



1984

TANZANIA

WEED MANAGEMENT

TRAINING COURSE

SUMMARY REPORT

FRONT COVER * Participants received instruction for collecting and pressing weeds from Mr. Mziray, TPPI Herbarium.

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Mr. von Roretz, a plantation manager, explains a weed control problem occurring in coffee plantings.

1984 TANZANIA WEED MANAGEMENT TRAINING COURSE

Graphic Summary

Event: 1984 Tanzania Weed Management
Training Course.

Date: November 28 - December 12, 1984.

Location: Horticulture Research and
Training Institute (HORTI),
Tengeru, Arusha, Tanzania.

Sponsored by:

- Plant Protection Service, Food
and Agriculture Organization of
the United Nations;
 - United Nations Development
Programme, through the FAO/UNDP
Action Programme for Improved
Plant Protection;
 - International Weed Science
Society.
-

Summary Report Issued:

- March 1985.
 - by the International Weed
Science Society Secretariat,
c/o IPPC, Oregon State
University, Corvallis, OR/USA.
 - as IWSS #14-85.
-



*Water was carefully measured for use
in a sprayer calibration exercise.*



Course instructors Machange and Stroud were on hand as participants discussed field research strategies.

BACKGROUND

The Tanzanian weed management course was the third in a series of courses held in Eastern Africa recently, the first being presented at Nairobi, Kenya, in September 1983, and the second at the Mt. Mukulu Research Station, Chilanga, Zambia, in December 1983.

Dr. Simon, Director, of the Tanzanian Tropical Pesticide Research Institute at Arusha, submitted the initial request for a weed management course to FAO's Plant Protection Service. Mr. Ali Farah, FAO-UNDP representative in Nairobi, and Dr. Ann Stroud, international weed science consultant, made the first organizational trip to the course site in October 1984. Dr. Stroud returned on a second trip later the same month.

Facilities

The lecture room and fields provided by the Horticulture Research Training Institute (HORTI-Tengeru) were convenient and comfortable. The HORTI-Tengeru staff, under the direction of Mr.

Maliwa, Principal, and Mrs. Kaaya, Deputy Principal, was very helpful and prompt. Food service was especially good. The participants expressed dissatisfaction with a shortage of blankets and water in the institute housing.



Participants discussed weed management in pineapple, lead by instructor Terry.



Preliminary testing of a lever-operated knapsack sprayer involved measuring the swath width while Fred Machange and L.J. Matthews looked on.

The Course

The Deputy Principal Secretary, Ministry of Agriculture and Livestock Development, opened the course, along with Mr. L. J. Matthews, weed scientist, Plant Protection Service, FAO, Rome, Italy.

