

RESEARCH ARTICLE :

Impact of watershed development programme on cropping pattern in Dindigul district of Tamil Nadu

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SUMMARY : This study attempts to examine the impact of Watershed development programme through comparative analysis between with and without watershed area approach. The study highlights the difference between with and without watershed area towards assessment on performance on parameters like cropping pattern. The study was conducted purposively in Athoor block of Dindigul district in Tamil Nadu. Twenty farmers from each village in total 60 farmers in Watershed Treated Area and 60 farmers in non-treated area were selected randomly from six selected villages for this study. The data collection was carried out through personal interview using well structured and pre-tested interview schedules. Two separate sets of interview schedules were prepared to collect details from the sample farmers of Watershed treated area and Non-Treated area. The results were analyzed and presented in percentage. Cropping intensity of the sample farmers was observed as 122.81 and 111.32 in WTA and NTA. In the present study, the changes in the proportion of the individual crop area to the total cultivated area over the period in watershed treated area were higher.

KEY WORDS :

Watershed development programme, Cropping pattern

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BACKGROUND AND OBJECTIVES

A watershed can simply be defined as any surface area from which rainfall is collected and drained to a common point. Each watershed has a unique combination of inherent conditions, use and management and the response to flow and water quality is highly variable and complex. Watersheds serve as effective natural units to monitor the processes that influence the integrity of the functioning ecosystem. The watershed approach is a system-based approach that facilitates the holistic development of agriculture, forestry

and allied activities in the proposed watershed.. Watershed Development Programmes (WDPs) have been accorded high priority in India's development plans (Singh, 1991) since from the year 1974 onwards.

RESOURCES AND METHODS

The study was conducted purposively in Athoor block of Dindigul district in Tamil Nadu. Twenty farmers from each village in total 60 farmers in Watershed Treated Area and 60 farmers in Non Treated Area were selected randomly from six selected villages

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OBSERVATIONS AND ANALYSIS

From the Table 1 the cropping pattern of the paddy in watershed implemented area has increased from 11.64 per cent in 2008-09 to 12.14 per cent during 2011 to 2012. Followed by sorghum has increased at positive difference of 0.58 per cent and the total pulses cultivated area was reduced compare to 3.27 per cent in 2011-12 which was high at 4.25 per cent in 2008-09. This is due to the fact more Drought Prone Area programme being implemented in the study area to increase cultivation of commercial crops like groundnut. The cultivated area under groundnut was increased from 0.88 per cent in 2008-09 to 1.88 per cent in 2011-12.

Cropping pattern of sample farms :

The cropping pattern in the sample farms of both WTA and NTA in study area was assessed and the results are tabulated in Table 2 and revealed that the overall area under crops in WTA was higher than in the NTA. It could be also observed that there is significant and positive difference in the area of remunerative crops between WTA and NTA. The reason attributed for the enhanced area under these crops in WTA could be due to augmentation of more area by land leveling and more water by the beneficiaries from the scrupulous adoption of conservation compliance.

The coconut area occupied 52.6 ha in the sample farmers after implementation of the watershed development programme followed by groundnut which occupies 26.4 ha. The changes are due to the activities like land leveling and conservation technologies followed in WTA sample farmers and hence the land use pattern was changed. On an average the coconut occupied 2.92 ha followed by mango with 2.14 per cent. The cropping intensity of the sample farmers was 122.81 and 111.32 in WTA and NTA, respectively. Thus the changes in

Sr. No.	Crops	2008 - 2009	2011-2012	Percentage change
1.	Paddy	1618 (11.64)	1834 (12.14)	1.04
2.	Sorghum	1510 (10.87)	1730 (11.45)	0.58
3.	Black gram	189 (1.36)	157 (1.03)	-0.33
4.	Green gram	117 (0.84)	107 (0.70)	-0.14
5.	Horse gram	49 (0.35)	21 (0.13)	-0.22
6.	Cowpea	237 (1.70)	214 (1.41)	-0.29
7.	Groundnut	44 (0.31)	285 (1.88)	1.57
8.	Sesame	4228 (30.44)	4265 (28.24)	-2.2
9.	Net cropped area	7413 (53.37)	14924 (98.85)	45.48
10.	Gross cropped area	13889	15099	

(Figures in parentheses indicate percentages to gross cropped area) Source: Statistical report of Athoor

Sr. No.	Crops	WTA				NTA	
		Before	Average	After	average	Area	Average
1.	Coconut	46.2	2.56	52.6	2.92	31.6	2.24
2.	Mango	18.4	1.69	23.6	2.14	26.8	2.06
3.	Sorghum	10.9	0.47	23.4	1.01	21.6	0.86
4.	Groundnut	14.6	0.46	26.4	0.81	21.2	0.66
5.	Bhendi	9.6	0.81	14.2	1.2	8.4	1.05
	Cropping intensity		115.5		122.81		111.32

Source: Field survey

cropping pattern clearly indicates that shift there is cultivation of commercial crops such as ground nut in the watershed areas. It is observed that most of the land in watershed area was either kept as fallow or least cultivated prior to implementation of the project.

Conclusion:

Cropping intensity of the sample farmers was observed as 122.81 and 111.32 in WTA and NTA. In the present study, the changes in the proportion of the individual crop area to the total cultivated area over the period in watershed treated area was higher.

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