

**INSTITUTIONAL INNOVATIONS IN COMMERCIALIZATION OF OKRA****Gaurav Sharma**

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**ABSTRACT**

*The commercialization of okra in Tapi's agricultural scenario is primarily the result of institutional interventions carried out through participation over the previous forty years, with a primary concentration on production followed marketing interventions. It has been observed that these interventions are successful in changing the agricultural sector of the region from parochial paddy cultivation to commercial okra farming. In current scenario, the major marketing-centric institutional interventions of the export promoting agencies have highlighted the relevance of institutional innovations in the promotion of okra in the region. A comparative gain of Rs. 37,475 per hectare has been reported for growers following export-oriented okra production. The study has shown the potential benefits of comprehensive institutional interventions persuaded by the export agencies in Tapi. A comparative analysis of marketing has revealed that marketing channel of okra via. exporting agency is the most efficient. The benefits of informal community participation under appropriate supervision and leadership have been shown by the study.*

**Keywords:** *participatory approach, livelihood security, institutional innovations, okra, technology transfer, marketing efficiency*

**INTRODUCTION**

The production scenario of Indian agricultural receives numerous innovations, institutions support and researches but the same impetus has not been provided to post production activities which can be broadly categorized in Rural Non-Farm activities . In spite of the fact that a number of non-agriculture activities are categorised under RNF viz., Cementary, manufacturing , mining but all these activities leads to movement of the peasantry away from the main land and later on migration. Thus, at current stage we need to focus on the activities which enhance the agriculture as well as provide the employment to the nascent growers at village and taluka level which mainly involves the development of secondary agriculture. Many studies have attempted to evaluate the impact of RNF on agriculture (Abraham 2009, Acharya and Mitra 2000, Ahluwalia1978, Basant et al. 1998, Basant1994, Basu and Kashyap1992, Bhalla and Singh 1997, Bhalla1993, Bhattacharya et al. 2004, Chadha 2001, Chandrasekhar and Ghosh 2004, Chenery and Syrquin1975, Chinna 2004, Dholakia 2007, Harriss 1987, Hazell and Haggblade 1991, Hymer and Resnick1969 and Kundu 1991). However, these studies have not separately dealt with the employing the rural population in Secondary Agriculture.

The Tapi district of Gujarat offers inherent opportunities to practice Okra. In the current era okra is commercially produced in the district. Although the production and demand

of the crops is continuously increasing, the marketing of the crop relies on tiers of intermediaries. Owing to high demand of the crop around three-fourth of the produce is routed outside district with the help of middlemen. These middlemen are mainly involved in the supply chain as commission agents and doesn't impart /help in the improving the production scenario of the region. With the event of time, new marketing channels including exporting agencies have evolved. However, the area of operation of such agencies is limited. In this background the present study has been undertaken to evaluate the impact of the both production and post productions interventions of okra on the commercialization of okra in Tapi district of South Gujarat with the following specific objectives:

**OBJECTIVES**

- (1) To access the Rural Livelihood Security through transformed agricultural landscape in Tapi with the institutionalized introduction of Okra,
- (2) To examine the role of the export agencies in technology transfer, processing and marketing of okra in Tapi

**METHODOLOGY**

The study is both exploratory and analytical, involving qualitative as well as quantitative methods and is

drawn from the two projects completed during the period of 2016 to 2019 and extension of a M. Sc. Research work based on primary data collected for the year 2022-23. To examine the technology transfer by the institutionalised set up of export agencies Dolvan block of Tapi was purposively selected as the export agency is mainly concentrating their work in Dolvan block of the district. The Kay Bee Exports Pvt. Ltd. and Vadilal Industries Ltd. were the key export players in the region and thus selected for the study. The cluster sampling was used for selection 60 vegetable growers in consultation with the Agency. Three clusters of villages involved with the agency were selected. Finally, 20 farmers per cluster were selected randomly. For the comparative analysis, 30 growers selling to the export agency as well 30 growers selling elsewhere were selected. Thus, a total of 60 vegetable growers were selected for accessing the extent of technology transfer. In order to achieve the objective, simple statistical tools like averages and percentages were used.

## RESULTS AND DISCUSSION

### **Rural livelihood security through transformed agricultural landscape in Tapi with the institutionalized introduction of okra**

The commercial production of okra in Tapi is more than four decade old. A unique feature embedded to the process of development of Okra sector in the region has been a mutually reinforcing collaborative approach between the Government of Gujarat and the state agricultural universities network. The notable outcomes of the collaborative initiatives are comprehensive policy approaches to the emerging issues over time.

The Okra was introduced in the region as an extension persuaded initiative during the beginning of 1980's. The region is predominantly a tribal belt of South Gujarat, the livelihood pattern during early eighties was mainly dependent on the parochial paddy cultivation. The viscous circle of the subsistence livelihood pattern of the fledgling growers was break through with the introduction of Okra. The benefits of the high value crops percolated slowly in the region and its commercial viability was exploded only with the commencement of the proper marketing interventions from 1990's onwards. Thereafter, the major interventions were initiated for the promotion of Okra sector in Tapi, which can broadly be classified under four phases.

