



Ditchbank, before and after, herbicide treatments and debris removal.



# Aquatic Weed Control

**L**akes, ponds, and streams are central features for many landscapes. Weeds in water features not only destroy their appearance, they also ruin the impact of the entire landscape.

Lagoons, holding ponds and ditches, although not landscape features, serve useful functions which are inhibited by weeds.

Control measures are limited by local regulations, desirable plants in the water, and uses, such as swimming, irrigation, fish farming, and air conditioning.

If a lake is part of a natural watershed area, there may be restrictions on the use of certain chemicals or weed-eating fish. Check with your local extension agent before treating, diverting, draining, or filling in any lake, even if it is on private property.

## Preventative control

Typical conditions causing an aquatic weed problem are shallowness (less than 8 ft. deep), poor circulation of water in the lake and air above the lake, fertilizer runoff into the lake, and presence of dead organic material in the lake (such as fish, plants, or sewage). Concentrate on these faults first.

Bottom-rooted aquatic plants require light to grow. Below eight feet this light is inadequate for many aquatic plants. If a lake cannot be deepened, dyes or bottom liners can be added to shade the lake bottom.

Pond aerators add needed oxygen to water and help avoid temperature stratification of water layers. Without mixing, water tends to form layers of water based upon temperature, the warmest layer on top. Keeping surface

*continued on page 86*

## Herbicide Directory from page 80

Herbicide	Brand Name(s)	Company	Uses
pronamide	Kerb	Rohm & Haas	Poa annua control in warm season grasses. Also weed and grass control around woody ornamentals and Christmas trees.
sethoxydim	Poast	BASF	Postemergence control of grassy weeds around broadleaf ornamentals.
siduron	Tupersan	du Pont	Preemergence control of annual grasses in newly seeded turf areas.
simazine	Princep	Ciba Geigy	Selective control of annual grasses and broadleaf weeds in established bermudagrass. Also, used in industrial and aquatic weed control.
sulfometuron	Oust	du Pont	Non-selective industrial and selective in bermudagrass.
tebuthiuron	Spike	Elanco	Total vegetation control in non-crop areas.
trifluralin	Treflan	Elanco	Selective preemergence weed control in established ornamentals.
trichlopyr	Garlon	Dow	Systemic control of woody plants in rights-of-way and industrial sites.
2, 4-D	2, 4-D	Dow SDS Biotech Rhone Poulenc Vertac	Selective control of weeds in turf and numerous other areas. Usually mixed with other herbicides.
Vorlex	Vorlex	Nor-Am	Preplant fumigant. Broadleaf weed control in established turf.

## Herbicide Combinations

2, 4-D plus MCPP	Chipco Turf Kleen Cleary Scotts II SDS Tee Time Lescopar	Rhone Poulenc WA Cleary OM Scott SDS Biotech Andersons LESCO	Broadleaf weed control in established turf.
2, 4-D plus dicamba	Scotts I Banvel Plus Lesco Selective Herbicide	OM Scott Velsicol Lesco	Selective postemergence control of weeds in turf.
2, 4-D plus MCPP plus dicamba	Trimec Trexan	PBI Gordon Mallinckrodt	Selective, Broad spectrum control of weeds in turf.
2, 4-D plus dichlorprop	Weedone DPC	Union Carbide	Selective postemergence control of weeds in turf.
2, 4-D plus 2,4-D plus dicamba	Trimec Ester	Bulkem	Selective, Broad spectrum control of weeds in turf.
2, 4-D plus dicamba plus dalapon	Banvel Plus	Velsicol	Broadspectrum, post-emergence turf weed control.

water temperatures down by mixing upper layers with lower, colder ones can discourage algae. Algae does not readily establish until surface water temperature reaches 60 degrees F.

Decaying organic matter removes oxygen from the water. Do not throw debris or clippings into the water. Dead plants should be removed from treated lakes if possible.

In certain states, various weed-eating fish are legal. They are restricted in certain states due to the fear they may reach major rivers and lakes.

Drawdown, or draining to expose aquatic plants to full sun or freezing temperatures, is used where fish or irrigation aren't factors. Dredging and aquatic weed harvestors are expensive and cause a disposal problem, but they may be the only way to get initial control over a serious aquatic weed problem.

