

Rice Weed Control

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Introduction

Weed identification is the key to selecting the best and cheapest weed control program.

Multiple herbicides applied multiple times are generally required.

Best yields observed when weeds are controlled before or soon after rice emergence.

Excellent weed control and rice yields are easiest obtained by using residual herbicides, but well timed sequential application of POST herbicides do a good job as well.

Why Herbicides Fail

Again, weed identification

Application timing is critical

- Barnyardgrass can go from 1-2 lf to tillering in a week

Environmental conditions

- Dry soil
- Field is flooded

Application errors

- GPA
- Surfactants
- Incompatible tank mixes

Resistance

GRASP

- Drill-seeded
 - Excellent barnyardgrass, sesbania, flatsedge (except umbrella) activity
 - Promising on ducksalad, dayflower, purple ammania
 - Some Texasweed activity when small or mixed with Aim, Permit, or Londax
 - No sprangletop control
 - Alligatorweed
- Water-seeded
 - Good barnyardgrass control from pegging through 2-3 lf rice (2.0 oz/A)
 - Sesbania control best at 2-3 lf stage (2.3 oz/A)
 - Excellent on rice flatsedge
 - Purple ammania and ducksalad control best at pegging
 - Toothcup?

GRASP

- Penoxsulam, Triazolopyrimidine sulfonamide
- Absorbed through the leaves, shoots and roots and translocated via the phloem and xylem.
- As with many ALS inhibiting herbicide symptoms, chlorosis of the growing point and redding of leaf veins, begin appearing in 3 to 7 days. Complete plant death usually occurs 14 to 21 days.
- Provides postemergence and some soil activity on several important broadleaf weeds in rice, demonstrates excellent selectivity in rice, and has few tank mix issues.

GRASP

- Apply 2 to 2.8 oz/A from emergence up to 60 days before harvest
- 2 oz/A preflood (1-2 in weeds)
- 2.3 oz/A preflood (3-4 in weeds)
- 2.5 oz/A post flood (optimum 1-2 wks after flood)
- Requires 1 qt/A COC
- Sensitive to moisture stress
- Tank mixes:
 - Londax and Permit
 - Clincher?
 - Grandstand?

Recent Developments in Rice Weed Control

- Clincher, Ricestar HT, Regiment
 - Excellent tools!
 - Postemergence herbicides
 - No soil or residual activity
- Clearfield rice
 - Excellent tool for red rice control
 - Needs help on several broadleaf weeds
 - Timing and water management is critical

CLINCHER

- Cyhalofop-butyl, ACC'ase inhibitor
- Controls most annual grasses and knotgrass
- Apply from 1-2 leaf stage up to 60 days before harvest
- 13.5 oz/A preflood (up to 4 leaf grass)
- 15.0 oz/A post flood (optimum 1-2 wks after flood)
- Requires 1 qt/A COC
- Extremely sensitive to moisture stress

CLINCHER

- Early post applications at 13.5 oz/A can be tank-mixed with Command, Facet, Pendimax or Prowl
- Tank-mixes with broadleaf herbicides are not recommended
- Avoid drift onto of grass crops and peaches
- Maximum of two applications per season (25 oz/A) and 15 oz/A per application
- Toxic to fish and aquatic invertebrates

RICESTAR HT

- Fenoxaprop-p-ethyl, ACC'ase inhibitor
- Controls most annual grasses
- Apply from 1 leaf stage through late tillering
- 13 oz/A preflood (1-2 leaf grass)
- 17 oz/A preflood (3-4 leaf grass)
- Watch for post flood rate adjustments
- No surfactant needed
- Sensitive to moisture stress

RICESTAR HT

- Early post applications at 13 oz/A can be tank-mixed with Bolero, Command, Facet, Pendimax or Prowl
- Can be tank-mixed with Aim, Basagran, Londax or Storm
- Can be tank-mixed with Whip 360
- Avoid drift onto of grass crops
- Maximum of two applications per season (30 oz/A) and 17 oz/A per application
- Toxic to fish and aquatic invertebrates

RICESTAR + WHIP 360

- 13 oz/A Ricestar + 4 oz/A Whip - 3-4 lf
- 9 oz/A Ricestar + 8 oz/A Whip - 4-5 lf
- 5 oz/A Ricestar + 12 oz/A Whip – post flood (1 tiller)

Follow guidelines for Whip 360

- Do not submerge rice
- Do not apply within 14 days of fertilizer
- No adjuvants
- No aromatic, short or medium grain varieties
- Apply only if minimum temperature will be above 65°

