SUSTAINABLE CASTOR INITIATIVE

PRAGATI

ANNUAL REPORT

Submitted By

Solidaridad

April,2017 - March, 2018

Contents

1. INTRODUCTION

The Pragati Programme (hereby referred to as the programme) strives to facilitate castor farmers to adopt sustainable agricultural practices. The programme aims to certify 3000 farmers in 4 districts of Gujarat namely; Sabarkantha, Banskantha, Mehsana and Patan. The programme oversaw the development of a code on sustainability principles in the first year, designed to evaluate the social, economic, agronomic and environmental performance of the Indian castor farmers called "**SuCCESS**" (Sustainable Castor Caring Environmental & Social Standards) (hereby referred to as the Code).
It is envisioned that the compliance with the principles will not only improve competitiveness among the castor farmers but will also facilitate them to achieve compliance with national and international regulations in a step-wise approach

The programme focus is to improve productivity through sustainable agricultural practices thereby enhancing the self-sufficiency and livelihoods of the people. The endeavours made in the programme has resulted in increase in yield and a resulting increase in income by the end of first year.
The second year in the programme conducted intensive farmer engagement for adoption of the good agricultural practices for 1972 farmers. The emphasis was on rigorous adoption of code with increase in compliance of the farmers trained in first year.
Trainings were organised not only in the 24 villages identified in the second year but also for the 10 certified farmer groups certified in the first year. The 1019 farmers in these 10 groups will undergo internal audits in the 2nd year post harvest. The compliance percentage of the 1st year farmers shall increase to 65% for the non-mandatory criteria of the code.
The field team conducted gap assessments against the code principles post which corrective action plan was based on the gap assessment findings implemented. The exercise ensures correct adoption of the code principles and also helps in preparedness of the farmer groups for the external audits by empanelled Certifying Bodies.

In continuation to the farmer training activities, a number of activities such as capacity building of the team, auditor's training, development of communication material for the programme etc. were undertaken throughout the year.

2. KEY ACHIEVEMENTS:

- 6500 Ha of total land area and out of which more than 2000 Ha of area castor is covered through the programme and good agricultural practices are implemented on the same
- More than 3500 farmers across 41 villages have been made aware of the benefits of good agricultural practices
- 2800 farmers trained in good agricultural practices
- 1711 safety kits and storage drums distributed in the second year to encourage farmers practice safe occupational health practices.
- 1019 farmers underwent third party audits and were certified in the first year of the programme.
- 55% increase in yield reported by the certified farmers. The increase in yield was calculated as compared to the findings of the baseline study conducted in the first year.
- Farmers and labourers in 26 programme villages underwent check-ups in a health camp organized by the programme to ensure only healthy persons are engaged in farm work.
- 5 demonstration plots set up in the programme to showcase benefits of implementing good agricultural practice

- 1 farmer support centre has been set up in the programme through which all the field coordinators provided continuous support to more than 2700 farmers through group and individual trainings wherever required.

3. CAPACITY BUILDING

A. Training:

The programme uses a number of capacity building methods for different scenarios and audiences. The common purpose is to increase awareness of the good practices for sustainable castor agriculture. For example, 'learning visits' help to increase farmers' exposure to new approaches; training workshops help to raise awareness or technical skills and; for some specific technical skills, combining in-door training and practical application in the field results in better awareness and subsequent implementation of the good practices.

The farmers received training through an intensive engagement process. Trainings were provided to lead farmers and general farmers alike by the castor expert and the field staff. A continuous facilitation was provided to the farmers wherein farmer groups were trained in various aspects of castor farming with various training tools. The programmes were conducted for farmer groups in villages and demonstrations were also held in field to facilitate the farmers. The programmes helped in creating discussions amongst the farmers which helped in dissemination of the interventions.

The training content focussed on compliance with code principles related to crop protection methods, usage of personal protective equipment during pesticide use, waste management, storage of chemicals etc.

Almost 2700 farmers from 41 villages in 4 districts were reached through the training programmes in the 2nd year. More than 100 hours of classroom and field trainings have been provided to the farmers.

