

# Impact of front line demonstration on production technology of watermelon cv. SUGAR BABY in Dhule district of Maharashtra

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## ABSTRACT

The front line demonstration on production technology of watermelon cv. SUGARBABY was conducted for five years (2004-05 to 2008-09) on farmers field in four different villages in all the four talukas of Dhule district in summer season. It was observed that the average yield performance of 45 demonstrated watermelon crop in an area of 17 hectares ranged from 364 to 404 q / ha. The average yield of 45 demonstrations in 17 ha area of watermelon crop for five years was found to be 382.40 q / ha whereas for local crop, it was found to be 292.60 q / ha. There was 30.68 per cent increase in demonstration yield over local crop during all the five years. The farmers have incurred average higher gross returns of Rs. 106680/ha through these demonstrations. The comparative results of the demonstration highlighted the cost benefit ratio of 6.83 as against the local crop which recorded 4.48, respectively Results of the demonstration had shown that the use of improved variety, improved cultivation practices, proper post harvest management and plant protection measures resulted in higher productivity of watermelon.

**Key words :** Impact, Watermelon, Demonstration, Production Technology

## INTRODUCTION

Watermelon (*Citrulus lanatus* Thunb.) is one of the most important vegetables, being grown in all the parts of India. It is almost exclusively grown on low priced lands away from the cities, because the return per acre from it, is not very high. It can give profitable returns from sandy soils. Small, unripe watermelons are also cooked as a vegetable. Watermelon has trace of vitamin A and is cooling in effect. It should be taken with salt to make it easily digestible. Watermelon requires a long growing season with high temperature for its best growth and quality, well drained soil is essential for watermelon production, as it does not thrive in water logged or a poorly drained soil (Yawalkar and Ram, 2004).

Watermelon is the major vegetable grown in India. The efforts are underway to increase the productivity of watermelon by imparting training and conducting demonstrations. The present study, therefore, was undertaken to ascertain the role of demonstrations in exhibiting the production technology of watermelon and thus increasing the yield.

## MATERIALS AND METHODS

Krishi Vigyan Kendra, Dhule conducted front line demonstrations on watermelon var. Sugarbaby during the year 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09 in summer season. Totally 45 demonstrations in an area of 17 hectares were conducted on watermelon crop on farmers field in all the four talukas viz., Sakri, Dhule, Shindkheda, Shirpur talukas of Dhule district. The

demonstrations were conducted in irrigated conditions and the soils of demonstrations plot ranged from medium to black cotton soils. The demonstrations included important technologies like improved variety, planting, use of manures and fertilizers, irrigations, chemical sprays and post harvest management. The yield data was recorded from demonstrations as well as from local plots.

## RESULTS AND DISCUSSION

The data of front line demonstrations presented in Table 1 showed that the yield performance of 45 demonstrated Watermelon crop in an area of 17 hectares ranged from 364 to 404 q / ha. The average yield of five years for Watermelon crop was found to be 382.40 q / ha whereas for local it was found to be 292.60 q / ha (Table 1). There was 30.68 per cent average increase in demonstration yield over local during all the five years. The increase in yield in demonstrations over local check was the impact of improved production technology of watermelon crop adopted in front line demonstrations. Similar results were also reported by Kalalbandi *et al.* (2006) in chilli crop.

Results of the demonstrations had shown that the use of improved variety, improved cultivation practices, proper post harvest management and plant protection measures resulted in higher productivity of watermelon. The farmers have incurred average higher returns of Rs. 106680/ha (Table 2) through these demonstrations. The comparative results of the demonstration highlighted the cost benefit ratio of 6.83 as against the local crop which

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**Table 1 : Yield performance of front line demonstration on watermelon var. SUGARBABY in Kharif season**

| Sr. No.         | Year    | Name of the Taluka (Village)   | Name of the variety/ component | No. of demonstrations | Area (ha) | Avg. yield (qtl/ha) |        |                | Per cent increase in yield |
|-----------------|---------|--|--------------------------------|-----------------------|-----------|---------------------|--------|----------------|----------------------------|
|                 |         |  |                                |                       |           | Demonstration       |        | Control /check |                            |
|                 |         |  |                                |                       |           | Max                 | Avg.   | Avg            |                            |
| 1.              | 2004-05 | Dhule (Kawathi Sakri (Ambapur) Shindkheda (Chimthane) Shirpur (Vikharan) | <i>Sugarbaby</i> +INM + PHT    | 10                    | 4.00      | 390                 | 380    | 290            | 31.03                      |
| 2.              | 2005-06 | Dhule (Kawathi Sakri (Ambapur) Shindkheda (Chimthane) Shirpur (Vikharan) | <i>Sugarbaby</i> +INM + PHT    | 10                    | 4.00      | 405                 | 392    | 298            | 31.54                      |
| 3.              | 2006-07 | Dhule (Kawathi Sakri (Ambapur) Shindkheda (Chimthane) Shirpur (Vikharan) | <i>Sugarbaby</i> +INM + PHT    | 10                    | 4.00      | 410                 | 404    | 305            | 32.46                      |
| 4.              | 2007-08 | Dhule (Kawathi Sakri (Ambapur) Shindkheda (Chimthane) Shirpur (Vikharan) | <i>Sugarbaby</i> +INM + PHT    | 10                    | 3.00      | 395                 | 372    | 280            | 32.86                      |
| 5.              | 2008-09 | Dhule (Kawathi Sakri (Ambapur) Shindkheda (Chimthane) Shirpur (Vikharan) | <i>Sugarbaby</i> +INM + PHT    | 05                    | 2.00      | 372                 | 364    | 290            | 25.52                      |
| Total / Average |         |  |                                | 45                    | 17.00     | 314.40              | 382.40 | 292.60         | 30.68                      |

INM: Integrated nutrient management, PHT: Post harvest Technology

**Table 2 : Economics of front line demonstration of watermelon var. SUGARBABY in Kharif season**

| Sr. No. | Year    | Demo                               |                      | Control                            |                      | B:C Ratio |       |
|---------|---------|------------------------------------|----------------------|------------------------------------|----------------------|-----------|-------|
|         |         | Total cost of cultivation (Rs./ha) | Gross return (Rs/ha) | Total cost of cultivation (Rs./ha) | Gross return (Rs/ha) | Demo.     | Check |
| 1.      | 2004-05 | 16200                              | 104000               | 14100                              | 58000                | 6.41      | 4.11  |
| 2.      | 2005-06 | 16800                              | 107000               | 14600                              | 59600                | 6.40      | 4.08  |
| 3.      | 2006-07 | 14900                              | 101000               | 12000                              | 61000                | 6.77      | 5.08  |
| 4.      | 2007-08 | 15300                              | 111600               | 12800                              | 56000                | 7.29      | 4.38  |
| 5.      | 2008-09 | 15000                              | 109200               | 12400                              | 58600                | 7.28      | 4.73  |
| Average |         | 15640                              | 106680               | 13180                              | 58640                | 6.83      | 4.48  |

recorded 4.48. Hence, there is a wide scope to increase the areas and production of watermelon crop by providing need based training and demonstrations on improved production technology to the farmers.

**Kalalbandi, B. M., Dudhate, D.G. and More, S.S. (2006).** Impact of front line demonstration on chilli (*Capsicum annum* L.) production technology in Parbhani District of Maharashtra State. *Crop Prot.Prod.*, **3**(1):157-158

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