

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
RICE For additional information on burndown herbicides see p. 25, WEED RESPONSE RATINGS FOR BURNDOWN HERBICIDES.				
Preplant-Vegetation Knockdown				
glyphosate @ 1 lb/A	Emerged weeds.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 32 oz/A.	Apply at least 7 days before seedbed preparation.	Field must be free of standing water. Avoid glyphosate drift to corn.
glyphosate + thifensulfuron + tribenuron @ 1 + 0.016 to 0.025 lb/A	Improved control of curly dock, smartweed, henbit, and garlic.	Glyphosate (4 lb/gal formulations) + First Shot 50 SG See table on page 23 for specific glyphosate conversions and surfactants. 32 oz/A + 0.5 to 0.8 oz/A.	Prior to planting.	Field must be free of standing water. Avoid glyphosate drift to corn.
glyphosate + bensulfuron @ 1 + 0.023 lb/A	Improved control of yellow nutsedge, morningglory, and hemp sesbania.	Glyphosate (4 lb/gal formulations) + Londax 60 DF See table on page 23 for specific glyphosate conversions and surfactants. 32 oz/A + 0.5 oz/A.	Apply at least 7 days before seedbed preparation or planting.	Field must be free of standing water. Avoid glyphosate drift to corn.
glyphosate + clomazone @ 1.0 lb + 0.3-0.6 lb/A	Emerged weeds plus residual grass.	Glyphosate (4 lb/gal formulations) 32 oz + Command 3 ME 0.8-1.6 pt/A Medium Fine (Silt Loam) (Clay) 0.8-1.1 pt/A 1.3-1.6 pt/A Research has shown very little difference in grass control among rates within each soil type. Note: On thin soils, especially those that have been leveled, consider rates as low as 0.5 pt/A.	Up to 14 days prior to planting.	Field must be free of standing water. Avoid glyphosate drift to corn.
glyphosate + halosulfuron @ 1.0 lb + 0.065 lb/A	Emerged weeds + enhanced sedge control. Will suppress other broadleaves.	Glyphosate (4 lb/gal formulations) + Permit 75 WG See table on page 23 for specific glyphosate conversions and surfactants. 32 oz/A + 1 oz/A.	Up to 14 days prior to planting.	Field must be free of standing water. Avoid glyphosate drift to corn. pH must be less than 8.0.

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paraquat @ 0.47 to 0.94 lb/A	Emerged weeds.	Gramoxone Inteon 2 SL 1.88 to 3.75 pt/A. Add 0.25% v/v nonionic surfactant.	Use high rate on weeds larger than 2".	Provides rapid desiccation of existing vegetation. Gramoxone is sensitive to off-target movement, therefore, drift control is necessary. Refer to label for precautions and tank-mix instructions.
2,4-D amine @ 0.5 to 1 lb/A	Emerged broadleaf weeds.	Various formulations 1 to 2 pt/A. Add 0.25% v/v nonionic surfactant.	See label for plant back intervals.	Some plants are sensitive to off-target movement. Therefore, avoid drift. May be tank-mixed with Roundup.

Clearfield Rice System

imazethapyr @ 0.063 lb/A followed by 0.063 lb/A	Red rice, barnyardgrass, broadleaf signalgrass, sprangletop, fall panicum, yellow nutsedge. Suppression of some aquatic broadleaf species.	Newpath 2 AS 4 oz/A ppi. Follow with 4 oz/A post-emergence. Add a nonionic surfactant to post-application. Rates higher than 4 followed by 4 oz/A have not improved weed control when properly timed.	Preplant incorporated or pre-emergence followed by post-emergence. Apply 4 oz/A preplant incorporated up to 7 days prior to planting or preemergence immediately following planting. Apply post-emergence treatment when rice is in 3 to 5 leaf stage. Do not exceed 6 oz/A per application on conventional varieties and 4 oz/A per application on hybrids.	Use on Clearfield rice varieties only. Preferred method for soil application is preplant incorporated at the time of final seedbed preparation. Incorporate during final seedbed preparation pass. Flush for activation if rainfall does not occur within a few days of planting. Repeat flushing as needed to keep soil applied treatment active. Tank mixing with propanil or other suitable products will be required for control of weeds such as hemp sesbania, northern jointvetch and eclipta. To prevent outcrossing between Clearfield rice and red rice, strive to achieve 100 percent red rice control, allowing no escapes. Avoid post applications to hybrids when cool temperatures persist. The University of Arkansas recommends growing Clearfield rice in the same field only one year in a row. Conventional rice varieties cannot be planted the year following Clearfield rice due to carryover of the Newpath injuring the conventional rice.
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Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
RICE [cont.]				
Sequential Post Program				
imazethapyr @ 0.063 lb/A followed by 0.063 lb/A	Same as above. Suppression of sprangletop. Improved control of barnyardgrass and red rice on heavy clays and reduced/no-till or chicken litter fields.	Newpath 2 AS 4 oz/A followed by 4 oz/A. Add nonionic surfactant at 0.25% v/v.	4 oz/A on 1 leaf to 2 leaf red rice followed by 4 oz/A approximately 14 days later.	Same as above. A soil applied herbicide, such as Command, should be used for sprangletop control and to aid in the control of annual grass. Most aquatic suppression will be lost, so be prepared to make appropriate tank-mixtures.
imazethapyr/quinclorac @ 0.063 to 0.30 lb/A followed by imazethapyr @ 0.067 lb/A	Same as above with improved barnyardgrass, hemp sesbania, and northern jointvetch control.	Clearpath followed by Newpath 0.5 lb/A followed by 4 oz/A. Add 1% v/v crop oil concentrate with Clearpath on enhanced tolerance varieties.	Preemergence followed by post-emergence or same as above.	Same as above. See Facet Restrictions and Precautions.
imazamox @ 0.04 lb/A	Late-season suppression of red rice.	Beyond 1 AS 5 oz/A. Surfactant or crop oil concentrate required.	Apply to red rice prior to seedhead emergence. Apply to conventional Clearfield rice no later than 14 days past panicle initiation. Apply to hybrid Clearfield rice no later than panicle initiation.	Late application of Beyond may help prevent red rice outcrossing with Clearfield rice varieties.

