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ICRAF

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A PRELIMINARY
AGROFORESTRY WORD LIST WITH
DEFINITIONS

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Note:

Many members of ICRAF staff have contributed suggestions for inclusion to this list and have also reviewed terms already included in the list. Not every term contributed has necessarily been incorporated and this work is ongoing.

Furthermore, this list has not formally been reviewed by ICRAF so the sole responsibility for this list is the author's.

These reasons notwithstanding, it is felt necessary to communicate the information here included in order to receive comment from in and outside the Council as soon as possible.

Foreword

The list of descriptors and the definitions and explanatory notes included herein are based on an analysis of the literature and on consultations with the scientific staff at ICRAF.

These consultations are still ongoing and because of this, the listing here cannot be considered conclusive.

Suggestions, comments and criticisms are welcomed from readers to assist with this work.

Agroforestry descriptors

This is a listing of terms, (some of which are defined) that are suggested as candidates for a controlled vocabulary of agroforestry, the terms chosen are considered to best represent agroforestry concepts. They are called descriptors.

The main objectives of listing are to:-

- i) permit the use of standard terms for the indexing and retrieval of bibliographic information, i.e. documents in the broad sense of the term, that deal with agroforestry.
- ii) identify difficulties in agroforestry Terminology for further elucidation.
- iii) show or suggest the hierarchical relationship of many of the terms selected.

Constructing the list

The terms were assembled on the basis of the analysis of about 3000 documents in the ICRAF reprint collection. Each document was described in bibliographic terms and subject descriptors were also assigned to them.

This was a 'free word' indexing effort and no single thesaurus was used. Further more, the selection of terms for descriptors was based on the documents assembled in the reprint collection. These documents have been acquired to answer specific requests for information about agroforestry and cannot be considered a random sample of the universe of knowledge about agroforestry. Therefore, some subject areas had been overlooked or not considered in sufficient detail.

In order to overcome this the Information Programme staff decided to evaluate the AGROVOC Thesaurus for it's suitability as thesaurus of agroforestry terms and also, to consult with the multidisciplinary specialists on the staff of the Council.

Using AGROVOC and ICRAF Staff Input

Info/Doc ICRAF decided to evaluate the application of the AGROVOC Thesaurus to the selection and use of descriptors for indexing

bibliographic information on agroforestry. The reasons for choosing the AGROVOC are as follows.

The AGROVOC Thesaurus is a structured vocabulary of agricultural terms devised to promote better dissemination of the results of agricultural research and, in particular to permit the more effective retrieval of bibliographic data included in the International Information System for the Agricultural Sciences and Technology (AGRIS), coordinated by FAO. Leatherdale, D (1982). The AGROVOC is also multilingual (English, French, German, Italian and Spanish) and permits the user to find the equivalents of any descriptor it contains in the above languages.

Furthermore, the AGROVOC is to be used for indexing by the AGRIS network, and is thus an international standard. The AGROVOC is not an extensive thesaurus.

This is to permit information centres working with more detailed areas of knowledge to fragment the concepts represented by the descriptors in order to afford more detailed description of these concepts. Leatherdale, D. (1982).

This possibility has been tested by Info/Doc ICRAF and was found to be valid for agroforestry. Beyond relying on modifying the free word descriptors derived from the subject analysis of 3000 reprints, an effort was made to obtain a more systematic coverage of the concepts that would generally be useful and to assign the appropriate descriptors to them. For this, the multidisciplinary staff of specialists at ICRAF was consulted. Staff were asked to review a preliminary computer generated printout of the terms produced from the document search and that had been adapted to suit AGROVOC. They contributed a list of terms thought to be generally relevant to agroforestry and based on the perspective of their own specialities.

The resulting comments and suggestions have been reviewed and included in this listing. Not every recommendation was accepted and changes to suggested AGROVOC terms have been resisted, although some changes have nevertheless been made. Many terms have also been added because they were not in the AGROVOC.

Of the 1006 terms in the data base, 564 are in the AGROVOC, and of these, 36 are not considered useful simply because they are compound terms that can be replaced by combining simpler concepts, (for example 'nitrogen fertilizer' is replaced by fertilizers and nitrogen) as two separate terms that can be used for retrieval. Some of these are simpler terms as well, i.e. tropical fruits is replaced by fruits.

Presentation of the list

In order to present the list for review and to quickly modify it DBASE II a microcomputer based relational data base management system was used with the OSBORNE 1 microcomputer.

Over 1000 descriptors were selected and each was described in a record containing three fields. The first field contained the descriptor, and is called 'DESCRIPT', the second field is a logical field capable of holding the binary information 'T' (true) or 'F' (false) depending on whether a given term was an AGROVOC descriptor. This field is called 'AGROVOC'. The third and last field was termed 'USE' and was reserved for listing scope notes or the relationships of descriptors to others used in the world list.

Structure of the descriptor data base

The descriptors data base has the following structure:

. Use b: descrip3

. disp stru

STRUCTURE FOR FILE: B: DESCRIP3. DBF

NUMBER OF RECORDS: 01006

DATE OF LAST UPDATE: 11/27/83

PRIMARY USE DATABASE

FLD	NAME	TYPE	WIDTH	DEC
001	DESCRIPT	C	035	
002	AGROVOC	L	001	
003	USE	C	055	
** TOTAL	**		00092	

The 'Descriptors' field contains the actual term. The 'AGROVOC' contains the binary information 'T' or 'F' depending on whether the term is in the AGROVOC thesaurus or not. Scope notes are used to

clarify the use of a term and/or its relationship to other terms in the list. The following abbreviations are used under the 'scope notes' field.

- d: delete the term in use and replace it with other term term. In some cases, the term is to be deleted and there is no reference to other terms.
- uf: used for
- bt: broad term
- nt: narrow term
- rt: related term

Difficulties of terminology

Crop intensification techniques with trees and concepts related to the use of woody perennials by animals and humans are of particular concern here.

The agronomist's terminology has been borrowed and applied to cropping systems and cropping patterns with trees. Andrews and Kassam (1976), Beets (1982). However, the time scale for agroforestry is different and this has been reflected for some of the terms. See Nair (1979) and Huxley (1983) for more details. Huxley (1983) presents a detailed discussion about the temporal and spatial sequence of crops and/or trees in an agroforestry system and the reader should refer to that article for more detail than is presented in the definitions listed below.

A second area of difficulty refers to the use of the terms 'feeds', 'fodders', 'browse', 'graze', etc.

For the purpose of this list, the following terminology and relationships are proposed:

- Feeds: What is consumed during feeding of animals (bt)
- Fodder: animal food of plant origin that is cut and usually dry but need not be. (nt)

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Browse: animal food that is green and growing. It is the bud or young shoot of a woody plant and it is foraged for by the animal. (nt)

Graze: animal food that is made up of growing grass, herbage or forbs. It is foraged for by the animal. (nt)

Feed crops: plants producing feeds for animals. (bt)

Woody feed crops: trees or shrubs that are a source of fodder or that are foraged for browse. (nt)

Feed trees: trees that are a source of fodder or that are foraged for browse. (nt)

Shrub trees: shrubs that are a source of fodder or that are foraged for browse. (nt)

Feed grasses, (nt)

Feed legumes, (nt)

Feed cereals, (nt)

Forbs. (non graminoid herbs). (nt)

Definitions

37 terms in the list are defined. The definitions follow here on the pages numbered from 1 onwards.

General references

Huxley, P. (1983) Comments on Agroforestry Classification:
with Special Reference to Plant Aspects. ICRAF,
Nairobi, Mimeo 11 pp.

