J. Agr. Sci. Tech. (2014) Vol. 16: 957-967

Identification of Factors Affecting Adoption of Soil Conservation Practices by Some Rainfed Farmers in Iran

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ABSTRACT

In recent decades, large investments have been made to introduce soil conservation methods, but most of these efforts have had limited success in achieving the goals. As a result, attempt to identify the factors deterring or promoting adoption of soil conservation practices is important. Therefore, this study aimed to investigate factors affecting adoption of soil conservation practices by rain-fed farmers. Data were gathered from 178 farmers of Izeh County in Khuzestan Province, Iran, during 2010 crop season. An ordered Logit regression model was applied to analyze the data. The results have revealed that farmers' perception of soil erosion and their knowledge about soil conservation practices, farms size, and grant funding have a positive effect, while farmers' levels of academic education and number of plots have negative effects on farmers' adoption. To promote adoption of conservation practices, awarding grants, holding targeted training/extension classes to increase farmers' knowledge about soil erosion, and methods of coping with it are suggested.

Keywords: Erosion, Ordered logit model, Soil conservation measures'.

INTRODUCTION

The geographical position and agro-ecological conditions of Iran have made it vulnerable to soil erosion and it is one of the Asian countries with a large volume of soil erosion (Mahboubi, 2004). Annual erosion rate of 33 tons per hectare reveals severity of land degradation and impose huge economic loss to the country (Iranian Soil and Water Research Institute, 2012). Some statistics show that through erosion, useful capacity of the country's dams reservoirs is annually reduced by one percent (1%) due to sedimentation, which is about 180 million cubic meters (Mahboobi, 2004). Furthermore, soil erosion results in crop production decrease and gradual decline in fertility of ten million hectares of rainfed lands of the country (Mahboobi, 2004). The Izeh County, located in Khuzestan Province, is one of the erodible areas of Iran. According to the statistics published in 2009, the annual erosion rates in that basin were around 15.23 tons ha^{-1}, while in the other areas of the county it varied between 20-25 tons ha^{-1} which exceeds the range of acceptable level (Forests, Range and Watershed Management Organization of Khuzistan, Iran 2010). Considering this fact that about 45% of the county's population are in the rural areas and more than 90% of them do rain-fed farming, in case the land is lost due to erosion, irreparable damages would happen to the region's rural population. Therefore, these lands should be preserved in any possible ways. Furthermore, loss of arable land due to soil erosion causes poverty and underdevelopment in the rural communities and it raises migration rate of villagers to

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surrounding cities, which is followed by social problems in the cities and non-sustainability in the rural areas. Therefore, the present study was conducted to investigate the factors influencing the adoption of soil conservation practices (mechanical and non-mechanical) by some rain-fed farmers of the country using ordered Logit regression model, to identify these factors and suggest appropriate recommendations and proper policy instruments to encourage farmers to do conservation practices, and decrease soil erosion in the area. Many studies have been done focusing on factors influencing the adoption of soil conservation practices. Shiferaw and Holden (1998), by examining effective factors on conservation technologies' adoption in Ethiopia, have found that farmers' perception of soil erosion and features of protective technologies, household, land and farm characteristics, and land quality attributes have significant effect on peasants' decision making concerning conservation practices. Demeke (2003) investigated factors influencing the adoption of soil conservation practices introduced in North West of Ethiopia. The results revealed that variables like farm size and awareness of the conservation methods have a positive influence on farmers' decisions to adopt conservation structures. However, factors like farm's distance from home, access to off-farm employment, and insecurity of tenure can have a negative effect on their decision. Karimi and Chizari (2004) studied the factors affecting adoption of conservation technologies in Markazi province of Iran. The results showed that factors like using governmental credit and loans, education level, age and farmers' perception towards soil conservation had a direct effect on technology adoption. Bayard *et al*. (2006), in their research done in Haiti, discovered that farmers' personal characteristics, institutional factors such as their membership in the local group, training on soil conservation, the per-capita income and land size influence the adoption of soil conservation. Shafiei (2007) investigated the role of communication and information technology on adoption of soil conservation practices by farmers of Karkheh and Dez watershed in Khuzestan Province of Iran. The results revealed a significant relationship between adoption and using information sources and communication channels as well as having access to communication and information technology's infrastructures. Torshizi and Salami (2007) identified factors which affected soil conservation practices for a group of farmers in Khorasan Razavi Province, using the Logit model. The results suggested significant influence of awareness of the effects of soil conservation index, education, land price, ratio of sloping land under cultivation compared to the total cultivated area, family labour force employed in agriculture, and percentage of farming income on probability of adoption. Asafu-Adjaye (2008) explored effective factors on Fijian cane farmers' on adoption of soil conservation measures. The results of the study showed that the significant factors affecting soil conservation effort were perception of the erosion problem, net farm income, farm size, land type, and extension services. Wollni *et al*. (2008) examined the effect of participation in organic markets and farmer-driven organization on adoption of soil conservation practices by farmers. The results showed that farmers' participation in each of these two sets, had positive effect on the number of practices adopted. Also, political activities, such as providing technical and extensional assistance played an important role in the sustainable management of soil. Junge *et al*. (2009) studied farmers' attitudes towards erosion and adoption of soil conservation technologies in Nigeria. In their study, low labour demand, common access, low cost and simplicity of operation and compatibility with existing agricultural systems were the factors that influenced the adoption. Rezvanfar *et al*. (2009) examined factors affecting adoption of sustainable soil conservation practices by wheat growers in

