</i> , 1 landraces, 2 old cultivars and 7 mutant/genetic stocks
Maintenance of collection:	Medium-term seed storage at 4°C and 65% RH. Seeds in paper bags
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Mildew and <i>Fusarium</i> spp.
Documentation:	No information

## FRANCE

Centre de Recherches Agronomiques  
des Antilles et de la Guyana  
Institut National de la Recherche Agronomique (INRA)  
B.P. 1232  
F-97184 Pointe-à-Pitre Cédex  
Guadeloupe

Telephone: (590) 25 59 45/255999  
Telex: 919867 GL  
Cable:  
Telefax: (590) 25 59 24

Curator/person in charge: H. Touvin / J. Sabine / J. Felicite  
Details of collection: *Zea mays*, 80 ecotypes from Guadeloupe archipelago  
Maintenance of collection: Medium-term seed storage at 5°C and 50% RH  
Duplication of collection: As a base collection at Station d'Amélioration des Plantes, INRA, Montpellier, France  
Availability: No information  
Quarantine: No information  
Evaluation: Precocity, plant height and resistance to *Spodoptera frugiperda* and *Heliothis zea*  
Documentation: Computerized

## FRANCE

Institut de Recherches Agronomiques  
Tropicales et des Cultures Vivrières (IRAT)  
Centre de Coopération Internationale en Recherche  
Agronomique pour le Développement (CIRAD)  
B.P. 5035  
F-34032 Montpellier Cédex 1

Telephone: (67) 61 58 00  
Telex: 49080762 F  
Cable:  
Telefax: (67) 61 59 88

Curator/person in charge: R. Vandevenne  
Details of collection: *Zea mays*, 867 landraces and cultivars from 36 different countries  
Maintenance of collection: Medium-term seed storage at 5°C  
Duplication of collection: No information  
Availability: Available on exchange basis. There are restrictions for some cultivars  
Quarantine: No known restrictions  
Evaluation: No information  
Documentation: Partial and computerized for passport data

## FRANCE

Station de Génétique et d'Amélioration des Plantes  
Centre de Recherches de Montpellier  
Institut National de la Recherche Agronomique (INRA)  
Domaine de Mèlguèil  
F-34130 Mauguio - Montpellier

Telephone: (67) 61 23 43  
Telex: 490818 INRAMON F  
Cable:  
Telefax: (67) 29 39 90

Curator/person in charge: A. Boyat / H. Duval

**FRANCE (cont.)**

- Details of collection: *Zea mays*, 1236 total accessions:  
 - 917 landraces from Algeria (4), Argentina (43), Austria (2), Barbados (1), Bulgaria (85), Canada (4), Chile (87), PR China (18), Czechoslovakia (21), France (267), FRG (4), Hungary (87), India (1), Italy (22), Japan (29), Korea (2), Morocco (2), Pakistan (1), Poland (18), Portugal (5), Romania (57), Spain (63), Switzerland (1), Thailand (1), Turkey (1), USA (38), USSR (9), Yemen, Arab Republic of (1), Yugoslavia (36) and donated by CIMMYT, Mexico (7)  
 - 315 synthetics from Afghanistan (2), Argentina (13), Australia (1), Bulgaria (13), Canada (13), France (63), Hungary (10), Italy (15), Japan (23), Poland (3), Romania (17), USA (129), Yugoslavia (3), 6 of unknown origin and donated by CIMMYT, Mexico (4)  
 - 2 hybrids from PR China  
 - 2 composite from France (1) and USA (1)
- Maintenance of collection: Long-term seed storage at -18°C. Seeds, 500 kernels by population, in glass jars. Two containers per accession  
 Medium-term seed storage at 5°C and 40% RH. Seeds with 10% m.c. in paper bags. 1 kg per accession
- Duplication of collection: No information
- Availability: Only French landraces and synthetics available (331 accessions)
- Quarantine: No known restrictions
- Evaluation: Main agronomical characters and combining ability with the 3 best available testers
- Documentation: Computerized. List available

**FRANCE**

Centre de Recherche LIMAGRAIN  
 B.P. 115  
 F-63203 Riom Cedex

Telephone: (73) 97 21 14  
 Telex: 390754 LIMAG A F  
 Cable:

- Curator/person in charge: M. Baron
- Details of collection: *Zea mays*, 1500 landraces and 2500 mutant/genetic stocks
- Maintenance of collection: Short-term seed storage at 6°C and 40% RH
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: Maize breeding from early to late material
- Documentation: No information

**FRANCE**

S.A. CIBA-GEIGY  
 B.P. 308  
 rue Lionel-Terray, 2-4  
 F-92560 Rueil-Malmaison Cedex

Telephone: 47 49 02 02  
 Telex: 203012 GIGER A F  
 Cable:

- Curator/person in charge: J.P. Pigot
- Details of collection: *Zea mays*, 1000 accessions

Maintenance of collection:	Medium-term seed storage at 5°C and 50% RH
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Stalk resistance vs. yield
Documentation:	No information

#### GERMAN DEMOCRATIC REPUBLIC

Zentralinstitut für Genetik  
und Kulturpflanzenforschung (ZIGuK)  
Corrensstrasse, 3  
DDR-4325 Gatersleben

Telephone: Gatersleben 50  
Telex: 48558 kupfga DDR  
Cable:

Curator/person in charge:	Ch. Lehmann
Details of collection:	<i>Zea mays</i> , 909 landraces and varieties mainly from Bulgaria, Canada, PR China, Czechoslovakia, Hungary, Italy, Morocco, Poland, USA, USSR and Yugoslavia
Maintenance of collection:	Long-term seed storage at -15° to -18°C. Seeds with 8-9% m.c. in glass jars with silica gel Medium-term seed storage at -5° to 0°C and 30% RH
Duplication of collection:	Partially duplicated at Istituto del Germoplasma, Bari, Italy and VIR, Leningrad, USSR
Availability:	Freely available. Index Seminum issued
Quarantine:	No known restrictions
Evaluation:	Disease resistance and cold tolerance
Documentation:	Computerized for passport data

#### GHANA

Plant Introduction and Exploration Section  
Agricultural Research Station  
Crops Research Institute  
Bunso

Telephone:  
Telex:  
Cable:

Curator/person in charge:	H.L.O. Holloway
Details of collection:	<i>Zea mays</i> , 72 landraces from Ghana
Maintenance of collection:	Active collection
Duplication of collection:	Agricultural Research Station, Okumaning, Ghana and IITA, Ibadan, Nigeria
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and manual

**GREECE**

Cereals Institute  
North Greek Agricultural Research Centre  
P.O. Box 10514  
54110 Thessaloniki

Telephone: (3031) 47 15 44  
Telex: 412130 asni gr  
Cable:

Curator/person in charge: D. Gogas  
Details of collection: *Zea mays*, 299 landraces and 750 breeding material  
Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at 0°-2°C and 30% RH  
Duplication of collection: Istituto del Germoplasma, Bari, Italy  
Availability: No information  
Quarantine: No information  
Evaluation: Frost, disease and lodging resistance  
Documentation: No information

**GREECE**

Greek Gene Bank  
North Greek Agricultural Research Centre  
P.O. Box 105 14  
541 10 Thessaloniki

Telephone: (031) 47 15 44  
Telex: 412130 asni gr  
Cable:

Curator/person in charge: A. Zamanis  
Details of collection: *Zea mays*, 19 landraces, 132 old cultivars and 113 mutant/genetic stocks  
Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at 0°-2°C and 30% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Rust, frost and drought resistance  
Documentation: No information

**HUNGARY**

Institute of Plant Production and Ecology  
University of Agricultural Sciences  
P.O. Box 36  
Böszörményi út 138  
H-4015 Debrecen

Telephone: 17-888  
Telex: 72211  
Cable:

Curator/person in charge: K. Pásztor  
Details of collection: *Zea mays*, 90 inbred lines from Hungary (10), Romania (25), USSR (5) and 50 donated by Pioneer Hi-Bred, USA; 105 mutants obtained by radiation  
*Z. mexicana*, 1  
*Z. mexicana* x *Z. mays*, 10 populations F<sub>1</sub> and F<sub>3</sub>  
Donated by Hortus Botanicus, Budapest, Hungary

Maintenance of collection:	Short-term seed storage at ambient temperatures and 60-75% RH. Seeds with 14% m.c.
Duplication of collection:	Cereal Research Institute, Szeged; Agricultural Research Institute, Martonvásár and National Institute of Agrobotany, Tápíószele, Hungary
Availability:	Available with authorization from the Ministry of Agriculture and Food
Quarantine:	Import of seed subject to the authorization of the Ministry of Agriculture and Food
Evaluation:	Partial
Documentation:	Partial

