



## **Analysis of the system of production, transformation and commercialization of bean seed, case: cooperative of bean seed producers, Condega, (COPROSEC).**

*Msc. Raquel Lopez Alonso and Francisca Membreño.*

### **Summary**

This research was financed by ADESOC. Its objective was to explain the way that small producers of beans have redefined their forms of organization, objectives of production, the way they combine their insertion to the market with the agricultural and livestock production and other products, as well as the methods to face the new contextual situations. The research was carried out with the associate members of the cooperative of Seed Producers of Condega (COPROSEC) and their families, located in the community Santa Rosa. The population of the research was 18 families, 102 people in total. We analyzed the socio economic characteristics of the families, the composition of the family units, the size of the parcels, the agricultural and livestock production, and were used to analyze the descriptive statistical information and the analysis of content. The results show us that the human resource that the cooperative (COPROSEC) has is able to produce seeds, it has a strong organization, even though now it depends on the government to sell the seeds (Pound by Pound Program). The cooperative does not sell directly to small or middle producers, because they get the seeds through projects or programs, because the actual price of the seeds is unaffordable, and its

yielding is relatively low (10 to 11 quintals per hectare), it does not allow the producers to afford the seeds cost. COPROSEC needs to look for strategic alliances with other cooperatives or associations that allow it to count on enough amounts of seeds to face the new rules of the national or international market, and to succeed in the sustainability of the cooperative. The cooperative organization is strong, it is a small group that has worked and grown together for ten years, this advantage should be used to find out a marketing strategy less dependant on the projects and more dependants on the small producers.

*Key words:* Bean seed, production, commercialization, cooperative organization.



## Introduction

### *Characterization of the area of research*

The research was carried out in the Cooperative of Seeds Producers of Condega COPROSEC. The cooperative has 18 members, 2 women and 16 men. The production, transformation and commercialization of certified seed encouraged them to get organized. It is located in the community Santa Rosa Condega, department of Estelí.

This community has a climate characterized as Sub tropical and semidry. It has two seasons: rainy season (winter), and dry season (summer). The relief is irregular, with waves and plains. The soil that prevails in the farming areas is clayey.

The existing vegetation is classified as secondary forest combined with bushes, and a reduced area of pines (*pinus oocarpa*), in the area known as Las Pilas. There is primary forest with precious timber species, among them cedar, laurel, pochote, medlar and matapalo, and also some types of musk and ferns beside creeks. This forest area was deforested 20 years ago and is now under protection.

The peasant population in this community produces corn, beans, and sorghum. Corn and sorghum are produced during the first months of the rainy seasons, and the beans September through December.

The corn-farmed areas vary between 150-160 hectares a year, with an

average of 25 quintals per hectare. 250 hectares of beans are farmed yearly, that produces 15 quintals per hectare. 100 hectares per productive cycle are sown with sorghum; here better yielding is obtained (30 quintals per hectare) in comparison to corn.

### *Material and methods*

The cooperative COPROSEC was selected for the research. The unit of analysis was the peasant economical unit through the study of the peasant family and its productive system.

This analysis was made in three stages: Exploratory, qualitative and quantitative gathering of information, and analysis of obtained information.

### **First stage: Exploratory**

This stage included visits to the cooperative, aiming to understand the logic of work of this organization; number of members, secondary information; to coordinate different actions in order to carry out the research. All of the members were interviewed.

### **Second Stage: compiling of qualitative and quantitative information**

We applied different tools: a questionnaire to all family leaders that showed the main tendencies of the peasant economy, above all the composition of family units, the size of parcels and the agricultural and livestock production.



The tendencies were deeply studied by a diachronic study through interviews to get information in the transformation and commercialization as part of the productive chain among the most representative cases of the researched subjects.

As a second instrument, the technique of open interview, combined with transversal visits in order to obtain the qualitative information.

The third tool was to organize participation workshops, in which the members of the cooperative built the concept of productive chain, its importance, and though this understanding, the strength, opportunities, weaknesses, and threatening, of the organization within the productive chain.

### **Third Stage: analysis of the information of the different sources.**

The quantitative, qualitative, exploratory, and descriptive analysis of the data of different sources, together with the secondary information was made. This allowed visualize the different interrelations of productive systems in the farms, the transformation and commercialization of the cooperative.

In this stage a first analysis was made, (statistical information of the surveys, interviews, and workshop), a preliminary document was written and presented to the members of the cooperative to be analyzed and discussed in order to elaborate the final report.

