

Weed Control



Identification of Common Weeds of Rice

Alligatorweed (*Alternanthera philoxeroides*)



Amazon sprangletop (*Leptochloa panicoides*)



Ammannia (red stem) (*Ammannia robusta*)



Arrowhead (*Sagittaria* spp.)



Barnyardgrass (*Echinochloa crus-galli*)



Flat sheath, no ligule, no hairs on blade, no auricles.

Bearded sprangletop (*Leptochloa fusca*)



Broadleaf signalgrass (*Urochloa platyphylla*)



Crabgrass (*Digitaria spp.*)



Ducksalad (*Heteranthera limosa*)



Fall panicum (*Panicum dichotomiflorum*)



Round sheath, ligule with fringe of hairs, blade smooth with prominent midvein, no auricles.

Rice flatsedge (*Cyperus iria*)



Gooseweed (*Sphenoclea zeylanica*)



Hemp sesbania (coffeebean)
(*Sesbania herbacea*)



Johnsongrass (*Sorghum halapense*)



Round sheath; membranous, tall, jagged ligule; blade smooth with prominent midvein; no auricles.

Junglerice (*Echinochloa colona*)



**Northern jointvetch (curly indigo)
(*Aeschynomene virginica*)**



Palmleaf morningglory (*Ipomoea wrightii*)



Pitted morningglory (*Ipomoea lacunosa*)



Red rice (*Oryza sativa*)



Rice cutgrass (*Leersia oryzoides*)



Roundleaf mudplantain (*Heteranthera reniformis*)



Smartweed (*Polygonum spp.*)



Smallflower Umbrella Sedge (*Cyperus difformis*)



Waterhyssop (*Bacopa spp.*)



Yellow nutsedge (*Cyperus esculentus*)



Stems and leaves triangular, reproduces by seed and tubers.

Early Postemergence Weed Response Ratings (0 = no control, 10 = 100% control)

Herbicides	Herbicide MOA	Grasses										Broadleaf Weeds										Sedges							
		Barnyardgrass ¹	Broadleaf signalgrass	Crabgrass	Fall panicum	Red rice	Rice cutgrass	Sprangletop (loosehead / bearded)	Sprangletop (tighthead / Amazon)	Ammania (red stem)	Dayflower	Ducksalad	Eclipta	False Pimpernel	Gooseweed	Groundcherry	Hemp sesbania (coffeebean)	Indian jointvetch	Northern jointvetch (curly indigo)	Palmleaf morningglory	Pigweed, Palmer	Pitted Morningglory	Smartweed	Texasweed	Water hyssop	Flatsedges	Spikerush	Umbrella sedge	Yellow nutsedge
Clincher	1	8	9	5	9	0	2	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ricestar HT	1	9	9	8	7	0	2	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grasp	2	8	0	0	0	0	6	0	0	7	8	9	8	-	8	8	8	8	4	0	5	7	8	7	8	9	8	0	6
Londax	2	0	0	0	0	0	0	0	0	9	7	9	8	9	9	0	6	6	5	0	5	6	0	9	8	8	8	0	6
Newpath fb	2	9	9	9	9	9.5	9	8	7	8	5	7	0	0	5	9	0	0	5	0	7	9	5	0	9	9	0	8	8
Newpath	2	0	0	0	0	0	5	0	0	5	8	3	5	-	4	6	9	3	6	0	0	4	5	-	8	-	0	9	9
Permit	2	0	0	0	0	0	5	0	0	8	9	7	7	-	4	8	9	5	7	3	0	8	5	-	8	-	0	9	9
Permit Plus	2	0	0	0	0	0	5	0	0	8	9	7	7	-	4	8	9	5	7	3	0	8	5	-	8	-	0	9	9
Regiment	2	8	0	0	0	0	7	3	2	6	9	9	7	-	0	-	8	7	7	4	0	5	10	7	6	8	-	3	5
Strada	2	0	0	0	0	0	0	0	0	8	7	6	7	-	4	9	8	9	3	0	4	5	6	-	9	-	0	7	7
Facet	4	8	9	7	6	0	2	0	0	3	3	3	9	3	8	8	8	8	8	4	8	0	0	3	5	-	0	0	0
Grandstand + Permit	4,2	0	0	0	0	0	0	0	0	8	8	4	5	-	4	8	9	9	9	4	9	7	9	-	9	-	3	9	9