### HUNGARY

Department of Plant Breeding  
University of Agricultural Sciences  
H-2103 Gödöllo

Telephone: Gödöllo 1/551  
Telex: 224892  
Cable:

Curator/person in charge:	A. Balint
Details of collection:	<i>Zea mays</i> , 50 accessions
Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

### HUNGARY

Agricultural Research Institute of the  
Hungarian Academy of Sciences  
P.O. Box 19  
H-2462 Martonvásár

Telephone: (26) 457 74  
Telex: 224008  
Cable:

Curator/person in charge:	B. Gyorffy
Details of collection:	<i>Zea mays</i> , 2811 accessions
Maintenance of collection:	No information
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**HUNGARY**

UAS Keszthely  
Faculty of Agricultural Sciences  
Mosonmagyaróvár  
Vár ut. 2  
H-9200 Mosonmagyaróvár

Telephone: (98) 159 11  
Telex: 24-211  
Cable:

Curator/person in charge: J. Varga  
Details of collection: *Zea mays* var. *dentiformis*, 1 old cultivar  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Specific disease resistance, yield and nutritional value improvement  
Documentation: No information

**HUNGARY**

Cereals Research Institute  
P.O. Box 391  
Szeged

Telephone: (62) 130 11  
Telex: 82450  
Cable:

Curator/person in charge: I. Szaniel  
Details of collection: *Zea mays*, 446 accessions  
Maintenance of collection: No information  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: No information  
Documentation: No information

**HUNGARY**

Research Centre for Agrobotany  
I.A.Q.  
H-2766 Tápiószéle

Telephone: Tápiószéle 41  
Telex: 226981 agbot H  
Cable:

Curator/person in charge: M. Nagy  
Details of collection: *Zea mays*, 980 total accessions. 844 landraces, 100 cultivars and 36 lines from Austria (1), Bulgaria (11), Canada (3), PR China (3), Czechoslovakia (25), DDR (4), Egypt (1), Hungary (844), Mexico (1), Netherlands (1), Poland (3), Romania (3), Rep. of South Africa (3), Sweden (1), USA (1), USSR (25), Yugoslavia (5) and 45 of unknown origin  
Maintenance of collection: Long-term seed storage at -20°C  
Medium-term seed storage at ±0°C. Seeds with 5% m.c. in airtight containers

Duplication of collection:	Partially duplicated
Availability:	Freely available provided there is sufficient seed. Index Seminum periodically issued
Quarantine:	Phytosanitary certificate required
Evaluation:	On-going work
Documentation:	Complete for passport data. On-going for characterization data (56 characters)

## INDIA

National Bureau of Plant Genetic Resources (NBPGR)  
 Indian Agricultural Research Institute (IARI)  
 Pusa Campus  
 New Delhi 110012

Telephone: 586908 / 589211  
 Telex: 31-63390 NBPGR IN  
 Cable:

Curator/person in charge:	R.S. Rana
Details of collection:	<i>Zea diploperennis</i> , 4 accessions from USA <i>Z. luxurians</i> , 1 accession from USA <i>Z. mays</i> , 2262 accessions from Mexico, Nigeria, Philippines, Thailand, USA and USSR <i>Z. perennis</i> , 1 accession from USA
Maintenance of collection:	Long-term seed storage at -20°C Medium-term seed storage at 4°C. Seeds with 5-7% m.c.
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	Cold tolerant lines, resistance to powdery mildew, leaf rust, leaf stripe rust and scald, forage type lines with large kernels, high protein and heat tolerance nursery
Documentation:	No information

## INDIA

All India Coordinated Maize Improvement Project  
 Cummings Laboratory  
 Indian Agricultural Research Institute (IARI)  
 New Delhi 110012

Telephone:  
 Telex:  
 Cable:

Curator/person in charge:	J. Singh
Details of collection:	<i>Zea mays</i> , 1571 landraces and cultivars from the Himalayan region
Maintenance of collection:	Active collection
Duplication of collection:	NBPGR, New Delhi, India
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**IRAQ**

Plant Genetic Resources Unit Agricultural Research Centre Abu Ghraib - Baghdad	Telephone: (01) 511 22 01 Telex: Cable: SBAAR - IRAQ
Curator/person in charge:	A.T. Sharif
Details of collection:	<i>Zea mays</i> , 10 landraces from Iraq
Maintenance of collection:	Short-term seed storage at 5°-10°C. Seeds in airtight cans. Storage capacity 40 m <sup>3</sup>
Duplication of collection:	Istituto del Germoplasma, Bari, Italy
Availability:	Freely available
Quarantine:	No known restrictions
Evaluation:	Partial
Documentation:	Manual. On-going

**ISRAEL**

Israel Gene Bank for Agricultural Crops Volcani Centre ARO P.O. Box 6 50-250 Bet Dagan	Telephone: (03) 968 34 58 Telex: 381476 AROVC IL Cable: Telefax: 972-3-993998
Curator/person in charge:	M. Zur
Details of collection:	<i>Zea mays</i> , 300 breeders' lines and cultivars from Far East and USA, donated by American Universities
Maintenance of collection:	Long-term seed storage at -10°C. Seeds in aluminium boxes of 1 kg capacity. Storage area 50 m <sup>2</sup>
Duplication of collection:	No information
Availability:	Available in limited quantity
Quarantine:	Special conditions and treatment according to Plant Protection Law
Evaluation:	Drought, salinity and disease resistance. High nutrition level
Documentation:	Complete and computerized

**ITALY**

Istituto del Germoplasma CNR Via G. Amendola, 165/A I-70126 Bari	Telephone: (080) 58 34 63 Telex: 810565 CNR/BA I Cable:
Curator/person in charge:	P. Perrino
Details of collection:	<i>Zea mays</i> , 600 landraces
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in airtight metal cans with silica gel Medium-term seed storage at 0°C and 40% RH. Seeds in vacuum sealed aluminium laminated foil packets

Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Complete and computerized

## ITALY

Istituto Sperimentale per la Cerealicoltura  
 Sezione di Bergamo  
 Via Stezzano, 24  
 I-24100 Bergamo

Telephone: (35) 31 14 22/313132  
 Telex:  
 Cable:

Curator/person in charge: M. Bertolini

Details of collection: *Zea mays*, 4526 total accessions:  
 - 3412 inbred lines: foreign yellow (1450), foreign white (200), foreign opaque (100), male-sterile (100), bm3 (10), su2 (6), fl2 (19), Ht (41), pop (24), rhm (11), wx (4), sweet (17), Rp (3), Lo selected lines (1032) and synthetics (from cycles 0 to improved cycles) (395)  
 - 1114 varieties from Afghanistan (1), Albania (33), Austria (2), Canada (14), Chile (6), PR China (12), Cyprus (198), Czechoslovakia (1), Ethiopia (8), FRG (2), France (15), Hungary (14), Italy (600), Japan (52), Mexico (1), Morocco (50), Netherlands (2), Romania (61), Spain (9), Turkey (11), USSR (11) and Yugoslavia (11)

Maintenance of collection: Medium-term seed storage at 4°-6°C. Seeds with 10% m.c. in sealed plastic bags

Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: No known restrictions  
 Evaluation: On-going work  
 Documentation: Manual

## ITALY

Centro Ricerche DeKalb Italiana SpA  
 I-31040 Chiarano (Treviso)

Telephone: (0422) 74 61 33  
 Telex: 41507  
 Cable:

Curator/person in charge: G.A. Prosdocimi  
 Details of collection: *Zea mays*, 25 hybrids  
 Maintenance of collection: No information  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**ITALY**

Institute of Plant Breeding and Agricultural  
Research "Nazareno Strampelli"  
Via Marconi, 1  
I-36045 Lonigo (VI)

Telephone: (0444) 83 00 88  
Telex:  
Cable:

Curator/person in charge: S. Giuliani  
Details of collection: *Zea mays*  
Maintenance of collection: Medium-term seed storage at 4°C and 40% RH  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Frost resistance  
Documentation: No information

**JAPAN**

National Institute of Agrobiological Resources (NIAR)  
Kannon-dai 2-1-2  
Tsukuba, Ibaraki 305

Telephone: 02975-6-7050  
Telex:  
Cable: NIARTSUKUBA YATABE  
Telefax: 02975-6-7408