1. **Agroforestry:** Agroforestry is a collective term for land-use systems and technologies where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land management unit as agricultural crops and/or animals, either under the same form of spatial arrangement or temporal sequence. In agroforestry systems there are both ecological and economical interactions between the different components.

source: Lundgren, B & J.B. Raintree (1983) Agroforestry in B. Nestel, Ed. 'Agricultural Research for Development: Potential and Challenges in Asia'. p 37-49. ISNAR, The Hague.

2. **Agropastoral system:** A farming system in which crops and livestock and not trees are the only components.

source: Labelle, R.

3. **Agrosilviaquacultural system:** An agroforestry system where forest trees are grown with tree crops and/or agricultural crops and with freshwater aquatic animals.

Each component of the system benefits directly from the products or services rendered by the other components.

An example of such a system would be the planting of feed trees in ground surrounding fish ponds and intercropped with agricultural crops. The leaves from the trees along with crop residues or compost are fed to the pond animals and the mud slurry from the fish pond is used to fertilize the trees and agricultural crops.

In an agrosilviaquacultural system, aquatic animal culture is an important animal production subsystem of the farm enterprise and it is dependent on both trees and crops for this.

This is to be contrasted with other agroforestry systems where fish, prawns, etc. are raised alone or with other animals but where the production of the fish or other aquatic animals is not dependent on trees.

source: Labelle, R.

4. Agrosilvicultural systems: An agroforestry system for 'the concurrent production of agricultural crops (including tree crops) and forest crops'. Nair (1980).

The forest crops serve either in a productive or service role whereas the tree and agricultural crops are chosen for their productive capacity first.

source: Nair, P.K.R. (1980) Agroforestry Species, A Crop Sheet Manual.
ICRAF 003e. Nairobi, 336 pp.
Labelle, R.

5. Agrosilvopastoral systems: all agroforestry systems which include trees or shrubs and herbaceous food crops and pastures or animals.

source: Torres, F. (1983) Role of Woody Perennials in Animal Agroforestry. Agroforestry Systems 1: 131-163.

6. Aquasilvicultural systems: agroforestry systems which combine trees with the raising of aquatic animals.

An example is the farming of fish, prawns, etc. in mangrove swamps (Malaysia, Indonesia).

source: Labelle, R.

7. Alley cropping: intercropping system in which selected species of shrubs or trees are planted in rows in association with food crops (alleys). It is an alternative to the traditional bush fallow system in humid and sub-humid tropics. Unlike traditional bush fallow systems, alley cropping permits the species grown to be selected, organized and integrated. The system still permits the planted fallow to retain the bush fallow function of nutrient cycling and maintenance of soil fertility, especially if the planted tree or shrub is leguminous.

source: Zandstra (1981) IDRC Project Summary, Alley Cropping (Nigeria), Project 3-P-81-0028. IDRC

8. **Bunds:** In India, any artificial embankment, a dam, dyke, causeway.
- source: Oxford University Press. Shorter Oxford English Dictionary, on Historical Principles, 3rd Edition, Oxford University Press, U.K.
9. **Continuous cropping:** the growing of crops in succession without seasonal fallowing.
- source: Leatherdale, D. (1982) AGROVOC. A multilingual Thesaurus of Agricultural Terminology English Version. 1st Ed. FAO, CEC, 530 pp.
10. **Corridor system:** a form of shifting cultivation in which the land is divided into parallel belts 100 meters wide. Successive corridors represent different phases of the crop and fallow rotation. Each family is given a holding which runs in a strip at right angles to the corridors, and thus includes land in all stages of crop and fallow... The corridór system is an attempt 'to combine the merits of the natural forest fallow with a system of individual ownership'. Nye, P.H. and D.J. Greenland (1960). The system was encouraged by the Belgium authorities during the colonial period in what was the Belgium Congo. Labelle, R.
- source: Nye, P.H. and D.J. Greenland (1960). The Soil Under Shifting Cultivation. Technical Communication No. 51. CAB, U.K. 156 pp.
11. **Cropping patterns:** The yearly sequence and spatial arrangement of crops or crops and fallow on a given area. Andrews, D.J. and A.H. Kassam (1976)
- The way in which a crop (or crops) is (are) grown in time and/or space. Labelle, R.
- source: Andrews, D.J. and A.H. Kassam (1976) The Importance of Multiple Cropping Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.
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12. Cropping systems: The cropping patterns used on a farm and their interaction with farm resources, other farm enterprises, and available technology which determine their make-up. Andrews, D.J. and A.H. Kassam (1976).

source: Andrews, D.J. and A.H. Kassam (1976).

The importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.

13. Fallow systems: Cropping system in which land is rested 'from deliberate cropping: not necessarily without sowing'.

source: Spedding, C.R.W. (1975) The Biology of Agricultural Systems. Academic Press. 261 pp.

14. Forest gardens: A land-use form on private lands outside the village in which planted trees and sometimes additional perennial crops occur. Wiersum, K.F. (1982)

source: Wiersum, K.F. (1982)

Wiersum, K.F. (1982) Tree Gardening and Taungya on Java: Examples of Agroforestry Techniques in the Humid Tropics.

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15. Grasslands: Plant communities with a vegetative mixture of herbaceous plants dominated by the family Graminae. Stoddart, Smith and Box (1975). The main function of grasslands is to provide herbaceous feed for large herbivores, both wild and domesticated.... (grasslands) are not necessarily free of trees. L. 't Mannetje (1978).

source: Stoddart, L.A., A.D. Smith and T.W. Box (1975) Range Management. 3rd Ed. McGraw-Hill, 532 pp.

't Mannetje, L. (1978) Measurement of Grassland Vegetation and Animal Production. Commonwealth Agricultural Bureaux Bulletin 52, U.K. 260 pp.

16. Home gardens: A land-use form on private lands surrounding individual houses with a definite fence, in which several tree species are cultivated together with annual and perennial crops, often with inclusion of small livestock.

. B'

source: Wiersum, K.F. (1982) Tree gardening and taungya on Java: Examples of agroforestry techniques in the humid tropics.

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17. Intercropping: growing two or more crops simultaneously on the same field. Crop intensification is in both time and space dimension. There is intercrop competition during all or part of crop growth. Farmers manage more than one crop at a time in the same field.

source: Andrews, D.J. and A.H. Kassam (1976)

The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.J., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping. ASA Special Publication 27, Madison, p 1-10.

18. Ley Farming: Rotation of arable crops with two or more years of sown pasture.

Leatherdale, D. (1982)

A ley pasture is defined as a temporary pasture grown as a specific phase in a defined crop-rotation sequence.

Whiteman, P.C. (1980).

source: Leatherdale, D.G. (1982). AGROVOC. A multilingual Thesaurus of Agricultural Terminology English Version. 1st Ed. FAO. CEC., 530 pp.

Whiteman, P.C. (1980) Tropical Pasture Science. Oxford University Press. 392 pp.

19. Mixed cropping: Growing more than one (crop) species on the same piece of land at the same time, or with a short interval.

source: Beets, W.C. (1932)

Multiple Cropping and Tropical Farming Systems. 156 pp., Gower (U.K.), Westview Press, (U.S.A.).

20. Mixed farming: Farming involving crop and animal production.
Leatherdale, D. (1982)

source: Leatherdale, D. (1982) AGROVOC. The multilingual Thesaurus of Agricultural Terminology English Version 1st Ed. FAO, CEC. 530 pp.

