



The Otterbine floating aerator, manufactured by Barebo, can provide round-the-clock control of algae.

Alternatives to chemical water weed control

Although most chemical treatments are labeled safe for the environment, some people choose to control aquatic weeds naturally. Three ways to do this are with a mechanical aerator, liquid water shading products, or weed-eating fish.

"Chemicals scare the hell out of me," says Charlie Barebo, general sales manager for Barebo Inc., manufacturers of Otterbine floating aerators.

Barebo describes his aerators as "an ongoing management tool." The Otterbine can work around the clock, throughout the season.

Another advantage is that you can use the pond for irrigation at any time, without waiting for a chemical to dissolve.

The aerator's main function is to add oxygen to the water and break down the thermal stratification. This mixes the warm water on top, which promotes algae growth, with the colder water on the bottom.

When the algae dies, it decomposes on the pond's bottom, bringing forth anaerobic bacteria to breakdown the algae and creating a bad smell. The aerator keeps oxygen flowing, eliminating the odor and promoting decomposition.

Such biological control can take time. Aerators take between four to six weeks to be effective.

Barebo estimates equipment costs from \$600 to \$4000, depending on the size of the pond or lake.

The aerator is used at 1 1/2-hp per acre. A long narrow body of water, for example, would use two smaller units better than one large one.

Most aerators are installed with a time clock, to be used as needed. New options which will be available with the aerators include aesthetic spray pat-

Dr. Paul Beatty, Southwest Aquatics in Palm Desert, Calif., says the grass carp give the landscape manager a biological alternative when fighting aquatic weeds.

terns, nightlighting, and special electrical control panel.

The aerators originated in 1925 for use in waste water treatment plants. Many manufacturers still deal only with such places.

Barebo is the only company which concentrates on the turf market. "We saw a nice market niche here," Barebo explains.

Filling the need has resulted in 150 percent growth for Barebo the last five years.

Today they sell about a third of their products to golf courses. The Otterbine is also used in places such as parks, fire retention ponds, and at Sea World and Knott's Berry Farm.

The aerator can be used in conjunction with a chemical treatment, since it will mix the chemical throughout the water. Because it produces oxygen, the chemical will also be more efficient. But Barebo prefers to stay away from chemicals.

"A combination of lake dye and aeration is the best way to control weeds," Barebo says.

Billie Wilson, president of Aquashade, agrees that using the products together is advantageous.

The product Aquashade, a lake dye, actually reduces certain wavelengths of sunlight, inhibiting photosynthesis of plants. It dyes the water blue and suppresses plant growth for up to six weeks.

The dye is best applied in early spring, but can be used any time of the year, including over ice in the late winter.

Aquashade can be poured from the edge of the pond and will automatically mix throughout the water. An aerator improves mixing action.

It's applied at the rate of one gallon per four acre-feet (a pond four feet deep covering one surface acre would need one gallon for control).

It costs approximately \$52 per gallon. One gallon of Aquashade treats more than a million gallons of water.

"There's no pesticidal activity," Wilson explains. "Most chemicals have a way of killing what's in the water."

A disadvantage is that Aquashade won't work in ponds which have water flowing out of them.

Wilson says her biggest customers are farm pond owners and golf course superintendents.

Another natural way to control aquatic weeds is the grass carp.

Registered for use in some areas, the grass carp consumes two to three times its weight each day in plant materials. Some grass carp weigh close to 100 pounds.

Dr. Paul Beatty of Southwest Aquatics in Palm Desert, Calif., reports the grass carp is doing well in experiments in the Palm Springs area. The fish is legal for use in parts of extreme southeast California.

(Check with wildlife officials to determine whether the grass carp is registered for use in your area.)

Beatty notes the fish cost \$10 each (imported from Arkansas), live 12 to 15 years, and are compatible with other fish species.

"They don't compete directly with any other fish for food," he says.

Beatty recommends 6 to 25 fish per surface acre for adequate control.

Problems with the grass carp include their non-selectiveness. They'll eat most anything that's green, including desirable vegetation. That could leave little for desirable species like bass.

Beatty reports the fish are more susceptible to copper than other herbicides, which means copper treatments must be used judiciously.

"The fish are not the total answer," he says, "but they are another biological control mechanism." □

