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Production and Marketing Problems for Sugar Cane Growers in Qena Governorate

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Abstract: Sugar cane is a principal agricultural product in Egypt. Over 48% of its area is grown in Qena governorate. The agricultural extension system should identify problems and needs for farmers and provide them with their solutions. The main objective of this paper was to know production and marketing problems for sugar cane growers in Qena governorate, Egypt. Six focus groups were organized for farmers in two villages and a survey was conducted on 224 extension personnel or 93 % of all extension personnel at districts and villages levels in Qena governorate to collect necessary data. The most important perceived production problems were: spread of weeds and insects, weak role of agricultural extension, shortage and high costs of fertilizers and labor, and high costs of production, insecticides and irrigation. The most important perceived marketing problems were: high costs and unsystematic cutting, shortage and high costs of transportation, delay of cutting and delivery of product to the factory, inaccurate weigh and low prices of the product. A great role lies on the agricultural extension system to identify such problems and provide farmers with their solutions in order to increase the agricultural productivity of this crop in Qena governorate.

Key words: Egypt, extension personnel, farmers, Qena governorate, sugarcane problems.

1. Introduction

Sugar cane is a principal agricultural product in Egypt. Its economic and nutrition importance need not to be clarified. It is grown mainly in middle and Upper Egypt but over 48% of the area under sugar cane is grown in Qena governorate alone. Also over 48% of sugar cane production is driven from this governorate [1]. The value of sugar cane production represents 10% of the total value of production of summer crops and 3.4% of the total plant production [2]. This urges the need to devote much attention to improve the productivity of this crop in the country as in general and in Qena governorate in particular.

As stated by Abdel-Maksoud [3, 4], in order to increase the productivity of agricultural crops and achieve agricultural development in Egypt, there must exist:

(1) An effective research system which is capable to deal with farmers' problems, produce the proper technology for farmers and make necessary tests for its applicability, simplify its results, and spread knowledge and information about it among farmers.

(2) An effective agricultural extension system which is capable to identify farmers' problems and needs and to carry them to research centers and come back to farmers with solutions to their problems and means to meet their needs. It must be able also to carry the new technology from the research centers to farmers and provide them with the proper education about this new technology, persuade farmers to adopt it, and come back to the research centers with its consequences on farmers. Strong and effective linkage must exist between these two systems which also must be well connected with farmers.

Sugar cane growers, like farmers of any other product, have their own problems and needs. It is important to know the problems facing those farmers

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and identify their needs to find solutions for them. As stated above, this is the role of agricultural extension system. Therefore, it is important that all extension personnel should be aware of problems facing sugar cane growers and their needs and have strong linkages with farmers as well as with research centers in the area.

The sugar company is the major buyer of this product from farmers. The company contracts to buy this product from farmers at fixed prices. However, small quantities of sugar cane product may be sold to private juice shops and molasses factories.

2. Objectives

The main objectives of this paper were to:

1. Identify various sugar cane production and marketing problems as perceived by farmers in Qena governorate.

2. Identify production and marketing problems facing sugar cane growers as perceived by extension personnel in Qena governorate.

3. Investigate the differences between farmers and extension personnel in their perceptions of sugar cane production and marketing problems.

4. Identify farmers and extension personnel suggestions to solve these perceived problems.

3. Methodology

To achieve the above objectives, the research was carried out on two groups of respondents: farmers and extension personnel. Below is a description of research methodology employed for each group.

3.1 Farmers

Data were collected from farmers through organizing and holding six focus groups of farmers in two villages: Alarabat, Neqada district and Algamalia, Qous district in Qena governorate. These two villages were purposively selected so that focus groups can be easily organized and held. Three focus groups were held in each village. In selecting focus group members, the authors were keen to include in these groups farmers from different locations in the village, having different personal and situational characteristics (Table 1).

The main points determined to be discussed with group members were to: (1) Determining production and marketing problems facing sugar cane growers; (2) Ranking these problems according to their importance from farmers' point of view; and (3) Their suggestions to solve these problems.

3.2 Extension Personnel

A survey was carried out to collect data from extension personnel in Qena Governorate. A questionnaire form was prepared and distributed among all extension personnel in the eleven districts of Qena governorate through the director of agricultural extension administration of the governorate. Out of 242 extension personnel in the eleven districts, 224 completed forms (or 93% of them) were received. The information gathered included some personal and situational characteristics, perceived production and marketing problems facing farmers and their suggestions to solve these problems.

