

## Classification of land use data

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### Classification of data

For the data collected under the 2007 global survey, the classification system developed for the 2006 survey was used, but slightly modified. When the 2006 survey began, FiBL did not yet have a classification system, as it was not known what kind of data would be available, if any (Baraibar 2006). As the data were collected, a classification system was developed according to the kind of data received. FiBL and SOEL are planning to improve the classification system and to ultimately bring it in line with classification systems that are currently being developed for organic farming.

As with the 2006 survey (Baraibar 2006), the following problems were found<sup>3</sup>:

- Standardization on a world level is lacking, and data is seldom comparable between countries, even though availability and quality of the statistics have improved in many countries.
- The perception of agriculture in different countries generated a huge variety of ways to provide the information, and aggregation levels vary significantly.
- Other ranking problems occurred when trying to classify a crop used in differing ways around the world (e.g. flax can be an industrial crop used for fiber or an oilseed).

### The FAO statistical system

For this survey, the general FAO classification system for main land uses<sup>4</sup> was utilized with slight modifications. Five main levels were used to classify the land use and crop data: arable land, permanent crops, permanent pastures/grassland, other crops and other. Wild collection was not included into the general survey, even though the data were stored when available.

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<sup>3</sup> As described by Baraibar (2006) organic data collection, processing and classification on a global level are not yet as developed as for agriculture in general. In spite of the dynamic growth of organic farming in many countries, most existing systems for agricultural statistics do not include organic agriculture figures. Many efforts, however, are currently being made – for instance by the FAO (Mayo 2004) or by Eurostat – to build a standardized system that will finally make it possible to have high quality, easily accessible and comparable statistical information. Another current activity is the European funded project European Information System for Organic Markets (EISFOM), aiming to develop a framework for the collection and processing of reliable and comprehensive data on organic production and markets (Rippin et al. 2006).

<sup>4</sup> This system is used for instance by Faostat to classify land use data and can be found at FAOSTAT (<http://faostat.fao.org/>) > Archives > Land use and irrigation <http://faostat.fao.org/site/418/default.aspx>, download of January 7, 2007

The main land use categories from the FAO were modified for the global organic survey as follows<sup>1</sup>:

- **Arable Land**

Land under temporary crops, temporary meadows for mowing or pasture, land under market and kitchen gardens and temporarily fallow land (less than five years). Abandoned land resulting from shifting cultivation is not included in this category. Data for 'Arable land' are not meant to indicate the amount of land that is potentially cultivable.

- **Permanent Crops**

Land cultivated with crops that occupy the land for long periods and need not to be replanted after each harvest, such as cocoa, coffee and rubber. This category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land with trees grown for wood or timber.

- **Permanent Pasture**

Land used permanently (five years or more) for herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land).

- **Other crops (FAO: Non-arable and permanent crops)**

This category was used for crops that did not fit into the other categories or for which details were not known. For this survey, the category was also used when crops of the arable and the permanent crop category had been put into one group by the data suppliers (e.g. olives and annual oil crops).

- **Other**

The FAO has a category 'Forest and Woodland'. In this survey, forest, aquaculture and the unutilized land categories were all grouped under 'Other'.

- **No information**

This category covers land for which no details were available.

### ***Data Storage and classification***

The huge amount of information gathered was entered into a database created for this purpose. The data was entered into this database at three levels:

1. Main category (arable land, permanent crops, permanent pastures/grassland, other crops, other). The main categories have already been explained (see above).

2. Crop category (main crop groups like cereals)

This second category was used to classify the main groups of crops within each main category. Because the information provided was very different from one country to another, this classification level aims to include the most important crop groups all over the world.

3. Crop (individual crops)

This last category includes specific crops grown organically around the world. They can be as specific as 'maize for silage' and general as 'greenhouse cultivated vegetables'.

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<sup>1</sup> See FAOSTAT homepage at <http://faostat.fao.org/> > Metadata > Concepts and definitions > Methodology (search) > 'Land use' at <http://faostat.fao.org/site/362/default.aspx>, download of January 7, 2007

The classification used for the data gathered in the survey is below. The fact that a crop is not included in this table does not mean that it is not grown organically, but that no specific data it was received.

