Resource productivity and profitability of little gourd [*Coccinia cordifolia* (Voigt.) L.] in Raigad district of Maharashtra

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ABSTRACT

The study was carried out on resource productivity and profitability in little gourd [*Coccinia corocifolia* (Voigt.) L.] production in Raigad district (M.S.) with a cross section at random sample of 80 little gourd cultivators. At the overall level, the per farm area was 0.0375 ha with a production of little gourd 5.532 q and having productivity 147.52 q. The per hectare physical input utilization indicated that the proportion of family labour days was more (51.22 %) than hired labour days (48.78 %) with per hectare average of 556.83 labour days. Regarding other inputs 2449.93 number of cuttings, 212.91 kg N, 94.79 kg P and 74.60 kg K chemical fertilizers, 140.77 q FYM, 647.98 kg mulching materials, 14.74 kg wire and 16.62 kg net and 17 hrs of machine labour were used. The per hectare cost of cultivation of little gourd worked out to Rs. 85,766 while, cost 'A' and cost 'B' worked out to Rs. 46,118 (53.77 %) and Rs. 65,786 (76.70 %), respectively. The net return per hectare was Rs 24,502 and benefit-cost ratio was 0.29. The coefficient of determination (R^2) indicated 99.45 per cent variation in little gourd production, explained by independent variables included in Cobb-Douglas production function analysis. The study revealed that the intensive use of resources would enable to enhance the production of little gourd on sample farms substantially. They have to reallocate their available resources to increase the profit from cultivation of little gourd by proper management of available resources and given technology.

Key words : Inputs, Benefit cost ratio, Resource productivity and Profitability.

India has made good progress in the horticultural sector. Horticultural crops are grown on about 12 million hectares, which is about 7 per cent of India's total cropped area (Kadam, 2002). The country has the distinction of being second largest producer of vegetables (94 million tons) after China. India's share in the world vegetable production is nearly 13.6 per cent. In India, vegetables occupy 6.25 million hectare area with an annual production of about 93.92 million tons, having productivity of 15.03 t/ha (2000-2001). The highest area and production of vegetables are reported in West Bengal followed by Bihar, Orissa, Plains of Uttar Pradesh, Maharashtra and highest productivity is reported in Tamil Nadu *i.e.*, 27.50 t/ha (Anonymous, 2002).

Maharashtra is bestowed with variety of edaphic agroclimatic conditions. Hence, it is suitable for growing a few vegetables successfully, among which, tomato, brinjal, onion, okra and cabbage are grown in most of the districts of the State. The area under vegetables in Maharashtra is about 4.09 million ha. producing about 5.142 million tons of vegetables per annum. Maharashtra ranks fifth in area and seventh in production of vegetables. The share of Maharashtra state in country's area and production is reported to be 6.55 per cent and 5.47 per cent, respectively. The productivity of vegetables in Maharashtra is 12.57 t/ha (Anonumous, 2002). The Konkan region occupies area of about 2,766 hectares under vegetables with a production of about 30,753 tones with a productivity of around 11.12 t/ha.

METHODOLOGY

A cross sectional random sample of 80 little gourd growers was selected from Alibag tahsil of Raigad district. This tahsil has most fovourable agro climatic conditions for growing little gourd. The data were processed by using standard cost concepts *viz.* cost A, cost B and cost C for arriving at desired and useful conclusions.

Functional analysis:

The following form of Cobb-Douglas production function was used to study resource productivity and resource use efficiency-

Function form : $Y = b_0 X_i^{bi} e^u$

where,

Y	=	Per farm yield of little gourd (q)
b_0	=	Intercept term or constant
X_i	=	Explanatory / independent variables
b_i	=	Regression coefficient of respective