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fair-fish guidelines for fish farming

Objectives

fair-fish wants to stimulate species-appropriate fish-farming with respect to the animals concerned and the environment. Whether a fish farm meets the needs of the fishes has to be decided by comparing the behaviour in the farm with the behaviour observed in the wild, on the most recent state of experience and biological and ethological findings as represented in FishEthoBase[1].

The aim is a respectful production of fish as alternative to more questionable ways of providing animal protein (intensive terrestrial animal husbandry; depletion of the seas; highly intensive aquaculture). The input of animal protein in the fish feed, of additionally bought offspring, of artificial aeration and of chemical-synthetic adjuvants as well as the handling of fishes shall be reduced step by step.

The fair-fish guidelines serve as an orientation for innovative developments in the sense of the aims of fair-fish. These guidelines will integrate innovations in practice thus promoting the innovation and advancing the guidelines.

Development of the guidelines

In the pursuit of the aim, requirements going one step further in a future version of these guidelines are explicitely reserved.
The guidelines are defined by the guidelines commission of fair-fish international after consulting the boards of the fair-fish associations.
If the guidelines are used as basis for certification, prior to any change of its requirements a stakeholder round (academia and field) has to be performed.

Area of validity, Fair trade

The present guidelines are applicable on fish farms located inside the EU, in Norway, Iceland, Switzerland, Northern America and Oceania. Previous to the applica-tion in other countries the guidelines are to be completed by Fair trade provisions in analogy to the fair-fish guidelines for fisheries.

[1] http://fishethobase.fair-fish.ch/en

The present guidelines are part of a licensing agreement between the fair-fish association and the responsible person of a fish farm. The following points are addressed to this person.

1. Species

1.1	The admission of species for farming under fair-fish guidelines is principally directed by their appropriateness
	• to the local climate,
	• to be kept in basins, raceways, net cages or ponds,
	• for a most gentle reproduction
	as well as by the availability of sustainably produced and species-appropriate feed.
1.2	For each species fair-fish releases specific guidelines which mirror the most recent state of ethologic research according to FishEthoBase[2].
1.3	Species not yet described by FishEthoBase cannot be admitted.
1.4	In the case of net cages, only native subspecies from the water body in question can be admitted.

2. Breeding and origin

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2.1	Produce the required offspring on your own farm. As long as this is not possible, the additional purchase of juveniles or eggs of the admitted species is allowed:
	• from other farms with a fair-fish licence,
	• from other breeding farms approved by fair-fish.
2.2	Additionally bought fishes must spend at least the last two third of their lives on your farm and according to the requirements of fair-fish.
2.3	The following actions are not allowed:
	• to genetically manipulate the fishes or to use genetically modified fishes,
	• to produce polyploid fishes,
	• to reverse sex by use of hormones and
	• to obtain sexual maturity by hormonal treatment.

[2] http://fishethobase.fair-fish.ch/en

3. Systems, environment, water quality

3.1	Adapt the system to the given landscape and avoid incisive change of the small-scale structure.
3.2	Prevent contamination of the system (by industry, business, intensive agriculture or pasture farming) by forsighted selection of the site or other provisions.
3.3	Select an appropriate shape and surrounding of the system to ensure the equal distribution of the feed and a good mixing of the water.
3.4	As far as the natural oxygen content of the water supply is not sufficient, design the inlet – eventually by mechanical means – so that the water can absorb as much oxygen as possible. Mechanical aeration in the ponds or basins itself is only admitted in periods of low oxygen concentration (summer nigths), but not permanently.
	No other artificial aeration procedure is allowed.
3.5	In addition, provide evidence of an environmentally acceptable production by having ascertained the fulfilment of the guidelines of one of the following organisations: • an organic federation approved by the competent authorities of the state your farm is located in, • Friend of the Sea (FOS), • Aquaculture Stewardship Council (ASC).

4. Measurements

4.1	Measure at least water temperature and oxygen concentration regularly.
4.2	Have your farm controlled at least twice a year of epidemics, pH-value and bacteria.
4.3	Record all measured values continuously in the breeding journal (see 11.1).

