Determinants of sustainable agriculture in New Valley governorate, Egypt

A. M. Diab and H. M. Tohamy

Abstract:

The purposes of this study are to: 1) measure respondents application of sustainable agriculture technologies in the study area, 2) identifying factors determine this level of application, and 3) determine problems facing the agricultural sustainability from the viewpoint of farmers in the study area. Three villages (Al-liwaa Sobieh, Abdel-Mageid Al-Goghail, and Talaat Dergham) belonging to the New Valley observatory for development and cooperatives, Farafrah, New Valley governorate were selected to be the place of the study. Data were collected from a sample of 135 respondents (60, 37, and 38 respectively) during the period of June and July 2016 by personal interview using questionnaire form. Frequencies, percentages, range, average, standard deviation, Cronbachs Alpha, one way ANOVA, and Step-Wise multiple regression analysis were used for data analysis and results presentation. Findings of the study revealed that F value was not significant at any probability level; this indicated that there are no mean differences of farmers application of sustainable agriculture technologies within the three studied villages; this resulted on the combination of the three studys samples into one sample. Results also revealed that farmers application of sustainable management of agricultural resources could be ranked as: animal resources (79.6% of the maximum score), plant resources (64.6% of the maximum score), land resources (61.4% of the maximum score), and finally water resources (56.9% of the maximum score). The average score of farmers application of sustainable agriculture was 39.81 (64.2% of the maximum score). The majority of respondents (63.7%) were located in the medium level of sustainable agriculture scale. Regarding factors determine level of adoption of sustainable agriculture technologies, results show that there are significant relationships between farmers sustainable management of plant resources and 8 independent factors, 3 of them explain about 42.3% of differences in the dependent variable. Five independent variables were significantly related with farmers sustainable management of land resources, 3 of them explain about 23.4% of differences in the dependent variable. Five independent variables were also significantly related with farmers sustainable management of water resources, one of them explain about 7.6% of differences in the dependent variable. Findings also show that there are significant relationship between 9 independent variables and farmers sustainable management of animal resources, 3 of them explain about 54.1% of differences in the dependent variable. With regard to the total score of sustainable agriculture scale, results show that there are 7 independent variables related to farmers application of sustainable agriculture technologies, 2 of them explain about 39.2% of differences in the dependent variable. Finally the study determined problems facing sustainability of agriculture and concluded some recommendations.

Keywords:

Published In: