

A VALUE CHAIN ON ENHANCED PRODUCTIVITY AND PROFITABILITY OF POMEGRANATE.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS MANAGEMENT

A. Basic information

1. Project statistics

Component code : 02

Name of Consortium leader : **Mr. M.Narayana Swamy, Chairman**
Akshay Food Park ltd, (AFPL) Bangalore

Name of CPI : **Dr. T.V. Reddy, Senior Project executive**
Akshay Food Park ltd, (AFPL) Bangalore

Akshay Food Park Limited, Bangalore
(Government of Karnataka Joint Venture)

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Consortium partners :
1. University of Agricultural Sciences (UAS), Bangalore.
2. Institution of Agricultural Technologists (IAT) Chitradurga chapter, Chitradurga, Karnataka.

2. Date of start: 1st April 2009

3. Planned duration : 3 years and 3months (01.04.2009 to 30.06.2012)

4. Project cost : 423.35 lakhs

5. Project objectives

- I. To enhance productivity and quality of pomegranate varieties namely Ganesh and Bhagwa through adoption of GAP, control of bacterial blight disease, blackening of arils and fruit cracking (**PRODUCTION**)
- II. Develop suitable technology and protocols for post harvest management of pomegranate fruit to maintain the quality, extend shelf life and reduce overall post harvest losses.(**POST HARVEST**)
- III. Explore and demonstrate appropriate methods and technologies for processing and value addition for complete utilization of pomegranate fruit including by-products namely fruit juice, seed oil, colour and flavour extraction. (**PROCESSING AND BY PRODUCT UTILIZATION**)
- IV. Conduct market research, analyse and create database for market intelligence on to enable better returns to stakeholders across the supply chain and facilitate advance marketing.(**MARKETING**)
- V. Dissemination and demonstration of results of the project across the value chain., promotion of commercial projects and development of Hiriyur as the “Hub for pomegranate value addition” (**DISSEMINATION and SCALE UP**)

6. Brief project description

This is a consortium based project involving public/private organizations and the stake holders with applied research and integration as the main focus. Akshay food park ltd (AFPL) a joint venture company is involved in establishment of Food Park with intentions of integrating food supply chain and work with a “farm to fork” concept. Akshay food park having worked with pomegranate farmers in the project area has good knowledge and tie up with farmers. Akshay food park is tied up with University of Agricultural sciences, Bangalore and Institution of Agricultural technologists, Chitradurga chapter in a consortium mode to plan and implement the project.

The project will focus on research to develop and implement good agricultural practices to prevent bacterial blight disease and fruit cracking of pomegranate fruit

The project aims at developing technology and protocols for post harvest management of pomegranate fruit to maintain the quality, extend shelf life and reduce overall post harvest losses

The project involves adopting innovative and scientific processing technologies to enhance productivity and efficiency and develop value added by products and also complete utilization of pomegranate fruit.

The value chain on pomegranate project will enhance the income levels of Pomegranate growers in the project area through intervention at production level and also create opportunity for entrepreneurs to take up pomegranate cultivation, processing, marketing and value addition industries.

The project will assist/catalyze commercialization of pomegranate project and attract investment in the region/state for the benefit of the farmers

7. Environmental Category issues in the subproject

- **Social**

The project does not have any negative effect on the social fabric of the region. On the contrast, the project will help the social upliftment of the farmers and their family

- **Environmental**

There are no environmental threats from the project.

8. Safeguard policies triggered (World Bank Policies)

Safeguard policies triggered (World Bank Policies)	Yes	No
Environmental assessment (OP/BP 4.01)	X	
Natural habitats (OP/BP 4.04)		√
Pest management (OP 4.09)		√
Cultural property (draft OP 4, 11-OPN 11.03-)		√
Involuntary resettlement (OP/BP 4.12)		√
Indigenous peoples (OD 4.20)		√
Forests (OP/BP 4.36)		√
Safety of dams (OP/BP4.37)		√
Projects in disputed areas (OP/BP 7.60)		√
Projects on international waterways (OPBP 7.50)		√

B. Risk analysis and related issues

Environmental risks: The project does not pose any risks related to environmental aspects. On the contrary, the project helps minimize the solid waste problems at the urban level which currently exists. As grading and packing of the fruit is done close to the farm, the waste generated is minimized and it becomes a useful material at the farm for vermicompost, bio gas etc.,

Social: As good numbers of farmers have witnessed problems with regard to pomegranate cultivation, there could be some reluctance among the farmers to revive and increase pomegranate crop area and adopt the good agricultural practices, package of practices suggested under this project. But this aspect has been given due attention. We have already discussed with the farmers group and they are willing to work with the project. Further the project also plans for demonstration plots and hence this will convince the farmers.