Facet + propanil	4,7	9	9	7	9	0	2	4	5	6	5	6	9	7	5	8	9	9	9	8	8	6	6	8	9	9	3	5	
Grandstand + Propanil	4,7	9	9	7	9	0	0	4	5	9	5	8	9	8	8	4	9	9	9	9	9	7	8	8	9	9	3	5	
Basagran	6	0	0	0	0	0	0	0	0	8	9	6	8	7	7	0	3	3	3	8	0	3	7	0	8	8	7	6	
Basagran + propanil	6,7	9	9	7	9	0	2	4	5	9	9	7	9	8	7	4	9	9	9	8	7	5	8	6	9	9	8	7	
Propanil	7	9	9	7	9	0	1	4	5	6	5	7	8	7	5	-	9	9	9	4	7	4	6	6	8	9	9	5	4
Propanil fb propanil	7	9	9	7	9	0	2	7	8	6	6	7	9	7	5	-	9	9	9	5	9	5	8	6	8	9	9	6	6
Propanil + Londax	7,2	9	9	7	9	0	2	4	5	9	8	7	9	8	9	0	9	9	9	9	7	9	8	5	8	9	9	6	8
Propanil + Permit	7,2	9	9	7	9	0	1	4	5	6	9	7	8	7	5	6	10	9	9	4	7	4	6	5	8	9	9	3	9
Propanil + Prowl	7,3	9	9	7	9	0	1	9	9	7	5	7	9	7	6	-	9 [†]	9 [†]	9 [†]	5	7	5	6	4	7	9	7	3	5
Propanil + Bolero	7,8	9	9 [†]	7	9	0	2	9	9	8	8	8	9	9	6	-	9 [†]	9 [†]	9 [†]	5	0	5	6	4	9	9	9	8	5
Aim	14	0	0	0	0	0	0	0	0	6	7	5	7	-	-	8	9	6	6	10	6	10	9	3	7	0	0	3	0
Sharpen	14	0	0	0	0	0	0	0	0	8	7	5	9	-	7	8	9	9	9	9	10	-	8	8	8	8	-	6	6
Ultra Blazer + propanil	14,7	8	8	7	8	0	1	4	5	6	5	7	8	7	5	8	9	6	9	8	9	8	7	3	8	8	8	2	5

¹Some biotypes of barnyardgrass are resistant to Command, propanil, Facet, both Facet and propanil, and Newpath, Grasp, and Regiment.

²Some biotypes of flatsedge and yellow nutsedge are resistant to Permit, Permit Plus, Regiment, Strada, Grasp, and Newpath.

[†]Postemergence control only

Read and follow all label directions when using these products.

Levee Weed Control (Larger Weeds)* (0 = no control, 10 = 100% control)

Herbicides	Herbicide MOA	Grasses					Broadleaf Weeds								
		Barnyardgrass	Bermudagrass	Broadleaf signalgrass	Crabgrass	Foxtail spp.	Entire/lytleat morninglory	Groundcherry	Hemp sesbania (coffeebean)	Northern jointvetch	Palmer amaranth	Palmleaf morninglory	Prickly side (Teaweed)	Sicklepod	Smartweed
Clincher	1	7	3	6	0	0	6	0	0	0	0	0	0	0	0
Ricestar HT	1	6	2	4	3	0	8	0	0	0	0	0	0	0	0
Beyond	2	7	0	7	4	4	4	3	0	0	4	4	0	0	6
Grasp	2	7	2	0	0	6	-	-	5	7	4	0	5	5	
Permit	2	0	0	0	0	5	0	0	8	6	3	2	5	6	
Permit Plus	2	0	0	0	0	6	0	0	8	7	4	3	5	8	
Strada	2	0	0	0	0	3	-	-	5	5	-	-	4	0	
Regiment	2	8	0	0	0	4	-	-	7	7	0	2	6	9	
2,4-D	4	0	0	0	0	8	0	6	9	5	9	9	9	9	
Facet	4	6	0	5	3	6	4	6	7	5	5	4	3	7	
Grandstand	4	0	0	0	0	9	0	5	9	9	9	3	6	7	
Basagran	6	0	0	0	0	4	0	2	2	0	4	4	0	5	
Propanil	7	6	4	6	3	4	0	3	9	8	3	2	4	7	
Aim	14	0	0	0	0	8	0	3	6	3	8	2	3	7	
Sharpen	14	0	0	0	0	9	0	7	8	8	8	6	6	-	
Ultra Blazer	14	0	0	0	0	7	0	3	9	0	6	2	0	6	

