

Value Chain in Major Seed Spices for Domestic and Export Promotion

Environmental and Social Safeguards Management

A. Basic Information

1. Project Statistics :
Component code : 2

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Consortium Partners : **State Agricultural Universities**
 1. S.D.Agricultural University, Sardarkrushinagar.**ICAR Institutes**
 2. National Research Centre on Seed Spices (NRCSS), Tabaji, Ajmer (Raj.)
 3. Central Institute of Agricultural Engineering, Bhopal**NGOs**
 4. Vikram Sarabhai Center for Development Interaction (VIKSAT), Ahmedabad
 5. Krishak Vikas Sansthan, Ajmer
2. Proposed date of start : 1 April, 2008
3. Planned duration : 5 Years
4. Project cost : Rs. 530.16 Lakh
5. Project Objectives :
 1. Enhancement of productivity, profitability and quality through Good Agricultural Practices (GAP).
 2. Standardization of post harvest handling, storage and processing

technologies to minimize post harvest losses.

3. Quality maintenance and confirmation to the standards wrt ASTA, ESA and ISO for use in quality testing.
 4. Market intelligence to the seed spice growers, traders, processors and exporters.
 5. Transfer of technology at farm and industry level.
6. Brief project description :

The proposed project “Value Chain in Major Seed Spices for Domestic and Export Promotion Project” will be undertaken by Sardarkrushinagar Dantiwada Agricultural University (Lead centre), two ICAR Institutes NRCSS-Ajmer and CIAE-Bhopal, two cooperative centers VIKSAT-Ahmedabad and Krishak Vikas Sansthan, Ajmer. Nations Research Centre on Seed Spices (NRCSS) is centre working on seed spices and excelling in multi disciplinary research work. CIAE, Bhopal is the premier institute for development of Agril. Farm Machinery, harvest and post harvest technologies. Viksat, AnaRDE and Moraraka Foundation are working for rural development by transfer of technologies through SHGs. Entrepreneurs such as Mr. D. A. Patel & Co. (Trader, processor & exporters), Shital Cleaning Industries, Unjha (cleaning and processing) and Amitos Gruh Udhyog, Palanpur (Ground spices) will be involved as associate partners/stakeholders in this project.

This Project is proposed in production to consumption system for Gujarat and Rajasthan with a vision and strategy of seed village concept for large scale seed multiplication and demonstration of good agriculture practices for productivity and profitability increase. It aims to demonstrate as to how a given area (village) can be used as a glue to bring experts and officials of diverse backgrounds, departments and agencies to work together in a live working environment for the common good of seed spices growers. Six seed spices crops are involved under this project viz; cumin, fennel and fenugreek from Gujarat and dill, coriander and ajwain from Rajasthan with different objectives and activities. The specific objectives are (1) Adoption of good agricultural practices (GAP) for productivity and quality improvement, (2) Post harvest handling, storage and processing technologies, (3) Quality maintenance and confirmation to the standards w.r.t. ASTA, ESA and ISO for use in quality testing, (4) To provide Market intelligence to the seed spice growers, traders, processors and exporters and (5) Transfer of technology.

It is hypothesized that designing multidimensional programme including good agricultural practices (GAP), on-farm value addition, storage , quality management and market intelligence will result in realizing the goal of business value chain in seed spices by production increase, quality improvement and export promotion to provide higher return to the growers, processors and exporters of seed spices.

7. Environmental categories issues in the subproject Social Environmental
8. Safeguard policies triggered (World Bank Policies)
- | | Yes | No |
|--|------|-----|
| Environment 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/BP 4.37) | [] | [] |
| Project on disputed areas (OP/BP 7.60) | [] | [] |
| Projects on International Waterways (OP/BP 7.50) | [] | [] |
- B. Risk Analysis and related issues
- Adoption of improved package of practices in a holistic way may be a problem if funds are adequate.
 - Marketing of poor quality seed spices may be a difficult, unless the prices are lower than market prices.
 - Conflict of interest in using seed spices for industrial and food purposes vis-à-vis seed spices for uses in future.
 - Packaging interventions in the unorganized sector is a complex issue.
 - Training programmes among an unorganized and low educated persons may be a complex problem.
 - Emergence of new markets on seed spices value added products.
 - Availability of partners to carry out the programme on a large scale for commercialization.
 - Logistic problems as these models are going to be tried out for the first time in the country.
 - Consumer's response may not be overwhelming, without very active promotional exercise.
9. Impact assessment:
Given below and adequately addressed.
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 health status of the target population is improved through quality seed spices consumption keeping many deficiencies (medicinal) and diseases at

bay.