21. **Mixed gardens:** A land-use form on private lands outside the village, which is dominated by planted perennial crops, mostly trees, under which animal crops are cultivated.

source: Wiersum, K.F. (1982). Tree gardening and Taungya on Java: Examples of Agroforestry Techniques in the Humid Tropics.

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22. **Monoculture:** Repeated growing of the same crop on the same land.

source: Leatherdale, D. (1982) AGROVOC. A multilingual Thesaurus of Agricultural Terminology English Version. 1st Ed. FAO, CEC, 530 pp.

23. **Multiple cropping:** Growing more than one crop on the same piece of land during one calendar year.

source: Beets, W.C. (1982)

Multiple Cropping and Tropical Farming Systems. 156 pp., Gower (U.K.), Westview Press, (U.S.A.)

Note: As mentioned by Nair (1979), the above definition is based on the 'time dimension in land-use... and it restricts the usage of the term to annual crops only. Though most examples of multiple cropping consist of growing annuals in quick succession, the principle of intensification of cropping in space dimension has been successfully extended to longer duration crops. also, and consequently come under the purview of multiple cropping too. Therefore... multiple cropping may be better referred to as a philosophy of maximising crop production per unit of time without causing soil deterioration. According to this concept, the number of crops grown per unit time is not the criterion, instead, the extent to which the opportunities for multiple use of the same resources are utilized through repeated and/or intensified cropping is the guiding principle of multiple cropping. Nair (1979).

24. **Multistorey cropping:** Multispecies crop combinations involving both annual and perennials with an existing stand of perennials. Nair (1976). Association of tall perennials with shorter biannual and animal crops.
- source: P.K.R. Nair (1976). Intensive Multiple Cropping with Coconuts in India.
- Verlag Paul Parey, Berlin und Hamburg 147 pp.
25. **Protective plants:** Plants grown to protect crops, soils or land from adverse environmental factors.
- Leatherdale, D. (1982)
- For our purposes, this is amended to include, after environmental factors..... 'or from animals or humans'.
- source: Leatherdale, D. (1982) AGROVOC. A multilingual Thesaurus of Agricultural Terminology English Version. 1st Ed. FAO, CEC. 530 pp.
26. **Rangelands:** Those areas of the world which by reason of physical limitations - low and erratic precipitation, rough topography, poor drainage, or cold temperatures - are unsuited for cultivation and which are a source of forage for freeranging native and domestic animals, as well as a source of wood products, water and wildlife.
- source: Stoddart, L.A. and A.D. Smith and T.W. Box (1975) Range Management, 3rd Edition, McGraw Hill, 532 pp.
27. **Relay cropping:** Planting crops between plants or rows of an already established crop during the growing period of the first planted crop(s).
- source: Beets, W.C. (1982)
- Multiple Cropping and Tropical Farming Systems, 156 pp. Gower (U.K.) Westview Press (U.S.A.)
28. **Rotational cropping:** The repetitive cultivation of an ordered succession of crops (or crops and fallow) on the same land. One cycle often takes several years to complete.

- source: Andrews, D.J. and A.H. Kassam (1976)
The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.
29. Rotational grazing: Grazing system in which the pasture is sub-divided into a number of enclosures with at least one more enclosure than groups of animals.
Whiteman, P.C. (1980)
- source: Whiteman, P.C. (1980) Tropical Pasture Science Oxford Science Publications, Oxford University Press. 392 pp.
30. Row intercropping: A form of mixed cropping where all crops are planted in a fixed pattern of spacing and rows.
Beets, W.C. (1982)
Growing two or more crops simultaneously where one or more crops are planted in rows.
Andrews, D.J. and A.H. Kassam (1976).
- source: Beets, W.C. (1982)
Multiple Cropping and Tropical Farming Systems. 156 pp. Gower, (U.K.) Westview Press (U.S.A.).
Andrews D.J. and A.H. Kassam (1976).
The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.
31. Sequential cropping: Growing more than one crop on the same piece of land with each crop during a different time of the year... Sequential cropping can only be practiced in the tropics or subtropics where temperatures are suitable for plant production throughout the year. Beets (1982). One plant is planted after another without fallowing.
Leatherdale, D. (1982)

source: Beets, W.C. (1982)

Multiple Cropping Tropical Farming Systems.
156 pp. Gower, (U.K.), Westview Press (U.S.A.).

Leatherdale, D. (1982) AGROVOC. A multilingual
Thesaurus of Agricultural Terminology English
Version. 1st Ed. FAO, CEC, 530 pp.

32. Silvopastoral systems: All agroforestry systems which include trees or shrubs and pastures or animals.

source: Torres, F. (1983) Role of Woody Perennials in Animal Agroforestry. Agroforestry Systems 1: 131-163

33. Sole cropping: One crop variety grown alone in pure stands at normal density. Synonymous with solid planting; opposite of intercropping. (Andrews, D.J. and A.H. Kassam).

source: Andrews, D.J. and A.H. Kassam (1976)

The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.

34. Strip cropping: Growing two or more crops simultaneously in different strips wide enough to permit independent cultivation but narrow enough for the crops to interact agronomically.

source: Andrews, D.J. and A.H. Kassam (1976).

The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.

35. Taungya system: Method of raising forest crops in combination with agricultural crops.... the agricultural use to which the land is put does not generally continue throughout the rotation of the forest crop, but is confined to that period which ends with the closing of the canopy of the forest crop.

source: King, K.F.S. (1968) Agrisilviculture (the Taungya System). Bulletin No.1 Dept. of Forestry, Univ. of Ibadan, Nigeria. 109 pp.

36. Tree gardens: Multiple-storeyed agroforestry systems where a mixture of several fruit and other trees are cultivated, sometimes with inclusion of annual crops.

source: Wiersum, K.F. (1982) Tree Gardening and Taungya on Java: Examples of Agroforestry Techniques in the Humid Tropics.

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37. Upland cropping: Crops grown on unirrigated land without storage of water.

source: Leatherdale, D.G. (1982).

The Importance of Multiple Cropping in Increasing World Food Supplies. In Papendick, R.I., P.A. Sanchez and G.B. Triplett (Eds). 'Multiple Cropping'. ASA Special Publication 27, Madison, p 1-10.

