Farmers' Rationalization with the Recommended Practices to Reduce salinity of Agricultural Lands In the New Valley Governorate

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Abstract

The research aimed to identify the degree of farmers' awareness of the most important causes that lead to the occurrence of the phenomenon of soil salinity, to recognize the degree of respondents' familiarity with the negative effects of soil salinity, to get to know respondents' knowledge and implementation level regarding the recommended technical practices to reduce land salinity, to identify The degree of their attitude towards towards the recommended technical practices to reduce the level of soil salinity, to get acquainted with respondents' viewpoint on the role of the agricultural extension system to curb the level of soil salinity, to determine the relationship between respondents' level of knowledge and implementation of the recommended technical practices and the studied independent variables and to define the , to define the proportion of contribution of the variables' of significant correlation in explaining the total variance. The research was carried out in El Kharga and Dakhla Centers in the New Valley Governorate. A systematic randomized sample comprised 303 of farmers with agricultural land possession as 172 farmers from (El Karga Village production) representing (7 %) of the total sample, and 131 farmers from (Mout Village) representing (7 %) of the total sample. Data were collected using a questionnaire form prepared and tested to achieve the objectives of the research, several statistical methods to analyze field data i.e. the tabular presentation with frequency, the Percentages, the Average, Arithmetic Mean, Relative Mean, the Weighting average, standard deviation, the Simple Correlation Coefficient, Spearman's Correlation coefficient of ranks for, the computer program of the Statistical Package for Social Sciences (SPSS) and (Step-Wise Multiple Correlation and Regression) were also used.

The study concluded the following important results:

1- The most crucial causes that led to the occurrence of the phenomenon of soil salinity was the high level of salinity of the groundwater with an average capacity of 2.97 with 99%, and the natural presence of salts in the soil with an average of 2.95 degrees with 98.3%.

2- The most negative effect of the phenomenon of salinization of agricultural lands is the sale of agricultural land and the purchase of another fertile area with a moderate degree (2.9) degree or 96.7%, followed by many lands becoming unfit for agriculture with a moderate degree of (2.79) degrees of 93%.

3- 46.5% of the respondents had a moderate level of knowledge, 30.7% of them had a high level of knowledge, while only 22.8% of them had a low level of knowledge of the recommended technical practices.

4- 47.2% of the respondents were of moderate implementation level, 36% of them had a high level of implementation, while only 16.8% of them had a low level of the recommended technical practices..

5-- The degree of respondents' knowledge of the recommended technical practices to reduce salinity in agricultural lands according to the arithmetic mean were: practices related to drainage and irrigation with arithmetic mean 222.3 degree, practices related to fertilization with arithmetic mean 171.1 degree the cultural practices with arithmetic mean 152.6 degree.

6- The degree of respondents' implementation of the recommended technical practices to reduce salinity in agricultural lands according to the arithmetic mean were: practices related to drainage and irrigation with arithmetic mean 163.1degree, practices related to fertilization with arithmetic mean 140.6 degree the cultural practices with arithmetic mean 125.4 degree.

7- The percentage of respondents with a neutral attitude to reduce the level of soil salinity in the research area came to 51.8% of the total number of respondents, and that the percentage of respondents with a pro-directional attitude was 31.7%, while the percentage of respondents with an unfavorable trend was 17.2% of the total number of respondents.

8- The most important activities carried out by agricultural extension system to reduce soil salinity was to facilitate farmers' access to production requirements from agricultural cooperatives recorded a moderate degree of (3.2) degree with 80%, and offering the advice and counsels to farmers pertaining the reduction of soil salinity level came to an average degree of (3) with 75 %.

9- There was significant correlations between the degree of respondents' to the recommended technical practices to minimize the level of soil salinity and the following studied independent variables: years of education, size of agricultural holding, degree of participation in organizations, degree of utilization of information sources, type of Agricultural tenure, types of crops grown, all are significant at the level of 0.01, while there was a

significant relationship at the level of 0.05 for the independent variable i.e. the degree of desert environmental participation.

10- The percentage of calculated "F" reached (51.409), which is significant at the significance level of 0.01, and value of the modified determination coefficient was 0.464, indicating five independent variables. explaining 46.4% of the total variance in the degree of respondents' 'knowledge of the recommended practices to reduce the level of soil salinity.

11- There was a significant correlation between respondent's degree of implementation of the recommended technical practices to curb soil salinity level and the following studied independent variables: number of years of education, size of agricultural holding, size of animal possession, degree of participation in organizations, and degree of utilization of resources Information, marital status, type of agricultural holding, all were significant at the level of 0.01.

12- The percentage calculated "P" reached (48,229), which is significant at level 0.01. The value of the modified coefficient of determination was 0.448 indicating five independent variables that explain 44.8% of the total variance in the degree of respondents' implementation of the recommended technical practices to reduce the level of soil salinity in the research area.

13- the most crucial problems facing respondents to curb salinity in agricultural lands in the research area was lack of agricultural drainage in most of the agricultural lands with 2.9 degree with 96.7 %.

14- The most common solution suggested by the respondents was establishing drainage system in all the agricultural fields with 93 %.