

Problems and Needs of Sugarcane Farming in Ilocos Sur

Florida U. Ursulom, DPA

Floraceli R. Rodillas, MATPA

Angelina Q. Verzosa, BSBA

Abstract

The study identified the problems that beset the farmers or tenants as well as the needs in sugarcane farming in Ilocos Sur. Likewise, it sought to determine the profile of sugarcane farming in terms of land area, estimated expenses, and estimated gross sales.

The study covered nine (9) municipalities of Aocos Sur; namely, Ailem, Magsingal, Quirino, San Juan, San Ildefonso, Sinait, Sta. Maria, Sto. Domingo, and Vigan. It utilized the descriptive method of research with the aid of a questionnaire supplemented by personal interviews.

The greatest problems encountered in sugarcane production were: lack of capital for expansion, strenuous work where there was no sugarcane milling machine or "dadpilan", high cost of inputs, lack of equipment technology, imbalanced increase of the cost of inputs over the sales price, low price especially during harvest season, and lack of government support on the marketing of the commodity.

The following are the recommendations: 1) To promote sugarcane farming, there should be a project of the government on sugarcane planting, buying all the products at a good price, and promoting sugarcane products by distributing them to different associations/organizations for livelihood project giving all the necessary support and motivation; 2) Incentives should be provided to those who grow sugarcane through competition programs until it yields a stable income to the growers and the government; 3) The hybrid sugarcane and the new technology of harvesting twice a year should be documented and widely disseminated to the farmers; 4) Continuing technology should be done once started so that the existing products from sugarcane can be increased; 5) Cash sales should prevail; and 6) The needs/aspirations and the problems of the sugarcane farmers should be addressed to motivate the farmers to produce more sugarcane.

Introduction

Background of the Study

Sugarcane is a giant member of the grass family. The jointed stems bear long tapering leaves and grow in bunches called *stools*. It is the principal source of sugar. More than one half of the world's sugar supply is obtained from sugarcane which is grown in tropical and subtropical climates. (*Encarta Encyclopedia, 2004*)

Aside from sugar, other by-products of sugarcane like molasses can be used as food supplement for broilers which gives a beneficial heavier weight; it is also used as sweetener for food preserves which is preferred in terms of taste and flavor. Other valuable by-products from sugarcane are alcohol used by the pharmaceutical industry, ethanol used as fuel, and bagasse which when decayed is used as a rich source of organic matter and nutrients for crop production. Its bagasse is also used as animal feed, used as fuel for the mill furnaces, can be sold to make wallboard or paper, or burnt to generate electricity for the local power grid. The green tops are a valuable cattle feed and there are also numerous food products coming from sugarcane like, *tagapulot, balikutya bokarilyong mani, bokarilyong niyog, kaskaron, sinambong, basi, and suka*.

It is a fact that sugarcane is the principal source of sugar in the whole world. It plays a major role in the Philippine economy for it provides employment, gives income to the farmers' families and those involved in trade and business and provides revenue to the national government.

Planting sugarcane is, therefore, important. However, motivating factors are not felt by the sugarcane farmers. As observed, sugarcane production in Ilocos Sur is declining; the number of sugarcane farmers is decreasing. The vast hectares of land which used to be planted with sugarcane have now turned into land parcels only. As a fact, among the 22 municipalities which were found by the Department of Agriculture (DA) in 1999 to be planting sugarcane, the researchers of this study found out that many municipalities have ceased planting. Further, the land area originally planted has lessened, too. To control the lessening of sugarcane farmers and to promote sugarcane production which is vital in our life and in our economy, there is a need to give attention to this industry. Hence, the conduct of this study Problems and Needs of Sugarcane Farming in Ilocos Sur.

Objectives

Generally, this study aimed to identify the problems that beset the farmers and tenants in sugarcane farming.

Specifically, it sought to determine the following:

1. Profile of sugarcane farming in terms of
 - a. land area planted;
 - b. estimated expenses; and
 - c. estimated gross sales;
2. Problems encountered by the sugarcane farmers or tenants along financing, production, and marketing; competition, and government intervention; and
3. Needs/aspirations of the sugarcane farmers in Ilocos Sur.

Methodology

Scope and Delimitation. This study was limited to the determination of problems that beset the farmers or tenants of sugarcane farming in Ilocos Sur. The respondents were the sugarcane farmers of some municipalities of Ilocos Sur; namely, Alilem, Magsingal, Quirino, San Juan, San Ildefonso, Sinait, Sta. Maria, Sto. Domingo, and Vigan.

