

## Economics Of Rainfed And Irrigated NHH-44 Cotton Production

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### ABSTRACT

Survey was conducted in Parbhani district during the year 2002-03 to study economics of rainfed and irrigated NHH-44 cotton production. The data were collected from 48 rainfed and 48 irrigated NHH-44 cotton growers. The results revealed that yield of seed cotton was 8.24 q/ha on the rainfed cotton farm, while it was 17.83 q/ha on the irrigated cotton farm. It was observed that cost-'C' was Rs. 13399.14/ha and Rs. 23116.01/ha on the rainfed and the irrigated cotton farms, respectively. It is worth noting that net profit on the rainfed cotton farm was Rs. 5968.55/ha which was three times less than that on the irrigated cotton farm (Rs. 18784.89/ha). Cost of production of seed cotton was Rs. 1575.66/ha on the rainfed cotton farm, while it was Rs. 1246.44/ha on the irrigated cotton farm. Output-input ratio was 1.44 and 1.81 on the rainfed and the irrigated cotton farms, respectively.

**Key words :** NHH-44 Cotton, rainfed farm, irrigated farm, gross returns, net profit, output-input ratio.

### INTRODUCTION

India has the highest cotton area of 8.53 million hectares i.e. 27 per cent of area under cotton in the world. It is important to note that India is the only country which is growing commercial hybrid cotton on about 2.80 million hectares. Likewise, integrated pest management is also adopted all over the country. Similarly, there is necessity to bring the area under irrigation for cotton crop to increase the productivity.

Maharashtra is the largest cotton producing state, which is contributing 34.8 per cent to the country's area of cotton. However, only 3 per cent of the area is under irrigation (0.089 million ha) and the rest of the area is under rainfed (2.878 million ha). Lack of irrigation facilities is the basic reason for low productivity of seed cotton in the state. The hybrid cotton is largely cultivated in Parbhani district of the state under rainfed as well as irrigated conditions. Risks are high in rainfed cotton due to unfavourable rainfall distribution and drought conditions. Keeping in view the above aspects, the investigation with respect to economics of rainfed and irrigated NHH-44 cotton production has been undertaken.

### MATERIALS AND METHODS

#### *Selection of cotton farms*

Rainfed and irrigated NHH-44 cotton farms were selected through multistage sampling design as follows. In the first stage, Parbhani district was purposely selected, because of its predominance in area of cotton. In the

second stage, Parbhani tehsil was also purposely selected, because of its superiority in area of cotton under rainfed as well as irrigated conditions. In the third stage, eight villages were selected on the basis of high area under both rainfed and irrigated NHH-44 cotton. In the fourth stage, from each of the selected villages, the separate lists of rainfed and irrigated NHH-44 cotton farms with area under the crop were obtained. Then, six rainfed and six irrigated NHH-44 cotton farms were selected randomly from each of the villages. Thus, 48 rainfed and 48 irrigated NHH-44 cotton farms were selected for present investigation.

#### *Collection of data*

Cross sectional data were collected from 48 rainfed and 48 irrigated NHH-44 cotton growers by personal interview method with the help of pretested schedule. Data were with respect to physical inputs, seed cotton production, cotton stalk production, costs and returns for the year 2002-03.

#### *Analysis of data*

Data were converted into per hectare basis in tabular form. Then statistical tools like arithmetic mean, percentage and ratio were used for estimating the costs and returns.

#### *Terms and concepts used*

The various terms and concepts which were frequently used in the present study are as follows. Gross return refers to a sum of the values from yield of seed cotton and cotton stalk. It is known as gross receipt or gross income. Cost-'A' refers to paid out costs or explicit costs. **Cost-'B'**

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