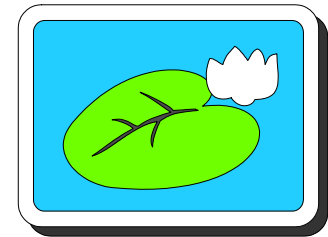


**Natural microorganisms designed to improve the water quality in garden ponds**

# ASA N



**ASA N** is a mixture of different microorganisms, which were isolated from natural salt- and fresh-water. They are used successfully in ponds, lakes and in commercial aquacultures, especially in the fish and crab breed.

**ASA N** should be used

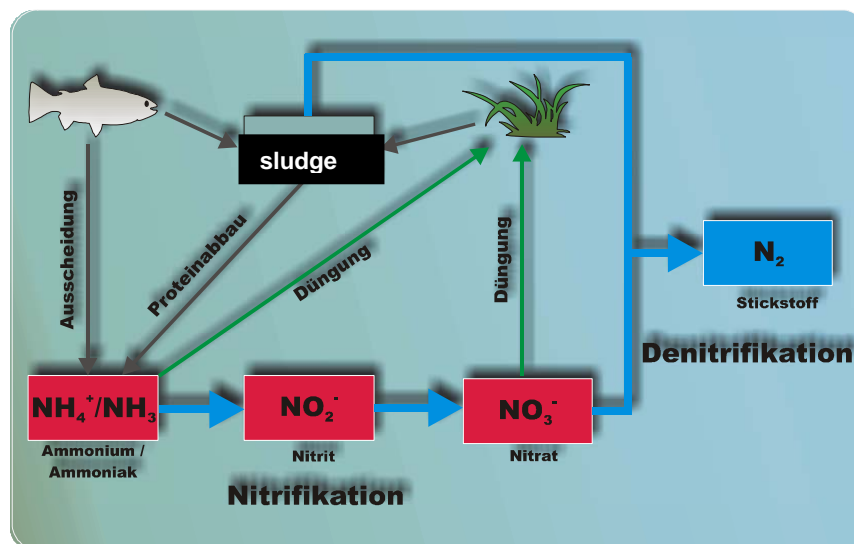
- in eutrophicated ponds and lakes
- at excessive growth of algae
- for displacement of turbidity in garden ponds

The microorganisms in **ASA N**

- reduce ammonium, ammonia, nitrite and nitrate
- reduce algae
- eliminate feed rests and reduce organic sludge deposits
- make the water clearly
- accelerate the adjustment of the ecological equilibrium after resetting up of a pond or a water change
- are harmless for aquatic animals and plants

### The action of **ASA N**

In waters died plants and animals are completely degraded by microorganisms. Final products of the biological degradation, e.g. nitrate, are taken up by plants as nutrients. So an ecological equilibrium develops controlled by the biological self purification leading to clear water. But this self purification is overloaded if it comes to a high input of inorganic substances (fertilizers) and organic waste materials (rests of plants, exudations of animals). As a consequence the concentrations of fish-toxic ammonia and nitrite arise and affect the organisms. The increase of nutrients promotes the growth of algae, which form mats on the water surface and cause cloudy water. Not decomposed biomass sinks to the ground forming there an expanding mud layer.



**ASA N** prevent by a natural way – with 2 groups of microorganisms:

- 1) Nitrifying microorganisms convert ammonium, ammonia and nitrite into nitrate (nitrification)
- 2) Denitrifying microorganisms degrade nitrate into gaseous nitrogen (denitrification) and eliminate nitrate by this way. Soluble organic matter is degraded simultaneously and the sludge layer will be

reduced.

We recommend a previous dilution of **ASA N** to obtain a better distribution of the microorganisms in the pond.

### Dosage:

#### First treatment:

20 ml per 1 m<sup>3</sup> (1000 l) water; after 14 days once more 20 ml per 1 m<sup>3</sup> water

#### Continous treatment:

each month 10 ml per 1 m<sup>3</sup> (1000 l) water

**Advices:**

- shake before use
- protect against chill and high temperatures
- with ambient temperature 18 months durable
- after a curative treatment use double dosage