



# AQUACIDE COMPANY

1627 9TH STREET • PO BOX 10748 • WHITE BEAR LAKE MN 55110-0748  
WATS: 800-328-9350 • Local: 651-429-6742 • Fax: 651-429-0563 • WWW.KillLakeWeeds.com

*Welcome!*

*You will find a variety of products here in our 2020 Bulletin that regular customers say are indispensable!*

*Our proven products give you results and are easy to use. The products offered here will help manage your recreational lake or pond to make the most of your property's potential.*

*Improve your water quality, restore water oriented activities and increase the value of your property by controlling aquatic invasive and nuisance weeds and algae this year.*

*Aquacide Company is a family owned and operated business formed in 1956 to produce and market Aquacide Pellets. At that time a first class postage stamp cost 4¢ and 10 lbs. of Aquacide Pellets cost \$14.95. Today a first class postage stamp costs 55¢ and 10 lbs. of Aquacide Pellets cost \$94.00. We think you will agree that Aquacide Pellets were and still are a terrific value!*

*Where required each product is registered for its specific use by the U.S. EPA. In addition, our products are certified and approved for use by state agencies. Good reasons to buy with confidence.*

*Control of weeds in state protected waters often requires a permit. Consult your State Fish and Game Agency before beginning any control operations. Customers requiring shipment to the states of AK, ME, NY, TX or WA please call for state specific requirements before ordering.*

*If you have questions, please call us. We can answer your questions and provide guidance in selecting the products you need to achieve results.*

*Substantial discounts are available to individuals and organizations requiring 200 lbs. or more of Aquacide Pellets, AquaClear or Clear-Pond Pellets. Please let us quote a reduced price for your larger order.*

*A large inventory of material is maintained to insure quick delivery. Orders placed by noon, Central Time are normally shipped the day they are received. Don't put off ordering though, weeds won't wait!*

*Sincerely,*

**AQUACIDE COMPANY**



©2020 Aquacide Company

# WHY CONTROL AQUATIC WEEDS?

Aquatic weed infestations adversely affect fish, wildlife, hunting, fishing, boating, recreation, irrigation and drainage. Weeds provide a breeding ground for mosquitoes and give water an unpleasant taste, odor and color.

Heavy infestations may render an area unsuitable for fish by exhausting dissolved oxygen in the water, by blocking sunlight essential to basic food production, by restricting movement of fish or by rendering shallow water unsuitable for spawning.

Excessive weed growth interferes with recreational use of lakes and ponds.

Access to, and use of, lakes and ponds for hunting and fishing is reduced.

Boating, swimming, skiing and other water oriented activities are hampered, reducing the recreational value of your property and your water resource.

Heavy infestations may restrict water flow in irrigation canals or drainage ditches.

Improving water quality by controlling aquatic weeds will restore balance to a body of water and increase the enjoyment and value that you receive from your property.

## WHAT CAUSES WEED GROWTH?

The primary factors that influence the growth of aquatic weeds are water depth, bottom type, nutrient level and water clarity. These factors vary from one body of water to the next and are influenced by the surrounding watershed.

As lakes and ponds age they fill with sediment rich in nutrients, such as nitrogen, phosphorus and potassium. Waters become shallower and more fertile, favoring weed growth.

Weather influences weed growth. Runoff from heavy rain carries nutrients into the water.

Drought may lower water levels creating shallow areas suitable for heavy weed growth.

Sunlight contributes to heavy weed growth, particularly in shallow, clear waters.

Human activities contribute to weed growth. Clearing of land for development and farming causes soil erosion leading to increased sedimentation. Discharges from sewage treatment plants, livestock feedlots and leaky septic systems provide additional sources of nutrients. Hard surfaces, such as roads, promote runoff rather than absorption and natural filtration.

For these reasons, waters that would not support heavy weed growth under natural conditions may support heavy weed growth as a result of human activities.

## 4 WAYS TO CONTROL WEEDS

- 1) Mechanical Cutting offers immediate short term control. Extended control can be achieved by cutting on a continual basis. Cut weeds must be removed to prevent fragments from re-establishing or spreading to other areas. Small hand operated equipment is available.
- 2) Biological Control uses weed eating fish, animals, insects or the introduction of plant diseases. This method can be slow to produce results and often is not as effective or consistent as other methods.
- 3) Water Draw Down, especially during winter months, is effective on submersed weeds. Drying out or freezing will destroy the exposed weeds. Destruction of fish and wildlife habitat and loss of recreational use may occur.
- 4) Chemical Control is currently the most commonly used, most effective and most economical method of controlling aquatic weed infestations. Aquatic herbicides produce faster, longer lasting results than other methods. Aquatic herbicides can be used in localized areas reducing the impact to non-target sites. The choice of aquatic herbicide depends on the weed(s) to be controlled. Best results are obtained by first identifying your weed(s) and then selecting the product(s) to use.

# SELECT A PRODUCT

## 1) CLASSIFY THE WEED:

Emerald: Growing in shallow water with leaves or stems above water surface.

Submersed: Growing in deeper water entirely below water surface.

Floating: Growing at water surface unattached or rooted.

Algae: Cellular, lower weed form. Often no stem or leaf. Moss or scum.

## 2) DETERMINE SPECIFIC WEED:

Pages 6 to 11 picture common aquatic weeds found throughout the U.S.

Place your weed in a clear glass jar with water to compare it with the pictures.

Pay careful attention to the leaves.

## 3) SELECT YOUR PRODUCT:

See page 12 for a table showing what product controls what weed.

Look up your weed to determine which product to use.

Review product information to confirm the product will meet your needs.

Product labels are available at [KillLakeWeeds.com](http://KillLakeWeeds.com).

## 4) QUANTITY TO ORDER:

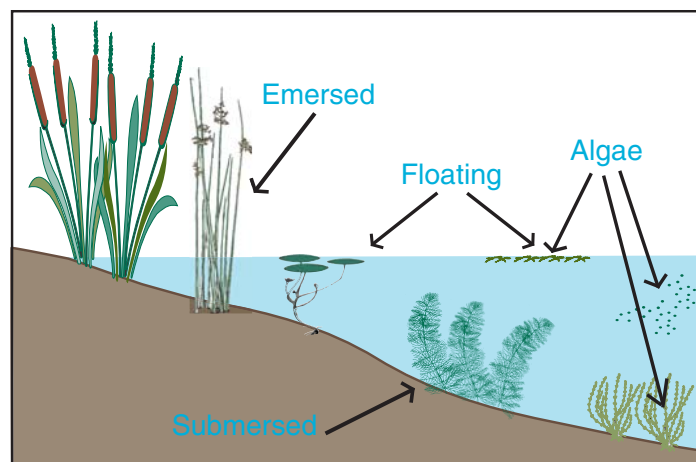
Estimate the area or volume to be treated. This can be done pacing a dock or pier and shoreline, measuring from a land survey or by other means. See page 5.

Once the area is determined, review product information for coverage and cost to determine quantity to order. Call us, we will be happy to help you.

## 5) PLACE YOUR ORDER:

See page 21 for an order form. Please record all information requested.

Place your order via Phone, FAX, Web or US mail.



If you need assistance identifying your weed(s), consider these options:

A) Contact your local Fish and Game or County Extension Agent.

B) Contact your local College or University.

C) Talk to your neighbors.

D) Send us a sample.

To do this, pull a sample of each weed. Rinse with clear water and shake out.

Include leaf and stem. Place in a plastic bag. Place the sample bag, a brief note, your phone number and USPS mail address in an envelope. Send to us.

Do not send samples packed in water - they rot and become difficult to identify.

Do not fully dry the sample - it may turn to dust and become difficult to identify.

Please allow 10 working days for a written response.

E) E-mail a close-up photograph of your weed to [Weeds@KillLakeWeeds.com](mailto:Weeds@KillLakeWeeds.com).

Include a recognizable coin for scale along with your USPS mail address.

# TREATMENT SIZE

Measure the treatment area in feet. Multiply the length (ft.) by the width (ft.).

Divide by 43,560 to convert to acres.

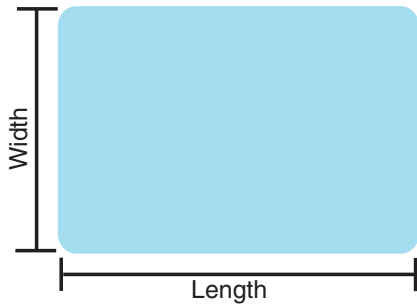
To estimate average depth, add deepest and shallowest points, then divide by 2.

Multiply acres by average depth in feet to determine volume in acre-ft.

Multiply acre-ft. by 325,850 to determine volume in gallons.

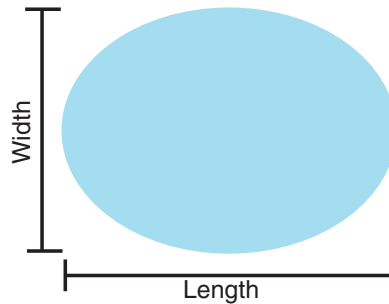
Area of a Rectangle (acres):

$$\frac{\text{Length (ft.)} \times \text{Width (ft.)}}{43,560} = \text{acres}$$



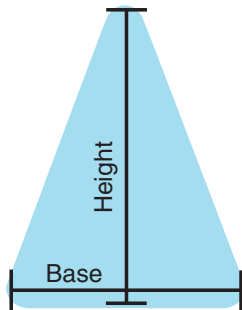
Area of an Oval (acres):

$$\frac{\text{Length (ft.)} \times \text{Width (ft.)}}{43,560} \times 0.8 = \text{acres}$$



Area of a Triangle (acres):

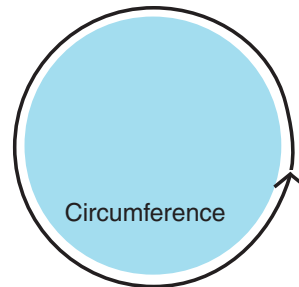
$$\frac{0.5 \times \text{Height (ft.)} \times \text{Base (ft.)}}{43,560} = \text{acres}$$



Area of a Circle (acres):