Marketability of pomegranate becoming a problem: There is no risk associated with pomegranate marketing as this fruit is very well accepted by the consumers and the trend world over is towards increased consumption of pomegranate and its products because of its extensive health benefits.

9. Impact assessment

Adequately addressed (Annexure I and II)

10. Potential indirect and/or long-term impacts due to anticipated future activities in the project areas (assessment of anticipated conflict/complimentarily with the current as well as those proposed for the next five years) in the areas of activities of the sub-project.

The long term impact of this project is that it will become a model for replication in other areas as well as for other crops. This multiplier effect will have major socio economic benefits specifically in the region and more generally across the agriculture sector. This project aims to be a trendsetter in the agriculture sector.

The socio economic status of the farming community in the region will improve, thereby improving education and health status of the community. The interaction and close networking with various stake holders will ensure the awareness of the farmers increases thereby societal status will be enhanced.

The project envisages development of rural and semi- urban areas as also create job opportunities in these areas. This would reduce migration from rural areas to urban areas cities which will have environmental impact. The project will stimulate Rural entrepreneurship and wealth creation opportunities

All the stakeholders will understand the benefit of an integrated approach and work towards strengthening the team work. The project will also showcase the possible impact through utilization of Research and Development, technology transfer and scientific approach.

11. Identify the key stakeholders and describe mechanisms for consultation with and to them done/disclosure so far done including pre-project consultation with the stakeholders, stakeholders' workshop before formulating the full proposal, discussing the full proposal with some stakeholders before submission to the PIU.

Extensive discussions have been held with the consortium partners and associate partners. We have had preliminary meetings and discussion with other stake holders. The inputs emanated out of the meetings have been incorporated in the full proposal

Public institutes

- University of Agricultural sciences, Bangalore.
- University of Agricultural sciences, Dharwad
- Karnataka state Agricultural produce, processing and export corporation (KAPPEC)
- Central Institute of Post Harvest Engineering & Technology, (CIPHET) Ludhiana.
- Central Food Technological Research Institute (CFTRI), Mysore
- State Bank of Hyderabad
- National research centre on pomegranate

Private institutions

- Field Fresh Foods Pvt Ltd., Pune.
- Green India food trading company pvt ltd. Bangalore
- Greendeal Consultancy & Overseas Pvt Ltd., (GDC) Bangalore.
- Processing industries
- Equipment manufacturers

NGO's

- Institution of Agricultural Technologists (IAT) Chitradurga chapter, Chitradurga, Karnataka.

International organizations

- M/s. JOGUE Incorporation USA.

12. Chronology of meetings/ activities held in connection with preparation of the concept note and full proposal

Sl. No.	Date & Location	Programme	Participants	Remarks
1	10.05.2008	NAIP awareness orientation program	Divisional heads	To understand about objectives and guidelines of NAIP
2	15.05.08	Brain storming session	AFPL Officers, Horticulture experts	To shortlist and identify crops / project of great relevance and impact.
3	22.05.08	Concept note briefing and discussions	AFPL Officers, Horticulture experts	To discuss the objectives goals and outcome of the proposed project.
4	28.05.08	Concept note finalization	AFPL Officers, UAS Scientists & IAT	Review and finalize the concept note.
5	20.08.08	Personal interactions and discussion	AFPL & UAS	To get inputs for core program
6	22.08.08	Telephonic discussions	AFPL	Inputs on core program
7	15.05.08 25.08.08	Telephonic and personnel discussions	AFPL & IAT	Inputs on core program
8	Aug/sep 2008	Telephonic discussions and E-mail interactions.	AFPL & NAIP Help desk.	Discussions about core program
9	23.09.08	Meeting	AFPL & UASB	Discussion for full proposal
10	25.09.08	Meeting	AFPL & IAT	Discussion for full proposal
11	27.09.08	Telephonic discussion	UAS	Discussion for full proposal
12	30.12.08	RPC Meeting	AFPL & NAIP	Presentation and discussion
13	6.01.09	Cost committee meeting	AFPL & NAIP	Discussions
14	25.02.09	PMC meeting	AFPL & NAIP	Presentation and discussions

13. Measures to address the issues:

Farmers' Education and Training on the use of IPM will be conducted for the participating Farmers in the sub-project.

