

# RICE

## WEED RESPONSE RATINGS FOR RICE HERBICIDES<sup>a</sup>

	Amazon Sprangletop	Ammania (Redstem)	Barnyardgrass	Bearded Sprangletop	Broadleaf Signalgrass	Crabgrass	Dayflower	Ducksalad	Eclipta	Fall Panicum	Flatsedges	Gooseweed	Hemp Sesbania (coffeebean)	Morningglory	Northern Jointvetch	Nutsedge	Smartweed	Spikerush	Texasweed (2-3 leaf)	Red Rice	Volunteer Glyphosate-Resistant Soybean <sup>c</sup>	Glyphosate-Resistant Horseweed <sup>d</sup>
Command pre	8	0	9	8	9	9	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	-
Facet pre	0	0	9	0	9	9	5	0	8	7	5	3	6	7	7	0	0	-	-	-	-	-
Bolero delayed pre	8	7	8	8	4	7	7	8	8	7	7	6	4	4	-	4	4	7	5	-	-	-
Facet + Bolero delayed pre	8	7	9	8	9	9	7	8	9	9	8	5	8	8	-	0	5	7	-	-	-	-
Facet + Prowl delayed pre	8	3	9	8	9	9	5	0	8	9	5	3	6	8	-	0	2	-	-	-	-	-
Clearpath (clearfield rice)	6	8	9	6	9	9	6	6	8	6	9	0	7	8	7	8	6	-	7	8	-	-
Newpath (2 applications to clearfield rice)	6	8	9	8	9	9	5	7	0	9	9	5	0	7	0	8	7	9	5	9	0	-
Prowl delayed pre	8	3	9	8	8	8	0	0	0	9	0	0	0	0	0	0	2	0	0	-	0	-
Facet early post	0	3	9	0	9	7	3	3	9	6	5	-	8	8	8	0	0	-	3	-	2	6
Facet + Prowl early post	0	3	9	0	9	9	3	3	8	6	5	-	8	8	7	0	2	-	6	-	-	-
Facet + Bolero early post	8	5	9	8	9	9	7	7	9	9	7	5	8	8	-	0	4	7	-	-	5	-
Facet + Propanil early post	5	6	9	4	9	7	5	6	8	9	9	5	9	8	9	5	5	9	8	-	8	8
Grandstand early post	0	8	0	0	0	0	6	4	9	0	6	5	9	9	8	0	6	5	8	0	9	6
Propanil early post	5	6	9	4	9	7	5	7	8	8	9	5	9	5	-	4	6	9	6	-	8	1
Propanil + Bolero (or Ricebeaux) early post	9	8	9	9	8	7	8	8	9	9	9	6	9	6	-	5	6	9	8	-	8	-
Propanil + Prowl early post	9	7	9	9	9	7	5	7	9	9	9	5	9	5	0	4	5	7	6	-	-	-
Propanil Sequential (3 + 3)	8	6	9	7	9	7	6	7	9	9	9	5	9	5	0	6	8	9	8	-	8	-
Propanil + Grandstand early post	5	9	9	4	9	7	7	6	9	9	8	9	9	9	9	5	7	9	8	-	9	-
Propanil + Londax (or Duet) early post	5	9	9	4	9	7	8	7	9	9	9	9	9	9	9	8	8	9	8	-	-	-
Clincher SF early post	8	0	9	9	9	6	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
Grasp early post	2	7	8	2	2	0	8	8	8	2	9	-	8	5	8	3	7	8	6	0	9	8
Regiment early post	2	7	9	2	3	0	8	8	7	0	8	0	8	7	7	0	8	-	8	0	9	5
Ricestar HT early post	8	0	9	9	9	8	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Londax early post	0	8	0	0	0	0	8	9	8	0	8	9	4	0	7	6	6	8	8	-	-	-
Aim early post	0	6	0	0	0	0	7	5	6	0	5	-	9	9	9	3	8	-	8	-	2	-
Permit early post	0	-	0	0	0	0	8	4	7	0	8	-	8	4	7	9	4	-	7	-	8	6
Strada early post	0	8	0	0	0	0	8	6	8	0	9	-	9	7	9	7	6	-	6	0	8	5
Basagran early post	0	8	0	0	0	0	9	7	7	0	8	7	3	3 <sup>b</sup>	-	7	7	8	5	-	0	-
Basagran + Propanil early post	5	9	9	4	9	7	9	7	9	9	9	7	9	5 <sup>b</sup>	9	6	9	9	5	-	-	-
Storm early post	2	9	3	2	3	3	7	8	7	2	8	-	9	8	-	7	8	-	8	-	0	-
Ultra Blazer midseason	0	0	0	0	0	0	0	0	0	0	0	0	9	4	-	0	0	0	4	-	0	-
Grandstand midseason	0	9	0	0	0	0	-	3	8	0	5	9	8	-	-	-	3	3	7	-	-	-
Propanil + Grandstand midseason	0	9	2	0	2	2	8	5	6	2	6	9	9	8	8	-	4	9	5	-	-	-
Propanil midseason	0	4	4	0	4	4	0	3	4	4	5	0	8	0	0	3	5	7	6	-	-	-
2,4-D midseason	0	9	0	0	0	0	9	9	9	0	8	6	9	9	-	5	6	8	-	-	-	-

<sup>a</sup>Control expected under optimum conditions. Mississippi State University does not guarantee these estimates since many factors cause herbicide performance to vary.

