

Algae Control in Stock Watering Tanks

Goldfish

Add 4-6 goldfish per 100 gallons of tank capacity. Water temperature should be at least 60°F for best fish survival, so spring-fed waterers or tanks with a constant water turnover may have inconsistent algae control. Remember you're trading the presence of algae for the presence of fish feces. When small, take the goldfish inside the house before fall frost and put them back out again in summer. They survive outdoors better as they get larger.

Chlorine Bleach

Add 2-3 ounces of 5.25% sodium hypochlorite (unscented laundry bleach) per 100 gallons of tank capacity every week. The chlorine will dissipate more rapidly in hot weather or if organic material is present in the tank. Do not use pipeline sanitizer or swimming pool chlorine. To determine gallonage of a square or rectangular tank, multiply in feet: (length x width x depth x 7.5). To estimate gallonage of a round tank, multiply in feet: (diameter x diameter x depth x 6).

Copper Sulfate

Add copper sulfate (Bluestone or Blue Vitrol) at the rate of 1/8 teaspoon per 100 gallons of water to kill existing algae. It should then be mechanically removed. Cover or shade the tanks to help slow algae growth.

Zinc Sulfate

Dissolve 1 cup of zinc sulfate in 1 gallon of warm water and put 1/2 cup of this solution per 100 gallons of water in tanks as often as necessary (it will depend on number of animals drinking, amount of organic material in trough, and weather). If bird manure on the roof is not a factor, direct runoff from galvanized roofs into waterers.

Algae Control in Ponds and Lakes

Nutrient Removal

Exclude animals from the water and maintain a 50-100 foot wide buffer of grass at least 6-12 inches tall around the pond or lake perimeter. Do not apply manure or commercial fertilizer within the grass buffer zone, because the nitrogen and phosphorus in these fertilizers promote aquatic plant growth.

Copper Sulfate

Apply copper sulfate crystals at a rate of 2-3 lbs. per acre-foot of water. An acre-foot is 43,560 square feet in area x 1 foot deep. Put the crystals in a porous bag, tie the bag to an empty milk jug as a float to keep the bag near the surface, and drag it through the water until the crystals dissolve. Apply in early spring prior to formation of matted growth. Chemical treatment works best when the water temperature is between 60°F and 80°F and algae clumps are broken up during chemical application. Avoid treating when the water temperature is above 80°F and treat only 1/4 to 1/3 of the vegetation at a time to prevent oxygen depletion and a possible fish kill.

Missouri Department of Conservation AquaGuide *Algae Control in Lakes and Ponds* at https://mdc.mo.gov/sites/default/files/downloads/page/algae_control_oct2012.pdf has more information.

Barley Straw (for homeowner use only)

The application rate of barley straw is 225 lbs. per acre of water surface in early to mid-April in Missouri. Break open the bales and place the straw loosely in netting, so that water and air can circulate through the straw when placed in the water. The straw, when it decomposes, produces an anti-algae agent. The effective chemical compound is produced only when the straw decomposes in the presence of oxygen, so tightly-packed bales which can become anaerobic are not the best method for application. It may take about a month to begin control, which lasts up to six months depending on various factors such as temperature and initial algae concentration. The barley straw is less effective on ponds with high nutrient concentrations. Rutgers University's publication *Using Barley Straw to Control Algae* at <https://njaes.rutgers.edu/fs1171/> has more information.

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