

Castor Production in Surendranagar District (Supply Chain Management)

And

The Role of SEWA in castor Production

Submitted to:



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Rupesh Singh

1. Introduction

About SEWA:

SEWA is a trade union registered in 1972. It is an organization of poor, self-employed women workers. These are women who earn a living through their own labor or small businesses. They do not obtain regular salaried employment with welfare benefits like workers in the organized sector. They are the unprotected labor force of our country. Constituting 93% of the labor force, these are workers of the unorganized sector. Of the female labor force in India, more than 94% are in the unorganized sector. However their work is not counted and hence remains invisible. In fact, women workers themselves remain uncounted, undercounted and invisible. SEWA's main goals are to organize women workers for full employment. Full employment means employment whereby workers obtain work security, income security, food security and social security (at least health care, child care and shelter). SEWA organizes women to ensure that every family obtains full employment. By self-reliance we mean that women should be autonomous and self-reliant, individually and collectively, both economically and in terms of their decision-making ability.

In rural India, agriculture and allied industrial sectors employ as much as 89.5% of the total female labor. In overall farm production, women's average contribution is estimated at 55% to 66% of the total labor.

Brief description of RUDI

RUDI was initiated by Self Employed Women's Association (SEWA) in 2004. RUDI Multi Trading Company Limited has been established in 2007 with an objective to internally generate funds for the rural producer groups. This will enhance the quality, capacity and efficiency of production through the use of better

technology. Eventually it will result in scaling up the profit margins by way of bulk procurement and a well organized sales and distribution network. The profits will be shared by the members of the rural Self-Help Groups and Farmer's Association, which will bring a positive change in the economic condition of the marginal farmers and workers who are struggling to survive and are below the poverty line.

The company would enable direct promotion and marketing of the agro commodities procured through Farmer's Association in the rural retail network of farmers and agriculture laborers across all the villages of 14 districts of Gujarat. RUDI Company also enables multiple employment opportunities, reduce incidental expenses, availability of good quality agricultural & non-agricultural products to the rural consumers at affordable prices and required quantity, elimination of middlemen, better earning for the producers and thereby socio economic development of the underprivileged rural people.

About castor crop:

Castor is a plant that is commercially very important to the world. Castor seed oil cake is very useful manure to crops. It is a very good fertilizer alternative containing optimum levels of Nitrogen, Phosphorous and Potassium which is suitable for cultivation of Paddy, Wheat, Maize and Sugarcane.

Castor Oil's application range is very wide-the uses range from cosmetics, paints, synthetic resins & varnishes, to the areas of national security involving engineering plastics, jet engine lubricants and polymers for electronics and telecommunications.

Gujarat is the leading state in castor seeds production in India followed by Rajasthan and Andhra Pradesh. Gujarat contributed 71% of the total production of castor seed in India in 2007-08, followed by Rajasthan at 16%, Andhra Pradesh at 9% and other states sharing 4%.

Mehsana and **Banaskantha** is the largest castor producing districts in Gujarat. In Gujarat castor cultivation comes from 6 districts of North Gujarat, viz., **Mehsana, Banaskantha, Sabarkantha, surendranagar, Patan** and **Kutch**.

Role of SEWA:

SEWA has its own district office in nine district of Gujarat. Surendranagar district association has **232** groups of farmers. Each farmer group has usually 10-20 members. Majority of the members are women. The main work of these groups is to provide small farmers, a village level platform from where they can sell their products. It helps small farmer to get appropriate money for their products because it save their transportation cost to the market and bargaining rates of market.

In this way the rural women and small farmers works and get mutually benefitted as farmer association share profit with the company where SEWA has a tie-up and farmers get money at their home.

Objectives:

1. The main objective of this project is to study of whole Supply chain of castor production in Surendranagar district.
2. Create a system using ICT through which one can know the castor production villages, Farmer mandals and Blocks of Surendranagar.

Methodology:

1. *Sampling (cluster random sampling):-* Out of 232 of farmers groups in Surendranagar District twenty groups has been selected by cluster random sampling. They all are interviewed by a well prepared questionnaire.

The questionnaire include, At what price rate the members of farmer group purchase castor from small farmers, How much money they spends on processing process, How much money the local labor gets, How quality of castor is determined by farmers group etc.