<sup>b</sup>8 for palmleaf morningglory.

<sup>c</sup>Control ratings do not apply to sulfonyleurea-tolerant soybean (STS).

<sup>d</sup>Control ratings apply only to glyphosate-resistant horseweed emerging in the spring. Lower control can be expected for glyphosate-resistant horseweed emerging in the fall.

Rating Scale: 0-3 = none to slight; 4-6 = fair; 7-8 = good; 9-10 = excellent.

Consult labels for approved adjuvants.

Weed resistance to recommended use-rates of certain herbicides has been documented in Mississippi — SEE PAGE 9.

Rice, Continued

**Crop, weed, or situation and active chemical per treated land acre**

<b>Crop, weed, or situation and active chemical per treated land acre</b>	<b>Formulation needed to treat 1 acre broadcast</b>	<b>Time of application</b>	<b>Weeds controlled</b>	<b>Special instructions and remarks</b>
<b>Preplant</b>				
flumioxazin — 0.51 to 1.02 lb/A	Valor 51 WDG — 1 to 2 oz/A	30 days Preplant.	Will enhance control of cutleaf evening primrose, henbit, Carolina geranium, and wild mustard, <b>when applied in a burndown program with glyphosate, paraquat, or 2,4-D.</b>	<b>Used in a burndown program</b> at 2 ounces per acre will provide residual control of horseweed, henbit, chickweed, and dandelion.
glyphosate — 1 to 1.5 lb/A	See glyphosate table on pages 5-6 for rates.	Preplant or preemergence.	Annual and perennial grasses and broadleaf weeds.	Apply to actively growing weeds less than 6 inches tall. Use higher rate for weeds more than 6 inches tall. Apply up to 5 pounds of active ingredient per acre for control of perennial weeds. See labels for specific weeds. See aerial application restrictions on page 7. Glyphosate may be tank-mixed with soil-applied herbicides for residual activity.
halosulfuron — 0.031 to 0.062 lb/A	Permit 75 WG — 0.67 to 1.33 oz/A	Preplant/ Preemergence	Yellow nutsedge, annual weeds	Avoid off-site movement to soybean. Add a non-ionic surfactant at 0.25% v/v or a crop oil concentrate at 1% v/v. Application is safe to rice when soil pH is less than 8.0. Do not make more than one preplant/preemergence per growing season.
imazethapyr — 0.063 to 0.094 lb/A	Newpath 2 AS — 4 to 6 oz/A	Preplant- incorporated. Sequential application to 3- to 5-leaf rice required.	Red rice and most annual grasses. Also controls morningglory, smartweed, and nutsedges.	<b>Use on Clearfield rice varieties and hybrids only.</b> Use 4 to 6 ounces per acre for enhanced tolerant Clearfield rice varieties and hybrids. Flush for activation if rainfall does not occur within a few days of planting. It must be followed by one postemergence application of Newpath. <b>Avoid off-site movement of Newpath onto conventional rice varieties.</b>
paraquat — 0.47 to 0.94 lb/A	Gramoxone Inteon 2 SL — 1.88 to 3.75 pt/A	Preplant/ Preemergence.	Annual and perennial grasses and broadleaf weeds. 1-3 inches: 1.3- 1.7 pt, 3-6 inches: 1.7-2 pt, 6 inches: 2-2.7 pt	Add nonionic surfactant at 0.25% v/v.
thifensulfuron + tribenuron — 0.016 to 0.025 lb/A	Firstshot 50 SG — 0.5 to 0.8 oz/A	Prior to planting.	Winter annual and some perennial broadleaf weeds, including curly dock and Pennsylvania smartweed.	Apply to actively growing weeds. May be mixed with other preplant herbicides to broaden weed spectrum. Extend time from application to planting to 7 days when Firstshot is used on light-textured soil (sand, sandy loam) or when Firstshot is used on high pH soils (>7.9).
thiobencarb — 4 lb/A	Bolero 8 EC— 4 pt/A	Preplant/preflood <b>(Water-seeded rice only).</b>	Barnyardgrass sprangletop and 3-4 weeks of aquatic weed control.	Prepare seedbed for <b>water seeding</b> with levees constructed. Destroy all vegetation prior to Bolero application. Apply Bolero and establish flood immediately. <b>Wait 3 days after flood establishment before seeding.</b>
2,4-D amine — 0.5 to 1 lb/A	Various formulations — 1 to 2 pt/A	During winter and early spring at least 30 days prior to planting.	Annual and perennial broadleaf weeds.	Do not apply by air after March 31. Do not apply more than 2.5 pints per growing season.