Research Design. The study utilized the descriptive method of research.

Sampling Technique. The sampling employed was the purposive technique since the respondents are purely sugarcane farmers.

Data-gathering Instrument. The data gathering tool was an interview schedule. The interview was in Iloco terms for better comprehension of the respondents.

Statistical Treatment. The statistical tools used were frequency and percentage in all the responses gathered. Ranking was also used to treat the problems and needs of the sugarcane farmers.

Results and Discussion

Profile of Sugarcane Farming

The profile of sugarcane farming is discussed here in terms of land area planted with sugarcane, total number of workers per cropping, number of months per cropping, type of sugarcane farmers, flow of products coming from sugarcane, total estimated expenses, and estimated gross sales.

As seen in Table 1, majority (15 or 50%) of the sugarcane farmers of the municipalities surveyed planted more than $\frac{1}{4}$ to $\frac{1}{2}$ hectare of land area. A minimal

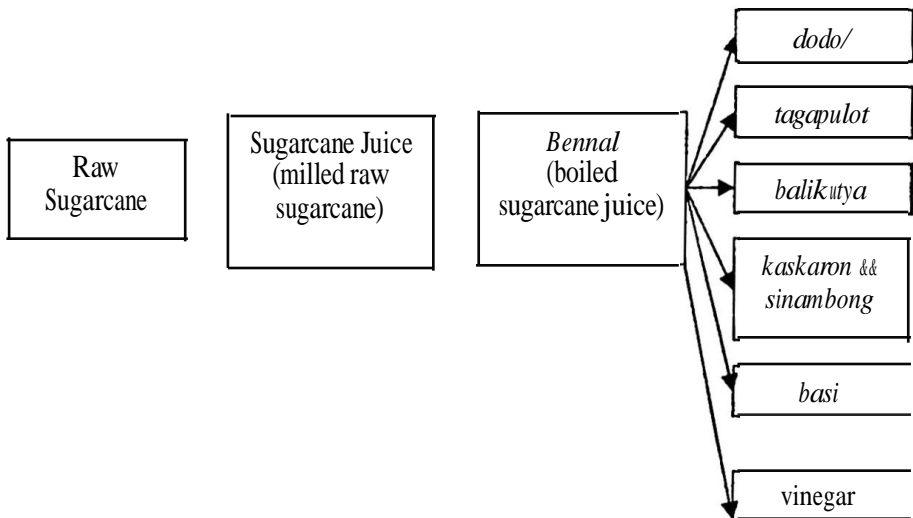
number of farmers (1 for more than 1 ¼ to 1 ½ has and 3 for more than 1 ¾ to 2 has) planted large size of land area. Based from the interviews, the areas have turned into residential lots and have been planted with *palay* and other crops due to some problems.

Information on total number of workers per cropping, number of months per cropping, type of sugarcane farmer, and flow of products as based from interview appear that the total number of workers per cropping depends on the size of land area planted with sugarcane. Only those planting large areas hire workers. On the other hand, those planting small areas have their family members to do the tasks.

Also, the number of months per cropping is claimed by the respondents to be 11-12 months. If used for *dodol*, a product from sugarcane molasses and powdered rice, the sugarcane can be harvested when 11 months old, but for vinegar, *tagapulot*, and other products, the sugarcane should be harvested when 12 months old. A new technology, however, has been found by the researchers. The sugarcane can be planted and harvested twice a year already. This technology is practiced by a large sugarcane grower and producer of sugarcane vinegar in Tinaan, Sta. Maria, Ilocos Sur.

Further, all the respondents claimed to be "growers and processors." This implies that the farmers themselves process their products.

Finally, the flow of products coming from sugarcane is presented in the following figure:



As seen in Figure 1, the raw sugarcane is to be milled and the juice shall be boiled. Products like *dodol*, *tagapulot*, *balikutya*, *sinambong*, *basi*, and vinegar can then be made. *Dodo/* needs powdered rice, *sinambong* needs rice *malagkit* which is

Wrapped in woven coconut leaves, *basi* and vinegar need *samak* leaves or tree barks of ipil-ipil or blackberry stored in big containers like jars. Vinegar has longer storage than *basi*. In fact, *basi* turns into vinegar when stored longer. The *tagapulot* and *balikutya* are products of pure sugarcane.