1. Analysis of SEWA structure.
2. Analysis of transportation route for cost reduction.

Questionnaire:

1. Block names
2. villages Names
3. Farmers Mandal Name
4. No. of Members in farmers association
5. No. of Females Members in association
6. How many farmers they contact each day & from how many they manage to buy Castor.
7. How they manage to arrange farmers to sell castor at their rates.
8. Usually what kind of problems comes during castor procurement and how they handle it?
9. How much castor procurement usually happens in one day?
10. How many extra labor works in cleaning, processing, loading process?
11. What are the daily wages for extra labor?
12. How many trucks they load in one day?
13. How they stores castor in case of delay in loading?
14. In how many days they get their money back?
15. How they share profit means per person what amount of money comes?
16. How they get report per day to district association for castor price?
17. What are modes of transportation for going one village to another village?
18. Is the money coming from castor procurement process helpful to improve their quality of life?

Method of data collection:

1. *Primary data collection.*

Under the primary data collection the procurement price determination of castor daily basis from village's farmer, processing cost of castor (cleaning, packaging, loading), labor cost include.

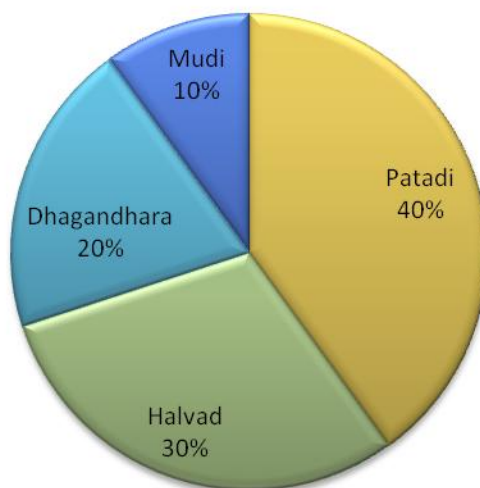
This all information has been taken through village level by interacting with farmer association/ Mandal and some of the information has been taken from district association.

| Mandal Names | Village name | Phone No. | Block name |
|-------------------------------|--------------|------------|------------|
| Kharagodha kisan vikas mandal | Kharagodha | 9825339654 | Patadi |
| Mithagodha kisan vikas mandal | Mithagodha | 9979996463 | Patadi |
| Surel K. V. M. | Surel | 9925501097 | Patadi |
| Dharti K. V. M. | Navarojwa | 9687245607 | Patadi |
| Saulash K. V. M. | Saulash | 9723761108 | Patadi |
| Kamalpur K. V. M. | Kamalpur | 9925079785 | Patadi |
| Degaam K. V. M. | Degaam | 9913557863 | Patadi |
| Visawadi K. V. M | Visawadi | 9727475713 | Patadi |
| Chamunda Mahila K. V. M. | Zadiyala | 9687053646 | Patadi |
| Sedla K. V. M. | Sedla | 9978134745 | Patadi |
| Khodu K. V. M. | khodu | 9727961159 | Patadi |
| Adriyana K. V. M. | Adriyana | 9998060923 | Patadi |
| Padivada K. V. M | Adriyana | 2758291534 | Patadi |
| Navavada K. V. M | Adriyana | 9712510717 | Patadi |

| | | | |
|-------------------------|-----------------|------------|-------------|
| Nanamajheti K. V. M. | Adriyana | 9979465088 | Patadi |
| Koyaba K. V. M. | koyaba | 2758291534 | Halvad |
| Jogad K. V. M | Jogad | 9712510717 | Halvad |
| Junamalaliyad K. V. M. | Junamalaliyad | 9909458584 | Halvad |
| Shivapur K. V. M | Shivapur | 9099389226 | Halvad |
| Sundaribhawani K. V. M. | sundaribhawani | 9925396129 | Halvad |
| Ranmalpur K. V. M. | Ranmalpur | 9429511665 | Halvad |
| Amrapur K. V. M. | amrapur | 7878281647 | Halvad |
| Aenzar K. V. M. | aenzar | 9727112211 | Halvad |
| Azitgarh K. V. M. | azitgarh | 9978069876 | Halvad |
| Lilapur K. V. M. | Azitgarh | | Halvad |
| Mathak K. V. M. | Azitgarh | | Halvad |
| Dungarpur K. V. M. | Azitgarh | | Halvad |
| Ratabhner K. V. M. | Azitgarh | | Halvad |
| Naradi K. V. M. | Naradi | | Dhagandhara |
| Gojavav K. V. M. | Gojavav | 9727031647 | Dhagandhara |
| Motimalvan K. V. M. | Motimalvan | 9725525229 | Dhagandhara |
| Rajpar K. V. M. | Rajpar | 9913047034 | Dhagandhara |
| Mota ankevadiya | Mota ankevadiya | 9913994195 | Dhagandhara |

