

ORIGINAL ARTICLES

Effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet in some villages of the Nubariya territory

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ABSTRACT

The objectives of the research were to determine the effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop and therefore determine the level of knowledge of the surveyed farmers about technical recommendations for the resistance of some pests and diseases that afflict sugar beet crop, and to convince them with the agricultural extension for implementation, and execution, and they benefit from the implementation of those recommendations, also the research tries to determine the relationship between the degree of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop as dependent variable and some independent variables studied to respondents, as well as identify the problems faced by the surveyed farmers in the field of resistance to certain pests and diseases of sugar beet crop. The research was conducted in province Nubariya, the total sample the 112 examined cases, which representing 10% of the total cultivation of sugar beet's 1120 in the three largest villages in the west Nubariya, in terms of acreage sugar beet season 2012, the data were collected by personal interviews using a form of Surveys during the month of September 2012.

Key words: extension activities, pests, diseases, sugar beet crop

The major search results were as follows:

- 41.1% of the total agricultural respondents fall into the low level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet, while 21.4% of the farmers surveyed in the average level of effectiveness, while 37.5% of Total respondents had fallen in high level of effectiveness of agricultural extension activities.

- That the problems faced by farmers of sugar beet respondents respectively are: the problem of high fertilizer prices by 100% of the total agricultural respondents came first, followed in second place the problem of high prices of transportations of the crop by 75%, while it was ranked third problem is irregular shifts irrigation increased by 65.5%, while the fourth problem is that they could not get the price of the crop on time in factories 63.4%, and finally and in fifth place came the problem of low delivery price in factories by 62.5% of the total agricultural respondents.

- There was significant correlation relationship between the level of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop and each of the following: independent variables age, degree of education the average productivity per Feddan of sugar beet crop, the degree of leadership opinion, the attitude towards outreach activities, and the degree of contact with extension agents and the degree of exposure to sources of agricultural information. There was opposite relationship between the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop and acreage of sugar beet crop.

Introduction and Research problem:

Sugar beet crop is considered as are of strategic crops, which can be based on integrated industrial agricultural communities plus they provide cultivation of irrigation water compared to the requirements agricultural water for sugar cane crop, and appropriate grown in the new lands newly reclaimed and high salinity, as well as the duration of the land only six months to allow the exploitation of the land for the cultivation of other crops for the rest of the year (Ministry of Agriculture and Land Reclamation, 1996: 56).

In addition to its production it contributes to reduce the size of the gap between production and consumption of sugar in Egypt, where decreased self-sufficiency ratio of sugar from 67.5% in 2007 to 60% in

2009, which refers to the widening gap between production and consumption (Ministry of Agriculture and Land Reclamation Land, 2010).

Moreover, the sugar industry and its expanded to fill the gap between production and consumption of sugar in excess of 850 thousand tons of sugar, and it is expected to jump to about 1.5 million tons of sugar in 2017, depending on the availability of raw materials needed for manufacturing as much as the requirements of existing plants and independent and that meet the needs of the country's sugar (the first scientific conference of the union of agricultural occupations, 2012: 6).

Experts stress that the right way to narrow the gap is following the scientific solutions that increase production at all levels, which accomplished by increasing agricultural area of sugar crops (horizontal expansion), or increase the productivity of these crops (vertical expansion), and reduce wastage of them (Seleem, 1990: p 1). Advancement of sugar beet crop productivity depends on a set of technical recommendations, which must be known by farmers so that they can apply them in their fields to increase production. The technical recommendations for resistance of some pests and diseases suffered by sugar beet crop are the most important technical recommendations, as the incidence of pests and diseases cause reduced productivity by about 30-50%, and estimated losses resulting from the disease plant by about 35% (Meligi, 1999: page 3).

The agricultural extension system is responsible for qualifying farmers in these technical recommendations, and helps them on the proper application. Since the human mind is the foundation through its development and freedom in thinking evolve its environment and thrive, and generalized prosperity, who develops behavior and environment commensurate with what he seems fit to continue its growth and development, which is the measure of the growth and direction (Omar, 1980: 26).

