

EHEIM

A guide to feeding fish

Which foods are healthy for both your fish and their water?

The most important tips



Favourite food for
fresh and marine water

Contents

Types of fish / types of food

Good food is good for your fish – and for your aquarium	4
Which fish need what food?	5
Differentiation by origin and habitat	6
Differentiation by where they swim and eat	7

Feeding

How to feed your fish	8
-----------------------	---

EHEIM professional food

Healthier and tastier than ever before: EHEIM favourite food	10
Ingredients that matter	12
New quality driven products	14
The EHEIM food on offer / feed table	16
List of keywords	18
Do you need advice and help?	19
Imprint	19

EHEIM
professionelfood

Dear Reader,

we have written this short guidebook to provide you with the basic information on how to feed your fish correctly because, like you, we have the wellbeing of your aquarium inhabitants at heart. For more than 50 years, we have developed and supplied aquarium technology to ensure healthy living conditions in aquariums around the world. Our food programme was developed using the same philosophy.

There are hundreds of types of fish foods with innumerable variants, names and ingredients. These include many wondrous claims and promises that, where opinions and advice clash, lead to confusion.

To help you find your way around, we have briefly summarized all you should know about fish food, feeding your fish and the different points you should consider when choosing their food.

We hope you enjoy reading our guidebook and learn something new.

We wish your fish “bon appétit“!

The EHEIM aquatic team

Good food is good for your fish – and for your aquarium

You should always look at the quality of food from two aspects: On one hand, your fish must like the taste, it must be appropriate to their species and it must provide them with healthy nourishment. On the other hand, it should not be a burden on the ecosystem in the aquarium.

Your fish need nutritious food, appropriate to their species

Good food is as vital for your fish as it is for humans. A lot depends on it – their health and vitality, their wellbeing and fertility (ability to reproduce), their blaze of colour and essentially, their long life. The most important criteria for fish foods are that the food should be: Appropriate to the individual species, fed in the correct quantity, good quality, tasty and the fish must benefit from the nutrients and ingredients (these should include carbohydrates, proteins, fats and fatty acids, vitamins, minerals, trace elements etc.). The food should also provide the correct nutrients for the different needs of different fish (see page 16).

The food must also be right for your aquarium

You must remember that an aquarium is a fascinating little biotope with inhabitants and plants* living closely together in a symbiotic relationship. Microorganisms and biochemical processes determine the ecological cycle and we can only keep this sensitive ecosystem balanced by matching technology (filters, light etc.) with a good care regime, which essentially includes the food for your aquarium inhabitants. The better the food, the less waste and residues remain to contaminate the water in which your fish live. This completes the cycle.

* In a fresh water aquarium

Please remember these three principles for fish food:

1. Healthy food

The food must taste good, be beneficial to your fish and contain all of the important ingredients in the correct ratios.

2. Good digestibility

The food must be easy to digest to ensure your fish retain the nutrients, but generate less waste, to minimise contamination of the water.

3. Firm consistency

The food must retain its consistency to avoid clouding the water.



Which fish need what food?

Like all groups of animals, fish eat different types of food. Their digestive organs, behaviour and metabolism have adapted to their circumstances according to evolution and habitat.

Differentiation by nutrition groups:

Whether your fish are tropical, marine or cold water – they can be roughly divided into the following nutritional groups:

➤ Omnivores

Most fish belong in this group. They need food that contains both animal and plant-based matter. In nature, they eat everything – from algae to other small animals.

➤ Carnivores

Better known as meat eaters. In nature, they eat mostly insects, larvae and smaller animals but they will also eat larger prey, depending on the species, and sometimes even eat their own young.

➤ Herbivores

These are vegetarians and include, for example, mollies and sword-tails. Like all herbivores, they have a longer gut in which the internal enzymes digest the vegetable matter.

➤ Algivores (algae eaters)

This sub-group of herbivores includes sucking loach and plecostomus. Most algivores need other food to supplement their diet as hunger is generally not sufficient to keep the aquarium free from algae.

The boundaries between the various groups should not be drawn too strictly. In nature, carnivores will eat vegetable matter and herbivores will unintentionally eat larvae and small animals as they graze on green food.