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	ASROVOC	SCOPE NOTES
abscission	.I.	
acid soils	.I.	
acrisols	.I.	
adaptation	.I.	
aerial photography	.F. d use remote sensing.	
aerosols	.I.	
afforestation	.I.	
agricultural crops	.F. d use crops or plantation and crops.	
agricultural development	.I.	
agricultural economics	.F. d use economics	
agricultural meteorology	.F.	
agricultural policies	.I.	
agricultural practices	.F. d use cropping systems or cropping patterns.	
agricultural productivity	.F.	
agricultural research	.F. d use research	
agricultural systems	.F. d use farming systems.	
agriculture	.I.	
agro-climate	.F. bt'agricultural meteorology'.	
agroecosystems	.F. d use ecosystems	
agroforest	.F. d use tree gardens.	
agroforestry dd	.I. bt'farming systems',rt'cropping systems'.	
agropastoral systems dd	.F. rt'mixed farming',bt'farming systems'.	
agrosilvopastoral systems dd	.F. bt'agroforestry'.	
agrosilvicultural systems dd	.F. bt'agroforestry',nt'taungya'.	
agrosilvopastoral systems dd	.F. bt'agroforestry'.	
air	.I. used for atmosphere.	
air temperature	.I. rt'microclimate',bt'agricultural meteorology'.	
albedo	.F. rt'net radiation',bt'radiation'.	
alkaline soils	.I.	
alkaloids	.I.	
allelopathy	.I.	
alley cropping dd	.F. rt 'multiple cropping',bt 'cropping patterns'.	
allometry	.F.	
alluvial soils	.I.	
alluvium	.F.	
alternate food sources	.F. d use foods, food crops, wild food plants.	
amendment application	.F. d use fertilizers.	
anatomy	.I.	
andesols	.I.	
animal breeding	.I.	
animal distribution	.F.	
animal housing	.I.	
animal husbandry	.F. d use zootechny.	
animal introduction	.F. bt 'introduction'.	
animal manure	.F.	
animal power	.I.	
animal production	.I. rt'biological production'.	
animal products	.I.	
animals	.I.	
annual crops	.F. d use annual and crops.	
annual grasses	.F. d use annual and grasses.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
anthropology	.F.	
antibiotics	.I.	
antitranspirants	.F.	
apical dominance	.F.	
apiculture	.I.	
appropriate technology	.I.	
aquasilvicultural systems dd	.F. bt'agroforestry'.	
aquatic plants	.I.	
arboreta	.I.	
arboricide	.F. d use herbicides.	
archeobotany	.F. d use botany.	
architecture	.F. rt'structure'.	
arenosols	.F. d use sandy soils.	
arid climate	.I.	
arid zones	.I.	
aromatic crops	.F. d use essential oil crops.	
assimilation	.I. rt'photosynthesis'.	
assimilation rate	.F. d use assimilation.	
azadirachtin	.F.	
basalt	.F. d use basic rocks.	
basic rocks	.F.	
bee plants	.I.	
bee trees	.F. bt'bee plants'.	
bees	.I.	
behaviour	.I.	
bench terracing	.F. d use terrace cropping.	
bibliography	.F.	
bicide	.F. d use herbicide.	
biogeochemical cycles	.F. d use cycling.	
biogeography	.I. d use plant distribution or animal distribution.	
biological competition	.I.	
biological control	.I.	
biological production.	.I.	
biological productivity	.F. d use biological production.	
biology	.I.	
bioassess	.I.	
bioass production	.F. d use biological production.	
bird control	.I.	
birds	.I.	
botanical description	.F. d use anatomy.	
botanical gardens	.I.	
botany	.I.	
breeds	.I.	
brown earth soils	.F. d use cambisols.	
browse	.F. uf bud or young shoot of foraged feed tree or shrub.	
browse plants	.F. d use woody feed crops.	
browsing	.I. uf feeding on leaves or shoots of trees or shrubs.	
budgets	.I.	
buildings	.I.	
bunds dd	.F. bt'soil conservation'.	
bush fallowing	.I.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
c3 plants	.F.	
c4 plants	.F.	
calcareous soils	.T.	
calimorphic soils	.F. d use calcareous soils.	
calorific value	.T.	
cambisols	.T.	
camels	.T. bt'Camelidae'.	
camphor	.T. bt'essential oils',rt'Cinnamomum camphora'.	
canopies	.F. d use canopy.	
canopy	.T.	
capital	.T.	
carbohydrate content	.T.	
carbohydrate reserves	.F. d use carbohydrate content.	
carbon balance	.F. d use photosynthesis.	
carbon dioxide	.T.	
carrying capacity	.F.	
cartography	.T.	
cash crops	.T.	
catch cropping	.F. d use catch crops.	
catch crops	.T. bt'cropping patterns'.	
catchment areas	.T. used for water catchments,rt'watersheds'.	
cattle	.T.	
cereals	.T.	
charcoal	.T.	
charcoal making	.F. d use charcoal.	
chemical analysis	.T. rt'methods'.	
chemical composition	.F. d use composition.	
chemico-physical properties	.T.	
chena	.F. d use shifting cultivation,see taungya.	
children	.T.	
highlands	.T.	
classification	.T.	
clay soils	.T.	
clearing	.T. used for land clearing.	
climate	.T.	
climatic requirements	.T. rt'environmental requirements'.	
climatic zones	.T.	
climatological data	.F. d use climate and data collection.	
climbers	.T.	
coastal plains	.T.	
commons	.F. used for common lands,common grazing lands,etc.	
community development	.T.	
community forestry	.F. d use forestry and community development.	
competition	.F. d use biological competition.	
competitive effect	.F. d use biological competition.	
composition	.T.	
compound farm	.F. d use home garden.	
coniferous forests	.T.	
conifers	.T.	
conservation	.T.	
continuous cropping dd	.T. bt'cropping systems'.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
controlled burning	.T.	
conversion plantation	.F. check Troup.PJR,PW,EF.	
cooking	.T.	
copra	.T. bt'vegetable products'.	
cork	.T.	
corridor system dd	.F. bt'cropping systems'.	
cover crops	.F. d use cover plants.	
cover plants	.T. bt'protective plants'.	
crop intensification	.F. d use cropping patterns.	
crop protection	.F. bt 'plant protection'.	
crop residues	.F.	
crop residues	.F. plant parts remaining in a field after harvest.	
crop rotation	.F. d use rotational cropping.	
crop yield	.F. d use yields and crops.	
cropping	.F. d use cropping patterns or cropping systems.	
cropping patterns dd	.T.	
cropping systems dd	.T.	
crops	.T.	
cultivars	.T. rt'provenances'.	
cultivation	.T.	
cultural behaviour	.F. d use culture.	
cycling	.T. used for nutrient cycling in ecosystems.	
cytology	.T.	
data collection	.T.	
deciduous forests	.F.	
decision making	.T.	
deer	.T. bt'ruminants' or 'game' or 'wildlife'.	
deficiency diseases	.T.	
deforestation	.T.	
dehesa	.F. d use agrosilvopastoral systems.	
demography	.T.	
desert climate	.T.	
desert control	.F. d use deserts.	
desert ecology	.F. d deserts and ecology.	
desert shrubs	.F. d use desert vegetation.	
desert vegetation	.F. d use arid zones and vegetation.	
desertification	.T.	
deserts	.T.	
design	.T. bt'methods',rt'experiments','planning'.	
developing countries	.T.	
development plans	.T.	
diet	.T.	
digestibility	.T.	
diseases	.T.	
documentation	.T.	
dormancy	.T.	
drainage	.T.	
drought	.T.	
drought resistance	.T. d use drought and resistance or adaptation.	
drug plants	.T. used for medicinal plants.	
dry matter content	.T.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
dry rangelands	.F. d use rangelands.	
dry season	.T.	
dryland farming	.F. d use dry farming.	
dunes	.T.	
dung	.F. d use animal manure.	
dyes	.T.	
ecological energetics	.F. d use ecology.	
ecological value	.F. d use ecology.	
ecological zonation	.T. used for ecozones.	
ecology	.T.	
economic analysis	.T.	
economic conditions	.F. d use economics.	
economic development	.T. d use economics or development.	
economic performance	.F. d use economics.	
economic potential	.F. d use economics.	
economic value	.F. d use economics.	
economics	.T.	
ecostress	.F. d use ecology and stress.	
ecosystem management	.F. d use ecosystem and management.	
ecosystem modeling	.F. d use models.	
ecosystem stability	.F. d use ecosystems.	
ecosystems	.T.	
edible wild plants	.F. d use wild food plants.	
education	.T.	
efficiency	.T. def:capacity utilization.	
employment	.T.	
energy	.T.	
energy farming	.F. d use fuelwood or biomass and farming.	
energy flow	.T.	
energy sources	.T.	
environment	.T.	
environmental conditions	.T. bt for 'climate', 'site factors', etc.	
environmental conservation	.F. d use conservation.	
environmental degradation	.F. d use environmental conditions.	
environmental requirements	.F.	
environmental research	.F. d use research	
erosion	.T.	
erosion control	.T. rt soil conservation.	
erosion control techniques	.F. d use soil conservation.	
essential oil crops	.T.	
ethnobotany	.F.	
evaporation	.T.	
evapotranspiration	.T. bt'evaporation',rt'water balance'.	
exotic plants	.F.	
experimental design	.F. d use experiments and design, bt'research'.	
experiments	.T.	
extension activities	.T.	
exudate	.F. d use gums, resins, latex, allelopathy.	
fallow	.F. d use fallow systems.	
fallow systems dd	.T.	
famine	.T.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
famine food	.F. d use foods and famine.	
farm buildings	.F. d use buildings and faras.	
farm management	.T. d use management and faras.	
farm planning	.T.	
farm sector	.T. d use agricultural sector.	
farm size	.T.	
farm survey	.F. d use survey.	
farmers	.T.	
farming	.F. d use farming systems.	
farming systems	.T.	
faras	.T.	
farmyard manure	.T. d use animal manure.	
fast growing N2 fixing trees	.F.	
fat content	.F. d use lipid content.	
fatty acids	.T.	
fauna	.T. d use animals.	
feed cereals	.T.	
feed crops	.T.	
feed grasses	.T.	
feed legumes	.T.	
feed resources	.F. d use feeds.	
feed shrubs	.F. uf browse shrubs or fodder shrubs, bt'woody feed crops'.	
feed trees	.F. uf browse trees or fodder trees, bt'woody feed crops'.	
feed value	.F. d use nutritive value.	
feeding habits	.T.	
feedlots	.T. rt'zero-grazing'.	
feeds	.T. nt'fodder', 'browse', 'graze'... consumed during feeding.	
ferralsitic soils	.F. d use ferralsols.	
ferralsols	.T.	
fertilizers	.T.	
fibre content	.T.	
fibre crops	.T.	
field crops	.F. d use crops.	
finance	.T.	
fire control	.T.	
fire management	.F. nt'controlled burning'.	
firebreaks	.T.	
fires	.T.	
fisheries	.T.	
flooding	.T.	
flow	.T.	
fodder	.F. bt 'feeds'.	
fodder	.F. uf feeds cut & carried to animals not necessarily dry.	
fodder grass	.F. d use feed grasses, bt'feed crops', rt'fodder'.	
fodder production	.F. d use fodder and biological production.	
fodder shrub	.F. d use feed shrubs.	
fodder tree	.F. d use feed trees.	
food crops	.T.	
food crops	.T.	
food intake	.T.	

