Evaluation of Regiment (Bispyribac-sodium) for Weed Control in Rice

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A study was conducted at the Rice Research Station, near Crowley, LA, in 2001 to evaluate bispyribac-sodium (Regiment) programs for weed control in rice. Regiment was applied at 11 and 22 g ai/ha alone or in tank-mix with 3.36 kg ai/ha thiobencarb (Bolero) or 0.45 kg ai/ha clomazone (Command) early postemergence (EPOST) followed by (fb) 22 g/ha Regiment late postemergence (LPOST) or after permanent flood (PFLOOD). Molinate plus propanil (Arrosolo) at 3.36 kg ai/ha was applied EPOST fb LPOST as a comparison. Visual control ratings of barnyardgrass \( [\text{Echinochloa crus-galli} \ (\text{L.}) \ \text{Beauv.}] \), broadleaf signalgrass \( [\text{Brachiaria platyphylla} \ (\text{Griseb.}) \ \text{Nash}] \), rice flatsedge \( [\text{Cyperus iria} \ \text{L.}] \), and hemp sesbania \( [\text{Sesbania exaltata} \ (\text{Raf.}) \ \text{Rydb. ex A.W.Hill}] \), and rice injury were taken at 13 days after EPOST (DAEPOST), 20 days after LPOST (DALPOST), and 15 days after PFLOOD (DAPFLOOD).

Barnyardgrass control at 13 DAEPOST was 68 to 74%, 78 to 86%, or 83 to 88% with Regiment alone, Regiment plus Bolero or Regiment plus Command EPOST, respectively. At 20 DALPOST, barnyardgrass control was 75 to 88% with Regiment alone or plus Bolero EPOST fb Regiment LPOST compared with 33 to 71% control without Regiment LPOST. Regiment plus Command EPOST controlled barnyardgrass 91 to 95% with or without Regiment LPOST. At 15 DAPFLOOD, barnyardgrass was controlled 91 to 97% with all treatments containing Regiment plus Command EPOST or Regiment plus Bolero EPOST fb Regiment LPOST. Reduced control was observed with single applications of Regiment or Regiment plus Bolero EPOST fb Regiment PFLOOD.

At 13 DAEPOST, broadleaf signalgrass control was 73 to 81% with Regiment plus Command EPOST, 58 to 69% with Regiment plus Bolero EPOST, and less than 56% with a single application of Regiment EPOST. At 20 DALPOST, control of broadleaf signalgrass was 81 to 88% with Regiment plus Bolero EPOST fb Regiment LPOST, 86 to 93% with treatments containing Regiment plus Command EPOST, and less than 79% with other treatments. At 15 DAPFLOOD, broadleaf signalgrass control was 85% with Regiment plus Command EPOST and less than 77% with other treatments.

At 13 DAEPOST, control of rice flatsedge was 60 to 78% with all EPOST treatments. At 20 DALPOST, rice flatsedge was controlled 89 to 97% with all treatments except Regiment at 11 g/ha alone or plus Command EPOST. At 15 DAPFLOOD, rice flatsedge control was greater than 91% with all treatments except Regiment plus Command EPOST fb Regiment PFLOOD.

At 13 DAEPOST, hemp sesbania was controlled 70 to 81% with all EPOST treatments. At 20 DALPOST, hemp sesbania control was 90 to 98% with all treatments except a single application of Regiment at 11 g/ha EPOST. Hemp sesbania control was above 95% with all treatments at 15 DAPFLOOD.

Rice injury ranged 10 to 16% with all EPOST treatments 13 DAEPOST. No rice injury was observed at the two later rating dates.

The results indicate that Regiment plus Bolero or Command EPOST can improve the control of barnyardgrass and broadleaf signalgrass compared with a single application of Regiment EPOST. Regiment EPOST fb LPOST increases barnyardgrass control compared with Regiment EPOST fb PFLOOD.