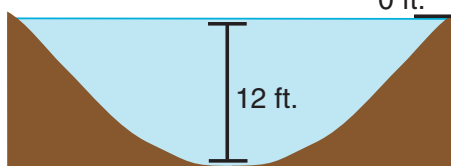
$$\frac{\text{Diameter (ft.)} \times \text{Diameter (ft.)}}{43,560} \times 0.8 = \text{acres}$$

$$\text{Diameter} = \frac{\text{Circumference}}{3.14}$$



Average Depth (ft.):

$$\frac{\text{Deep (ft.)} + \text{Shallow (ft.)}}{2} = \text{ft.}$$



Volume (acre-ft.):

$$\text{Area (acres)} \times \text{Average Depth (feet)} = \text{acre-ft.}$$

*Example:*

*0.5 acre pond with a 12 ft. depth.*

*Area (acre): 0.5 acre*

$$\text{Average Depth (feet): } \frac{12 (\text{deep}) + 0 (\text{shallow})}{2} = 6$$

$$\text{Volume (acre-ft.): } 0.5 \times 6 = 3.0 \text{ acre-ft.}$$

# USEFUL CONVERSIONS

1 acre = 43,560 sq. ft.	1 qt. = 2 pts.	1 oz. = 2 tablespoons	1 ppm = 2.7 lbs./acre-ft.
1 acre-ft. = 1 acre x 1 ft. deep	1 pt. = 2 cups	1 gal. = 128 ozs.	1:10 dilution = 12 ozs./1 gal.
1 acre-ft. = 325,850 gal.	1 cup = 8 ozs.	grain/gal = 17.1 ppm	1:9 dilution = 13 ozs./1 gal.
volume = surface area x average depth		average depth = 0.5 x (deepest point + shallowest point)	

# SUBMERSED WEEDS...

## **Milfoil (*Myriophyllum*):**

Leaves whorled in groups of 4. Each leaf is divided into many thread-like leaflets extending from a central rib (see leaf detail). Forms tangled mats at the surface. Seed heads develop mid to late season and may extend above water surface. Treat anytime weeds are actively growing.



## **Parrot Feather (*Myriophyllum brasiliense*):**

A type of Milfoil. Leaves whorled in groups of 4 to 6. Each leaf is divided into 18 pairs of thread-like segments resembling a feather (see leaf detail). This species differs from other types of Milfoil by having its foliage partially out of the water. Emerged foliage is bright green.



## **Coontail (*Ceratophyllum demersum*):**

Leaves whorled around the stem and have a serrated appearance (see leaf detail). Spacing between leaf whorls variable. Weeds may be long and sparse or bushy. Near end of stem leaves and whorls are crowded. Branches repeatedly forked. Do not confuse with Bushy Pondweed or Chara. Chara has a strong odor when crushed, Bushy Pondweed and Coontail do not.



## **Elodea (*Elodea canadensis*):**

Similar to Hydrilla. Leaves whorled in groups of 3 to 5. Elodea leaves have a smooth edge (see leaf detail). Whorls of leaves are compact near growing tips. Spacing between whorls increases further down the stem.



## **Hydrilla (*Hydrilla verticillata*):**

Similar to Elodea. Hydrilla has leaves whorled in groups of 3 or more. Leaves have a serrated edge with 2 to 3 pointed spines on the midrib of underside (see leaf detail). Whorls of leaves are compact near growing tips. Spacing between whorls increases further down the stem.



## **Bladderwort (*Utricularia*):**

Finely divided leaves scattered along stem with numerous bladder-like structures on leaves. Stems have many branches and are densely leafy at the tips. Flowers are yellow and rise above water surface when mature.



# SUBMERSED WEEDS...

## **Horned Pondweed (*Zannichellia palustris*):**

Leaves are long and thread-like. Oppositely arranged on stem unlike other pondweeds. Seeds found at leaf base, flattish in shape, and serrated on one side.



## **Bushy Pondweed (*Najas gracillima*):**

Leaves are narrow with tiny spines along the edges. Leaves slightly enlarged at base. Stems slender with frequent branching. Leaves oppositely arranged, or in groups of 2 or more at a node. Leaves densely concentrated at tips. Do not confuse with Chara or Coontail. Chara has a strong odor when crushed, Bushy Pondweed and Coontail do not.



## **Leafy Pondweed (*Potamogeton foliosus*):**

Short grass-like leaves which measure 1" to 3" long and branch freely on a slender stem. Leaves alternately arranged on stem. Clumps of 4 to 8 fruiting bodies attached to a center stem by a short stalk that rises above water surface when mature.



## **Sago Pondweed (*Potamogeton pectinatus*):**

Leaves are stiff, narrow and thread-like. Stems branched with leaves alternately arranged on stem. Spreading leaves resemble a fan with an overall bushy appearance. Nutlets appear like beads on a string. Tiny green flower appears on spike with nutlets above water surface when mature.



## **Large-Leaf Pondweed (*Pot. amplifolius*):**

Leaves both floating and submersed. Submersed leaves are large, oblong, wavy and taper to stem. Floating leaves are oval-shaped. Parallel leaf veins are evident. Stems are seldom branched. Leaves alternately arranged on stem. Solid, tightly packed spike of nutlets at tip of weed rises above water surface when mature.



## **Floating-Leaf Pondweed (*Pot. natans*):**

Leaves both floating and submersed. Submersed leaves long and narrow. Floating leaves oblong and slightly heart-shaped at base. Parallel leaf veins evident. Stems occasionally branched. Leaves alternately arranged on stem. Solid, tightly packed spike of nutlets at tip of weed rises above water surface when mature.



## SUBMERSED WEEDS

### **Curly-Leaf Pondweed (*Pot. crispus*):**

Leaves thin with wavy and finely serrated edges. Stems branched. Upper leaves often crispy and appear waxy. Leaves alternately arranged on stem. Flowers born on spikes rise above water surface when mature.



### **Clasping-Leaf Pondweed (*Pot. richardsonii*):**

Leaves wide and wavy with smooth edges. Broad leaf base clasps stem. Upper stem commonly branched and leafy. Leaves alternately arranged on stem. Solid, tightly packed spike of nutlets at tip of weed rises above water surface when mature.



## FLOATING WEEDS

### **White Water Lily (*Nymphaea odorata*):**

Leaves large, round and slit to center. Underside of leaf often purplish. Stem below surface. Roots thick and fleshy, often buried in mud. Flowers white with multiple petals born on a single stalk above water surface. Do not confuse with Spatterdock.



### **Water Shield (*Brasenia schreberi*):**

Leaves oval in shape with smooth edges, usually with rust-colored underside. Stem is attached to middle of leaf. A clear jelly-like slime covers underside of leaves and stems on mature weeds. A dull purple flower develops in early summer. Best treated early before slime develops.



### **False Loosestrife (*Ludwigia palustris*):**

Leaves both floating and submersed. Oblong and narrow near stem. Leaves oppositely arranged on stem, most often in pairs. Stems rooted at joints. Forms tangled mat on water surface when mature.



### **Duckweed (*Lemna minor*):**

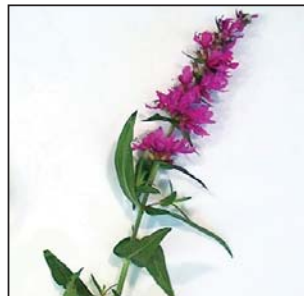
Leaves the size of a pencil eraser. Occurs individually or in clusters. Small root hairs may be seen hanging down from underside of the leaf. No stem is distinguishable. Heavy growth may blanket water surface to depth of several inches. Duckweed is not as interconnected as Filamentous Algae. Do not confuse with Algae.



## EMERSED WEEDS...

### **Purple Loosestrife (*Lythrum salicaria*):**

Leaves slightly heart-shaped at base coming to a point at leaf tip. Leaves small and more numerous near tip. Stems rigid, four-sided and have fine hairs on them. Leaves oppositely arranged on stem, usually in pairs. Flowers bright purplish on a spike closely attached to stem.



### **Water Willow (*Dianthera americana*):**

Leaves long, narrow and tapered at each end. Branched veins are evident. Edges are smooth. Stems usually unbranched. Leaves oppositely arranged on stem, usually in pairs. Flowers born on spikes, purplish in color.



### **Water Primrose (*Jussiaea repens*):**

Leaves lance-shaped with smooth edges. Veins evident in leaves. Stems and leaves are hairy. Leaves numerous and alternately arranged on stem. Flowers bright yellow and develop at top of the weed when mature.



### **Smartweed (*Polygonum hydropiperoides*):**

Leaves oblong and smooth on edges. Leaves alternately arranged on stem. Stems distinctly jointed. Lower portion of stem rooted at joints. Flowers small and tightly clustered, white or pink in color. Weed may be emersed in shallow water or completely submersed with only flowers visible above surface in deep water.



### **Bulrush (*Scirpus* spp.):**

Leaves may or may not be present. If present, leaves appear as a continuation of the stem. Stems are tall and smooth, either round or triangular in shape. A loose cluster of brownish flowers and seeds located near tip of stem.



### **American Lotus (*Nelumbo lutea*):**

Floating circular leaves with stems attached to center of leaf underside. Emersed leaves also circular and depressed to center of upper surface. Solitary flowers pale yellow and composed of numerous petals. Seed pod in flower center with seeds embedded in surface.



# EMERSED WEEDS...

## **Spatterdock (*Nuphar advena*):**

Leaves heart-shaped at base, shiny and smooth. Some leaves float but most stand above water. Solitary flowers on long stalk slightly above water surface, yellow with green outer petals. Roots become very thick once weed is well established.



## **Pickernelweed (*Pontederia cordata*):**

Leaves heart-shaped at base. Veins very fine and numerous. Flowers blue-purple and crowded on elongated spikes. Each flower has 6 petal-like parts united below into a tube.



## **Water Pennywort (*Hydrocotyle*):**

Leaves round with low rounded lobes. Attached at center to stem. Leaf about the size of a half dollar. Stems extend from a horizontal root in shallow water. Flowers rise in groups from smooth stems. Each individual flower has 5 small white petals. Often rooted in mud, forming dense mats.



## **Cattail (*Typha latifolia*):**

Leaves tall and flat. Stems tall, round and unbranched. Flower the distinctive cigar-shaped spike which is green in early summer and turns brown and fuzzy in fall. Weed has an extensive root system. Difficult to control when well-established. Stout rootstocks make this weed difficult to pull out.



