

Table 1. Treatment Response of Common Aquatic Plants to Registered Herbicides

AQUATIC GROUP & VEGETATION	bispyribac	carfentrazone	copper & copper complexes: <i>algae/ciaes</i>	copper complexes: <i>herbicides</i>	diquat	endothall	fluridone	flumioxazin	glyphosate	imazamox	imazapyr	penoxsulam	sodium carbonate peroxy-hydrate	triclopyr	2,4-D	GRASS CARP ⁹
AQUATIC HERBICIDE¹																
ALGAE																
<i>Chara/Nitella</i>	P		E		P	G²-p³	P	P	P						P	G
filamentous			E		G	G²-p³	P	G	P				G⁶		P	F
planktonic			E		P	G²	P	F	P				G⁶		P	
FLOATING PLANTS																
azolla		G	P		G		E	E	F			E			F	
duckweeds		E	P		G	P	E	E	P		P	E			F	F
salvinia	F	G	P		G		E	E	G	E		E				P
water hyacinth	E	G	P	G⁴	E		P	P	G	E	E	E		E	E	P
watermeal	F	G	P		F		G	E				G			F	P
water lettuce	E	E	P	G⁴	E		G	E	G		E	E		G	F	
SUBMERGED PLANTS																
coontail	P		P	G⁴	E	E	E	G							G	F-G
elodea			P	G⁴	E	F	E	E				G				E
fanwort			P	P	G	F	E	G				G			F	F
hydrilla	E		P	G⁴	G	G	E	G		G		E				E
milfoils	G	E	P	G⁴	E	E	G	G		G		E		E	E	F
naiads			P	G⁴	E	E	E	E				G			F	E
parrotfeather			P	P	E	E	E	G		G	G⁵	G		G	E	G
pondweeds	G		P	G⁴	G	E	E	G		E	G⁵	G			P	E

¹E= excellent control; G= good control; F= fair control; P= poor control; blank= unknown or no control

²Hydrothol formulations

³Aquathol formulations

⁴Specific copper complexes only: Nautique, Komeen, etc.

⁵Spray only emergent portion

⁶Best on blue-green algae

⁷E for sedge

⁸F for rushes

⁹Permit required from Texas Parks & Wildlife

Table 1. Treatment Response of Common Aquatic Plants to Registered Herbicides continued

AQUATIC GROUP & VEGETATION	bispyribac	carfentrazone	copper & copper complexes: <i>algicides</i>	copper complexes: <i>herbicides</i>	diquat	endothall	fluridone	flumioxazin	glyphosate	imazamox	imazapyr	penoxsulam	sodium carbonate peroxy-hydrate	triclopyr	2,4-D	GRASS CARP ⁹
	AQUATIC HERBICIDE ¹															
EMERGENT PLANTS																
alders			P		F	P	P		E		E			E	E	
alligatorweed	E	F			P		F	G	G	G	E			E	F	
arrowhead	E		P		G	G	E	G	E	E	E				E	
buttonbrush			P		F	P	P		G		G				F	
cattails	P		P		G	P	F	P	E	E	E				F	
common reed			P		F		F	P	E	G	E				F	
frogbit	E			T ⁴	E			G	F	E	E			E	E	
pickerelweed	F			T ⁴	G		P	P	F	E	E			G	G	
sedges & rushes	F		P		F		P	F	G		E ⁷ F ⁸	G			F	
slender spikerush			P		G		G	P	P		F					
smartweed	G		P	T ⁴	F		F	P	E	E	E	G		E	E	
southern watergrass			P				G		E		E				P	
waterlilies	F		P		P		E	F	G	G	G	G		G	E	
water pennywort	G		P		G		P	G	G		E	G		E	G	
water primrose		F	P		F	P	F	G	E	E	E			E	E	
watershield			P		P		G	G	G	G	E				E	
willows	P		P		F	P	P	P	E		E			E	E	
Active Ingredients	Commonly Available Trade Names						Active Ingredients	Commonly Available Trade Names								
bispyribac	Tradewind						glyphosate	Rodeo, Aquamaster, AquaNeat, Eraser AQ, Refuge [®] , others								
carfentrazone	Stingray						imazamox	Clearcast								
copper & complexes	Copper Sulfate, Cutrine, Cutrine Plus, K-Tea, Captain, Agritec, EarthTec, Clearigate						imazapyr	Habitat, Arsenal, Poloris								
copper - herbicides	Komeen, Nautique						penoxsulam	Galleon								
diquat	Reward, Harvester, Tribune, Tsunami DQ, Diquat SPC2L, Weedtrine						sodium carbonate peroxyhydrate	Green Clean, PAK 27, Phycomycin								
endothall	Aquathol K, Aquathol Super K, Hydrothol 191						triclopyr	Renovate, Navitrol, Ecotriclopyr								
flumioxazin	Clipper						2,4-D	Navigate, Weedar 64								
fluridone	Sonar, Avast, WhiteCap, Restore															

