

Short Communication

Resource productivity in patchouli

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ABSTRACT

The study on resource productivity in patchouli in Konkan region was conducted with a sample of 31 patchouli growers selected from Thane, Raigad, Ratnagiri and Sindhudurg districts of Konkan region. The sample patchouli growers were classified into three groups; according to their area under patchouli crop as Group-I (Area upto 0.40 ha), Group-II (0.40-0.80 ha) and Group-III (0.80ha and above). To estimate the contribution of various inputs on crop yield, multiple linear production function was fitted for patchouli crop with input- output data. The variation in yield explained by the various inputs used in crop production was 98 per cent. Amongst the six variables considered for regression only three have turned out to be significant. Price function analysis revealed that, 78 per cent variation in the average prices revealed for patchouli leaves have been explained by factors under consideration. The length of harvested stem cuttings (X_1), the completely dry leaves (D_1) and the form of final produce (D_2) have turned out to be significant.

Key words : Resource productivity, Multiple linear production function, Price function.

INTRODUCTION

In India the production of patchouli oil is major requirement of Indian perfumery are met by import of more than 50 tonnes of patchouli oil and 70 tonnes of formulated oil per annum. India has considerable scope to enter the world market. In recent years, patchouli is introduced in Konkan region of Maharashtra state. It thrives well under agro climatic conditions of Konkan region. Due to commercial advantages of patchouli crop it improves the income and employment opportunities for the farmer. In this process, it will conserve our foreign exchange. Further more this crop will enhance scope for establishing small scale industries for extraction of patchouli oil in this region. In this context an attempt had been made in this study to investigate resource productivity in patchouli in Konkan region.

MATERIALS AND METHODS

The Konkan region was selected purposively as cultivation of Patchouli in Konkan region is new one. The sample for the study necessarily involved the selection of cultivators for gathering the relevant data of the study. The

districts selected for the study are Thane, Raigad, Ratnagiri, and Sindhudurg. Adequate Patchouli growers were selected randomly from the study area.

RESULTS AND DISCUSSION

Data collected were analyzed and the results are presented in the tables.

Resource productivity in patchouli:

Tabular analysis had shown the static results i.e. per hectare use of inputs and corresponding output of patchouli on sample growers. In the present study 'Multiple linear production function' has been estimated to show the technical relationship between output of patchouli and use of various inputs. In Multiple Linear Production Function, the relationship between output (Y) of patchouli (kg) and various factors namely area (X_1), irrigation (X_2), labour (X_3), cutting (X_4), manures (X_5), fertilizer (X_6) were considered. Results of the same are presented in Table I.

It is seen from results that, the function indicated a very high value of R^2 i.e. 0.98. It implied that 98 per cent variation in the output (dried leaves of patchouli) was

Table 1 : Production elasticities of independent variables

S.No.	Name of the variable			Regression coefficient
1.	Area	(ha)	(X_1)	7383.00300***
2.	Irrigation	(Rs)	(X_2)	0.17898
3.	Labour	(no.)	(X_3)	24.27417**
4.	Cuttings	(no.)	(X_4)	-0.00796
5.	Manuring	(kg)	(X_5)	-0.29677*
6.	Fertilizers	(kg)	(X_6)	0.96154

$R^2 = 0.98$

F = 260.35

*** Highly significant (1%)

** Moderately significant (5%)

* Significant (10%)

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