Rice Continued

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

**Preemergence/Delayed Pre**

clomazone                      Command 3 ME —                      Preemergence.  
0.3 to 0.6 lb/A                      0.8 to 1.6 pt/A

Barnyardgrass,  
Broadleaf signalgrass,  
crabgrass, panicum sp,  
sprangletop.

Command may be applied from planting to rice emergence but before weed emergence. Do not apply to recently land-formed fields. If grasses emerge after application, rainfall or flushing may be needed for activation or reactivation. **Caution: follow label when tank-mixing.**

Command 3ME Herbicide Applied Alone RATES AND WEEDS CONTROLLED	
Soil Texture	Broadcast Rates Per Acre*
Coarse (light) Soils: (sand, loamy sand, sandy loam)	Do not use
Medium Soils: (loam, silt, silt loam, sandy clay, sandy clay loam)	0.8 to 1.125 pt/A (0.3 to 0.4 lb ai)
Fine (heavy) Soils: (silty clay, clay loam, silty clay loam, clay)	1.33 to 1.6 pt/A (0.5 to 0.6 lb ai)

\*Select lower to higher rates based on lighter to heavier soils

glyphosate +  
pendimethalin  
0.37 to 2 lb/A +  
0.75 to 1 lb/A

See glyphosate table on  
pages 5-6 for rates +  
Prowl or Pendimax 3.3  
EC — 1.8 to 2.4 pt/A;  
Prowl H2O 3.8 CS — 1.6  
to 2.1 pt/A

Delayed Pre.

Winter annual weeds  
and residual grass  
control.

See precautions for glyphosate alone and for pendimethalin.

imazethapyr —  
0.063 to 0.094  
lb/A

Newpath 2 AS — 4 to  
6 oz/A

Preemergence.  
Sequential  
application to  
3- to 5-leaf rice  
required.

Red rice and most  
annual grasses. Also  
controls morningglory,  
smartweed, and  
nutsedges.

**Use on Clearfield rice varieties and hybrids only.** Use 4 to 6 ounces per acre for enhanced tolerant Clearfield rice varieties and hybrids. Flush for activation if rainfall does not occur within a few days of planting. It must be followed by one postemergence application of Newpath. **Avoid off-site movement of Newpath onto conventional rice varieties.**

pendimethalin —  
0.75 to 1 lb/A

Prowl or Pendimax 3.3  
EC — 1.8 to 2.4 pt/A;  
Prowl H2O 3.8 CS —  
1.6 to 2.1 pt/A

Delayed Pre.

Annual grasses  
including sprangletop  
and broadleaf signal-  
grass.

Apply after the rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80% of germinated seeds have primary root (radicle) or shoot at least 0.5 inch long. If applied to soil prior to these conditions, or to cracked soil, the stand reduction or stunting of rice may occur. Under some conditions, use of gibberellic acid-treated seed, **heavy rainfall or flushing after application** may result in herbicide injury to rice. Rice can overcome moderate injury with appropriate cultural practices.

quinclorac —  
0.25 to 0.5 lb/A

Facet 75 DF — 0.33 to  
0.67 lb/A

Pre/  
Delayed Pre.

Annual grasses except  
sprangletop, controls  
morningglory, sesba-  
nia, and eclipta.

**Do not** use on sand or loamy sand soils. Apply in 10-40 gallons per acre by ground and 5 gallons per acre by air. See general instructions and remarks for Facet. Do not apply on precision-cut land until the second rice crop. Rice seed exposed to the spray may be severely injured.