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AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
food plants	.F. d	use food crops.
food production	.T.	
food stocks	.T.	
food supply	.T.	
foods	.I.	
forage production	.F. d	use feed crops, specify nt and biological production.
forage value	.F. d	use nutritive value.
foraging	.T. uf	hunting/gathering for animals, see feeding habit.
forbs	.F.	
forest and livestock	.F. d	use forest grazing.
forest clearing	.F. d	use clearing and forest.
forest cover	.F. d	use forests and structure.
forest ecosystem	.F. d	use forest and ecosystem.
forest fallow	.F. d	use fallow systems and forest.
forest fires	.T. d	use fires and forest.
forest gardens	.F. bt	'tree gardens'.
forest grazing	.T. bt	'silvopastoral systems'.
forest industry	.F. d	use industries and forest.
forest inventory	.F. d	use inventory and forests.
forest land management	.F. d	use forest and management.
forest litter	.T. d	use litter and forest.
forest policy	.F. d	use forestry policies.
forest products	.T.	
forest regeneration	.F. d	use regeneration.
forest reserve	.F.	
forest savanna	.F. d	use savannas and woodlands.
forest soil	.T. d	use forests and soils.
forest trees	.T.	
forest utilization	.F. d	use forest products.
forest vegetation	.F. d	use vegetation.
forest villages	.F.	
foresters	.T.	
forestland ownership	.F. d	use ownership or tenure and forests.
forestry	.T.	
forestry policies	.T.	
forests	.T.	
fowl	.F. d	use poultry.
fragile ecosystem	.F. d	use ecosystems.
free range grazing	.F.	
fruit	.T.	
fruit crops	.T.	
fruit tree propagation	.F. d	use plant propagation.
fuel crops	.T.	
fuels	.T.	
fuelwood	.T.	
fungicides	.T.	
game	.T.	
gardens	.T.	
genetic resources	.T. d	use germplasm.
genetics	.T.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
genotypes	.T.	
geography	.T.	
geology	.T.	
geomorphology	.T.	
germination	.T.	
germplasm	.T.	
germplasm conservation	.T.	
germplasm exploration	.F.	
gleysols	.T.	
goats	.T.	
grain legumes	.T.	
grass fallow	.F. d	use fallow systems and grasses.
grasses	.T.	
grassland ecosystems	.F. d	use grasslands.
grassland management	.T. d	use rangelands or grasslands and management.
grasslands dd	.T.	bt'vegetation',rt'savannas', 'steppes', 'prairies'.
graze	.F. uf	feeds obtained from animals grazing, ie growing grass
grazing	.T.	
grazing habits	.F. d	use feeding habits.
grazing intensity	.T. d	use grazing and management, carrying capacity.
grazing lands	.T.	
grazing patterns	.F. d	use feeding habits.
green manure	.T.	
groundwater	.T.	
growing season	.F. d	use dry season, wet season, see seasonal development.
growth	.T.	
growth habit	.T. d	use plant habit.
growth rate	.F. d	use growth.
gum arabic	.T.	bt'gums'.
gums	.T.	
hair	.T.	bt'animal products'.
harvesting	.T.	
hay	.T.	
hedging plants	.T.	bt'protective plants'.
herbage production	.F. d	use herbage and biological production.
herbaria	.T.	
herbicides	.T.	
herbivores	.T.	
highland agriculture	.F. d	use highland and agriculture.
hillside agriculture	.F. d	use sloping land and agriculture.
histosols	.T. d	use organic soils.
hives	.T.	
home gardens dd	.F.	bt'tree gardens'.
honey	.T.	
honey production	.T. d	use honey and yields.
honey tree	.F. d	use bee trees.
hormones	.T.	
horticulture	.T.	
households	.T.	
human ecology	.T.	
human feeding	.T. d	use diets.