## **Note:**

**Common Cattails** (above) have leaves more than 1/2" wide with the two parts of the spike nearly continuous.

**Narrowleaf Cattails** (below) have leaves less than 1/2" wide and a space between the two parts of the spike.



## **Water Chestnut (*Trapa natans*):**

Submersed leaves thread-like and far apart on stem. Floating leaves nearly triangular or diamond-shaped, toothed in upper half on inflated stems. Flowers have 4 white petals.



## EMERSED WEEDS

### **Reed Grass (*Phragmites maximus*):**

Leaves long and flat with parallel veins. Stems tall and round with alternately arranged leaves. Flower of weed is made up of spikelets with a long, silky, thread-like mass of hairs. Stout rootstocks make this weed difficult to pull out.



### **Grass Family (*Gramineae*):**

Many kinds of grasses grow in damp places and at times are found in water. Leaves long and slender, 10 or times as long as wide. Veins within leaves run parallel to length of blade. Leaves arranged alternately on stem. Most grasses emerged including but not limited to Giant Cutgrass, Giant Foxtail, Maidencane, Paragrass and Sawgrass.

## ALGAE

### **Chara (*Chara vulgaris*):**

Leaf-like structures whorled around hollow stem. Dense growth attached, but not rooted to bottom. Often “carpets” large areas of a lake or pond bottom. Strong musky odor when crushed. May have a gritty texture due to mineral deposits on weed surface. Do not confuse with Bushy Pondweed or Coontail.



### **Filamentous Algae:**

Individual filaments are a series of cells joined end to end that form a thread-like appearance. Often referred to as pond moss or scum. Forms felt-like surface mats. Growth begins at the bottom and rises to water surface as a bubble-filled mass. May also form fur-like growths on logs and rocks at bottom.



### **Planktonic Algae:**

Microscopic growth often visible as a greenish tinge suspended in the upper few feet of water. Severe blooms resemble pea soup and actually thicken the water.



# WHAT CONTROLS WHAT

**TOP  
SELLER**

	Aquacide Pellets	Cutrine-Plus Granular or Liquid	Fluridone Liquid or Sonar Granular	Aquathol Super K Granular	Hydrothol Granular	Harvester Liquid	Combined Harvester Liquid & Cutrine-Plus Liquid	Pond-Klear Liquid	Shore-Klear or Aqua Neat Liquids
	Pg. 14-15	Pg. 16-17	Pg. 18-19	Pg. 22	Pg. 23	Pg. 24	Pg. 24 & 17	Pg. 25	Pg. 26
<b>SUBMERSED</b>									
Bladderwort	G		G			G	G		
Coontail	E		G	G	G	G	G	G	
Elodea			G		G	G	E		
Hydrilla			G	G	G	G	E	G	
Milfoil	E		G	G	G	G	G	G	
Parrot Feather	E		F	G	G	G	G		
Pondweed			G	E	E	G	G	G	
<b>FLOATING</b>									
Duckweed	G*		E			E	E	E	
False Loosestrife	G								
Water Lily	G		G	F	F				E
Water Shield	E		F		F	F	F		G
<b>EMERSED</b>									
American Lotus	E		G	G	F				G
Bulrush	E					F	F		E
Cattail (Common)	G		F			G	G		E
Cattail (Narrowleaf)			F			G	G		E
Pickeralweed	G					G	G		G
Purple Loosestrife	G								G
Reed Grass/Grass						G	G		E
Smartweed	G		F	G		F	F		F
Spatterdock	G		G	G	F				E
Water Chestnut	G								
Water Pennywort	G					E	E		
Water Primrose	E		F	F	F	F	F		G
Water Willow	G		G			F	F		G
<b>ALGAE</b>									
Chara		E			G				
Filamentous Algae		E			G	G	E	G	
Planktonic Algae		E			G	F	E		

E = Excellent, G = Good, F = Fair  
\* in water less than 3 feet deep.

# WATER USE RESTRICTIONS (days)

Product Name	Active Ingredient	Weight % Active Ingredient	EPA Reg. No.	Human			Animal	Irrigation		
				Drinking	Swimming	Fish Consumption	Drinking	Turf	Forage	Food Crop
Aquacide Pellets	2,4-dichlorophenoxy acetic acid	17.5	5080-2	0+	0	0	0	0	21	21
AquaClear Liquid	5 bacterial strains	N/A	N/A	0	0	0	0	0	0	0
AquaClear Pellets	5 bacterial strains	N/A	N/A	0	0	0	0	0	0	0
Aquashade Plus (blue)	Acid blue 9 Acid yellow 23	13.64	33068-1	*	0	0	0	0	0	0
Aquashadow (blue) Packets	Acid blue 9 Acid yellow 23	100	N/A	*	0	0	0	0	0	0
Aquashadow (black) Liquid	Red 40, Acid blue 9 and yellow	N/A	N/A	*	0	0	0	0	0	0
Aqua Neat Liquid	Isopropylamine salt of glyphosate	53.8	228-365	0+	0	0	0	0	0	0
Aquathol Super K Granular	Dipotassium salt of endothall	63.0	70506-191	0+	0	0	0	0	0	0
Clear-Pond Pellets	Aluminum sulfate Sodium carbonate	60/20	N/A	0	0	0	0	0	0	0
Citrine-Plus Granular	Copper ethanolamine complexes	3.7	8959-12-AA	0	0	0	0	0	0	0
Citrine-Plus Liquid	Copper ethanolamine complexes	9.0	8959-10	0	0	0	0	0	0	0
Cygnat Plus Liquid	d,l-limonene	100	N/A	0	0	0	0	0	0	0
Fluridone Liquid	Fluridone aqueous suspension	41.7	81927-45	0+	0	0	0	30++	30++	30++
GreenClean Granular	Sodium Carbonate Peroxy-hydrate	50	70299-4	0	0	0	0	0	0	0
Harvester Liquid	Diquat dibromide	37.3	100-1091-8959	3	0	0	1	1	5	5
Hydrothol Granular	Dimethylalkylamine salt of endothall	11.2	70506-174	0+	0	0	0	0	0	0
KoiClear	5 bacterial strains	50.0	N/A	0	0	0	0	0	0	0
Pond-Klear Liquid	Flumioxazin	44.0	8959-61	0	0	0	0	3	3	5
Shore-Klear Liquid	Isopropylamine salt of glyphosate	53.8	228-365-8959	0+	0	0	0	0	0	0
Sonar Q Granular	Fluridone quick-release pellet	5.0	67690-3	0+	0	0	0	30++	30++	30++

\* Not to be used in potable water.

+ See label for distance allowed from potable water intake.

++ Voluntary restrictions suggested by manufacturer.

**Top  
Seller**

## **AQUACIDE PELLETS...**



Aquacide Pellets with 2,4-D is a selective, root killing, systemic herbicide. Controls submersed, emersed and floating weeds. For use in ponds, lakes, reservoirs, bayous, drainage ditches, non-irrigation canals, rivers and streams that are quiescent or slow moving. Great around docks, boat hoists, swimming beaches and shorelines.

### **Easy to apply.**

Marble-size Aquacide Pellets sink directly into the weed bed, visibly expand over a period of several hours to a day and stratify a layer of herbicide where weeds grow. Herbicide is released slowly in controlled amounts. As weeds grow herbicide is absorbed through leaves, stems and roots.

Herbicide absorption is quite rapid, just a few hours under good growing conditions. Once absorbed, the herbicide moves throughout the weed to the growing parts of leaves and roots. Growth at these parts is halted and the weed dies.

Kills the entire weed roots and all. Initial effects occur in 7 to 10 days.

Initial effects include brittle stems and curling leaf tips. Under optimum conditions full weed kill occurs in 3 to 5 weeks. Dead weeds sink to the bottom and decompose.

### **Effective on many common weeds.**

Aquacide Pellets are effective anytime susceptible weeds are actively growing. When applied in spring and early summer, less material is required, less dead weeds occur and a longer weed free period will result. Successful applications can be made in late summer and fall to actively growing weeds. The full effect of late season applications may not be fully evident until the following season.

*"This year the weeds were so thick and so many I was worried that our grandchildren would never go into the lake. We applied your product and within a week or so weeds were almost gone. Thank you for a summer of fun at the lake."*

*N.C., Lake Hopatcong ,NJ*

Early season applications to perennial weeds such as Common Cattails or Water Lilies, while growing below the surface, may require 3 to 4 lbs. per 1000 sq. ft. at a 4 foot depth. A second application may be necessary in 3 to 5 weeks if weeds show signs of recovery.

Heavy clay, mud or silt build up may reduce root absorption by sealing the roots.

Early season application or more than one application may overcome this problem.

Water movement in the form of currents or bottom springs may reduce effectiveness by moving herbicide from treatment site.

# AQUACIDE PELLETS

A comprehensive up to date review of 2,4-D is contained in the EPA re-registration eligibility decision for 2,4-D. This document states; “2,4-D has a reputation as a selective and economical means to remove invasive plants, enhance the growth and recovery of desirable native vegetation, restore water quality and improve fish and wildlife habitat.”

As a rule of thumb Aquacide Pellets will be effective on weeds with leaves that have a laced or branched vein structure. Aquacide Pellets will usually not be effective on weeds with leaves having parallel veins such as Grasses.

Aquacide Pellets are easy to apply. Nothing to mix or spray. Simply broadcast pellets uniformly over water surface with a fanning motion of the hand. Similar to sowing grass seed. Effective at any depth.

## ***Tried and true.***

Use Aquacide Pellets at a rate of 1.0 to 4.0 ppm active ingredient. This is equivalent to 15 to 60 pounds of Aquacide Pellets per acre-foot of weed volume, or 5.6 to 22.4 pounds of Aquacide Pellets over 4,000 sq. ft. at a 4 foot average depth.

For spring to early summer applications on new weeds use 1.0 to 2.0 ppm.

For mid-summer to fall applications on mature weeds use 3.0 to 4.0 ppm.

To determine pounds of Aquacide Pellets to use per 1,000 sq. ft.:

$$(\text{application rate in ppm}) \times (\text{average depth in feet}) \times (0.35)$$

To use 2.0 ppm at an average depth of 4.0 feet:

$$2.0 \times 4.0 \times 0.35 = 2.8 \text{ lbs. per 1000 sq. ft.}$$

Avoid churning water in treatment site for 72 hours following application.

