

Original Research Article

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Mango Ventures: A Successful Example of Public-Private Partnership

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ABSTRACT

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An initiative was taken by AEEC, Koppal to educate farmer on the importance of organic mango production and value addition with the help of a NGO. Farmer produced the organic mango and NGO procured and processed the produce and sold at premium price. The farmer received an additional income of Rs. 98926 and consumer satisfied with organic products.

Introduction

Mango (*Mangifera indica* L.) is the king among tropical fruits and is greatly relished for its succulence, exotic flavour and delicious taste in most countries of the world (Bhatnagar and Subramanyam, 1973). Apart from its delicacy, it is a nutritionally important fruit being a good source of vitamin A, B and C and minerals. India is the largest producer of mango in the world (40%), followed by China and Thailand. In 2012–13, the area under mango cultivation accounted for 36 per cent of the total area under fruit production, and the quantity produced was about 22.1 per cent of the total fruit production of India. Although India is the top

producer of mangoes in the world, its productivity is very low because of postharvest losses, poor infrastructure, and size of orchards among other reasons (Banerjee 2011). Further, its share in the export of mangoes or processed mango products is comparatively low and it ranks fifth globally in the export of mangoes. The lack of profitable marketing opportunities is one among the several constraints faced by farmers. Specifically, the marketing channels for small and medium farmers are circumscribed by credit relations, high transaction costs, and lack of transparency in price fixation. To support the cultivation of traditional crops and cash crops like soybean, technology has been introduced and

information dissemination systems like e-choupals have been established. This has made the farmers more aware, resulting in competitive prices and profitable business opportunities (Goyal 2010).

Despite these developments, the majority of small and medium farmers continue to be heavily dependent on wholesale agents and traders for market information and credit facilities, which binds them in an informal contractual relationship with the latter (Saripalle 2016). In the light of above facts an effort was made to give technologies for higher production in organic cultivation and bee pollination and also value addition with marketing linkage by Agricultural Extension Education Center, Koppal and Samasti Gramina abyudaya Samsthe, Koppal.

Materials and Methods

Collaborative partners *viz.*, Agricultural Extension Education Center, Koppal (AEEC) and Samasti Gramina abyudaya Samsthe, Koppal identified a mango grower, Narayanarao Police Patil in Kamanoor village of Koppal district and made an unsigned memorandum of understanding with each other. 60 trees consisting of 20 alphanso, 20 Beneshan and 20 raspuri were selected. AEEC Koppal provided organic plant protection technology to manage fruitflies and fruit borer and also provided 2 bee colonies/acre at flowering.

After harvest, NGO procured the fruits at Rs. 50000 per ton and produce was taken to food

processing unit of University of Agricultural Sciences, Raichur for processing. Value added products were prepared and packed in the name of SIRI SAMASTI and sold through their marketing net work through SIRI store. Again the additional profit through value addition was paid to the farmer in 40:60 basis.

Results and Discussion

The results clearly revealed that, the pest incidence will be very meager in the plots maintained with organic plant protection measures compared to plots which are not maintained regularly. The number of fruitflies were 116 compared to 1364 in check plots and per cent fruit damage was also very low (2.38) when compared to check plots (9.64). The pollination support rendered by bees has increased the yields upto 15.13 per cent when compared to open pollination in check plots (Table 1).

1.5 tons of beneshan and 1.0 tons of raspuri fruits and alphanso each were harvested from 20 selected trees. Farmer was paid Rs. 1, 75, 000 for 2.5 tons of fruit at the rate of Rs. 50 per Kg as per existing market price and then the fruits were taken to processing unit and processed for various purpose. Alphanso fruits were sorted and graded for table purpose. 252 liters of squash was prepared from raspuri fruits and bottled and 210 kg of fruit jam was prepared from beneshan and packed. Fruits were sold at a premium price of Rs. 150 per Kg, Juice was sold at Rs.160/500 ml and Jam at Rs. 260/300g (Table 2).

Table.1 Details of pest incidence and yield increase

Sl. NO.	Treatments	No. of fruitflies trapped	% incidence of fruit borer	Per cent increase in Yield due to bee pollination
1	Demo plot	116	2.38	15.13
2	Check plot	1364	9.64	-

Table.2 Details of benefit reaped for value addition

Fruit variety	Type of value addition	Quantity	Price paid to farmer at market price	Quantity of value added products	Market Price of value added products (Rs)	Expenses for value addition	Value of value added produce	Additional income Column 8 – column 4+ column 7)	
Alphanso	Box for table purpose	1.5	75000	1.5 t	150/kg	8300	225000	141700	
Beneshan	Jam	1.0	50000	210 kg	1154/kg	15200	182000	116800	
Raspuri	Squash	1.0	50000	252 l	320/l	11824	80640	18816	
			175000			35324	487640	277316	
	Miscellaneous expenses (Transport, Stall charges and labour)					30000			

Gross income (a) = 487640

Expenses (Farmer share + value addition + Miscellaneous)(b) = 1,75,000 + 35324 + 30000 = 240324

Balance (a – b) = 247316

NGO: Farmer share @ 60:40 basis = 148390: 98926

Total amount received by farmer = 175000+ 98926 = Rs. 273926

NGO share = Rs. 148390

Farmer used to get just 1,75,000 as per market price but due to intervention of Agricultural Extension Education Center, Koppal and NGO an additional income of Rs. 98926 was gained and more important the farmer could avoid the vagaries of marketing and shelf life of product was increased through value addition and customers got organic products

In conclusion, mango has an established market and poses bright opportunities for in the national market whether in fresh or processed forms. Similarly, the mango industry has provided livelihood opportunities to its growers and those involved in its marketing channel. Thus, adoption of suitable and sustainable organic practices will increase yield and helps to get quality produce and

value addition helps to achieve maximum profit.

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