

Economics of crop rotations in Ratnagiri, India

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ABSTRACT

The important crop rotations found were rice-fallow and Nagli-fallow. The pulses like Pawta, kulthi, tur, wal and vegetables like tomato, brinjal, chilli, watermelon and groundnut, a oil seed crop were the margin crops grain after rice. Rice-fallow rotation was found to be most common with 65 cultivators with per farm area was 0.26 hectares. It was pointed out that per farm area under first crop was 1.20 hectares and under second crop it was 0.32 hectares in crop rotation. In economics of crop rotation, gross return was maximum in case of rice-tomato (Rs. 1, 20,002.00). Regarding input cost, maximum cost incurred for rice-tomato i.e. Rs. 66,248/-. Maximum net income was obtained from rice-tomato rotation (Rs. 59,753.60). Rice-chilli rotation provided maximum employment which was 723 days. Per farm gross income was Rs. 70649. The major income was from high yielding varieties of rice (Rs. 19080/-). Farmers earned farm business income of Rs. 42,228.00. Capital output ratio (17.22) as well as labour output ratio was highest (19.48) for coconut crop. In case of rice-fallow, capital and labour output ratio was 1.23 and 2.18, respectively.

Key words : Crop rotation, Physical inputs, Employment generation.

INTRODUCTION

The role of cropping system in intensive cropping is to increase the cropping intensity in irrigated as well as rain fed areas of the country. The net sown area in the country has remained almost steady at 143 million hectares over the past few years and there is ample scope for bringing the additional area under cultivation. The only possibility of expansion of cropped area is through the increase in area sown more than once. The cropping intensity can be increased both in rain fed as well as irrigated areas. The farming in India is carried out under diverse condition of agro climate, soil types and individual farm resources. Different crop rotations are used on different farms and in different regions to suit local situations and to fulfill individual household requirements.

Objective of the present study is to know the input use, cost and return structure of different Crop rotations and to analyze economic efficiency through income and employment generation.

MATERIALS AND METHODS

Ratnagiri district of the Konkan region was selected purposively for the study as it has more diversified farming practices. For the selection of cultivators, three stage random sampling technique was followed with taluk as primary unit, village as secondary unit and cultivator as ultimate unit to draw a cross sectorial sample of 120 cultivators. The data pertained to the agriculture year 2003 – 04.

RESULTS AND DISCUSSION

The information regarding crop rotation followed by

sample cultivators eleven crop rotations were identified in the study area (Table 1). Rice – Fallow rotation was found to be most common with 65 cultivators and 31.20 hectare area with per farm area 0.26 ha. This is because the soil in the study area was very light which do not and therefore, growing second crop is not possible on extensive scale. Where soils are retentive of moisture in plain area. The rotation like rice-Pawta (48 farmer), rice-kulthi (17 farmer), rice-tur (20 farmer), rice-wal (20 farmer) were followed. Maximum area was found in rice-Pawta rotation (26.40 ha) followed by rice-tur (8.40 ha) rotation.

Where irrigation is available, the rotation like rice – tomato (18 farmers), rice – brinjal (13 farmers), rice – chilli (12 farmers), and rice – watermelon (8 farmers) were followed. The maximum area was found in rice – tomato rotation (7.20 ha) followed by rice – brinjal and rice – chilli with 3.60 ha of area in end.

Nagli –Fallow rotation was followed as Nagli crop is grown on hill slopes where there is no moisture in rabi season and hence no second crop was possible.

There is limited scope for growing second crop under present situations due to poor moisture holding capacity of the soil and limited irrigation facilities in the study areas. Growing second crop on wider scale will be possible only if more irrigation facilities are available. Therefore, efforts need to be made to provide surface and ground water irrigation wherever possible.

Use of physical inputs

Physical inputs included labour, seed, manure, fertilizers, insecticides, pesticides and raw material per

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