This will help insure maximum herbicide is available for absorption by the weeds.

See page 13 for Water Use Restrictions.

**Aquacide Pellets, 10 lb. bag** (treats 4,000 sq. ft.)..... **94.00**

**Aquacide Pellets, 1 - 50 lb. bag** (treats 0.50 acre)..... **345.00**

**Aquacide Pellets, 4 - 50 lb. bags** (treats 2.00 acres)..... **1,296.00**

(Call for prices on 10 or more 50 lb. bags.)



# CUTRINE-PLUS GRANULAR...



Cutrine-Plus with copper ethanolamine complexes is a highly effective algaecide available in both liquid and granular form. Controls a broad range of algae in lakes, ponds, fish hatcheries, irrigation canals and drainage ditches. Effective on Hydrilla when combined with Harvester Liquid (p24). Cutrine-Plus is hard water stable and far less corrosive than other common algaecides.

## Control algae in 1-4 days!

Begins to work immediately on contact to break down algae's cellular structure. Controls Planktonic Algae in 1 to 2 days, Filamentous Algae in 3 to 4 days.

Early treatment when growth first appears will reduce the amount of Cutrine-Plus you need for season long control. Early treatment will also reduce the amount of dead growth.

Control will last from several weeks to several months, depending on the type of algae and local conditions. Several applications will typically be required to maintain season long control on Planktonic and Filamentous Algae. Retreat as new growth reappears. Allow 1 to 2 weeks between consecutive treatments.

Heavy, out of control growth may require more than one treatment or physical removal to gain control. Use under conditions of minimal water flow. For best results, apply early on the morning of a calm, sunny day with water temperature of 60°F or warmer. Contact time should be at least 3 hours. Bright sunlight will improve effectiveness.

Use Cutrine-Plus Liquid to treat surface algae or the entire volume of a pond.

Use Cutrine-Plus Granular to conveniently spot treat sections of a pond or lake front.

Cutrine-Plus Granular will deliver a layer or blanket of Cutrine-Plus 2 to 3 feet thick over the area treated. Cat litter size granules quickly settle through water onto algae. Granules settling and remaining on floating mats of Filamentous Algae will control surface growth to a depth of 2 to 3 feet.

Easily control early season bottom growth of Chara and Filamentous Algae.

## Highly effective algaecide.

### To apply Cutrine-Plus Granular:

Determine the surface area to be treated in acres.

Use 30 lbs. of Cutrine-Plus Granular per 0.5 acre.

Broadcast granules uniformly over treatment area.

Treat Chara in spring and summer when weed is soft and supple.

Mature Chara will become calcified or lime-encrusted (gritty) in hard water.

Calcified Chara is very difficult to control. Treat early.

A single, early season application of Cutrine-Plus Granular will usually control Chara for the entire season.

**Cutrine-Plus Granular, 12 lb. container** (treats 8,700 sq. ft.)..... **78.00**

**Cutrine-Plus Granular, 4 - 12 lb. containers** (treats 34,800 sq. ft.) ..... **257.00**

**Cutrine-Plus Granular, 30 lb. bag** (treats 0.50 acre)..... **153.00**

# CUTRINE-PLUS LIQUID



Cutrine-Plus Liquid is ideal for treating surface growth of Planktonic Algae and floating mats of Filamentous Algae. In ponds with little or no outflow, long term control of several months can be achieved on Filamentous and Planktonic Algae by treating the entire pond volume.

*Cutrine-Plus may be toxic to trout if carbonate hardness of treated water is less than 50 ppm. Most surface waters exceed this limit and pose no threat. If in doubt, use Water Hardness Test Strips (p36). Do not use Cutrine-Plus in water containing Koi or hybrid goldfish.*

## To apply Cutrine-Plus Liquid:

Determine volume of water to be treated in acre-ft.

For Filamentous and Planktonic Algae:

Use 1 gallon of Cutrine-Plus Liquid per 1.5 acre-ft. of treated water.

For Chara:

Use 2 gallons of Cutrine-Plus Liquid per 1.5 acre-ft. of treated water.

Dilute with a minimum of 9 gallons water.

Spray uniformly over water surface.

*"I recently purchased the Cutrine-Plus Liquid and used it on a once beautiful pond. It worked GREAT! I was amazed and so happy. The ugly green bubbling algae was gone by the following weekend. Unbelievable."*

*K.S., Roanoke, TX*

Contact with Filamentous Algae will be improved by breaking apart heavy surface mats before application.

## Pond water clear as a bell.

For Hydrilla, use 2 gallons of Harvester Liquid (p24) mixed with 3 gallons of Cutrine-Plus Liquid per 1 surface acre of treated water.

Dilute mixture with a minimum of 9 parts water and apply as a surface spray or by underwater injection.

Add Cygnet Plus Liquid (p27) to Cutrine-Plus Liquid to increase penetration and contact.

Treat heavy infestations in sections  $\frac{1}{3}$  to  $\frac{1}{2}$  of total algae volume to avoid oxygen depletion. Allow 5 to 7 days before continuing to untreated sections.

Water in areas treated with Cutrine-Plus has no use restrictions, see page 13.

<b>Cutrine-Plus Liquid, 1 gallon</b> (treats 1.50 acre-ft.)	<b>73.00</b>
<b>Cutrine-Plus Liquid, 2.5 gallon</b> (treats 3.75 acre-ft.)	<b>142.00</b>
<b>Cutrine-Plus Liquid, 4 - 1 gallons</b> (treats 6.00 acre-ft.)	<b>234.00</b>
<b>Cutrine-Plus Liquid, 5 gallon</b> (treats 7.50 acre-ft.)	<b>283.00</b>

# ALLIGARE FLURIDONE LIQUID...



Alligare Fluridone & Sonar Q with fluridone are systemic herbicides for controlling weeds in fresh water ponds, lakes, reservoirs, irrigation canals and drainage ditches.

Alligare Fluridone & Sonar Q provide excellent control of many difficult to control weeds, including Duckweed, while allowing desirable vegetation to remain.

## Treat your entire pond.

For ponds (waters less than 10 acres), treat entire pond or a minimum of 5 acres.

For lakes (waters 10 acres or more), treat a minimum of 5 acres.

Treating less than 5 acres or treating narrow strips may not produce satisfactory results due to dilution.

Alligare Fluridone & Sonar Q are absorbed by leaves and stems directly from water and by roots from hydrosol.

In susceptible weeds, Alligare Fluridone & Sonar Q inhibit carotene production. Without carotene, chlorophyll is rapidly destroyed by sunlight. Without chlorophyll weeds die.

Initial results show a bleaching at growing tips of the weed. Within 7 to 10 days weeds begin to turn pink then white. Growth is halted and weeds begin to die.

Results occur slowly. Under optimum conditions, full kill occurs in 30 to 90 days.

Alligare Fluridone & Sonar Q will not cause oxygen depletion resulting from rapid weed collapse.

<b>Alligare Fluridone Liquid, 1/4 pint</b> (treats 0.62 acre-ft.) .....	<b>141.00</b>
<b>Alligare Fluridone Liquid, 1/2 pint</b> (treats 1.25 acre-ft.) .....	<b>250.00</b>
<b>Alligare Fluridone Liquid, 1 pint</b> (treats 2.50 acre-ft.) .....	<b>436.00</b>
<b>Alligare Fluridone Liquid, 1 quart</b> (treats 5.00 acre-ft.) .....	<b>763.00</b>
<b>Alligare Fluridone Liquid, 1/2 gallon</b> (treats 10.00 acre-ft.) .....	<b>1,365.00</b>
<b>Alligare Fluridone Liquid, 1 gallon</b> (treats 20.00 acre-ft.) .....	<b>2,399.00</b>



# SONAR Q GRANULAR



For best results, apply in spring and summer during the early stages of growth. Weeds are more easily controlled when treated at this time. Less material is required and results occur more quickly. Alligare Fluridone & Sonar Q work on susceptible mature plants but will require higher application rates and more time to show the full effect of an application.

**A little goes a long way.**

Consistent concentrations of Alligare Fluridone or Sonar Q need to be maintained in water for up to 45 days following application. Rapid dilution due to water flow will reduce results. Best results occur in ponds with little or no outflow.

## **To apply Alligare Fluridone Liquid:**

Determine the volume of water to be treated in acre-ft.

Use ½ pint of Alligare Fluridone Liquid per 1.25 acre-ft. of treated water.

Dilute with 5 to 100 gallons of water and apply uniformly over water surface.

## **To apply Sonar Q Granular:**

Determine the volume of water to be treated in acre-ft.

Use 8 pounds of Sonar Q Granular per 2.0 acre-ft. of treated water.

Simply broadcast granules uniformly over water surface in area to be treated.

## **Visible results in 7 to 10 days.**

Use Sonar Q Granular when treating a portion of a large body of water.

This will help to maintain concentration at the treatment site by reducing dilution.

For Duckweed, split the calculated amount of Alligare Fluridone or Sonar Q into 3 equal portions. Apply each portion separately at 10 to 15 day intervals.

*"This is the first time in over 25 years that my pond has been free of watermeal and duckweed. Great product. Looks great!"*

*L.K., Faribault, MN*

See page 13 for Water Use Restrictions.

**Sonar Q Granular, 8 lb. pail** (treats 2.00 acre-ft.).....**499.00**

**Sonar Q Granular, 40 lb. pail** (treats 10.00 acre-ft.).....**1,846.00**

# TO ORDER

Simply complete the order form opposite this page.  
Include your mailing address, shipping address and a daytime telephone number.  
Please provide a street address (NO PO Box) for shipping.  
We accept checks, money orders, and VISA, MASTERCARD or DISCOVER.  
Please NO COD.

## BY MAIL:

Mail a copy of the order form to address shown at the top of the order blank.

## BY PHONE OR FAX:

**Toll Free** 800-328-9350

**Local** 651-429-6742

**FAX** 651-429-0563

Representatives available 8:00 am - 4:30 pm,  
Central Time, Monday - Friday.  
Best time to call is 12:00 noon - 4:30 pm Central Time.  
FAX and voice mail available anytime.

## ONLINE ANYTIME:

**KillLakeWeeds.com**

## SALES TAX

Minnesota customers please add 7.375% state sales tax.