The specifics of the training programmes is represented as below:

Programme Activities	Y1	Y2
Number of villages covered	17	24
Number of training sessions conducted	33	78
Total enrolled farmers in Year 2	1592	1972
Total Farmers trained	1019	1791

Lead Farmer training was held at the SDAU premises on 27th Sep, 2017. 67 lead farmers identified across the 4 districts attended the programme. The event was also attended by participants from the University, Industry members and Solidaridad Team. The University experts provided detailed trainings on castor agricultural practices like seed management, irrigation management, and disease management. It was followed by field visits to the demonstration plots maintained by Castor Research station in the university campus.

Lead farmers training at SDAU

B. Demonstration Plots:

On-farm demonstrations serve as one of the most effective extension training tools and also to reduce the risks farmers perceive while adopting new practices. For farmers, demonstration plots serve as a way to display the results of a new practice in comparison to traditional practices. Farmers adopt practices they believe to be effective and appropriate under local conditions. The phrase “seeing is believing” serves perfectly well to describe the experiences of the farmer with demo plots.

Farmers are continually trying to manage their irrigation systems to increase yields and improve the quality of their produce. Some examples include installing new sprinkler packages and improved irrigation methods. Each of these methods help improve the system, reduce costs and efficiently distribute pumped water to the growing crop. The agricultural water meter shall help in assessing the exact amount of water required for irrigation and reduce excessive consumption.

The demo plots shall demonstrate the effectiveness of water saving interventions along with other good agricultural practices.

Installation of Water Meters at Demonstration Plot in Madana

C. Farm Support Centre:

Solidaridad has set up a Farm Support Centre (FSC) operating from its field office at Palanpur. The FSC comprises of 1 senior expert and 7 field coordinators who provide capacity building support to the farmers in all the four districts. The FSC also maintains all the records and documents related to the programme where all the documents of the certified farmers have been stored. The field coordinators conducted trainings for all the 2800 farmers in the second year. Of these 1019 farmers certified in the first year, were provided trainings to prepare them for internal audits.

The FSC conducts regular visits to the farmers who are undertaking the sustainable castor initiative to monitor progress against and also to provide assistance for implementing the code.

D. Soil and Water Testing:

During the programme period, initial farmer interactions revealed that soil tests were not a regular practice among the farmers. The farmers were following the university recommendations released district wise. Hence to arrive at the nutrient requirement for villages, the programme conducted village wise soil tests. Soil and water tests were carried out in all the 26 villages. The test revealed sulphur and zinc deficiency in major areas and phosphorus deficiency in some areas. To address the deficiency of these nutrients, the farmers were advised to apply organic manure in the fields. This helped in improving the nutrient content along with the organic matter content of the soil. The farmers were enthusiastic in implementing the same and this resulted in better yields.

E. Waste Management:

Farmers and commercial pesticide users generally cannot dispose pesticides in household hazardous waste programs even if The pesticide container have instructions on the label to ensure the safe use, reuse, disposal and adequate cleaning of the containers. Continuous trainings were organised in order to highlight the different methods of disposing wastes such as holes should be punched in the base of the empty containers or the containers should be flattened out before disposal so that they cannot be used for other purposes. The empty containers should be buried in non- agriculture land to avoid further misuse.

Waste disposal as per Code guidelines

4. FARMER SUPPORT

A. Farm Diary Distribution:

After the successful completion of 1st year certification in 17 villages the Solidaridad team identified 24new villages to widen the scope of the programme. Farmer registration were completed in 2626 villages with new farmers for Year 2.

The Farmers were enrolled through community The Farmers were enrolled through farmer meetings in which the staff introduced themselves and the programme, its objectives and sought their opinion about the programme and engagement methods.

These meetings were also utilized to create initial awareness on sustainable castor initiative Pragati and sustainable farming practices. In each village Lead farmers have been identified and farmers' groups formed having at least 3 lead farmers in a group.

Farm Diary Completion & Training

B. PPE Kit Distribution:

PPE kits were being distributed as part of the programme to all the enrolled farmers. These kits consist of face mask, hand gloves and safety goggles. The PPE kit help the farmers to follow the safety guidelines as per GAP. These kits have been distributed to all the farmers enrolled in the 2nd year. Post distribution of the kits, demonstrations were also conducted by the field team to help farmers in using the kit correctly and effectively. The farmer response was highly positive to the safety kit distribution and has been one of the major reasons for adoption of the SuCCESS principles. The programme has documented one of the farmer experiences with the use of safety kits through the most significant change technique.