***Texas A&M University & Texas A&M AgriLife Extension does not endorse any trade name herbicide

**TABLE 2. AQUATIC VEGETATION HERBICIDE CONTROL WATER USE RESTRICTION¹
(NUMBER OF DAYS AFTER TREATMENT BEFORE USE IN PRIVATE WATERS ONLY)**

COMMON NAME	DRINKING	HUMAN USE SWIMMING	FISH	LIVESTOCK WATERING	IRRIGATION	
					TURF	CROPS
bispyribac	0	0	0	0	30	30
carfentrazone	0-1 ²	0	0	0-1 ²	0-14 ²	0-14 ²
copper complexes ³	0	0	0	0	0	0
diquat	1-3 ³	0	0	1	1-3 ⁴	5
endothall ⁵	7-25	1	0	7-25	7-25	7-25
flumioxazin	0	0	0	0	0-3 ⁴	5
fluridone ⁶	0	0	0	0	7-30	7-30
glyphosate ⁷	0	0	0	0	0	0
imazamox	0	0	0	0	1	1 ⁸
imazapyr	* ⁹	0	0	0	120 ¹⁰	120 ¹⁰
penoxsulam	0	0	0	0	0	* ¹¹
SCP ¹²	0	0	0	0	0	0
triclopyr	* ¹³	0	0	0	0 ¹⁴	120 ¹⁵
2,4-D	* ¹⁶	* ¹⁶	* ¹⁶	* ¹⁶	* ¹⁶	* ¹⁶

¹ Aquatic vegetation control can result in periods of low dissolved oxygen which can stress and/or kill fish. It is best to treat most aquatic vegetation early in the growing season, when the plant is rapidly growing. Treating small areas (e.g. ¼) of the pond at a time at 10- to 14-day intervals will allow for decomposition usually without causing oxygen depletion.

² Varies if 20% or more of surface area is treated

³ If water is for drinking, the elemental copper concentration should not exceed 1.0 ppm (i.e., 4.0 ppm copper sulfate).

⁴ Depending on formulation or rate. Read label.

⁵ Length of use restriction for endothall varies with concentration used. Read label.

⁶ Do not apply within 0.25 mile of a functioning potable water intake.

⁷ Do not apply within 0.5 mile of a functioning potable water intake.

⁸ Do not use treated water to irrigate greenhouses, nurseries, or hydroponics

⁹ Greater than ½ mile from potable water intake

¹⁰ Or until <1.0 ppb

¹¹ Do not use water from any treated site for food crop irrigation until residues are determined to be less than or equal to 1 ppb.

¹² Sodium Carbonate Peroxyhydrate

¹³ Minimum setback distances from potable water intakes required and laboratory tests to determine < 0.4 ppm for use. Read label.

¹⁴ No restriction on irrigating established grasses but do not harvest hay for 14 days after application. Read label.

¹⁵ Or until non-detectable concentration in immunoassay analysis

¹⁶ Water restrictions on 2,4-D vary with formulation, location, rate, and time of year. Read label.

ONLY PRODUCTS LABELED FOR AQUATIC USE may be used in, over, or near the water

Additional information is available through the following references and websites – aquaplant.tamu.edu, srac.tamu.edu, & wildlife.tamu.edu

Aquatic Vegetation Identification Card Deck, RWFPM-PU-321, produced by Dr. Michael P. Masser is for sale for \$12.00 + taxes & shipping, order for 10 or more or \$7.00 + taxes & shipping, order from AgriLifeLearn.tamu.edu

*srac.tamu.edu website publication numbers, SRAC 0360-0369; 3600-3699

**These tables were prepared and maintained by:
Michael P. Masser, Professor and Department Head WFSC
Todd D. Sink, Assistant Professor and Fisheries Extension Specialist**