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Backward and Forward Linkages Developed by Farmer Producer Organisations in Western Maharashtra

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ABSTRACT

In the present study, an attempt was made to find out the forward and backward linkages developed by farmer organizations especially for vegetable production and marketing. Based on maximum number of farmer produce organizations (FPOs), Pune district from western Maharashtra was purposively selected. Three tahsils *viz., Khed, Junner and Purander* and total eleven FPOs engaged in production and marketing of vegetables were selected. From selected FPOs, ten per cent respondents were randomly selected, constituting a total sample size of 200 respondents and asked to indicate their response regarding source of assistance/ guidance for getting finance, procuring inputs, seed production, post-harvest, value addition *etc*. These functional relationships with other stakeholders were considered as linkage under the study. The responses were recorded using frequency and percentage. The results of study revealed that member farmers had developed backward linkages with SAU and KVKs scientists for technical guidance, and with cooperatives for getting loans. FPO members had developed forward linkages with marketing board for marketing, whereas, linkages with private sector were developed for storage, processing and value addition. The findings revealed that small and marginal farmers can have strong forward and backward linkages with both private and public sectors that can lead to their overall economic development.

Key Words: FPO, Backward, Forward Linkages, Vegetables.

INTRODUCTION

Indian agriculture is hampered mainly by climate change, fragmentation of land, uncertainty of market, weak linkages among the stakeholders. Although, India ranks second in vegetable production after China, very little attention is paid to grading, sorting and storage. Poor handling during loading, unloading and transport results in post harvest losses to the tune of 30-40 per cent of the total production. Farmers' indebtedness and lack of storage facilities were major reasons for selling most of produce by farmers immediately after harvesting (Narender, 2011). The agri-business need to be diversified to yield value added remunerations to the farmers and the end users of the produce (Robita, 2011).

In the prevailing situation, farmers will be benefited by organizing themselves into functional groups in the form of self-help groups, co-operatives, associations, companies and by linking with markets. Linking primary producers with global and national markets through fresh food retail chains is seen as one of the emerging agricultural marketing practices in India to improve small producers' livelihood. (Singhal *et al, 2011).* It has been emphasized that attempts to strengthen Indian agriculture must address not only farm production (farmers) but also processing, marketing, trade, and distribution and moreover linking farmers to markets was essential. This throws a light on developing linkages among the various stakeholders in agriculture.

Considering the importance of marketing linkages in enhancing farmers' income, the present

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Table 1. Activity wise backward linkages developed by the members VPOs. (N = 200)

Sr. No.	Activity	Agency			
A	**Procurement of input**	**Input agencies**	**Agricultural department**	**FPCs**	**SAUs**
1	Seeds/seedlings	40(20.0%)	16(8.0%)	20(10.0%)	28(14.0%)
2	Fertilizers/bio-fertilizers	48(24.0%)	20(10.0%)	38(19.0%)	42(21.0%)
3	Plant protection chemicals	62(31.0%)	20(10.0%)	54(27.0%)	0
4	Equipments and machinery	84(42.0%)	0	0	0
B	**Technical guidance**	**University Scientists**	**Agricultural department**	**KVK scientists**	**Other FPCS**
5	Improved variety	82(41.0%)	46(23.0%)	72(36.0%)	0
6	Production technology	38(19.0%)	86(43.0%)	76(38.0%)	0
7	Marketing of produce	33(16.5%)	138(69.0%)	14(7.0%)	0
C	**Financial Assistance**	**Private bank**	**Cooperative Banks**	**Cooperative societies**	
8	Loan	10(5.0%)	58(29.0%)	125(62.5%)	
9		**Agricultural Department**	**Public insurance company**	**Private insurance company**	
	Insurance	124(62.0%)	44(22.0%)	26(13.0%)	

study on working relationships of farmer producers organizations (FPOs) with other partners was undertaken with the objective to study the backward and forward linkages developed by the vegetable producer organisations (VPOs) for enhanced production levels and improved marketing of vegetables.