Varamin region of Iran. Their step by step regression analysis showed that knowledge of wheat growers could explain 83% of the adoption. The research of Wauters *et al*. (2010), in Belgium, concluded that attitude towards soil conservation practices explained the adoption, and future interventions to encourage erosion control measures, and should be directed at changing farmers' attitudes. Generally, findings of these studies have revealed that factors like farmers' educational level, their wealth and income, their perception of soil erosion and knowledge of conservation methods, their family size as well as land's characteristics like slope, fertility, distance from farmer's home, farmers' participation in related extension classes, farming system and access to governmental grants for conservation practices have significant effects on adoption of soil conservation measures. Therefore, considering the environmental and cultivation characteristics of the region besides the opinion of the agricultural experts and similar studies that have been done in the country (Karimi and Chizari 2004; Mahboubi, 2004; Rezvanfar *et al*, 2009; Shafiei, 2007; Torshizi and Salami 2007), some of the factors which were assumed to be effective on farmers' adoption of conservation practices in the area were chosen in the present study.

MATERIALS AND METHODS

Regarding discrete nature and ordinal ranking of the dependent variable, which is different levels of adoption of soil conservation practices, an ordered Logit regression was applied that is the most appropriate choice in such issues (Haghjou *et al.*, 2013). In this model, the dependent variable is placed under a set of assumptions and with respect to different specified classes it takes some amounts (Greene, 2005). The model is set up around a latent regression that starts with:

$$Y^* = X'\beta + \varepsilon \qquad (1)$$

In which y* is unobserved and what can be observed is:

$$y_i = \begin{cases} 0 & if \quad y^* \le \mu_1 \\ 1 & if \quad \mu_1 \prec y^* \le \mu_2 \\ 2 & if \quad \mu_2 \prec y^* \le \mu_3 \\ \vdots & \\ J & if \quad \mu_{j-1} \le y^* \end{cases} \qquad (2)$$

Model 2 represents a form of censoring and the μ and s are unknown parameters that would be calculated with β.

The main assumption is that ε is normally distributed across observations. By normalizing the mean and variance of ε to zero and one, the following probabilities are obtained:

$$\begin{aligned} &prob(y=0 \mid x) = F(-x'\beta) \\ &prob(y=1 \mid x) = F(\mu_1 - x'\beta) - F(-x'\beta) \\ &prob(y=2 \mid x) = F(\mu_2 - x'\beta) - F(\mu_1 - x'\beta) \\ &\vdots \\ &prob(y=j \mid x) = 1 - F(\mu_{j-1} - x'\beta) \end{aligned} \qquad (3)$$

Since all probabilities should be positive, the following condition must be established:

$$0 \prec \mu_1 \prec \mu_2 \prec \ldots \prec \mu_{j-1}$$

Because the model's coefficients are not equal with the marginal effects of regressors x on the probabilities, the marginal effects of changes in the regressors could be computed by the patterns below (Maddala, 1991; Greene, 2005):

$$\begin{aligned} &\frac{\partial prob(y=0 \mid \mathrm{x})}{\partial x_i} = -F(-x'\beta)\beta \\ &\frac{\partial prob(y=1 \mid \mathrm{x})}{\partial x_i} = \left[F(-x'\beta) - F(\mu_1 - x'\beta)\right]\beta \\ &\vdots \\ &\frac{\partial prob(y=j \mid \mathrm{x})}{\partial x_i} = F(\mu_{j-1} - x'\beta) \end{aligned} \qquad (4)$$