| | | | |
|--------------------------|-----------------|------------|-------------|
| K. V. M. | | | |
| Ravadivadar K. V. M. | Mota ankevadiya | | Dhagandhara |
| Nana ankevadiya K. V. M. | Mota ankevadiya | | Dhagandhara |
| Rampara K. V. M. | Mota ankevadiya | 9913047034 | Dhagandhara |
| Narichana K. V. M. | Mota ankevadiya | | Dhagandhara |
| Dungarpur K. V. M. | Mota ankevadiya | | Dhagandhara |
| Thadda K. V. M. | Mota ankevadiya | | Dhagandhara |
| Bharadda K. V. M. | Mota ankevadiya | | Dhagandhara |
| Kantalpur K. V. M. | kantalpur | | Mudi |
| Lia K. V. M. | lia | | Mudi |
| Sadla K. V. M. | sadla | | Mudi |
| | | | |

Share of Castor Production Blocks



SEWA STRUCTURE (In Surendranagar)

District association of SEWA

10 blocks of Surendranagar

Out of which four blocks are working.





232 farmers group out of four working blocks of Surendranagar and each group have generally 10-15 members.

Surendranagar has total 651 village out of which block wise working village are as follows:-

| <i>Name of block</i> | <i>Total no. of villages</i> | <i>Village covered</i> | <i>Main Villages name</i> | <i>Percentages</i> | <i>No. of members</i> |
|----------------------|------------------------------|------------------------|---|--------------------|-----------------------|
| Halwad | 67 | 50 | Lilapur, ranmalpur, koyaba, mathak, chulli | 74.62 | 8000 |
| Patdi | 87 | 45 | Kharagoda, Sedla, Adriyana, Saulash, visandi, Nagvada | 51.72 | 13-14000 |
| Dhrangadhra | 63 | 50 | Narichana, Khodu, Bawdi, Raigarh, Kalyanpur | 79.36 | 8-9000 |
| Mudi | 50 | 25 | Khuntalpur, Gadda, Badra, Bedavadar, Chandra | 50% | |
| Limbdi | 63 | | | | |
| Sayla | 75 | | | | |
| Wadhwan | 46 | | | | |
| Lakhtar | 42 | | | | |
| Chuda | 38 | | | | |
| chotila | 112 | | | | |

Castor Production in Dhrangadhra block:

There are 8000-9000 members of Sewa district association from different village of Dhargadhra. They visit all villages of different blocks and ask farmer to sell their castor to them. They buy castor or at the appropriate rates and then procure it. Once the procurement process gets finished then by the help of local labor they make it clean, package it and make the castor load on the company truck. The

procurement is determined by SEWA headquarter at Ahmadabad. They keeps inform everyday to their district associations about daily castor rates.

When member of farmers group go for procurement they already know about today's rate of castor as they have been already informed by Company main headquarter at Ahmadabad , so before purchasing they keep two things in their mind, first that today's rate of castor and second quality of castor. The price is usually fixed but can be negotiable at good quality of castor product.