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
human population	.I.	
human resources	.I. d use labour.	
humid climate	.I.	
humid tropics	.I.	
humid zones	.I.	
humidity	.I.	
humus	.I. rt'litter'.	
hunter gatherers	.F. bt 'foraging'.	
hunting	.I.	
hybridizing	.I.	
hydrogeology	.F. deals with water below the surface,rt'ground water'.	
hydrology	.I. deals with surface water,nt'runoff'.	
hydrometeorology	.I. deals with atmospheric water,nt'air humidity'.	
hydromorphic soils	.F. d use gleysols.	
income	.I.	
indigenous animals	.F.	
indigenous plants	.F. use for native plants.	
industrial use	.F.	
infiltration	.F.	
information services	.I.	
innovations	.F. d use innovation adoption.	
insect repellent	.F. bt 'insect control'.	
insects	.I.	
interactions	.F. def:biological exchanges between agroforestry component	
interception	.F. def:..of precipitation,nutrients,light by canopy.	
intercropping dd	.I. rt'multiple cropping',bt'cropping patterns'.	
introduced species	.F. d use exotic plants or plant introduction.	
introduction	.F. nt 'plant introduction' or 'animal introduction'.	
inventory	.F. use for surveys.	
inventory survey	.F. d use inventory.	
irrigated farming	.I.	
irrigation	.I.	
jardin creole	.F. d use mixed gardens.	
jhooming	.F. d use shifting cultivation (India).	
kaingin	.F. d use shifting cultivation.(Philippines).	
kandy gardens	.F. d use home gardens(Sri Lanka).	
labour	.I.	
land	.I.	
land capability	.F.	
land classification	.F.	
land clearing	.F. d use clearing.	
land competition	.F.	
land development	.I.	
land evaluation	.F.	
land management	.F. d use management.	
land productivity	.I.	
land reclamation	.F. d use reclamation.	
land reform	.I.	
land resources	.I.	
land tenure	.F. d use tenure.	
land use	.I.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
landforms	.F.	
landscape	.T.	
landslides	.T.	
laterite	.F.	
latex	.T. bt'exudates'.	
latosols	.F. bt'soil types'.	
law	.F.	
leaching	.T.	
leaves	.T.	
legume-rhizobium symbiosis	.F. d use rhizobium and Leguminosae.	
legumes	.T. nt'feed', 'grain' or 'vegetable' legumes.	
ley farming dd	.T. bt 'cropping systems'.	
light distribution	.F. d use light regimes.	
light intensity	.F. bt 'light',rt'light regime'.	
light regimes	.T.	
light requirements.	.F. d use light and requirements.	
lignins	.T.	
limestone	.T.	
lipid content	.T.	
lipids	.T.	
lithosols	.T.	
litter	.F. used for forest litter or litter from fallen tree parts	
live fences	.F. d use hedging plants,rt'protective plants'.	
livestock	.T.	
livestock management	.F. d use livestock and management.	
livestock production	.F. d use animal production or livestock and biological pro	
living standards	.T.	
locusts	.T.	
logging	.T.	
lowland tropics	.F. d use humid tropics and lowlands.	
lowlands	.T.	
luvisols	.T.	
macroclimate	.T. d use climate.	
management	.F.	
mangrove swamps	.T.	
mangroves	.F. d use mangrove swamps,for mangrove plants name species.	
manure	.T. d use animal manure or green manure.	
map	.F. d use cartography.	
mapping	.F. d use cartography.	
marginal lands	.T.	
marketing	.T.	
meat	.T.	
mechanization	.T.	
medicinal plants	.F. d use drug plants.	
mediterranean climate	.T.	
peristene	.T.	
meteorology	.T.	
methods	.T.	
microcatchment	.F. bt'catchment areas'.	
microclimate	.T.	
microclimate modification	.F.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
microorganism	.T.	
microphyllous trees or shrubs	.F. use for thorny vegetation.	
milk	.T.	
minosine	.F.	
mineral cycling	.F. d use cycling.	
mineral metabolism	.T.	
mineral nutrition	.F. d use nutrition and/or mineral metabolism.	
minerals	.T.	
minimum tillage	.F. d use zero-tillage.	
mixed cropping dd	.T. bt 'cropping patterns'.	
mixed farming dd	.T. bt 'farming systems'.	
mixed gardens dd	.F. bt 'tree gardens'.	
moisture content	.T.	
monocropping	.F. d use use continuous cropping.	
monoculture dd	.T. bt 'cropping patterns'.	
montane climate	.F. d use mountain climate or highland and climate.	
montane forest	.F. PM,EF.	
morphology	.F. d use soil morphological features, plant anatomy, etc.	
mountain climate	.T.	
mulches	.T.	
mulching	.T. rt 'microclimate modification'.	
multi-story cropping dd	.F. bt 'cropping pattern'.	
multiple cropping dd	.T. bt 'cropping patterns'.	
multiple land use	.F. d use multiple use and land.	
multiple use	.F.	
multipurpose trees & shrubs	.F.	
mycorrhizae	.T.	
national parks	.T.	
native culture	.F. d use culture.	
native forage	.F. d use feed crops.	
native population	.F. d use human population.	
native species	.F. d use indigenous animals or indigenous plants.	
natural distribution	.T. d use animal distribution and/or plant distribution.	
natural environment	.F. d use environmental conditions.	
natural forests	.F. bt 'forests', rt 'primary forest', 'secondary forest'.	
natural grassland	.F. d use grasslands.	
natural pastures	.F. d use rangelands or grasslands.	
natural pesticide	.F.	
natural resources	.T.	
natural vegetation	.F. d use vegetation.	
nematodes	.T.	
nitosols	.T.	
nitrogen	.T.	
nitrogen content	.T.	
nitrogen fertilizer	.T. d use fertilizers and nitrogen.	
nitrogen fixation	.T.	
nitrogen fixing trees or shrubs	.F.	
nitrogen metabolism	.T.	
nodulation	.F. d use root nodulation.	
noedisa	.F. nt 'transhumance'.	
nurse crops	.T.	

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AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
nursery practice	.F. d	use plant nurseries and methods.
nut crops	.T.	
nutrient availability	.T.	
nutrient competition	.F. d	use nutrients and plants and biological competition.
nutrient content	.T.	use with nt for nutrient, see composition.
nutrient cycling	.F. d	use cycling.
nutrient deficiency	.F. d	use deficiency diseases.
nutrient recycling	.F. d	use cycling.
nutrient transport	.T.	nt 'translocation'.
nutrients	.T.	use with narrow term:phosphorus, boron, etc.
nutrition	.T.	
nutritional requirements	.T.	
nutritive value	.T.	rt'chemical composition'.
oil crops	.T.	
oilseed	.F. d	use oilseed cakes or oil crop.
oilseed cakes	.T.	
oilseed residues	.F. d	use oilseed cakes.
orchard	.T.	
organic matter	.T.	
organic soils	.T.	
overgrazing	.F. d	use grazing and carrying capacity.
overpopulation	.T.	
overstory/understory relationship	.F. d	use interactions or canopy & structure, shade toleran
ownership	.T.	
pH	.T.	
paddocks	.F. d	use grazing and management.
palatability	.T.	
palmae	.T.	
pastoral nomadism	.F. d	use nomadism.
pasture grasses	.F. d	use pastures and grasses.
pasture legumes	.F. d	use feed legumes.
pasture, irrigated	.F. d	use pastures and irrigation.
pastures	.T.	
pedology	.F. d	use soil science.
percolation	.F.	flow of water through soil or plant canopy, nt'stemflow'
perennial	.T.	bt'periodicity'.
perennial crops	.F. d	use perennial and crops.
perennial grasses	.F. d	use perennial and grasses.
performance	.T.	
periodicity	.T.	nt 'seasons', 'time'.
pest control	.T.	
pesticide	.T.	
pests	.T.	
pharmaceutical properties	.F. d	use pharmacology.
pharmacology	.T.	rt 'drug plants'.
phenology	.T.	
phenotype	.T.	
photography	.T.	
photoperiodicity	.T.	used as response to light regimes, rt'phenology'.
photosynthesis	.T.	
physiographic features	.T.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
physiography	.T. uf physical geography.	
physiology	.T.	
pisciculture	.F. d use fish culture ,bt'aquaculture'.	
plains	.T.	
plant anatomy	.T.	
plant breeding	.T.	
plant collections	.T. nt 'herbaria','arboreta'.	
plant competition	.F. d use plants and biological competition.	
plant development	.F. d use plant developmental stages.	
plant diseases	.T.	
plant establishment	.T.	
plant growth substances	.T.	
plant habit	.T. use for growth form,growth habit.	
plant interactions	.F. d use interactions and biological competition.	
plant introduction	.T.	
plant life forms	.F. d use plant habit or anatomy and plants.	
plant nurseries	.T.	
plant nutrients	.F. d use nutrients and plants.	
plant physiology	.F. d use plants and physiology.	
plant population	.T. rt'germplasm'.	
plant production	.T. d use photosynthesis or yields or growth.	
plant propagation	.T.	
plant protection	.T. used for crop protection.	
plant response	.F. d use specific response,ie:growth,defoliation,death.	
plant services	.F. d use nt'mulches','shade',etc.	
plantations	.T.	
planting	.T.	
plants	.T.	
plateaux	.T. bt'physiographic features',rt'highland','plains'.	
plinthite	.F. d use laterite.	
pods	.F.	
podzols	.T.	
poles	.T. bt'roundwood'.	
policies	.T.	
political factors	.F. d use political systems.	
political systems	.T.	
pollution	.T.	
population	.T.	
population change	.T. d use population dynamics.	
population dynamics	.T.	
pore spaces	.F. used in soil science.	
potential evaporation	.F. d use evaporation.	
poultry	.T.	
precipitation	.T.	
primary forest	.F.	
primary production	.F. d use photosynthesis or bt 'biological production'.	
primitive agriculture	.F. d use agriculture or farming systems.	
production	.T.	
progeny testing	.T. bt'breeding methods',rt'selection'.	
protective plants dd	.T.	
protein content	.T.	