As viewed o Table 2, majority (91 or 56.88%) of the sugarcane farmers claimed a total estimated expense belonging to the P1, 000 and below bracket. Moreover, not all the sugarcane farmers produce *dodol*, *tagapulot*, and *balikutya*. All, however, produce *kaskaron* and *sinambong*, *basi*, and vinegar. Further, a minimal number (3 or 1.88%) claimed to have an estimated expense belonging to P3,001–P4,000 bracket only.

The findings indicate that planting sugarcane incurs a minimal **expense** only.

As presented on Table 3, majority (85 or 71.43%) of the sugarcane farmers claimed to have an estimated gross sales on the P5,000 and below range, while the least (1 or 0.80%) admitted to have gross sales on the P15,001-P20,000 bracket. This implies that the lesser the area planted, the lesser gross sales earned.

Moreover, not all the sugarcane farmers sell sugarcane juice, *dodol*, *tagapulot* or *kuya-kuya*, *baliktuya*, *kaskaron* and *sinambong*, and *basi*. From the interview, they claimed that some produce the said products not for sale but for consumption only.

Further, all of the sugarcane farmers produce vinegar for consumption and for sale. This finding means that the main source of income of the sugarcane farmers is from the sale of vinegar.

Table 1. Land area planted with sugarcane in 1989 and 1990

Year	1989		1990		Total	%	Cultivated	Irrigated	Total	%	Cultivated	Irrigated	Total	%	Cultivated	Irrigated
	Area (ha)	Number of plots	Area (ha)	Number of plots												
1989	1000	100	1000	100	2000	100	1000	1000	2000	100	1000	1000	2000	100	1000	1000
1990	1000	100	1000	100	2000	100	1000	1000	2000	100	1000	1000	2000	100	1000	1000
Total	2000	200	2000	200	4000	100	2000	2000	4000	100	2000	2000	4000	100	2000	2000

*Brackets where there were no responses were deleted.
Source: Department of Agriculture, 1989.

Table 3. Total estimated gross sales in sugarcane farming by the respondents

Estimated Gross Sales	Raw Sugarcane		Tagapuror		Baikunya		Kastaron & Sinabong		Vinegar	
	%	Q	Q	%	Q	%	Q	%	Q	%
P 5,000 & below	77.78	000	000	17	85	0	0	0	0	0
P 5,001 – 10,000										
P 10,001 – 15,000										
P 15,001 – 20,000										
P 20,001 & above										
	100	1000	1000	100	1000	100	1000	100	1000	1000

Problems Encountered by the Sugarcane Farmers

There are some sugarcane farmers who want sugarcane planting as their source of income because it does not require a big capital and can stand even if typhoon comes, however, some almost surrender it because of some reasons or problems.

The problems claimed by the respondents are categorized into financing, production, marketing, competition, and government intervention.

The channels of marketing the sugarcane products in Ilocos Sur are also presented for the reader to have wider understanding on the problems in sugarcane farming.

Table 4. Problems in sugarcane farming along financing

Problems	pt (n = 30)	%	Rank
Lack of capital per expansion	14	45.16	1
Lack of financiers/capitalist at low interest	5	16.13	3
Too many paper requirements for bank loans	1	3.23	5
High rate of interest	8	25.81	2
Lack of government subsidy	3	9.68	4
Total	31	100.00	

multiple response

Table 4 shows that the foremost problem in sugarcane production as evidenced by 14 or 45.16% claimants along financing is the lack of capital for expansion. This indicates that those with large land areas would produce more sugarcane or cultivate more lands for sugarcane if they don't worry on capital especially if their other problems particularly on production and marketing are adhered to because as some claimed, they prefer sugarcane to other products because this commodity requires less capital as compared to others, and firmer to stand even during typhoon.

As displayed in Table 5, the number one problem along production is the strenuous work involved in sugarcane production with 20 or 26.67% respondents, followed by high cost of inputs with 16 (21.33%) respondents, then followed by lack of equipment technology like motorized "dadapilan" or motorized sugarcane mill with 13 (17.33%) respondents.

Table 5. Problems in sugarcane production along production

Problems	P (= 30)	%	Rank
Long time to harvest or long range of production that can't support the daily needs of the family	7	9.33	5
High cost of inputs	16	21.33	2
High cost of labor	9	12.00	4
Strenuous work involved in sugarcane production	20	26.67	1
Lack of equipment technology like motorized "dadapilan" or motorized sugarcane mill.	13	17.33	3
Pests and lack of technology to control pests	4	5.33	6.5
Lack of water supply during summer	4	5.33	6.5
Lack of government support for motivation	2	2.67	8
Total	75	100.00	

multiple response

The above findings indicate that the motorized sugarcane mill, that is being enjoyed by the sugarcane farmers in Sta. Maria and Sto. Domingo, Ilocos Sur, is not yet available in all places where there are sugarcane farmers.