Rice, Continued

Crop, weed, or situation and active chemical per treated land acre

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
quinclorac + pendimethalin — 0.25 to 0.5 lb/A + 0.75 to 1 lb/A	Facet 75 DF — 0.33 to 0.67 lb/A + Prowl or Pendimax 3.3 EC — 1.8 to 2.4 pt/A; Prowl H2O 3.8 CS — 1.6 to 2.1 pt/A	Delayed Pre.	Annual grasses, including sprangletop. Also controls morningglory and sesbania.	See special instructions and remarks for pendimethalin. See general instructions and remarks for Facet. <b>Do not</b> apply on precision-cut land until the second rice crop. Rice seed exposed to the spray may be severely injured.
quinclorac + thiobencarb — 0.25 to 0.5 lb/A + 3 to 4 lb/A	Facet 75 DF — 0.33 to 0.67 lb/A + Bolero 8 EC — 3 to 4 pt/A	Pre/ Delayed Pre.	Annual grasses including sprangletop, also controls morningglory, sesbania, eclipta, and aquatics.	See general instructions and remarks for Facet. <b>Do not</b> apply on precision-cut land until the second rice crop. Rice seed exposed to the spray may be severely injured. Application to rice stressed by high salt and/or high pH soil may cause excessive rice injury.
thiobencarb — 4 lb/A	Bolero 8 EC — 4 pt/A	Delayed Pre. (1-5 days before rice and weed emergence).	Barnyardgrass, sprangletop, ducksalad, redstem, water hyssop, false pimpernel, annual umbrella plant, and spikerush.	Seedbed should be sealed by rain or flushing. <b>Do not</b> allow soil to crack after application. Application to rice stressed by high salt and/or high pH soil may cause excessive rice injury.
thiobencarb + pendimethalin — 4 lb/A + 0.75 to 1 lb/A	Bolero 8 EC — 4 pt/A + Prowl or Pendimax 3.3 EC — 1.8 to 2.4 pt/A; Prowl H2O 3.8 CS — 1.6 to 2.1 pt/A	Delayed Pre. (1-5 days before rice and weed emergence)	Barnyardgrass, sprangletop, ducksalad, redstem, water hysop, false pimpernel, annual umbrella plant, and spikerush	See special instructions and remarks above for pendimethalin. Seedbed should be sealed by rain or flushing. <b>Do not</b> allow soil to crack after application. Application to rice stressed by high salt and/or high pH soil may cause excessive rice injury.

**GENERAL INSTRUCTIONS AND REMARKS FOR FACET.** See table below for soil type restrictions. Facet on soil requires water for activation. For preemergence application, apply to moist soil or apply to dry soil and flush the field within 3 to 5 days. For postemergence application, flush 3 to 14 days after application or when new grass/weeds have emerged and are less than 1 inch tall.

**DO NOT DO THE FOLLOWING:**

1. DO NOT apply more than 0.67 pound per acre of Facet per season.
2. DO NOT use on soil that does not have good water-holding capacity.
3. DO NOT use Facet in tank mixes other than those listed on the Facet label or supplemental labels.
4. DO NOT allow Facet to drift onto sensitive crops such as cotton, soybeans, corn, or vegetables.
5. DO NOT plant any crop other than rice for a period of 309 days following Facet application.
6. DO NOT use Facet on precision-cut fields until the second rice crop.

**Preemergence Application for Drill-Seeded Rice**

Soil texture	Facet rate
sand, loamy sand	Do not use
sandy loam	0.33 - 0.44 lb/A
loam, silt loam, silt, sandy clay loam	0.44 - 0.5 lb/A
silty clay loam, clay loam, sandy clay, silty clay, clay	0.50 - 0.67 lb/A

Rice, Continued

Crop, weed, or situation and

active chemical per treated land acre

Formulation needed to treat 1 acre broadcast

Time of application

Weeds controlled

Special instructions and remarks

**Postemergence**

acifluorfen + bentazon — 0.25 to 0.5 lb/A + 0.25 to 0.5 lb/A

Storm 4L — 1.5 pt/A

Apply after rice tillering to early boot.

Cocklebur, dayflower, hemp sesbania, redstem, smartweed, and yellow nutsedge.

Add a nonionic surfactant at 0.25% v/v.

bentazon — 0.75 to 1 lb/A

Basagran 4L — 1.5 to 2 pt/A in 10 gal water for aerial application.

Apply at least 24 hours before permanent flooding. On flooded fields, lower flood or drain before application.

Dayflower, smartweed, redstem, cocklebur, and yellow nutsedge.

Refer to label for rates and stages of weed growth. Apply early to actively growing weeds. Do not apply to submerged weeds because thorough coverage is necessary. A second application may be made 10 to 14 days later if needed. Do not apply more than 2 pounds per acre per season. Tank mix with propanil to increase weed spectrum. Add a nonphytotoxic crop oil concentrate at 1.25% v/v.

bensulfuron — 0.038 to 0.06 lb/A

Londax 60 DF — 1 to 1.6 oz/A in 10 gal water for aerial application.

Apply to flooded field pre-emergence to weeds or very early postemergence to submerged aquatic weeds. Redstem and yellow nutsedge should be 3 to 4 inches above water at application.

Aquatic weeds and yellow nutsedge.

Apply after flood establishment but before weeds reach the 3-leaf stage. Hold water static for at least 7 days after application. May be tank mixed with propanil 1-7 days pre-flood for increased yellow nutsedge and rice flatsedge control. See label for tank-mix rates. Add C.O.C. 1% or N.I.S. 0.25% if used alone or with a dry flowable herbicide.

byspyribac-sodium 0.02 to 0.033 lb/A

Regiment 80 WP — 0.4 to 0.67 oz/A

3-leaf rice but before first elongated internode exceeds 0.5 inch.

Barnyardgrass, junglerice, johnsongrass, hemp sesbania, duck-salad, and Pennsylvania smartweed.