## DELIVERIES

Orders received by Noon Central Time are normally shipped the same day.  
Free ground shipping within the lower 48 states.  
Please add \$10.00 per package shipped to Alaska, Hawaii or Puerto Rico.  
Most shipments are made UPS ground or FedEx ground.  
MN, WI, IA, ND, SD and parts of MO, NE and IL may be shipped S P E E D E E.  
Orders over 500 lbs. can be palletized and shipped common carrier truck.  
Air service is available on limited products, call for charges and availability.  
Customers shipping to AK, ME, NY, TX or WA, please contact us for state specific requirements before ordering.



## GOVERNMENTS, BUSINESSES AND PROPERTY OWNERS ASSOCIATIONS

Open account NET 30 billings are available to Governments, Businesses and Property Owners Associations with established credit.  
Minimum billing \$100.00. Shipping charges are added to all NET 30 billings.  
Please contact us for a credit application.

## CUSTOMER SATISFACTION POLICY

Unopened containers may be returned for credit or refund within 30 days of receipt.  
Please contact us for return authorization. Returned items must be shipped prepaid and are subject to a 15% restocking charge plus outbound shipping charges.  
No credit can be issued for partial returns of chemical products not manufactured by AQUACIDE COMPANY.



## Aquacide Company

1627 9th Street  
PO Box 10748  
White Bear Lake MN 55110-0748

Credit Card Orders CALL:

**800-328-9350**

8:00 am - 4:30 pm Central Time Mon-Fri  
(Voice mail at other times.)

<b>ORDERED BY: (complete mailing address)</b>		 For better service, please enter the letters and numbers located directly above your name on the address label.			
<b>Customer ID:</b>					
<b>Name:</b>					
<b>Company:</b>					
<b>Address:</b>					
<b>City/State/Zip:</b>					
<b>E-mail:</b>					
<b>SHIP TO: (if different from ORDERED BY)</b>					
<b>Name:</b>					
<b>Company:</b>					
<b>Address:</b>					
<b>City/State/Zip:</b>					
<b>METHOD OF PAYMENT:</b>					
<input type="checkbox"/> <b>CHECK ENCLOSED:</b> \$ <input type="text"/> Date ____/____/____					
<input type="checkbox"/>  <b>VISA</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>					
<input type="checkbox"/>  <b>MASTERCARD</b> Exp. Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Month Year					
<input type="checkbox"/>  <b>DISCOVER</b>					
Phone (____) _____ Signature _____					
<b>PAGE NO.</b>	<b>QTY.</b>	<b>PRODUCT NAME</b>	<b>SIZE</b>	<b>PRICE</b>	<b>TOTAL</b>
<b>MERCHANDISE TOTAL</b>					
7.375% state sales tax in Minnesota					
<b>FREE SHIPPING</b> within Continental U.S.					0 00
Shipping Per Package, AK, HI & PR					10 00
<b>TOTAL</b>					

# AQUATHOL SUPER K GRANULAR



Aquathol Super K Granular with potassium endothall is a selective, rapid-acting herbicide. Controls submersed weeds in lakes and ponds. Works rapidly enough to be effective in both still and slow moving water.

## **Nothing to mix or spray.**

Aquathol Super K Granular is a convenient, ready-to-use granular product. Nothing to mix or spray. Begins working on contact with submersed weeds to break down cell structure and inhibit protein synthesis. Without this ability the weed dies. Full kill takes place in 3 to 4 weeks. Weeds drop to the bottom and decompose. Effective anytime live weeds can be contacted. Best results occur when applied in spring and summer as water temperature rises to 65°F or warmer. With early treatment less material is required and a longer weed free period will result.

Contact time with weeds should be at least 2 hours. In large bodies of water longer term control will result when treating a minimum of 1 acre or 100 ft. of shoreline. Although selective, Aquathol Super K Granular is effective on many different weeds.

## **Excellent pondweed control.**

Recommended application rate for Aquathol Super K Granular ranges from 0.5 to 5.0 ppm. Safe for most fish at 100 ppm or more.

For most Pondweeds growing in lakes or ponds 2.0 to 4.0 ppm will give excellent control. This rate is equivalent to 0.8 to 1.6 lbs. of Aquathol Super K Granular per 1,000 sq. ft. at an average depth of 4.0 feet.

When treating an entire pond you can use 25% to 50% less material.

To determine pounds of Aquathol Super K Granular to use per 1,000 sq. ft.:

$$(\text{application rate in ppm}) \times (\text{average depth in feet}) \times (0.1)$$

To use 3.0 ppm at an average depth of 4.0 feet:

$$3.0 \times 4.0 \times 0.1 = 1.2 \text{ pounds per 1,000 sq. ft.}$$

Treat heavy infestations in sections of  $\frac{1}{3}$  to  $\frac{1}{2}$  of the total weed volume to avoid oxygen depletion. Allow 5 to 7 days before continuing to untreated sections.

See page 13 for Water Use Restrictions.

**Buy 2 bags and save \$109.00!**

**Buy 4 bags and save \$437.00!**

**Aquathol Super K Granular, 10 lb. bag** (treats 6,000 to 12,000 sq. ft.)..... **434.00**

**Aquathol Super K Granular, 2 - 10 lb. bags** (treats 12,000 to 24,000 sq. ft.)..... **759.00**

**Aquathol Super K Granular, 4 - 10 lb. bags** (treats 24,000 to 48,000 sq. ft.)..... **1,299.00**

# HYDROTHOL GRANULAR



Hydrothol Granular with alkylamine endothall is a selective, rapid-acting herbicide and algacide. Controls submersed weeds and algae in lakes, ponds, irrigation canals and drainage ditches. Works rapidly enough to be effective in both still and slow moving water. May be harmful to fish at recommended application rates.

## Aquathol with a boost!

The physical form, mode of action, and general usage of Hydrothol Granular are similar to Aquathol Super K Granular.

Where fish are present, application of Hydrothol Granular at rates over 0.3 ppm should be used only for spot treatments, narrow margins, or where some fish kill is acceptable. Do not treat more than 10% of a lake or pond at one time at application rates above 1.0 ppm.

When treating lakes or ponds with Hydrothol Granular, begin at shoreline and work toward center. Apply parallel to shoreline. This will herd fish away from the treated area into deeper, untreated portions of the lake or pond.

## Treat your entire pond for algae.

### Lakes and ponds:

Algae can be controlled with as little as 0.2 ppm of Hydrothol Granular when the entire pond is treated. For longer term control or spot treatments, use 0.5 to 1.5 ppm. Repeat treatment when growth reappears. For floating mats, scatter uniformly over the surface of the mat.

Weeds can be controlled with 0.5 to 3.0 ppm of Hydrothol Granular.

For most Pondweeds 1.0 to 2.0 ppm will give excellent control.

When treating an entire pond you can use 25% to 50% less material.

To determine pounds of Hydrothol Granular to use per 1,000 sq. ft.:

$$(\text{application rate in ppm}) \times (\text{average depth in feet}) \times (1.25)$$

To use 1.5 ppm at an average depth of 4.0 feet:

$$1.5 \times 4.0 \times 1.25 = 7.5 \text{ pounds per 1,000 sq. ft.}$$

### Canals and ditches:

Irrigation canals or drainage ditches will require 3.0 to 5.0 ppm of Hydrothol Granular.

To determine pounds of Hydrothol Granular in canals and ditches:

$$(\text{application rate in ppm}) \times (1000\text{'s of linear feet}) \times (\text{cross section in sq. ft.}) \times (1.25)$$

To use 3.0 ppm over 2,000 feet with a cross section of 15 sq. ft.:

$$3.0 \times 2.0 \times 15 \times 1.25 = 112.5 \text{ pounds}$$

Treat heavy infestations in sections of  $\frac{1}{3}$  to  $\frac{1}{2}$  of the total weed volume to avoid oxygen depletion. Allow 5 to 7 days before continuing to untreated sections.

See page 13 for Water Use Restrictions.

**Hydrothol Granular, 20 lb. bag** (treats 2,000 to 8,000 sq. ft.)..... **184.00**

**Hydrothol Granular, 2 - 20 lb. bags** (treats 4,000 to 16,000 sq. ft.)..... **299.00**

# HARVESTER LIQUID



Harvester Liquid with diquat is a broad spectrum, rapid-acting contact herbicide. Ideal for use on small bodies of water or small weed patches. Successfully controls a broad range of submersed, floating and emersed weeds in still lakes, ponds and ditches.

## Great on land too!

Use around patios, ornamental gardens and along fence lines. Rapidly absorbed by foliage. Begins to work immediately on contact. Wilting and loss of foliage occur quite rapidly. Effective anytime live foliage is accessible. Best results when applied to well developed foliage, but before growth becomes too dense or weeds flower. Turbid water or mud covered foliage will reduce absorption and effectiveness. For difficult to control weeds, add Cutrine-Plus Liquid (p17) to boost effectiveness.

In or out of water, Harvester Liquid is very strongly bound to foliage and will not rinse off. One quart of Harvester Liquid covers 5,000 sq. ft. of submersed weeds or 8,000 to 10,000 sq. ft. of floating, emersed or terrestrial weeds. Dilute with water before use.

*"I used it to deal with an outbreak of hydrilla...it got so bad earlier this year that you could barely paddle through it with a canoe. Three weeks after application they were gone."*

*D.B., North Miami Beach, FL*

### For submersed weeds:

Use 6.5 oz. of Harvester Liquid and 1.5 to 2.5 ozs. of Cygnet Plus Liquid per 1,000 sq. ft. Add water to make 1 gallon. Inject below surface with a tank sprayer or pour into water in strips 20 to 40 feet apart.

### For floating, emersed or terrestrial weeds:

Use 0.50 to 1.0 oz. of Harvester Liquid and 0.5 to 1.0 oz. of Cygnet Plus Liquid per 1,000 sq. ft. Add water to make 1 gallon. Thoroughly spray exposed foliage. Foliage not contacted by spray will not be controlled.

## Effective on many different weeds.

Treat heavy infestations in sections of  $\frac{1}{3}$  to  $\frac{1}{2}$  of total weed volume to avoid oxygen depletion. Allow 5 to 7 days before continuing to untreated sections. See page 13 for Water Use Restrictions.