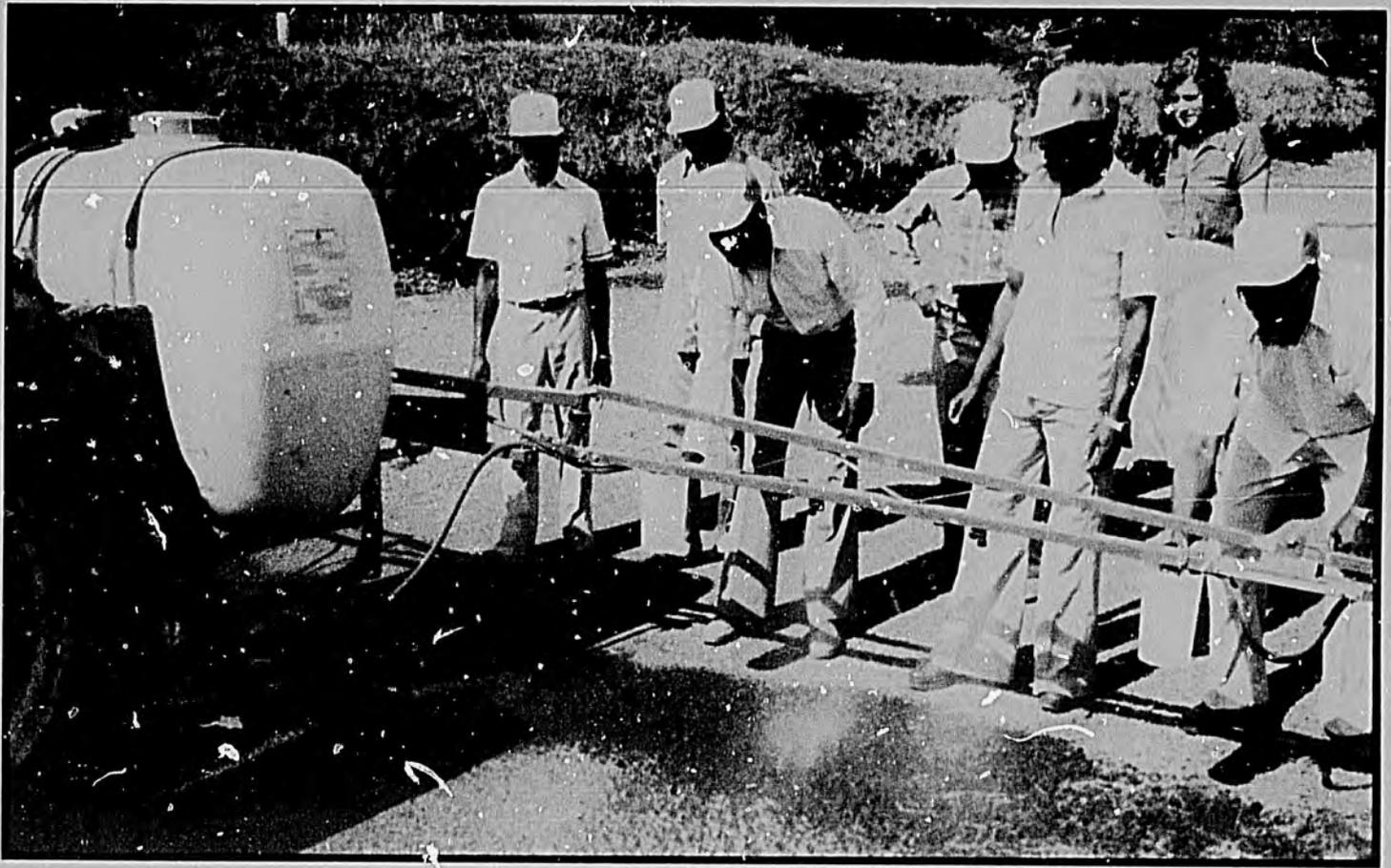
As the day-by-day schedule (following) suggests, the course comprised a full range of lectures, discussions, and field activities.

Additionally, information/study visits were conducted to:

- (1) Centre for Agricultural Mechanization and Rural Technology, CAMARTEC, to observe equipment testing facilities and demonstrations of oxen-, and tractor-, drawn tillage implements;
- (2) The Tanzania-Canada wheat production and research project, to observe large, motorized equipment being evaluated for suitability to Tanzanian farming conditions;
- (3) A large coffee plantation (Selian Estate), managed by Mr. E. von Roretz, to observe and discuss weed problems and solutions;
- (4) The Tropical Pesticide Research Institute, Arusha, to use the herbarium for identification of weeds collected by participants as a course assignment.



A participant practices pacing for calibration of a lever-operated knapsack sprayer.



With instructor Stroud observing, participants spent an afternoon practicing the operation and calibration of a large field sprayer.

Participants

Participants for the course were selected by Mr. Sungusia, Acting Head, Extension and Technical Services Department, Tanzania. Participants represented training and extension for the Ministry, production farms, seed farms, and the Tanzania-Canada wheat project.

