



## Short Communication

# Scaling up of technical backstopping in banana cultivation

M.Esakkimuthu<sup>1\*</sup> and C.Bhaskaran<sup>2</sup>

<sup>1</sup>*Department of Agricultural Extension and Communication, College of Agriculture, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand – 263 145.*

<sup>2</sup>*Department of Agricultural Extension, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala-695 522*

Received 7 August 2014; received in revised form 15 September 2014; accepted 19 September 2014.

### Abstract

Samagra project on banana cultivation is one of the few successful agricultural development initiatives from the state of Kerala, India. The multiple stakeholder partnership project was implemented in Thiruvananthapuram district with the aim to enhance banana productivity through promotion of innovations in technical backstopping. The study attempted to measure innovations in technical backstopping in terms of perception about the innovative procedures, processes and institutions. The results indicated that majority of the beneficiary respondents perceived the procedures, processes and institutions adopted in the 'Samagra' to be excellent in terms of technology backstopping.

**Keywords:** Multi-stakeholder, Participation, Innovation, Procedures, Processes and Institutions.

India is an agricultural country with over 70 per cent of its population dependent on it. Even as India's industrial and service sectors are growing by leaps and bounds, growth rate in agriculture is below 2 % (Kudumbashree, 2008). Industrial and services sector growth is dependent on the fortunes of agriculture due to various forward and backward linkages. Kerala a pioneering state in decentralized planning process of India has undertaken many demand driven initiatives towards technology commercialization in agriculture as part of Local Self Governments. One among them is the promotion of scientific banana cultivation called 'Samagra' Project, taken up by the Thiruvananthapuram District Panchayat through the Kudumbashree Mission, a women oriented poverty eradication programme of the Government of Kerala (Pawar, 2010).

According to Sikhamony and Sudha (2004),

consequent to the seventy third and seventy fourth amendments to the constitution of India, Local Self Government (LSGs) have an important role to play in the agricultural production process. Thiruvananthapuram District Panchayat shows the way for the rest of the LSGs in the state and elsewhere in the matter of designing, implementing and evaluating innovative agricultural production programmes. One among them is 'Samagra' Banana Project for the promotion of scientific market-oriented banana production and processing network by effectively utilizing organized 'Kudumbashree' units (Shilaja and Sobhana, 2010). Co-ordinated efforts of the State 'Kudumbashree' mission and the Thiruvananthapuram District Panchayat could effectively build up this kind of an innovative venture to improve banana cultivation utilizing high end technologies and enabling steady market. It is a multi-stakeholder participatory effort in agricultural development emphasising on 5 Ps-

\*Author for correspondence: Phone + 1-87913 87276; E-mail: <esakkimuthu418@yahoo.com>.

Public-Private-Panchayat-People Partnerships. The partners in the project are the Thiruvananthapuram District Panchayat, the 'Kudumbashree' Mission, the Agricultural Department, the Kerala Agricultural University, the State Horticultural Mission, the Nationalised Banks, and the private partner 'Prowins Agri System'. All the institutions are contributing to the various aspects of the 'Samagra' Project such as 'Kudumbashree' is mainly co-ordinating the activity groups, Thiruvananthapuram District Panchayat is providing subsidy to groups, agricultural department is providing crop insurance to banana growers, State Bank of Travancore (SBT) is helping financial support to the groups, Kerala Agricultural University is providing technical support in terms of project preparation, establishment of various laboratory such as soil testing lab, bio-control lab, model nursery form etc. Prowins is the implementing agency at field level through its field staff and supports pest and disease diagnosis, timely input supply, co-ordinating activity groups into marketing agency etc. It includes various innovations in technical backstopping systems.

The State Kudumbashree Mission, 2007 report indicated that, the initial results of the 'Samagra' project implemented in 34 Grama Panchayats covering 1691 ha; involving 2915 activity groups resulted in the productivity enhancement to 15 tons per ha and returns of Rs. 2.28 lakh per ha during 2007-10. Encouraged by these positive trends, the Thiruvananthapuram District Panchayat proposed to cover all the Grama Panchayats in the district and to bring in 709 ha additionally under commercial banana cultivation.

Therefore, the study area was purposively selected as Thiruvananthapuram district with beneficiaries of 'Samagra' Banana Project in the three selected gram panchayats, namely Kottukal, Kunnathukal and Kalliyoor as respondents. From each grama panchayat, twenty beneficiaries were selected based on simple random sampling. Accordingly, the total number of respondents for the study was 60 beneficiaries. Ex-post facto design was adopted in the study. 'Innovations in technical backstopping of 'Samagra' project' were measured in terms of innovative procedures, innovative processes and innovative institutions. The term innovation is defined as a process through which the nation creates and transforms new knowledge and technologies into useful products. Perception about innovative procedures, processes and institutions involved in the 'Samagra' project was evaluated on the basis of their effective utilization in 'Samagra' project. The innovative procedure is defined as the fixed step-by-step sequence of activities as envisaged in the 'Samagra' project. The innovative procedures identified are credit linkage, full technical support given by private agency. The innovative processes are defined as the sequence of linked procedures which constitute a process. The innovative processes are assured supply of quality inputs, capacity building activities, Kudumbashree giving fund for technology support and Socio-economic-ecologically sustainable development. The innovative Institution is defined as the newly established organisations, ways and means in the implementation of 'Samagra' project. The innovative Institutions are; one product-one village concept, private agency linkage with governmental agencies, ensures people's participation and