<b>Harvester Liquid, 1 quart</b> (treats 5,000 sq. ft.).....	<b>77.50</b>
<b>Harvester Liquid, 1 gallon</b> (treats 0.50 acre).....	<b>221.00</b>
<b>Harvester Liquid, 4 - 1 gallons</b> (treats 2.00 acres).....	<b>778.00</b>

# POND-KLEAR LIQUID



Pond-Klear with flumioxazin is a selective rapid-acting contact herbicide. Control submersed, emersed and floating weeds in slow moving or calm bayous, canals, drainage ditches, lakes, marshes, ponds and reservoirs.

Pond-Klear is most effective when applied early to actively growing weeds in hard water ponds and lakes.

Quickly degrades in water. Weeds that do not come in contact with the herbicide will not be controlled.

Full coverage is essential for successful control.

## Great duckweed control.

### To apply Pond-Klear Liquid:

Determine volume of water to treat in acre-ft.

Use 1 pint of Pond-Klear per acre-ft. of treated water.

Dilute with a minimum of 4 gallons of water.

Spray uniformly over water surface.

1 pint of Pond-Klear will treat 1.33 to 2.67 acres of surface weeds or 0.50 to 1.0 acre-ft. of underwater weeds.

Application during early morning hours may enhance effectiveness.

Tank mix with Shore-Klear/Aqua Neat or Harvester for enhanced control of floating and emersed weeds.

See page 13 for Water Use Restrictions.

**Pond-Klear Liquid, 1 pint** (*treats 0.50 to 1.0 acre-ft.*)..... **297.00**



# SHORE-KLEAR & AQUA NEAT LIQUIDS



Shore-Klear & Aqua Neat Liquids with glyphosate are broad spectrum, root killing, systemic herbicides. Controls floating and emersed weeds in and around surface waters. Great on land too!

Thorough systemic action. Applied directly to foliage exposed in air, Shore-Klear & Aqua Neat Liquids are absorbed by the weed and move throughout killing roots and all. Will not work on submersed weeds.

**Initial results in 2 to 4 days.**

Initial results occur in 2 to 4 days. Results begin with wilting and yellowing followed by full browning. Well established heavy growth will require 1 to 3 weeks to show results.

*"Works as advertised! Instructions are clear and application was easy. Weeds were killed to the root. Sprayed an area over six months ago and still no sign of weeds returning."*

*T.L., online testimonial*

Apply Shore-Klear or Aqua Neat Liquid in mid to late season. Apply to actively growing, well developed foliage. A 6 hour rain free period following application is necessary for proper herbicide absorption. Provides effective control of most green vegetation.

## Effective on most exposed vegetation.

Use 1.0 to 2.0 oz. of Shore-Klear or Aqua Neat Liquid and 0.5 to 1.0 oz. of Cygnet Plus Liquid (p27). Add water to make 1 gallon of solution.

Apply with a sprayer. Uniformly wet foliage to point of runoff.

Coverage with Shore-Klear or Aqua Neat Liquid varies with type of weed treated and density of growth. Typically 100 gallons of spray solution will cover 1 acre.

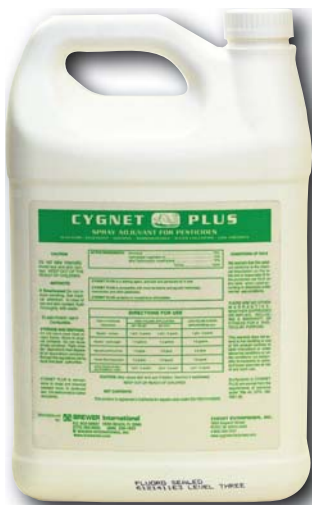
Well-established perennial weeds such as Cattails and Water Lilies may require a second application in 3 weeks.

*Shore-Klear and Aqua Neat are functionally equivalent.  
Same ingredient, same concentration, same uses.  
Different name, different container size.*

Water in areas treated with Shore-Klear or Aqua Neat Liquid has no use restrictions, see page 13.

<b>Shore-Klear Liquid, 1 quart</b> (treats 0.25 to 0.32 acre) .....	<b>84.00</b>
<b>Aqua Neat Liquid, 2.5 gallons</b> (treats 2.50 to 3.20 acres) .....	<b>295.00</b>

## CYGNET PLUS LIQUID



Cygnet Plus Liquid with limonene is a non-ionic, water soluble, biodegradable surfactant made from forestry by-products. Increases effectiveness and reduces treatment costs when used with foliar applied liquid herbicides.

### Stretch your herbicide dollars.

Eliminates beading resulting in a uniform sheeting action of spray solution over foliage surface.

Maximizes contact between spray solution and foliage.

Effectively penetrates waxy coating of leaf surfaces.

Helps stick spray solution to foliage. Improved contact, penetration and adhesion results in improved control.

Use with Alligare Fluridone Liquid, Cutrine-Plus Liquid, Pond-Klear Liquid, Shore-Klear/Aqua Neat Liquid or Harvester Liquid.

For foliage in air, use 0.5 to 1.0 oz. of Cygnet Plus Liquid per gallon of spray solution.

For submersed weeds, use 1.5 to 2.5 oz. of Cygnet Plus Liquid per gallon of spray solution.

**Cygnet Plus Liquid, 1 quart** (mix with up to 64 gallons of spray)..... **35.00**

**Cygnet Plus Liquid, 1 gallon** (mix with up to 256 gallons of spray)..... **72.00**

## HUDSON SPRAYERS



Hudson Constructo Tank Sprayer is a high quality, general purpose hand held sprayer. Graduated translucent tank for easy measuring. Easy fill funnel top reduces spills. Strong steel handle, reinforced hose and 19" brass wand.

### Uniform application, uniform control.

Hudson Bak-Pak Sprayer is a high quality, commercial grade sprayer. Easy to carry and spray larger areas. Easy measuring graduated tank. Wide 4" fill opening includes a filter to reduce clogging. Padded adjustable shoulder straps, 42" non-kinking hose and 4 nozzle options. Insures uniform results.

Use with Alligare Fluridone Liquid, AquaClear Liquid, Cutrine-Plus Liquid, Pond-Klear Liquid, Shore-Klear/Aqua Neat Liquid or Harvester Liquid.

Place wand below the surface and inject solution to treat submersed weeds.

**Constructo Sprayer** (3.0 gallon capacity) ..... **89.00**

**Bak-Pak Sprayer** (4.0 gallon capacity) ..... **109.00**

# AQUACLEAR LIQUID...



AquaClear is a blend of environmentally beneficial microorganisms available in both pellet and liquid form. AquaClear is a safe, natural, effective way to clean up your pond or lake front and provide a healthy aquatic environment.

## Get the muck out!

AquaClear contains microorganisms which use nitrogen and phosphorous present in water and bottom sediment to improve water clarity, reduce organic buildup and eliminate odors. AquaClear will consume excess nutrients in water and in bottom sediment. As nutrient levels drop, balance returns to the water and microbe levels also drop. Once balance is restored, continue monthly to maintain a high level of water quality.

The microorganisms in AquaClear are confirmed to be a non-pathogenic, non-genetically manipulated, non-harmful species of environmentally beneficial microbes. These microbes are typically present in all regions of the world and occur naturally in ponds and lakes.

AquaClear works in water containing high or low levels of oxygen. Optimum results occur in waters with a pH of 6.5 to 8.0 and at temperatures above 40°F.

Water in most ponds and lakes fall within these ranges.

*Organisms in AquaClear may consume herbicides. Do not apply herbicide and AquaClear in the same physical form at the same time. Allow 3 weeks before or after herbicide application before applying AquaClear. This does not apply to Cutrine-Plus.*

### AquaClear will:

- Reduce and eliminate black anaerobic soil.
- Reduce and eliminate decaying organic matter.
- Eliminate odor due to organic buildup.
- Increase water clarity improving aesthetics.
- Increase water quality.
- Ensure good algae balance.
- Promote a healthy aquatic environment.

### AquaClear will not:

- Harm fish, animals, birds, plants or humans.
- Control algae blooms.
- Limit water uses including swimming, fishing or irrigation.
- Work below 40°F.
- Harm fiberglass, aluminum or wood.
- Deplete oxygen levels.

**AquaClear Liquid, 1 gallon** (treats 0.50 to 1.00 acre-ft.) ..... **89.00**

**AquaClear Liquid, 5 gallons** (treats 2.50 to 5.00 acre-ft.) ..... **308.00**

# AQUACLEAR PELLETS



Thorough and completely consumes dead weeds, fish droppings and other organic material in sediment. Muck disappears from the bottom of your water front! Begin applying AquaClear in the spring when the water temperature rises to 40°F or warmer. Repeat weekly for 4 weeks or until desired water or bottom quality is achieved. Continue monthly to maintain a high level of water quality.

## Improve water quality.

Use AquaClear Pellets to clean up your lake or pond bottom. Use AquaClear Liquid to clean up your pond water.

*"I love the way the pellets make the pond look-clear as a swimming pool."*

*M.D., Ohio*

### To apply AquaClear Pellets:

Determine the surface area to be treated in acres.  
Use 10 lbs. of AquaClear Pellets per surface acre.  
Broadcast pellets uniformly over the water surface.

### To apply AquaClear Liquid:

Determine the volume of water to be treated in acre-ft.  
Use 1 gallon of AquaClear Liquid per acre-ft. of treated water.  
Dilute with 9 parts water and spray or pour into the pond.  
Wave action and natural currents will distribute microorganisms uniformly in a few hours.  
When treating half or less of a body of water or under high stress conditions such as drought, following heavy rains or during algae bloom, double the amounts shown above.  
Water in areas treated with AquaClear has no water use restrictions, see page 13.



**AquaClear Pellets, 10 lb. bag** (treats 0.50 to 1.00 acre - one time) ..... **97.00**

**AquaClear Pellets, 1 - 50 lb. bag** (treats 2.50 to 5.00 acres - one time)..... **356.00**

**AquaClear Pellets, 4 - 50 lb. bags** (treats 10.00 to 20.00 acres - one time).... **1,339.00**

(Call for prices on 10 or more 50 lb. bags)

# KOICLEAR LIQUID



KoiClear Liquid is a blend of environmentally beneficial microorganisms used to restore balance in ornamental, Koi and goldfish ponds. Creates sparkling clear pond water. Works equally well in natural and man-made ponds. One pint will treat 100,000 gallons of pond water.