See Regiment label for a list of adjuvants approved by Valent. Apply in at least 10 gallons per acre and do not exceed 1.06 ounces per year. Avoid off-site movement to soybean. It provides little or no control of sprangletop. Medium-grain varieties may be more sensitive to Regiment under stressed conditions.

carfentrazone — 0.025 to 0.05 lb/A

Aim 2 EC — 1.6 to 3.2 oz/A

2-leaf rice or larger and weeds up to 4 inches tall.

Cocklebur, jointvetch, morningglory, smartweed, hemp sesbania, Texasweed.

Do not apply more than 8.6 ounces per season. If flood is lowered, return to normal 24 hours following treatment. Hold water 30 days after treatment. Add a nonionic surfactant at 0.25% v/v or a nonphytotoxic crop oil concentrate at 1% v/v. Avoid applications from flag leaf emergence through harvest-aid application.

carfentrazone + quinclorac — 0.015 to 0.03 + 0.19 to 0.375 lb/A

Aim 2 EC — 1 to 2 oz/A + Facet 75 DF — 0.25 to 0.5 lb/A or Broadhead 70 DF — 6 to 12 oz/A

Preplant, pre-emergence, or between the 2-leaf rice stage and permanent flood.

Barnyardgrass, morningglory, hemp sesbania, and other grass and broadleaf weeds.

See Special Instructions and Remarks for Aim and Facet. Add nonionic surfactant at 0.25% v/v or a nonphytotoxic crop oil concentrate at 1% v/v to postemergence applications.

clomazone 0.3 to 0.6 lb/A

Command 3 ME — 0.8 to 1.6 pt/A

1- to 2- leaf rice.

To provide premergence and residual control of grass weeds.

For control of existing grass weeds present at time of application include a postemergence herbicide from the list on the Command label.

Rice Continued

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

cyhalofop-butyl — 0.25 to 0.28 lb/A

Clincher SF 2.38 EC — 13.5 to 15 oz/A

1-leaf rice up to 60 days before harvest.

Barnyardgrass, broadleaf signalgrass, fall panicum, johnsongrass (seedling), large crabgrass, sprangletop 13.5 oz up to 4 leaf, 13.5-15 oz postflood prior to heading.

Apply 10 gallons per acre or more by air or ground. **Do not apply by air within 2 miles downwind or 4 miles upwind of peaches or nectarines.** A nonphytotoxic crop oil concentrate must be used at 1 quart per acre. **It is essential to have good soil moisture and actively growing grass.** Tank-mixing with broadleaf or sedge hedge herbicides can result in loss of grass activity. May be used in sequential applications. **Do not exceed 25 ounces per acre per year.**

fenoxaprop + safener 0.06 to 0.1088 lb/A

Ricestar HT 0.58 EC — 13 to 24 oz/A

1-leaf rice to tillering but before panicle initiation.

Barnyardgrass, sprangletop, broadleaf signalgrass, johnsongrass (seedling), and fall panicum.

**Do not** apply within 48 hours of an application of methyl parathion. Soil moisture is critical for good activity. Tank-mix only with approved herbicides on Ricestar HT label.

halosulfuron — 0.032 to 0.063 lb/A

Permit 75 WG — 0.67 to 1.33 oz/A

Prior to rice emergence until after flooding.

1- to 6-inch yellow or purple nutsedge, 0.67 oz/A; 6-to 12-inch sedges, 1-1.33 oz/A.

Do not apply within 48 days of harvest. Avoid off-site movement to soybeans. Add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1% v/v.

imazethapyr — 0.063 to 0.094 lb/A

Newpath 2 AS — 4 to 6 oz/A

3-leaf through 5-leaf rice prior to permanent flooding.

Red rice and most annual grasses.

**Use on Clearfield rice varieties and hybrids only. This application must be preceded by one Newpath PPI or PRE application.** Use 4 to 6 ounces per acre for enhanced tolerant Clearfield rice varieties and hybrids. Tank-mixing with other herbicides will be required for control of broadleaf weeds, including hemp sesbania, northern jointvetch, and eclipta. **Avoid off-site movement of Newpath onto conventional rice varieties.** Add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1% v/v.

imazethapyr — 0.063 to 0.094 lb/A followed by 0.063 to 0.094 lb/A

Newpath 2 AS — 4 to 6 oz/A followed by 4 to 6 oz/A

Make first postemergence application at spike to 1-leaf rice followed by a second postemergence application 10 to 14 days later.

Red rice and most annual grasses. Also controls morningglory, smartweed, and nutsedges.

**Use on Clearfield rice varieties and hybrids only.** Use 4 to 6 ounces per acre for enhanced tolerant Clearfield rice varieties and hybrids. A soil-applied herbicide such as Command should be used in the first Newpath application for sprangletop control and to aid in control of annual grasses. Tank-mixing with other herbicides will be required for control of broadleaf weeds, including hemp sesbania, northern jointvetch, and eclipta. **Avoid off-site movement of Newpath onto conventional rice varieties.** Add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1% v/v.

imazethapyr + quinclorac — 0.063 + 0.312 lb/A

Clearpath 75 DF — 0.5 lb/A

Preplant incorporated, pre-emergence, or postemergence (up to 5-leaf rice).

