

CLEAN WATER

without chemicals

Gardener Gert Larsen from Bladgrønt, situated in Køge just outside Copenhagen, Denmark, has only had good results with the new water purification system, which efficiently removes the risk for bacteria in the lettuce. It also reduces the consumption of fertilizers and water by about 30%.

Gardener Gert Larsen, is always curious about new technologies. He has invested in a new water purification system, which, without the use of chemical additives, can purify the rain water he uses for watering.



Traditionally Danish gardeners use rain water for watering and so does Gert Larsen, who has one of the largest lettuce farms in Denmark, when he waters the 4 million heads of special lettuce he cultivates every year in Køge. He takes the water from some large open ponds connected to the greenhouses, which have an area of 50,000 m². 1 mm of rain gives 50 m³ in the ponds, and, as he uses 200-300 m³ per day during the summer it is easy to calculate his need of rainy days.

But, rain water is not clean; it may contain sulphur, oil particles, gasoline matter and other contaminants from the air. And, after having some problems with algae and E.coli bacteria in the ponds on warm summer days, Gert

looked for an efficient purification system. He found the Swedish company JOSAB International, which specializes in water purification systems for undeveloped countries where the water mostly comes from contaminated lakes and rivers.

Visible effect

JOSAB International is formed by the Swedish engineer Jan-Olov Sparrman, who in his many visits to undeveloped countries, noticed the urgent need for clean drinking water for the people to avoid illness and death due to contaminated water. After a lot of research he found the mineral AQUALITE, which has a supercilious purifying structure, excellent for water

purification. A number of positive tests resulted in a water purification system with unique properties. The system works without any chemical additives and can remove particles down to a size of one micron, which is impossible for purification systems based on sand or active carbon. The efficiency of the system can be explained by referring to the enormous active area of AQUALITE. One gram of AQUALITE has an active area of up to 500 m². When water passes through this structure, ion-exchanging takes place, in which heavy metals, among others, are bound. Efficiency and capacity are controlled by the pressure in the AQUALITE filter tank. The mineral acts like a molecular sieve; it removes substances from the water. High

They have good reasons to smile after the system has been installed. From left, Gardener Gert Larsen, together with CEO Jan-Olov Sparrman and Kim Andersen from JOSAB.



pressure results in longer retention time and, better ion-exchanging and bacteria killing. Particles and solids are collected in the toplevel of AQUALITE. The picture shows how much solids are collected during a few hours between back washings; a glass of treated water compared to a glass of back-washed water with sludge. The effect is clearly visible.

Savings

Bladgrönt gardening consumes about 1 m³ water per sqm garden area and, for the total size, the savings are 15,000 m³ water per year (30% of 50,000 m³). This is really something, says Gert Larsen. Then there are all fertilizers, that should have been mixed in the water, and don't forget the environmental view. With better purification and more constant water quality, you have an advantage when you mix the water with fertilizer, according to Gert Larsen. You have total control over the fertilizer you give the plants, and you can give the necessary amount in order to avoid loss. JOSAB water purification systems can be delivered as small units for private households, with a capacity of 500 l/h, or, as large units, produce more than 100 m³/h. Bladgrönt has had no problem supplying the large 300 m³ pond with purified water from the purification system they built in a container, placed near the pond. From this pond they continuously pump water for watering the lettuce.

A patent approved system with many applications.

The quality of AQUALITE varies, and to get the special quality for use in water purification, the mineral must be influenced by high temperature and pressure for thousands of years, in order to form the very special structure with its enormous active area, and, thereby the excellent benefits for water purification.

The right quality of the mineral is found in just a few places on earth.

AQUALITE has many fields of application, including, the gardener Gert Larsen observation that he and his staff could clean the greenhouses without any soap or disinfection chemicals after they had installed the purification system with AQUALITE. Moreover, they have no tipburn in the lettuce today. Symptoms of tipburn include brown edges on the lettuce leaves, resulting from a disequilibrium in the plants' ability to absorb calcium.

'This relationship has not been proved, but we have not had any problems with tipburns since we started to purify our water with AQUALITE' says Gert Larsen.

