

Ornamental fish food guide

What fish
really need



astaxanthin



spirulina



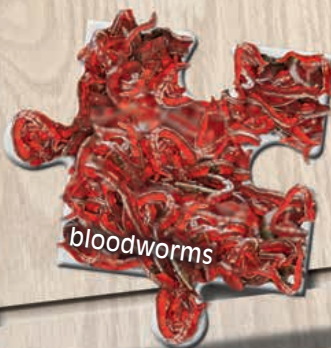
wheat germ



sea algae



yeast



bloodworms



gammarus



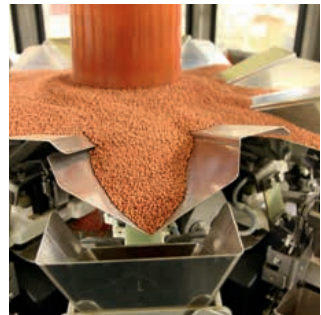
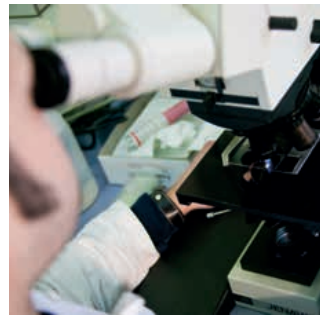
Sera food

Modern fishkeeping



The family enterprise sera, based in Heinsberg/Germany, is manufacturing high quality food for ornamental fish since over 45 years. Decades of experience along with continuous research and development ensure the high quality of sera products. For keeping ornamental fish close to nature:

- ✓ Responsibility towards man, animals and environment for future generations
- ✓ Sustainability is practiced from production via transport up to distribution; constant optimization towards saving even more energy, reduction of emissions and sustainability
- ✓ Up to date: Everything – food, care and technical equipment – for keeping animals close to nature, according to their requirements and environmentally friendly
- ✓ Food with absolute transparency: single declaration, high quality ingredients and no usage of unnecessary additives



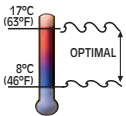
Feeding naturally and functionally

In nature, fish often have to deal with little but varied nutrition. On the other hand, when kept in an aquarium the animals are almost always provided with plenty of food but often suffer from lacking variety. sera high quality

fish food exactly meets this requirement to variety and balance. Due to high quality ingredients close to nature, the fish are optimally supplied with all nutrients.

What characterizes sera food?

- ✓ Varied and balanced food for health, doing well, splendid appearance and liveliness
- ✓ Food with best acceptancy and digestibility supports clear, unpolluted water and thus optimal living conditions
- ✓ Suitable food for every fish – matching: size, development stadium, mouth size, teeth, eating habits and water temperature
- ✓ Perfect feeding functionality due to balanced compositions, suitable sizes, easily edible shapes, attractive consistency matching the eating speed, as well as suitable floating or sinking behavior for surface, middle zone or bottom eating fish



- ✓ Freely combinable special and functional food: variety, color enhancement, additional vitamins or simply a healthy treat
- ✓ Water stable food that clouds and washes out as little as possible, but on the other hand takes up enough water to quickly take up an attractive, meaty consistency that does not burden the fish



Nutrients and their sources



The animal organism required different nutrients for living, which need to be provided in sufficient amounts via the nutrition. Depending on animal species, environmental conditions (e.g. water temperature) and development stadium of the fish being kept, their requirements to shape (depending on the source) and, correspondingly, the specific usability of these nutrients as well as the ratios of the basic elements vary.

sera by all means does not use insufficiently useable substitutes such as soy grits; binding agents such as guar flour; synthetic amino acids; artificial flavors and attractants; preservatives such as ethoxyquin as well as materials from genetically altered organisms.

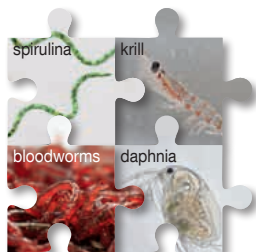
sera provides ornamental fish food close to nature, excellently useable and of highest quality, which optimally support health and well-being. Due to the excellent acceptancy and digestibility, the water remains clear and unpolluted.



High quality protein
from sustainable fishery

Proteins – indispensable components

Sufficient protein supply is indispensable for strong, healthily growing and fertile fish. Cheap protein sources such as soy grits, sometimes used in fish fattening, are lacking – besides other deficits – certain essential amino acids. This may lead to deficiencies, growth trouble, infertility, inflammatory diseases and increased water pollution due to undigested remainders. Proteins of aquatic origin, however, have an amino acid profile that can be transferred into body protein (e.g. muscles) by the fish almost without any loss.

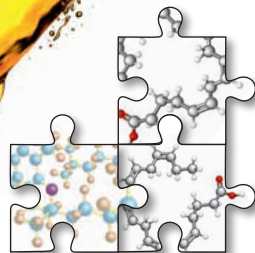


Plankton organisms rich in
protein for a diet close to nature

sera in particular uses marine fish meal made from fresh, whole fish from sustainable fishery – no fish for human consumption! Addition of chicken eggs or milk protein, which improve the consistency and can be utilized excellently despite their terrestrial origin, round off the protein supply.

