

Excerpt from the Bio Suisse Standards

## Requirements for a balanced crop rotation in accordance with Bio Suisse standards

### Soil protection and soil building

- a) At least 20% of the crop rotation must protect or improve the soil or accumulate nutrients. Examples of such crops include:
- grain legumes or mixtures of grain legumes (e.g., soybeans, peas, broad beans, lupines, oats/peas, vetches)
  - green manure (relative to the cropping period, e.g., 1 ha of green manure with a 6-month cropping period counts as 0.5 ha)
  - fallow land or crop residues with a spontaneous plant cover (relative to the cropping period, e.g., 1 ha of spontaneous plant cover with a 6-month cropping period counts as 0.5 ha) leys or sown legumes (e.g., clover/grass mix, alfalfa)
  - leys or sown legumes (e.g., clover/grass mix, alfalfa)
- b) Outside of the growing season, at least 50% of the open arable land must have sufficient plant cover (living or dead). The growing season is defined as the main production period for a specific crop in a specific pedoclimatic zone (e.g., in arid or semi-arid regions of the northern hemisphere, the growing season for durum wheat and vegetables is during the winter).

### Rotation breaks

For annual arable and field vegetable crops there must be at least a twelve-month rotation break between two main crops of the same species.

### Rules for derogations concerning rotation breaks

- a) Rice may be planted for a maximum of three in five consecutive years in temperate climate zones, which means that no rice may be planted in two of five years. This rule may be waived in tropical climate zones if all provisions regarding soil protection and soil building are met.
- b) The requirements regarding a rotation system with rotation breaks between the two main crops do not apply to vegetable and herb gardens or to pineapple cultivation.
- c) In justified cases, an exemption from the above rules may be made. In such cases, Bio Suisse checks whether the latest crop rotation is sustainable and in compliance with the Bio Suisse Standards, based on the following criteria:
- Balanced humus management
  - Prevention of erosion
  - Prevention of nutrient losses (due to eluviation and leaching)
  - Preventive crop protection
  - Nutrient supply (through accumulation and mobilisation)
  - Enhancement of biodiversity (through diversity of the crop rotation)

### Exception for operations with less than 1 ha of open cropland

Operations with less than 1 ha of open cropland are not required to satisfy the crop rotation requirements in principle as defined under Soil fertility Part II, Chap. 2.1, Page 64.

### **Rules for derogations concerning sugarcane**

Sugar cane production must meet the following requirements:

- Sugar cane may not be grown for more than 10 consecutive years on the same plot.
- Prior to each new planting of sugar cane, crops other than sugar cane must have been grown on the same plot for a period of no less than six months.
- The requirement that 20% of the crop rotation must protect or improve the soil or accumulate nutrients does not need to be met for sugar cane.

### **Specific regulations for quinoa cultivation at altitudes higher than 3000 m above sea level**

- Where crop rotation with legumes or other kinds of green manure is not possible, quinoa may only be grown every third year, and no tillage may take place for at least 18 months. During this period there must be sufficient spontaneous plant cover to prevent erosion.
- A field of quinoa may not be larger than 1 ha and must be protected by windbreaks. The windbreaks should be 2 to 3 m wide and should comprise at least 10% of the cropland.
- Minimal tillage: A disc plough or other deep tillage implement may only be used to incorporate farmyard manure into the soil. Otherwise, only shallow tillage, for instance by means of a harrow or hoe, is permitted.