Awareness of risk related factors will be addressed to the stakeholders through orientation sessions on topics such as adoption of improved package of practices in a holistic way, using technologies. Environmental friendly or holistic measures shall be adopted to address the Bacterial blight disease which is rampant in these areas. Issues such as grading, processing and packaging interventions will be addressed as far as possible so as to take care of environmental safeguards etc.

14. Consultation/disclosures to be done in future:

Local disclosure through mechanisms such as launch workshop, interfaces during the implementation stage of the sub-project for sharing the results and soliciting feedback, circulating project brochures and implementation progress from time to time, putting up annual reports on the website and annual stakeholder workshops wherever feasible.

Circulation of project brochures and implementation progress from time to time, putting up annual reports on the web site and annual stakeholder workshops wherever feasible.

The circulation disclosures will be done as per NAIP guidelines depending on the progress of the project. Training, demonstration programmes and workshops on various themes relevant to farming, primary processing, post harvest, product preparations, packing, labeling, retrofitting, nutritional benefits awareness, recipe making marketing aspects etc., will be showcased. The project findings will be disclosed time to time through brochures/CDs/Videos/literatures and necessary feedback will be collected for further improvement and better implementation. Assistance of different related organizations will be availed.

- Dissemination of holistic crop management and extension services to farmers through partners.

- Demonstration of best post harvest management practices to all stakeholders
 - Demonstration of new product preparation to stake holders
 - Dissemination of information and sensitization of line departments of state and central governments to policy makers, planners and project partners
 - Popularization and awareness creation to consumers
 - Information dissemination through mass and print media on benefits across the supply chain, health and nutritional benefits to consumers.
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- Linkages with financial institutions will be enabled so that as and when required, the farmers and the other entrepreneurs/ industries are adequately financed for their commercial activities.

Consortium PI

National Coordinator

National Director

Annexure I

Environmental safeguard: Activities, Issues, Impact and Mitigation Measures

Activities ¹	Issues ²	Anticipated level of impacts ³		Mitigation measures (negative impact) ⁴
		Positive	Negative	
Upgradation of integrated laboratory for soil analysis and residual testing equipments	Minimize/eliminate non discriminate use of pesticide Soil and pesticide analysis on a regular basis will provide data for effective monitoring and awareness among farmers. This can help minimize the environmental damage to soil	4		
Adopt cost effective post harvest management practices (PHMP) for pomegranate sorting, grading, precooling, waxing, handling, storage, packing and fumigation to reduce overall post harvest losses and improve the shelf life of pomegranate.	Minimize post harvest losses which would otherwise cause solid waste pollution /environmental problem	4	0	
Establish a model nursery and demonstration plot	Optimal and efficient use of natural resources	3	0	

for promoting pomegranate cultivation	including water			
Establish a pilot plant for grading and packing, seed oil extraction, IQF, CAS storage, juice and anardhana	Since it is a pilot plant the pollution problem would be minimal and measures will be taken to abide by PCB norms.	4	1	Equipment and systems selected will meet PCB norms
Use of chemical fertilizers and pesticides	Soil degradation		1	Integrated pest management and use of farm yard/organic manure.

Annexure II

Social safeguard: Activities, Issues, Impact and Mitigation Measures

Activities ¹	Issues ²	Anticipated level of impacts ³		Mitigation measures (negative impact) ⁴
		Positive	Negative	
Pomegranate cultivation and prevention of bacterial blight disease to avoid rooting of plant	Requirement of additional funds		2	Project envisages buy back arrangement and tie up with banks for funding
Farm Mechanization	Utilization of lesser human resource		1	Minimal farm mechanization shall be adopted.
Networking among stake holder and dissemination of information	Improves working relationship and enhance knowledge level of farmers	4		
Conduct market research to get data on supply and demand (domestic and exports), price trends, demand trends, export quality requirement, etc.	Effective marketing of produce will not only get better revenues but also avoid discard of produce by farmers if market not available (as in some cases)	4	0	
Assess various product possibilities both food and non-food.	Complete utilization of fruit and plant parts will not only reduce environmental load but also enhance farmers revenues	4	0	