

NHM Scheme Impact on Beneficiaries of Horticultural Farmers in Karnataka-An Economic Analysis

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ABSTRACT

NHM is a centrally sponsored scheme, launched by the Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India during 2005-06. The scheme aims at holistic development of horticulture sector duly ensuring forward and backward linkages, with the active participation of all the stake-holders including farmers and private entrepreneurs. The Mission has a strong technical support at the National and State Level provided by the National Horticulture Board, with suitably strengthened experts and technical personnel to advise, formulate, appraise and monitor the implementation of the Mission's programme (Mruthyunjaya et al., 2011). Assistance for a number of components under NHM, particularly for the private sector involving infrastructure development such as nurseries, establishment of lab & clinics, post-harvest management and marketing is in the form of credit linked back ended subsidy. Multi stage random sampling technique has employed for identifying the sample respondents covered under NHM Scheme. The Primary data on cost, returns, income, employment and other infrastructural facilities generated collected from the sample respondents. Thus a total sample size of 240 beneficiaries and 90 non beneficiaries of NHM scheme will be interviewed. The result revealed that the distribution of land holding among beneficiaries is highest with 3.16 hectares per household per year in comparison with non-beneficiaries with 2.3 hectares per household per year. The distribution of land holding to horticulture and allied enterprises among beneficiaries was higher with 5.4 hectare per household per year in comparison with 1.5 hectare per household per year among beneficiaries. The higher income generated by beneficiaries from horticulture crop enterprises is mainly due to technological components provided under NHM scheme. The beneficiaries of NHM scheme have generated higher employment with 217 mandays in comparison with 176 mandays/ household /year. Implementation of NHM scheme has generated more employment among beneficiaries with 217 mandays per household per year in comparison with non-beneficiaries with 176 mandays per household per year. Higher employment generation is mainly attributed to perennial nature of horticultural crops whose farm practices are carried out throughout the year cultivation of horticultural crop enterprises also reduce migration in rural areas.

Key words: NHM, Income, Employment, Land Use, Technology use.

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INTRODUCTION

National Horticulture Mission is a centrally sponsored scheme in which Government of India provide 100 per cent assistance to the state mission during the year 2005-06 (Tenth Plan). During XI plan, the assistance from Government of India will be 85 per cent with 15 per cent contribution by the State Government. The various components under NHM scheme are introduced for a good cause, it has delivered with a medium impact on the beneficiaries. This show that still there is scope to increase productivity and production, income and employment among the farmers through effective implementation of various technological components provided under NHM. The change in land use is mainly attributed to increasing in demand for high value horticultural commodities. Due to implementation of NHM components including area expansion under horticultural crops, supply of planting materials, adoption of IPM, INM practices, organic farming, cold storage facilities resulted in change in income and employment among the beneficiaries. Though the various components under NHM are implemented, still there is scope for effective implementation of technological components provided under NHM scheme.

MATERIAL AND METHODS

Multistage random sampling technique was adopted in designing sample frame work for the study. In the first stage, four districts such as Bagalkot, Chitradurga, Raichur and Vijayapura were selected. Similarly, in Bagalkot district two talukas such as Bagalkot and Mudhol were selected, in Chitradurga district talukas such as Chitradurga and Hiriuru were selected, in Raichur district *viz.*, Raichur and Lingsugur and in Vijayapura district talukas such as Vijayapura and Indi were chosen for survey based on the highest area under Horticultural crops and highest number of NHM beneficiary in the districts and talukas in the Karnataka. In the third stage, horticultural crops growing farmers from each selected talukas were chosen at random in view of spread of horticultural

crops growers in different districts. Thus, total sample constitutes 240 beneficiary farmers and at the same time 90 non beneficiary farmers cultivating horticultural crops in the same districts and talukas were selected. The collected data is analysed using mean and percentages. The tabular analysis and percentage analysis was done for primary data collected in the study area.

RESULTS AND DISCUSSION

The impact of NHM on income, employment of beneficiary farmers

The primary data collected from respective beneficiaries for the analysis of impact of NHM on beneficiaries and non-beneficiaries of horticultural farmers were analyzed and interpreted looking to the objectives of the study. In this study the results of the investigation carried out are presented under the following headings.

