



Template Management plan for sustainable water usage

Based on: The Bio Suisse Standards, part V, section 3.6

1. Introduction

BIOSUISSE ORGANIC farming operations in areas with scarce water resources (see definition in the Bio Suisse Standards, part V, section 3.6.2.1) must devise a management plan which must be signed by the farm operations manager. The present document may be used as a template.

The management plan must comprise three parts:

- a) A risk analysis
The purpose of a risk analysis is to address the risks to which your farming operation is exposed in connection with water usage. It should be based on the points outlined in the Bio Suisse Standards under "Water resources management". The risk analysis should accurately depict the situation of your farming operation.
- b) A plan of action
The plan of action will define all measures that you have already taken or that must still be taken to eliminate or mitigate identified risks.
- c) Records
All measurements that you make in compliance with the Bio Suisse standards should be recorded here. Analyse these figures to make decisions pertaining to resource management and to introduce improvements.

2. The accuracy of the information must be confirmed by the farm operations manager

The management plan must be truthfully completed by the farm operations manager. The responsible person is obliged to implement any changes to the management plan and to remedy existing deficiencies within a reasonable period of time. This management plan and all relevant documentation may be checked for accuracy and completeness during inspections.

Name of the project / farming operation:	
Farm operations manager:	
E-mail:	

I confirm the accuracy of all details given in this management plan.

Farm operations manager:

Date:

Signature:

Last updated:

Signature:



3. Risk analysis and plan of action

Quality of groundwater and surface water; quality of products (Bio Suisse Standards, part V, sections 3.6.1.1 and 3.6.1.2)			
Risks on the farming operation	Measures to be taken	Date	Completed
See appendix for examples.	See appendix for examples.		

Adverse effects on soil fertility (Bio Suisse Standards, part V, section 3.6.1.3)			
Risks on the farming operation	Measures to be taken	Date	Completed
See appendix for examples.	See appendix for examples.		



Efficient irrigation systems (Bio Suisse Standards, part V, section 3.6.2.3)			
Risks on the farming operation	Measures to be taken	Date	Completed
See appendix for examples.	See appendix for examples.		



4. Records (Bio Suisse Standards, part V, section 3.6.2.4)

4.1. Lists and map of water sources and irrigation facilities

Please list here all sources of water used (such as rivers, streams, ponds, groundwater, etc.) and all irrigation facilities (such as wells, pumps, reservoirs, distribution systems, etc.), and enter them on a map. The map must be attached to this document.

Designation of water source on the map	Type of water source
...	

Designation of irrigation facility on the map	Type of irrigation facility
...	

4.2. Amount of water used and the groundwater level

Please record here the amount of water (in cubic metres) used on your farming operation and (if there is a well) the groundwater level (in metres).

	Calendar year:	Comments
Total amount of water used (m³)		
Water usage per hectare (m³)		
Groundwater level (m)		<i>Measure every well. Measure on the same day of each year.</i>
Groundwater level (m)		<i>Measure every well. Measure on the same day of each year.</i>
...		

4.3. Cooperation with stakeholder groups (inter-operational cooperation, water stewardship)

Please enter the following into the table:

- With which stakeholder groups does your operation cooperate to achieve the sustainable use of water, both at the level of the individual operations as well as at the regional level (e.g., public authorities, other operations, nongovernmental organizations, water user associations, etc.)?
- How does your operation cooperate with these stakeholder groups?
- Which measures for improvement are planned (incl. date of planned implementation)?
- Which measures for improvement have already been implemented (incl. date)?



Identified stakeholder groups	Kinds of contact with stakeholder groups	Planned measures for improvement	Implemented measures for improvement

4.4. Use of nonrenewable water resources

If nonrenewable (fossil) water is used on your farming operation, you must ensure that its abstraction poses no ecological or social risks. Bio Suisse provides an application form which must be furnished to Bio Suisse for assessment prior to certification.

