

Detopping with defoliation treatment – maximizes seed yield in cotton

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The indeterminate growth habit of cotton crop throws up many intricacies in respect of growth and developmental events in terms of varied expressions influenced considerably by the biotic as well as abiotic factors. Many attempts have been made to alter the growth habit of the crop (through mechanical and chemical means) so as to improve productivity and to bring about some more amenability for cultural manipulations. The utility of detopping technique and also the use of growth retardants have been investigated independently over number of years at many locations to assess their impact on growth, development and yield. In fact, in some countries application of growth retardant has become a routine cultural practice. The main aim of detopping is to get good architecture so that the plant can get required sunlight with minimum of mutual shading and thus the picking efficiency can be increased with the advancement of crop maturity. With this idea, an experiment in LRA 5166 cotton crop was conducted at CICR, Regional station, Coimbatore. The treatments were T1 – control, T2 - detopping at 90 days after sowing (DAS), T3 - detopping at 120 DAS, T4 - detopping at 90 DAS + foliar spray of ethrel @ 450 g a.i. at 140 DAS, T5 - detopping at 90 DAS + foliar spray of ethrel @ 450 g a.i. at 160 DAS, T6 - detopping at 120 DAS + foliar spray of ethrel @ 450 g a.i. at 140 DAS, T7 - detopping at 120 DAS + foliar spray of ethrel @ 450 g a.i. at 160 DAS. The results have indicated that the beneficial effects of detopping at 120 days and spraying of ethrel @ 450 g a.i./acre at 160 days after sowing (T7) was seen in terms of reduced plant height and increased number of sympodia/plant, number of bolls / plant, boll weight, seed cotton yield and seed yield in two seasons over control. The percentage increase in seed yield ranged from 17.1 % to 36.1 % with viability improvement of 5 % to 9 % (tested after harvest) over control and season. Therefore, the above treatment may be recommended for cotton crop grown under irrigated condition.