*Table 1.* Distribution of the 'Samagra' beneficiaries on their perceptions about innovations in technical backstopping (n = 60)

Perception category	Score	Perception about					
		Innovative procedures		Innovative processes		Innovative institutions	
		F	%	F	%	F	%
Bad	Upto 3	0	0	0	0	0	0
Good	4 – 8	18	30	21	35	23	38.33
Excellent	9 and above	42	70	39	65	37	61.67
Total	60	100	60	100	60	100	

Kudumbashree linked with Local Self Government Institutions (LSGIs).

The perception about innovative procedures, processes and institutions of all the respondents responses were grouped into three categories of as bad, good, excellent. The responses of respondents were collected on three point continuum viz., excellent, good, bad with scoring of 3, 2 and 1 respectively. In order to study the relationship between the independent and dependent variables, correlation analysis was done.

The innovative procedures, processes and institutions were implemented in the 'Samagra' project was measured by using an arbitrary scale developed for the purpose of study. The measuring instrument was pre-tested and standardised by the experts. The instrument contains three point continuum like excellent for the score of three and good for the score of two means the 'Samagra' beneficiary were perceived as the project in a excellent and good manner were as none of the beneficiary groups were perceived in bad or poor manner.

Based on the response of the respondents three categories of perception as Bad, Good, Excellent were formed and the results are presented in Table 1. From the results it could be inferred that the majority (70%) of the beneficiaries had the opinion that innovative procedures in the 'Samagra' project were excellent. Thirty per cent of the beneficiaries opined that innovative procedures in the 'Samagra' project were good and none of them had bad remark about innovative procedures in the 'Samagra' project. Sixty five per cent of the beneficiaries opined that innovative processes in the 'Samagra' project were excellent. Thirty five per cent of the beneficiaries opined that innovative processes in the 'Samagra' project were good and none of them had bad remark about innovative processes in the 'Samagra' project. Majority (61.67%) of the beneficiaries opined that innovative institutions of the 'Samagra' project were excellent. Over 38 per

cent (38.33%) of the beneficiaries opined that innovative institutions formed in the 'Samagra' project were good. None of the respondents perceived the innovative institutions in 'Samagra' project as bad. This may be due to fact that 'Samagra' is the only project providing assured market to the banana produced by the beneficiaries. This could also be attributed to the good technical backstopping provided in the project by the private agency 'Prowins'.

Profile characteristics of selected sixty respondents with reference to age, area under cultivation, experience in banana cultivation, annual income, educational status, cosmopolitaness, social participation, trainings attended, information need perception, credit orientation, risk orientation, economic motivation, innovativeness, achievement motivation and attitude towards 'Samagra' are as follows in the Table 2.

In order to study the relationship between the independent and dependent variables, correlation analysis was done. The results of the analysis are furnished in the Table 3. The results presented in Table 3 revealed that among the selected fifteen independent variables, experience in banana cultivation, educational status, credit orientation, achievement motivation had positive and significant relationship with innovative procedures, innovative processes and innovative institutions. Economic motivation had positive and significant relationship with innovative procedures and innovative institutions where as it had no significant relationship with innovative processes. Innovativeness had negative significant relationship with innovative processes where as it had no significant relationship with innovative procedures and innovative institutions. Majority of the respondents were literate and high educational status. This may be the reason for positive significant relationship of education with perception about innovative procedures, processes and institutions. This is because of the farmers are adopting the scientific banana cultivation farming

Table 2. Distribution of respondents based on their profile characteristics (n=60)