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AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
protein products	.T. d	use meat,milk,etc specify product.
proteins	.T.	
provenance	.F.	
pruning	.T.	
pulp & paper	.F. d	use pulpwood.
radiation	.T.	all short & long wavelength fluxes between .3-60nm.
rain	.T. bt	'precipitation'.
rainfall	.F. d	use rain.
rainfed farming	.T. rt	'dry farming',bt 'cropping systems'.
rainforest	.F. d	use tropical rain forests.
range grasses	.F. d	use grasses and rangelands.
range management	.F. d	use rangelands and management.
range plants	.F. d	use rangelands and plants.
rangelands dd	.T. bt	'grazing lands'.
ratooning	.T.	roots of a harvested crop produce a subsequent crop.
reclamation	.T.	
recreation	.T.	
reforestation	.F.	
regeneration	.T.	
relay cropping dd	.F. bt	'cropping patterns'.
remote sensing	.T.	used for satellites.
renewable resources	.T.	
reproduction	.T.	
requirements	.F.	
research	.T.	
reserves,nutrient	.F. d	use nutrient content,fat content,nutrients,etc.
resins	.T.	
resistance	.F. uf	tolerance use with drought,browsing,temperature.
resource conservation	.T. d	use conservation.
resource management	.F. d	use environmental management.
resources	.T.	
rhizobium	.T.	
rhizosphere	.T.	
right of access	.T.	
right of use	.F.	
ring barking	.T.	
rivers	.T.	
root architecture	.F. d	use roots and architecture.
root competition	.F. d	use roots and biological competition.
root crops	.T.	
root depth	.F. d	use root distribution.
root development	.F. d	use roots.
root distribution	.F.	
root growth	.F. d	use roots and plant growth.
root nodulation	.T.	
root penetration	.F.	
root system	.F. d	use root distribution.
roots	.T.	
rotational cropping dd	.T. bt	'cropping patterns',rt'ley farming','fallow systems'.

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
rotational grazing dd	.T.	
rotenone	.T.	
roughage	.T.	
row intercropping dd	.F. bt'cropping patterns'.	
rubber crops	.T.	
ruminants	.T.	
runoff	.T. bt'water balance',rt'precipitation' or 'percolation'.	
rural areas	.T.	
rural development	.T.	
rural poor	.T.	
rural population	.T.	
rural settlement	.T.	
sahel	.T. rt'semi-arid climate'.	
saline soils	.T.	
salinity	.T. d use saline soils.	
salt tolerance	.F.	
salts	.T.	
sand dune fixation	.F. d use sand dunes.	
sand dune fixation plants	.F. d use erosion control plants and sand dunes.	
sand dunes	.F.	
sandy soils	.T.	
satellite imagery	.F. d use remote sensing.	
savanna woodland	.F. d use savannas and woodland.	
savannas	.T.	
seasons	.T. bt 'periodicity'.	
secondary forest	.F.	
sedimentation	.T.	
seed bank	.F.	
seed cake	.F. d use oilseed cakes.	
seed collection	.T.	
seed dispersal	.T.	
seed dormancy	.F. d use dormancy.	
seed inoculation	.F. d use inoculation and seeds.	
seed longevity	.T.	
seed multiplication	.F. FAO term.	
seed production	.T. d use seeds and yields.	
seed storage	.T.	
seed trees	.T.	
seeding	.F. d use sowing.	
seedlings	.T. bt'plant developmental stages'.	
seeds	.T.	
selection	.T. used for selective breeding.	
selective feeding	.F.	
semi-arid climate	.T.	
semi-arid zones	.T.	
senescence	.F. d use aging.	
sequential cropping dd	.T. bt 'cropping patterns'.	
sericulture	.T.	
settlement	.F. d use rural settlement.	
shade	.F.	
shade tolerant plants	.F.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
shade trees	.I.	
shallow soils	.F. d use lithosols.	
shamba taungya	.F. d use taungya.	
sheep	.I.	
shelterbelt	.F. d use windbreaks.	
shifting cultivation	.I.	
shifting sand dunes	.F. d use sand dunes.	
shoots	.F. d use stems.	
shrub savanna	.F. d use savannas and shrubs.	
shrubs	.F.	
siltation	.F. d use sedimentation.	
silviculture	.I.	
silviculture research	.F. d use research and silviculture.	
silvopastoral systems dd	.F. bt'agroforestry'.	
silvopasture	.F. d use silvopastoral systems.	
site factors	.I. bt'environment'.	
slash & burn cultivation	.F. d use shifting cultivation.	
sloping land	.I. bt'physiographic feature'.	
sloping land	.I.	
small holder farms	.F. d use small scale farming.	
small scale farming	.I.	
social change	.I.	
social forestry	.F. d use forestry and community development.	
social problems	.F.	
social structure	.I.	
social welfare	.I.	
sociology	.I.	
soil acidity	.F. d use acid soils, soil reaction.	
soil biology	.I.	
soil chemical properties	.F. d use soil chemistry.	
soil chemistry	.I.	
soil classification	.I.	
soil compaction	.I.	
soil conditions	.F. d use soil types.	
soil conservation	.I.	
soil deterioration	.I.	
soil drainage	.F. d use drainage.	
soil enrichment	.F. d use soils.	
soil erosion	.F.	
soil fauna	.I. d use soil biology.	
soil fertility	.I.	
soil fixation	.I.	
soil formation	.F. d use soil genesis.	
soil genesis	.I. used for soil formation.	
soil leaching	.F. d use leaching.	
soil loss	.F. d use soil erosion.	
soil management	.I.	
soil moisture	.F. d use soil water.	
soil morphological features	.I.	
soil nutrients	.F. d use nutrients.	
soil organic matter	.F. d use organic matter and soils.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
soil physicochemical properties	.T.	
soil preparation	.F. d use cultivation.	
soil requirements	.T.	
soil restoration	.F. d use soil fertility.	
soil sciences	.T.	
soil structure	.T.	
soil survey	.F.	
soil temperature	.T.	
soil texture	.T.	
soil types	.T.	
soil water	.T.	
soils	.T.	
sole cropping dd	.T. bt'cropping patterns'.	
source-sink relationships	.F. rt'translocation'.	
sowing	.T.	
sowing methods	.F. d use sowing and methods.	
sown pastures	.T. bt 'ley farming'.	
spacing	.T.	
spatial combination	.F. d use cropping pattern.	
species composition	.F. d use species list.	
species distribution	.F. d use plant distribution or animal distribution.	
species list	.F. use when long listing of organisms is made in document.	
species performance	.F. d use performance and animals or plants.	
species selection	.F. d use selection.	
spice crops	.T.	
steeplands	.F. d use sloping land.	
stemflow	.F.	
stems	.T.	
stimulant crops	.T. bt 'drug plants'.	
stony soils	.T. d use lithosols.	
storage	.T. used for post harvest crop storage.	
stress	.F.	
strip cropping dd	.F. bt'cropping patterns'.	
stripping	.F. def:see EF.	
stripping regime	.F. d use stripping and methods.	
structure	.F.	
sub-humid zones	.F.	
subsidies	.T.	
subsistence economy	.F. d use subsistence farming.	
subsistence farming	.T.	
surveying	.T. d use inventory.	
swamps	.T.	
swidden agriculture	.F. d use shifting cultivation.	
sybiosis	.T.	
systems analysis	.T.	
tannins	.T.	
taungya system dd	.F. bt 'agrosilvicultural systems'.	
taxes	.T.	
taxonomy	.T.	
techniques	.F. d use methods.	
technology	.T.	