5. Stocking density and housing system

5.1		The stocking density must not impair the welfare and health of the fishes and must not enforce unnatural shoal forming. The specific guidelines for the species in question define the maximum acceptable density.
5.2		Design the system so that the fishes can behave according to their nature, especially with regards to their natural social behaviour, their food-intake and the withdrawal from current, light and conspecifics.
	5.2.1	Structure basins and raceways
		• either by boards hung into the system that do not reach to the bottom and are removable and easy to clean
		• or by natural substrate and by offering shelters between bottom and side walls.
	5.2.2	Structure net cages appropriately.
	5.2.3	The specific guidelines for the species in question may allow exceptions concerning the structuring • for systems with extra low density or • for systems with a depth that enables to escape to different water layers.
	5.2.4	In biotope-like earthen ponds the innate flora is sufficient as structure, provided that it has been re-cultivated after draining the pond; else a pond has to be structured like a basin.
	5.2.5	Design the surrounding of the system so that the fishes can frequent enough shaded water zones. If necessary, install awnings or the like.
	5.2.6	Protect the fishes against predators.
5.3		Give the fishes free access to daylight, at least to artificial light of daylight quality. Do not subject the fishes to an unnatural circadian rhythm; they must be able to meet indvidually different needs of day/night resp. light/shadow conditions.
5.4		Only keep fishes of different species or size in the same part pof the system if you can definitely exclude aggression.
5.5		Make sure that the behaviour of the fishes is observed daily. Record peculiar observations in the breeding journal (see 11.1).

6. Feed

6.1		Feed components originating from wild fish fisheries must not exceed a fish in : fish out ratio (FIFO) of 0.2 : 1.0 on your farm. That is to say that for the production of 1 kg farmed fish (live weight), a maximum of 200 g wild fish (live weight) may be fed. When calculating the FIFO, you do not have to include:
	6.1.2	a) fish meal and fish oil that have been produced exclusively from by-products of slaughtering and processing farmed fish; the maximum allowed input however is limited to the amount of fish meal and fish oil that can be produced from the byproducts provided by your own farm.
	6.1.3	b) fish meal and fish oil originating from the following sources, but altogether representing a maximum of 30 percent of all fishmeal and fish oil used by your farm:
		▪ byprodcuts of slaughtering and processing of wild fish;
		▪ utilisation of not marketable fish from fisheries certified for sustainability,
		▪ utilisation of not marketable fish which were caught to maintain the balance in a water body by order of the competent fishery authority.
6.2		Make sure that your feed contains, as far as available, fish meal and fish oil certified by fair-fish or by another acknowledged scheme (Organic, Friend of the Sea, MSC, ASC).
6.3		Make sure that fish meal and fish oil do not originate from the same species which you feed.
6.4		Make sure that the fish feed does not contain animal or vegetable components that have been produced by means of genetic engineering.

7. Hygiene and fish health

7.1	Clean each part of the system when needed.
7.2	Observe the fishes continuously, paying attention to symptoms for illnesses (fungal infestation, swelling of the gills, etc.) as well as for excessive stocking density and stress (fin deformities, abnormal behaviour, injuries, etc.).
7.3	Prevent diseases by prophylaxis (water quality, hygiene, stocking density). Administer chemotherapeutics only after consulting a veterinary experienced with fish. Do not market fishes treated with chemotherapeutics unless residue freedom is proven.
7.4	For the disinfection of the system and the equipment and for prophylaxis use only adjuvants admitted by an organic federation which is approved by the competent authorities of the state your farm is located in.

8. Handling

8.1	Reduce the handling of the fishes to the absolute minimum. The specific guidelines für the species in question define the maximum acceptable number of sorting procedures during the lifetime of a fish.
8.2	Gentle Handling by well trained staff and with appropriate equipment is first priority. If fishes must be taken out of the water, catch them in small groups and land them without rushing. Limit the dwell time outside the water to the absolute minimum; during this time the fishes and all surfaces and equipment getting in touch with them must be kept moist.