Land use pattern among beneficiaries and non-beneficiaries under NHM scheme

The land use pattern among beneficiary and non-beneficiaries of NHM is presented in Table. 1. The land use pattern of beneficiaries was highest to the extent of 3.16 hectares under various cropping pattern in comparison with 2.3 hectares of non-beneficiaries under various cropping pattern. Among different cropping pattern, horticulture and allied activities highest use of land to the extent of 5.4 hectares of beneficiaries. Whereas land use to the tune of 1.5 hectares with non-beneficiaries in horticulture and allied activities. The next highest land use area in horticulture cropping pattern with 3.8 hectares of beneficiaries in comparison with land use of 2.5 hectares of non-beneficiaries under horticulture. The land use of 3.1 hectares under agriculture and horticulture of beneficiaries in comparison to the same extent of land use with 3.1 hectares of non-beneficiaries in agriculture and horticulture cropping pattern. Among land use pattern of agriculture and allied activities to the extent of 2.5 hectares of beneficiaries. Whereas land use pattern with 2.4 hectares of non-beneficiaries under agriculture and allied activities. The

lowest land use pattern of 1 hectares land use of beneficiaries in agriculture only with comparison of land use pattern of 2 hectares land use of non-beneficiaries under

agriculture. In overall, the percentage change in land use between beneficiaries and non-beneficiaries of NHM is to tune of 72.78 per cent which is significant with 6.89 per cent.

Table 1: Land use pattern among beneficiaries and non-beneficiaries of NHM scheme

Sl. No.	Activities	Beneficiaries (N=240)		Non-Beneficiaries (N=90)		'Z' value
		No. of respondents	Land use (ha.)	No. of respondents	Land use (ha.)	
1	Agriculture	21	1	10	2	6.89*
2	Agriculture +Allied	29	2.5	26	2.4	
3	Agriculture +Horticulture	46	3.1	27	3.1	
4	Horticulture	63	3.8	21	2.5	
5	Horticulture +Allied	86	5.4	7	1.5	
	Mean area (ha.)		3.16		2.3	
	Percentage Change	72.78				

*Significant at 5 per cent level

Technology use across crop enterprises among beneficiaries and non-beneficiaries of NHM scheme

Technology use across crop enterprise among beneficiaries and non-beneficiaries of NHM is presented in Table.2. The adoption of components wise technology in horticulture alone was highest with 69.17 per cent of the respondents. Whereas only 2.22 per cent of non-beneficiaries adopted the various technology. In the technology adoption in horticulture and allied activities was to the tune 19.17 per cent of beneficiaries in comparison with 1.11 per cent among non-

beneficiaries of NHM. In agriculture and allied activities 3.33 of beneficiaries adopted the NHM technology. While 15.56 per cent of non-beneficiaries adopted technology in agriculture and allied activities. In case of agriculture and horticulture, 3.33 and 4.44 per cent of the beneficiaries and non-beneficiaries adopted the technology. In case of agriculture alone beneficiaries and non-beneficiaries to the extent of 2.50 and 76.67 per cent adopted various technologies in crop production. The percentage in technology between beneficiaries and non-beneficiaries was 37.50 per cent which is significant at 4.73 per cent¹.

Table 2: Technology use across crop enterprises among beneficiaries and non-beneficiaries of NHM scheme

Sl. No.	Activities	Beneficiaries (N=240)		Non- Beneficiaries (N=90)		'Z' Value
		No. of respondents	Percentage	No. of respondents	Percentage	
1	Agriculture	6	2.50	69	76.67	4.73*
2	Agriculture +Allied	14	5.83	14	15.56	
3	Agriculture +Horticulture	8	3.33	4	4.44	
4	Horticulture	166	69.17	2	2.22	
5	Horticulture +Allied	46	19.17	1	1.11	
	Percentage Change	37.50				

*Significant at 5 per cent level

Income generation across crop enterprises among beneficiaries and non-beneficiaries under NHM scheme.

The amount of mean income received among beneficiary and non-beneficiaries of NHM is presented in Table. 3. The mean income received by beneficiary was highest with ₹ 2,

31,450 per household/year from different income sources. Whereas non-beneficiaries receives mean income was ₹ 1, 67, 292 per household/year from different income sources. The household received the income from horticulture and allied activities were the tune of ₹ 3, 57,832 per household/year of

beneficiaries in comparison ₹ 2, 10,563 per household/year among non-beneficiaries of NHM. In horticulture, income received was ₹ 2, 73,942 per household/year of beneficiaries received the mean income while, ₹ 1, 87,895 per household/year of non-beneficiaries received income in horticulture only. In case of business and others activities, income received to the tune of ₹ 2,66,328 per household/year of beneficiaries while in non-beneficiaries, to extent of ₹ 1,96,438 per household/year mean income received from business and other activities. In agriculture and horticulture, the income received to the extent of ₹ 1, 96,322 per household /year of beneficiaries while mean income received with

₹ 1, 67,894 per household /year of non-beneficiaries in agriculture and horticulture activities. The mean income received in agriculture and allied activities was ₹ 1, 70,000 per household/year of beneficiaries in comparison with mean income received ₹ 1, 67,894 per household/year of non-beneficiaries. The mean income received in agriculture with ₹ 1, 24, 520 of beneficiaries in comparison with income received ₹ 1, 45,678 per household/year of non-beneficiaries in agriculture only. In overall, the percentage change in income between beneficiaries and non-beneficiaries of NHM is to tune of 79.39 per cent which is significant with 5.91 per cent⁶.