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AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
technology transfer	.T.	
temperate climate	.T.	
temperature	.T.	
tenure	.T.	
termites	.T.	
terrace cropping	.T. bt 'cropping systems'.	
thinning	.T.	
thorny vegetation	.F. d use microphyllous trees or shrubs.	
three dimensional cropping	.F. d use cropping patterns.	
throughfall	.F. used for nutrient throughfall,rt'percolation'.	
tillage	.T.	
tillering	.T. production of shoots from crown of a plant.	
timber	.F. d use wood.	
tolerance	.F. d use resistance.	
topography	.T.	
toxicity	.T.	
trade	.T.	
traditional crop	.F. d use traditional farming and crops.	
traditional farming	.T. rt'farming systems'.	
traditional land use	.F. d use traditional farming.	
traditional medicine	.F. rt'medical sciences', 'drug plants'.	
training	.T.	
transhumance	.T. bt 'nomadism'.	
translocation.	.T.	
transmission	.F. used for transmission of light.	
transpiration	.T.	
tree association	.F. d use trees and interactions,rt'plant ecology'.	
tree crops	.F.	
tree density	.F. d use spacing.	
tree establishaent	.F. d use plant establishment.	
tree farming	.F. def:plantation forestry by farmers.	
tree felling	.F. d use trees and harvesting.	
tree gardens dd	.F. nt 'home gardens', 'mixed gardens', 'forest gardens'.	
tree growth	.F. d use growth and trees.	
tree improvement	.F. d use selection.	
tree legume 1	.F. d use trees and Leguminosae(botany)or legumes(feed,	
tree legume 2	.F. ...grain or vegetable legumes)	
tree pests	.F. d use pests.	
tree plantations	.F. d use plantations.	
tree planting	.F. d use planting and trees.	
tree products	.F. d use trees and products.	
tree propagation	.F. d use plant propagation.	
tree rights	.F. d use trees and right of use and/or ownership.	
tree savanna	.F. d use savanna.	
tree savannas	.F. d use trees and savannas.	
tree seed	.F. d use seeds and trees,see also seed trees.	
tree seed germination	.F. d use germination.	
tree species chemistry	.F. d use trees and composition.	
tree species list	.F. d use trees and species list.	
tree tenure	.F. d use trees and tenure.	
tree use rights	.F. d use right of use and trees.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
trees	.T.	
trials	.T.	
tropical climate	.T. rt'humid tropics','sub-humid tropics'.	
tropical ecosystem	.F. d use ecosystem.	
tropical forest	.F. d use tropical rain forests.	
tropical forest classification	.F. d use classification.	
tropical forest soil	.F. d use forests and soil.	
tropical forest spatial arrangement	.F. d use structure and canopy,rt'multistoried cropping'.	
tropical forest species	.F. d use trees and species list and forests,or name specie	
tropical forest surveys	.F. d use inventories.	
tropical fruits	.T. d use fruits.	
tropical rain forests	.T.	
tropical seasonal forests	.T.	
tropical trees	.F. d use trees.	
tropics	.T.	
turpentine	.T.	
underexploited plants	.F. d use botanical species name of plant.	
understory plants	.F. d use shade tolerant plants,see also canopy & structure	
underutilized tree crops	.F. d use botanical species name.	
upland cropping dd	.T. rt'rain fed farming',bt'cropping patterns'.	
upland rice	.T. rt 'upland cropping'.	
use rights	.F.	
uses	.T.	
utilization	.F. d use uses.	
valley development	.F. d use valleys.	
valleys	.T.	
variation	.F. used for genetic or phenotypic variation.	
varieties	.T.	
vegetable crops	.T.	
vegetables	.T.	
vegetation	.T.	
vegetation survey	.F.	
vegetative propagation	.T.	
veld	.T. bt'grasslands'.	
vertisols	.T.	
viability	.F. used for seed viability.	
village forestry	.F. d use forestry and community development.	
villages	.T.	
vines	.F. d use climbers.	
virgin lands	.T. uf virgin forests.	
wastes	.T. d use crop residues or animal manures,see LP	
water	.T.	
water availability	.T. bt'site factors'.	
water availability	.T. bt'site factors'.	
water balance	.T.	
water catchments	.F. d use catchment areas.	
water competition	.F.	
water conservation	.T.	
water content	.F. d use moisture content.	
water erosion	.T.	
water management	.T.	

AGROFORESTRY DESCRIPTORS

DESCRIPTORS	AGROVOC	SCOPE NOTES
water potential	.F.	used for plant water potential.
water requirements	.T.	
water resources	.T.	
water supply	.T.	
water uptake	.T.	
watershed management	.T.	
watersheds	.T.	rt 'catchment areas'.
wax	.F.	d use waxes.
waxes	.T.	
weathering	.T.	
weed control	.T.	bt 'pest control'.
weeding	.T.	
weeds	.T.	
weight gain	.T.	
wet season	.T.	
wild food plants	.F.	use for edible wild plants.
wildlife	.T.	
wildlife conservation	.F.	d use nature conservation.
wind erosion	.T.	
wind erosion control	.F.	d use wind and erosion control.
windbreaks	.T.	use for shelterbelts.
winds	.T.	
women	.T.	
wood	.T.	
wood production	.F.	d use wood and biological production or yields.
wood products	.F.	d use wood and products.
wood requirements	.F.	d use wood and uses.
woodfuel	.F.	d use fuelwood.
woodlands	.T.	
woodlots	.F.	
woody feed crops	.F.	uf trees or shrubs used as browse or fodder.
woody legumes	.F.	d use Leguminosae and trees or shrubs.
woody perennials	.F.	
woody plants	.F.	nt'trees or shrubs'.
woody weeds	.F.	d use weeds and trees or shrubs or woody plants.
wool	.T.	
workers	.T.	d use labour.
yields	.T.	
zero grazing	.F.	use for feedlots.
zero-tillage	.T.	
zootechny	.T.	