

Analysis of yield and input gap of Bt. cotton in Marathwada region

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ABSTRACT

Cotton (*Gossypium* spp.) the white gold or the king of fibres is closely linked to human civilization itself. It exerts considerable influence on India's economy. Investigation was carried out during the year 2005-06 in Nanded and Parbhani districts of Maharashtra. Data were collected from 150 cotton growers by personal interview method with respect to inputs, productions, cost and returns. It was estimated that total yield gap was of 68.64 per cent. It was seen that, total gap varied with variation in size of land holdings and showed inverse relationship between size of land holdings and total yield gap. This postulate that, as the size of land holding increases the total yield gap decreases. Inter comparison of the sample districts revealed that, all the four yield gaps, irrespective of scales of farming were relatively higher in Nanded district as compared to that of Parbhani district. The study also revealed that, at an overall level by and large, gap in per hectare use of inputs like, seed, FYM, nitrogen, phosphorus and potash was found to be higher in Parbhani district than counter part farms in Nanded district. While for rest of the inputs, viz., expenditure on plant protection chemicals and expenditure on wages of farm labourers situation was found to be reverse, for these inputs gaps in Nanded district were as compared to Parbhani district

Key words : Cotton, Yield gap, Yield index, Input gap

Cotton (*Gossypium* spp.) the white gold or the king of fibres is closely linked to human civilization itself. It is one of the most ancient and important commercial crops next to only food grains. About 78 countries are growing cotton in the world on an area of 32.80 million hectares with the production of 94.63 million bales of 170 kg each. The world cotton growing area has almost remained stagnant at around 33 million hectares. But over the years, the productivity has also stagnated at 72 kg/ha. During 2006-07, world cotton production was 25.30 million tonnes, while its consumption was 26.10 million tonnes and world cotton export was 8.30 million tonnes (International Cotton Advisory Committee Washington). World cotton consumption rose from 23.66 million tonnes in 2004-05 to 26.10 million tonnes in 2007-08.

India is the third largest producer of cotton in the world with production of around 3.95 million tons (MT) (approximately 15.71 per cent of world production). Area under cotton is around 9.50 million hectares contributing about 29 per cent in world share and keeps fluctuating

owing to monsoon and other factors.

Maharashtra is the first in area and production of cotton in the country. It has 2.83 million hectares area under cotton crop with production of 0.68 million tonnes of lint (4.06 million bales) in the year 2004-05. The productivity of cotton during this year was 176 kg/ha lint yield (686 kg/ha seed cotton yield). Thus state is contributing 22.7 per cent to the total cotton production in the country in the year 2003-04.

Marathwada region contributes an area of 0.97 million ha with annual production of 0.14 million tonnes of lint (0.81 million bales). Cotton is dominantly grown under rainfed condition in the region. The Marathwada region accounts 27 per cent of area and 25 per cent of production in the state. Ninety six per cent cotton is grown as rainfed cotton. Nanded, Parbhani, Jalna, Aurangabad and Beed are major cotton growing districts of Marathwada region. Though Nanded and Parbhani districts contribute more than 50 per cent area of cotton in Marathwada but the productivity of these two districts is as less as compared to other districts. Parbhani district has area of cotton about 2.03 lakh ha with seed cotton Production of 0.91 lakh tonnes in the year 2001-02.

METHODOLOGY

For the purpose of collection of primary data from the farmers, a multistage sampling design was adopted, taking the talukas at the primary level, the villages at the secondary level and the farmers at the tertiary level. The Talukas in Nanded and Parbhani were selected at the

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