*For good levee broadleaf weed control, a combination of products is needed, especially where 2,4-D cannot be used. Applying Facet or other residuals prior to weed emergence is recommended in 2,4-D restricted areas.

Read and follow all label directions when using these products.

Herbicide Modes of Action and Resistance

MOA	Herbicides	Weeds Resistant to This Group in Arkansas
1	Postemergence grass herbicide (ACCase inhibitor) Hoelon, Axial, Select, Fusilade, Clincher, Ricestar HT, Assure II, Poast	annual ryegrass
2	ALS inhibitor herbicide Newpath, Classic, Staple, FirstRate, Scepter, Synchrony XP, FirstShot, Harmony, Oust, Regiment, Permit, Finesse	annual ryegrass, pigweed, common cocklebur, red rice, barnyardgrass, annual nutsedge, smallflower, umbrella sedge, and yellow nutsedge
3	DNA herbicides Prowl H2O, Treflan, Sonolan, Barricade, Pendimax, Trilin	goosegrass
4	Synthetic auxins Facet	barnyardgrass
7	Photosynthetic inhibitors (amides) Propanil (SuperWham, Stam, others)	barnyardgrass
8	Inhibitor of lipid synthesis (not ACCase) Bolero	none

MOA	Herbicides	Weeds Resistant to This Group in Arkansas
9	EPSPS inhibitor Roundup	horseweed, Palmer pigweed, common ragweed, giant ragweed, annual ryegrass, johnsongrass
10	Glutamine synthase inhibitor Liberty	none
13	Pigment inhibitors Command	barnyardgrass
14	PPO inhibitors Valor, Flexstar, Ultra Blazer	none
15	Acetamide herbicides Dual, Lasso, Degree, Outlook, Parlay	none

Row-Crop Plant-Back Intervals for Common Herbicides in Rice Rotations

Herbicide	Cotton	Field Corn	Grain Sorghum	Rice	Soybeans	Wheat
2,4-D	28D	7D	7D	21D	14D	7D
Aim						
Basagran						
Beyond	9M	8.5M	9M	9M ¹³		3M
Bolero	6M	6M	6M	6M	6M	6M
Clarity	21D ¹²		15D	22D	14D ¹²	22D
Clearpath ⁷	18M	10M	18M	18M ¹³	10M	10M
Clincher SF	3M	3M	3M		3M	3M
Command		9M	9M			4M ²¹
Distinct	30D ¹⁴	7D	30D ¹⁴	30D ¹⁴	30D ¹⁴	30D ¹⁴
Express	14D ⁶	14D ⁶	14D ⁶	0D	7D ⁶	0D
Facet L	10M	10M			10M	
FirstShot	14D ⁶	14D ⁶	14D ⁶		7D ⁶	
Grandstand	4M	4M	4M		4M	4M
Grasp/Xtra	3M	3M	3M	3M	3M	3M
League	8M	12M	12M		12M	12M
Londax	4M	4M	4M		4M	4M
Newpath ⁷	18M	8.5M	18M	18M ¹³		4M
Obey	309D	309D	309D		309D	309D
Permit/ HaloMax/ Permit Plus	4M	1M	2M		9M ^{16,19}	2M