## Sparkling clear Koi pond water.

A safe, natural method to return your Koi pond water to a healthy balance. Beneficial microorganisms in KoiClear Liquid use nitrogen and phosphorus present in water and bottom sediment to improve water quality.

Increase water clarity, reduce organic buildup and eliminate odors. KoiClear Liquid will consume excess nutrients in water and bottom sediment. Quickly and thoroughly consumes fish droppings, excess food and dead weeds. Will not affect live growth.

*"It is a fantastic product. It is keeping our pond clear whereas no other product or solution has in the past."*

*C.M., Carver, MN*

The microorganisms in KoiClear are confirmed to be a non-pathogenic, non-genetically manipulated, non-harmful species of environmentally beneficial microbes. These microbes are typically present in all regions of the world and occur naturally in ponds and lakes.

Apply weekly for 4 weeks or until desired water quality is reached.

Monthly maintenance will ensure a continued high level of water quality.

Will not work below 40° F or above 140° F.

- *Beneficial bacteria.*
- *Natural and safe.*
- *Will not harm liners or filters.*
- *Improve nutrient balance.*
- *Improve water clarity.*
- *Lower ammonia levels.*
- *Safe for fish and plants.*

### To apply KoiClear Liquid:

Determine the volume of your pond in gallons.

Use 1.6 oz. of KoiClear Liquid concentrate per 10,000 gallons of pond water.

Or calculate:

$$(\text{surface area in sq. ft.}) \times (\text{average depth in ft.}) \times (0.0012)$$

To treat a 25 ft. x 10 ft. pond 2 ft. deep:

$$(25 \text{ ft.} \times 10 \text{ ft.}) \times (2 \text{ ft.}) \times 0.0012 = 0.60 \text{ oz.}$$

Water treated with KoiClear Liquid has no use restrictions, see page 13.

**KoiClear Liquid, 16 oz. container** (treats 100,000 gallons of water)..... **55.00**

**KioClear Liquid, 24 - 16 oz. containers** (treats 100,000 gallons 24 times).....**549.00**

# GREENCLEAN GRANULAR



GreenClean with sodium carbonate peroxyhydrate is a rapid-acting contact algaecide for control of algae in non-chlorinated swimming areas, water gardens, goldfish and Koi ponds, ornamental waterfalls, bird baths and many other places where algae develops.

Effects are immediate with bubbling, bleaching and discoloration of the algae.

Control is best achieved when GreenClean is applied before algae becomes well-established.

Allow 48 hours between treatments. Sunlight and higher temperatures enhance GreenClean activity. Skimming off dead algae that rises to the surface will help reduce nutrients in the water.

## To apply GreenClean Granular:

Determine the volume of your pond in gallons.  
Use 3 to 16 Tablespoons of GreenClean Granular per 1,000 gallons of pond water.

Hand-broadcast the granules or dissolve in water and spray evenly over water surface.

Piers, ramps, concrete and outdoor furniture will benefit from surface applications to prevent algae, moss, slime mold and the odors produced. Avoid contact with desirable non-target plants. Undiluted granules will burn non-target plants.

**Clean the green in  
goldfish  
& Koi ponds.**

Do not apply to finished drinking water.  
Water treated with GreenClean has no use restrictions, see page 13.



**GreenClean Granular, 20 lb. container** (treats 0.12-0.67 acre-ft.) ..... **142.00**

# CLEAR-POND PELLETS



Clear-Pond Pellets, buffered alum, is a water clarifier and phosphorous eliminator for use in small bodies of water including ornamental, farm, fish, industrial and golf course ponds.

Quickly and effectively clears water of suspended solids and lowers pond productivity. Improves water clarity in as little as 24 hours.

## **Clear your pond water.**

In most ponds phosphorous is the weed nutrient in shortest supply. When phosphorous levels increase, productivity also increases. Lowering phosphorous levels reduces pond productivity, including algae blooms and excessive weed growth.

Phosphorous enters water from external sources and by internal recycling from bottom sediment. External sources of phosphorous include rainwater, runoff, septic tank discharge, waterfowl droppings and atmospheric deposition. Internal recycling occurs when phosphorous is released from bottom sediment under low oxygen conditions.

Clear-Pond Pellets will strip phosphorous from water and bind it in a form which is unavailable to weeds. This binding of phosphorous is strong enough to prevent internal recycling over a broad range of pH and is independent of oxygen levels. Binding of phosphorous will significantly reduce the productivity of your pond.

## **Reduces excess phosphorous.**

### **To apply Clear-Pond Pellets:**

Determine the volume of your pond in acre-ft.

Use 50 lbs. of Clear-Pond Pellets per acre-ft. of treated water.

Apply the pellets uniformly over the entire body of water.

Clear-Pond Pellets quickly sink and begin to bubble and form a milky white floc.

This floc rises through the water gathering suspended particles and phosphorous.

As particles accumulate floc becomes dense enough to sink.

When water clarity is less than 24" due to algae bloom, better results will be achieved by treating with an algaecide first. Partial pond treatment will be significantly less effective than full pond treatment. The entire pond should be treated.

Water treated with Clear-Pond Pellets has no use restrictions, see page 13.

**Clear-Pond Pellets, 50 lb. bag** (*treats 1.00 acre-ft.*) ..... **219.00**

## AQUASHADE PLUS/AQUASHADOW (blue)



Aquashade Liquid with concentrated dyes filters sunlight, inhibits photosynthesis and creates sparkling blue water. Controls submersed weeds and algae in ponds, decorative water features and other impounded bodies of water. Gives water a crisp, clear, blue color.

Use Aquashade Liquid in spring and early summer before growth begins. Less effective when growth is within 2 feet of water surface. Shallow weeds, algae mats and floating weeds are not affected.

### To apply:

Determine the volume of your pond in acre-ft.

### For Aquashade Plus:

Use 50 oz. of Aquashade Plus per 4.0 acre-ft.  
Pour directly into the water.

### For Aquashadow dry packets:

Use 1 Aquashadow dry packet per 1.0 acre-ft. of water.  
Simply toss entire packet into the water.

The entire pond volume should be treated.

*Aquashade and Aquashade Plus are functionally equivalent. Same ingredients, same uses. Aquashade Plus is 2.6 times more concentrated than Aquashade.*

Aquashadow dry packets should only be used to color man-made water features such as fountains and ponds.

See page 13 for Water Use Restrictions.

<b>Aquashade Plus Liquid, 50 oz. (blue)</b> (treats 4 acre-ft).....	<b>NEW!</b> 83.00
<b>Aquashade Plus Liquid, 6 - 50 oz. (blue)</b> (treats 24 acre-ft).....	389.00
<b>Aquashadow, 4 dry packets (blue)</b> (treats 4.00 acre-ft.).....	98.00
<b>Aquashadow, 4 - 4 dry packets (blue)</b> (treats 16.00 acre-ft.) .....	345.00

## AQUASHADOW (black)

Aquashadow black pond colorant is a water soluble dye designed for use in lakes, ponds, decorative water features and fish hatcheries. Aquashadow black pond colorant beautifies murky, cloudy or off-colored water with a pleasing, reflective dark tint.

### To apply:

Determine the volume of your pond in acre-ft.

Use 0.25 to 0.50 gallons of Aquashadow black per 4.00 acre-ft.

Pour directly into the water.

Dyes disperse within several hours by natural water movement.

The entire pond volume should be treated.

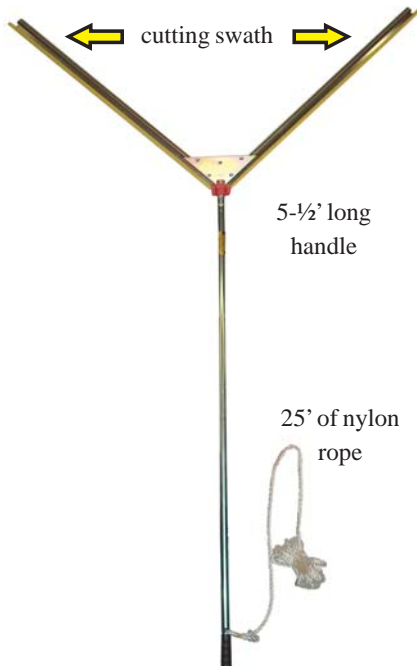
**Safe for goldfish & Koi.**

Aquashadow black pond colorant will not harm fish, waterfowl, pets or wildlife.

See page 13 for Water Use Restrictions.

<b>Aquashadow Liquid, 1 gallon (black)</b> (treats 8.00 to 16.00 acre-ft.).....	<b>105.00</b>
<b>Aquashadow Liquid, 4 - 1 gallons (black)</b> (treats 32.00 to 64.00 acre-ft.).....	<b>356.00</b>

# WEED RAZER



The Weed Razer is a lightweight, hand operated, underwater weed cutter. Available in 3 cutting swath sizes; 30", 48" and 32" to 62". Designed for easy use by a single person. Two angled stainless steel blades cut cleanly through weeds. Non-blade parts are zinc plated for corrosion resistance. Includes 25' of nylon rope and complete instructions.

## Great exercise.

Simply toss Weed Razer into weed bed. Allow a few seconds for cutter to sink. Draw back in a jerking motion. Cut weeds pop to the surface for easy removal. Regular sharpening of blades makes cutting easier. Apply a light oil after each use to help maintain cutter. The Weed Razer Express and Weed Razer are fixed swath cutters. The Weed Razer Pro cutting swath adjusts in 4 settings 32", 47", 57", and 62".

## Weed Razer Pro is ideal for Cattails & Water Lilies.

All three Weed Razer's are best suited to small localized weed patches.  
Do not tow behind a power boat.  
Replace blade covers when not in use.

<b>Weed Razer Express</b> (30") <i>without sharpener</i> .....	<b>139.00</b>
<b>Weed Razer</b> (48") <i>with sharpener</i> .....	<b>172.00</b>
<b>Weed Razer Pro Adjustable</b> (32" to 62") <i>with sharpener</i> .....	<b>233.00</b>
<b>Sharpener</b> .....	<b>29.00</b>

**Have a Before & After photo or video of your lake or pond? E-mail to [Weeds@KillLakeWeeds.com](mailto:Weeds@KillLakeWeeds.com). If used in our Bulletin or on our web site, you will receive 10% off your next order!**

## RAZER RAKE



wide aluminum Razer Rake head has 34 teeth. These are 20% longer than most rakes and each 4.75" tooth better cutting and digging. The lightweight galvanized in 3 snap-together extensions. It includes 2 foam floats floating rope.