APPENDIX

Catalogue of examples of potential risks and possible measures

Quality of groundwater and surface water; quality of products (Bio Suisse Standards, sections 3.6.1.1 and 3.6.1.2)

Sample questions for risk analysis	Possible measures (examples)
<ul style="list-style-type: none"> • Have the groundwater, surface water or products of the farming operation ever been contaminated by wastewater or effluents? • How great is the risk that this may occur (again)? 	<ul style="list-style-type: none"> • Take precautions to prevent the movement of pollutants (e.g., by storing manure and fertilizers properly so that effluents cannot seep away or are captured). • Apply fertilizer as appropriate to the site, at proper times and according to need. • Ensure that residues of plant protection products cannot seep into the soil: Properly store plant protection products, and dispose of residues in a proper manner.
<p>Are any households on the farming operation <u>not</u> connected to the public sewage system?</p>	<ul style="list-style-type: none"> • Protect surface waters from spray drift by choosing suitable days of application, using appropriate application techniques and implementing protective measures (such as installing windbreaks or nets).
<p>Are the storage and disposal of sewage and waste materials properly managed?</p>	<ul style="list-style-type: none"> • Create buffer zones. • Regularly check and calibrate spraying equipment. • Collect household and farmyard wastewater in a septic tank or slurry pit and dispose of it in an efficient manner that does not harm the environment.
<p>Have all storage facilities for fertilizers, plant protection products, fuel, etc. (collecting tanks, indoor storage sites, fireproofing, etc.) been critically checked?</p>	<ul style="list-style-type: none"> • Plant or maintain riparian trees along the edges of surface waters. • Ensure that garages and machinery rooms are equipped with oil-water separators. • Prevent oil leakage from pumps and other equipment.
<p>Have the social, economic and environmental impacts of water abstraction on the immediate vicinity or on downstream areas been assessed?</p>	<ul style="list-style-type: none"> • Use only potable water for irrigation. • Regularly check irrigation water for contaminants (heavy metals, pesticide residues, microbial pathogens). • Take precautions to prevent the pollution of irrigation water (e.g., by covering irrigation water reservoirs and keeping wells clean). • Either refrain from using water which has flowed through non-organic plots, or check first for potential contaminants (e.g., before use in paddy fields).
<p>...</p>	<p>...</p>

Adverse effects on soil fertility (Bio Suisse Standards, part V, section 3.6.1.3)

Sample questions for risk analysis	Possible measures (examples)
Is there any danger of salt crust formation?	<ul style="list-style-type: none"> • Carry out regular monitoring. • Minimize soil loss and erosion by means of suitable cultivation techniques (e.g., contour ploughing; refraining from intensive tillage; drainage; ground cover; green cover; humus management). • Identify salt crusts and instances of leaching. • Ensure that drainage channels feature ramps and detention basins. • Build terraces and dams; plant hedgerows. • Sow crops in strips and along contours.
Is there any danger of erosion due to water?	
Is a system in place for the early identification of salt crusts or instances of erosion?	
Is a system in place to monitor the implementation of measures?	
...	...

Efficient irrigation systems (Bio Suisse Standards, part V, section 3.6.2.3)

Sample questions for risk analysis	Possible measures (examples)
How efficient is the irrigation system?	<ul style="list-style-type: none"> • Examine records of water usage on the farming operation at different levels for accuracy, reliability and plausibility. • Ensure that employees assigned to irrigation work receive proper training. • At the end of the season, the farm operations manager could meet with irrigation employees to discuss potential measures for improvement. • Identify sources of water loss; discuss and document any problems that have occurred during the operation and maintenance of the irrigation system. • Assess whether irrigation is conducted with due consideration for climatic conditions. • Endeavour to conduct irrigation according to recommendations issued by recognized local institutions and public authorities, and subsequently note any deviations. • Regularly review and evaluate the duration and frequency of irrigation cycles. • Keep track of water consumption from parcel to parcel or from year to year. • Calculate the water footprint (litres of water per kilo of harvested product). • Compare irrigation plans to actual water consumption. • Consider investing in improvements to the system. • Evenly distribute irrigation water (e.g., by means of short irrigation intervals or by equalizing pressure). • Filter and/or treat irrigation water before use.
Is the system optimally adapted to the situation of the farming operation?	
Must a derogation be obtained from Bio Suisse?	
Is the equipment/filter protected against blockage?	
...	...