Red rice and most annual grasses. Also controls morningglory, smartweed, and nutsedges. Improved control of some grasses and broadleaf weeds over Newpath.

**Use on Clearfield rice varieties and hybrids only.** Tank-mixing with other herbicides will be required for complete control of broadleaf weeds, including hemp sesbania, northern jointvetch, and eclipta. **Avoid off-site movement of Newpath onto conventional rice varieties.** Clearpath at 0.5 pound per acre provides 4 ounces of Newpath and 0.4 pound of Facet per acre. Add a crop oil concentrate at 1 quart per acre. See *General Instructions and Remarks* for Facet.

Rice, Continued

Crop, weed, or situation and active chemical per treat-

land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
orthosulfamuron — 0.053 to 0.065 lb/A	Strada 50 WG — 1.7 to 2.1 oz/A	Early post-emergence to 0.5 inch internode elongation.	Annual sedge, hemp sesbania, jointvetch.	Tank-mix with other herbicides such as Command, Newpath, or propanil to broaden spectrum. See label for surfactant requirements.
penoxsulam — 0.031 to 0.036 lb/A	Grasp 2 SC — 2 to 2.3 oz/A	Emergence to 60 days before harvest.	Up to 7-leaf eclipta, hemp sesbania, jointvetch, flatsedge, and smartweed; up to 4-leaf duck salad, pigweed, and barnyardgrass.	Do not apply to drought-stressed weeds. Little to no control of sprangletop, broadleaf signalgrass, and fall panicum. May cause stunting and root pruning, especially if higher than labeled rates are applied. <b>Avoid use on high pH soils (&gt;7.8).</b> Add a nonphytotoxic crop oil concentrate or methylated seed oil adjuvant at 1 quart per acre.
propanil — 3 to 6 lb/A	3 to 6 qt/A of 4 lb/gal formulation in 10 gal water for aerial application and 15 to 20 gal water for ground application	When barnyardgrass is in the 1- to 4-leaf stage.	Barnyardgrass and many other grasses and broadleaf weeds common in rice fields.	See general remarks for propanil. If grass is in the 4- to 5-leaf stage, apply 4 to 5 pounds of active material per acre. To prevent reinfestation, flood 1 or 2 days after application. Weed foliage must not be covered with water at time of application. Consult label concerning use of surfactants or crop oil concentrates.

**GENERAL INSTRUCTIONS AND REMARKS FOR PROPANIL:** For aerial application, apply 10 gallons of spray mixture and avoid drift to susceptible crops. Complete spray coverage is necessary. Weeds should be growing actively at treatment time. Rice plants may show yellowing after treatment; however, plants recover quickly. **Do not** exceed 6 pounds per acre per application or 8 pounds per acre per season. **Do not** apply when rain is expected within 6 hours or during periods when daily maximum temperatures are below 75 °F, or above 100 °F. Application during high temperatures may result in excessive rice injury. **DO NOT** use in spray equipment that has contained organophosphate insecticides unless the equipment has been cleaned thoroughly, and **DO NOT** apply these insecticides within 14 days before or after applying propanil.

propanil — 6 to 8 lb/A (For split application where flooding is delayed)	Total 6 to 8 qt/A of 4 lb/gal formulation in two applications	Split application, 3 to 4 lb/A when weeds are in 1- to 3-leaf stage and apply second 3 to 4 lb/A treatment when needed.	Barnyardgrass, Amazon sprangletop, and many other grass and broadleaf weeds common in rice fields.	See general instructions and remarks for propanil. Flood 1 or 2 days after final application. Treatment may not give satisfactory control of other sprangletop species. Weed foliage must not be covered with water at time of application. Consult label concerning use of surfactants or crop oil concentrates.
propanil + bensulfuron — 3 to 5 lb/A + 0.038 to 0.063 lb/A	propanil — 3 to 5 qt/A of 4 lb/gal formulation + Londax 60 DF — 0.75 to 1 oz/A or Duet 4.03 EC — 3 to 5 qt/A	Apply 1 to 7 days before flood.	Many grass and broadleaf weeds and yellow nutsedge.	See <i>General Instructions and Remarks</i> for propanil. For best results, maintain permanent flood and keep water as static as possible. Consult the label concerning use of surfactants. For increased control of nutsedge, add Permit at 0.25 to 0.33 ounce per acre.
propanil + triclopyr — 3 to 4 lb/A + 0.125 to 0.25 lb/A	propanil — 3 to 4 qt/A of 4 lb/gal formulation + Grandstand 3 SL — 0.5 to 0.67 pt/A	Apply after rice reaches the 2-leaf stage and before weeds exceed 6 inches in height. Use no more than 0.5 pt/A of Grandstand if applying to 2- to 3-leaf rice and up to 0.67 pt/A if applying after 4-leaf stage.	Barnyardgrass, morningglory, hemp sesbania, northern jointvetch, eclipta, purple ammannia (red-stem)	See <i>General Instructions and Remarks</i> for propanil. Flood should be delayed for 72 hours after application.