## **Results and discussion**

The analysis of the peasant economic unit (PEU) starts in the family when considering, as Chayanov did (1974), that the peasant family is the prevailing factor of the organization of the entire unit where the decisions are taken. Regarding the age of the family, the biggest number is the sons, who represent the 58% of the members who are less than 20 years of age. The educational level of families shows that 63% has finished primary school, 18% secondary school, 8% can just read, 9% are illiterate, and a minority has got technical or university level. The houses where families live present the following characteristics of construction: 66.7% has a roof made of zinc, and 33.3% has tile roof. 11.1% of the walls are made out of wood, and 38.9% adobe, 50% of brick. The majority, 66.7%, have earthen floor, and 33.3 floor of cement. 72% have access to running water, 72% have access to electricity; 80% have access to media, and 50% have television. 94% have latrines and 100% have access to nearby schools. The material conditions mentioned so far, allow us say that the majority of the peasant families that were studied in the community Santa Rosa have houses with acceptable basic services in comparison to other rural areas that are poorer and that do not have access to basic services nor dignified houses.

Regarding the average number of members of the researched families, they present a high level of promiscuity, due to the fact that two or more



**ASOCIACIÓN PARA LA INVESTIGACIÓN DEL  
DESARROLLO SOSTENIBLE DE LAS SEGOVIAS  
ADESO “Las Segovias”**

N° RUC: 041295-9574  
N° Perpetuo: 616

Telefax: 0-7133550  
Aptdo. 60 – Estelí

---

members sleep in one room. While some producers do not have a hectare of land, others have more than 50 hectares. The major frequency is 1-5 hectares. The most significant as for the possession of land of the researched peasant families is that 100% of them are land owners, and 83% out of them were benefited by the agrarian reform.

The productive activities in the lands of individual use are concentrated in the primary sector and are fundamentally led to the consumption and commercialization (certified bean seed), even though they participate in the market in small amounts.

The main income in the families, according to 93% of opinion, comes from the production of certified bean seeds (*Phaseolus vulgaris*). The farming work in the farm is considered the main labor of the family.

The stage of transformation of the seed starts with different actions after the harvest, among them: beating or threshing (to peel the seed), the production, cleaning and selection of the grain are made in the field. Later the production is sent to a processing plant in Estelí where the laboratory tests are made considering as parameters the strength, physical and genetic authenticity, and the no plague existence. The Cooperative of Seed Producers buys the certification service from Agriculture Cattle Raising and Forest Ministry (MAGFOR), institution that evaluates the quality and quantity of the seed that reaches the norms and procedures of quality control that are established by the law about seeds;

according to the results they define the percentage of certified seed and second category seed, classified as grain. It is packed and labeled in 80 pound capacity paper bags. The amount of production in the year 2002-2003 is 480 quintals. The commercialization of bean certified seed is made in several ways: by private enterprise, government and NGOs. Among them: Private enterprise, Northern Seed Producers' Association (Spanish initials APROSEN), which the cooperative belongs to. They also provide seed to the government through the “Pound per Pound” program.

### **Analysis of the chain vs. the organization**

According to Gibson (1989). “In the context of the theory of systems, the organization is considered as one of several elements that interact in mutual dependence. The flow of reinvestments and products is the basic starting point to describe the organization”. The organization takes resources (reinvestments) from the wider system (technical means), they are processed and returned as products. The organization will no longer exist when it no longer contributes to the wider system which it is part of, it will not contribute when it is no longer efficient.

This way the productive chain as part of the production system of COPROSEC starts from the peasant family decision taking in the planning of the action to be done and the demand of technological needs. At this moment takes place the



**ASOCIACIÓN PARA LA INVESTIGACIÓN DEL  
DESARROLLO SOSTENIBLE DE LAS SEGOVIAS  
ADESO “Las Segovias”**

N° RUC: 041295-9574  
N° Perpetuo: 616

Telefax: 0-7133550  
Aptdo. 60 – Estelí

---

insertion of the institutions or external agents that participate through the step taking of organized groups or through the offer that they lead (the institutions). The linkage continues with a series of actions that are performed aiming to produce raw material, in this case, (bean certified seed), where different cultural steps are made in order to guaranty the quality of the product or raw material. The next linkage belongs to the transformation stage also known as processing, it is here where other type of quality norms are applied so that the final product will have the quality standards that the market demands.

The last linkage of the productive chain ends with all the actions that the commercialization has, it has to do directly with the market, the promotion of the product and its offer facing the demand. But the role of the organization of the system does not end here, because from this moment on the cycle starts with the flow of capital that flows to the cooperative and to the family, and it is here when the cycle of the system starts again, and as part of it, the productive chain, being the organization the key element of success in the consolidation of COPROSEC.

1. The material conditions of the researched peasant families of the cooperative allow us to say that the community Santa Rosa counts on basic services and houses that are built with acceptable materials that allow them live better in comparison to other families from rural areas who are poorer, with no access to basic

services, and who have wooden houses with plastic roofs. According the average number of members of the researched families and the number of the houses, they present a high level of promiscuity.

2. The associate members of COPROSEC are trained on necessary technology in order to be producers of certified seed, and they count on specialized technical support in the seed production.

3. The associate members are clear about the objectives of the cooperative formation, but they have had little technical support in the organizational process, since they were not controlled for the consolidation and strengthening of the process.

4. The main restriction or “bottle neck” is the lack of steady amounts for the stage of transformation (processing and packing), sometimes jeopardizing the product because of the lack of financial support. This restriction is generally presented with the production that is obtained during the months September-December, because the demand of this seed is presented six months after the harvest (December).

5. Even though it is a young organization, it has step taking capacities to deal with clients and organizations, they have organized alliances among adjacent sectors to their organization in order to find mutual help. Nevertheless, because of the institutional support in the organizational process they have had some mistakes with enterprises that



**ASOCIACIÓN PARA LA INVESTIGACIÓN DEL  
DESARROLLO SOSTENIBLE DE LAS SEGOVIAS  
ADESO “Las Segovias”**

N° RUC: 041295-9574  
N° Perpetuo: 616

Telefax: 0-7133550  
Aptdo. 60 – Estelí

---

have not complied verbal agreements, which are part of peasant's culture.

6. The cooperative fulfills the stages of the productive chain, better organized and developed than others. Nevertheless it is necessary to make noticeable that the commercialization of bean seed is sold to government organizations, or to the Seed Producers Association (APROSEN), that is an intermediary. The cooperative does not sell seed to middle or to small producers, because they receive the seed through donations of projects or programs, because the producers can not afford the price (\$ 56 an eighty pound bag) and the yielding of the grain bean is relatively low (10-11 quintals per hectare), which is not enough to pay for the cost of the seed.

7. The construction of the history of the cooperative allowed us to visualize that this group of producers was born from a policy determined by the Ministry of Agriculture and the Nicaraguan Institute of Agricultural and livestock technology (INTA), who promoted groups of artisan bean seed producers, for them to improve and produce their own seed; these groups were later no longer supported.

8. The government has changed the rules regarding the use and production of certified seed, actually the seed is being sold to the government through BAGSA (Agricultural and Livestock Market) and if this group of producers COPROSEC does not look for allies in other organizations in search of volumes it might not commercialize the future productions.

9. The cooperative organization is strong, since it is a small group and has worked for more than ten years; growing together, and this advantage should be properly used in order to find marketing strategies that are fewer dependants on the projects and more dependants on the producers.

### **Factors of success**

Identified a specialized and profitable rubric; the bean seed production.

To count on technical assistance from INTA. Producers experience in the agronomical management of the farming Motivation and discipline of the group of producers in fulfilling their goals. Step taking capacity of the group in order to get reinvestments Technical assistance and commercialization of the product The project PASA-DANIDA supported them in getting their legal status through a process of consultation and consensus that allowed the selection of the ideal organization for them.

### **Recommendations**

- It is necessary to establish simple forms to plan the production of the possible benefits to be obtained, and of the management of profits in the future.
- To count on a place and infrastructure for the benefited ones is one of the initial steps that COPROSEC has to procure and resolve.
- To be trained on enterprise management should be a short



**ASOCIACIÓN PARA LA INVESTIGACIÓN DEL  
DESARROLLO SOSTENIBLE DE LAS SEGOVIAS  
ADESO “Las Segovias”**

Nº RUC: 041295-9574  
Nº Perpetuo: 616

Telefax: 0-7133550  
Apto. 60 – Estelí

---

term goal for the cooperative associate members.

- To look for strategic alliances with other cooperatives or associations, that permit them to obtain volumes to face the new rules of the national and international market, and to find a direct market or seed exportation.

### **Bibliography**

- 1- Boucher, F y Muchnick. 1995. Agroindustria Rural. Instituto Interamericano de Cooperación para la Agricultura (IICA), Centro Internacional de Investigaciones para el Desarrollo (CID), San José Costa Rica. 504p.
- 2- Chayanov. A. La organización de la unidad Económica Campesina: “Introducción en Economía Campesina”. Centro de Estudios y Promoción de Desarrollo (DESCO), Lima. 1979pp 107-135.
- 3- Gibson. I. “Organizaciones, Conducta, Estructura y Proceso” México. 1990.
- 4- Membreño, Francisca.””Proceso Organizativo de la Microempresa PLAMCYTT, Productora Campesina de Plantas Medicinales”. Tlaxcala, México. Tesis de Maestría. 2002.