

1724 Breeding for oil quantity and quality using elite lines in cotton

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Cottonseed is the world's second largest source of edible oil and is also among the most unsaturated oils, a desirable dietary attribute. In India, the growth in demand for cottonseed oil is projected to increase at the rate of 6 % annually. In this backdrop, oil content in 72 elite lines of the different cultivated species grown at Raichur was estimated. Intra-hirsutum hybrids had the highest mean oil content (16.72 %) followed by arboreums (16.35 %), compact hirsutum cultivars (14.14 %), hirsutum cultivars (13.33 %) and then lastly, herbaceums (13.12 %). The highest oil content was recorded by RAHH-177 (18.44 %), an intra-hirsutum hybrid. Among all cultivars tested, RACH-11-1, a compact hirsutum cultivar showed the highest oil content of 18.01 %. Intercrosses among the genotypes of each species group have been initiated from which higher oil content will be selected. Emphasis also will be directed toward oil quality, *i.e.*, increasing oleic acid content and eliminating gossypol.