Differentiation by origin and habitat

Most of the ornamental fish in our aquariums are freshwater fish from tropical regions but more and more aquarium enthusiasts are also keeping marine fish that originate from tropical coral colonies. Cold water aquariums are also popular for fish from cooler regions (Central Europe, North America etc.), including the goldfish – which originated from China.

All these species have different dietary needs and belong in a mix of the various **nutritional groups**, but the main distinction to be made in feeding is between **freshwater, marine and cold water fish**. We should also take into account the individual needs and preferences of the various species. For example, some discus are very choosy about what they eat and both cichlids and goldfish should be fed with food suitable to their dietary needs.

In principle, you can assume that many of the fish sold in shops have been bred in captivity. They are therefore used to 'processed' food and are more adaptable regarding their nutritional needs than freshly caught fish from remote habitats.



Differentiation by where they swim and eat

As in nature, different types of aquarium fish inhabit different levels of the aquarium, generally split into top, middle and bottom zones. For example, guppies and platies prefer the upper to middle zone, neon tetra inhabit the middle zone, while catfish and loach live on the bottom.

These are also the areas in which they usually feed, so it is essential that the appropriate foods reach the fish in all zones, especially the bottom.

There are various forms of food to ensure that all fish are fed in their natural zones.

Flaked food (flakes):

Food that is made into flat flakes of various sizes and mixtures. The flakes swell in the water and then slowly sink to the bottom. This means that the food reaches all the zones in which the fish swim and eat.

Granules:

Granules consist of small, compressed particles of food that remain stable, absorb water and are eaten whole. For this reason, the granule size must be appropriate to the fish size. Granules are particularly suitable for cichlids.

Tablets:

Tablets are the best food for bottom-feeding fish as they sink quickly. The solid consistency enables you to observe the fish 'grazing' on the tablet over a period of time.

Pellets (sticks)

These are food particles pressed into pellets. They generally float on the surface of the water before sinking and are mainly used for larger fish (e.g. in a garden pond).



1 - EHEIM FLAKES
2 - EHEIM GRANULES
3 - EHEIM TABLETS

How to feed your fish

In nature, fish spend practically the whole day searching for food and continuously nibble on small quantities. They are better than mammals at adapting to their conditions as fish can survive on any food they can find. This is because their metabolism slows down when there is not much food around.

Three basic rules:

- Feed fish two to three times a day with just enough food for them to eat in two minutes (we would recommend one of the EHEIM feeding units or the EHEIM feeding station for this). Never give them their full days' ration at once.
- For variety, occasionally (once a week) serve live or natural food (see below). Appropriate reference.
- Do not make them fast for a day, as is often recommended. This is not necessary if you feed correctly.

Do not overfeed.

Overfeeding and incorrect nutrition are the most frequent causes of disease in an aquarium. Underfeeding is practically impossible.

A clear sign of overfeeding is when your fish are constantly ravenous. This is caused by the fish storing fat when there is an excess of food and as they grow, they get even hungrier.

The only remedy is not to feed them for a few days. Their ravenous hunger will gradually abate and the fish will begin to eat normally again.

The **EHEIM feedingSTATION** dispenses the food at a fixed location below the surface of the water. The food is not dispersed by the current, so the fish can catch and eat it immediately, reducing the possibility of cloudy water. The feeding station also creates the ideal opportunity to study your fish as they wait patiently for the food to be dispensed.

Ring the changes from nature

In the wild, depending on their species and habitat, fish will eat algae, plant residues, insects, insect larvae, small crustaceans (e.g. daphnia), shrimps and even other, smaller fish. Life is exciting and the menu is varied.

You should therefore occasionally surprise your fish with live food. A retail shop will be able to sell you fresh live food for your fish (mosquito larvae, krill, daphnia, etc.) as well as frozen live food (animal, vegetable or mixed – depending on your fish).

For herbivores, you can occasionally liven up the menu with some lettuce, spinach or cubes of cucumber or courgette. **Attention:** Always buy vegetables that have not been sprayed and wash them thoroughly before feeding.

We strongly advise against feeding your fish live food you have caught yourself, as you may introduce diseases and organisms into your aquarium. Marine fish may even ingest fresh water into their organs.