Table 6. Problems in sugarcane production along marketing

Problems	P (n=30)	%	Rank
Sales are staggered, and there is no big lump sale.	8	12.90	4
Low price especially during harvest season	12	19.35	2
Not cash sales	6	9.68	5
Non-availability of ready buyers.	5	8.06	6
Transportation problem for big bulk	2	3.23	7.5
Hard to dispose especially with the existence of artificial vinegar, a DOH project	2	3.23	7.5
Lack of government support on the market of the commodity	11	17.74	3
Imbalanced increase of the cost of inputs over the sales price	16	25.81	1
Total	62	100.00	

multiple response

As seen in Table 6, the greatest problem along marketing is the "imbalanced" increase of the cost of inputs over the sales price as proven by 16 (25.81%) respondents, followed by low price especially during harvest season with 12 (19.35%) respondents, then followed by lack of government support on the market of the commodity with 11 (17.74%) respondents.

The findings above manifest that there **is a** need for the government to give attention to the solution of high cost of inputs but low sales price or for the correction of great inflation.

Channels of Marketing the Sugarcane Products

The marketing of the sugarcane products are presented on Tables 7 and 8.

Table 7. Market outlet for sugarcane products

Outlets	pt (n = 30)	%
1. own town's market	18	24,32
2. other town's markets	16	21.62
3. neighbors	30	40.54
4. house- to-house in nearby barangays and towns	10	13.51
5. foreign countries (export)	0	-
Total	74	100.00

**multiple response

As viewed on Table 7, the sugarcane products are sold to "neighbors" as evidenced by 30 or 40.54% respondents, followed by "own town market" with 18 (24.32%) respondents, then followed by "other town markets" with 16 (21.62%) respondents. No one claimed that their products are sold to foreigners; only as a gift or give-away.

From the above findings, it can be deduced that there is a truly poor market of our sugarcane products; therefore it needs development or attention in order to expand their markets up to foreign lands. Trainings particularly on packaging and promotion is greatly needed.

Table 8. Buyers of sugarcane products

Buyers	P# (n= 30)	%
1. Retailers	8	17.02
2. Wholesalers	4	8.51
3. Processors	5	10.64
4. Exporters	0	-
5. Consumers	30	63.83
Total	47	100.00

Based from Table 8, the greatest buyers of sugarcane products are the "consumers" as responded by 30 or 63.83% sugarcane farmers, then followed by "retailers" with 8 (17.02%) respondents. This finding implies that sugarcane farmers cannot have a good standard of living or status because though prices of the products can be higher if sold to consumers or retailers, they can not be sold by bulk, hence, no big lump sales. Further, retailers usually buy not in cash. With this fact, **it is** not encouraging to produce sugarcane.

Needs in Sugarcane Production

The needs of sugarcane farmers are in terms of aspirations which are presented on Table 9.

Table 9. Needs in sugarcane production

Needs	pt (n=30)	%	Rank
1. Government assistance on financing machine-operated sugarcane mill (<i>dadapilan</i>) and marketing of the commodity	17	15.32	2
2. More aggressive programs, trainings/seminars to disseminate new technologies on sugarcane production and marketing	20	18.02	1
3. Seminars/trainings on technology of sugarcane production	14	12.61	4
4. Seminar/trainings on organic adoption to minimize high cost of inputs	10	9.01	6
5. Provision of equipment technology by the government at minimal rent	13	11.71	5
6. Availability of contract buyers at attractive price	3	2.70	10
7. Involvement of DTI to control the price of all sugarcane farmers and businessmen in order to maintain a new prevailing rice	3	2.70	10
8. Stoppage of the making of artificial vinegar	3	2.70	10
9. Wider or more areas to plant	3	2.70	10
10. Existence of sugarcane farmers association or cooperatives which can be of assistance in the financing, production, and marketing of the commodity	15	13.51	3
11. Financiers at low interest and no collateral	7	6.31	7
12. Provision of farm-to-market roads and bridges	3	2.70	10
Total	111	100.00	

Table 9 shows that the foremost need of sugarcane farmers is the "more aggressive programs, trainings/seminars to disseminate new technologies on sugarcane production and marketing as supplemented by 20 or 18.02%, respectively; next, is the "government assistance on financing machine-operated sugarcane mill and marketing of the commodity" as claimed by 17 (15.32%) respondents, and third, "existence of sugarcane farmers association or cooperatives which can be of assistance on financing, production, and marketing of the commodity" as claimed by 15 (13.51%) respondents.