#### **Phase I (1982-1991)**

The introductory phase was initiated with experimental planting of Okra crop without any organized back up of production and marketing efforts. The major institutional interventions during this phase were the persuasion by the extension agencies of Agricultural

Universities for plantation of High Value crops and slowly development of the marketing channels for efficient marketing the crop. The agriculture sector in the region relies mainly on the traditional paddy production with low productivity resulting in poverty ridden livelihood of the growers. During this phase, the extension activity has persuaded few growers to adopt a new crop. Initially, the type of Okra produced was not as per the market demand i.e. thick, lopsided, long and infested etc. The crude form of ungraded okra was sold to the dealers operating at Surat. The know how provided by the extension agencies of SAU's and market stakeholders help the growers for further improving the quality of the produce.

#### **Phase II (1991-2004)**

This phase witnessed major changes in the production sector with steady growth in the share of small and marginal farmers. The major breakthrough during this phase is active involvement of private vegetable seed producing companies, which supplies the necessary inputs, equipment and services to the growers through the extension support of public agencies. These supports were crucial to sustain the income base of the slowly developing sector. Despite differences in the extent of services delivery by private and public agencies, they are complementary at a functional level.

#### **Phase III (2004-2014)**

This phase heralded a new era in the sphere of Okra marketing in Tapi. The major innovation is development of the new marketing channels to other states, development of Vyara Mandis and Dolvan Mandis to cater the marketing needs of the nascent growers and the mushroom growth of both licensed and as un-licensed commission agent providing better opportunities for the realization of higher prices.

#### **Phase IV (2014 onwards)**

This current stage has seen vertical integration of the Okra sector, especially with the establishment of an export oriented processing plant in the private sector by the Kay Bee group in 2015 and with the entry of export oriented cut vegetable segment of Vadilal group Pvt. Ltd. These export oriented processing units has transformed the cachet of Okra sector in the region. The industry sources a major share of its produce from farm gate by opening an informal Producers cooperative in different part of Tapi. Apparently, with inception of the export catering units, the Okra sector of Tapi has been comprehensively evolved into two groups, viz. the informally formed Farmers cooperatives selling a significant share of their graded produce to exporting agencies, and the growers in the unorganized sector who primarily market their produce as either graded or ungraded to the Market stakeholders. In effect, understanding the marketing need of the region the State Marketing Board has started operating sub yards in the major producing areas of Tapi.

**Technology transfer backed by export agencies**

The production of Okra backed by exporters in the study area is mainly dealt by two agencies viz., Kay Bee Exports Pvt. Ltd. and Vadilal Industries Ltd. The processing cum export oriented unit of Kayee Export Pvt. Ltd. was working in the region from 2015 onwards. The Kay bee exports was found to be deeply involved in the production process and works through the year whereas the Vadilal group procures Okra with the network of NGOs (or sometimes through Kay bee Exports) and operates during monsoon season. The Kay Bee group was found merchandising in the fresh produce while the Vadilal Industries Ltd was involved in frozen cut vegetables. The group persuades the growers in formation of informal farmer’s producers groups. The kaybee has developed a unique model where by all the plant inputs and plant protection products are bought by the company for its entire group of informally formed producers cooperative directly from the manufacturers. These are supplied to the growers of these cooperatives on credit basis. The technical team of the agencies periodically visits growers field and provides integrated pest management practices based on modern agronomic principles. It was observed that scientific farming methods have resulted in production of the crop as per the laid down parameters at international level. The groups offer a fair-priced fixed contract rate to the growers. Farmers also have the assurance of a full buy-back from these agencies.

The processing unit in the region provides technical support to the growers in producing the nutritive okra on scientific grounds without compromising with the income. The unit is opened in vicinity of the major okra producing villages which provide easy technical know-how as well provide the employment to the growers of the area. Thus the unit is creating secondary source of income by generating new jobs whereby helping in checking poverty. Moreover it is bridging the gap between export oriented demand and farm production by cultivation crop as per the specifications by specific country.