The philosophy of agricultural extension is to help people themselves to change their behavior, mental pattern, executive and emotional to address the problems of their lives, in order to raise their level of economical and social conditions as a result of this change (Omar, 1992: 40). Therefore, agricultural extension seeks mainly to make behavioral changes desirable among farmers Whether this change in behavior, mental pattern or cognitive, and executive behavior or skill, and emotional behavior or directional through developing knowledge of farmers to help them implementing efficiently, to increase the level of their productivity.

The problem:

It is apparently mentioned that the importance of the sugar beet crop, which is one of the economically important crops, as the largest crop planted in the new lands and newly reclaimed land and salt, land and low water needs, together with that land duration in just six months So it was expected to deliver this crop active indicative intensive work to provide farming knowledge and skills, and overcome the obstacles facing them for the advancement of generally, and productivity sugar beet crop in particular, work on the expansion in the cultivation of this crop is important to the economy, especially since Egypt suffers from deficit in the production of sugar, estimated at about 850 thousand tons, so that access to self-sufficiency and to eliminate foreign competition that threatens Egyptian sugar market.

Because agricultural extension is the most important organization of the change-oriented, specialized in making behavioral changes in knowledge, skills and attitudes of farmers and help them to cope with their problems, and raise their productivity, and thus improve their economic, social knowledge that will help them implementing the technical recommendations. So Central agricultural extension organization in collaboration with sugar production companies performed several outreach activities to promote the productivity of sugar beet crop in several governorates of the republic, and including Nubaria region where it plants 19210/ acre representing 50.92% of the total area of Egypt.

Because the infestation of pests and diseases suffered by sugar beet crop cause reducing the crop productivity, including an estimated 30-50%, hence This research was conducted to identify the effectiveness of agricultural extension for resisting certain pests and diseases suffered by sugar beet crop province Nubariya, about through the identification of knowledge of farmers in the province Nubariya technical recommendations for resistance to certain pests and diseases of sugar beet crop, and convince them to implement; and executer of these technical recommendations, and benefit from them.

The research is to determine the relationship between the degree of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet and each of the following Independent variables age, degree of education sugar beet acreage crop the average productivity per feddan of the crop, the degree of leadership opinion and the attitudes towards outreach activities, and the attitudes towards some ideas of agricultural, innovations the degree of contact with extension agent and the degree of exposure to sources of agricultural information.

Research objectives:

Consistent with previous research dimensions of the problem presented possible formulation of the following research objectives:

1. Determining the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases sugar beet crop through the following objectives:

A- Determining the level of knowledge of the surveyed farmers about technical recommendations to resist some pests and diseases of sugar beet crop.

b- Determining the level of agricultural extension to convince growers' respondents to implement the technical recommendations to resist some pests and diseases of sugar beet crop.

C - Determining implementation level of farmers surveyed to technical recommendations to resist some pests and diseases of sugar beet crop.

D - Determining the level of benefit that farmers surveyed to technical recommendations to resist some pests and diseases sugar beet crop.

2. Determining the relationship between the degree of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop respondents as the dependent variable and each of the following independent variables age, degree of education and crop acreage of sugar beet, and the average production per feddan of the crop, and the degree of leadership opinion, and the attitudes towards outreach activities, and the trend towards some ideas and agricultural innovations and the degree of contact with extension agent and the degree of exposure to sources of agricultural information.

3. Recognizing the most important problems facing farmers in the field of resistance to certain pests and diseases of sugar beet crop.

Research hypothesis:

To achieve the second objective the research hypothesis was formulated as follows:

There was significant relationship between the effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop and each of the following: independent variables age, degree of education and crop acreage of sugar beet, and the average production per feddan of the crop, and the degree of leadership opinion and the attitudes towards outreach activities , and the attitudes towards some ideas and agricultural innovations and the degree of contact agents with extension and the degree of exposure to sources of agricultural information.

Research method:

The research method includes research on each of the operational definitions, the search area and its sample data collection, processing and quantitative data, and statistical analysis tools. The operational definition Effectiveness: is the ability to achieve the goals.

The effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop: is the ability of extension activities to achieve its objectives through the definition of farmers technical recommendations for resistance of some pests and diseases sugar beet crop, and to convince farmers respondents to implement those recommendations, and the benefit from them.