9. Stunning, killing, slaughter

9.1		Stunning of the fishes is mandatory before slaughter, allowed for the stripping of breeders, but prohibited for other purposes.
9.2		Thourough preparation as well as sufficient and well instructed staff are indispensible.
9.3		Capture the fishes according to 8.2.
9.4		Stun each fish immediatly after removing it from the water and kill it while still unconscious in order to keep its suffering as short and marginal as possible. It is prohibited to kill non-stunned fishes or let the fishes to asphyxiation.
9.5		**Stun the fishes**
		▪ by a well directed blow (club) to the upper eye region
		▪ by introduction of electrical direct-current in a water tank or
		▪ by addition of clove oil to the water.
	9.5.1	If you capture the fish with a hook, stun it first before you remove it from the hook.
	9.5.2	Observe the fish to ensure it is still unconscious before you kill it. Only repeat the stunning if necessary.
	9.5.3	If you provide scientific evidence that another procedure leads to anaesthesia as well, and if you proof that this procedure can be standardised and controlled, fair-fish can approve it as a procedure for stunning. Without such approvement only the three stunning procedures mentioned under 9.5 are permitted.
9.6		**Kill the fishes while unconscious**
		• by evisceration or
		• by exsanguination of the heart.
	9.6.1	If you provide scientific evidence that a particular stunning procedure leads to death when the fish is still unconscious, and if you proof that this procedure can be standardised and controlled, fair-fish can approve it as a procedure for stunning and killing at the same time. Without such approvement, two separate procedures are to be carried out: one for the stunnig and the other, immediately following, for the killing.
9.7		The killing must be completed while the fish is unconscious.

10. Keeping and selling live fishes

10.1		Only keep live fish stocked
		• in a fair-fish approved installation,
		• for selling alive to clients according to 10.2,
		• for direct sale on your farm to end-consumers (kill the fish before the sale),
		• of species whose meat is suitable for human consumption (independently of the season) only if yo keep the fishes in fresh water for some days before slaughter – unless other proven procedures are applicable with lower impact on the animals. Specific guidelines for the species in question are reserved.
10.2		Only transport live fishes ▪ for restocking and cultivating waterbodies and ▪ when purchasing or selling juveniles for fish farming maximally up to the age of a third of their lifetime until slaughter.
	10.2.1	No live sale of edible fish.
10.3		Installations for keeping live fish stocked must consider the needs of the fishes in the same way as farming ponds or basins have to, especially with regard to fresh water, stocking density, withdrawal opportunities, social behaviour and shelter from light, noise and hecticness. The specific guidelines for the species in question define the details.
	10.3.1	Only keep live fish of different species or size in the same installation if you can definitely exclude aggression.
	10.3.2	Do not keep injured or ill fishes for stocking but kill them instantly.
10.4		The duration and the way of live transportation, the stocking density and the water parameters must be acceptable for the fishes of the species in question. The critical water values are to be monitored continuously. The specific guidelines for the species in question define the details.
	10.4.1	Fishes of different species must not be transported in the same container.
	10.4.2	Prior to every change of the container (basin, pond) or of the water make sure that the temperature difference you subject the fish to will in no case exceed 3° C. This holds unless contradictory to species-specific guidelines.

11. Records

11.1	Keep a farm journal for all fishes of the approved species according to 1. about the following points:
	• Date, origin, species, number and weight of the fish stock in each part of the system
	• Date and measurements and findings according to 4.
	• Date of the sorting procedures in each part of the system
	• Date of the strippings (incl. sample drawings)
	• Date and type of peculiar observations (behaviour, symptoms, etc.)
	• Date and type of medication
	• Date and number of and reason for mortality in each part of the system
	• Date, number and weight of fishes caught and slaughtered, for each part of the system separately
11.2	Note in your bills of delivery of fishes of the approved species (and keep the copies):
	• Date, species, weight, type of processing (live, gutted, filetted, smoked) and client. *You can procure suitable bills of delivery forms from fair-fish at cost price.*
	• For direct sales on your farm to end-consumers one overall record per day suffices.
11.3	Invoice documents for purchased juveniles of the approved species contain: • Date, origin, species, number and age or weight of the fishes.
11.4	Keep records (invoice documents) about the origin of all feeding stuff used on your farm.
11.5	Keep all above mentioned records up-to-date and present them to control persons.

12. Control

12.1	fair-fish commissions an independent body to control your farm.
12.2	The basis for the control of your farm are the present guidelines and your records (see 11).
12.3	You grant fair-fish and the appointed control body the right to inspect your business premises, all parts of the system, business documents and operational procedures at any time, also unannounced, insofar as indispensable to control the compliance with the present guidelines.
12.4	The licencing agreement defines the details.