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HERBICIDE DECISION AIDS FOR COTTON IN THE SOUTH

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Abstract

Many herbicide applicators find it difficult to choose which herbicide or tank mixture will control the weeds present in their fields effectively and economically. NC State University has developed the HADSS (Herbicide Application Decision Support System) family of decision aids to assist growers in choosing an appropriate treatment. HADSS, WebHADSS, and PocketHERB are economic threshold models which utilize weed populations, weed competitiveness, herbicide efficacy, herbicide cost, estimated crop yield, estimated selling price and other information to create a list of appropriate treatments that can then be ranked based on net economic return, maximum weed control obtained, herbicide cost, and several other factors. HADSS, WebHADSS, and Pocket HERB use a common database of information on weed control and weed competitiveness with each crop. All three programs provide the exact same recommendations if the same conditions and weeds are input. HADSS is the desktop version of the software. WebHADSS is accessible through the World Wide Web and was made available for the first time for the 2001 growing season. This type of access allows users on any computer with a relatively up-to-date web browser to utilize this software. WebHADSS can be found at: http://www.cropsci.ncsu.edu/webhadss. Pocket HERB has been developed to give extension agents, growers, consultants, and other users a decision aid that can be used "in the field". The software runs on various Windows Pocket PC palmtop computers, such as the HP Jornada, the Compaq Ipaq, and the Casio EM-500. North Carolina developed the cotton database used in the initial HADSS program. Regional adaptation of the initial HADSS cotton database includes Alabama, Georgia, Louisiana, Mississippi, Tennessee, and Texas. Georgia (WebHADSS), North Carolina (HADSS, WebHADSS, and Pocket HERB), and Tennessee (HADSS) versions are currently available for public use.