Rice, Continued

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

propanil + pendimethalin — 3 to 4 lb/A + 0.75 to 1 lb/A

propanil — 3 to 4 qt/A of 4 lb/gal formulation + Prowl or Pendimax 3.3 EC — 1.8 to 2.4 pt/A; Prowl H2O 3.8 CS — 1.6 to 2.1 pt/A in 10 gal water for aerial application

After rice emerges and barnyardgrass is in 1- to 3-leaf stage.

Postemergence control of barnyardgrass and many other grasses and broadleaf weeds common in rice fields. Preemergence control of barnyardgrass, sprangle-top, broadleaf signalgrass, and crabgrass.

See general instructions and remarks for propanil. Seedbed should be firm and free of large clods, trash, and surface water at time of application. Field should be flushed if adequate rainfall does not occur within 7 days. **Do not** make more than one application of pendimethalin per season.

quinclorac — 0.25 to 0.5 lb/A

Facet 75 DF — 0.33 to 0.67 lb/A

Early postemergence.

1- to 2-leaf barnyardgrass, broadleaf signalgrass, crabgrass, junglerice, sesbania, and eclipita. Controls 2- to 6-leaf morningglory.

Add a nonphytotoxic crop oil concentrate at 1 quart per acre to maximize weed control. Facet can be applied to water-seeded rice after first true leaf of rice has developed. **Do not** use on precision-cut fields until the second year as rice injury might occur. Does not control sprangle-top.

quinclorac + acifluorfen — 0.25 to 0.5 lb/A + 0.125 to 0.25 lb/A

Facet 75 DF — 0.33 to 0.67 lb/A + Ultra Blazer 2 L — 0.5 to 1 pt/A

Apply after rice is past the 3-leaf stage.

Broad spectrum of grasses and broadleaf weeds.

Add a nonionic surfactant at 0.25% v/v. See label for mixing instructions. **Do not apply to recently land-formed fields.**

quinclorac + acifluorfen + bentazon — 0.25-0.5 lb/A + 0.25-0.5 lb/A

Facet 75 DF — 0.33 to 0.67 lb/A + Storm 4L — 1.5 pt/A

Apply after rice is past the 3-leaf stage.

Grasses and broadleaf weeds such as cocklebur, dayflower, hemp sesbania, red-stem, smartweed, and yellow nutsedge.

Add a nonionic surfactant at 0.25% v/v. See label for mixing instructions. **Do not apply to recently land-formed fields.**

quinclorac + bensulfuron 0.25 to 0.5 lb/A + 0.038 to 0.06 lb/A

Facet 75 DF — 0.33 to 0.67 lb/A + Londax 60 DF — 1 to 1.6 oz/A

Postemergence 1-2 days prior to permanent flood.

Grasses, broadleaf weeds, and yellow nutsedge.

Add a nonphytotoxic crop oil concentrate at 1 quart per acre. See label for mixing instructions.

quinclorac + propanil — 0.25 to 0.5 lb/A + 3 to 5 lb/A

Facet 75 DF — 0.33 to 0.67 lb/A + propanil — 3 to 5 qt/A of 4 lb/gal formulation

Early postemergence.

Broad spectrum grass and broadleaf weeds.

See label for mixing instructions. **Do not** use on precision-cut fields until the second year as rice injury might occur. Weed foliage must not be covered with water at time of application. Consult label concerning use of surfactants or crop oil concentrates.

Rice, Continued

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

triclopyr — 0.25 to 0.375 lb/A	Grandstand 3 SL — 0.67 to 1 pt/A	3-leaf to 0.5- inch internode elongation	Many annual broadleaf weeds.	Flood must be delayed 72 hours to prevent rice injury for applications made prior to flood. If flood is lowered for application, do not expose the crown of rice plants and wait 48 hours before raising the flood level. Add a nonionic surfactant at 0.25% or C.O.C. at 1% v/v. Do not use on precision-cut land until the second rice crop.
thiobencarb + propanil — 3 to 4 lb/A + 3 to 4 lb/A	Bolero 8 EC — 3 to 4 pt/A + propanil — 3 to 4 qt/A of 4 lb/gal for- mulation or Ricebeaux 6 EC — 4 qt/A	Early poste- mergence. Grass in 1- to 3-leaf stage, aquatics less than 0.5 inch tall, and broadleaf weeds less than 2 inches tall.	Many grass and broadleaf weeds.	See <i>General Instructions and Remarks</i> for propanil. Soil should be moist at the time of application and not allowed to crack after application. Do not apply to stressed rice. Ricebeaux at 4 quarts per acre provides 3 pints of Bolero and 3 quarts of propanil per acre.

