



## SUPPORTING HEALTHY PASTURES FOR THE ENVIRONMENT AND LIVESTOCK

Increasing human and livestock populations, as well as increased cropland and intensification of cropping systems, affect the sustainability of natural grassland ecosystems. As grassland ecosystems are usually in fragile environments unsuited to intensive exploitation, farmers, herders, ecologists, policy-makers and economists need to look for a way to combine grassland production and protection.

Many answers can be found in the organic agriculture system. **Organic production methods and certification standards applied to grasslands contribute to the maintenance of the ecosystem, add value to grasslands products, assure income generation to their users, and promote animal welfare.** Yet organically certified and managed grasslands account for only a small fraction of the grasslands worldwide.



Grasslands, which are immensely different in their climatic needs, physical conditions, cultural and historical roots and economic situations, contain 24 percent of the world's vegetation and cover about 4.6 billion ha (42.8 percent of the earth's surface) of which 9 million ha are organically certified. Grasslands are of prime importance in global carbon budget, maintenance of flora and fauna biodiversity, control of desertification, maintenance of soil fertility, and the living conditions of the population.

Grasslands can be natural, made up of indigenous species and managed with few external inputs. Or, they can be temporary, used in rotation, alternating between cropland and grassland and intensively managed.

**Natural grasslands** produce with very few or no external inputs, maintain soil fertility and ground cover, and contribute to the maintenance of biodiversity and ecosystem functions. Most natural grasslands are relegated to the more marginal lands of the South American pampas, the Eastern European and North African steppes, high mountain areas, the Sahelian, Soudano and savannah zones of Africa, and North American prairies.

In terms of meeting organic objectives, **temporary grasslands** offer a number of advantages including easier maintenance of high clover content, easy exploitation of residual fertility by arable crops, minimized weed development and better possibilities to provide regular, clean worm-free grazing. However, establishment costs are high.



Natural grasslands, Lake Chad



Free-range pigs in temporary pasture, Switzerland

Organic farms in regions with climate, soil type and topography well suited to cropping are likely to have a mixed crop/grassland system, while permanent grasslands are more frequent in fragile environments and low potential



Natural pasture, Burundi

areas. Because organic standards restrict crop and livestock inputs, **farmers need to employ preventative approaches to crop and livestock husbandry such as crop nutrient supply, weed control and animal health if they are to build and maintain a viable organic system.**

Well-managed grasslands used for extensive grazing, such as those in Australia and Argentina, offer opportunities to add value to livestock products on the market through organic certification.

ORGANIC RESTRICTIONS	IMPLICATION FOR GRASSLAND MANAGEMENT
No soluble nitrogen	Emphasis on legumes
Minimal use of mineral phosphorus and potassium	Emphasis on efficient nutrient cycling within the farm
No synthetic herbicides	Design management to minimize weed invasion
Minimum amount of purchased feed, minimum proportion of forage in ruminant diets, prohibition of certain high protein feeds	Maximize livestock nutrient supply from forage produced on the farm, especially high protein forage
No routine preventative use of veterinary medicines	Manage grazing to minimize build-up of parasite and disease problems

**Implications of the organic standards on grassland management**

The Grassland and Pasture Crops Group of the FAO Plant Production and Protection Division is looking into alternatives for certification in communal pasture systems and is preparing "Guidelines on organic pasture production in arid and semi-arid communal rangelands".



Natural grasslands, Caucasus