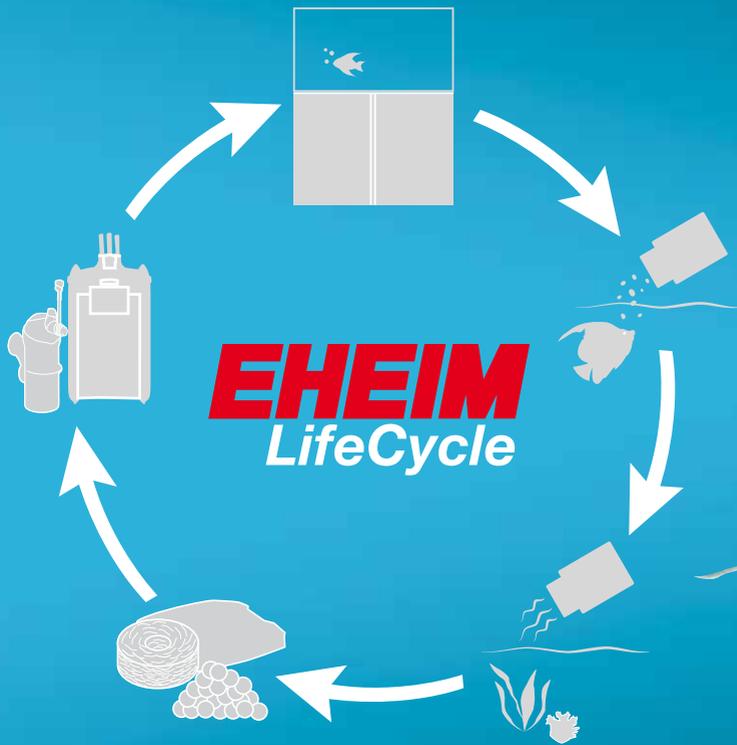


The **EHEIM feeding units** (two models: autofeeder and TWINfeeder) dispense the appropriate food into your aquarium – in the right quantity and at preset times. You can customise the program for everyday use or to ensure reliable feeding while you are away on holiday.



EHEIM professional food

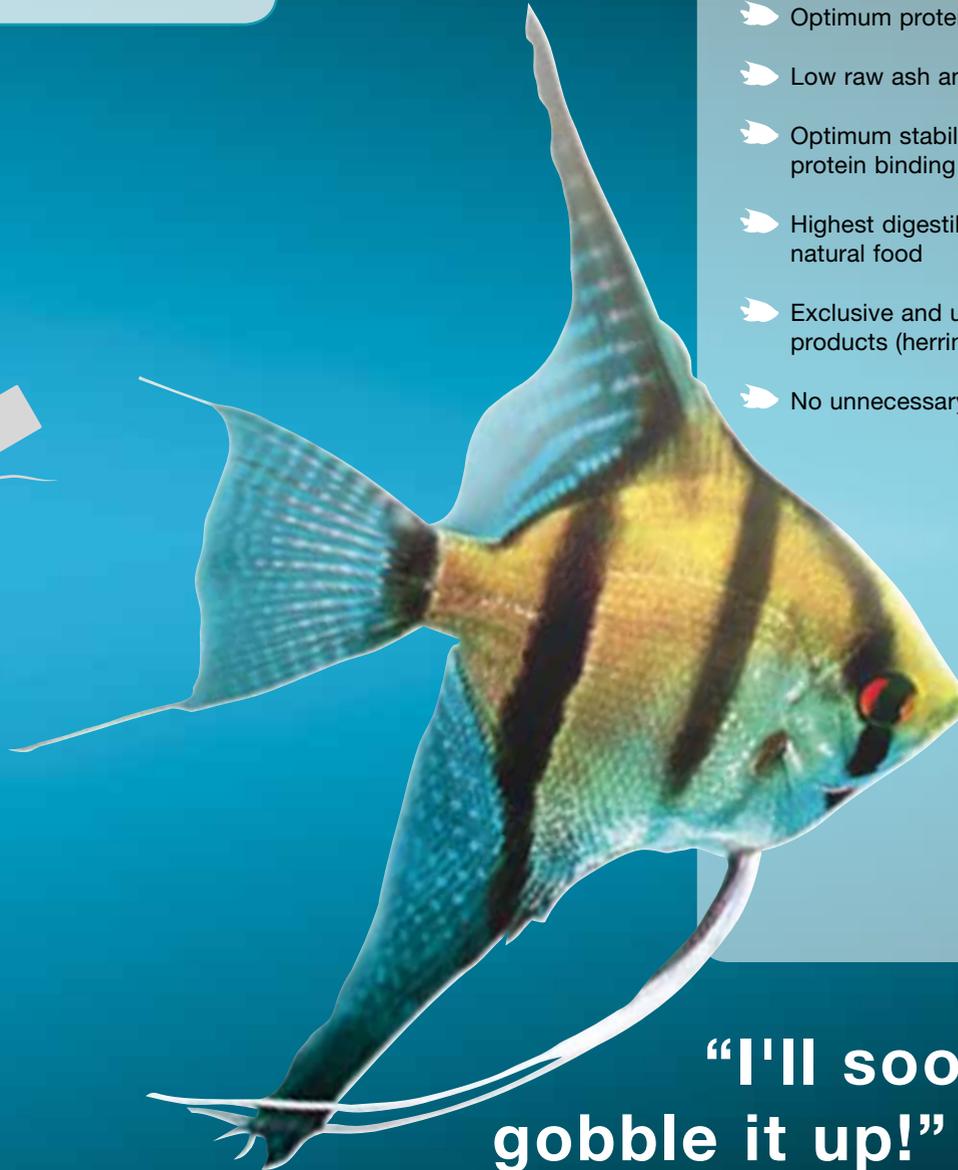
Healthier and tastier than ever before: EHEIM favourite food



