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PREFACE



Bt cotton completed 10 years in India. Cotton area increased to an all time high of 121.91 lakh hectares with 91.2% under Bt-cotton. With all the best of technologies available for cotton cultivation, the production was highest ever at 345 lakh bales. It is clear that Bt-cotton as a technology has played a significant role in bollworm management. The impact of the Bt cotton technology has been perceptible on at least three main aspects. 1. Effective control of bollworms, 2. Significant reduction of insecticides for bollworm control from 70% in 2001 (before Bt cotton) to 10% in 2011 and 3. decline of 'bollworm-fear'. Yields increased because of Bt and a few other efficient technologies such as micro-irrigation, high yielding hybrids, seed treatment and effective pesticides for sucking pest control.

The cost of inputs for cotton cultivation increased recently. Bt-cotton seed cost increased from Rs 750 to Rs 930 per packet of 450 gms. Fertilizer costs, labour costs and pesticide costs increased as well. Taking all these factors into consideration, the minimum support price was increased to Rs 3300 per quintal for medium staple and Rs 3900 for long staple cotton. The impact of this increase remains to be seen once the harvested produce reaches markets. However, there is an imminent need to develop low cost technologies to sustain higher yields, to make cotton cultivation more profitable.

Some of the recent results from the institute showed that drought resistance, disease resistance and insect resistance could be possible through conventional breeding as well through genetic modification. While the science appears promising, it is important to convert the useful findings into tangible technologies. Specifically, efforts need to be intensified to develop technologies for rainfed tracts. And, the institute is gearing up for the same.

Cotton in rainfed regions, especially in Vidarbha has always been a challenge. We need short-duration early maturing varieties for the region, that are resistant to sucking pests. The institute's variety 'Suraj' gives us plenty of hope for the future. With the best-ever quality fiber attributes at 30 mm and 25 g/tex, Suraj has been found to be amenable for high density planting. We have plans to demonstrate cultivation of 'Suraj' and a few Desi varieties with CICR technologies in about 240 acre demonstration plots of high density planting systems (HDPS) in 8 districts of Vidarbha, in shallow soils under rainfed conditions. The density at 100,000 plants per acre in the HDPS would be at least

16 to 20 times more than the density of Bt-hybrids. Thus 5 bolls per plant in HDPS would be equivalent to 100 bolls per plant in Bt-hybrids. If the trials succeed, the institute would have paved the way for a new low-cost alternative approach of sustainable cotton cultivation in rainfed regions and more specifically in Vidarbha. We earnestly hope to succeed.

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K. R. Kranthi
Director



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