In order to prevent the development of ALS-resistant barnyardgrass, the University recommends using an additional barnyardgrass herbicide in CL rice. Do not rely on Newpath alone year after year.

Preplant Non-incorporated [Water Seeded Rice Only]

thiobencarb @ 4 lb/A	Red rice.	Bolero 8E 4 pt/A.	After final seedbed preparation.	Do not apply to Millie or Adair. Flood within 2 to 3 but no sooner than 1 day after Bolero application. If pin-point flood management is used, reflood within 3 to 5 days to prevent loss of Bolero. Use pregerminated seed. Severe injury has occurred in some cases with this recommendation. Contact company for full instructions before using.
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Preemergence [Dry Seeded Rice Only]

quinclorac @ 0.25 to 0.5 lb/A	Barnyardgrass, broadleaf signalgrass, morningglory, hemp sesbania, northern jointvetch.	Facet 75 DF 0.33 to 0.67 lb/A Facet rate by Soil Type <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Coarse (sand)</td> <td>Medium</td> <td>Fine (clay)</td> </tr> <tr> <td>0.33</td> <td>0.5</td> <td>0.67</td> </tr> </table> After planting.	Coarse (sand)	Medium	Fine (clay)	0.33	0.5	0.67	Apply to smooth seedbed with rice seed covered by soil. Rice seed exposed to the spray may be severely injured. Use the lower rate on sandy soils, use the higher rate on clays.	Tomatoes and cotton are extremely sensitive to Facet. For more consistent results, follow the Delayed Preemergence instructions below. If weeds emerge after application, rainfall or flushing may be required for activation and reactivation. Fields treated with Facet should be scouted for smartweed, nutsedge, and sprangletop and treated if necessary. Common purslane will not be controlled by Facet. However, it should be controlled by the flood.
Coarse (sand)	Medium	Fine (clay)								
0.33	0.5	0.67								

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clomazone @ 0.3 to 0.6 lb/A or glyphosate + clomazone @ 1 lb/A + 0.3 to 0.6 lb/A or paraquat + clomazone @ 0.625 + 0.3 to 0.6 lb/A or quinclorac + clomazone @ 0.25 to 0.5 + 0.3 to 0.6 lb/A	Barnyardgrass, broadleaf signalgrass, sprangletop and other annual grasses.	<p>Command 3 ME 0.8 to 1.6 pt/A.</p> <p>Medium (Silt Loam) Fine (Clay) 0.8 to 1.1 pt/A 1.3 to 1.6 pt/A</p> <p>Research has shown very little difference in grass control among rates within each soil type.</p> <p>Note: On thin soils, especially those that have been leveled, consider rates as low as 0.5 pt/A.</p> <p>or</p> <p>Glyphosate (4 lb/gal formulations) + Command See table on page 23 for specific glyphosate conversions and surfactants.</p> <p>or</p> <p>Gramoxone Max + Command</p> <p>or</p> <p>Command 3 ME + Facet 75 DF</p>	<p>Apply from planting to rice emergence to smooth seedbed with rice seed covered by soil.</p> <p>May be used in conventional, stale seedbed and no-till culture. If emerged vegetation is present, add glyphosate at 1 qt glyphosate or equivalent, or Gramoxone Extra at 1.67 pt/A. Using less glyphosate can result in failure due to tank mix antagonism.</p>	<p>If grasses emerge after application, rainfall or flushing may be needed for activation and reactivation. Grasses may emerge white, however usually die off after emergence. Application on newly cut ground can result in severe injury and stand loss. Rice in low areas of the field, or where water is prone to stand, may show more injury. Fields treated with Command should be scouted for nutsedge and flatsedge species and other broadleaf weeds and treated if necessary. Command is not a stand-alone herbicide. It should be used in a herbicide program to control these species. Scout carefully for escaped grasses prior to flooding.</p> <p>Command plus glyphosate can be applied up to 14 days prior to planting. However, sequential post grass herbicides may be needed due to shorter residual.</p>
Delayed Preemergence [Dry Seeded Rice Only]				
thiobencarb @ 4 lb/A	Sprangletop, barnyardgrass and aquatic weeds.	Bolero 8E 4 pt/A.	Apply 1 to 5 days before rice emergence or about 5 to 9 days after planting. Rice seed must have imbibed its germination water prior to application.	Bolero delayed preemergence will usually require follow-up treatment for complete grass control prior to flooding. Apply to soil that has been sealed by rain or flush. Application to rice stressed by high salt and/or high pH soils may cause excessive rice injury. Drain surface water before application. Rainfall or flush required for activation if soil begins to crack or if grass begins to germinate. Does not control broadleaf signalgrass. If barnyardgrass or sprangletop has emerged, use tank mix with propanil.
quinclorac @ 0.25 to 0.5 lb/A	Barnyardgrass, broadleaf signalgrass, morningglory, hemp sesbania, northern jointvetch.	<p>Facet 75 DF 0.33 to 0.67 lb/A. Add 1 qt/A crop oil concentrate if weeds have emerged. Apply 1 to 5 days before rice emergence or about 5 to 9 days after planting.</p>	Apply before or after rain or flushing. Rice seed that is exposed to the spray may be severely injured. Best weed control is obtained if soil surface is smooth and wet, especially on clays.	If weeds emerge after application, rainfall or flushing may be required for activation and reactivation. Fields treated with Facet should be watched for smartweed, nutsedge, and sprangletop and treated if necessary. Common purslane will not be controlled by Facet. However, it should be controlled by the flood. Tomatoes and cotton are extremely sensitive to Facet drift.