The EHEIM „comfort“ programme for your fish:
Food, water care and technology – highest quality
in perfect harmony

All benefits at a glance:

- 🐟 The food with the lowest water pollution
- 🐟 Optimum protein / fat ratio of 3:1
- 🐟 Low raw ash and raw fibre content
- 🐟 Optimum stability of form thanks to natural protein binding
- 🐟 Highest digestibility – being based on fish's natural food
- 🐟 Exclusive and unique recipe using fresh marine products (herring, kelp, shrimps)
- 🐟 No unnecessary ingredients at all



“I'll soon
gobble it up!”

Ingredients that matter

Your fish need carbohydrates, proteins, fats and fatty acids, vitamins, minerals, trace elements and roughage – all in the correct quantities. A complex subject about which you will hear many differing opinions. We believe the following:

What you need to think about regarding food

Less is more

The variety of fish food on offer is enormous. The ingredients and recipes vary accordingly and there are some very "creative" explanations for this. Various ingredients are added, such as synthetic agents, questionable bacteria or pointless extracts, some of which do more harm than good. We recommend you choose food that is as natural as possible and only contains the ingredients that your fish actually need.

Stable consistency

Food that is not eaten immediately must retain its consistency. This means that nutrients are not lost, vitamins are not leached away, the fish can eat all the food and the water remains clear instead of becoming cloudy. Stable consistency is achieved in the production of the food when predominantly, raw proteins are used as a binding agent instead of water-soluble vegetable starch.

Low raw fibre content

Raw fibre is the connective tissue and cellulose contained in the food. Raw fibre acts as a surface on which the bacteria and micro-organisms necessary for digestion can reside. However, only a very small quantity is needed for this (approximately 2%). If the raw fibre content is too high, the food will be difficult to digest and excreted as waste.

Low raw ash content

Raw ash consists of the non-organic constituents in the food such as sand, grit and other indigestible minerals and a high percentage indicates high fish meal content. The lower the raw ash content (maximum 8%), the higher the quality. The food will taste better, be easier to digest and the nutrients will be fully absorbed by the fish – resulting in less waste and healthy water.

Less phosphate

Phosphate is generally due to excessive fishmeal content in the food. Excess phosphate is excreted by the fish and leads to increased water pollution.

Good protein / fat ratio

Protein (raw protein / protein) is essentially good for growth, cell regeneration and the formation of eggs. Fat (raw fat) is needed as the main source of energy. Fish food must have the best possible ratio of protein to fat as the two substances influence each other. A protein / fat ration of 3:1 is ideal for most fish (see below).

Omega fatty acids – in the right ratio

Omega 3 and 6 are unsaturated fatty acids that are important for nourishing the nerves, cell walls, membranes, boosting the immune system and brain function. Depending on the species, some fish are even able to produce some fatty acids themselves. The ratio of Omega 3 to Omega 6 in the food should always be 2:1.

