



Barley Straw for Algae Control

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A weighted onion bag with loose barley straw.

The problem

Excessive algae growth is one of the most common problems occurring in ponds in Pennsylvania. Traditional mechanical and chemical control methods are not always efficient or economical.

In recent years, the use of barley straw has become more common as an alternative method for controlling excessive

algae growth. This method has been extensively studied by Dr. Jonathan Newman at the Centre for Aquatic Plant Management in Great Britain. This page summarizes the use of barley straw based on Dr. Newman's work and our experiences in Pennsylvania.

When applied at the proper time and rate, barley straw has been a very successful algae control technique in Pennsylvania ponds.

How does it work?

Barley straw does *not* kill existing algae, but it inhibits the new growth of algae. The exact mechanism is poorly understood, but it seems that barley straw, when

exposed to sunlight and in the presence of oxygen, produces a chemical that inhibits algae growth.

Barley straw does *not* reduce the growth of other aquatic plants. In fact, in some cases aquatic plant growth has increased after barley straw applications because algae are no longer present to compete with the aquatic plants.

When should it be applied?

Barley straw is most effective when applied early in the year prior to the appearance of algae (fall through early spring). When applied to cold water (less than 50°F), it may take six to eight weeks for the straw to begin producing the active chemicals that inhibit algae growth.

If the straw is applied to warmer water (above 70°F), it may become effective in as little as one to two weeks. In any case, barley straw remains effective for approximately six months after application.

How much straw?

The most common application is about two to three bales per surface acre of pond (or about 10 to 25 grams of straw per square meter of pond area). The depth of water in the pond is not important. In ponds that are frequently muddy or those that have a history of heavy algae growth, two or three times this recommended dose may be required for the initial treatment.

However, overdosing the pond with barley straw may cause fish kills because the straw deoxygenates the water as it decays. This is especially a problem if the pond is overdosed with straw during a prolonged warm spell.

How to apply the straw?

The straw is most effective when applied loosely in cages or netting. It is best to anchor the straw packages to the bottom, but provide a float to keep the straw near the surface of the pond where sunlight and oxygen are more prevalent.

Apply the straw at several locations around the pond and especially near the water source if a spring or stream feeds the pond. In small garden ponds, small nets or nylon stockings can be used to hold the small amounts of straw needed.

Where can I get barley straw?

Finding a local supplier of barley straw can sometimes be difficult. You might consult with private and government agencies that work with local farmers, such as farm supply companies, extension offices, and Conservation District offices, to determine if barley straw is locally available.

In addition, several suppliers are available online (just type "barley straw" in your favorite search engine).

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