ENSURING FARMER AND WORKER SAFETY

Mayuddinbhai Ahmedbhai Shaikh is a resident of Talepura village and has been practicing farming for the last 20 years. For the last 13 years he is growing castor as it is a remunerative crop in the local climatic and soil conditions. However, with the crop often getting affected by diseases and pests like blight, semilooper among others, he had been frequently using chemical pesticides by spraying or broadcasting.

The chemical pesticides were not only expensive but using them was also taking a toll on his health. Shaikh's improper handling and exposure to the chemicals resulted in physical problems like itching, irritation in the eyes, skin rashes and bad smell on hands over prolonged time period. With no knowledge or access to personal protective equipment, he was exposed to adverse health risks like many other farmers.

In 2016, he came to know about the Sustainable Castor Initiative programme and he joined the initiative to acquire knowledge and awareness on current good practices of castor farming.

After attending the orientation session, he realised how the initiative touched many important components such as livelihood improvement, economic conditions and social impact. Social impact's main focus is on the occupational health of farmers and workers. Through the training he learnt about the benefits of using personal protective equipment (PPE) kits. According to Shaikh, the most significant change he experienced in the programme was the use of the safety kit.

The safety kit was distributed to farmers during the programme as it was difficult for the farmers to invest in the same.

Since then, he has been using the kit in almost every activity of farming practices, during spraying, fertilizer application, harvesting, threshing etc. *"The gloves are helpful during harvesting too. The on field trainings also made us aware about avoiding exposure to the chemical and wear appropriate clothes to cover our hands, legs and face. The use of the kit also helped me to work faster and cover more area compared to before when I had to take breaks in between chemical applications to get respite from the strong smelling chemicals"*, adds Shaikh

C. Storage Drum Distribution:

Storing the agro chemicals in the house presents a potential risk not only to the health of the farmers & his family but also to the integrity of the environment. The quality of surface water, groundwater and soil is affected in areas where pesticides are stored under inappropriate conditions, improperly mixed and loaded into application tanks and where equipment is washed and rinsed after application. Accidents involving spills or leakages may have serious health and environmental consequences.

This was one of the main gaps identified during the audits as farmers were storing the chemicals in their house. Regular trainings were organised to create awareness and it was decided to distribute storage drums as safe storage & use of pesticides is part of compliance to code principles & this will go long way in addressing the ill effects of improper storage of chemicals.

Storage Drum Distribution at Mehsana

D. Health Camps:

Medical health camps were organised in different villages where not only the farmers but also the labours supporting and performing various activities on field were invited. They were checked on Haemoglobin %, Blood pressure & Diabetes. This is part of the OHS risks identified under the SuCCESS code where only a healthy person should be involved in specific activities like harvesting,

Health camps setup in Untvada village in Banaskantha

5. CERTIFICATION

A. Auditor's Training, learning and exchange meeting:

2nd Auditor's training and learning event was organized on 19th February 2018 which saw participation from three certification bodies, Solidaridad implementation team and involved exchange of ideas and also experiences of field team.
Three certifying bodies namely Control Union, Indocert and SGS were invited to the auditor's training programme which were empanelled to conduct the final audits on the field.
The refresher training was aimed at understanding sustainability code and to comprehend its various aspects which involved not only the quantitative principles of the code but also to give a refresher training to auditors on various challenges faced during the last year's audit.

Objectives of the Training:

The refresher training was aimed at understanding sustainability code and to comprehend its various aspects which involved not only the quantitative principles of the code but also to give a refresher training to auditors on various aspects and challenges that occurred during the last year's audit.

Experience sharing & Suggestions for Improvement by External Auditors

The external auditors of SGS India Pvt. Ltd., shared their experiences based on the last verification audit. The experiences shared based on the last verification audit includes:

- Maintaining farm maps.
- Importance of practicing mulching, intercropping in the castor farms.
- To conserve water by furrow irrigation.
- Storage of CPPs.
- Risk assessment.

B. Gap assessments and implementation of corrective action plan:

Post the training programme, gap assessments were conducted for the second year farmer groups to assess their compliance with the code principles of SuCCESS. The gap audits were conducted in the months January 2018. The gap assessment was conducted by the Solidaridad field staff for the farmers.

Gap assessments were carried out for 155 farmers across 26 villages in the programme covering all four district of the programme.
Post the gap audits, the field staff have developed and implemented a Corrective Action Plan to address the challenges identified during the assessments. The farmers who did not comply with the code were given training wherever applicable.