### **Arable land**

- Cereals  
Ajonjoli, amaranth, barley, buckwheat, emmer wheat, grain maize, oats, rice, rye, quinoa, sorghum, spelt wheat, triticale, wheat, other cereals
- Field fodder growing  
Feed legumes, Lucerne (Medicago), maize for silage, maslin (mixed cultivation of either different cereals or mixed cultivation of cereals and pulses), temporary grassland, other field fodder growing
- Flowers and ornamental plants  
Roses, tagetes, other flowers and ornamental plants
- Medicinal and aromatic plants and spices,  
*Aloe Vera* (Sabila), black pepper, caraway, citronella, chamomile, geranium, ginger, herbs for essential oil, lavender, leaf herbs, lemongrass, patchouli, sienna pods, ververt
- Industrial crops  
Cotton, flax, hemp, jojoba, other industrial crops
- Oilseeds  
Mani (*Arachis hypogaea*), pumpkin seeds, rape and turnip rape, safflower seeds, sesame seeds, sunflower seeds
- Vegetables  
Brussel sprouts, cabbage, carrot, garlic, greenhouse cultivation, onion, parsley, pepper, Savoy cabbage, other vegetables, tomatoes
- Root crops  
Fodder roots and brassicas, potatoes, sugar beets, other root crops
- Protein crops  
Beans, legumes, peas, pulses, soy, other protein crops
- Other arable crops  
Chile, 'esponja' (*Luffa acutangula*), jamaica, tobacco, panela, other arable crops
- Seed production  
Seeds and seedlings
- Set-a-side/ green manuring

### **Permanent crops**

- Fruits and nuts  
Almonds, apples, apricots, blackberry, blueberry, carob trees, cherries, chestnut, citrus, lemon, fig, hazelnut, nuts, peach, pear, peanuts, pecano (*Carya illinoensis*), pimberrien, plum, pomegranate, raspberry, sour cherry, strawberries, walnut kernel, other fruits and nuts
- Grapes  
Grapes, sultanas, currants
- Olives
- Coffee  
Coffee and coffee associated with other crops
- Cocoa

- Sugarcane

- Tropical fruits

Araza or Amazon peach (*Eugenia stipitata*), avocado, banana, cactus, coconut, dates, guava, guineo, jocote (*Spondia Purpurea* L), litchi, mamey (*Mammea americana* L), mango, 'marañon' (*Anacardium occidentale* L), 'nanche' (*Byrsonima crassifolia*), orito (*Musa acuminata*), papaya, passion fruit, pineapple, pitaya (*Hilocereus undatus*).

- Permanent crops

Various Hops, guar gum, gum Arabic, hibiscus, kiwi, kaki, macadamia, neem (*Azadirachta indica*), palm oil, palmito (*Bactris gasipaes* Kunth), vanilla, yucca, Other permanent crops

- Tea

Other crops

- Unknown/mixed, e.g. permanent crops and arable crops together.

### ***Permanent pastures***

- Permanent pastures, permanent meadows

Other

- Unutilized land, forest, aquaculture

### ***Further Reading***

Baraibar, Bárbara (2006): Contacts and Data Sources. In: Willer/Yussefi (Eds.) *The World of Organic Agriculture 2006*, International Federation of Organic Agriculture Movements, Bonn, Germany and Research Institute of Organic Agriculture FiBL, Frick, Switzerland

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Rippin, Markus (2006) *Classification List for Land Use and Livestock Data*. Zentrale Markt- und Preisberichtsstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH, DE-Bonn. <http://orgprints.org/9109/>

Rippin, Markus; Willer, Helga; Lampkin, Nicolas and Vaughan, Alison, Eds. (2006) *Towards a European Framework for Organic Market Information*. Proceedings of the Second EISfOM European Seminar, Brussels, November 10 & 11, 2005. Research Institute of Organic Agriculture FiBL, Frick, Switzerland. <http://orgprints.org/6054/>