Research area and Sample:

The area was selected in West Nubariya as the largest sectors of the territory of Nubariya in cultivation of sugar beet crop, reaching acreage of the crop 10,996 acres in 2011, representing 57.24% of the total area of the region, as the three villages were selected in terms of area cultivated beet crop respective Accordingly been selected villages Bilal, Hussein Abu convenience, and Adam reaching area sugar beet cultivated respective 2779 and 2536, and 2053 acres, respectively, representing 37.72%, 34.42%, 27.86% of the total area of this crop in the region.

To achieve the research objectives sample was selected of 10% of farmers of sugar beet crop from selected villages and numbered 1120 randomly from regular payroll of beet sugar farmers in all agricultural associations in the selected villages for season 2012, 42 respondents were chosen from Bilal village, 36 respondents from Hussein Abo Alyosr, and 34 respondents from Adam village. The total sample were 112 respondents.

Data collection:

Data were collected using a prepared personal questionnaire during September 2012. Pre-test was done on 30 respondents from Abo nour Village at west Nubariya. Three parts were included in the questionnaire. The first set of questions to measure the independent variables of respondents, and second to determine the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases sugar beet crop, and the third to know the problems faced by farmers surveyed in the field of research. Quantitative data processing Independent variables:

1. Age: measured by asking the respondent for years to the nearest calendar year, expressed in terms of raw, then divide the respondents according to their age into three categories: young (less than 39 years), and middle age (from 39 - to less than 43 years), and seniors (43 years and older).

2. Degree of education obtaining this variable by asking the respondent about his education, and years of his formal education, then divided respondents into three categories: Mom, and reads and writes without qualification, and holds a qualification, and given the degree of one person illiterate, and two degrees to those who read He writes without qualification, while the rest of the respondents gave each respondent score for each of the years he spent in formal education as follows: From obtained the certificate Primary given six degrees, and obtained the certificate prep given nine degrees, and obtained a high school or diploma Average given twelve ten degrees, and has a degree above average given four ten degrees, and earned a degree given six ten degrees, and obtained the certificate postgraduate high studies or doctoral given twentieth degree, and thus possible to obtain the degree indicates Education Category.

3. Acreage of sugar beet: This variable was measured by raw numbers to the area of sugar beet crop, which has planted (acre) during the year 2012. Then he divided respondents into three categories: a small area (less than 3 acres), an area of moderate (3 - to less than 5 acres), and a large area (5 acres or more).

4. Average productivity per feddan of the sugar beet crop: This variable was measured through the rough figure for the number of tons produced per unit area of agricultural land of the sugar beet crop. Respondents were divided into three categories: low production (less than 10 tons), average production (from 10 - to less than 15 tones), the production is high (from 15 tones and above).

5. Degree of leadership opinion: adopted in measuring this variable on the way self-esteem, no recognition respondent for himself as a source of more information than others, and consists measure of six indications degree leadership opinion of the respondents, was measured this variable by giving respondent grades 3, 2,1 according to the responses: OK, Oossian, and Non-OK, respectively, have ranged degrees respondents between 6 - 18 degrees, and therefore was divided respondents into three categories: leadership low (less than 10 degrees), and the leadership of medium (of 10 - to less than 15 degrees), and the leadership of high (15 degrees or more), and collecting scores obtained by each respondent of the items it is possible to obtain a degree leading each farmer opinion Quested.

6. Attitude towards outreach activities: Use in measuring this variable scale consists of seven statements was considered a step-by-step response patterns, which consists of three responses are OK, Sean, is OK has been given to these responses grades 3,2,1 in the case of ferries positive, and vice versa in the case of ferries negative, has reached the upper limit 17 degrees, and the minimum 9 degrees, and therefore was divided respondents into three categories: negative trend (less than 11 degrees), and the direction of neutral (from 11 - to less than 14 degrees) , and a positive direction (14 degrees and above), and collect grades obtained by the respondent of the scale units can get a degree express direction of the farmers surveyed about outreach activities.