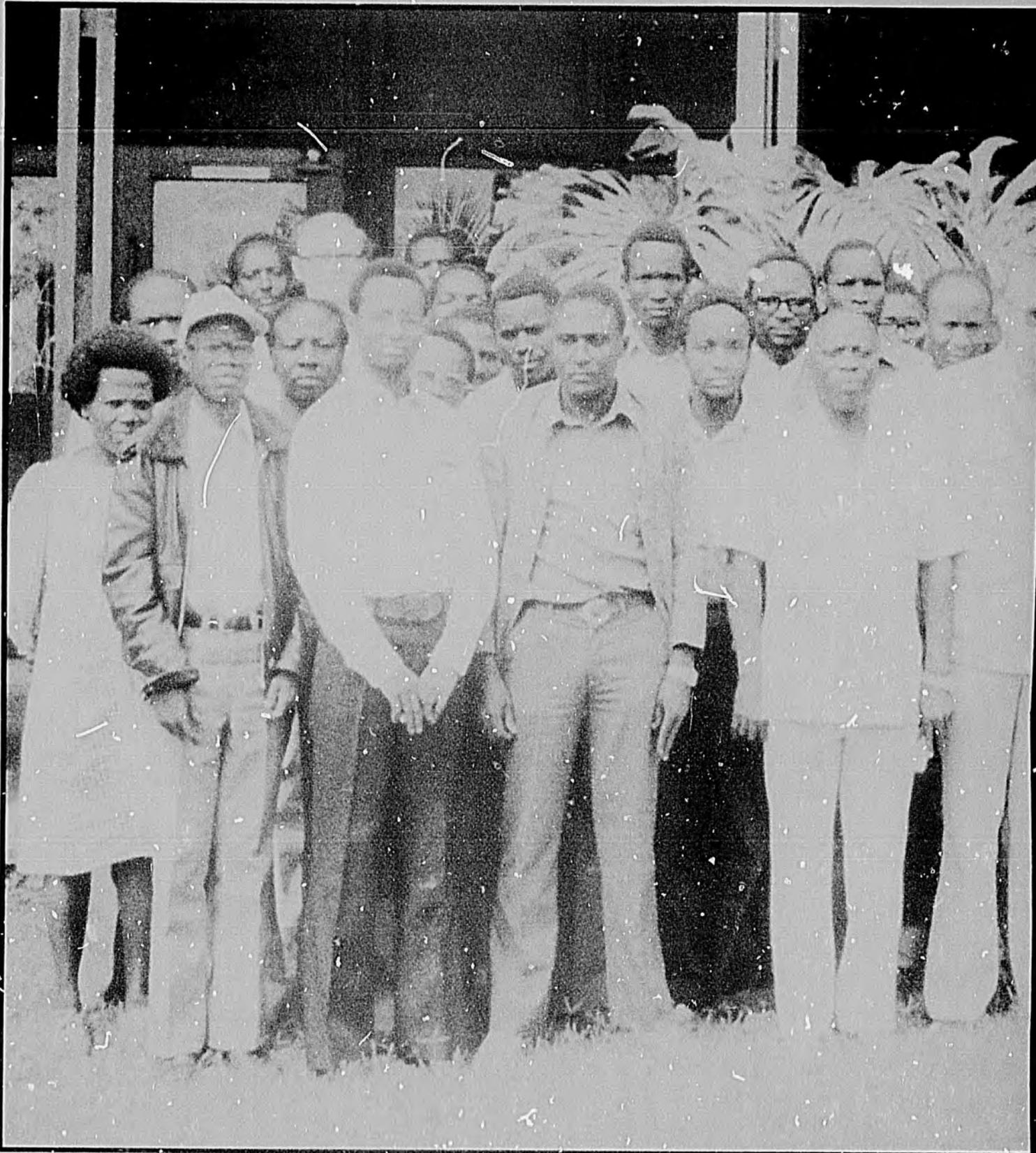
Only half of the 25 selected participants arrived for the start of the course. However, several individuals from nearby organizations learned of the course and were on hand the first day. They all seemed to be qualified and interested, so they were accepted bringing the total to 23. One of the originally selected individuals arrived six days after the course began and was denied opportunity to participate.