- Quality seed spices intake will help due to their medicinal value among some diseases affected populations both in urban and rural areas..
- While potential direct impact will be household food and livelihood security of dryland poor is assured through replications of more such models on seed spices business value chain.
- The indirect benefit will be sustainability of seed spices cultivation in dryland regions of the country, offering fodder security for live stock including meat animals with better productivity and efficiency and dairy production
- Increased seed spices cultivation will be at the cost of replacement of other crops. Obviously less remunerative crops will be replaced.
- Development of Rural base processing industries
- Awareness of farmers for achieving better returns with improving marketing approaches.
- Rural entrepreneurship will help in reducing migration to urban areas through enhanced employment and income generation

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

State Agricultural Universities

1. S.D.Agricultural University, Sardarkrushinagar.
2. National Research Centre on Seed Spices (NRCSS), Tabaji, Ajmer (Raj.)
3. Central Institute of Agricultural Engineering, Bhopal
4. Anand Agricultural University, Anand
5. Junagadh Agricultural University, Junagadh
6. Ganpat University, Kherva
7. Farmers and consumers
8. Panchayat Raj of Govt. of Gujarat
9. Agriculture Department, Govt of Gujarat
10. Horticulture Department, Govt of Gujarat
11. District Rural Development Agency (DRDA)
12. District Industrial Corporation (DIC)
13. National Institute of Cooperative Management (NICM), Gandhinagar
14. APMC, Unjha

Private participation:

15. D.A.Patel & Co., Unjha

16. Shital cleaning, Unjha
17. Amitoj Grah Udhyog, Palanpur

NGOs

18. Vikram Sarabhai Center for Development Interaction (VIKSAT), Ahmedabad
19. Krishak Vikas Sansthan, Ajmer
20. ANaRDe Foundation, Mehsana

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

Sr No	Date & Location	Programme	Participants	Remarks
1.	11.08.06 S.K.Nagar	NAIP value chain workshop	All senior Scientists of SDAU	For preparation of projects
2.	28.09.06 Unjha	Discussion with processors, exporters & traders	SDAU, D.A. Patel & others	Discuss about joint work
3.	29.09.06 Gandhinagar	Discussion with NICM and DOH Gandhinagar	SDAU, NICM, & Gandhinagar	Discuss about joint work
4.	6.10.06	Meeting with VIKSAT & AAU, Anand at Ahmedabad	VIKSAT, AAU & SDAU	Discuss about joint work
5.	10.10.06	Meeting with SDAU home science collage staff	Home science collage	Discussion and preparation of project
6.	16.10.06	Intraction Meeting	AAU, JAU, DRDA's, DIC's, NABARD, GAIC, Spices Board, processors, traders, exporters, NGO's KVK's	Discuss about joint work and project preparation
7.	11.11.06 S.K. Nagar	Presentation in meeting of peer review comittee	Peer review committee members	Finalization of project
8.	14.11.06 Unjha	Intraction Meeting	SDAU, D.A. Patel & other	Discussion about his problem

			processors	
9.	06.08.07 S.K. Nagar	Intraction meeting	PI & NAIP project coordinator Component-2	Arrangement of Stackholder workshop
9.	14.08.07	Meeting with all consortia partners	All consortia partners	Preparation of full project
10.	17-18.09.07 Jagudan	Stakeholder's workshop	All consortia partners and stakeholders	Preparation of full project
11.	04.10.07 S.K. Nagar	Meeting with all consortia partners	All consortia partners	Preparation of full project

12. Measures to Address the Issues

A document on Safeguard Matrix has been prepared. Farmers Education and Training on the use of IPM and IPNMS will be conducted for the participating farmers in the sub-project.

Awareness of risk related factors will be addressed to the stalkholders through orientation session on topics such as adoption of improved package of practices in a holistic way, using technologies such as harvesting at physiological maturity & artificial drying to circumvent problems of marketing of molded or blackened millets (due to mold), educate them to safeguard the conflicting interests of food users vs industrial purposes by diverting grains only when it becomes unfit for human consumption (blackened grain) thus coming out of food chain. Issues such as packaging interventions will be addressed in the unorganized sector through utilization of biodegradable packaging structures as far as possible so as to take care of environmental safeguards etc.

13. Consultations / disclosures to be done in future

Local discloser through mechanisms such as launch workshop interfaces during the implementation stage of the subproject for sharing the results and soliciting feedback, one will circulate project brochures and implementation progress from time to time putting up annual reports on the web site and annual stakeholder workshop wherever feasible.