Fats – pure energy

Fat is the most important energy source in fish nutrition. Unpolluted fish oil (from marine fish living in cold water), as used by sera, is particularly well suited. It remains liquid and easily digestible even at low water temperatures, and it is also particularly rich in fat soluble vitamins (A, D, E, K) and essential (omega) fatty acids. A sufficient amount of suitable fats in the nutrition has a positive effect on the condition of the fish, making them more robust and stress resistant in general.



Plenty of omega fatty acids and vitamins from wholesome fish oil and cod liver oil

Carbohydrates – Something good in moderate amounts

Carbohydrates are a quickly available energy source and give the food its suitable consistency and stability. Even predominantly carnivorous fish require carbohydrates, e.g. for forming the protecting mucous on the skin and in the digestive tract, plus some of them as prebiotics. However, excess supply may lead to fat deposits and dangerous pathological liver fattening, since fish utilize carbohydrates only to a certain extent.

In case of low water temperatures, the digestibility of this nutrient decreases disproportionately. Therefore, sera pond food for the colder seasons has a low carbohydrate percentage and an accordingly higher fat and protein percentage.



The quick energy boost from well processed grain – of course free from gene technology

Fibers – Healthy digestion

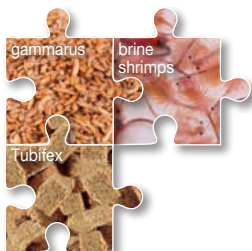
Indispensable for a healthy digestion: fibers. These nutrition components are not utilized energetically by the body, but they nevertheless contribute to activating digestion. Due to their specialized intestinal tract, predominantly herbivorous fish tend to require more fibers than carnivorous fish. sera food contains suitable amounts of herbs and vegetables rich in raw fibers as to enhance the healthy digestion of the fish.



Rich in fibers for best digestion



Tasty, nutritious and valuable



Variety for optimal acceptance and supply of rare trace elements



Rich in iodine

Mineral substances and trace elements

Mineral substances and trace elements fulfill numerous important key functions in metabolism and growth (skeleton growth, among others). Insufficient supply can quickly lead to severe deficiencies and growth trouble.

Due to the varied ingredients close to nature in sera food, such as spirulina, yeast, zooplankton and sea algae, the fish are being sufficiently supplied with all necessary mineral substances and trace elements in an optimally useable form.

Vital substances – Functional variety

Ornamental fish also need a whole range of various “vital substances” or micro nutrients, such as vitamins, pigments, antioxidants, herbal substances, prebiotics and probiotics for a healthy and long life. A varied diet with ingredients close to nature is the best protection against possible deficiencies. sera food fulfills this requirement and thus effectively supports the liveliness of the fish.

It is unavoidable that essential vitamins from the ingredients are partially lost during manufacturing and storage. They are therefore added in a controlled manner as to prevent deficiencies safely. Additionally, there are other valuable natural but rarely occurring vital substances such as astaxanthin and mannan oligosaccharides (MOS), which have a particularly positive effect on well-being, disease resistance and development of the fish. These are added to sera food in a directed way as to ensure an optimal nutrition for the beloved pets.



spirulina

The all-rounder: excellent nutrient contents, stabilizing effect on the intestines, immune system supporting and color enhancing!



Different vegetables and herbs add to the food

Vital substance

Effect



mannan oligosaccharides (MOS)
(cell wall component of a specific yeast strain)

prebiotic; support intestinal health, immunity, food utilization and growth; lower risk of infections and mortality



Bacillus subtilis
(live bacterium, included in the food as stable spores)

probiotic: our newest innovation: a probiotic / intestinal flora stabilizer, which improves growth and food utilization of ornamental fish



astaxanthin
(natural pigment of *Haematococcus* algae)

similar to vitamins, anti-oxidative, fertility enhancing, immune system supporting and strongly color intensifying (all colors; without tinting white zones) – cheaper (synthetic) variants are less effective and possibly even harmful



beta glucanes
(from yeast cell walls)

immune system stimulating, detoxifying, prebiotic, supporting intestinal health



extract of New Zealand green-lipped mussel

inflammation inhibiting, cartilage forming



garlic

digestion stabilizing, immune system strengthening, recovery supporting in case of various diseases (bacterial infections, worms, intestinal flagellates, among others)

The sera food range for ornamental fish: balanced, healthy and functional

From all-rounders such as sera Vipran flake food up to special food types – the sera range provides a large variety of high quality food for ornamental fish. The development of new food types such as the innovative probiotic sera ImmunPro food, among others, takes place in the laboratory of the company. Every food is being manufactured and packed in the sera facilities in Heinsberg, and dispatched to the retailers from there. This allows always ensuring high quality, maximum freshness and long shelf life.

Feeding ornamental fish according to nature

Besides the size of the fish, their mouth size and kind of teeth, you should also consider the specific nutritional requirements as well as their feeding habits for choosing the correct food. You will find the suitable food for every requirement in the sera range:



Printed in Germany



4 001942 451222

45122-00US

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For natural aquariums

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