Variables	Category	Frequency	Percentage
Age	Young (upto 35)	15	25
	Middle (36-50)	30	50
	Old (51 and above)	15	25
Area under cultivation in cents	Low (upto 60 )	42	70
	Medium (61-70)	7	11.66
	High (71 and above)	11	18.33
Experience in banana cultivation in years	Low (upto 3)	29	48.33
	High (4 and above)	31	51.67
Annual income	Low (upto 50,000)	13	21.67
	Medium (50,001-1,00,000)	46	76.67
	High (1,00,001 and above)	1	1.66
Educational status	Illiterate	1	1.67
	Can read and write only	1	1.67
	Primary school level	17	28.33
	Middle school level	16	26.67
	High school level	18	30
	College level	7	11.66
	Professional college status	0	0
Cosmopolitaness	Low (upto 12)	14	23.33
	Medium (13-24)	38	63.33
	High (25 and above)	8	13.34
Social participation	Low (1)	16	26.6
	Medium (2-3)	38	63.3
	High (4 and above)	6	10.1
Trainings attended	Low (upto 1)	1	1.67
	Medium (2)	19	31.7
	High (3 and above)	40	66.63
Information need perception	Low (upto 19)	36	60
	High (20 and above)	24	40
Credit orientation	Low (upto 11)	20	33.33
	Medium (12-15)	25	41.67
	High (16 and above)	15	25
Risk orientation	Low (upto 18)	1	1.66
	Medium (19-25)	37	61.67
	High (26 and above)	22	36.67
Economic motivation	Low (upto 20)	30	50
	Medium (21-23)	27	45
	High (24 and above)	3	5
Innovativeness	Low (upto 2)	4	6.67
	High (3 and above)	56	93.33
Achievement motivation	Low (upto 7)	46	76.67
	High (8 and above)	14	23.33
Attitude	Unfavourable (upto 12)	0	0
	Neutral (13-18)	24	40
	Favourable (19 and above)	36	60

*Table 3.* Relationship between independent and dependent variables of beneficiaries of ‘Samagra’ project (n = 60)

Sl. No	Name of the independent variable	Correlation coefficient (Y1-Perception about innovative procedures)	Correlation coefficient (Y2-Perception about innovative processes)	Correlation coefficient (Y3- Perception about innovative institutions)
1	Age	-0.1006	-0.0962	-0.0736
2	Area under cultivation:	0.0661	0.2166	0.1320
3	Experience in banana cultivation	0.4778**	0.5846**	0.5390**
4	Annual Income	0.1580	0.1775	0.1703
5	Educational status	0.3708**	0.4110 **	0.3370**
6	Cosmopolitaness	0.2309	0.0574	0.1580
7	Social participation	0.0165	0.1572	0.1215
8	Training attended	0.0433	0.0532	0.1335
9	Information need perception	0.1300	0.1263	0.1987
10	Credit orientation	0.6524**	0.7443 **	0.5983 **
11	Risk orientation	0.0379	0.1763	0.0019
12	Economic motivation	0.4617**	0.2402	0.4165 **
13	Innovativeness	0.1309	- 0.2507*	- 0.1592
14	Achievement motivation	0.3451**	0.4074**	0.3423 **
15	Attitude	- 0.1320	0.2285	0.0873

\*\* Significant at 0.01 level; \*Significant at 0.05 level

practices and also the literate farmers familiar with innovations in ‘Samagra’ project. Majority of the respondents in the study were literate. The relatively better literacy status as a result of the availability of educational facilities even in rural Kerala predisposes increased awareness which may be the reason for the positive and significant relationship of education with perception about innovative procedures, processes and institutions as observed in the study. Majority of the beneficiaries were traditionally banana growers with more experience in the indicates of banana cultivation. This could be attributed as the reason for positive and significant relationship of experience in banana cultivation with perception about innovative procedures, processes and institutions. Most of the farmers are having medium level of credit orientation. Their positive mindset about increased use of capital through credit borrowing for banana cultivation in the ‘Samagra’ Project would have led to the positive and significant relationship of credit orientation with perception about innovative procedures, processes and institutions. Economic motivation is important in promoting a person to perform more effectively to improve his/her economic status. This is a favourable psycho

physical disposition which could cultivate in the positive significant relationship of economic motivation with perception about innovative procedures, processes and institutions. A person with high need for achievement would be viewing innovations in any sphere of activity with a positive frame of mind. This could be cited as a reason for the positive and significant relationship of achievement motivation in banana cultivation with perception about innovative procedures, processes and institutions as evidenced in the present study. The study proved that ‘Samagra’ project had more number of innovative procedures, processes and institutions and it helps to uplift the beneficiaries livelihood status. The respondents had got a favourable attitude towards ‘Samagra’ Project. They also had the appreciative perception about the innovations in technical backstopping of ‘Samagra’ project on banana cultivation.

## References

- Kudumbashree, 2008. Kudumbashree Report: In Samagra – Nendran Banana Project. District Kudumbashree Mission.
- Pawar, S. 2010. Agriculture Minister Calls for Leveraging Private Sector Resources for

- Commercialization of Technology. ICAR News Letter 84 (5): 3-4.
- Shilaja, S. and Sobhana, G. 2010. Rural Business Hub – An Innovative Approach for Rural Upliftment. In: Ashok Powar (ed.), *Proceedings of the National Seminar on Role of Extension Education in Changing Agricultural Scenario*, Mar 06-08 2010, Maharashtra Society of Extension Education, Pune, India, pp. 121-122.
- Sikhamony, S.D. and Sudha, M. 2004. Lucrative Export Possibilities, The Hindu Survey of India Agriculture, Chennai.
- State Kudumbashree Mission. 2007. Samagra-Production-Marketing-Network (A combined project report of District Panchayat, Thiruvananthapuram / NHM / Prowins Foods Private Limited)