Vitamins, minerals, trace elements

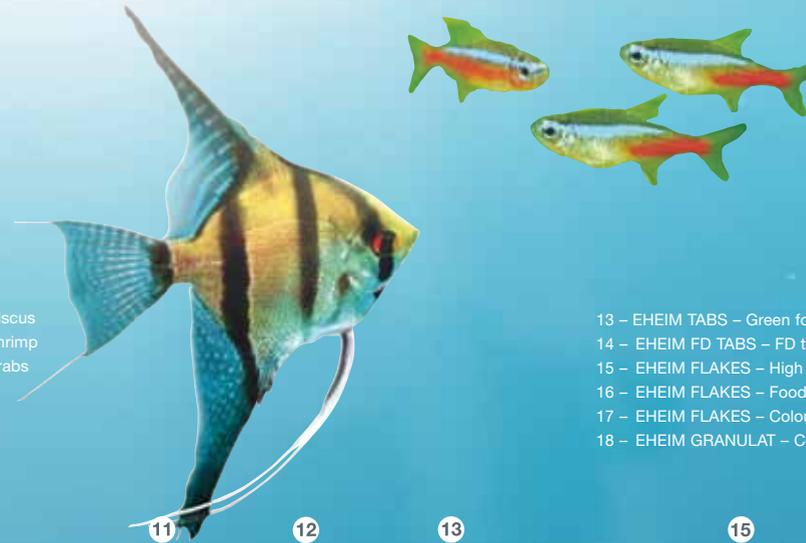
If carefully processed, many of the natural ingredients in the food can be retained but, as natural products are involved, they can also be subject to natural fluctuations. Vitamins, minerals and trace elements are generally added to cover any shortfalls.

! Caution: If the proportion of protein to fat is wrong

A high protein content combined with a too low fat content means that more energy needs to be obtained from the protein. This means that if the fat content is not sufficient, (most) fish have to get their energy by burning protein. This makes the fish generate more ammonium, which is in part, excreted through the gills. This is known as "painful protein burning". If the pH levels in the aquarium are high, ammonium changes into toxic ammonia - polluting the water and putting the fish under extreme stress.

Many fish food suppliers recommend higher protein and lower fat contents. This has generally to do with their production processes, in which the raw materials first have to be pre-treated and therefore lose valuable properties.

New quality driven products



EHEIM food for freshwater fish:

- 1 – EHEIM FLAKES – Staple food flakes for all tropical fish
- 2 – EHEIM TABS – Staple food wafers for all bottom feeding fish
- 3/4/5 – EHEIM GRANULAT SMALL/MEDIUM/LARGE – Staple food granules for all cichlids and larger carnivorous fish
- 6/7 – EHEIM GRANULAT SMALL/ MEDIUM – Staple food granules for all herbivorous cichlids and larger herbivorous fish
- 8 – EHEIM GRANULAT – Main food granules for discus
- 9 – EHEIM GRANULAT – Main food granules for shrimp
- 10 – EHEIM GRANULAT – Main food granules for crabs
- 11 – EHEIM FLAKES – Main food flakes for golfish
- 12 – EHEIM FLAKES – Green food flakes for all herbivorous fish

- 13 – EHEIM TABS – Green food wafers for all bottom feeding fish
- 14 – EHEIM FD TABS – FD tablet treats for all tropical fish
- 15 – EHEIM FLAKES – High energy flakes for all tropical fish
- 16 – EHEIM FLAKES – Food flakes for all young tropical fish
- 17 – EHEIM FLAKES – Colour food flakes for all tropical fish
- 18 – EHEIM GRANULAT – Colour food granules for all tropical fish



EHEIM professional food is a high-quality premium food that guarantees healthy nutrition and less water pollution.

Our food consists, predominantly, of natural ingredients such as fresh kelp and wild caught whole herring and shrimp. By using the whole animal, we ensure the nutrient composition is both natural and healthy and the ingredients are kept pure by using a new, gentle production method.

The optimum ratio of protein and fat, as well as unsaturated Omega 3 and 6 fatty acids, keep the fish healthy and lively. Low raw fibre and raw ash content ensures good digestion, less excretion and lower water pollution. Last, but not least – EHEIM professional food does not cloud the water.