Curator/person in charge: Head, Germplasm Storage Center  
Details of collection: *Zea mays*, 3241 old and commercial cultivars, landraces and inbred lines from Central America, East Asia, Europe, Japan and North America  
Maintenance of collection: Long-term seed storage at -10°C  
Medium-term seed storage at -1°C and 30% RH  
Seeds with 6-7% m.c. in 1 to 3 PET containers of 430 ml  
The Institute has agreed to accept responsibility for maintaining an Asian collection of *Zea mays* for long-term conservation  
Duplication of collection: No information  
Availability: Freely available for research purposes. A fee is applicable for private institutions  
Quarantine: No information  
Evaluation: Standard manual published by specialists' consent  
Documentation: Computerized for passport data

**JAPAN**

Plant Germplasm Institute  
Faculty of Agriculture  
Kyoto University  
Mukoshi  
Kyoto 617

Telephone:  
Telex:  
Cable:

Curator/person in charge: M. Tanaka

Details of collection:	<i>Tripsacum</i> spp., 16 <i>Zea mays</i> , 800 landraces <i>Z. mexicana</i> , 207 <i>Z. mays</i> x <i>Z. mexicana</i> , 20  All accessions from Argentina, Bolivia, Brazil, Chile, Guatemala, Honduras, Mexico, Nepal and Peru
Maintenance of collection:	Medium-term seed storage at 5°C and 50-70% RH. Seeds in vacuum sealed cans
Duplication of collection:	NIAR, Tsukuba, Japan
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial and computerized

**KENYA**

National Agricultural Research Station  
P.O. Box 450  
Kitale

Telephone:  
Telex:  
Cable:

Curator/person in charge:	D. Mathuka
Details of collection:	<i>Zea mays</i> , 1500 accessions from Kenya and other countries
Maintenance of collection:	Medium-term seed storage at 5°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	Partial

**KENYA**

National Dryland Farming Research Centre  
P.O. Box 340  
Katamani - Marbakos

Telephone: 215 06/7  
Telex:  
Cable:

Curator/person in charge:	J.W. Kamau / A. Shakoor
Details of collection:	<i>Zea mays</i> , 438 total accessions: - 346 landraces from Kenya - 92 elite lines from Africa (13), donated by Semi-Arid Food Grain Research and Development - Organization of African Unity (SAFGRAD-OAU), Burkina Faso (2), East and Southern Africa (2), France (1), Mexico (12), Nepal (1) and USA (61), all the others donated by KARI, Muguga, Kenya
Maintenance of collection:	Medium-term seed storage at 4°C and no controlled humidity. Seeds in aluminium laminated foil packets
Duplication of collection:	ICRISAT, India; KARI, Kenya and CIMMYT, Mexico
Availability:	Requests through the Ministry of Research Science and Technology

**KENYA (cont.)**

Quarantine:	Normal plant quarantine procedures for import and export
Evaluation:	On-going work according to IBPGR descriptor list
Documentation:	Manual. On-going work

**KOREA, REPUBLIC OF**

Department of Agronomy  
College of Agriculture  
Chungnam National University  
300-01 Daejeon

Telephone: (042) 822 01 01/Ext. 2531  
Telex: 45571 CNUCIE K  
Cable:

Curator/person in charge:	B.H. Choe
Details of collection:	<i>Zea mays</i> , 1500 accessions from Korea
Maintenance of collection:	Medium-term seed storage at 3°C. Seeds in paper bags
Duplication of collection:	National Seed Storage Laboratory, Seed Management Division of Rural Development Administration (RDA), Suwon, Korea
Availability:	Available on exchange basis
Quarantine:	Restrictions not applicable for genetic resources import
Evaluation:	On-going work especially for breeding purposes
Documentation:	No information

**MALAWI**

Chitedze Agricultural Research Station  
P.O. Box 158  
Lilongwe

Telephone:  
Telex:  
Cable:

Curator/person in charge:	P. Sibale
Details of collection:	<i>Zea mays</i> , 113 landraces from Malawi, and 237 introduced cultivars
Maintenance of collection:	Short-term seed storage at 6 <sup>o</sup> -10 <sup>o</sup> C and 50% RH. Seeds in tins, jars or packets
Duplication of collection:	CIMMYT, Mexico and IITA, Ibadan, Nigeria
Availability:	No information
Quarantine:	No information
Evaluation:	Partial for yield components and disease resistance
Documentation:	No information

**MEXICO**

Banco de Germoplasma de Maíz  
Campo Agrícola Experimental  
del Valle de México  
Chapingo

Telephone:  
Telex:  
Cable:

Curator/person in charge:	F. Cardenas Ramos
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Details of collection:	<i>Zea mays</i> , 9988 accessions from Mexico
Maintenance of collection:	Medium-term seed storage at 0°-5°C. Seeds with 8-9% m.c. in glass vials with metal screw-cap
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	In progress for 16 descriptors
Documentation:	Computerized and complete for 94% of the collection

## MEXICO

Centro Internacional de Mejoramiento  
de Maíz y Trigo (CIMMYT)  
Apartado Postal 6-641  
Mexico 0600, D.F.

Telephone: (52-5) 954 21 00  
(905) 761 33 11  
Telex: 1772023 CIMTME  
Cable: CENCIMMYT  
E-Mail: 57:CGI201

Curator/person in charge: S. Taba

Details of collection:	<i>Zea mays</i> , 13304 accessions from Afghanistan (19), Angola (6), Argentina (93), Antigua (10), Australia (1), Austria (7), Bahamas (1), Barbados (13), Bolivia (99), Brazil (2243), Caribe (1), Chile (63), PR China (25), Colombia (131), Congo (1), Costa Rica (390), Cuba (171), Dominican Republic (99), Ecuador (558), Egypt (1), El Salvador (79), Ethiopia (29), FRG (7), French Guiana (9), Grenada (21), Guadeloupe (France) (21), Guatemala (475), Guyana (15), Haiti (38), Honduras (118), India (2), Israel (4), Jamaica (9), Lebanon (7), Mali (58), Martinique (2), Malawi (5), Mexico (3520), Nicaragua (80), Nigeria (1), Nepal (212), Pakistan (2), Panama (153), Peru (264), Philippines (3), Paraguay (101), Puerto Rico (USA) (31), San Croix (13), Sta. Lucia (7), Suriname (11), San Vicente (16), Trinidad and Tobago (59), Uganda (4), Uruguay (857), USA (31), Venezuela (270), Virgin Islands (UK) (53), Yemen (2), 12 of unknown origin and 2271 accessions in process of multiplication
Maintenance of collection:	Long-term seed storage at -15°C and 25% RH Medium-term seed storage at 0°C and 30-35% RH Seeds in tins
Duplication of collection:	Partially (6000 samples) at NSSL, Fort Collins, USA
Availability:	Available for the accessions listed in the Index Seminum
Quarantine:	Phytosanitary certificate requested for import/export of seed
Evaluation:	About 20% of the collection evaluated for number of days to flowering, plant height, lodging, maturity, adaptation, yield and pest and disease susceptibility Further evaluation on advanced lines is the responsibility of the breeding programme: harvest index, drought resistance, response to fertilization, photoperiod sensitivity and protein content
Documentation:	Computerization in progress

**MOROCCO**

Sorghum and Millet Section  
 Institut National de la Recherche Agronomique (INRA)  
 P.O. Box 415  
 Guich - Rabat

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: M. Sali Belaid  
 Details of collection: *Zea mays*  
 Maintenance of collection: Short-term seed storage at 16<sup>o</sup>-17<sup>o</sup>C and 70% RH. Seeds with 12-13% m.c. in paper bags  
 Duplication of collection: CIMMYT, Mexico and Banco de Germoplasma, Braga, Portugal  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

**NEPAL**

Plant Genetic Resources Unit (PGRU)  
 Division of Agricultural Botany  
 Kathmandu

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: M.P. Upadhyay  
 Details of collection: *Zea mays*, 302 local landraces  
 Maintenance of collection: Medium-term seed storage at 5<sup>o</sup>C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: In progress for 10 descriptors  
 Documentation: No information

**NETHERLANDS**

Zelder B.V.  
 Landgoed Zelder  
 NL-6595 NW Ottersum

Telephone: (08851) 181 44  
 Telex: 37311  
 Cable:

Curator/person in charge: A. W. De Jong  
 Details of collection: *Zea mays*, 5 landraces and 25 old cultivars  
 Maintenance of collection: Medium-term seed storage at 5<sup>o</sup>C and 30% RH  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Genotype testing  
 Documentation: No information

## NETHERLANDS

Centre for Genetic Resources,  
The Netherlands (CGN)  
P.O. Box 224  
NL-6700 AE Wageningen