7. Attitude towards some ideas and agricultural innovations: Qais this variable scale consists of eight phrases considered every word of them graded patterns of response, and are intended to speed relative (precession relative) in the application and use of agricultural techniques developed, and standards of social systems which a person belongs, and how encourage these criteria to the process of change; consists of three responses are: OK, and Sian, and is OK, has been given to these responses grades 3,2,1 order in the case of positive phrases, and vice versa in the case of ferries negative, has reached the upper limit 19 degrees, and the minimum 12 degrees, and therefore was divided respondents into three categories, namely: a negative direction (less than 14 degrees), and the direction of neutral (from 14 - to less than 17 degrees), and a positive direction (17 degrees and above), and collect grades obtained by the respondent possible get express degrees trend towards agricultural ideas and methods developed.

8. Contact degree with extension agents: obtaining this variable by asking farmers surveyed on the degree of their discussion in the field of resistance to certain pests and diseases of sugar beet with a public officials are: extension agent, director of Agricultural cooperative, orchards extension agent, counselors Center, and head of the extension Department of the region, and gave Category one degree for every contact with all of the agents mentioned, and therefore was divided respondents into three categories: Poor contact (less than 6 degrees), medium contact (6 - to less than 7 degrees), high (from 7 degrees above), has reached the upper limit 8 degrees

and the minimum 5 degrees, and collect the number of times contact respondents in all official Extension officials during last season, it is possible to obtain the degree of contact with extension agents.

9. The degree of exposure to agricultural sources of information from which it is derived, including farmers respondents their private information in the field of resistance to certain pests and diseases of sugar beet crop. Where we asked farmers respondents about their sources of agricultural regarding resistance to pests and diseases that afflict sugar beet crop, namely: agricultural, extension agent and engineerer of the factory, neighbors, and personal experience, and build on it through the response respondent exposed or not exposed to any of the sources of agricultural information above, were duplicates of each source inventory of sources, was calculated the percentage of those duplicates, then arrange Descending sources accordingly. Ranging over degrees of exposure to sources of agricultural information to farmers of sugar beet crop to carry out the technical recommendations between 1 degree at a minimum, and 4 degrees maximum, and therefore respondents were into three categories: sources of information are weak (less than 2 degrees), and sources of information were medium (2 - to less than 3 degrees), and sources of information were high (more than 3 degrees).

The dependent variable:

Effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop. The level of effectiveness extension activities from the viewpoint of growers of sugar beet = degree of knowledge of agricultural technical recommendations to resist some pests and diseases of sugar beet + convince degree of agricultural extension to farmers respondents to implement these recommendations + carrying out degree of these recommendations + benefit degree from the implementation of these recommendations in increasing the productivity of beet crop Sugar (Ahmed, 2006: p 66).

With regard to the measurement of the level of knowledge of farmers respondents, the respondent were asked about knowledge of each of the technical recommendations to resist some pests and diseases of sugar beet crop, was given two degrees in the case of knowledge of the recommendation, and a degree if he did not know it. And collect scores obtained by each respondent to the recommendations studied possible to obtain the degree to know these recommendations, ranging degrees Know respondents between 18 degrees maximum and 12 degrees minimum, and a mean of 15.73 degrees, and a standard deviation of 1.95 degrees. Accordingly respondents were divided into three categories according to their level of knowledge of those recommendations, namely: the level of knowledge was low (less than 14 degrees), and the level of knowledge was average (from 14 - to less than 17 degrees), and the level of knowledge was high (17 degrees and above).

To measure the level of persuasion of agricultural extension to farmers respondents implementation of technical recommendations for resistance of some pests and diseases that afflict sugar beet crop, respondents had been asked how agricultural extension convince farmers respondents to implement those recommendations which were given grades 4, or 3, or 2, or 1 according to his persuasion response high, or persuasion implemented a moderate, or persuasion implemented poorly, or not be convinced for implementation respectively, and collect grades obtained by the respondent to the recommendations to obtain the convince degree of agricultural extension to farmers respondents implementation of technical recommendations studied, ranged convince degrees of agricultural extension to farmers respondents implementation between 33 degrees maximum and 12 degrees as minimum, with arithmetic mean = 21.05 degrees, and standard deviation 5.18 degrees, and therefore were respondents divided according to the persuade level of agricultural extension to farmers respondents to implement the recommendations into three categories: convince level low (less than 19 degrees), and convince level average (19 - to less than 26 degrees), and a high convince level (26 degrees and above).