The findings above manifest that there are strategies of promoting sugarcane production, and that, the assistance or involvement of experts, government, and associations or cooperatives are very much needed.

Conclusions

Based from the findings, the following conclusions are drawn:

1. The sugarcane farmers have decreased in number including the size of land area being cultivated because of non-motivation.
2. The number of workers depends on the size of the land area being cultivated and the workers are mostly members of the family. Only those cultivating large areas are hiring additional manpower.
3. The number of months of sugarcane before harvesting is 11 to 12 months old. New technology, however, is six months old; hence, harvesting is done twice a year.
4. The sugarcane farmers process their own products into either of the following: *dodol*, *tagapulot*, *balikutya*, *kaskaron*, *sinambo*, *g*, *basi*, and *suka*.
5. Expenses in sugarcane production is minimal and sales are staggered. There are no big lump sales and, usually, not cash sales.
6. The greatest problems in sugarcane production that caused the decrease of sugarcane growers and size of land areas to be cultivated are: lack of capital for expansion, strenuous work involved in sugarcane production where there is no machine-operated sugarcane mill yet, high cost of inputs, lack of equipment technology, imbalanced increase of the cost of inputs over the sales price, low price especially during harvest season, and lack of government support on the market of the commodity.
7. The only current channels of marketing the sugarcane products are through neighbors, own town market, other town markets, and house-to-house in nearby barangays and towns. The buyers are only consumers, retailers, and minimal by processors and wholesalers.
8. The greatest needs or aspirations of the sugarcane producers are the following: more aggressive programs, trainings/seminars to disseminate new technologies on sugarcane production and marketing, government assistance on financing machine-operated sugarcane mill and marketing of the commodity, and

existence of sugarcane farmers association or cooperatives which can be of assistance on financing, production, and marketing of the commodity.

Recommendations

Based from the conclusions, the following are hereby recommended:

1. To promote the sugarcane farming, there should be a project of the government on sugarcane planting, buying all the products at a good price and promoting sugarcane products by distributing them to different associations/organizations for livelihood project giving all the necessary support and motivation.

2. Incentives should be provided to those who grow sugarcane through competition programs until it yields a stable income to the growers and the government.

3. The hybrid sugarcane and the new technology of harvesting twice a year should be documented and widely disseminated to the farmers.

4. Continuing technology should be done once started so that the existing products from sugarcane can be increased.

5. Cash sales should prevail.

6. The needs/aspirations and the problems of the sugarcane farmers should be addressed to motivate the farmers to produce more sugarcane.

References

Journals

Cabanting, M. et. al. 2000. *Status and Prospects of Fruit Production in Ilocos Sur*. UNP Research Journal. Vol. IX. University of Northern Philippines.

Felicitas, A. Jr. et. al. 1997. *Commodity Flow of Agricultural Products in Selected Municipalities of Ilocos Sur*. UNP Research Journal. Vol. VI. University of Northern Philippines.

Gavina, M. & Navarro, R. 2000. *Problems and Needs of the Jewelry Industry of Ilocos Sur*. In UNP Research Journal, Vol. IX, University of Northern Philippines.

Pinol, G. 1996. *The Problems and Needs of Bamboo Craft Industry Operators in Selected Towns of Ilocos Sur: An Assessment*. UNP Research Journal. Vol. V. University of Northern Philippines

- Ringor, C. B. A *Comparative Study on the Effects of Different Levels of Brown Sugar to the Feeds Upon the Growth Rates of Broilers*. Agriculture: Research Compendium. Ilocos Agricultural Research Center, Mariano Marcos State University, Batac, Ilocos Norte: January 1985.p. 66.
- Sacayanan, L. P. *Effects of Cane Sugars on Ripe Mango Preserves*. Agriculture: Research Compendium Ilocos Agricultural Research Center, Mariano Marcos State University, Batac, Ilocos Norte: January 1985.
- Ursulom, F. et. al. 2005, *Problems Besetting Bamboo Production in Ilocos Sur*: Trends and Innovations in the Bamboo Industry: Proceedings.

Multi-media Sources

Encarta Encyclopedia. 2004.

Microsoft Encarta. 1993-2003.

<http://www.parc.gov.ph/sugar.htm>

Toe New Book of Knowledge. 1996.