

## Control of Pond Algae Using Barley Straw

*Taken from Chemung County SWCD*

If you are a pond owner, you are well aware of the problems that algae can cause. There are some very effective chemicals that can be used to control algae, but they are very expensive and require a permit from the State, not to mention the adverse affects chemicals can cause if used incorrectly. There is a biological alternative, Barley Straw. The following paragraphs will inform you about the use of this simple material to control problem algae in your pond.

**BARLEY STRAW** is inexpensive and healthier for your fish and plants than chemicals. Barley straw has been used for centuries in Europe to maintain fish and garden pond water quality. It has been proven environmentally safe.

**TYPE OF STRAW TO USE:** Barley straw is more effective and works for longer periods than wheat or other straws. The variety of barley straw does not seem to have any effect on the performance. Hay should never be used as it increases algae growth and it decomposes very rapidly which may cause a deoxygenating of the water. Barley straw will not kill existing algae, it is not a pesticide. Rather it creates a unique pond environment which discourages any unwanted growth while not harming any plant or animal habitats.

**NATURAL vs. HERBICIDES:** The growth rate of algae makes it very difficult to control. There are many forms of algae and most are susceptible to herbicide use. The problem with using herbicides is that it also will kill your other plants and once the chemical is gone from the water, the re-growth of algae will reappear and subsequently become worse years later. Natural solutions are safer and more cost effective.

**HOW DOES BARLEY STRAW WORK?** As the straw decomposes in the water, byproducts are released creating a unique environment. The temperature of the water is an important factor. If the water temp is 40 degrees it may take up to 2 weeks for the straw to become active. When the water temperature is above 40 degrees the straw becomes active faster. In about a week the straw should begin to release it's chemical, given sufficient sunlight and oxygen.

Well oxygenated conditions are essential to ensure the straw will decompose and produce it's chemical. If the straw is in a compacted state with restricted water movement through the straw, the effectiveness is extremely reduced.

**WILL BARLEY STRAW HARM FISH OR PLANTS?** Barley straw does not harm fish or plant life. Actually in most cases it increases the invertebrate population providing a food source for fish. In fish farms and hatcheries where straw has been used, there are reports of improved gill function and better overall fish health.

**HOW AND WHERE TO APPLY THE STRAW:** In ponds, the straw should be wrapped loosely in some type of netting that will allow water to flow through. To be most effective, place the bundle of straw on the up wind side to let wind currents help carry the straw by products across the pond. As the straw decomposes it will sink.

Some sort of float should be attached to keep it partially out of the water. The straw needs a continuous exposure to both water and oxygen. Keeping the straw oxygenated will help the barley decompose thus releasing the byproducts.

**WHEN SHOULD BARLEY STRAW BE ADDED?** Barley straw should be added very early in the spring. It is best to apply when the water temp is low. Time should be given (about 30 days) for the straw to become active. Once activated, the straw will create the unique environment for up to 6 months. A replacement bundle should be added before the first bundle is completely decomposed. Two applications should be enough for one year. Ponds that have a high content of

suspended mud it may be necessary to add more straw than in clear waters as the byproducts can be slowly inactivated by the mud.

**HOW MUCH TO USE?** If used proactively before the pond is over run with algae, a common recommendation would be 20 lbs of straw for every  $\frac{1}{4}$  acre of pond surface area. Thus an average bale of straw weighing 40 lbs should treat a  $\frac{1}{4}$  acre pond for a year. In ponds with a history of heavy algae growth, two to three times that amount may be required at first.

**CAN IT BE OVER DONE?** The straw is not known to be directly hazardous, but anything that decays in water in large quantities will reduce dissolved oxygen levels. This is not likely a problem unless the barley is massively overdosed (more than ten times normal) and the pond is already oxygen limited by over stocking fish, or the decomposition of other organic materials such as leaves.

