

AGRONOMICS OF COTTON-CORN ROTATIONS IN MISSISSIPPI

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Abstract

Benefits of crop rotations are well known, and this farming practice has been in existence since early Greek and Roman times. Crop rotations are beneficial because they interrupt pest cycles, such as diseases, nematodes, insects, weeds, and they improve soil properties, such as tilth and organic matter content. As a result of the Freedom to Farm Act, growers have more decisions to make, and crop selection is one of the most critical decisions. Cotton (*Gossypium hirsutum* L.) and corn (*Zea mays* L.) rotations have been successful in Mississippi, with corn acres increasing in recent years. Cotton lint yields following one year of corn in Stoneville, MS were 117 pounds per acre (10%) more than lint yields in continuous cotton (Ebelhar and Welch, 1989 Proc. Belt. Cotton Prod. Res. Conf.). Cotton lint yields did not benefit when planted behind two years of corn or behind one- or two-years of soybean, compared to continuous cotton. Based on agronomics, two years of cotton followed by one year of corn is a rotation worth considering in Mississippi. Both cotton and corn are well-adapted to narrow 30- or 32-inch row widths. More than two years of continuous corn is not recommended. Growers should be aware of potential herbicide carry-over and drift problems, as well as varying nutrient requirements between crops. Ultimately, producers must consider prices received, costs of production, and potential yields to determine the most profitable crop mix.