Table 3: Income generation across crop enterprises among beneficiaries and non-beneficiaries of NHM scheme

Sl. No.	Activities	Beneficiaries (N=240)		Non-Beneficiaries (N=90)		'Z' value
		No. of respondents	Income (₹ / household /year)	No. of respondents	Income (₹ / household /year)	
1	Agriculture	9	1,24,520	23	1,45,678	5.19*
2	Agriculture+Allied	30	1,70,000	26	1,67,894	
3	Agriculture+Horticulture	36	1,96,322	2	1,04,326	
4	Horticulture	70	2,73,942	29	1,87,895	
5	Horticulture+Allied	83	3,57,832	6	2,01,563	
6	Business and others	12	2,66,328	4	1,96,438	
	Mean Income (₹ / household / year)		2,31,490.66		1,67,299.00	
	Percentage Change					79.39

*Significant at 5 per cent level

Employment generation across crop enterprises among beneficiaries and non-beneficiaries under NHM scheme

The employment generated across crop enterprises among beneficiary and non-beneficiaries of NHM is presented in Table.4. The employment generated of 216.67 mandays per household/year of beneficiaries under NHM scheme. Whereas, 175.67 mandays per household/year of non-beneficiaries from different cropping system. Among horticulture and allied activities the highest employment generated with 362 mandays per household/year of beneficiaries while employment generated to extent of 271 mandays per household/year of non-beneficiaries. Among horticulture activities only the employment generated with 301

mandays per household /year of beneficiaries. Whereas 221 mandays per household/year of non-beneficiaries in horticulture activities. The employment generated to the extent of 278 mandays per household /year of beneficiaries in agriculture and horticulture with comparison with 153 mandays per household /year of non-beneficiaries. The employment generated in business and other activities to extent of 168 mandays per household /year of beneficiaries. Whereas, in non-beneficiaries employment generated in business and others activities was 182 mandays per household/year. The employment generated in agriculture and allied activities with the extent of 102 mandays per household/year in comparison with 123 mandays per household/year of non-beneficiaries in

agriculture and allied activities (Parmod, K., 2013). The lowest amount of employment generated in agriculture with 89 mandays per household/year of beneficiaries in comparison of 104 mandays per household /year of non-

beneficiaries under agriculture activities. In overall, the percentage change in employment between beneficiaries and non-beneficiaries of NHM is to tune of 81.08 per cent which is significant with 9.16 per cent.

Table 4: Employment generation across crop enterprises among beneficiaries and non-beneficiaries of NHM scheme

Sl. No.	Activities	Beneficiaries (N=240)		Non-Beneficiaries (N=240)		'Z' Value
		No. of respondents	Employment (mandays / household /year)	No. of respondents	Employment (mandays / household /year)	
1	Agriculture	9	89	23	104	9.16*
2	Agriculture +Allied	30	102	26	123	
3	Agriculture +Horticulture	36	278	2	153	
4	Horticulture	70	301	29	221	
5	Horticulture +Allied	83	362	6	271	
6	Business and others	12	168	4	182	
	Mean (mandays / household /year)		216.67		175.67	
	Percentage Change	81.08				

*Significant at 5 per cent level

Impact of NHM scheme on beneficiaries in Karnataka

The overall impact of NHM among the beneficiaries is bifurcated into low, medium and high is presented in Table 5. The beneficiaries to the extent of 63.33 per cent belongs to the medium category. While low

and high level of impact was observed among 16.67 and 15 per cent of beneficiaries. The overall impact consisting of change in income, employment, land use pattern, technology adoption was to the tune of 68.80 per cent among beneficiaries in study area.

Table 5: Impact of NHM scheme on beneficiaries in Karnataka

Sl. No.	Categories	Level of impact	Beneficiaries (N=240)	Percentage
1	Low	Up to 33.33	40	16.67
2	Medium	33.34 to 66.66	164	68.33
3	High	Above 66.66	36	15.00
Total impact			240	100.00

Overall impact of NHM = (percentage change in income + percentage change in employment + percentage change in land use + percentage change in technology use) / 4
 = (79.39+81.08+72.78+37.50) / 4
 = **67.68 %**

CONCLUSION

The impact of NHM scheme on beneficiary farmers of Karnataka. The implementation of NHM scheme in Karnataka has brought about medium level impact among 67.68 per cent of the beneficiaries while it has a low and high level of impact among 16.67 and 15.00 per

cent of the beneficiaries. Though the various components under NHM scheme are introduced for a good cause, it has delivered with a medium impact on the beneficiaries. This shows that still there is scope to increase productivity and production, income and employment among the farmers through effective implementation of various technological components provided under NHM.

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