• Clincher is the best post flood option

REGIMENT

- Bispyribac-sodium, ALS inhibitor
- Controls barnyardgrass, junglerice and seedling johnsongrass, hemp sesbania, jointvetch, rice flatsedge, gooseweed, dayflower, waterhyssop, ducksalad, and Pennsylvania smartweed
- Suppresses alligatorweed, knotgrass (post flood), perennial barnyardgrass, redstem, large smartweed, pigweeds, morningglory, Mexicanweed, and eclipta
- Apply from 3 leaf stage through green ring
- 11 to 15 g/A depending on weed species and timing, 18 g/A for late season barnyardgrass

REGIMENT

- A surfactant is required, see label – Freeway, Kinetic, Regiwet, Silkin, Siltac
- Can be tank-mixed with Bolero, Prowl, Granstand, 2,4-D, MCPA, and Blazer
- Do not tank-mix with propanil, malathion or methyl parthion
- Avoid drift to other crops
- Maximum of 30 g/A per season
- Misses sprangletop, nutsedge, and broadleaf signalgrass

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CLEARFIELD RICE: NEWPATH

Excellent grass control with timely applications (2 leaves) and floods. **Don't delay floods!** It is weak on several broadleaf weeds.

Controls red rice (9), sprangletop (8), signalgrass (9), barnyardgrass (9); sedges (6), duckweed (6), dayflower (7); misse...
esbania and jointvetch.

Always make both applications (4 oz/A/application)

Post applications require NIS or COC.

CLEARFIELD RICE: NEWPATH

Tank-mix partners for improved grass control

- Prowl, Facet, Ricestar, or propanil

Tank-mix partners for improved broadleaf weed control

- Facet, Storm, Blazer, Basagran or propanil

Excellent tolerance at most application timings with new varieties

Avoid applications on 1-2 leaf rice with 1st generation varieties.

Preventing outcrossing and sound resistance management will be critical.