EHEIM food for marinewater fish:

- 1/2/3 – EHEIM GRANULAT SMALL/MEDIUM/LARGE – Staple food granules for all marine fish
- 4 – EHEIM FLAKES – Green food flakes for all marine fish
- 5 – EHEIM GRANULAT – Green food granules for all marine fish

EHEIM food for terraristics:

- 1 – EHEIM GRANULAT – Staple food granules for all water turtles

List of keywords

Pages	Pages
Algivores 5	Herbivores 5, 8, 15, 16/17
Ammonia / ammonium..... 13	High energy food 15, 16/17
Angelfishes 5	Living food 8
Attractants 12	Loaches 5, 7, 16/17
Bacteria 12	Marine water fishes 5, 6, 8, 15, 16/17
Binding agent 11, 12	Microorganisms 4, 12
Bottom-feeding fish 3, 15, 16/17	Minerals 4, 12, 13
Catfishes 5, 7, 16/17	Mollies 5
Carbohydrates 4, 12	Natural food 8
Carnivores (animal eaters) 5	Neon tetra 7
Cellulose 12	Omega fatty acids 4, 12/13, 14
Cichlids 6/7, 15, 16/17	Omnivores 5, 16/17
Cold water fishes 5, 6	Overfeeding / underfeeding 8
Colour food 15, 16/17	Pellets 7
Connective tissue 12	Phosphate 13
Consistency 4, 7, 12	Platies 7
Consumer groups 5, 6	Production 12, 13, 14
Crisps 7	Protein 4, 10/11, 12/13, 14
Digestion 4, 10, 12, 13, 14	Raw ash 10, 13, 14
Diseases 8	Raw fiber 10, 12, 14
Enzymes 5	Roughage 12
Fast day 8	Sediment 4, 14
Fat 4, 8, 10, 12/13, 14	Species of discus 5, 6, 15, 16/17
Fatty acids 4, 12/13, 14	Staple food 15, 16/17
Feeding unit / feeding station . 8/9	Starch 12
Fertility 4	Sticks 7
Fish meal 13	Swordtails 5
Flakes 7, 15, 16/17	Swimming areas 7
Food for young fish 8, 15, 16/17	Special food 15, 16/17
Food residues 4	Tablets 7, 15, 16/17
Fresh water fishes 5, 6, 15, 16/17	Trace elements 4, 12/13
Frozen food 8	Turbidity 3, 12, 14
Garden pond 7	Vegetables 8
Goldfish 6, 16/17	Vitamins 4, 12, 13
Granules 7, 15, 16/17	Water pollution 4, 11, 13, 14
Green food 5, 15, 16/17	
Guppies 7	

Do you need advice and help?

If you have questions, go and see your specialist aquatics retailer. Fishkeepers' clubs are also useful.

You can find a specialist aquatic retailer by visiting our website

www.eheim.com

You will also find there a lot more information about aquariums, technology, fish, plants etc.

Imprint

EHEIM GmbH & Co. KG

Plochingen Str. 54
73779 Deizisau

Phone +49 (0)7153 / 70 02 -01
Fax +49 (0)7153 / 70 02 -174

E-mail: info@eheim.de

Registered in Stuttgart HRA 211766
VAT ID: DE 1453 394 92

Managing Director:
Armin Luczkowski
Gebhard Wagenblast

Text:
Kaspar H. Noeren CMC

Design:
Bettina Müller.DESIGN

Quality has a good name.

EHEIM

Good food is a pre-requisite for a healthy life in the aquarium. With this in mind, EHEIM has written this guide to explain, in brief, everything you need to know about feeding fish with the correct food. It covers the healthy, species appropriate nutritional needs of fish as well as the effects their environment – water – has on their metabolism. This interesting, basic information is sure to assist any aquarium enthusiast to get his head around the abundance of available products and the many varied opinions in the aquatic hobby. The feeding table also contains invaluable information.

FAVOURITE FOOD



EHEIM 7998220-GB/12.14



Your specialist aquarium dealer:



EHEIM GmbH & Co. KG
Plochinger Str. 54
73779 Deizisau, Germany
Phone +49 (0)7153 / 70 02 -01
Fax +49 (0)7153 / 70 02 -174

www.eheim.com