

Farmers' knowledge of risks of the unsafe use of the pesticides used in agricultural pest control in the South Sinai Governorate

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Summary

The research was mainly done to identify the level of farmers' knowledge of the technical recommendations related to the risks of unsafe use of some pesticides used in the control of agricultural pests, to recognize the preventive measures followed for the use of pesticides in the field, and to identify the most important sources of information on handling pesticides, storing and dispose of pesticides remains, identify the role of agricultural extension in introducing farmers to the practices of the unsafe use of some pesticides used in agricultural pest control, and to determine the relationship between the farmers' level of knowledge of the recommendations related to the risks of unsafe use of some pesticides used in agricultural pest control and the independent variables studied, and define the ratio of contribution of each of the independent variables of significant correlation in explaining the total variation of respondent farmers' knowledge of the technical recommendations of the unsafe use of agricultural pests control at the study area.

The study was carried out in Ras Sidr Center, South Sinai Governorate, on a sample of 291 respondents representing 24% of the total respondents. Data was collected through a personal interview using a questionnaire form specially prepared for this research, the sample was randomly selected in a regular systematic way during May and June 2020, to present and analyze the data, Replicates Percentages, Mathematical mean, Standard deviation , Simple Pearson correlation coefficient and Step-Wise

The study concluded the following results:

- 1- Results showed that 45.4% of respondents had low knowledge of the studied recommendations, 29.9% of them had moderate knowledge, while only 24.7% had high knowledge level to the studied technical recommendations.
- 2- Results showed also that the degree of respondents' use to the preventive measures followed in controlling agricultural pests reached a moderate level of 18.73 with 52 %, and the highest degree of using the preventive measures was reading and getting familiar with the pest brochure before applying it with a moderate level of 2.52 % with 84 %, making sure of the expiry date of the pesticide with a moderate level of 2.48 % with 82.7 %, calculating the amount of the pesticide to be sprayed with a moderate

- degree of 2.36 % with 78.7 % and not using the hand without protection when mixing the pesticide with a moderate level of 3.9 % with 97.5 %.
- 3- Results indicated that the degree of the total benefit of the information sources used by respondent farmers regarding handling, applying, storing and disposing of the remains of pests reached a moderate level of 30.3 % with 62.7 % and the highest source of information came from reading and applying the recommendations in the pest brochure with a moderate level of 3.9 % with 97.5 %.
 - 4- There was a significant relationship at significance level of 0.01 between: number of years of respondent's formal education, the area of agricultural holding, the degree of official social participation, the degree of non-official social participation, the degree of willingness to change, the degree of attitude toward agricultural extension, and the degree of attitude toward adopting the agricultural innovations and the level of knowledge of respondent farmers about the technical recommendations related to the risks of unsafe use of some the pesticides used in agricultural pest control, while there was a significant relationship at the level of 0.05 for both number of family members and the period of experience in the agricultural field.
 - 5- Results indicated the significance of the statistical model at the seventh step, as the calculated "F" reached (36.740) at significance level of 0.01, and the value of the modified determination factor was 0.476, meaning that there were seven independent variables out of the total independent variables explaining about 47.6.% of the total variation for the level of farmers' knowledge of the technical recommendations related to the risks of unsafe use of some pesticides used in agricultural pest control.