

Barley Straw

I n s p i r e d B y N a t u r e

We could site hundreds of references but they all same generally about the same thing: results are inconclusive, barley straw will not inhibit the growth of all species of algae, it may, in fact, promote the growth of certain types of algae, it will not inhibit the growth of aquatic plants or weeds, barley straw needs a large amount of oxygen to decompose, it is not a quick fix, the barley straw must be broken up for best decomposition, it is best to put the straw in small bundles that can be retrieved, results take several months to appear, it has been seen to work in certain degrees but the results are inconsistent.

At Inspired By Nature, Inc. we are all about natural pond management and have researched barley straw for several years. We feel that although barley straw may help a pond owner achieve a certain degree of new growth algae control, the simple fact that the straw is decomposing in the water causing more nutrients for other types of plant growth out weighs the benefits from new algal growth. Many types of algae can take over take a pond with little resistance from barley straw or other natural means of algae control. The key in pond management is **NUTRIENT CONTROL**, without that it doesn't matter what you put in the pond you will still have troubles. To gain better control of the pond you must try and get a handle on the nutrient load.

“Experts” can’t agree on whether barley straw works or a not. The benefits from using barley straw are rather minimal compared with the use of aeration, microbes (which are proven to work) and physical removal. Diversity is essential to nutrient management. Nutrient Management is essential to pond management.

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Barley Straw

Inspired By Nature

Barley Straw has created quite a stir in recent years. Researchers can't seem to agree on whether it works, how much to use or if the results warrant the use of barley straw. Legally, Barley Straw may not be sold as an algicide - this is mandated by the EPA. Barley Straw is often sold as a homeopathic "remedy" for algae - which as you will see in the excerpts taken from one of numerous studies on Barley Straw, may or may not be entirely the case.

"The technique of using barley for algae control was developed in the early 1990s in England, where it is widely used in many bodies of water, including large reservoirs and canals. In general, it is thought that fungi decompose the barley in water, which causes a chemical to be released that prevents the growth of the algae. The specific chemical(s) has not been identified (oxidized polyphenolics and hydrogen peroxide are two decomposition products that have been suggested), and it is not clear whether the chemical is exuded from the barley itself or if it is a metabolic product produced by the fungi. The activity of barley straw is usually described as being algistatic (prevents new growth of algae) rather than algicidal (kills already existing algae).

Results of research at Purdue University have been inconsistent. Our first studies were conducted in the laboratory, and we were able to show that some algal species were indeed susceptible to barley, but others were not. A similar study at the University of Maryland (1) also showed that algal species vary in their susceptibility. We then tried larger studies that were conducted in stock tanks (outdoors) and in plastic cylinders (in the greenhouse). Although a decrease in phytoplanktonic growth (the microscopic algae that color the water green) was sometimes observed, we often noticed an increase in mat-forming algae (the algae that form floating mats on the surface of the water).

Testimonials from pond or lake owners who have tried barley straw range from success to failure. Without replication (e.g. treating several ponds and not treating others with similar algae and water conditions) and extensive data collection, it is difficult to evaluate these reports.

The effectiveness of the straw is reduced by sediments suspended in the water (i.e. "muddy" water). Therefore, a higher dose may be required in "muddy" lakes or lakes with extremely severe algae problems. In these types of lakes, apply 450 pounds per acre (1.7 oz. per 10 square feet), but do not exceed 900 pounds per acre (3.3 oz. per 10 square feet). The decomposition of the straw requires oxygen, and the application of excessive amounts (greater than 900 lbs. per acre) of straw could reduce the oxygen content of the water to levels that stress or kill fish."

Aquatic Plant Management - Barley Straw for Algae Control
Purdue Cooperative Extension Office
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Disadvantages:

1. Barley Straw will not control aquatic plants , such as pondweeds. In fact barley straw may promote aquatic weed growth to nuisance levels.
2. Barley Straw is effective in the prohibition of new algae, but is apparently not effective for controlling existing algae.
3. The following factors affect of the potency of the Barley Straw:
 - Oxygen levels must be high enough to create the inhibitors
 - The inhibitors are deactivated by dirt, sludge, etc. Thus, in ponds with more of these substances, more straw is needed to get the same effect.
 - In cold water, the straw may take 3 months or more to become effective. In warm water (70 deg F or more), it may take only one month. Likewise straw will last longer in cold temperatures.

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