Lakes require some vegetation to produce needed oxygen, to provide cover for fish and wildlife, and to appear a natural part of the landscape. Portions of the lake can be kept shallow to provide for aquatic plants. Another method is removable containers of plants submersed close to the water's surface. Desirable water plants, such as water hyacinth, are available from specialized nurseries. These container plants can be removed if necessary during treatment periods.

Certain aquatic herbicides may be absorbed by roots of nearby trees or plants which extend into the water. Read labels carefully for susceptible land plant species.

## Curative control

In warmer climates aquatic weed control is an ongoing struggle with nature. In the North it is a seasonal fight beginning when water temperatures get above 60 degrees F.

**Algae.** If preventative measures aren't enough to stop algae, then copper compounds (Cutrine) are effective. Used at correct rates, these compounds do not restrict water use.

If a lake has a history of algae problems, start using copper compounds as soon as water temperatures get above 60 degrees F. Periodic retreatment may be necessary for season-long control.

Copper compounds are often mixed with other aquatic herbicides for control of a variety of weeds.

**Floating Weeds.** Floating weeds can be either free-floating or bottom-rooted plants which have leaves on the surface. They include hyacinths, duckweed, water lettuce, floating fern, water pennywort, and salvinia.

The primary herbicides for floating

2, 4-D plus prometon	Vegemec	PBI Gordon	Selective postemergence control of weeds in turf.
2, 4-D plus triclopyr	Turflon-D	Dow Chemical	Selective postemergence turf herbicide for broadleaf weeds.
Balan plus Ronstar	Regalstar	Regal Chem.	Broad spectrum pre-emergence control of weeds in turf.
amitrol plus simazine	Amizine	Union Carbide	Season-long control of weeds and grasses around ornamentals.
MSMA plus cacodylic acid	Broadside	Crystal	Nonselective, broad spectrum weed control.
diuron plus sodium chlorate plus sodium metaborate	Chlorea	Rhone Poulenc	Nonselective weed and grass killer.
Amitrole plus fenac plus atrazine	Fenamime	Union Carbide	Pre- and postemergence control of weeds for industrial sites and rights-of-way
bromacil plus diuron	Rout Krovar	Hopkins du Pont	Wide range control of weeds in industrial sites and rights-of-way
MSMA plus dicamba	Mondak	Velsicol	Noncropland general weed control.
prometon, simazine and chlorate	Pramitol	Ciba Geigy	Full-season weed control in industrial sites.

weeds are 2,4-D and Diquat. Sonar (Fluridone) is a broad-spectrum aquatic herbicide under experimental use.

**Submersed Weeds.** Weeds which are bottom-rooted and totally under water are called submersed weeds. They include hydrilla, pondweed, watermilfoil, and coontail.

The primary herbicides for submersed weeds are 2,4-D, endothall (Aquathol K), Diquat, and Sonar (experimental use only). Combinations of endothall and Diquat with copper are often used.

**Emerged Weeds.** These are weeds growing in shallow areas with stems and leaves above the water surface. They include cattails, duckweed, hyacinths, alligatorweed, torpedograss, and arrowhead.

Primary herbicides for these are Banvel, 2,4-D, dalapon (Dowpon), diuron (Karmex), Rodeo (glyphosate), Sonar (experimental use only) and amitrole.

Products registered for aquatic weeds are also the best to use for ditchbank weed control, since there is always a possibility water containing herbicides in ditches will drift to other locations. Check labels for ditchbank applications.

# For more uptime you need a **National!**



MODEL 84

■ Ask any professional, National's known for providing maximum efficiency with minimum maintenance...and a lot more!

■ **New Steering Assembly** (Model 84) for easier steering and longer service life.

■ **B&S, I/C Heavy Duty Engine** (Model 68) for increased performance and less maintenance.

■ **Less Down Time.** Standard off-the-shelf items like belts and bearings, available from any local supplier.

■ **Greater Fuel Economy.** 44% to 62% less fuel consumption than power robbing, hydrostatic type rotary mowers.

■ **Lower Initial Cost** than that of mowers sold to do the same job.

MODEL PQ II



MODEL 68



**NATIONAL MOWER COMPANY**

660 Raymond Avenue, St. Paul, MN 55114  
612/646-4079