The farmers were assisted with completing & drawing detailed farm maps in their farm diaries. The farmers were not only trained but storage drums were distributed under the programme and were encouraged to use the same. The farmers were also trained on safe disposal of waste products such as burying the empty chemical containers in a ditch dug in the ground wherein it would be out of reach of stray animals, human contact or water source to avoid contamination.

Challenges in conforming to the Code:

- Most of the farmers have land records & documents however, detailed farm maps were missing in few farm diaries.
- Storage of CPP not as per the code standards. Most of the farmers store the CPP containers at home and use the empty containers for domestic use. The storage area is not well ventilated
- Safe Disposal of wastes such as empty containers for pesticides, chemical fertilizers etc. is not conducted properly as farmers were not aware of the proper guidelines to dispose the same.

Awareness Meeting for Corrective Action Plan

C. Pilot Audits:

Consultivo, a management advisory and consulting firm was engaged to conduct pilot gap assessments of Castor farms based on code Pragati was carried out from 19th Feb – 1st March 2018 in four districts (Patan, Mehsana, Sabarkantha and Banskantha) of North Gujarat. The audit was carried out in 92 farms out of a total of 1729 farms belonging to 16 groups (Patan–7, Mehsana-3, Sabarkantha-4, and Banaskantha-2).

The methodology adopted for the study consisted of discussion with the group of farm owners and the Field Officer of Solidaridad followed by documentation review and field visit.

KEY OBSERVATIONS:

The salient points noted during discussion and field visit were:

- The farmers showed their interest to comply with the requirements stipulated in the code
- The farmers were taking advice from the agricultural university as far as seeds, pesticides, fertilisers, etc. were concerned
- The farmers showed interest to know about the cost and subsidy of solar power plants.
- A training register is maintained by the group in-charge
- The farmers are using cow/buffalo dung & urine for agricultural waste compost to increase the soil organic matter.
- The farmers cut the plants with rotovator and use them for mulching
- Inter-cropping and crop rotation is practiced
- Soil test has been carried out in most of the areas
- Farm diaries are maintained by the group in-charge
- Disposal of empty containers of hazardous material need to be streamlined
- Storage facility for fertilisers and CPPs require improvement. Storage of fertilisers, CPPs and verified product requires special attention. The stores & cupboards inside the house that had CPPs/fertilisers were not found suitable.

Protected store


Drying in clean area


Meeting with farmers

D. External Audits:

Ten farmer groups with approximately 100 members in each communicated to the castor secretariat and requested for audits. Two empanelled certification bodies (CBs) were engaged to conduct external audits of castor farms based on the code principles. Audits was carried out in 17 villages of North Gujarat for 1019 farmers in April 2017. The CBs adopted the square root biased sampling rule to arrive at the sample size for this audit. 10 farms were selected as samples from each group.

Further in the 2nd year, 1791 farmers were identified who are organised in 17 groups with an average 100 members in each. Learnings from the 1st year audits will help in better preparation of these farmers which will undergo same process of external audits during the time of harvesting.

Key audit observations in Y1:

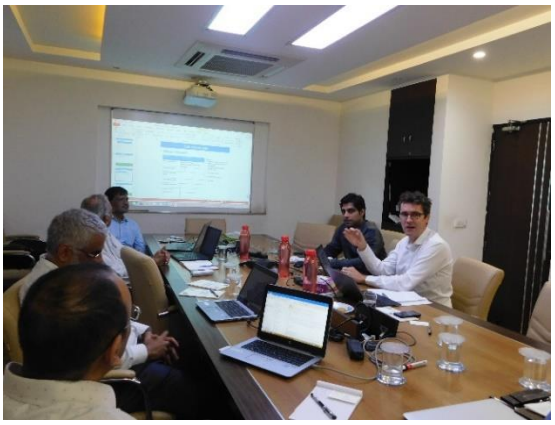
- The farmers purchased certified seeds & had kept records of the same attached in the farm diary
- Farmers are aware of systems of waste management, CPP management
- Farm Dairies were filled properly with all the farmers possessing the legal documents for the land
- The PPE kits were properly maintained and farmers confirmed its usage in the field
- Occupational health check-up of farm owners and their family members, who are participating in farming activities, labours working in the field, recommended to be carried out annually
- Classification of Chemicals – further capacity building needs to be ensured

Audits conducted in Y1 by the CBs

6. PROGRAMME GOVERNANCE

A. Project Steering Committee and Project Management Committee meeting:

Throughout the year various Project Steering Committee meetings & Project Management meeting were conducted. These meetings were attended by all three funding companies, Solidaridad and a representative from Aid Environment.
Aid Environment highlighted the value proposition for different customer segments. During the meetings the additional benefits for the founding members were highlighted, with discussions on formation and governance structure of the Castor code secretariat.



