Imazethapyr application rates and timings in an imidazolinone-tolerant rice (*Oryza sativa* L.) production system. C.T. Leon, E. P. Webster, W. Zhang, Louisiana State University AgCenter, Baton Rouge.

Field studies were conducted in 2000 and 2001 at the Rice Research Station near Crowley, LA, to evaluate imazethapyr rates and timings on weed control and injury in drill- and water-seeded imidazolinone-tolerant rice. A single application of 140 g ai/ha imazethapyr was applied preemergence (PRE), early postemergence (EPOST), or late postemergence (LPOST) or as a split application of a PRE followed by (fb) an EPOST or LPOST. At 21 d after LPOST, barnyardgrass [*Echinochloa crus-galli* (L.) Beauv.] control was at least 90% in the drill-seeded system with all treatments. In the water-seeded system, all PRE fb EPOST treatments controlled barnyardgrass 91% except 105 g/ha PRE fb 35 g/ha EPOST. Red rice (*Oryza sativa* L.) control was 90% with 88 g/ha imazethapyr PRE fb 52 g/ha EPOST in the drill-seeded system, and red rice control was at least 90% with the exception of 140 g/ha imazethapyr LPOST or 35 g/ha PRE fb 105 g/ha LPOST. Rice injury was less than 10% in the drill- and water-seeded systems. At 50 d after LPOST, barnyardgrass control was at least 90% in the drill- and water-seeded systems, except a single application of 140 g/ha imazethapyr applied PRE or LPOST in the water-seeded system. Red rice control in the drill-seeded system was 93 to 97% with the exception of imazethapyr at 140 g/ha PRE, 105 g/ha PRE fb 35 g/ha EPOST or LPOST, and 88 g/ha PRE fb 52 g/ha LPOST. All treatments controlled red rice at least 90% with the exception of a single application of 140 g/ha PRE or EPOST in the water-seeded system. No rice injury and no differences were observed in rice height in either production system 50 d after LPOST applications regardless of imazethapyr rate or timing.