On measuring the level of implementation of agricultural subjects for substantive recommendations of some resistance to pests and diseases of sugar beet crop, the respondent were asked about implementation of each of the technical recommendations studied, and was given two degrees in the case of the implementation of the recommendations, and one degree in the case of failure to perform them. And collected scores obtained by each respondent to the recommendations to obtain the implementation degree of these recommendations, ranging between 18 degrees as maximum, and 9 degrees as minimum, and an arithmetic mean 15.13 degrees, and a standard deviation 2.44 degrees. Accordingly respondents were divided into three categories according to the level of their implementation of those recommendations, namely: the level of knowledge was low (less than 12 degrees), and the level of knowledge was average (from 12 - to less than 15 degrees), and the level of knowledge was high (15 degrees and above).

As for the level of respondents benefit of technical recommendations for resistance of some pests and diseases that afflict sugar beet crop, has been asked respondent how he benefited from those recommendations and gave him grades 4, or 3, or 2, or 1 according to his beneficiary response high or medium, or poor, or not beneficiary, and collected grades obtained by the respondent to the recommendations to obtain the degree he benefited from the implementation of the recommendations and ranged benefit degrees between 36 maximum,

and 9 minimum score, with an arithmetic mean 20.88 degrees, and a standard deviation 10.44 degrees. Accordingly respondents were divided according to the level that they benefit from the implementation of the recommendations into three categories: low benefit level (less than 18 degrees), average level (18 - to less than 27 degrees), and high level (27 degrees and above).

Regarding to the effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop has been measured by collecting knowledge degrees of farmers to the recommendations any convince grades of agricultural extension to farmers to implement, and degrees of its carrying out and degrees of benefit from the implementation of those recommendations, and those grades ranged between 100 degrees as maximum, and minimum degrees, 46 and with an arithmetic mean were 72.79 degrees and standard deviation 16.77 degrees. . Accordingly respondents divided were according to the level of effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop into three categories: level of effectiveness was low (less than 63 degrees), and level of effectiveness average (from 63 - to less than 82 degrees), and a high level of effectiveness (82 degrees and above).

Statistical analysis tools:

Data were analyzed by arithmetic mean, standard deviation, the percentage of the average, and Pearson simple correlation coefficient also used tabular presentation and percentages to view the results, data were analyzed by computer using the SPSS program.

Research findings:

First:

the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop. This part of the research review of the results that have been reached regarding the effectiveness of extension activities in the field of resistance to certain pests and diseases of sugar beet crop, through Results reached regarding each of respondents knowledge to the recommendations and agricultural extension convince to farmers to implement them and the implementation of them, and their benefit from the implementation of these recommendations. The following are the most important results that have been reached in this regard.

A- level of knowledge of farmers to technical recommendations in the field of resistance to certain pests and diseases sugar beet crop The results in Table (2) that 25% of the total respondents their level of knowledge were low to the studied technical recommendations, and the proportion of 27.7% of them had average level of knowledge, while the proportion of 47.3% of them were high level of knowledge items thoughtful recommendations. These results indicated that more than one-third of respondents increased by 47.3% as high level of knowledge of the studied technical recommendations, which indicated high cognitive level of the respondents, which may indicate the need to continue to provide sugar beet growers with correct technical information for the field of resistance of some pests and diseases which affect positively on increasing the productivity of sugar beet in the study area.

B- The level of agricultural extension convince growers respondents to implement the recommendations of the Special Technical resistance to certain pests and diseases of sugar beet crop The results in Table (2) also 9.9% of the total respondents had a low level to convince them to implement the recommendations and the proportion of 26.7% of them had convince the average level, while the proportion of 63.4% of them a high level to convince them to implement the recommendations. These results indicated that more than half of farmers of the total agricultural respondents were accounted high to convince agricultural extension them to carry out technical recommendations which requires from agricultural extension to made great effort of work to continue to convince growers of sugar beet to implement the technical recommendations to increase the productivity of sugar beet crop.

C- The level of implementation of the sugar beet growers to technical recommendations of the field of resistance to certain pests and diseases The results showed in Table (2) that 37.5% of the total respondents level of their implementation of the recommendations were low, and the proportion of 40.1% of them carrying out level, was average while the proportion of 22.9% was them a high level of their implementation of the recommendations. These results indicated that 77.6% of the total respondents carrying out level was between among low-and average technical recommendations which indicated a decrease of executive respondents, level and indicated to the weak of agricultural extension to convince growers of sugar beet to implement the correct technical recommendations for resistance Some pests and diseases of sugar beet crop, which leads to decrease of sugar beet production in the study area.