**A comparative assessment of production scenario under organized growers of export oriented agencies vis-à-vis unorganized growers**

As discussed in previous section, the exporters agencies backed Okra production in the study area is dealt by two agencies viz., Kay Bee Exports Pvt. Ltd. and Vadilal Industries Ltd. The present section is for quantitative analysis of the production scenario based on primary survey of the growers. The table 1 shows the production and cost pattern of the growers involved with the export agencies. The Export agencies provide a platform for different services to the growers (for mandating the plantation as per their

**Table 1. Details of Production activities and cost associated per hectare of okra production in export oriented chain (n=60)**

Sr. No.	Items	Physical unit	Value ₹
1	Pre Land preparation (Mainly Mechanical)	-	10472
2	Seed Rate	8.82	28532
3	Chemical Fertilizer	-	5792
4	Irrigation	-	10157
5	Insecticides/ Pesticides	-	2464*
6	<b>i) Pre Harvesting</b>		
	A: Family (man days)	124.43	14932
	B: Hired (man days)	6.06	728
	<b>ii) Plucking/ harvesting</b>		
	Plucking/season	40.43	-
	Labour/ Plucking		
	A: Family (man days)	6.16	-
	B: Hired (man days)	0.70	-
	Total labour requirement for plucking	249.07	34870
	A: Family (man days)		
B: Hired (man days)	28.30	3962	
Total human labour			
A: Family (man days)	373.50	49801	
B: Hired (man days)	34.37	4690	

**Note:\*** The cost mainly involve the fuel charge used for spraying chemicals

specifications) followed by efficient grading and marketing. They supplies seeds, equipment and on farm extension services to growers. Despite the differences in the extent of services rendered to different villages they are complementary at a functional level. The seeds were supplied to the growers on the loan basis and the amount was found to be recovered as the harvesting initiates. Apparently, an amount of Rs. 28,532 per hectare (table 1) was indirectly availed by the growers as a credit for initiating the okra plantation. The Export agency emphasize on the minimum use of the pesticides which helps to maintain the standards set at the international level. They were found using the organic pesticides like Neem oil and Nilgiri etc. The sprayer as well pesticides were found to be provided by the agency for ensuring the use of recommended pesticides. The cost incurred for insecticide and pesticide is ₹ 2,464 which predominantly involves the fuel used for spraying chemicals. In case of heavy infestation the growers were allowed to spray other chemical pesticides but during the residual effect period the agency was not found to procure Okra.

**Table 2. Details of Production activities and cost associated per hectare of okra production for unorganised growers (n=60)**

Sr. No.	Items	Physical unit	Value ₹
1	Pre Land preparation (Mainly Mechanical)	-	11046
2	Seed Rate	9.10	29379
3	Chemical Fertilizer	-	7313
4	Irrigation	-	9793
5	Insecticides/ Pesticides	-	11876
6	<b>i) Pre Harvesting</b>		
	A: Family (man days)	115.21	13826
	B: Hired (man days)	6.65	798
	<b>ii) Plucking/ harvesting</b>		
	Plucking/season	40.93	-
	Labour/ Plucking		
	A: Family (man days)	8.96	-
	B: Hired (man days)	1.62	-
	Total labour requirement for plucking	366.76	51347
	A: Family (man days)		
	B: Hired (man days)	189.11	26476
Total human labour			
A: Family (man days)	481.98	65172	
B: Hired (man days)	195.76	27274	

The table 2 shows the production and cost pattern of the unorganised growers involved with the of Okra production. The production is done in the absence of any extension exposure rather based on the expertise of the grower on its own. Thus all the cost in the production scenario was found higher in comparison to the cost involved in the export oriented growers. Moreover the advantage of receiving seeds on credit is foregone in this pattern. Apparently, the quality as well quantity of the seeds during the peak season depends on the whims and fancies of the seed stakeholders. The growers of the regions were also found to visit other districts in the search of the premium quality seed.

In comparative sense, the key difference in production framework of export and unorganised growers lies in plant protection and plucking. The growers in unorganised segment were found to incur a cost of Rs. 11,876 per ha. for Plant protection use due to comparatively higher use of pesticides. Moreover, the farmers in the export précis were found to use minimum quantity of chemical pesticides making the produce more nutritive. Apparently, the okra produced for local or national level consumption shall be having high doses of pesticides which is hazardous for human health. The

labour requirement for harvesting in export chain was found to be low as the grading labour was provided by the agency. Thus a comparative gain of Rs. 37,475 per hectare was found for export oriented okra production. As the production process of okra involves 5-6 months, farmers were not found to maintain precise production record.

## CONCLUSION

The study on transforming landscape has focused on the potential benefits of comprehensive institutional interventions persuaded by the export agencies in Tapi. The informal set up of farmers has been found effective in scientific and nutritive okra production. The export oriented set up has been instrumental in providing good quality seeds on credit supplemented with periodic supervision. Linkages with exporting companies ensure availability of good quality inputs at reasonable rates. In addition, the linkages are helpful to the smallholders in processing and marketing of Okra. The study has demonstrated the benefits of informal community participation with proper guidance and monitoring.

## WAY FORWARD

The further development of the Okra sector in Tapi, requires to develop the marketing sector for keeping pace with the quickly developing production sector. The stakeholders like Exporting agencies needs to be encouraged for establishing procurement-cum-processing centers in rural areas for farm gate purchase as well for development of secondary agriculture and rural economy as a whole. The New innovative marketing router like online trading, e- NAM are also needed to be developed for bridging the gap between the growers and consumers.

## CONFLICT OF INTEREST

All authors declare that they have no conflict of interest

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