Telephone: (08370) 229 25  
Telex: 75044 DLOWA NL  
Cable:  
Telefax: (08370) 16513

- Curator/person in charge: L.J.M. van Soest / M. Dik
- Details of collection: *Zea mays*, 450 mainly landraces from Europe, Pakistan and USA, donated by Foundation for Agricultural Plant Breeding (SVP)
- Maintenance of collection: Long-term seed storage at -20°C. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Medium-term seed storage at 4°C and 30% RH. Seeds with 5-8% m.c. in sealed aluminium laminated foil packets  
Short-term seed storage at ambient temperatures. Seeds in paper envelopes
- Duplication of collection: Partially at several other genebanks
- Availability: Available on exchange basis provided there is sufficient seed
- Quarantine: No known restrictions
- Evaluation: On-going for:  
Mandatory:  
Days to silk, plant height, ear height, number of ears per plant, root lodging susceptibility, ear length, kernel type, rows per ear and seed colour  
Optional:  
Silks: anthocyaninic colouration, tassel: close anthocyanin ring at base of glume, tillering, ear shape, kernel-pericarp colour, ear diameter and 1000 grain weight
- Documentation: On-going for passport and evaluation data

## NICARAGUA

Programa de Recursos Genéticos Nicaragüenses (REGEN)  
Instituto Superior de Ciencias Agropecuarias (ISCA)  
Apartado 453  
Carretera Norte km 12,5  
Managua

Telephone: 319 68 / 316 19 Ext. 14  
Telex:  
Cable:

- Curator/person in charge: C. Henry Loáisiga C.
- Details of collection: *Zea mays*, 138 accessions
- Maintenance of collection: Medium-term seed storage at 0°C and 55-60% RH. Seeds in aluminium laminated foil packets
- Duplication of collection: No information
- Availability: Freely available
- Quarantine: Phytosanitary certificate required
- Evaluation: On-going work. 30 accessions already evaluated and 20 in process of evaluation
- Documentation: Computerized for passport, characterization and evaluation data

**NIGERIA**

Genetic Resources Unit (GRU)  
International Institute of Tropical  
Agriculture (IITA)  
PMB 5320, Oyo Road  
Ibadan

Telephone: (234-22) 40 03 00-317  
Telex: 31417 TROPIN NG  
Cable: TROPFOUND, IKEJA  
E-Mail: 10074:CGU 018  
Telefax: (234-1) 66 91 85

- Curator/person in charge: N.Q. Ng
- Details of collection: *Zea mays*, 5000 accessions, mainly breeding lines developed by IITA's Maize Research Program, which also keeps about 50000 breeding lines in short-term seed storage
- Maintenance of collection: Long-term seed storage at -20°C. Seeds with 6-7% m.c. in aluminium cans  
Medium-term seed storage at 5°C and 30-35% RH. About one kg of seeds in plastic screw-top jars
- Duplication of collection: No information
- Availability: Freely available
- Quarantine: Import seeds must pass post-entry observation by the Nigeria Federal Department of Agriculture, Plant Quarantine Service
- Evaluation: On-going work on agrobotanical characteristics; disease, insect and pest resistance and resistance to physiological stresses
- Documentation: Complete and computerized

**NIGERIA**

National Centre for Genetic Resources  
and Biotechnology (NACGRAB)  
Moor Plantation  
PMB 5382  
Ibadan

Telephone: (022) 31 26 70/312622  
Telex:  
Cable: GENE BANK

- Curator/person in charge: P.E. Onuorah
- Details of collection: *Zea* spp., 99 accessions
- Maintenance of collection: Long-term seed storage
- Duplication of collection: No information
- Availability: Available in limited quantity
- Quarantine: No information
- Evaluation: No information
- Documentation: Manual. Passport data available

**PAKISTAN**

Plant Genetic Resources Laboratory  
National Agricultural Research Centre  
Pakistan Agricultural Research Council (PARC)  
P.O. Box 1031  
Islamabad

Telephone: 82 00 53 33  
Telex: 5604 PARC PAK  
Cable: AGRESCOUNCIL

- Curator/person in charge: R. Anwar

Details of collection:	<i>Zea mays</i> , 264 local cultivars from Pakistan
Maintenance of collection:	Medium-term seed storage at 5°C ±1°C. Seeds in cans
Duplication of collection:	At several International Research Centres
Availability:	Freely available provided there is sufficient seed
Quarantine:	Imported seeds must possess phytosanitary certificate and import permit. Export of seeds accompanied with phytosanitary certificate
Evaluation:	Partial
Documentation:	Manual

## PARAGUAY

Instituto Agronómico Nacional  
Ministerio de Agricultura y Ganadería  
km 48 Ruta II  
Caacupé

Telephone: (0511) 255  
Telex:  
Cable:

Curator/person in charge:	M. Alvarez
Details of collection:	<p><i>Zea mays</i>, 470 total accessions: Races: Avatí Morotí, 139 Avatí Mitá, 16 Avatí Tí, 26 Avatí guapy, 2 Sape Pyta, 124 All the above listed accessions are landraces Typí Pyta, 88 Sapé morotí, 10 Improved material and advanced generations of hybrids Pichingá redondo, 47 Pichingá aristado, 18 All landraces Races Avatí Mitá, Avatí Tí and Avatí guapy are cultivated exclusively by the Indian population All material collected in all the 14 Departments of the Oriental Region and in 3 Departments of the Occidental Region of Paraguay 88 accessions from an expedition in 1942 in Paraguay were donated by CIMMYT, Mexico</p>
Maintenance of collection:	<p>Medium-term seed storage at 0°C. Storage capacity 58.2 m<sup>3</sup> Short-term seed storage at 5°-10°C. Storage capacity 48.6 m<sup>3</sup> Seeds in plastic containers of 1 kg capacity with tight snap-cap</p>
Duplication of collection:	94 accessions at CIMMYT, Mexico and 79 at NSSL, Fort Collins, USA. In a near future the full collection will be duplicated at CIMMYT
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	<p>On-going work under the Latin America Maize Project (LAMP) A total of 455 accessions are under evaluation for: days to silk, plant height, ear height, stem and root lodging, tillering, ear quality and grain type and colour</p>
Documentation:	Computerized. A 2nd edition of the Maize Germplasm Catalogue (1st edition INTA-1983) will be published soon, including passport and evaluation data

**PERU**

Banco de Germoplasma de Maiz  
 Programa Cooperativo de Investigaciones en Maiz  
 Universidad Nacional Agraria  
 Apartado 456  
 La Molina - Lima

Telephone: (14) 35 20 35 Ext.344  
 Telex:  
 Cable: UNIAGRARIA

Curator/person in charge: R. Sevilla

Details of collection: *Zea mays*, 3680 landraces from Peru

Maintenance of collection: Medium-term seed storage at 4°-8°C and 40-60% RH

Duplication of collection: NSSL, Fort Collins, USA

Availability: Freely available (2637 accessions already regenerated)

Quarantine: Phytosanitary certificate required for import

Evaluation: 2314 accessions being characterized for 46 descriptors: ear, grain, pollen and tassel characterization, published in a Catalogue

Documentation: Complete for passport data

**PHILIPPINES**

National Plant Genetic Resources Laboratory (NPGRL)  
 Institute of Plant Breeding (IPB)  
 University of the Philippines at Los Baños  
 College, Laguna

Telephone: (63) 833 35 28  
 Telex: 3432 PTBLK PU  
 Cable: PLANTBREED,  
 PHILIPPINES

Curator/person in charge: N.C. Altoveros

Details of collection: *Zea mays*, 1813 total accessions:  
 - 557 landraces from the Philippines  
 - 223 breeding lines, including 31 current and obsolete varieties bred in the Philippines  
 - 1033 introductions, including landraces, commercial varieties and breeding lines

Maintenance of collection: Long-term seed storage at -20°C  
 Medium-term seed storage at 5°C and 40% RH  
 Seeds with 6% m.c. in glass bottles or in tin cans or in aluminium laminated foil packets

Duplication of collection: Partially at CIMMYT, Mexico and USDA, USA

Availability: Available on exchange basis

Quarantine: Import permit required

Evaluation: On-going work. Around 200 samples are characterized and evaluated every year

Documentation: Computerized and complete for passport data. On-going for evaluation data

**POLAND**

Plant Breeding Station  
37-220 Kanczuga  
Krzeczowice

Telephone: Przeworsk 22 84  
Telex: 0632577 PIUMG,  
Kanczuga  
Cable:

Curator/person in charge: Z. Nykiel  
Details of collection: *Zea mays*, 4 landraces and 3 wild  
Maintenance of collection: Short-term seed storage at ambient temperatures  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Frost resistance  
Documentation: No information

**POLAND**

Experimental Breeding Station  
63-743 Smolice

Telephone: Kobylin 20  
Telex: 045311 HODOR PL  
Cable:

Curator/person in charge: Z. Krolikowski  
Details of collection: *Zea mays*, 260 accessions  
Maintenance of collection: Short-term seed storage at ambient temperatures. Seeds in screw top jars and plastic bags  
Duplication of collection: No information  
Availability: No information  
Quarantine: No information  
Evaluation: Combining ability  
Documentation: No information

**PORTUGAL**

Núcleo de Melhoramento de Milho (NUMI)  
Estação Nacional de Melhoramento de Plantas (ENMP)  
Instituto Nacional de Investigação Agrária (INIA)  
Quinta dos Peões - Gualtar  
P-4700 Braga

Telephone: (53) 245 51  
Telex: 33506 NUMI P  
Cable:

Curator/person in charge: Rena M. Farias  
Details of collection: *Zea mays*, 2090 total accessions. Landraces from Continental Portugal (760), Azores Archipelago (88), Madeira Archipelago (72), Morocco (127), Yemen (43) and 1000 breeder's lines  
Maintenance of collection: Long-term seed storage at -16°C  
Medium-term seed storage at -2<sup>u</sup> to 0°C and 45% RH  
Seeds with 5-6% m.c. in aluminium laminated foil packets. Storage area 56,6 m<sup>2</sup>

**PORTUGAL (cont.)**

- The Institute has agreed to accept responsibility for maintaining a Mediterranean collection of *Zea mays* for long-term conservation
- Duplication of collection: Istituto del Germoplasma, Bari, Italy
- Availability: Available in limited quantity and on exchange basis
- Quarantine: No restrictions for export but imported material must possess phytosanitary certificate
- Evaluation: On-going work. 486 accessions from Portugal and 49 from Morocco were evaluated
- Documentation: Computerized for passport, characterization and preliminary evaluation data

**PORTUGAL**

Secção de Genética  
 Estação Agronómica Nacional (EAN)  
 Instituto Nacional de Investigação Agrária (INIA)  
 P-2780 Oeiras

Telephone: (1) 443 15 05/4430442  
 Telex: 63698 EAN P  
 Cable:

- Curator/person in charge: M. Mota
- Details of collection: *Zea mays*, 385 landraces and old cultivars from Portugal (366) and from Spain (19)
- Maintenance of collection: Long-term seed storage at -16°C in deep-freezers
- Duplication of collection: Partially at Banco de Germoplasma, Braga, Portugal
- Availability: Available in limited quantity
- Quarantine: No restrictions for export but imported material must possess phytosanitary certificate
- Evaluation: Characterization in progress according to IBPGR descriptor list
- Documentation: Computerized for passport data

**ROMANIA**

Genetic Resources Department  
 Research Institute for Cereals  
 and Technical Crops  
 Jud. Călărași  
 R-8264 Fundulea

Telephone: (90) 15 08 05  
 Telex: 11349 ASAS R  
 Cable: ICCPT Fundulea 8264 R

- Curator/person in charge: P. Varga
- Details of collection: *Zea mays*, 370 landraces, 52 old cultivars and 2546 mutant/genetic stocks
- Maintenance of collection: Short-term seed storage at ambient temperatures
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information

Evaluation: Specific disease resistance, precocity, quality, lodging resistance and stress reaction

Documentation: No information

## ROMANIA

Gene Bank of Suceava  
Agricultural Research Station of Suceava  
Bulevardul 1 May, 15  
R-5800 Judetul Suceava

Telephone: (987) 158 47  
Telex: 23268  
Cable:

Curator/person in charge: M. Cristea

Details of collection: *Zea mays*, 1204 populations and 134 hybrids from Romania, donated by Research Institute for Cereals and Technical Plants, Fundulea and Agricultural Research Station of Simnic, Romania

Maintenance of collection: Long-term seed storage at -20°C. Four rooms with the total storage capacity of 172.5 m<sup>3</sup>  
Medium-term seed storage at 4°C. Four rooms with the total storage capacity of 273.6 m<sup>3</sup>. Seeds with 8-10% m.c. in sealed glass containers of 50, 100, 150, 350, 400, 750, 800 and 1000 ml capacity

Duplication of collection: Research Institute for Cereals and Technical Plants, Fundulea and Agricultural Research Station of Simnic, Romania

Availability: Available on exchange basis

Quarantine: In conformity with international quarantine regulations

Evaluation: On-going work for field and laboratorial evaluation

Documentation: Characterization data computerized

## SOUTH AFRICA, REPUBLIC OF

Department of Agricultural Economics and Marketing  
Directorate of Plant and Liquor Control  
Private Bag X 179  
0001 Pretoria

Telephone: (012) 206 24 06  
Telex: 3-23264  
Cable: SATIVA PRETORIA  
Telefax: (012) 206 27 86

Curator/person in charge: H. Chamberlain

Details of collection: *Zea mays*, 1200 landraces and cultivars from Australia, Bolivia, Brazil, France, Hawaii (USA), Malawi, Mexico, Peru, Rep. of South Africa (600), Turkey, USA, USSR and Zimbabwe

Maintenance of collection: Long-term seed storage at -20°C. Seeds in vacuum sealed aluminium laminated foil packets (small part of the collection)  
Short-term seed storage at 6<sup>o</sup>-7<sup>o</sup>C and 45% RH. Seeds in plastic containers

Duplication of collection: At different Crop Research Institutes in the Republic of South Africa

Availability: Available in limited quantity (0.5 / 300 g) and on exchange basis. Index Seminum issued yearly  
Requests to: The Plant Introduction Officer  
(same address)

Quarantine: Seed for planting:  
1. Additional declaration on the phytosanitary certificate that:

## SOUTH AFRICA, REPUBLIC OF (cont.)

- Quarantine: (cont.)
- a) *Cephalosporium maydis*
  - b) *Sclerophthora rayssiae* var. *zeae*
  - c) *Perenosclerospora phyllipinensis*
  - d) *Perenosclerospora sacchari*
  - e) *Perenosclerospora maydis*
- do not occur in the country of production; and parent plants were inspected during active growth and found to be free from:
- a) *Erwinia stewartii*
  - b) maize dwarf mosaic virus
  - c) *Kabatiella zeae*
- or that these organisms do not occur in the area of production
2. Declaration on the phytosanitary certificate that the seed was treated with an appropriate:
- a) fungicide especially against *Drechslera maydis*
  - b) fumigant or wide spectrum insecticide especially against *Chaetocnema pulicaria*
- Evaluation: On-going work
- Documentation: Complete and computerized

## PAIN

Banco de Germoplasma  
Finca "El Encin"  
Instituto Nacional de Investigaciones Agrarias (INIA)  
P.O. Box 127  
Alcalá de Henares - Madrid

Telephone: (1) 889 69 69/70  
Telex: 48989 INIA E  
Cable:

- Curator/person in charge: R. Ponce
- Details of collection: *Zea mays*, 1218 landraces
- Maintenance of collection: Long-term seed storage at -18°C  
Medium-term seed storage at -2°C and 30% RH
- Duplication of collection: No information
- Availability: No information
- Quarantine: No information
- Evaluation: No information
- Documentation: No information

## SPAIN

Misión Biológica de Galicia  
Consejo Superior de Investigaciones Científicas (CSIC)  
P.O. Box 28  
36080 Pontevedra

Telephone: (986) 85 48 00  
Telex:  
Cable: El Palacio - Salcedo  
Telefax: (986) 84 13 62

- Curator/person in charge: A. Ordas
- Details of collection: *Zea mays*, 114 landraces, 16 old cultivars and 23 other accessions from Spain and USA
- Maintenance of collection: Medium-term seed storage at 1°-3°C and 55% RH. Storage capacity 80 m<sup>3</sup>
- Duplication of collection: Not duplicated
- Availability: Available for research purposes provided there is sufficient seed

Quarantine: No known restrictions  
 Evaluation: On-going for agronomical characteristics  
 Documentation: Passport data partial and computerized

### SWITZERLAND

SZV-FSS Schweiz. Saatzuchverband  
 P.O. Box 929  
 Pststrasse, 10  
 CH-4502 Solothurn

Telephone: (065) 22 36 66  
 Telex: 934795 SAAT CH  
 Cable:

Curator/person in charge: O. Steinemann  
 Details of collection: *Zea mays*  
 Maintenance of collection: Medium-term seed storage at 3°C and 35% RH  
 Duplication of collection: Nyon and Zürich, Switzerland  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Disease resistance, baking quality and early ripening  
 Documentation: No information

### SWITZERLAND

Eidg. Forschungsanstalt für landw.  
 Pflanzenbau Zürich-Reckenholz  
 Reckenholzstr., 191/211  
 CH-8046 Zürich

Telephone: (01) 57 88 00  
 Telex:  
 Cable: Elvatest Zürich

Curator/person in charge: M. Menzi / F. Weilenmann  
 Details of collection: *Zea mays*, 150 landraces  
 Maintenance of collection: No information  
 Duplication of collection: FAL, Braunschweig, FRG and NSSL, Fort Collins, USA  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Yield and disease resistance  
 Documentation: No information

### SYRIA

Genetic Resources Unit  
 Agriculture Research Directorate  
 P.O. Box 113  
 Douma - Damascus

Telephone: 75 04 01  
 Telex: 411634 SYR  
 Cable: MINAGRI DAMS

Curator/person in charge: K.S. Obari  
 Details of collection: *Zea mays*, 337 landraces and primitive cultivars from Syria

**SYRIA (cont.)**

Maintenance of collection:	Medium-term seed storage at 4°C and 45% RH. Seeds in metal tins (10.5 cm x 10.5 cm) and aluminium laminated foil packets (20 cm x 10 cm)
Duplication of collection:	Istituto del Germoplasma, Bari, Italy; ICARDA, Syria and Royal Botanic Gardens, Kew, UK
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work using IBPGR descriptor list
Documentation:	Manual. On-going work

**THAILAND**

Genebank  
Thailand Institute of Scientific  
and Technical Research (TISTR)  
196 Phahonyothin Road  
Bangkok  
Bangkok 10900

Telephone:  
Telex:  
Cable:

Curator/person in charge:	S. Chomchalow
Details of collection:	<i>Zea mays</i>
Maintenance of collection:	Long-term seed storage at -20°C with no RH control. Storage capacity 24 m <sup>3</sup> Medium-term seed storage at 0°-10°C and 40% RH. Storage capacity 72 m <sup>3</sup> The Institute has agreed to accept responsibility for maintaining an Asian collection of <i>Zea mays</i> for long-term conservation as a base collection
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**THAILAND**

National Corn and Sorghum Research Center  
Kasetsart University  
Pak Chong  
30130 Nakorn Ratchasima

Telephone: (044) 31 17 70 / 31 20 81  
Tele.:  
Cable:

Curator/person in charge:	R. Thiraporn
Details of collection:	<i>Zea mays</i> , 1832 accessions
Maintenance of collection:	Short-term seed storage at 18°-19°C and 70% RH
Duplication of collection:	Not duplicated
Availability:	Available with the exception of elite lines

Quarantine: Import restrictions  
 Evaluation: Partial  
 Documentation: Manual

## TURKEY

Aegean Agricultural Research Institute (AARI)  
 P.O. Box 9  
 35661 Menemen - Izmir

Telephone: (51) 14 91 31  
 Telex:  
 Cable:

Curator/person in charge: The Directorate  
 Details of collection: *Zea mays*, 530 landraces and 8 old cultivars  
 Maintenance of collection: Long-term seed storage at -20°C. Seeds in metal cans. Medium-term seed storage at 0°C  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: Stripe and stem rust resistance  
 Documentation: No information

## UNION OF SOVIET SOCIALIST REPUBLICS

The N.I. Vavilov Institute of Plant Industry (VIR)  
 44, Herzen str.  
 Leningrad 190000

Telephone: (314) 48 48  
 Telex:  
 Cable:

Curator/person in charge: V.I. Krivchenko  
 Details of collection: *Tripsacum dactyloides*, 1 wild  
*Zea diploperennis*, 4 wild  
*Z. mays*, 18324 varieties, landraces, lines, hybrids and genetically marked mutants, including 17323 accessions in the main catalogue and 1001 in the temporary catalogue. World-wide representation  
*Z. luxurians*, 2 wild  
*Z. mexicana*, 70 wild  
 Maintenance of collection: Long-term seed storage at -10°C  
 Medium-term seed storage at 4°C. Seeds with 6-7% m.c. in sealed glass containers  
 The Institute has agreed to accept responsibility for maintaining an European collection of *Zea mays* for long-term conservation  
 Duplication of collection: Partially at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, Fort Collins, USA  
 Availability: Available in accordance with the Exchange Catalogue regularly issued  
 Quarantine: According to the International Convention on Phytosanitary Plant Protection

**UNION OF SOVIET SOCIALIST REPUBLICS (cont.)**

Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Computerized for passport data of samples included in the main catalogue. Manual for other data

NB - *Samples received at the Institute are given temporary catalogue numbers. Some may be included in the permanent collection after 2-3 years trials, elimination of duplicates and low-value breeding lines*

**UNITED KINGDOM**

Plant Breeding Institute (PBI) Maris Lane Trumpington Cambridge CB2 2LQ	Telephone: Telex: Cable:	(0223)84 04 11
Curator/person in charge:	H.H. Rodgers	
Details of collection:	<i>Zea mays</i> , 183 landraces from northern India, Nepal and northern Pakistan	
Maintenance of collection:	Long-term seed storage at -20°C. Seeds with 7-8% m.c. in aluminium laminated foil packets Medium-term seed storage at 1°-2°C and 20-25% RH. Seeds in envelopes or bags	
Duplication of collection:	Duplicates of the Pakistan collection at Lyallpur University of Agriculture	
Availability:	No information	
Quarantine:	No information	
Evaluation:	No information	
Documentation:	Partial and computerized	

**UNITED STATES OF AMERICA**

North Central Regional Plant Introduction Station Iowa State University USDA - ARS Ames, Iowa 50011	Telephone: Telex: Cable:	(515) 294-32 55
Curator/person in charge:	R.L. Clark / M.J. Millard	
Details of collection:	<i>Zea mays</i> , 6044 accessions, including 800 landraces and inbreds from various countries, being 66 from USA and populations from various countries	
Maintenance of collection:	Medium-term seed storage at 4°C and 35-40% RH. Seeds in glass jars with screw-on lids	
Duplication of collection:	Partially (about 70%) duplicated at NSSL, Fort Collins, USA	
Availability:	Freely available	
Quarantine:	No restrictions for export but restrictions on incoming seeds of maize from Africa and India	
Evaluation:	Evaluation data on 37 descriptors, such as: seed type and colour; cob length, colour and number of kernel rows; plant height and vigour; ear, node and tiller number	

Documentation: Computerized and complete. Database for Germplasm Resources Information Network (GRIN), National Agricultural Library, Beltsville, USA

#### UNITED STATES OF AMERICA

National Seed Storage Laboratory (NSSL)  
US Department of Agriculture (USDA)  
Agricultural Research Service (ARS)  
Colorado State University Campus  
Fort Collins, Colorado 80523

Telephone: (303) 484 04 02  
Telex: 237401714 DNPA UC  
Cable:  
Telefax: (303) 221 14 27

Curator/person in charge: S.A. Eberhart

Details of collection: *Zea mays*, 17070 landraces, open-pollinated varieties, inbred lines and genetic stocks

Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets

The Institute has agreed to accept responsibility for maintaining a New World collection of *Zea mays* for long-term conservation

Duplication of collection: As an active collection at CIMMYT, Mexico and at the Regional Plant Introduction Station, Ames, Iowa, USA

Availability: Freely available only if not available from the active collection

Quarantine: No information

Evaluation: Responsibility of the Station holding the active collection

Documentation: All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

#### UNITED STATES OF AMERICA

Southern Regional Plant introduction Station  
1109 Experiment Street  
Griffin, Georgia 30223

Telephone:  
Telex:  
Cable:

Curator/person in charge: W.R. Longford

Details of collection: *Tripsacum fasciculatum*, 1  
*T. lanceolatum*, 1

*Zea mays* subsp. *mexicana*, 54  
Accessions from Guatemala, Honduras, Mexico and USA

Maintenance of collection: No information

Duplication of collection: No information

Availability: No information

Quarantine: No information

Evaluation: No information

Documentation: No information

**UNITED STATES OF AMERICA**

Mayagüez Institute of Tropical Agriculture  
 USDA, SEA-AR  
 P.O. Box 70  
 Mayagüez, Puerto Rico 00708