PMC meeting held in Delhi

PSC meeting in Mumbai

Aid environment presented different scenarios of revenue models for the Secretariat with key assumptions made on the membership scale-up options along with implementation costs.

Key Takeaways

- Preparation of an excel tool to develop and test different revenue models.
- Development of the value proposition for each customer segment of the code, revenue model for the secretariat with analysis of revenue scenarios
- Setting up the Secretariat as a Section 8 entity with MoA and other necessary documents prepared which will act as the custodian of SuCCESS code developed.
- SuCCESS logo and trademark registration to be done
- Incentive of Rs. 650 per ton of seed is the to be distributed to the 1st year certified farmers for the yield achieved in year 1 of the programme.
- Roundtable in Europe to be planned
- Public launch of the SuCCESS code.

7. KPI PROGRESS-Y2

Output	Indicators	Programme Target	Year 1	Year 2	Cumulative Result	Remarks
Output 1 : Increase in Awareness on Good Agricultural Practices	# of farmers trained	3000	1019	1791	2800	The farmers who attended the training programmes post registration
Output 2: Benchmarking of Good Agricultural Practice	Number of demonstration Plots set up to establish Good Agricultural Practices	5	-	5	5	
Output 3: Use of IT Platform for tracking continual improvement	# of Lead Farmers trained	600	50	67	117	Current implementation model & farmer awareness level it was suitable to have on an average three lead farmers per group of 100 farmers each
Output 4:Farmer Support Centre	# of farmers enrolled	3000	1019	1972	3564	Farmers registered in the programme with unique code to each
	Number of farmers outreached	3000	1520	2428	3948	Farmers who attended the introductory meetings conducted by the field team
Outcome 1 : Increase in yield	Percentage increase in yield of the farmers	10	55%	In progress*		Yield increase calculated based on the baseline study conducted in Y1. Y2 calculation to be done after audits
Outcome 2: Increase in income	Percentage increase in income of certified farmers	5				Income increase analysis is under development
Outcome 5:Adoption of Good	Number of farmers adopting GAP and water	3000	1019	In Progress*	1019	Audits of first year ongoing

Agricultural Practices	efficient practices on land water use					
	Area covered under GAP (in Ha)	3000	688	1360	2048	Landholding area of farmers considered for certification
Outcome 3: Certified Castor Farmers	# of farmers certified	3000	1019	1711*	1019	Audits of 2nd year ongoing
	Volume of certified castor seeds (tonnes)		1711	TBC**	1711	Audits of 2nd year ongoing
	Number of Hectares certified under the code	3000	688	TBC	688	Audits of 2nd year ongoing
Outcome 4: Optimal Use of water	Percentage Increase crop per drop	5		TBC		The methodology for water calculation to be finalised in the first quarter of next year

*considered for certification **To be calculated

8. RESULTS TO BE ACHIEVED IN Y3

- 3000 farmer certification
- Increase in yield
- Increase in farmer income
- Increase in crop per drop

9. CONCLUSION

Year 2 of the PRAGATI programme focused on providing training and awareness to the farmers and conducting gap assessments for the farmers identified during this period who will be undergoing external audits.
The field team conducted the gap audits and also developed corrective action plans to close the gaps identified during the assessments. The farmers were facilitated in complying with the code requirements post the assessments.

The farmer groups were formed among the farmers enrolled in the programme. On an average three lead farmers were chosen per group. The learning from the 1st year were taken into consideration so that the compliance level of the farmers towards the success code increases. The trainings were not only conducted for the farmers registered in the 2nd year but also continuous support was provided to 1st year certified farmers who will undergo internal audits. Post the internal audits the farmers will submit the report with the total production for 2nd year to the code interim secretariat. In the third year of the programme, focus will be more towards increasing the compliance level to 80 % of the non-mandatory clauses of the Success code. Also more communication events shall be organized to increase the visibility of the code and substantially increase the number of members supporting the secretariat.