D- The level of benefit of farmers respondents from implementing the technical recommendations for resistance to certain pests and diseases of sugar beet crop The results of the research in Table (2) that 37.5% of

the total respondents benefit level from the implementation of the recommendations was low, and 25% of them benefit level was medium while the proportion of 37.5% of them were high level of benefit from the implementation of the recommendations. These results indicated that 37.5% of the total respondents were equal for both benefit low-and high for the implementation of technical recommendations and referred to the fluctuation of the activities of agricultural extension in benefiting farmers for the implementation of correct technical recommendations to resist certain pests and diseases of sugar beet crop, which requires from agricultural extension organization to exert great effort to benefit sugar beet growers with high degree according the technical implementation of recommendations to increase the productivity of the crop.

E- The total score for the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop The results in Table (2) that 41.1% of the total respondents fall in the level of low effectiveness of agricultural extension while showing that 21.4% of the total respondents had signed in the level of average, effectiveness of agricultural extension while showing that 37.5 % of the total respondents fall in the level of high effectiveness agricultural extension. These results indicated that more than one third of the farmers surveyed by 41.1% of the total agricultural respondents have fallen into the low effectiveness of agricultural extension due to weak effectiveness of agricultural extension as a source of farmers, information to implement the studied, recommendations. It is necessary need to set training sessions in the field of research so that the farmers could be benefited much better to implement the recommendations in the field of technical resistance to certain pests and diseases of sugar beet.

Second:

the relationship between the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop and all of the independent variables.

The data indicated in the table number (1) the distribution of agricultural respondents according to their characteristics that 50% of the total agricultural respondents those with old age. These results indicated that about half of respondents were old, and had personal experience in the field of agriculture. Which calls for extension agencies to intensify all efforts necessary to them It was: dictated that 62.5% of the total agricultural respondents hold educational degrees which indicated that most of farmers high level of education, which calls for increasing the extension efforts and taking care of educated groups and set training courses for them in the field of research. While the proportion of 50% of the total agricultural respondents those with large sugar beet average, which calls for direct extension programs for large areas holders of agricultural areas of the sugar beet so they can take advantage of these programs and therefore interested in increasing their of area cultivation of sugar beet standing, and increasing crop production. The results also showed that 62.5% of the total agricultural respondents those with average, production which indicated that the average productivity per feddan of sugar beet average and this let those extension organizations to continue to provide the appropriate conditions for farmers so that they can increase productivity more they got before indicated 75% of the total agricultural respondents with leadership degrees equally between medium and high, and this refers to the need to direct some of the outreach programs specialized for sugar beet crop through seminars and field days for farmers and local leaders to gain greater expertise in this area to resist certain pests and diseases of sugar beet. While showing that 75% of the total agricultural respondents those with a high degree, and suggests that the Preference farmers respondents tend to rise, and this necessitates the need to direct outreach extension to these farmers for their responses about what agricultural extension gave them extension bulletins indicative them Societies agricultural villages, and also through the work of guiding fields of sugar beet until they can increase the production of sugar beet crop lands. The results showed that 75% of the total agricultural respondents people with average attitude degrees towards some ideas and agricultural innovations due to the need to make the effort of the agricultural extension towards the dissemination of ideas and innovations in the area of research among farmers so that they can adopt these new ideas to work on increasing the productivity crop. The results also showed that 58% of the total agricultural respondents had weak degrees of contact with extension agents, and this showed a decrease communication between farmers respondents and extension agents by more than half, which is called the effort of extension towards set intensive training courses in the field of resistance to certain pests and diseases of beet sugar area search to extension agents so that they can persuade farmers with technical recommendations which coming from agricultural extension for persuading farmers to implement and work on increasing the productivity of feddan unit of sugar beet and the results showed that 50% of the total respondents were poorly exposed to sources of agricultural information at recommendations items and the remaining ratio were between middle and high. These results indicated the weakness of the degree of exposure to agricultural sources of information which sugar beet growers were obtaining information in the field of resistance to certain pests and diseases.