In this research, the Ordered Logit model was preferred, because according to Sinden and King (1990), since in the models with ordinal dependent variables, the normal

distribution can't be seen, the Logit is a better choice than Probit model. Finally, the empirical model used in this study is defined as follows:

$$Z_i = \mathrm{B}_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_{19} X_{19} + U_i \quad (5)$$

Where, Z_i is the dependent variable of model presenting the ranking of conservation methods adoption (0= Those who do not apply any, 1= Farmers who apply one, 2= Those who apply two, ... and 5= Those who apply more than five soil conservation measures in the area). The mechanical soil conservation practices used in the area were: using terraces, strips or piles of stone, diversion channels, while the non-mechanical measures were: crop rotation, plowing across the slope, mulching, and leaving straw and using manure on the ground. β_i s are the regression's coefficient, U_i the error part, and X_i s are models' explanatory variables as defined in Table 1.

The study was an applied research considering 13,462 rain-fed farmers of Izeh County as a statistical population. Using a pre-test and Cochran formula, the appropriate sample size of 157 was obtained, and the stratified random sampling was applied. The Limdep 7.0 and Stata 11.00 econometric software was used to estimate and test the regression. The model significance was verified by computing the Chi-square (χ^2) statistics, calculated from the restricted and unrestricted log-likelihood function.

$$(-2) \times Log - liklihood \text{ ratio} = \chi^2$$

Table 1. Definition of independent variables of the model.

	Variable	Definition
X_1	Age	Unit: Years of living
X_2	Level of education	1= Illiterate, 2= Primary school, 3= Junior high school, 4= Senior high school, 5= Having university education and above
X_3	Perception of soil erosion	1=No perception, 2= A little, 3= Average, 4= Well, 5= Very well
X_4	Perception of conservation practices and their effects	Sum of number of practices and their effects, which were mentioned
X_5	Contact with promoters and supervisors	1= No contact, 2= Limited contact, 3= Well (at least 2 contacts annually), 4= Very well in contact (more than 2 contacts annually)
X_6	The annual gross income of farm	Unit:10,000 RLs
X_7	Non-agricultural employment	1= If the farmer has one , 0= Otherwise
X_8	Total space of land	Unit: Hectare
X_9	Number of plots	Number of plots possessed by farmer
X_{10}	Slope of farms	1= Steep and very steep, 0= Flat and low-slop
X_{11}	Fertility of farm	1= Low, 2= Average, 3= High
X_{12}	Ratio of Rain-fed farming's share of total revenue	1= Less than 25, 2= 25-50, 3= 50, 4= 50-75, 5= 75-100 percent
X_{13}	Ownership of Land	1= Private, 0= Otherwise
X_{14}	Participation in the soil conservation trainings	1= If the farmers has participated, 0= Otherwise
X_{16}	Attitudes towards soil conservation	Sum of 10 Likert statements relating to the soil conservation
X_{17}	Willingness to try new technologies	1= Yes, 0= No
X_{18}	Membership in the rural social groups	1= Yes, 0= No
X_{19}	Receiving governmental grants	1= Yes (if the farmer received any governmental grant for the conservation practices) , 0= No (if the other wise).

RESULTS AND DISCUSSION

Statistical characteristics of farmers are presented in Tables 2 and 3. The mean of age variable indicates an old population of farmers. The majority of study subjects were married men and individuals with large families. The mean of annual gross income shows that rain-fed farmers of the area had low income. Also, on average, one family member was a rain-fed farmer.

Table 4 shows that most of the conservation measures' adoptions are related to plowing across the slope, crop rotation, and using manure, respectively. Overall, results of this table suggest that acceptance probability of non-mechanical methods is more than mechanical ones, since most of the non-mechanical methods are not capital- and labor-intensive techniques, and they are mostly based on farmer's management skills. In contrast, mechanical measures are labor and capital-intensive techniques, and because of farmers' lack of these sources, they could not be adopted easily.

Preliminary results of the ordered Logit model shows that some variables like age, slope of land, visits and contacts with promoters, gross income of farmer, and non-agricultural employment were not statistically significant. Thus, the ultimate model's result, with elimination of insignificant variables, is shown in Table 5. The Chi-square (χ^2) statistics, significant at the 1% level, indicates proper explanation power of estimated model of estimated model. The scaled R_s^2 of about 51% indicates a proper overall ability of the model to provide accurate prediction for the dependent variable. The ordered Logit (Probit) model assumes that the distance between each category of the outcome is proportional. In practice, violating this assumption may or may not alter the substantive conclusions. According to the test whether this is the case, a Brant test was used to test whether the proportional odds (i.e., parallel lines) assumption holds. The results showed an insignificant test statistic, which provided the evidence for existence of parallel regression assumption. Therefore, the ordered Logit model was chosen as the final model.

