CUTUPS IN THE COTTON PATCH

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Abstract

The cotyledons of upland cotton (*Gossypium hirsutum* L.) seedlings may be partially or completely lost due to an array of biotic and abiotic factors. These experiments were conducted in the field over a 4-yr period to determine the effects of such losses in the early VC growth stage on lint yield, selected lint yield components, and fiber traits. Loss of half a cotyledon apparently stimulated the cotton plant to *over*compensate for lint yield by 4 to 6%. Overcompensation was not detected for any of the other traits. The plant compensated for the loss of up to one cotyledon in all traits except fiber strength in 1 yr. Loss of one and one-half cotyledons reduced lint yield (11 to 33%), picked lint percentage (up to 2.1%), pulled lint percentage (0.4%), fiber fineness (up to 0.2 units), and fiber elongation (up to 0.3%). Loss of both cotyledons reduced lint yield (81 to 100%), picked lint percentage (up to 4.6%), pulled lint percentage (4.7%), boll size (15.8%), fiber fineness (up to 1.6 units), and fiber elongation (up to 1.4%). Fiber length and length uniformity were not affected at any level of cotyledon removal. Fiber strength exhibited significant differences among treatments in one experiment, but no trend. The elimination of both cotyledons when the first true leaf was about the size of a dime was considerably less harmful to the plant than when done earlier in the season.