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RICE				
Delayed Preemergence [Dry Seeded Rice Only] [cont.]				
quinclorac + thiobencarb @ 0.25 to 0.5 + 3 to 4 lb/A	Barnyardgrass, broadleaf signalgrass, sprangletop, morning-glory, hemp sesbania, northern jointvetch.	Facet 75 DF + Bolero 8E 0.33 to 0.67 lb/A + 3 to 4 pt/A. Research has shown 2 pt/A Bolero effective if sprangletop is only target weed for the Bolero in this mixture, and sprangletop density is light.	Apply 1 to 5 days before rice emergence or about 5 to 9 days after planting. May be applied early post-emergence later than Bolero applied alone. Rice seed exposed to the spray may be severely injured. Rice seed must have imbibed germination water prior to application.	Apply to soil that has been sealed by rain or flush. Application to rice stressed by high salt and/or high pH soils may cause excessive rice injury. Drain surface water before application. Rainfall or flush required for activation and reactivation if soil begins to crack or if grass begins to germinate. Tomatoes and cotton are extremely sensitive to Facet drift.
quinclorac + pendimethalin @ 0.25 to 0.5 + 1 lb/A	Barnyardgrass, broadleaf signalgrass, sprangletop, morning-glory, hemp sesbania, northern jointvetch.	Facet 75 DF + Prowl or Pendimax 3.3 EC 0.33 to 0.67 lb/A + 2.4 pt/A. or Prowl H₂O 3.8 CS 1.6 to 2.1 pt/A. Use low rate for sandy loam soils and high rate for all others.	Apply 1 to 5 days before rice emergence or about 5 to 9 days after planting. May be applied early post-emergence later than Bolero applied alone. Rice seed exposed to the spray may be severely injured. Rice seed must have imbibed germination water prior to application.	Apply to soil that has been sealed by rain or flush. Drain surface water before application. Rainfall or flush required for reactivation. This has been an excellent broad spectrum program in University trials. Tomatoes and cotton are extremely sensitive to Facet drift.
glyphosate + thiobencarb @ 0.38 to 0.75 + 4 lb/A	Emerged weeds, residual control of sprangletop, barnyardgrass, and aquatic weeds.	Glyphosate (4 lb/gal formulations) + Bolero See table on page 23 for specific glyphosate conversions and surfactants. 2 pt/A + 4 pt/A.	Same as above.	Same as above. EMERGED RICE WILL BE KILLED.
pendimethalin @ 0.75 to 1 lb/A	Barnyardgrass, sprangletop, broadleaf signalgrass, crabgrass.	Prowl H₂O 3.8 CS 1.6 to 2.1 pt/A. Use low rate for sandy loam soils and high rate for all others.	Apply 1 to 5 days before emergence or about 5 to 9 days after planting. DO NOT apply preplant incorporated or immediately after planting. Rice seed must have imbibed germination water prior to application.	Broadcast/Drill-seeded rice only. Rice seed must have imbibed germination water. Apply after rain or flush to seal soil. If grass weeds have emerged, add propanil or follow with propanil. See special instructions on label for broadcast seeded rice.
pendimethalin + thiobencarb @ 1 + 3 lb/A	Barnyardgrass, sprangletop, broadleaf signalgrass, and suppression of aquatics.	Prowl H₂O 3.8 CS + Bolero 8 EC 2.1 + 3 pt/A.	Apply 1 to 5 days before rice emergence, usually about 5 to 9 days after planting. Rice seed must have imbibed its germination water prior to application.	This treatment is an option to consider in areas where drift to sensitive plantings is a problem.

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Early Postemergence

propanil @ 3 to 4 lb/A

Barnyardgrass (millet, blue-stem, watergrass), fall panicum, broadleaf signalgrass, hemp sesbania (coffeebean), northern jointvetch (curly indigo), spike rushes, flatsedges, giant foxtail, eclipta, false pimpernel, morningglory, volunteer milo, aquatics. (Refer to rating table for more detail.)

4 lb Propanil Formulations
(Stam M-4, propanil 4-E, Super Wham)
3 to 4 qt/A.

Weed	In.	No. Leaves
Barnyardgrass	1-4	1-4
Fall panicum	1-4	1-4
Broadleaf signalgrass	1-4	1-4
Sprangletop	1/2	1-2
Morningglory	3	2-3
Ducksalad	1	2
Redstem	1	2-4
Smartweed	2	2-4
Volunteer milo	5	4-6
Northern jointvetch	6	--
Hemp sesbania	12	--

Dry or water seeded rice. Weed foliage must not be covered with water at time of application. Repeat treatment if necessary. Two applications 5 to 7 days apart will be necessary for hard-to-kill weeds such as smartweed, volunteer milo, or sprangletop.

Barnyardgrass from some fields in Arkansas has been shown to be tolerant to over 30 lb/A of propanil. If propanil resistant barnyardgrass is a problem, Command or over-the-top grass herbicides should be used. (See Weed Resistance to Herbicide, pages 11 and 12.)

Use 4 lb rate if 4 leaf barnyardgrass is present or on larger stages of weeds listed above.

GENERAL INFORMATION FOR PROPANIL: Avoid drift to susceptible crops. NOTE: Under certain conditions propanil drift to cotton fields before crop emergence can cause injury after emergence. Soybeans are very sensitive to propanil drift. Apply 10 gallons spray mixture for aerial spraying or 15 to 20 gallons for ground spraying. Flush and drain the fields 2 to 3 days before applying propanil to improve weed control if the field is dry and grass is growing slowly. Shallow flood field starting 24 hours after treatment and complete within 4 days after treatment to prevent grass reinfestation. Rice may turn yellow but recovers quickly. When applied during prolonged periods of high temperatures (100°F or above), seedling rice may be severely injured or killed.

Preferred cutoff date is 1/2" internode elongation. The absolute cutoff date is 56 days prior to harvest. The actual dates are provided in the DD50 program.

NOTE: Adding surfactants, petroleum oils, vegetable oils or other additives does not increase efficacy of EC propanil formulations.

DO NOT (a) mix with insecticides, (b) apply within 14 days before or after applying ethyl parathion or carbaryl (Sevin) or anytime after applying carbofuran (Furadan), (c) apply within 7 days before or after methyl parathion, EC or encapsulated formulations, (d) exceed 6 lb/A per application or 8 lb/A per season, (e) apply when rain is expected within a 12-hour period, (f) apply during cool weather (low night temperatures below 50°F and high daytime temperatures below 70°F).

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RICE				
Early Postemergence [cont.]				
clomazone @ 0.3 to 0.6 lb/A + cyhalofop @ 0.25 lb/A	Barnyardgrass and other annual grasses. Certain broadleaf weeds.	Command 3 ME 0.8 to 1.6 pt/A. + Clincher 2.38 EC 13.5 oz/A. Add 1 qt/A of COC.	Prior to 3 leaf rice.	Apply to small, actively growing weeds. If soil moisture is low and the field is hard to flush, Facet is recommended as tank-mix partner with Command 3 ME.
or fenoxaprop @ 0.08 lb/A		or Ricestar HT 0.58 EC 17 oz/A.		
or propanil @ 3 to 4 lb/A		or 4 lb propanil formulations (SuperWham, Stam M4, propanil 4-L) 3 to 4 qt/A.		
or quinclorac @0.25 to 0.5 lb/A	Adds residual jointvetch and hemp sesbania control.	or Facet 75 DF 0.33 to 0.67 lb/A. Add 1% v/v COC.		
or penoxsulam @ 0.031lb/A	Adds postemergence and 2 weeks residual control of hemp sesbania and rice flatsedge.	or Grasp 2 SC 2 oz/A. Add 1 qt/A crop oil concentrate or MSO.	Early postemergence.	In water-seeded rice, rice roots should be well established prior to application.
Postemergence				
fenoxaprop @ 0.08 lb/A	Barnyardgrass, broadleaf signalgrass, fall panicum, loosehead sprangletop, seedling johnsongrass. Suppression of rhizome johnsongrass.	Ricestar HT 0.58 EC 17 oz/A.	When grasses are in 2- to 3-leaf stage. Do not apply within 65 days of harvesting rice.	Excellent soil moisture is critical for good activity. Tank mixing with broadleaf and sedge herbicides can result in loss of grass activity. The greatest antagonism has been observed with Aim and Permit. This treatment is most effective on small actively growing grasses. It is not an effective salvage herbicide. See current 24C label for Arkansas for use rate up to 24 oz/A.
quinclorac + cyhalofop @ 0.25 lb/A + 0.25 lb/A	Annual grasses, sesbania, eclipta, and johnsongrass.	Facet 75DF + Clincher 2.38 EC 0.33 lb/A + 13.5 oz/A. Add 1 qt/A of COC.	Small actively growing weeds.	Do not drift on cotton or tomatoes. Follow State Plant Board recommendations. Excellent soil moisture is needed for good activity.
quinclorac + fenoxaprop @ 0.25 lb/A + 0.08 lb/A	Annual grasses, sesbania, eclipta, and johnsongrass.	Facet 75 DF + Ricestar HT 0.58 EC 0.33 lb/A + 17 oz/A.	Small actively growing weeds.	Do not drift on cotton or tomatoes. Follow State Plant Board recommendations.

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propanil + bensulfuron methyl @ 3 to 4 lb/A + 0.028 to 0.038 lb/A	Yellow nutsedge, rice flatsedge, morningglories, hemp sesbania, northern jointvetch, redstem eclipta.	Stam M4, Propanil 4E, or Super Wham 4 SC + Londax 60DF 3 to 4 qt/A + 0.75 to 1 oz/A. Use 0.5 oz/A if applying sequentially with propanil. or Duet 4.03 EC 3 to 4 qt/A. For increased control of nutsedge, add 0.25 oz/A of Permit.	Apply 1 to 7 days prior to establishment of permanent flood.	For best results, maintain permanent flood and keep water as static as possible.
halosulfuron @ 0.047 to 0.063 lb/A	Yellow nutsedge, flatsedge, and hemp sesbania.	Permit 75 WG 1 to 1.33 oz/A. Add a nonionic surfactant or crop oil concentrate.	Apply to emerged weeds from prior to rice emergence until after permanent flood is established.	Aerial or ground application. Avoid drift to soybeans. Do not apply within 48 days of harvest.
orthosulfamuron @ 0.053 to 0.065 lb/A	Hemp sesbania, flatsedge, and northern jointvetch.	Strada 50 WG 1.7 to 2.1 oz/A. Add surfactant.	From early postemerge until after permanent flood is established.	Apply in a tank mix with propanil, Command or Newpath for best results. Do not apply past 1/2 internode.
propanil + halosulfuron @ 3 to 4 lb/A + 0.031 to 0.063 lb/A	Yellow nutsedge, flatsedges, morningglories, eclipta, hemp sesbania, and northern jointvetch.	Stam, Super Wham 4 SC, or Propanil + Permit 3 to 4 qt/A or equivalent + 0.67 to 1 oz/A Permit.	Apply to emerged weeds. Follow and Permit and propanil restrictions.	See propanil or Permit above.
propanil + thiobencarb @ 3 or 3 + 3 + 3 lb/A	Barnyardgrass, sprangletop, broadleaf signalgrass, and aquatic weeds. (Refer to rating table for more detail.)	Stam M4, Propanil 4E, or Super Wham 4 SC + Bolero 8E 3 qt/A + 3 pt/A. or RiceBeaux 6 SC 4 qt/A.	From 5 to 9 days after planting up to 3-leaf stage of rice. Refer to above table on propanil for optimum timing according to weed size. If rice is water seeded, apply only after rice is well rooted and usually in the 2-leaf stage.	Apply to soil that has been sealed by rain or flush. Application to rice stressed by high salt and/or high pH soils may cause excessive rice injury. Drain any flood or surface water from field. Rainfall or flush will be needed for activation if soil begins to crack or weeds begin to germinate. Provides up to 3 weeks residual.
propanil + thiobencarb fb propanil + thiobencarb @ 2 to 3 + 2 fb 2 to 3 + 2 lb/A	Same as above.	Stam M4, Super Wham 4 SC or Propanil 4E + Bolero 2 to 3 qt/A + 2 pt/A followed by 2 to 3 qt/A + 2 pt/A.	Time first application according to early propanil timing above. Repeat the application immediately prior to flooding.	See above comments. In addition this treatment will provide an extended period of residual control often needed with semi-dwarf rice varieties.
propanil + pendimethalin @ 3 to 4 lb/A + 0.75 to 1 lb/A	Same as above.	Stam M4, Super Wham 4 SC or Propanil 4E + Prowl H₂O 3.8 CS 3 to 4 qt/A + 2.1 pt/A.	Apply to rice in spiking to 3-leaf stage. Refer to table for propanil for optimum timing according to weed size.	Dry seeded rice only. Soil should be sealed by rain or flush. Drain any surface water. Rainfall will be needed for activation. Gives residual control up to 2 weeks. Residual control from Prowl reduced after flooding, flushing or several days of heavy rainfall.

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RICE				
Postemergence [cont.]				
quinclorac + propanil @ 0.25 to 0.5 + 3 to 4	Barnyardgrass, broadleaf signalgrass, morningglory, hemp sesbania, northern jointvetch.	Facet 75 DF + Stam M4, Super Wham 4 SC, or Propanil 4 E 0.33 to 0.67 lb/A + 3 to 4 qt/A.	Apply to small actively growing weeds. Follow adjuvant recommendation on label for propanil formulation used.	Rainfall or flushing may be required for activation or reactivation. Fields treated with Facet should be scouted for smartweed, nutsedge, and sprangletop and treated if necessary. Tomatoes and cotton are extremely sensitive to Facet drift.
bispyribac @ 0.02 to 0.032 lb/A	Barnyardgrass, smartweed, ducksalad, and johnsongrass.	Regiment 80 WP 0.4 to 0.63 oz/A. See label for approved surfactants.	From 4 leaf rice to joint movement. Do not apply past joint movement.	May cause root pruning and stunting, especially if higher than labeled rates are applied. Studies have shown that the addition of UAN liquid fertilizer can improve weed control.
penoxsulam @ 0.031 to 0.036 lb/A	Ducksalad, rice flatsedge, barnyardgrass, jointvetch, and hemp sesbania.	Grasp 2 EC 2 to 2.3 oz/A. Add 1 qt/A crop oil concentrate or methylated seed oil.	Apply early postemergence. Make only 1 application per year. *Water seeded rice should be well-rooted prior to application. Do not apply within 60 days of harvest.	May cause root pruning and stunting, especially if higher than labeled rates are applied. Avoid high pH soils (>7.8) and soils with salt related problems. Delay flooding for 3 days after application.
Early Postemergence [Specialty Use]				
propanil + bentazon @ 3 to 5 lb/A + 3/4 lb/A	Barnyardgrass, smartweed, cocklebur, redstem, yellow nutsedge, dayflower, and spikerush.	Stam M4, Super Wham 4 SC or Propanil 4E + Basagran 3 to 5 qt/A 1 1/2 pt/A. If grass weeds are not present, Basagran alone at 1 1/2 to 2 pt/A will control broadleaf weeds such as cocklebur or smartweed. Refer to rating table for comparison.	Apply up to 6" broadleaf weeds on all except cocklebur (10 inches), redstem (4 inches), and nutsedge (4 to 6 inches). Propanil timing for grasses should be applied as for propanil alone.	Dry or water seeded rice. See general propanil and follow information on state label. No residual control. Control of yellow nutsedge erratic.
propanil + acifluorfen @ 3 lb/A + 0.2 lb/A	Morningglory and hemp sesbania.	Stam M4, Super Wham 4 SC or Propanil 4E + Ultra Blazer 3 qt/A + 0.8 pt/A Ultra Blazer.	When hemp sesbania is 1 to 5 feet and morningglory runners are less than 1 foot.	May cause tip burn on rice, but symptoms will be quickly outgrown. Do not apply more than 1 pt/A per season. The addition of Ultra Blazer reduces propanil activity on grasses. Do not apply past boot stage.
propanil + bentazon/acifluorfen @ 3 to 5 lb/A + 0.5 + 0.25 lb/A	Barnyardgrass, cocklebur, hemp sesbania, morningglory, redstem, smartweed and eclipta.	Stam M4, Super Wham 4 SC or Propanil 4E + Storm 3 to 5 qt/A + 1 1/2 pt/A. (If grass weeds are not present, Storm alone will control broadleaf weeds such as cocklebur, morningglory, and hemp sesbania).	Apply to small actively growing weeds, except cocklebur (10 inches), hemp sesbania (1 to 4 ft), redstem (4 inches).	Dry or water seeded rice. No residual control. Storm contains the same active ingredient as in Ultra Blazer, therefore reduced propanil activity on grasses may occur.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
propanil + triclopyr @ 3 to 4 + 0.125 to 0.25 lb/A	Barnyardgrass, morningglories, hemp sesbania, northern jointvetch, eclipta, redstem, and cocklebur.	Stam M4, Propanil 4E, or Super Wham 4 SC + Grandstand 3 SL 3 to 4 qt/A + 1/2 to 2/3 pt/A. Surfactant not required when tank-mixing Grandstand and propanil. If no grasses are present, the rate of propanil may be reduced to 1 to 2 qt/A.	Apply after rice reaches 2- to 3-leaf stage, and before weeds exceed 6 inches in height. Use no more than 1/2 pt/A if applying to 2- to 3-leaf rice and up to 2/3 pt/A if after 4-leaf stage.	Research has shown that injury can be caused by fertilizing and flooding soon after application. Flood should be delayed 3 days after application.
carfentrazone @ 0.016 lb/A	Morningglories, hemp sesbania, groundcherry, and smartweed.	Aim 2 EC 1.0 oz/A. Add a nonionic surfactant.	Apply after rice reaches 2-leaf stage to small actively growing weeds. Avoid applications from flag leaf emergence through harvest aid applications.	Thorough mixing and excellent sprayer agitation required. Avoid drift to cotton. Can burn or speckle rice, especially if foliage is wet. Symptoms are cosmetic and quickly outgrown.
carfentrazone + quinclorac @ 0.016 + 0.19 to 0.44 lb/A	Barnyardgrass, morningglories, hemp sesbania, groundcherry, and other grass and broadleaf weeds.	Aim 2 EC + Facet 75 DF 1.0 oz/A + 0.25 to 0.33 lb/A. Add crop oil concentrate at 1% v/v.	Apply after rice reaches 2-leaf stage.	See Aim and Facet precautions.
carfentrazone + halosulfuron @ 0.047 lb/A	Smartweed early, morningglories, sedges, and other broadleaves.	Aim 2 EC + Permit 75 WG 1.0 oz/A + 1.0 oz/A. Add surfactant.	Apply after rice reaches 2-leaf stage.	Possible antagonism on hemp sesbania.
triclopyr + propanil @ 0.25 to 0.375 lb ai/A + 1 lb/A	Morningglories, jointvetch, cocklebur, alligatorweed, eclipta, redstem, and sicklepod.	Grandstand 3 SL + Propanil 4E 2/3 to 1 pt/A + 1 qt/A.	After rice reaches 3- to 4-leaf stage.	Research has shown that injury can be caused by fertilizing and flooding soon after application. Flood should be delayed 3 days after application.
triclopyr + acifluorfen @ 0.19 to 0.25 + 0.2 lb/A	Morningglories, jointvetch, hemp sesbania, and cocklebur.	Grandstand 3 SL + Ultra Blazer 2L 1/2 to 2/3 pt/A + 0.8 pt/A. NIS required with tank mix.	Apply after rice reaches 2- to 3-leaf stage.	Research has shown that injury can be caused by fertilizing and flooding soon after application. Flood should be delayed 3 days after application. Do not apply past 1/2 inch internode.
triclopyr + halosulfuron @ 0.25 lb ai/A + 0.031 to 0.063 lb/A	Morningglories, jointvetch, hemp sesbania, cocklebur, and nut-sedge.	Grandstand 3 SL + Permit 75 WG 0.67 pt/A + 0.67 to 1 oz Permit.	From 2-leaf stage until after field is flooded.	Same as above. Do not apply within 48 days of harvest.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
RICE [cont.]				
Postemergence [After Flooding]				
cyhalofop @ 0.28 lb/A	Barnyardgrass, fall panicum, and other annual grasses.	Clincher 2.38 EC 15 oz/A + 1 qt/A of COC or MSO.	Do not apply within 60 days of harvest. Apply to grasses in shallow flood. Best results have been achieved when applications are made no later than 7 days after flooding with 70% of the foliage exposed.	Do not apply within 60 days of harvest. Maintain flood after application. Do not tank-mix with broadleaf herbicides. (Later than 7 days after flood, adding 0.25 to 0.50 lb/A of Facet will improve control and consistency.) In salvage situations, 15 oz/A of Clincher can be followed by 10 oz/A of additional product. Apply approximately 7 days apart, preferably in an alternative spray pattern. Do not use more than 25 oz per year.
penoxsulam @ 0.044 lb/A	Suppression of barnyardgrass, jointvetch, hemp sesbania, eclipta, and rice flatsedge.	Grasp 2 SC 2.8 oz/A + 1 qt/A COC or MSO.	Apply 7 to 10 days after flood. Not a salvage treatment.	At least 70% of target weed should be exposed (above flood). Good coverage is essential. Do not apply within 60 days of harvest.
quinclorac @ 0.375 lb/A + propanil @ 4 lb/A	Salvage barnyardgrass and broadleaf signalgrass.	Facet 75 DF + Super Wham 4 SC, Stam M4, or Propanil 4E 0.5 lb/A + 4 qt/A + COC 1% v/v.	Apply to barnyardgrass before rice heads to desiccate barnyardgrass to minimize lodging and open up the canopy.	Broadcast aerially in 5 gallons of spray mixture to flooded field. An application of 20 to 30 lb/A of nitrogen 4 to 7 days later will stimulate rice recovery. NOTE: the newer formulations of Liquid N have less free ammonia than in early years. This often results in less effectiveness. Grower's risk treatment. Do not apply within 40 days of harvest.
GENERAL INFORMATION ON PHENOXY HERBICIDE. Follow State Plant Board Regulations. Drain field or lower flood sufficiently to expose weeds to herbicides before treatment. Phenoxy herbicides are hazardous to cotton and soybeans. AVOID DRIFT. Cotton is extremely sensitive to 2,4-D and MCPA. Rain 1 to 6 hours after treatment may reduce effectiveness. Do not apply nitrogen during the 7 to 21 days before phenoxy herbicide application, since the nitrogen stimulates the rice plant growth, making it more susceptible to phenoxy treatment injury. Note: Not all brands of 2,4-D and MCPA are labeled for use on rice. Choose a brand labeled for the intended use.				
bensulfuron methyl @ 0.0375 to 0.063 lb/A	Ducksalad, redstem, eclipta, false pimpernel, gooseweed, dayflower, flatsedge, water hyssop, arrowhead, and emerged yellow nutsedge.	Londax 60 DF 1 to 1.67 oz/A. Add 1% crop oil concentrate for emerged weeds.	For aquatics, apply within 5 days after flooding when target weeds are small and maintain flood at least 7 days. For water-seeded rice apply as soon as possible after rice has pegged and flood stabilized. For emerged yellow nutsedge, when leaves are 3" to 4" above water surface.	Londax is highly water soluble which requires non-moving water. Avoid pumping for 7 days after treatment, if possible. Activity is slow. Most consistent results are obtained on aquatics before or just at emergence.
2,4-D amine @ 1 to 1.5 lb/A	Broadleaf and aquatic weed control. Refer to rating table.	2,4-D amine 2 to 3 pt/A of 4 lb/gal.	Apply at correct DD50 threshold or when the first elongating internode begins movement to 1/2 inch long. Do not apply when internode exceeds 1/2 inch.	If rice injury occurs, apply 20 to 30 pounds of nitrogen within 5 days after phenoxy herbicide treatment. Apply additional nitrogen 10 to 14 days after the recommended mid-season stage for the variety. For specific nitrogen rates and timing, consult your county Extension agent. If for some reason nitrogen is applied first, a phenoxy herbicide can be safely applied 5 days after the nitrogen application, providing the first elongating internode is not longer than 1/2 inch. Application of 2,4-D is restricted in some counties.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
acifluorfen @ 0.125 to 0.25 lb/A	Hemp sesbania (coffeebean).	Ultra Blazer 2L 1/2 to 1 pt/A. Add a surfactant.	When hemp sesbania is 1 to 5 feet tall. See DD50 program for specific begin and end dates.	Do not apply past the boot stage of rice. May cause tip burn on rice, but symptoms will be quickly outgrown. Do not apply more than 1 pt/A per season.
triclopyr + propanil @ 0.25 + 1 lb/A	Morningglories, hemp sesbania, and northern jointvetch.	Grandstand 3 SL + Stam M4, Super Wham 4 SC, or Propanil 4E 2/3 pt/A + 1 qt/A. Surfactant not required when tank-mixing with propanil.	Apply prior to 1/2 inch internode elongation. See DD50 program for details.	For the midseason applications, research has shown significant yield reductions when applied soon after 1/2 inch internode elongation. Also, make sure flood water covers soil surface and root area of plants. Note: This is in contrast to the recommendation for the early season application.
<i>Colletotrichum gloeosporioides</i> f sp. <i>aeschynomene</i>	Northern jointvetch (curly indigo).	LockDown 75 billion spores/A. See label for specific instructions.	Apply when northern jointvetch averages 8 to 24 inches tall and when plants have emerged through rice canopy. See DD50 printout for specific beginning and ending dates.	Expect slow results. Special sprayer cleanup and mixing instructions must be used. Refer to LockDown label for details. Late application near blooming stage of northern jointvetch may not allow enough time to prevent seed production or kill weeds before harvest. Does not control Indian jointvetch. Do not apply Benlate within 14 days before or after a LockDown application. If possible, do not apply Quadris, Tilt or Moncut within 14 days of LockDown, but applications down to 7 days before or after Lockdown likely will not reduce overall effectiveness. Very late afternoon to early evening or just prior to rainfall are optimal for application.

Levee Application

MID-SEASON LEVEE WEED CONTROL (LARGER WEEDS)*

HERBICIDES	Barnyardgrass	Bermudagrass	Broadleaf Signalgrass	Crabgrass	Entire/ly/leaf Morningglory	Foxtail sp.	Groundcherry	Hemp Sesbania (coffeebean)	Northern Jointvetch	Palmer Amaranth	Palmeaf Morningglory	Prickly Sida (Teaweed)	Smartweed
2,4-D	0	0	0	0	8	0	6	9	5	8	9	9	9
Aim	0	0	0	0	6	0	3	8	3	3	6	2	7
Basagran	0	0	0	0	4	0	2	2	0	0	4	4	5
Beyond	7	0	7	4	4	4	3	0	0	0	4	4	6
Clincher	7	3	6	0	0	6	0	0	0	0	0	0	0
Facet	6	0	5	3	6	4	6	7	5	0	5	4	7
Grandstand	0	0	0	0	7	0	5	9	9	4	6	3	7
Grasp	7	2	0	0	3	-	-	5	7	-	4	0	5
Permit	0	0	0	0	5	0	0	8	6	0	3	2	7
Propanil	6	4	6	3	3	0	3	9	8	6	3	2	7
Regiment	8	0	0	0	4	-	-	7	7	-	0	2	9
Ricestar	6	2	4	3	0	8	0	0	0	0	0	0	0
Strada	0	0	0	0	3	-	-	5	5	0	-	-	0
Ultra Blazer	0	0	0	0	7	0	3	9	0	4	6	2	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.

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
RICE				
Levee Application [cont.]				
propanil + 2,4-D @ 3 to 4 lb/A + 0.75 to 1.25 lb/A	Barnyardgrass, broadleaf and aquatic weeds on levees.	Stam M4, Super Wham 4 SC or Propanil 4E + 2,4-D 3 to 4 qt/A + 1.5 to 2.5 pt/A.	Apply at correct DD50 date or when the first elongating internode begins movement to 1/2 inch long. Do not apply when internode exceeds 1/2 inch.	Use 5 gpa by air and 10 to 20 gpa by ground. Grower's risk treatment (see inside cover for explanation). Follow all phenoxy regulations.
propanil + acifluorfen @ 3 to 4 lb/A + 0.25 lb/A	Same as above.	Stam M4, Super Wham 4 SC or Propanil 4E + Ultra Blazer 2L 3 to 4 qt/A + 1 pt/A.	See DD50 printout for specific beginning and ending dates.	Less effective than propanil + 2,4-D, but is safer to use when cotton is grown nearby. Reduced activity on morningglories with runners greater than 1 foot.
propanil + bentazon/acifluorfen @ 3 to 4 lb/A + 0.5 + 0.25 lb/A	Barnyardgrass, cocklebur, hemp sesbania, morningglory, red-stem, smartweed, and eclipta.	Stam M4, Super Wham 4 SC or Propanil 4E + Storm 3 to 5 qt/A + 1 1/2 pt/A. [If grass weeds are not present, Storm alone will control broadleaf weeds such as cocklebur, morning-glory, and hemp sesbania].	See DD50 printout for specific beginning and ending dates.	Same as above.
Preharvest				
sodium chlorate @ 6 lb/A	Desiccating green weed foliage.	Sodium Chlorate Several brands and trade names are available. 2 gal/A of 3 lb/gal or 1 gal/A of 6 lb/gal.	When average moisture is 25% or below.	See label for details. Harvest within 5 days after application to prevent overdrying, and potential milling quality reduction.
carfentrazone @ 0.025 lb/A	Morningglories.	Aim 2 EC 1.5 oz/A. Add 1% COC.	When average moisture is 25% or below.	Aim has a 3-day PHI. Can be tank-mixed with sodium chlorate.