

WEED MANAGEMENT WITH COTTON –HADSS, A NEW COMPUTER-BASED DECISION AID

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Abstract

Row crop weed management decisions can be complex due to the number of available herbicide treatment options, the multi-species nature of weed infestations within fields, and the effect of soil characteristics and soil-moisture conditions on herbicide efficacy. To assist weed managers in evaluating alternative strategies and tactics, three computer programs have been developed for corn, cotton, peanut, and soybean. The programs, called HADSS™ (Herbicide Application Decision Support System), Pocket HERB™, and WebHADSS™, utilize field-specific information to estimate yield loss that may occur if no control methods are used; to eliminate herbicide treatments that are inappropriate for the specified conditions; and to calculate expected yield loss after treatment and expected net return for each available herbicide treatment. Each program has a unique interactive interface that provides recommendations to three distinct use audiences: desktop usage (HADSS), internet usage (WebHADSS), and on-site usage (Pocket HERB). Using WeedEd™, an editing program, cooperators in several Southern US states have created different versions of HADSS, WebHADSS, and Pocket HERB that are tailored to conditions and weed management systems in their locations.