

## Economics of banana production in drip irrigated and flood irrigated gardens

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### ABSTRACT

Investigation was carried out during the year 2008-2009. Forty eight drip irrigated and forty eight flood irrigated banana growers were randomly selected from eight villages of Ardhapur tehsil of Nanded district in Maharashtra for the study. Cross sectional data were collected from the banana growers with the help of pretested schedule by personal interview method. The cost concept of cost-A, cost-B and cost-C was used to analyze the data. The results revealed that per hectare use of irrigation was higher as 20000 cubic meters in flood irrigated garden while that was 13999.57 cubic meters in drip irrigated garden. It inferred that there was water saving in drip irrigated garden due to drip system. Per hectare main produce of banana fruit was 231.46 quintals in drip irrigated banana garden followed by 213.89 quintals in flood irrigated banana garden. Per hectare gross return was Rs. 126607.73 in drip irrigated banana garden followed by Rs. 116917.80 in flood irrigated banana garden. Cost-C was lower as Rs. 81108.33 in drip irrigated garden while it was Rs. 83413.13 in the flood irrigated garden. Per hectare net profit was higher as Rs. 45499.40 in drip irrigated garden than that of Rs. 33504.67 in flood irrigated garden. Per quintal cost of production was lower in drip irrigated garden due to drip irrigation system.

**Key words :** Banana, Drip irrigated, Flood irrigated, Production, Profit

**B**anana (*Musa paradisiaca* L.) is one of the leading tropical fruit crops. It ranks next to mango in both area and production in India. Nanded district of Maharashtra has favorable climate to grow banana varieties like Basrai and Ardhapuri. The district has medium to heavy black cotton soil. The average rainfall of district is 1533 mm. Drip irrigation for banana crop is water saving technology. Deoghare *et al.* (1999) showed that drip irrigation system is low cost for banana production and higher profitability over conventional irrigation system. The result revealed that per quintal cost of production in drip irrigation system was Rs. 113.8 while that was Rs. 122.93 in conventional irrigation system. Farmers are giving top priority to banana crop in the cropping pattern where the irrigation facilities are available. It requires heavy dose of fertilizers and manure. It is capital intensive crop. By keeping in view the above aspects, the present study was undertaken in order to know the effect of both drip irrigation and flood irrigation systems on the profitabilities of banana cultivation.

### METHODOLOGY

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Multistage sampling design was used in selection of district, tehsil, villages and banana gardens. In first stage, Nanded district of Maharashtra was selected purposely because of favourable climate to grow banana crop. In the second stage, Ardhapur Tehsil was selected on the basis of highest area under banana crop. In the third stage, eight villages were selected from the Tehsil on the basis of area under both drip irrigated as well as flood irrigated banana gardens. The selected villages were namely, Ardhapur, Degaon, Lahan, Loni(Bu), Loni(kh), Malegaon, Panghari and Pardi. In the fourth stage, six drip irrigated and six flood irrigated banana gardens were randomly selected from each of the selected villages. Thus, from eight villages, forty eight drip irrigated and forty eight flood irrigated banana gardens were selected for the study. The cross-sectional data were collected from forty eight drip irrigated and forty eight flood irrigated banana growers by personal interview method with help of pretested schedule for the year 2007-08.

Cost concept of cost-A, cost-B and cost-C was used to analyse the data. Evaluation of cost items was as follows: One man day consisted with 8 hours of work. Labour cost was evaluated at the rate of Rs. 80 per day for male and Rs. 60 per day for female. The female labour was converted into man day by multiplying to number of female with 0.75. Bullock labour charge was Rs.150 per pair day for eight hours of work. Machine labour was evaluated at the rate of 270 per hour. Banana sucker was purchased for Rs.10 per sucker. The rate prevailing in the market for nitrogen, phosphorus and potash was