Mwambungu, A. H.; Agricultural Officer; Kilimo (W), P.O. Box 253, Mbeya

Lujuo, E. J.; Farm Manager; Msimba Seed Farm, P.O. Box 78, Kilosa

Owenya, F. S.; Senior Agronomist; T.P.C. Limited, P.O. Box 97, Moshi

Mmbaga, T. E. (Mrs.); Scientific Officer; TARO-Lyamungu, P.O. Box 3004, Moshi



1984 Tanzania Weed Management Training Course participants,
instructors, governmental officials, and sponsor representatives.



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- Kipende, E. H.; Training Officer; MATI-Nyegezi, P.O. Box 1400,
Mwanza
- Kadete, D.; Assistant Field; Kilangali Seed Farm, P.O. Box 104,
Kilosa
- Njalayao, A. H.; Agronomist; Mtibwa Sugar Co., P.O. Mtibwa,
Morogoro
- Muliahela, E. M.; Scientific Officer; TARO-Katrin, Private Bag,
Ifakara
- Kavula, J. M.; Training Officer; MATI-Nyegezi, P.O. Box 1400,
Mwanza
- Mtae, R.Y.L.; Training Officer; LITI-Tengeru, P.O. Box 3101,
Arusha
- Mshana, D. (Miss); Scientific Officer; TARO-Ilonga, Private Bag,
Kilosa
- Latonga, T. M.; Farm Manager; NAFCO Puva Rice Farm, P.O. Box
30137, Kibaha
- Masasi, J. J.; Section Manager; Kilombero Sugar Co., P.O. Box 50,
Kidatu
- Kishoa, D. L.; Kagere Sugar Co. Ltd, P.O. Box 815, Bukoba
- Temu, A.E.M.; Senior Scientific; Uyole Agric. Centre, Officer,
P.O. Box 400, Mbeya
- Lyezire, R.; Training Officer; Uyole Agric. Centre, P.O. Box 400,
Mbeya
- Assenga, F. P.; Training Officer; LITI-Tengeru, P.O. Box 3101,
Arusha
- Fute, J. L.; Agronomist; Kilombero Sugar Co., P.O. Box 50, Kidatu
- Swai, I. S.; Training Officer; HORTI-Tengeru, P.O. Box 1253,
Arusha
- Owenya, Z. J.; Agric. Field Officer; Canada-Tanzania, Wheat
Project, P.O. Box 6024, Arusha
- Kagaruki, D.; Extension Officer; Coffee Authority, P.O. Box 1187,
Moshi
- Kavugushi, B. R.; Training Officer; MATI-Ukiriguru, P.O. Box 1434,
Mwanza
- Mlay, E. E.; Farm Manager; TARO-Ilonga, P/Bag, Kilosa



Participants working in the field at research plots.

INSTRUCTORS

Individuals serving as the major instructors and organizers for the course were:

- A. Stroud, FAO Weed Science Consultant, Nairobi, Kenya;
- P. J. Terry, Tropical Weed Specialist, Weed Research Organization, U.K.;
- L. C. Burrill, Senior Weed Scientist, International Plant Protection Center, and Secretary, International Weed Science Society;
- F. Z. Machange, Senior Irrigation Agronomist, Ministry of Agriculture, Dar es Salaam, Tanzania.

In addition, the following individuals contributed valuable guest lectures:

- Mr. Mziray, TPRI Herbarium;
- Mr. Lyatuu, TPRI, weed control specialist;
- Mr. Akhabuhay, TPRI, pesticide chemist.