Farmers' perception of soil erosion, as in the study by Shiferaw and Holden (1998) and Asafu-Adjaye (2008), has a positive effect on adoption. According to the study of Torshizi and Salami (2007), perception of conservation practices and their effects had a positive effect on farmers' adoption; the same result was achieved by the present study. Negative effect of academic education could be because of educated people's preference to spend their time on other lucrative activities, therefore, they had less willingness to supervise their rain-fed field and apply conservation measures. Also, educated people had higher income, and as a result, the economic importance of soil

Table 2. Summarized statistical features of quantitative variables.

Variable	Min	Max	Mean	Standard error	Categories			
Age	24	86	57.9	13.7	≤ 45	46-60	61-75	≥ 76
					19.7 %	36.5%	33.7%	10.1%
Family Size	3	15	7.3	2.0	≤ 4	5-7	8-10	≥ 11
					6.1%	47.2	41.6%	5.1%
Land Space (Hec)	1	30	5.6	4.0	≤ 2	3-5	6-8	≥ 9
					10.1%	55.6%	19.7%	14.6%
Number of plots	1	10	1.6	1.2	≤ 2	3-5		≥ 6
					91%	7.3%		1.7%
Annual gross income (10000 RLs)	270	9780	2064	1422	≤ 1000	1000-2000	2001-3000	≥ 3000
					24.2%	30.9%	26.4%	18.5%

Table 3. Frequency of ordinal and qualitative variables.

Variable	Categories and their frequency				
Level of education	Illiterate	Primary School	Junior High school	Senior High school	University education and above
	66.9%	21.3%	6.2%	3.4%	2.2%
Perception of soil erosion	non	A little		Average	High
	3.4%	17.4%		39.3%	39.9%
Perception of conservation practices and their effects	Non	A little		Average	High
	4.5%	24.7%		42.7%	28.1%
Distance of farm from home (measure by minutes of walking till farm)	< 5	5-10		11-20	20>
	18%	41%		27.5%	12.9%
Slop of farm	Flat	Low-slop		Steep	Very steep
	3.9%	14.6%		51.7%	29.8%
Fertility of farm	low		average		high
	31.5%		50.6%		18%
Contact with promoters and supervisors	non	A few		Average	A lot
	78.1%	14%		7.3%	0.6%
Ratio of Rain-fed farming's share of total revenue	less than 25 %	25-50%	50%	51-75%	75-100%
	36.5%	30.3%	18.5%	11.8%	2.8%
Receiving governmental grants	1= If yes			0= If no	
	21.3%			78.7%	
Ownership of Land	1= If private			0= Otherwise	
	91%			9%	
Participation in the soil conservation trainings	1= If yes			0= If no	
	27%			73%	
Membership in the rural social groups	1= If yes			0= If no	
	11.8%			88.2%	

Table 4. Frequency of soil conservation practices' adoption by farmers.

Soil conservation method	Adoption	Non-adoption
Strips or piles of stone	38.2	61.8
Using terraces	24.7	75.3
Diversion channels	10.1	89.9
Ploughing perpendicular to the slope	95.5	4.5
Crop rotation	66.9	33.1
Using manure	62.9	37.1
Mulching and leaving straw	11.2	88.8

Table 5. Results of estimation of Ordered Logit model.

Variable	Estimated coefficient	Standard error	*Z*-ratio
Constant	-10.65***	2.1	-5.72
Participation in the soil conservation trainings	1.28***	0.41	2.71
Attitudes towards soil conservation	0.16***	0.057	2.84
Perception of conservation practices and their effects	-0.39***	0.19	-2.08
Level of education	0.60***	0.21	2.87
Perception of soil erosion	0.87***	0.24	3.6
Total space of land	0.203**	0.08	2.45
Ownership of Land	1.93***	0.51	3.78
Number of plots	-0.47*	0.24	-1.90
Receiving governmental grants	0.77*	0.46	1.7
Membership in the rural social groups	1.26**	0.49	2.57
Willingness to try new technologies	0.73**	0.33	2.22
Fertility of farm	0.98***	0.22	4.29
Ratio of Rain-fed farming's share of total revenue	0.23*	0.13	1.68
Threshold parameters for index			
MU (1)	2.367	0.225	10.503
MU (2)	3.878	0.207	18.676
MU (3)	5.805	0.233	24.892
MU (4)	8.381	0.362	23118
Log likelihood: -219.439, $R_s^2 = 0.51$, χ^2: 168.65***			

***: P<0.01, **: P<0.05, *: P<0.1, ns: non-significant

conservation for them was less than others. This corollary is according to Bayard *et al*. (2006) who believed that negative effect of education was because of higher opportunity cost of educated people compared to others. This deduction could also be used for the ratio of rain-fed farming's share of total revenue. Generally, farmers give more attention and importance to the fertile lands and with augmentation of fertility, soil conservation practices increase. That is because the marginal productivity loss due to soil erosion in the fertile lands is more than non-fertile ones. The variable of land's ownership has also a positive effect on adoption. Demeke (2003) obtained the same result. It happens because the farmers have no desire to invest in land that may not be theirs to farm next year.