CLEARFIELD – ADDITONS/CHANGES

Label changes

- Two 6 oz/A applications

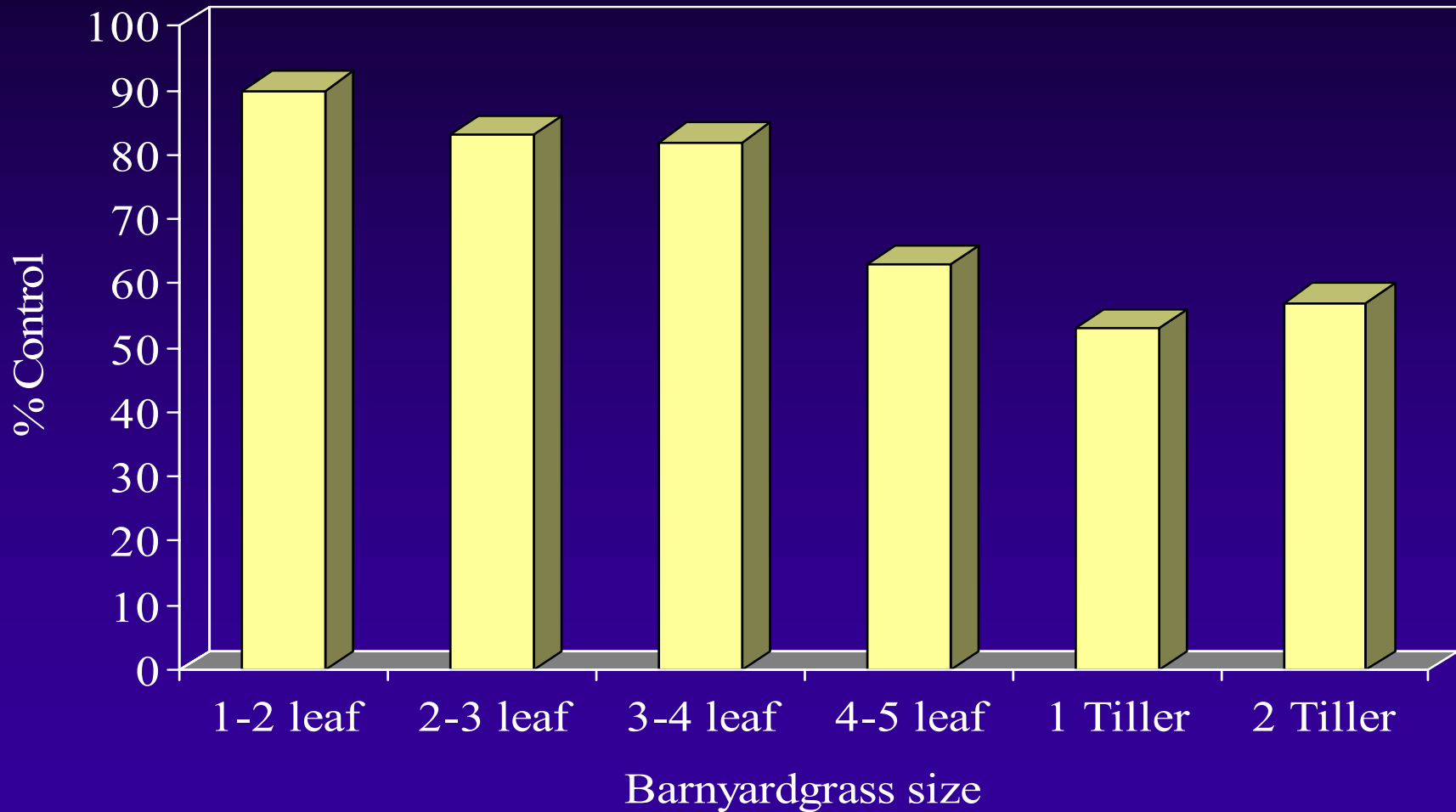
Clearpath

- Newpath plus Facet
- Improved barnyardgrass and sesbania control

Beyond

- Excellent red rice, barnyardgrass, and sprangletop control
- 5 oz/A at PI+17 (Red rice at ½”) best program
- Can only be used following to Newpath applications

Barnyardgrass Control with 6 oz/A Newpath



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Clearpath

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Beyond

- Excellent red rice, barnyardgrass, and sprangletop control
- 5 oz/A at PI+17 (Red rice at 1/2") best program
- Can only be used following to Newpath applications

CLEARFIELD – Keys to Success

- This technology will be most beneficial to producers capable of:
 - Planting into a clean seed bed
 - Making timely sprays
 - Maintaining good soil moisture
 - Establishing and maintaining permanent floods

New Developments in Rice Weed Control

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 - Excellent tools!
 - Postemergence herbicides
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- Clearfield rice
 - Excellent tool for red rice control
 - Needs help on several broadleaf weeds
 - Timing and water management is critical
- Don't abandon traditional weed management programs

Tankmix - Propanil

- Prowl - Residual: eclipta (8-9), sprangletop (7-9), redstem (7-9), sesbania (7-9); dayflower, sedge, ducksalad.
- Ordram - Residual, larger grass: eclipta (7-9), sprangletop (7-8), ducksalad (6-8), sesbania, (7-9), hyssop (8-9), jointvetch (8-9), dayflower (6-8), texasweed (6-8); morningglory and sedge.
- Facet – Residual, larger grass: mornigglory (5-8), eclipta (8-9), sesbania (7-9), jointvetch (8-9), texasweed (6-8); sedge, alligatorweed, ducksalad, dayflower.

Tankmix - Propanil

- Bolero – Residual, larger grass: eclipta (8-9), sprangletop (7-9), sesbania (7-9), hyssop (8-9), dayflower (6-8), texasweed (6-8); sedge, ducksalad
- Londax – Aquatics: morningglory (5-9), eclipta (8-9), sedge (4-9), redstem (7-9), sesbania (7-9), jointvetch (8-9), smartweed (6-8), dayflower (6-8), texasweed (6-9); alligatorweed, ducksalad
- Aim – Broadleaf: morningglory (5-9), sesbania (7-9), jointvetch (8-9), smartweed (6-8); sedge

Tankmix - Others

- Aim + Grandstand - Fast: jointvetch
- Permit + Londax - sedges
- Prowl + Facet - sprangletop
- Storm - Most broadleaf weeds
- Stam + Command - residual grass control
- Regiment + Aim – Fast, alligatorweed

Summary

There is not a single herbicide that controls all the weeds found in rice fields.

Knowing what weeds are present is essential to selecting the cheapest program that will do the job.

Most fields will require programs that include good residual program and/or sequential applications

Command, Facet, Bolero and Pendimax are good choices to build programs around, but each has different strengths and weaknesses.

Summary

Command plus Facet is similar to Facet plus Prowl, except that Command is better on some aquatic weeds such as duck salad. Also Command does not restrict you to DPRE to EPOST applications. However, Prowl does not restrict you to ground applications.

Facet plus Prowl or Command control most annual grasses and several broadleaf weeds. These programs may be all you need if broadleaf weed pressure is low to moderate and you have good stands and establish floods early. Reduced rates may increase cost.

Summary

Clincher, Regiment, Ricestar, Aim and Grasp are excellent additions to the rice herbicide arsenal.

The best fit for NewPath is red rice. Timely applications and floods are critical and tankmixes should be considered.

Resistance management should be considered when selecting herbicides and planning rotations. Especially with NewPath, Facet and propanil.

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