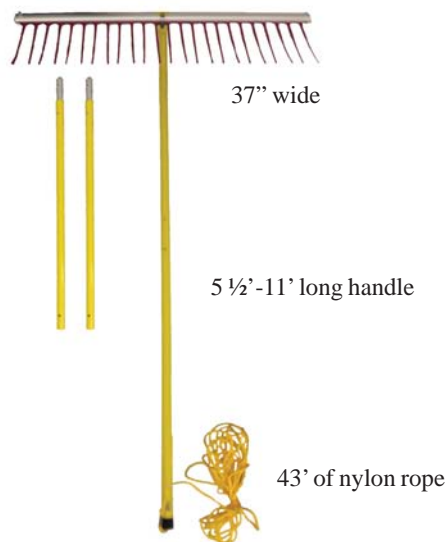
*In cases where physical removal of aquatic weeds is undertaken, longer term control will be achieved by herbicide application. For best results herbicides should be applied after bottom sediment settles and water clears.*

Razer Rake is best-suited for clearing away free floating weeds and debris on the surface and digging deep into bottom to remove stems and roots of submersed weeds. for removing any muck on the lake or pond bottom and cleanup after a heavy storm.

To use Razer Rake in water, toss from shoreline or dock while holding rope and then draw back. Use without rope while wading.

**Razer Rake ..... 169.00**

## WEED RAKER



The Weed Raker is a high strength, lightweight rake with **flexible plastic teeth**. Hollow, 37" rake bar with 24 - 8" teeth. Handle adjusts from 5½' to 11' using two 33" snap-in extensions. Includes 43' of nylon rope. Weighs less than 7 lbs.

The spring action of the flexible teeth loosens settled, compacted bottom debris for easy removal. Use the Weed Raker regularly and you will be amazed by the improvement. Begin early and continue regularly. Roots will be less developed. The amount of debris to be removed will be less substantial. Removing roots prevents weed regrowth.

***Weighs less than 7 lbs.***

Weight hollow head with small stones or sand for a better grip on bottom crud. Great for removing cut or dead weeds from water or land.

**Weed Raker ..... 169.00**  
**5 Replacement Teeth ..... 29.00**

## WATER HARDNESS TEST STRIPS



Water Hardness Test Strips provide a quick and reliable carbonate hardness determination. Includes strips for 50 tests. No mixing. Simply dip test strip, wait 10 seconds and compare to color scale on the bottle. Done!

***Test your water softener too.***

Water Hardness Test Strips should be used prior to Cutrine-Plus in waters containing trout.

Also great for testing tap water for hardness or monitoring your water softener for effectiveness.

**Water Hardness Test Strips ..... 42.00**

## EV-N-SPRED SPREADER



The Earthway EV-N-SPRED Spreader is a commercial quality, shoulder held, hand crank spreader. Features a 40 lb. capacity, stainless steel spread pattern plates, 3 hole drop system, infinite flow control settings and On/Off control.

***Easily treat several acres.***

The Earthway EV-N-SPRED Spreader insures uniform results when applying granular products such as Aquathol Super K, Cutrine-Plus Granular, Hydrothol or Sonar Q Granular.

Will not work with Aquacide Pellets, AquaClear Pellets or Clear-Pond Pellets. Easily managed from a boat.

**EV-N-Spred Spreader ..... 142.00**

## EASY HAND-HELD SPREADER



The Easy Hand-Held Spreader is a durable and affordable hand held spreader for granular products. Rustproof construction, 10 lb. capacity and easy-flow adjustment.

***Easily handled by one person.***

Great for treating tight areas around the dock, boat lift or raft. Easily treat up to an acre. No assembly required.

Will not work with Aquacide Pellets, AquaClear Pellets or Clear-Pond Pellets.

**Easy Hand Held Spreader ..... 32.50**

# MOSQUITO BRIQUETS



Mosquito Briquets with B.t.i. (*Bacillus thuringiensis israelensis*) is a floating, long lasting mosquito larvicide. Controls mosquito larvae in old tires, rain barrels, still ponds, ditches, gutters and flower pots.

Any area where standing water is present.

Use Mosquito Briquets anytime during mosquito season. Apply directly to standing water or areas where standing water develops. Stake or tie in place with string. Unused portions which dry out will start working again when wet. Unused portions remain effective indefinitely.

***Use before they develop into biting adults.***

## To apply Mosquito Briquets:

Determine the area to treat in square-ft.

Use one briquet per 100 square feet.

Simply toss briquets into mosquito breeding areas.

Because they float, active material is released at the surface where larvae live.

Larvae feed on this material and are killed before developing into biting adults.

Partial briquets can be applied to smaller areas.

Lasts for 30 days when in continuous contact with water.

**Mosquito Briquets, 20 each** (treats 2,000 sq. ft.)..... **70.00**

**Mosquito Briquets, 5 - 20 each** (treats 10,000 sq. ft.)..... **274.00**



# AQUAGEST POWDER (septic tank)



Aquagest Powder, bacterial waste degrader, is non-corrosive and non-toxic. The bacteria in Aquagest Powder have been selected and tested for the ability to consume common household organic waste. Breaks down and liquefies fats, grease and paper products.

## Keep drains clear!

Bacteria work slowly but surely. Several hours may be required to free slow moving drains. Several days or weeks may be required to improve a slow moving septic system. Regular use is key to success. In-place septic systems will benefit from regular use of Aquagest Powder. Reduces drainfield glazing to increase percolation.

New septic systems will benefit from regular use of Aquagest Powder.

Prevent the accumulation of waste by using Aquagest Powder from the start in your new septic system.

Aquagest is ideal for restoring the natural action of a septic system which has lost the ability to degrade wastes. This can result in a significant reduction in the number of pump outs required to maintain your septic system.

### Aquagest will:

- Digest organic waste from humans, animals and plants.
- Clear traps, joints and pipes of grease and fat deposits.
- Accelerate the natural decay process.
- Provide optimal enzyme activity by pH adjustment.
- Reduce odor by eliminating the causes.

### To apply Aquagest Powder:

Determine volume of septic tank in gallons.

Use 0.5 lbs. for each 500 gallons of septic tank capacity.

Pour into toilet nearest septic tank.

Wait 30 minutes and flush.

Repeat weekly for a total of 4 weeks.

Continue every other month to maintain system.

One scoop in each drain every other week will keep them clean, free flowing and odor free.

Other uses include outdoor toilets, motor homes, trailers, boats and compost piles.

The effectiveness of Aquagest Powder increases with temperatures up to 120°F.

Above 120°F Aquagest Powder is not effective.

No appreciable activity can be expected below 40°F.

Aquagest Powder is safe for household use and will not harm plumbing or fixtures.



**Aquagest Powder, 5 lb. box** (treats 5,000 gallons) ..... **87.50**

**Aquagest Powder, 25 lb. box** (treats 25,000 gallons)..... **299.00**

## QUESTIONS & ANSWERS

### **Will these products harm fish?**

Read Cutrine-Plus (p17) and Hydrothol Granular (p23) labels carefully regarding fish cautions. Fish are generally at greatest risk from oxygen depletion resulting from rapid decay of dead vegetation. Product labels are available at **KillLakeWeeds.com**.

### **Can I treat my entire pond?**

Best results are achieved by treating an entire pond. This reduces the likelihood that untreated areas will encroach on treated areas. Treatment of an entire pond should be done in sections. Treat  $\frac{1}{3}$  to  $\frac{1}{2}$  of total weed volume at a time. Allow 5 to 7 days between treatments. This will reduce the possibility of fish suffocation due to oxygen depletion from rapid decomposition of dead weeds. This is of greatest concern in warm waters when using rapid-acting contact herbicides and algaecides on well developed weeds and algae.

### **When should I apply aquatic herbicides?**

As a general rule these products should be applied when weeds are actively growing. Controlling aquatic weeds usually requires more effort as the season progresses and weeds become well established. As weeds mature, growth slows and systemic herbicides become less efficient. Mature weeds may hinder access to the treatment site and when treatment is done, a greater amount of dead weeds will result.

### **Which product works the best?**

Each product works best in different situations. The best product for a given weed depends on several factors; the type of weed, time of year, intended water uses, depth and area to be treated. Call us for help in determining the best product for your situation.

### **How long will a treatment last?**

The length of control will depend on the product used, weed treated and local conditions. Systemic herbicides will provide longer term results than contact herbicides. Slow growing weeds will take longer to re-develop than rapidly growing weeds. Treating an entire body of water will provide longer term control than treating a small section of a larger body of water.

### **What are systemic and contact herbicides?**

Systemic herbicides are absorbed by weeds, move throughout the weed and kill the entire weed including roots. Successful systemic treatments require consistent presence of herbicide and more time to work. Usually only one treatment per season is necessary. Contact herbicides kill only those parts of the weed which they touch. Contact herbicides begin to work quickly and require less time to show results. Contact herbicides may require more than one treatment for season long control.

### **Why both granular and liquid products?**

Granular products are used to control bottom growing or rooted weeds and algae.

Liquid products are used to control weeds and algae at or near the surface, have easily accessible foliage or are throughout the water.

In many cases either form may be used successfully.

### **Is mud a problem?**

The effectiveness of chemical control is reduced in muddy or turbid waters.

Liquid herbicides are not absorbed well by mud covered foliage.

Clay, silt or mud will reduce the effectiveness of granular or pelletized herbicides.

AquaClear Pellets (p29) or Clear-Pond Pellets (p32) will help solve these problems.

### **Do I need a permit?**

Control of weeds in state protected waters often requires a permit.

Consult your State Fish and Game Agency before beginning any control operations.

### **What water temperature is best?**

Generally chemicals will be more highly active and effective at warmer temperatures.

Warm temperatures also help insure active weed growth necessary for best results.

If a specific temperature is recommended for use, it will be specified on the product label.

### **Don't fish need weeds to produce oxygen?**

Weeds do produce oxygen, but not nearly as much as is stirred into the water from the atmosphere by wind and wave action. Heavy surface mats of weeds and algae may actually reduce oxygen available to fish and other aquatic organisms by sealing the surface.