To determine the relationship between the level of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop and all of the independent variables the hypothesis was formulated Statistically as it there was no significant relationship between the level of effectiveness of the

extension activities in the field of resistance to certain pests and diseases of sugar beet crop and each following: independent variables age, degree of education acreage of sugar beet, crop the production average per feddan of the crop, the degree of leadership opinion, the attitude towards outreach activities, the attitude towards some ideas and agricultural innovations, the degree of contact with extension agents, and the degree of exposure to sources of agricultural information . To test the validity of this hypothesis pearson simple correlation coefficient was used.

The results listed in Table No. (3) indicated that three was significant relationship at the level of 0.01 between the level of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop and all of the following: independent variables Age worth 0.248, and the degree of leadership, opinion a value of 0.252 and the attitudes towards outreach activities, 0.353, the degree of contact with extension agents value of 0.748, and the degree of exposure to sources of agricultural information value of 0.513, These values were more than the tabulated values or 0.01 significant level. There was a positive significant relationship at the level of 0.05 between the level of effectiveness of the extension activities in the field of resistance to certain pests and diseases of sugar beet crop and all of the following: independent variables the degree of education worth 0.202, and the average at productivity per feddan of sugar beet crop worth 0.229 and two values were larger than its tabulated values. There was, positive significant relationship at the level of 0.05 between the level of effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop and acreage of sugar beet crop value -0.192 which is greater than its tabulated values.

Based on previous results statistical hypothesis could be rejected and research hypothesis could not be rejected and the research hypothesis, were rejected to attitudes variables toward some ideas and agricultural innovations.

Third:

the problems facing the sugar beet crop growers The results of Table (4) indicated that the problems faced farmers surveyed in descending order as follows:

Table 1: shows the distribution of the farmers surveyed and according to studied personal characteristics: (n = 112)

Serial	Personal characteristics	number	%
1-	Age		
	age (less than 39 years)	28	25
	Middle age (39 - to less than 43 years old)	28	25
	Old age (43 + years)	56	50
2-	degree Education Category		
	Illiterate	28	25
	Reads and writes without an educational degree	14	12.5 62.5
	holds as educational degree	70	
3-	acreage farmed with sugar beet		
	Small area (less than 3 acres)	42	37.5 12.5
	Medium area (3 - to less than 5 acres)	14	50
	Large area (5 acres and more)	56	
4-	Average productivity per feddan		
	Low production (less than 10 tons)	28	25
	Average production (10 - to less than 15 tones)	70	62.5 12.5
	High production (15 tons and more)	14	
5-	leadership opinion		
	Low leadership (less than 10 degrees)	28	25
	Average leadership (10 - to less than 15 degrees)	42	37.5 37.5
	High leadership (15 degrees and above)	42	
6-	Attitude towards outreach activities		
	Negative attitude (less than 11 degrees)	14	12.5 12.5
	Neutral attitude (11 - to less than 14 degrees)	14	75
	Positive attitude (14 degrees and above)	84	
7-	the trend towards new agricultural methods:		
	Negative trend (less than 14 degrees)	14	12.5 75
	Neutral direction (14 - to less than 17 degrees)	84	12.5
	Positive direction (17 degrees and more)	14	
8-	Contact with extension agent:		
	Poor contact (less than 6 degrees)	65	58
	Average contact (6 - to less than 7 degrees)	16	14.3
	High contact (7 degrees and above)	31	27.7
9-	Agricultural information sources		
	Poor source (less than 2 degrees)	56	50
	Average source (2 - to less than 3 degrees)	31	27.5
	High source (3 degrees or more)	25	22.3

Table 2: Distribution of respondents according to their degree of knowledge, persuasion, implementation benefit, and the degree of the total effectiveness of agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet crop

Level Categories	knowledge		Agricultural extension knowledge to convince the growers to implementation		execution		Benefit from the implementation		the overall degree of implementation effectiveness of agricultural extension activities	
	number	%	number	%	number	%	number	%	number	%
Low	28	25	11	9.9	42	37.5	42	37.5	46	41.1
Medium	31	27.7	30	26.7	45	40.1	28	25	21	21.4
High	53	47.3	71	63.4	25	22.9	42	37.5	42	37.5
Total	112	100	112	100	112	100	112	100	112	100