MATERIALS AND METHODS

This study area was purposively selected based on maximum number of FPOs. Considering area under vegetable production and number of FPOs working in vegetable production and marketing, three talukas viz., *Khed, Junner and Purander* of Pune district were selected. Futher, based on maximum number of members of farmers producer organizations engaged in vegetable production, vegetable producer organization (VPOs) were selected. Total eleven VPOs were purposively selected and 10 per cent group members (from each selected VPO) were randomly selected, thus, comprising total sample size of 200 farmers.

Vegetable producer organization linkages with different agencies *viz.,* State Agricultural University (SAUs), State Agriculture Department, Krishi Vigyan Kendra (KVK), other FPOs, Banks, Insurance companies *etc.* were considered in order to study the backward and forward linkages developed for production and marketing of vegetables. The respondents were asked to record their response for each agency from where they sought assistance/

Table 2. Distribution of respondents as per the forward linkages developed for marketing. (N = 200)

Sr. No.	Activity	Agency		
1	Storage	**Private storage centre**	**Govt. storage Centre**	**Other FPCs**
		48(24.0%)	26(13.0%)	0
2	Processing and value addition	**Private processing company**	**Govt. processing centre**	**SHGs**
		62(31.0%)	0	34(17.0%)
3	Marketing	**Marketing board**	**APMCs**	**SHGs**
		56(28.0%)	0	0

guidance for getting finance, procuring inputs, seed production, post-harvest, value addition *etc*. The responses were recorded and data were analysed using frequency and percentage.

RESULTS AND DISCUSSION

The data (Table 1) regarding development of backward linkages revealed that for procurement of seed and seedlings one fifth (20.0%) members had linkage with input agencies, followed by SAUs (14.0%), Farmer Producer Companies (FPCs) (10.0%) and agriculture department (8.0%). For getting fertilizers nearly one fourth (24.0%) had linkage with input agency followed by SAUs (21.0%) whereas, 19.0 per cent stated that they get fertilizers from input malls established by other farmers organization. In case of purchase of plant protection chemicals, 31.0 per cent had linkage with input agency followed by FPOs (27.0%) and 10.0 per cent linked with agriculture department For purchase of equipments and machinery 42.0 per cent members had linkage with input dealers. It means that farmers linked with input dealers and preferred for serving their various needs than other stakes. This might be due to that their services are available directly in the villages and can avail them as per their convenience. Similar findings were recorded by Patel (2011).

Data pertaining to linkages developed for technical guidance revealed that majority of the respondents (41.0%) had developed linkage with university scientists, 36.0 per cent had linkage with KVK scientists for use of improved variety, and farmers might have felt SAUs, KVKs as credible source to solve their technical problems. Similar results were recorded by Nikam (2012). Whereas, for getting guidance regarding production technology 43.0 per cent had linkage with agriculture department and 38.0 per cent had developed linkage with KVK scientists. For marketing purpose majority (69.0%) of members had linkage with state department of agriculture. Data pertaining to linkages developed for financial assistance especially for taking loan and insurance, about same percentage of respondents (62.5 and 62.0) had linked with co operative societies and agriculture department, respectively.

Forward linkages developed for marketing

An attempt was made to study the forward linkages developed by VPOs for marketing of vegetables. The data pertaining to activity-wise forward linkages developed (Table 2).

Data pertaining to forward linkages revealed that 24.0 per cent had preferred private storage centers followed by 13.0 per cent had linkage with government storage centre whereas no member had linkage with other FPCs for storing the farm produce. For processing and value addition 31.0 per cent had developed linkage with private processing company whereas 28.0 per cent had linkage with marketing

board for marketing of produce. No member had developed forward linkages for custom and labour hiring with other FPCs. Thus, it can be inferred that forward linkages were developed in selected area only, might be due to that the organizations would be in developing stage and need time for expanding their business activities to develop functional relationships with other agencies.

CONCLUSION

It may be concluded that farmers had developed backward linkages for purchase of inputs, finance and technical guidance regarding vegetable production with input dealers, Co-operatives, SAUs/KVKS respectively. Also forward linkages were developed for storage, processing, value addition with private sectors. There is wide scope to establish linkages with other stakeholders by expanding activities of organizations. Further study can conclude that functional linkages with business partners will lead for development of value chain through FPOs.

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