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: A.R. Sotomayor  
 Details of collection: *Zea mays*, 100 landraces from Puerto Rico  
 Maintenance of collection: Active collection  
 Duplication of collection: CIMMYT, Mexico  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: Partial and manual

**UNITED STATES OF AMERICA**

North Carolina State University  
 P.O. Box 7620  
 Raleigh, North Carolina 27695

Telephone: (919) 737 27 04  
 Telex:  
 Cable:

Curator/person in charge: M. Goodman  
 Details of collection: *Zea mays*, 1300 landraces from Latin America, donated by ICA, Colombia; CIMMYT and INIFAT, Mexico and PCIM, Peru  
 Maintenance of collection: Long-term seed storage at -18°C. 500 kernels in sealed aluminium laminated foil packets or paper envelopes  
 Duplication of collection: ICA, Colombia; CIMMYT and INIFAT, Mexico and PCIM, Peru  
 Availability: Available in limited quantity. Limited facilities for distribution  
 Quarantine: No known restrictions  
 Evaluation: Almost complete for plant and ear height, lodging and ear quality. Some disease evaluation for more promising accessions. Results to be published in *Crop Science*  
 Documentation: Inventory computerized. Partial and computerized for passport data

**URUGUAY**

Facultad de Agronomía  
 Universidad de La República  
 Montevideo

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: J.L. de León / C.M. Fernandez  
 Details of collection: *Zea mays*, 850 landraces from Uruguay  
 Maintenance of collection: Active collection  
 Duplication of collection: INTA, Pergamino, Argentina and CIMMYT, Mexico  
 Availability: No information

Quarantine: No information  
 Evaluation: On-going according to IBPGR descriptor list  
 Documentation: No information

## VENEZUELA

Fondo Nacional de Investigaciones  
 Agropecuarias (FONAIAP)  
 Apartado 4653  
 2101 Maracay

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: Arnoldo Bejarano M.  
 Details of collection: *Zea mays*, 60 local cultivars, 154 introduced varieties, 45 breeding material and 630 original collections  
 Maintenance of collection: Short-term seed storage at 10°C and 60% RH. Seeds with 12% m.c. in metal containers of 3 kg capacity  
 Duplication of collection: No information  
 Availability: No information  
 Quarantine: No information  
 Evaluation: No information  
 Documentation: No information

## YEMEN, PEOPLE'S DEMOCRATIC REPUBLIC

Department of Research & Extension  
 El-Kod Agricultural Research Centre  
 Ministry of Agriculture & Agrarian Reform  
 Abyan Gov

Telephone: 325 09 / 45 55  
 Telex: 2243 AD FAO  
 Cable: FOODAGRI ADEN

Curator/person in charge: AB. S. Mu' Allem  
 Details of collection: *Zea mays*, 2 landraces from PDR Yemen  
 Maintenance of collection: Short-term seed storage at 25°C and 75% RH. Seeds with >8% m.c. in tin containers. Regeneration done yearly  
 Duplication of collection: Not duplicated  
 Availability: Available on exchange basis  
 Quarantine: Phytosanitary certificate is required for import of material  
 Evaluation: Due to start soon  
 Documentation: Partial and manual

## YUGOSLAVIA

Maize Research Institute  
 "Zemun Polje"  
 Slobodana Bajica, 1  
 11080 Belgrade

Telephone: (011) 21 74 34  
 Telex: 11098 INZP YU  
 Cable:

Curator/person in charge: G. Radovic

**YUGOSLAVIA (cont.)**

Details of collection:	<i>Zea mays</i> , 2104 cultivars from Yugoslavia, 1500 introduced inbred lines and 750 local populations and synthetics Donations from institutions world-wide, but mainly from USA and USSR
Maintenance of collection:	Medium-term seed storage at 0°-4°C and 50-60% RH. Seeds with 11% m.c. in plastic containers
Duplication of collection:	Partially at NSSL, Fort Collins, USA and VIR, Leningrad, USSR
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	On-going computerization

**YUGOSLAVIA**

Institute for Breeding and Production  
of Field Crops  
Faculty of Agricultural Sciences  
University of Zagreb  
Marulicev trg 5/1  
4100 Zagreb

Telephone: (041) 44 65 45  
Telex: 21404 YUBILJE  
Cable: CROPINSTITUTE

Curator/person in charge:	B. Kolic
Details of collection:	<i>Zea mays</i> , 12000 accessions
Maintenance of collection:	Medium-term seed storage at 2°C and at 4°-6°C
Duplication of collection:	No information
Availability:	No information
Quarantine:	No information
Evaluation:	No information
Documentation:	No information

**ZAMBIA**

Mount Makulu Research Station  
Private Bag 7  
Chilanga

Telephone: 27 86 55  
Telex:  
Cable: Research Chilanga

Curator/person in charge:	C. Nkhoma
Details of collection:	<i>Zea mays</i> , 4 landraces and primitive cultivars from Zambia
Maintenance of collection:	Short-term seed storage at 10°C and no controlled humidity. Seeds in aluminium laminated foil packets of 10 cm x 20 cm
Duplication of collection:	NSSL, Fort Collins, USA
Availability:	Available with the only condition of information feed-back
Quarantine:	Import and export seeds must be accompanied with phytosanitary certificate
Evaluation:	Partial for yield components
Documentation:	Partial and manual

# Pseudocereals

**BOLIVIA**

Estación Experimental de Patacamaya  
 Instituto Boliviano de Tecnología  
 Agropecuaria (IBTA)  
 Patacamaya

Telephone:  
 Telex:  
 Cable:

Curator/person in charge: M. Tapia

Details of collection: *Chenopodium pallidicaule*, 404 accessions  
*C. quinoa*, 2000 accessions

Maintenance of collection: Short-term seed storage at ambient temperatures

Duplication of collection: No information

Availability: Freely available

Quarantine: No information

Evaluation: No information

Documentation: Manual

**CHILE**

Instituto de Producción y Sanidad Vegetal  
 Universidad Austral de Chile  
 Casilla 567  
 Valdivia

Telephone: 213911-232  
 Telex: 271035 UN AUS CL  
 Cable:  
 Telefax: 063212589

Curator/person in charge: A. Contreras Mendez

Details of collection: *Chenopodium quinoa*, 7 primitive cultivars from Chile

Maintenance of collection: Long-term seed storage at -18°C. Seeds in aluminium containers

Duplication of collection: Partially at FAL, Braunschweig, RFA; University of California, Davis; USA; Sturgeon Bay, USA and different institutions in Japan, Netherlands and UK

Availability: Available on exchange basis

Quarantine: International Quarantine Regulations applied. No restrictions for import via meristem culture

Evaluation: No information

Documentation: Computerization in progress

**ECUADOR**

Unidad de Recursos Fitogenéticos  
 Instituto Nacional de Investigaciones  
 Agropecuarias (INIAP)  
 Casilla 340  
 Quito

Telephone: 629-691  
 Telex: 2532 INIAP ED  
 Cable:

Curator/person in charge: R. Castillo Torres

Details of collection: *Chenopodium quinoa*, 440 landraces from Bolivia (50), donated by Instituto Boliviano de Tecnología Agropecuaria; Ecuador (310), donated by INIAP and from Peru (80), donated by Instituto Nacional de Investigación Agrícola y Agroindustrial and Universidad Nacional Agraria, La Molina

Maintenance of collection:	Long-term seed storage at -12°C. Seeds with 5-6% m.c. in aluminium laminated foil packets of 40 g each, 6 packets each accession
Duplication of collection:	Accessions from Bolivia and Peru are duplicated at Patacamaya-IBTA, Bolivia; La Molina and at Universidad del Altiplano, Peru
Availability:	Available on exchange basis
Quarantine:	No restrictions for export. Imported material must possess phytosanitary certificate
Evaluation:	On-going. 75% of the collection evaluated
Documentation:	Computerized

### FEDERAL REPUBLIC OF GERMANY

Institut für Pflanzenbau und  
Pflanzenzüchtung der FAL  
Bundesallee, 50

D-3300 Braunschweig

Curator/person in charge:

L. Seidewitz

Details of collection:

*Chenopodium quinoa*, 953 accessions from Bolivia (2), Peru (950) and 1 of unknown origin

*Fagopyrum esculentum*, 63 total accessions:

- 7 cultivars from Czechoslovakia (3), Japan (1), Poland (2) and USSR (1)  
- 53 landraces from Bhutan (16), Canada (1), FRG (3), Japan (23), Mexico (1), Nepal (2), USSR (3), Yugoslavia (1) and Zimbabwe (3)  
- 3 ecotypes from Hungary