Propanil	I	I	I	I	I	I	I	I	I
Prowl	I	FS	FY	FS	I	FS	I	I	4M
Regiment	FY	FY	FY	FY	I	FY	FY	FY	FY
RiceBeaux	60D	60D	60D	60D	I	60D	I	60D	60D
Ricestar HT	30D	30D	30D	30D	I	30D	I	30D	4M
Select/Select Max	I	30D	30D	30D	I	30D	I	30D	30D
Sharpen	1.5-3M ²¹	I	I	I	I	I	I	0-30D ²¹	I
Storm	100D	100D	100D	100D	I	100D	I	I	40D
Strada PRO	6M	3M	3M	3M	I	3M	I	9M	3M
Strada XT7	309D	309D	309D	309D	I	309D	I	309D	309D
Ultra Blazer	100D	100D	100D	100D	I	100D	I	I	40D
Valor	30D ⁶	30D ⁶	30D ⁶	30D ⁶	I	30D ⁶	I	30D ⁶	30D ⁶

***Not all herbicide listed labeled for use in rice – herbicides listed commonly used in rice, in rice rotations, or for burndown.**

⁶Time interval increases with increase of rate and soil pH level.

⁷For Newpath use rates greater than 8 oz/A per season; only Soybeans may be planted the following year.

¹²Time interval is based on 8 oz/A application rate and does not begin until 1 inch of rainfall is received.

¹³Clearfield Rice may be planted at any time after application of Beyond, Clearpath or Newpath.

¹⁴If 4 oz/A or less used and 1 inch of rainfall/irrigation received after application.

¹⁶STS Soybeans can be planted immediately.

¹⁹Rotation interval for Soybeans is 2 months where pH is less than 7.5.

²¹Rotation intervals increase with higher application rate.

Rainfall-Free Periods for Postemergence Rice

Herbicide	Time Before Rainfall
2,4-D	6 hours
Aim	1 hour
Basagran	8 hours
Beyond	4 hours
Bolero	none on label
Clincher	1 hour
Facet	none on label
Grasp	1 hour
League	6 hours
Newpath	4 hours
Permit/Permit Plus	1 hour
Propanil	6 hours
Regiment	8 hours
Ricestar HT	1 hour
Sharpen	1 hour
Storm	8 hours
Strada	6 hours
Ultra Blazer	4 hours

Herbicide Injury to Rice

Newpath injury to Clearfield rice



Not common, but can occur under cool, wet conditions. Symptoms include yellowing and interveinal chlorosis (leaves appear to have yellow stripes). Symptoms can be induced when Newpath or Beyond is tank-mixed with another ALS herbicide such as Regiment or Grasp. Drain and dry the field to allow rice to recover.

Paraquat injury to rice



Symptoms include burned spots or lesions resulting in no yield loss unless filling grains directly contacted.

Glyphosate injury



Vegetative injury results in stunting, but may not reduce yields; however, reproductive injury can/will lead to potentially significant yield loss. Timing of injury as important as rate of herbicide.

Select/ACCase injury



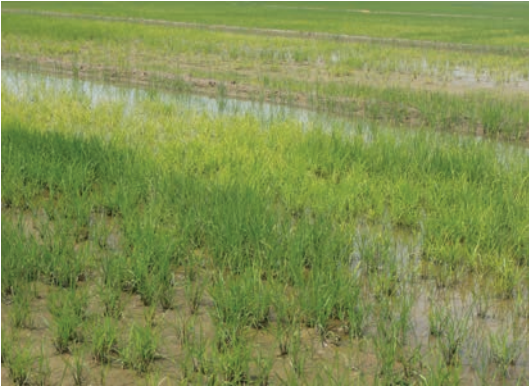
Symptoms include death of primary shoots typical of graminicides. Injury can be severe, often yield losses are not great, but a delay in maturity is common. Often only the main or center tiller is affected.

Glufosinate injury



Symptoms include “water-soaked” leaves and yellow discoloration in spots. Typically not yield-limiting, even with severe crop response.

Permit injury



Rare and usually in combination with very high pH, symptoms include bright yellow plants and interveinal chlorosis. Removal of standing water key to recovery.

Glyphosate tank contamination



Direct application of high rates can result in plant death.

Delayed Phytotoxicity Syndrome (DPS, Delayed Phytotoxic Shock)



Symptoms can vary but include excessive tillering, twisting of tillers and “fish-hooking” of roots. Multiple herbicides including Facet and Bolero can be responsible, in combination with the right set of environmental conditions or stress on plants.