The consultation/ disclosures will be done at par NAIP guide lines depending on the progress of the project. Training, demonstration programmes and workshop on various themes relevant to farming, primary processing, post harvest product preparations, packing, labeling, retrofitting, nutritional benefit awareness recipe making, marketing aspects etc.

1. Dissemination of holistic crop management and extension services to participating farmers, specifically IPM & IPNS through training & education programmes.
2. Demonstration of new products preparations to stakeholders.
3. Transfer of technology of value-added health foods to stakeholders.
4. Dissemination of information and sensitization of line departments of state and central governments to policy makers, planners and project partners for enhancement of spices consumption.
5. Popularisation through information dissemination on safety of developed products to the consumers.
6. Information dissemination through mass and print media on health and nutritional benefits to stakeholders, targeted groups especially diabetic and obese urban consumers.
7. Linkages with financial institutions will be enabled so that as when requested the entrepreneurs are adequately financed for their commercial activities. Both print and other media will be fully utilized to attain the desired goals and objectives.
8. Religious groups such as *brachmarkumaris* and places such as *gurudwaras* and 'boys town' will be involved for rapid spread of the message of 'Spices for good health' both as prophylactic and therapeutically merits.
9. NGOs will play a major role along with the *Panchayat Raj* institution in imparting skills to small-scale processors, family run small business units.



Consortium PI

National Coordinator

National Director

Environmental safeguard: Activities, issues, impact and mitigation measures

Activities	Issues	Anticipated level of Impacts		Mitigation measures (Negative issues)/Remarks
		Positive	Negative	
Cultivation of high yielding varieties	Seed yield increase	4		
	Positive effect of water saving and higher yield	3		
	Positive effects of changes in cropping pattern on soil water and environment	4		
	Effect on agro biodiversity- Suitable for crop rotation	4		
	Increase in use of pesticides and fertilizers		2	Cultivation of resistant varieties and promotion of IPM / INM methods
Harvesting and storage of agricultural produce	Crop residue	4		
Packaging studies	To increase shelf life	4		
	Use of plastics for packaging		3	Modern methods of packing material, Use of recyclable and recycle packaging material will be ensured.
In plant studies	Efficiency in energy use	4		
	Emission of dust		2	Installation of proper equipment for dust collection
Processing of produce at farm level	Quality raw material for processing industries	4		
	Higher price to growers	5		
	domestic and export promotion	4		
Integrated farm extension services with buy back	Crop management trainings to participating farmers at farm level and research station	5		
By product value addition	Higher price for farmer	5		
	Increase in consumption and area	4		
Entrepreneurship development of stakeholders for intensive cultivation, product development, Mechanization	Health brand promotion in place	4		

Social safeguard: Activities, issues, impact and mitigation measures

Activities ¹	Issues	Anticipated level of impacts ³		Mitigation measures (Negative Impact) ⁴
		Positive	Negative	
Base line survey	Availability of information on initial status of area		2	Participatory approaches for data collection will be carried out
On farm production for specific end uses –use of HYV's/crop diversification	1.Change in occupational patterns 2.Unequal access to inputs 3. selection of clusters-social conflicts 4.Hike in income	3		
Integrated farm extension services	Effective crop management practices in place	4		
Seed produced under seed village	Availability of quality seed	5		
	Development of human resources in seed production area	5		
	Adulteration in supply of seed by farmers		2	Constant monitoring of quality of seed following seed production standards.
Aggregation and storage function in target regions	Supply chain management is in place for commercialization	3		
Transport and processing of produce		3		
Mechanization of seed spices crops	Reduction in cost of cultivation and drudgery.	5		
Packing and marketing	Good packing leads to elimination of middle men,etc.	3		
Product(s) for wide-spread market & niche markets	Clear market segmentation for whole and powdered spices		3	Market intelligence can help in finding newer markets
Assessment of nutrient composition in selected spices crop	Market for seed spices free from residue of chemicals and heavy metals	4		
	Prospects for exports	5		
Evaluation of the spices for residue analysis for	Residue free produce for exports	4		

exports				
Identification of number of potential SPICES products for wide ranging and niche markets through market survey	Few and potential seed spices are identified for powder, whole spices and oleoresins.	3		
Pricing of the developed food products	Increased profits form spices.	3		
Sensitizing line departments of governments for enhancing spices cultivation and consumption	Crop diversification and availability of quality spices produce.	3		
Entrepreneurship development of stakeholder for intensive cultivation product development mechanization.	Revenue generation and hike in income	3		
Taking demo units of processing to field	Higher adoption	3		
Value addition of spices by training and popularization.	Leads to more consumption of spices.	3		