**Midseason**

acifluorfen — 0.125 to 0.25 lb/A	Ultra Blazer 2 L — 0.5 to 1 pt/A in 5 to 10 gal water	Apply to ac- tively growing sesbania before it flowers. Apply to rice prior to early boot stage.	Hemp sesbania	Add a nonionic surfactant at 0.25% v/v. Do not mix Blazer with oils, drift control agents, liquid fertilizers or other pesticides. See label for other restrictions.
propanil — 2 to 3 lb/A	2 to 3 qt/A of 4 lb/gal formulation	Midseason when the first elongating internode of rice is less than 0.5 inch in length.	Hemp sesbania less than 5 feet tall. Lower rates may be used on weeds 3 feet or less.	See general instructions and remarks for propanil. Treatment may be applied to flooded or drained fields. Complete kill may require 2 to 3 weeks. Weed foliage must not be covered with water at time of application. Consult label concerning use of surfactants or crop oil concentrates.
triclopyr — 0.25 to 0.38 lb/A	Grandstand 3 SL — 0.67 to 1 pt/A	Apply from 3-leaf to midseason.	Many midseason broadleaf weeds.	Add a nonionic surfactant at 0.25-0.5% v/v. <b>Do not apply to recently land-formed fields.</b> The addition of propanil will broaden weed control spectrum.
2,4-D amine 1 to 1.5 lb/A	Various formulations — 2 to 3 pt/A	Late tillering stage but before first elongating internode exceeds 0.5 inch in length.	Hemp sesbania, curly indigo, redstem, duck- salad, gooseweed, smartweed, spikerush, umbrellasedge, water hyacinth, morningglo- ry, and dayflower.	Follow Division of Plant Industry regulations for phenoxy herbicides. Add 1 pint of surfac- tant to each 50 gallons of spray mix. Fields should have shallow flood at time of treat- ment. Do not apply nitrogen within 5- to 21- day period before treatment. Use extreme caution to prevent drift to susceptible crops.

Rice, Continued

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

**Salvage**

bispyribac-sodium 0.034 lb/A

Regiment 80WP — 0.67 oz/A

Postflood but before 0.5-inch internode elongation.

Barnyardgrass, junglerice (4 tiller up to booting).

**Emergency salvage treatment.** See label for list of adjuvants approved by Valent. **Avoid off-site movement to soybeans.**

cyhalofop-butyl 0.25 to 0.28 lb/A

Clincher SF 2.38 EC — 13.5 to 15 oz/A

Postflood.

Annual grasses.

Emergency salvage treatment. Add a nonphytotoxic crop oil concentrate at 1 quart per acre.

imazamox 0.04 lb/A

Beyond IAS — 5 oz/A

Apply only after two applications of Newpath. Apply to red rice prior to heading.

Late-season suppression of red rice.

**Use on Clearfield rice varieties and hybrids only.** It must be applied from tillering to 14 days after panicle initiation on Clearfield rice varieties or from tillering to panicle initiation on Clearfield rice hybrids. **Avoid off-site movement of Beyond onto conventional rice varieties.** Add a nonphytotoxic crop oil concentrate at 1% v/v.

penoxsulam — 0.036 to 0.044 lb/A

Grasp 2 SL — 2.3 to 2.8 oz/A

Postflood to 60 days before harvest but before heading if targeting barnyardgrass.

Barnyardgrass (prior to heading), hemp sesbania, jointvetch, flatsedge, and duck-salad.

**Emergency salvage treatment.** Regrowth of treated weeds may occur. Add a nonphytotoxic crop oil concentrate or methylated seed oil adjuvant at 1 quart per acre.

**Preharvest**

Sodium chlorate at 4.5 lb/A

1.5 gal of a 3 lb/gal formulation in 10 gal spray solution per acre

Apply 7 days before harvest.

Desiccation of weeds and “Down” rice.

Allow 7 days between application and harvest.

**RED RICE CONTROL.** Steps should be taken to prevent the introduction of this weed into rice fields. These steps include use of rice seed free of red rice, cleaning equipment before entering uninfested fields, and hand roguing of light infestations. Where severe infestations occur, several cycles of a 2-year soybean or a 1-year sorghum/1-year soybean rotation with rice are suggested. During the years out of rice, strive for 100% red rice control. Use a combination of preemergence and postemergence herbicides recommended for the control of red rice (see soybean section). A combination of shallow spring and fall disking in conjunction with clod disruption also should be used to reduce the soil reserves of red rice by stimulating germination and destroying germinated seed. When rice is planted, an early-season variety should be used. It should be planted late to allow for additional spring tillage and seeded at a rate that allows a good competitive stand. The early-season varieties mature earlier, thereby limiting the amount of red rice that shatters before harvesting as well as extending the time interval for additional fall tillage.