

Excerpt from the Bio Suisse Standards

Water resources management

Based on Bio Suisse mission statement in part I.

Water is a valuable natural resource that is not infinitely available. Operations certified under the Bio Suisse Standards use water sparingly and efficiently. Adverse effects on humans and the environment are avoided. These include disturbances to natural cycles, negative impacts on natural flora and fauna, and adverse effects on the quality and quantity of groundwater and surface water and on the quality of harvested products.

1 General requirements

The requirements must be met by all operations that are certified according to the Bio Suisse Standards, regardless of whether the operation is located in a water risk area or an area with sufficient water resources.

1.1 Quality of groundwater and surface water

The quality of groundwater and surface water must not be impaired by effluents or seepage from agricultural or processing activities, company housing or management measures such as the storage of farmyard manure.

1.2 Irrigation and product quality

Irrigation water may not impair the quality of harvested products. This especially applies to irrigation water that flows through non-organic plots prior to being used on an organic farming operation (e.g. in paddy fields) or that could be contaminated by pathogenic bacteria, parasites or pesticides. Water or product analyses must be furnished if there is a high risk of contamination or if required by the BSO certification body.

1.3 Irrigation and soil fertility

Good soil fertility is the basis of sustainable water management. The quantity and availability of water reserves in the soil depends greatly on the proportion of organic substance, which increases the soil's field capacity. The objective is to achieve soil with a higher field capacity in order to use as little irrigation water as possible. Irrigation may not have an adverse effect on the natural fertility of the soil (e.g. through topsoil salinisation or erosion). If there is a greater risk or increased water consumption, or if erosion or salinisation of the topsoil are discovered, suitable measures must be implemented.

2 Use of water in areas with water risks

Operations in areas with water risks must meet additional requirements. This only applies to operations with irrigation, not to operations that only use rainfed agriculture (without water management).

2.1 Definitions

All Bio Suisse decisions about whether an operation is situated in an area with water risks are backed by solid scientific evidence.

In the interest of gradual implementation, operations categorised with the indicator "Water Depletion" in accordance with the World Resources Institute's (WRI) Aqueduct Water Risk Atlas will be first. The Aqueduct Water Risk Atlas is available at www.wri.org. Areas that are categorised as "High" (50%–75%) or "Extremely high" (>75%) in accordance with the indicator "Water Depletion" or that are located in a desert region that is labelled with "arid and low water use" are considered areas with water risks.

2.2 Water management plan

Operations and producer groups in areas with water risks must devise a water management plan. The plan is comprised of three parts: general information on irrigation, a risk analysis including plan of action, and current records kept in a separate table. The operations or producer groups concerned must analyse the risks to which they are exposed in connection with water usage and take measures to reduce or avoid these risks. The water management plan must accurately represent the current situation of the operation. Bio Suisse offers operations a water management plan template at international.bio-suisse.ch

Operations in water risk areas must submit their water management plan (WMP) annually during inspection. The water management plan must be updated and submitted with the signature of the inspection body at least every three years. Documents that are referenced in the water management plan must be enclosed. The records in the separate table must be kept continuously. The water management plan is reviewed in stages by the certification body and is designed to be expanded upon. Bio Suisse ensures that the requirements from Use of water in areas with water risks Part V, Art. 3.6.2, harmonise with the Naturland e. V. standards and will put procedures in place to allow for mutual acknowledgement of the results of the inspection process.

2.3 Irrigation systems

Only comprehensively efficient and water-conserving irrigation systems may be used in areas with water risks. "Efficient" is defined here as economical usage of the available water (e.g. rain water reservoirs) and the energy required for this purpose (e.g. for boreholes, desalination plants), as well as avoiding unnecessary loss (e.g. through the use of covered reservoirs). Water consumption must be documented and regular maintenance must be carried out. If any defects are discovered during inspection, measures for improvement must be implemented.

2.4 Origin and quantity of irrigation water

Operations in water risk areas must record all information about the origin and quantity of irrigation water in their water management plan or the corresponding table. All quantitative information on water consumption (m³ irrigation water per hectare of irrigated land and year) as well as information on the origin of the water, the water rights and the local climate, as well as the quality of the irrigation water as per the parameters of the FAO (www.fao.org) are recorded in the water management plan or a table that is included as an attachment to the water management plan.

2.5 Legality of all water extraction

In countries with legal regulations on water use, the national or regional laws and provisions must be complied with. Proof of legality from the corresponding government authority must be enclosed with the water management plan for all water extractions. In countries without legal regulations on water use (or insufficient regulations), all other required appendices in accordance with the water management plan must be submitted in conformity with the principle of governance. For producer groups with an internal control system (as per Producer groups Part V, Art. 3.1.1.3), the completeness of the proof of legality must be taken into account in the internal manual and verified as part of internal inspection.

2.6 Cooperation with relevant stakeholder groups (water stewardship)

With regard to water management, BSO producers must identify relevant stakeholder groups and actively work with them to achieve progress in the sustainable use of water, both at the level of the individual operations and at the regional level (e.g. watersheds). The identified stakeholder groups, the sustainability efforts of the producer and all planned or completed optimisation measures must be documented in the water resources management plan.

2.7 Additional requirements for the use of water in areas with a desert climate

The use of water for irrigation in areas with a desert climate (as per the world map of the Köppen-Geiger climate classification created by the Oak Ridge National Laboratory webmap.ornl.gov, climate category BWh) is only permitted under certain conditions:

- Irrigation is carried out between 6 p.m. and 10 a.m.
- Annual crops may only be cultivated during the winter season.

The BSO certification body can grant derogations for farming operations in traditional cultivation zones. Traditional cultivation zones are cropland that has been cultivated year-round since 1960.

3 Use of non-renewable water resources

The use of non-renewable (fossil) water resources for agricultural production is only permitted if credible documentation can be furnished in the application form (available upon request) that the abstraction poses no serious ecological or socioeconomic risks. The analysis must take account of the entire water catchment area and all aquifers, and include the possible ecological and social consequences for other regions or countries. Both short-term and long-term risks must be analysed. The water management plan and the application form must be submitted to Bio Suisse for assessment prior to certification.