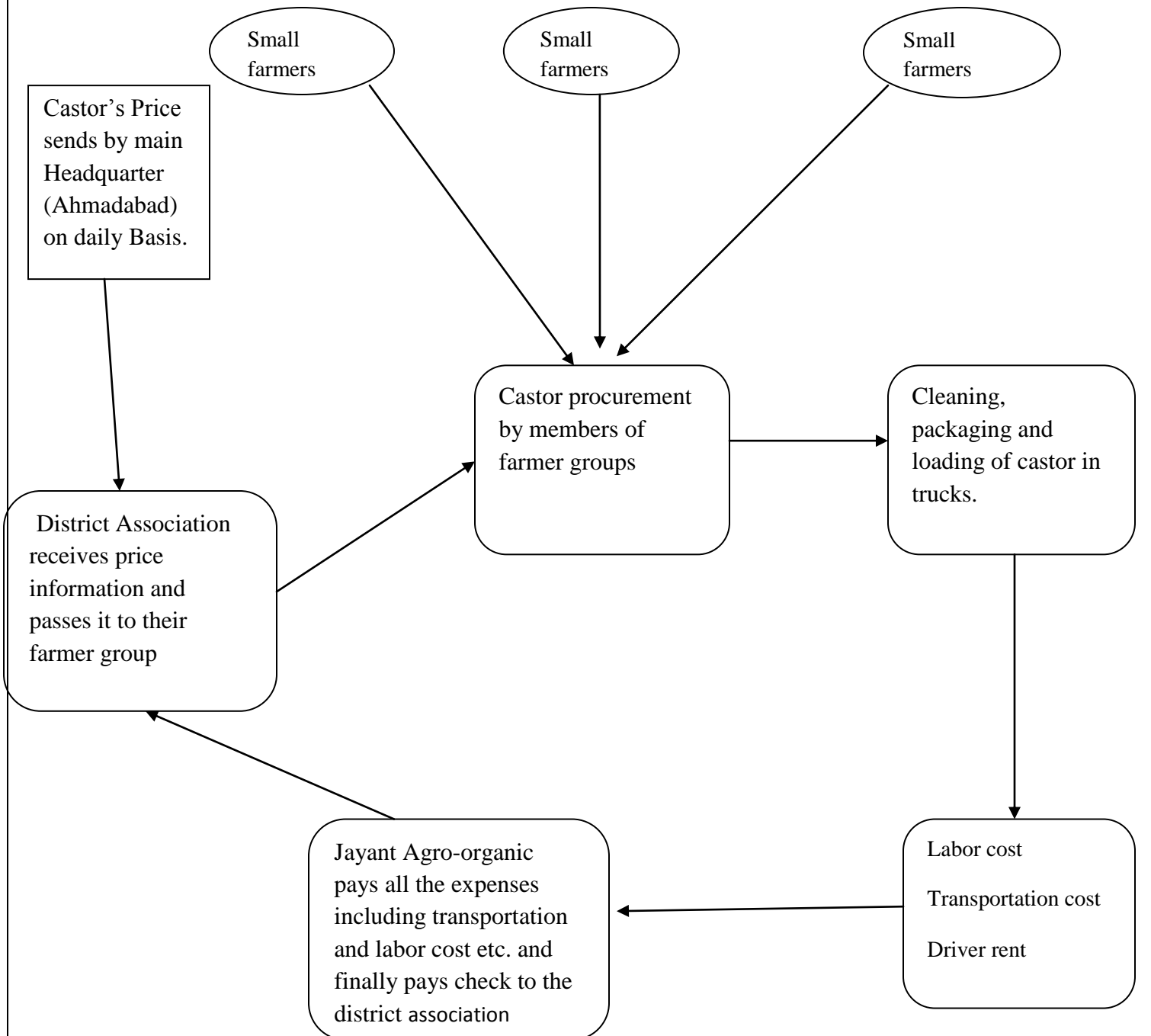
They purchase castor according to the quality because the company to whom they sell it have certain criteria for quality standard determination. If one bag of castor doesn't have weight of 75.2 kg of weight they don't give same rate that was fixed earlier. So it becomes members of farmer group responsibility to purchase castor of good quality and package it well.

Jayant Agro-organic ltd. (The Company)

Jayant Agro-Organics Limited is an emerging global oleo chemical company with leadership in the castor-based specialty chemicals industry. With proven research capabilities, strict adherence to stringent quality controls conforming to International Standards and flawless record of honoring delivery schedules it is no wonder that Jayant Agro-Organics Ltd. is the preferred partner of choice worldwide for sourcing of castor oil and castor oil derivatives. With the long-term approach we have adopted to the industry it is no wonder that we balance your requirement equations not only chemically but also economically.

This company has a tie-up with SEWA. They purchase castor in a bulk amount from farmers group. They give 2% of total sell, means if farmer group sell castor of cost 1laks in a day then they will get 2000 Rs. In Surendranagr district association, they sell 20 ton/day means, they sell castor of worth 650,000 Rs, and if price rate of castor is 650/20kg means they will get 13,000 Rs. The 1.25% of this amount goes to SEWA'S district association and remaining 0.75% goes to SEWA main headquarter in Ahmadabad.

Supply chain of castor from village to company by District association Of SEWA



Pricing:

Castor rate of small farmers= 630-650 Rs/20kg.

Cost of one ton Castor = 32,500Rs..

Labor Cost (Cleaning, Processing, packageing)-=25Rs. /bag of 75.2 Kg.

It means 1% can be taken for this, so the cost of one truck carrying 10 tons of castor would be= 3, 25,000 + 1 % of 3, 25,000= **3, 28,250Rs.**

In one day they send **8-10 truck**, so it sums up of Rs. **32, 82,500**, but in one month usually they procure only twenty days, as delay in repayments from Jayant agro tech. Company.

Distribution of Money among farmers group:

Castor rate of small farmers= 630-650 Rs/20kg.

Cost of one ton Castor = 32,500Rs..

Labor Cost (Cleaning, Processing, packageing)-=25Rs. /bag of 75.2 Kg.

Company sends every day his own trucks to the different part of Surendranagar District. Company Pays all the cost including transportation, labor cost etc.

When company receives the tucks of castor, its check quality of castor and the Weighing accuracy as one bag of castor should be weight of 75.2kg. Once the company clears this entire thing it gives its payment to the direct District association within a week maximum.