It is hereby certified that

.....
having satisfactorily participated in the

WEED MANAGEMENT TRAINING COURSE

conducted at Arusha, Tanzania,
28 November to 12 December, 1984,
is duly awarded this



Certificate of Achievement

.....
Professor Simon M. Mbilinyi
Principal Secretary, Ministry of
Agriculture and
Livestock Development
Dar Es Salaam

.....
N. S. M. M. Principal
Tengeru Horticultural Research
and Training Institute
Arusha

.....
Dr. Simon, Director
Tropical Pesticide Research
Institute
Arusha

.....
C. R. MacCulloch
FAO Country Representative
Dar Es Salaam

.....
L. C. Burrill, Secretary
International Weed Science
Society
Corvallis, Oregon USA

Schedule

Tuesday, 27 November

- Participants arrival and registration

Wednesday, 28 November

- Introduction to the course
- Official Opening
- Participant's self-introduction
- Pre-course exam
- Safe use of pesticides
- Introduce sprayers and calibration
- Continue sprayers and calibration
- Practice sprayer calibration

Thursday, 29 November

- Field research techniques - concerning herbicides
- Herbicide calculations
- Field spraying exercise
- Reception

Friday, 30 November

- Review application problems
- Definition and costs of weeds in Tanzania
- Weed-crop interference
- Quelea quelea and weeds
- Weed biology and dissemination
- Weed identification
- Weed collection from MATI for pressing

Saturday, 1 December

- Weed ecology - shifting weed populations
- Review of weed control methods - prevention, eradication, control
- Mechanical, cultural and biological methods of weed control
- Conservation tillage systems

Monday, 3 December

- Chemical weed control - classification of herbicides
- Soil applied herbicides - factors affecting performance
- Foliar applied herbicides - factors affecting performance
- Herbicide selectivity
- Assign and prepare for debates

*LEFT * A replica of the Certificate of Achievement awarded to the participants who successfully completed the course.*

Tuesday, 4 December

- Safety and efficacy of pesticides, fate in the environment
- Debate on crop production in a weed free environment
- Socio-economic considerations in weed management
- Debate on use of herbicides in Tanzania

Wednesday, 5 December

- Survey methods for weeds and weed problems.
- Evaluation methods for field research
- Field visits to observe and discuss weed control in several annual and perennial crops.

Thursday, 6 December

- Visit to Centre for Agricultural Mechanization and Rural Technology (CAMARTEC)
- Assign and prepare for group discussion on research plans

Friday, 7 December

- Group presentations of research plans
- Observe and calibrate large field sprayer
- Assign group discussions on weed control for several crops
- Review

Saturday, 8 December

- Control of Striga
- Control of perennial grasses
- Biology and control of Cyperus spp.
- Weed control in minimum tillage systems
- Prepare for discussion on weed control in crops



Monday, 10 December

- Field Trip - Coffee plantation
- Canada wheat project
- Tropical Pesticide Research Institute

Tuesday, 11 December

- Presentation of weed control plans
- Final exam

Wednesday, 12 December

- Discuss course follow-up in Tanzania
- Review exam
- Closing ceremony

Instructor Burrill prepares for a demonstration of herbicide formulations.

Follow up

Course participants held long discussions with Fred Machange and stressed the need to express their concern for proper weed management to Ministry officials. It was agreed that a spokesman for the participants would meet with Mr. Machange in Dar es Salaam to explore ways to convey the group's keen interest in improving weed management in Tanzania.

The course instructors agreed that additional courses could and should be taught by some of the participants with only material and advisory support from consultants.

A selection of technical publications and a light-activated hand-held calculator were provided for each participant.



Materials/publications

Each participant was provided with a set of publications including:

Knapsack Sprayers
Bibliography of Weed Science
IPPC Technical Assistance
Bulletins #1 (Spray Shields)
and #2 (Spray Nozzles)
Field Manual for Weed
Control Research
Field Guide to Weeds of
Zambia

GIFAP Guidelines for the
Safe and Effective Use
of Pesticides
Weed Control Recommendations
for Zambia
Weed Control in Eastern
Africa