*F. tataricum*, 3 cultivars from Czechoslovakia (1), Hungary (1), 1 of unknown origin and 1 landrace from Yugoslavia

Maintenance of collection:

Long-term seed storage at -10°C. Seeds with 6% m.c. in airtight tins  
Medium-term seed storage at 3°C and 30% RH

Duplication of collection:

Not duplicated

Availability:

Freely available

Quarantine:

No known restrictions

Evaluation:

Complete for 35 descriptors

Documentation:

All available data computerized. Passport data are available for practically all accessions

### NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND NORWAY, SWEDEN)

Nordic Gene Bank  
for Agricultural and Horticultural Plants  
Smødjevägen 2 B  
P.O. Box 41  
S-23053 Alnarp  
Sweden

Telephone: (4640) 41 50 00  
Telex: 32727 NGB S  
Cable:  
Telefax: (4640) 46 21 88

Curator/person in charge:

S. Blixt

**NORDIC COUNTRIES (DENMARK, FINLAND, ICELAND  
NORWAY, SWEDEN) (cont.)**

Details of collection:	<i>Fagopyrum esculentum</i> , 2 accessions
Maintenance of collection:	Long-term seed storage at -20°C. Seeds in glass jars or bottles
Duplication of collection:	Duplicated in permafrost at Svalbard, Norway
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work within the participating countries
Documentation:	Computerized for passport and evaluation data

**UNION OF THE SOVIET SOCIALIST REPUBLICS**

The N.I. Vavilov Institute of Plant Industry (VIR) 44, Herzen str. Leningrad 190000	Telephone: (314) 48 48 Telex: Cable:
Curator/person in charge:	V.I. Krivchenko
Details of collection:	<i>Chenopodium quinoa</i> , 8 primitive cultivars and landraces from Peru <i>Coix lacryma-jobi</i> , 4 wild <i>Fagopyrum esculentum</i> <i>F. tataricum</i> subsp. <i>multiholium</i> 2200 landraces, cultivars and wild forms. World-wide representation
Maintenance of collection:	Long-term seed storage at -10°C Medium-term seed storage at 4°C. Seeds with 7-8% m.c. and 6-7% m.c. ( <i>Chenopodium</i> ) in sealed glass jars
Duplication of collection:	Partially at ZIGuK, Gatersleben, DDR; Istituto del Germoplasma, Bari, Italy and NSSL, Fort Collins, USA
Availability:	Available in accordance with the Exchange Catalogue regularly issued
Quarantine:	According to the International Convention on Phytosanitary Plant Protection
Evaluation:	Field and laboratory evaluation using the International COMECON descriptors list
Documentation:	Manual. Passport data available

**UNITED STATES OF AMERICA**

National Seed Storage Laboratory (NSSL) US Department of Agriculture (USDA) Agricultural Research Service (ARS) Colorado State University Campus Fort Collins, Colorado 80523	Telephone: (303) 484 04 02 Telex: 237401714 DNPA UC Cable: Telefax: (303) 221 14 27
Curator/person in charge:	S.A. Eberhart
Details of collection:	<i>Chenopodium</i> spp., 23 accessions <i>Fagopyrum esculentum</i> , 132 accessions
Maintenance of collection:	Long-term seed storage at -18°C. Seeds in aluminium laminated foil packets

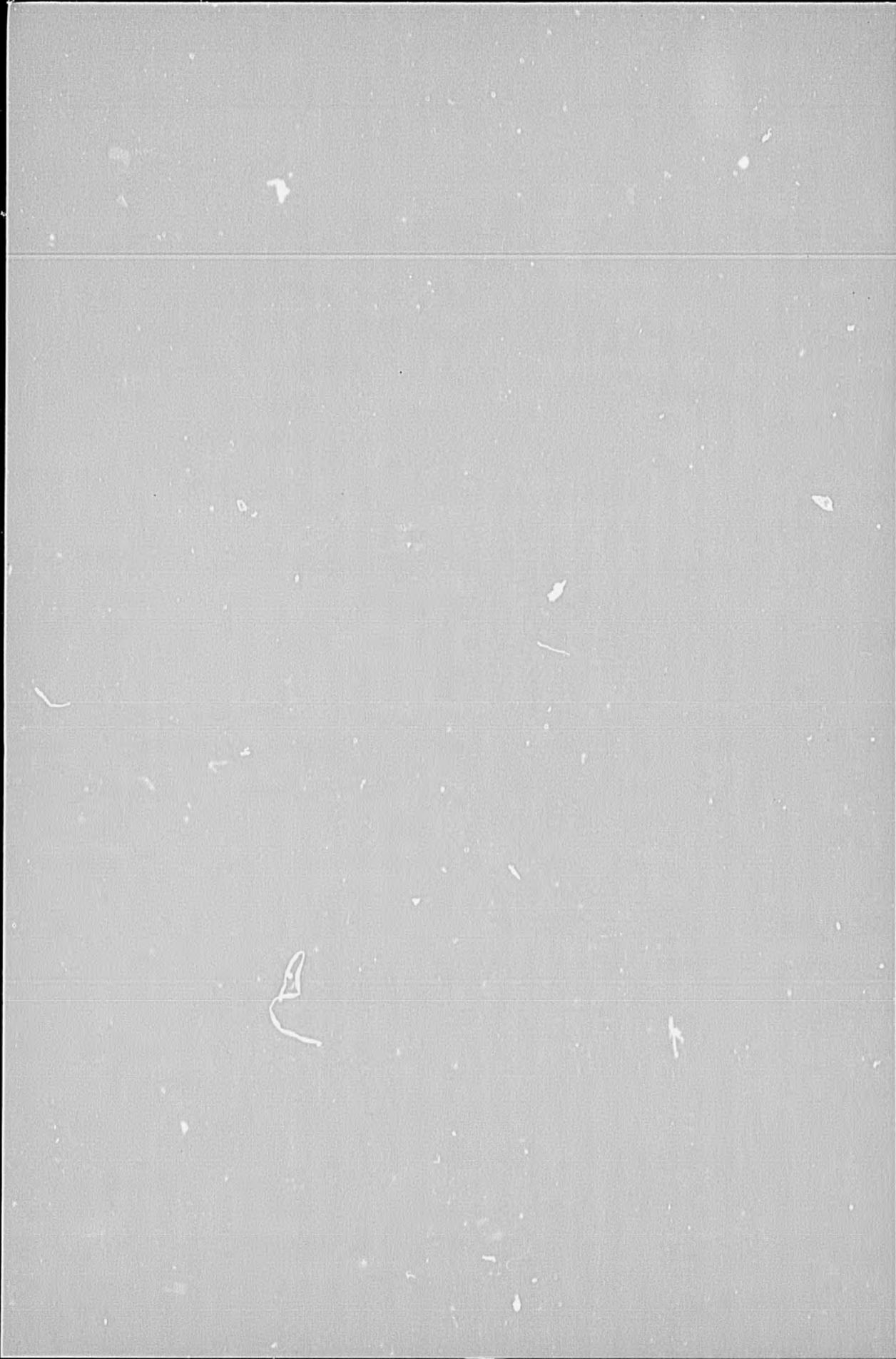
Duplication of collection:	As active collections at Regional Introduction Stations: <i>Chenopodium</i> , at Ames, Iowa, USA <i>Fagopyrum</i> , at Geneva, New York, USA
Availability:	Freely available only if not available from the active collection
Quarantine:	No information
Evaluation:	Responsibility of the Station holding the active collection
Documentation:	All data are computerized in GRIN (Germplasm Resources Information Network). The GRIN system resides on a Prime Computer in Beltsville, MD, USA

## YUGOSLAVIA

Chair of Genetics and Plant Breeding  
Agronomy Department  
Biotechnical Faculty  
Krekov trg 1  
61000 Ljubljana

Telephone: (061) 26 47 61  
Telex:  
Cable:

Curator/person in charge:	Z. Luthar
Details of collection:	<i>Fagopyrum esculentum</i> , 361 landraces from Austria (3), PR China (6), Czechoslovakia (1), Finland (4), France (2), Hungary (4), India (4), Italy (1), Japan (16), Korea (2), Netherlands (3), Poland (22), USSR (65) and Yugoslavia (226) <i>F. tataricum</i> , 17 accessions from Nepal (3) and Yugoslavia (14)
Maintenance of collection:	Medium-term seed storage at 4°C. Seeds with 5% m.c. in sealed glass containers
Duplication of collection:	Not duplicated
Availability:	Available on exchange basis
Quarantine:	No known restrictions
Evaluation:	On-going work
Documentation:	Computerized. On-going work



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