For instance, district association sends 10 truck of castor to the company so the cost would be around 32, 82,500Rs. Now the company will repay 2% of it as profit

Analysis of SEWA's Working Blocks of Castor Production:

| <i>Name of block</i> | <i>Total no. of villages</i> | <i>Village covered</i> | <i>Main Villages name</i> | <i>Percentages</i> | <i>No. of members</i> |
|-----------------------------|-------------------------------------|-------------------------------|---|---------------------------|------------------------------|
| Halwad | 67 | 50 | Lilapur, ranmalpur, koyaba, mathak, chulli | 74.62 | 8000 |
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| Mudi | 50 | 25 | Khuntalpur, Gadda, Badra, Bedavadar, Chandra | 50% | |

For 2nd objective:

To create a query based system through which District Association can access the total no. of Mandal in district, their names, Village name in a quick time I have done following things.

1. Installing WAMP server in laptop.
2. Creating a database by data entry in php-My Admin.
3. Connecting it with My Sql
4. Generating Query that would be mostly may asked by its end user.

WAMP Server is system internal server, after successfully installation of it, it gives package of independently programme that use Microsoft windows software. This includes php, Apache & My-Sql. Php is a scripting language, Apache is web server and My-sql is open data base system which stores Create database, table, class in this.

Once the system starts to work it gives option to search either block wise or Mandal Name wise. When you will select Block wise then you will have to select one of the blocks. For instance, if you selects patadi block then it will list out the names of all the farmer Mandal names of that block. If you select Farmer Mandal names then it will show the village name & block names where from that Farmer Mandal belongs.

Use of System:

This system can be use by Surendranagar district association where they need frequent information about their mandal names and working village of castor production. It can save their time as they search it in their data base and it time consuming process.

Analysis of transportation route:

This will include analysis of the entire possible route from where castor is being procured in a bulk amount. This will help us to prepare a plan to use shortest route through which maximum procurement of castor can be covered.

Conclusion:

After taking interview of twenty farmers group of castor, 20 small farmers a Study of SEWA structure and transportation System of Jayant Agro tech. it can be said that the production of castor in Suredranagar District of Gujarat has open a village level platform for small farmers. The option to sell their castor product at their own door is saving them from bargaining rates in market as well as additional transportation cost. The Farmers Group scheme is very new in castor production. It can be implemented for other agricultural products also.

Recommendation:

- Lack of pesticide use Knowledge on Castor. So, Need of improvement in technical training.

During the visit of more than 50 villages I saw in most of the villages that many farmers were unaware about the new technology that is being used by other farmers, the pesticide application, and about the modern equipments. Though they can't get the knowledge of modern castor farming in one day but there should be a knowledge center, through farmers can ask to their problems with specialist as when they need for it. Through knowledge center they will not only get the knowledge of castor crop only but they can also get the knowledge of weather forecast and use of new technology for other crop also.

- Need of Modern Equipments for Processing of Castor (Cleaning, packaging, loading), as its being done by labor hand.

In most of the villages where castor processing part was happening, I saw that whole process was being done by the hand of labor only. There were no machine for cleaning, and drying. Hence the quality of castor is highly important as the company who buys castor, they have very strict rule of castor quality. So, there was a need of modern equipments. Through modern equipments they can not only assure quality control but they can save time also.

- Transport route analysis

This includes the deep study of the entire possible route for castor producing villages and castor processing center between many

villages. Through this we can identify the shortest possible routes to different castor producing villages. It will help to farmer association in frequently travelling in many villages in one day, many villages to processing center, processing center to district association, and also the company (Jayant agro) can also take advantage through this synchronize transportation route. It not only saves money spent on travelling but it will save time also.

- *Need of Farmer's villages level small bank:*

As I saw there that five hundred villages in Surendranagar district were engaged in castor production. Around two hundred farmer associations were working on castor production. So, in two hundred farmer association there were three hundred farmers including small and marginal farmers. Each farmers gets there money from the head of farmer association, and each head of farmer association gets their money from district association.

What I personally felt that if we can established a bank at each 100 villages, then farmer can get their money from there and head of farmer associations also. The only thing will have to do by district association is to deposit the money of all the farmers who have sold their castor.

The system I have created can help in this situation because it show which farmer from which village has sold what amount of castor. So by accessing this system the accountant will come to know that what amount of money has to be deposit in which farmer's account. This system will help accountant of District association in saving time because till now it is being done by "showing bill and getting money process".

References:

<http://www.sewa.org>

<http://www.jayantagro.com/home.htm>