



## Mississippi Corn Promotion Board 2024 Progress Report

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### Project

Title: Evaluation of Preemergence Herbicides Impregnated on Fertilizer in Corn

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### Project Summary (Issue/Response)

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Four studies were initiated for this project at the Delta Research and Extension Center in Stoneville in 2024. The fourth study was not completed after we could not find a suitable way to apply tassel treatments over the top of the corn canopy. Two of the studies focused on herbicide (Zidua SC, Aatrex, and Trivolt) impregnation on urea (46-0-0) and potash (0-0-60) fertilizers. The third study utilized urea impregnated with Zidua SC applied at different vegetative stages of corn growth.



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### Project Results/Outcomes

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Urea impregnated with herbicides was applied at the V2 corn growth stage and compared with the same herbicide treatments applied as broadcast sprays. At 21 days after application, barnyardgrass and Palmer amaranth control were similar whether herbicides were applied as broadcast spray or impregnated on urea. Trivolt controlled more barnyardgrass than Zidua SC with either application method. Aatrex and Trivolt were more effective for Palmer amaranth control than Zidua SC. Yields in plots receiving herbicide treatments were similar and  $\geq 200$  bushels per acre.

The timing study evaluated weed control with urea impregnated with Zidua SC and applied at the V2, V4, V6, and V8 corn growth stages. Barnyardgrass and Palmer amaranth control were similar regardless of the timing of treatment application. Furthermore, control with all treatments was  $\geq 94\%$  at 14 days after V8 application timing. By season's end, corn yields were similar and  $\geq 191$  bushels per acre.

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# Project Results

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## Project Impacts/Benefits

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## Project Deliverables

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