Table 3: correlation coefficients of the relationship between the degree of effectiveness of the activities in the field of agricultural extension resistance to certain pests and diseases of sugar beet crop and each of the independent variables studied to respondents

Serial	Independent variables	Correlation coefficient values
1-	Age	0.248 **
2-	Degree of education	0.202 *
3-	acreage of sugar beet	0.192 *
4-	Average productivity per feddan of sugar beet crop	0.229 *
5-	degree of leadership opinion	0.253 **
6-	Degree of attitude towards outreach activities	0.353 **
7-	Degree of attitude toward some ideas and innovations	0.054
8-	Contact degree with extension agent	0.748 **
9-	agricultural information sources	0.513 **

** Correlation coefficient significant at the level of (0.01) and degrees of freedom (n-2) = 110 and tabular value =

* Correlation significant at the level of (0.05) and degrees of freedom (n-2) = 110 and tabular value =

Table 4: in descending order of the problems facing the sugar beet crop growers in Resistance to certain pests and diseases, according to the frequencies and percentages for each

Serial	problems	No. of respondents	%
1-	high prices of seeds	112	100
2-	high fertilizer prices	84	75
3-	high transportation rates	70	62.5
4-	lower delivery rate prices of the factory	63.4	71
5-	not get the price of the crop time handed over to the factory	65.5	73
6-	irregular shifts of irrigation	42	37.5
7-	non-existence except for one factory in the region	112	100

Where the problem of high fertilizer prices came in the first place by 100% of the total agricultural respondents, followed in second place the problem of high transportation rates of the crop by 75%, while it was ranked third with erratic shifts irrigation by 65.5% of the total agricultural respondents, while the problem about came not get the price of the crop time to the factory 63.4% of the total agricultural respondents ranked fourth, and finally came in the fifth and final delivery problem about low price of the plant by 62.5% of the total agricultural respondents in search area. This requires from extension organization to work on solving the problems facing farmers' respondents so that they can increase the acreage of the crop and increase production per unit area.

Applied benefits:

1- The need to extension outreach activities related to technical recommendations for the sugar beet crop in general and the fight against pests and diseases suffered by sugar beet crop in particular, so that the farmers benefit much better to implement the recommendations.

2- The need to take advantage of the independent variables which have correlation effectively with agricultural extension activities in the field of resistance to certain pests and diseases of sugar beet in the planning and implementation of these activities.

3- It requires from extension organization to work to solve the problems facing farmers' respondents so that they can increase the acreage of the crop and increase production per unit area.

References

Ahmed, Mohammed Sayed Mohammed, 2006. the effectiveness of agricultural extension in the field of resistance to certain diseases of vegetables in Qalubia, PhD, Faculty of Agriculture, University of Banha.

- Meligi, Mohamed Hazem Abdel-Maksoud, 1999. the educational needs of growers with regard to the prevention of some diseases of cotton, Menoufia, Research Bulletin No. 216, Research in the Institute of Agricultural Extension and Rural Development - ARC.
- Agricultural Magazine, Issue 629, April (2011).
- The first scientific conference "Agriculture Egyptian reality and the future of the Union of Professional Agricultural Committee of Culture and Information, 2012.
- Seleem Fouad Kamal Eldinn, 1990. the need for agricultural extension for rural women to reduce the loss in productivity of apricot crop in Qalubia and Fayoum governorates ,a research n.67 in the Institute of Agricultural Extension and Rural Development - ARC.
- Omar, Ahmed Mohamed, 1980. Agricultural Extension .Officet Publisher, Cairo.
- Omar, Ahmed Mohamed, 1980. Current Agricultural Extension, Egypt for educational service, Cairo.
- Ministry of Agriculture and land Reclamation, sugary Crops Council, the Institute of sugary Crops in Egypt.
- Ministry of Agriculture and land Reclamation, the central Management of agricultural extension, 2010: research n.335, Cairo.
- Ministry of Agriculture and land Reclamation, the Directorate of agriculture in new land in Nubariya, 2012 unpublished data.
- Ministry of Agriculture and land Reclamation, 2012. Central management for Agricultural Economy, the Economical Agricultural Research.