

# BURNDOWN WEED CONTROL PROGRAMS FOR COTTON AND CORN

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## INTERPRETIVE SUMMARY

Conservation tillage systems used in cotton and corn production place greater reliance on utilizing herbicide programs that successfully remove winter vegetation to allow a clean seedbed at planting. Winter weeds common to the cotton and corn producing regions of northeast Louisiana range from easy to control weeds, such as annual bluegrass and common chickweed, to more difficult to control species, such as curly dock and annual ryegrass. Therefore, proper weed identification and herbicide selection are keys to a successful burndown weed control program.

Roundup Ultra, Touchdown, and Gramoxone Extra continue to form the "backbone" of most burndown herbicide programs in cotton and corn production in northeast Louisiana. Each exhibit particular strengths and weaknesses, and tank mixtures with other materials are often needed to increase spectrum of weeds controlled or to provide residual weed control. Previous research has shown Roundup Ultra and Touchdown to be equally effective on all winter weeds evaluated on a lb for lb basis, although initial symptoms may appear 3 to 4 days quicker with Touchdown. Research has shown little benefit to addition of ammonium sulfate over nonionic surfactants or company formulations when tested under non "hard water" conditions. In replicated research trials and recorded field observations, both materials provide excellent control of annual bluegrass, Carolina foxtail, little barley, buttercup spp., chickweed spp., dandelion, marestail, shepherdspurse, bittercress and Virginia pepperweed. Control of Carolina

geranium, curly dock, henbit, cutleaf eveningprimrose, Pennsylvania smartweed, and vetch has been fair to poor. Addition of Goal 2XL has increased control of Carolina geranium, henbit, Pennsylvania smartweed, and vetch. Addition of Harmony Extra has increased control of Carolina geranium, curly dock, cutleaf eveningprimrose, henbit, Pennsylvania smartweed, and vetch. Including 2,4-D as a tank mix partner can aid in control of Carolina geranium, curly dock, cutleaf eveningprimrose, and vetch. Gramoxone extra provides excellent control of annual bluegrass, little barley, buttercup spp., Carolina geranium, chickweed spp., henbit, and shepherdspurse. Control of annual ryegrass, curly dock, cutleaf eveningprimrose, marestail, Pennsylvania smartweed, swinecress, vetch, and Virginia pepperweed has been poor. A tank mixture including Bladex/CyPro will increase control of cutleaf eveningprimrose, marestail, Pennsylvania smartweed, vetch, and Virginia pepperweed. Including Goal 2XL as a tank mix partner will aid in control of cutleaf eveningprimrose, marestail, Pennsylvania smartweed, vetch, and Virginia pepperweed. Control of curly dock, cutleaf eveningprimrose, marestail, Pennsylvania smartweed, swinecress, vetch, and Virginia pepperweed can be increased with addition of Harmony Extra. Burndown herbicide decisions should be based on activity of Roundup Ultra, Touchdown, or Gramoxone Extra on the predominant weed species present and appropriate tank mixture considered based on their ability to increase control of additional weeds present.