Table 1 Description of focus group members.

Items	Alarabat village, Neqadah district			Algamaliah village, Qous district		
	Group I	Group II	Group III	Group IV	Group V	Group VI
Number of farmers	12	9	8	8	8	8
Age	21-85	21-70	28-65	50-73	35-75	26-65
Education	R & W–univ. degree	R & W–univ. degree	R & W–univ. degree	Illiterate–primary	R & W–univ. degree	Illiterate–technical secondary
Land holding (Feddan)	2-20	0.1-11	1-5	0.1-12	0.2-14	0.4-4
Area of sugar cane (Fedd.)	0.9-10	0.4-6	0.2-2	0.5-12	0.2-9	0.2-3

Source: Focus group members.

The second author alone has taken the responsibility of organizing and holding the six focus groups of farmers and collecting data from extension personnel from Dec. 2006 to Feb. 2007.

4. Results

The results of this research can be summarized as follows:

(1): Focus groups of farmers

The number of farmers of the six focus groups ranged from eight to twelve farmers. Their ages were between 21 to 85 with various educational levels and land holdings (Table 1).

Production and marketing problems mentioned by focus groups held in the two villages were listed and prioritized in Tables 2 and 3. It can be seen that eight production problems were raised and mentioned by members of focus groups in the two villages. They agreed on the existence of weak role of extension and spread of insects as two important problems. Members of the three focus groups of the first village, although agreed upon the existence of shortage of fertilizers, they differed in their perceptions of the other three problems mentioned in this village. The three focus groups of the second village differed widely in their perceptions of the other six problems they raised. While one group assured the spread of weeds, another group raised the shortage of fertilizers and high costs of production, pesticides and irrigation.

With regard to marketing problems, members of the three focus groups in the first village agreed upon the existence and priorities of delay of cutting, high costs of transportation (L.E. 15 per ton), stealing of product during transportation, delay of transportation and delivery,

Table 2 Production problems as perceived and prioritized by focus group members.

Items	Alarabat village, Neqadah district			Algamaliah village, Qous district		
	Group I	Group II	Group III	Group IV	Group V	Group VI
Spread of weeds	1			2		
Spread of insects	2	3	4	1	1	2
Weak role of extension	3	1	1	3	2	1
Shortage of fertilizers	4	2	3			4
Spread of mice		4	5			
High costs of production			2			5
High costs of insecticides						3
High costs of irrigation						6

Source: Focus group members.

Table 3 Marketing problems as perceived and prioritized by focus group members.

Items	Alarabat village, Neqadah district			Algamaliah village, Qous district		
	Group I	Group II	Group III	Group IV	Group V	Group VI
Lateness of cutting the crop	1	1	1			4
High costs of transportation	2	2	2	1	1	1
Stealing the crop during transportation	3	3	3			
Lateness of transportation	4	4	4			4
Inaccurate weigh	5	5	5	2	2	2
Shortage of loading machines				3		
Low price of product					3	6
High ratio of defects					4	5
Lateness of getting the value of product						3

Source: Focus group members.

and inaccuracy of weigh at the factory.

In the second village, high costs of transportation and inaccuracy of weigh were mentioned by members of the three focus groups. Non-availability of loading machines, delay of cutting, low price of product and high ratio of defects were mentioned by only one or two focus groups held in that village.

In order to solve the above problems, members of focus groups suggested that the agricultural extension system should play a more effective role and the government should assist farmers to control weeds, insects, mice and diseases, and provide them with adequate amounts of fertilizers and irrigation water. With regard to marketing problems, members of focus groups suggested that coordination should exist between the agricultural administration, the sugar company and farmers. In order to solve various marketing problems facing sugarcane growers in the area, farmers suggested that they should be allowed to supervise marketing their product.

(2): Extension personnel

As mentioned before, the total number of extension personnel included in this survey was 224. Their ages ranged from 26 to 59 years. Nearly two thirds of them had diploma of secondary schools and the same ratio were village extension workers and had 10 years or more of experience in extension work. Forty three percent of them had agricultural land holdings ranging from one half to 48 feddan. Most of land holders grew sugar cane crop (Table 4).

Thirty four production problems and twenty two marketing problems were raised by extension personnel in Qena governorate. The number of extension personnel mentioned each problem ranged from 1 to 94. All problems raised by farmers were mentioned by extension personnel except the weak role of extension. The most important production and marketing problems according to the number of extension personnel mentioned each are given in Tables 5 and 6.

To solve production and marketing problems they perceived, extension personnel proposed a very large number of suggestions which exceeded the number of problems they mentioned. All these suggestions can be easily anticipated by looking at those problems.

Table 4 Distribution of extension personnel according to their characteristics (N = 224).

Characteristics	Number	%
Age		
Less than 30 years	4	1.9
30-	16	7.4
40-	117	54.4
50-	78	26.3
Unknown	9	4.0
Qualification		
Diploma of agric. second schools	148	66.1
B. Sc.	74	33.0
Unknown	2	0.9
Job		
Extension worker	151	67.4
Specialist	48	21.4
Head of a department	22	9.8
Administration director	1	0.5
Unknown	2	0.9
Number of years of experience		
1-9	69	30.8
10-19	90	40.2
20-29	50	22.3
30 +	8	3.6
Unknown	7	3.1
Land holding		
None	128	57.1
Less than one feddan	4	1.8
1–less than 5 feddan	50	22.3
5–less than 10 feddan	22	9.8
10 feddans or more	19	8.5
Unknown	1	0.5
Area of sugar cane		
No holding	128	57.1
Less than one feddan	12	5.3
1–less than 5 feddan	57	25.5
5–less than 10 feddan	13	5.8
10 feddans or more	14	6.3

Source: Questionnaire forms.

5. Conclusions and Recommendations

It can be seen from all problems raised by farmers and extension personnel that some of these problems seem to be chronic such as shortage and high costs of fertilizers, labor, pesticides, and irrigation. Such problems were identified in previous inquiries concerning farmers' problems [5-7]. They are routine problems and their solution rests in the hands of the

Table 5 Production problems mentioned by extension personnel (N = 224).

Problems	Number	%
Shortage and high costs of fertilizers	94	42.0
Shortage and high costs of labor	75	33.5
Differences in planting dates	59	26.3
Shortage of irregular timing of irrigation water	56	25.0
Non-availability of new varieties	55	24.6
Spread of different kinds of insects & diseases	45	20.1
Spread of different kinds of weeds	41	18.3
Over irrigation	31	13.8
Non-leveling by laser	30	13.4
Differences in crop rotation	26	11.6
Non-recommended furrowing rate	25	11.2
Non-availability of calcium sulfate	16	7.1
Non-subsoil plowing	16	7.1
small and fragmented land holdings	15	6.7
Improper pre-harvest irrigation	14	6.3
High salinity of soil	14	6.3
High costs of irrigation	13	5.8
Improper time of planting	12	5.4
Non-availability of cutting machines	12	5.4
High costs of petroleum products	11	4.9
Non-adoption of recommended practices	10	4.5
Over application of nitrate fertilizers	9	4.0
Shortage of insecticides	9	4.0

Source: Questionnaire forms.

Table 6 Marketing problems mentioned by extension personnel (N = 224).

Problems	Number	%
Shortage and high wages of labor	82	36.6
Shortage of irregular transportation means	80	35.7
High costs of transportation	69	30.8
Unsystematic cutting	67	29.9
High costs of cutting and transportation	58	25.9
Low price of product	46	20.5
Steal of product during transportation	44	19.6
Delay of delivery of product	40	17.9
Delay of cutting	29	12.9
High costs of loading	21	9.4
Inaccuracy of weigh	14	6.3
Long distance from factory	11	4.9
High ratio of defects	8	3.6
Delay of getting the value of product	6	2.7
The contract is controlled by the company	4	1.8
High costs of cutting	4	1.8

Source : Questionnaire forms.

government. Farmers and the extension system are responsible for some other problems such as differences in planting dates, over irrigation, differences in crop rotation, non-subsoil plowing, non-laser leveling, improper furrowing, improper pre-harvest irrigation and the like. The solution of these problems rests in the hands of farmers and the extension system. A great role lies on the agricultural extension system in the region to educate farmers and persuade them to adopt recommended practices to increase the productivity of this crop. These efforts will be successful if, and only if, the research centers in the area are capable to produce the proper new technology to achieve this objective.

The solution of most marketing problems rests in the hands of the sugar company, the main buyer of this product. The company should put a systematic plan for cutting, provide loading machines, assist farmers in making better arrangements for transportation, delivery, weighing, and giving farmers the value of their product immediately after weighing. Coordination between the sugar company, the agricultural administration and farmers is urged to overcome most production and marketing problems facing sugar cane growers in Qena governorate.

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