As in studies by Mbaga-Semgalawe and Folmer (2000), Bayard *et al*. (2006), and Asafu-Adjaye (2008), participation in the soil conservation trainings had a positive effect on adoption. Receiving governmental grants was another effective factor. This happens because construction and maintenance of soil conservation structures, particularly the mechanical type, requires a high initial investment. This is a major impediment to the adoption of these practices by the subsistent and small farmers. Therefore, receiving governmental grants is an important factor in encouraging poor rain-fed peasants to do conservation measures. This result is the same as that of Shiferaw and Holden (1998). The coefficient of total space of land shows that if the land area increases, the probability of adoption rises. Those who have small farms do not tend to spend money on conservation practices, either the mechanical or non-mechanical ones. The same result was achieved by Shiferaw and Holden (1998); Mbaga-Semgalawe and Folmer (2000), Demeke (2003), and Asafu-Adjaye (2008). The variable of number of plots indicates a

negative effect of this factor on adoption. That is because with the increase of plots' number, their management and conservation would become harder.. This result is the same with Shiferaw and Holden (1998). Finally, willingness to try new technologies and membership in the rural social groups have a positive effect on adoption, as they had the same effect in the works of Shiferaw and Holden (1998) and Demeke (2003).

To measure the impact of a change in particular explanatory variable on adoption, for non-linear models (like this study's), marginal effects of independent variables should be calculated. For a specific variable, the marginal effects across the six categories must sum to zero. The paraphrase of marginal effects for non-binary variables is simple. If all other variables stay fixed, one unit change in the particular explanatory variable would result in an increase or decrease in the predicted probability equal to the degree of marginal effect. Nevertheless, for a binary variable the marginal effect indicates change in the predicted probability based on whether the respondent falls into the category or not. Table 6 shows the marginal effects for all explanatory variables in six levels of adoption.

The marginal effects for the perception of soil erosion variable are negative in the first three levels (applying less than 3 conservation practices) and in the next three levels (applying more than 2 conservation measures) are positive. This indicates that an increase in the people's perception of soil erosion would cause positive changes in the probability of higher adoption levels, and negative effect in lower levels. This means that probability of being in the lower levels lessens adoption, while it would augment it in the higher levels of dependent variable. The utmost positive effect of perception of soil erosion variable is in the fifth level (adoption of 4 conservation practices) and the maximum negative effect is in the third level (adoption of 2 conservation measures). For instance, for the farmers in the fifth level (those who have applied 4 conservation practices), as the perception of soil erosion increases (while other factors are fixed) the probability of adoption would increase by about 0.109. Results show that the marginal effects of level of education in the first three levels of adoption are positive, and in the last three levels are negative. For example, in the fifth level (for those who have adopted 4 conservation practices) with one unit increase (moving from one level of education to the next) of education level

Table 6. Marginal effects of the estimated Ordered Logit model.

Variable	N.A*= 0	N.A*= 1	N.A*= 2	N.A*= 3	N.A*= 4	N.A$^{*}\geq$ 5
Participation in the soil conservation trainings	-0.0132	-0.098	-0.142	0.0665	0.1638	0.0229
Attitudes towards soil conservation	-0.0023	-0.0169	-0.0206	0.0167	0.0206	0.0025
Perception of conservation practices and their effects	-0.0048	-0.0344	-0.0419	0.0341	0.0419	0.005
Level of education	0.0057	0.0412	0.0502	-0.0408	-0.0503	-0.006
Perception of soil erosion	-0.0125	-0.09	-0.1097	0.0892	0.1099	0.0132
Total space of land	-0.0029	-0.021	-0.0255	0.0208	0.0256	0.0031
Ownership of Land	-0.0671	-0.2951	-0.0698	0.2702	0.1463	0.0155
Number of plots	0.0067	0.0486	0.0592	-0.0481	-0.0592	-0.0071
Receiving governmental grants	-0.0092	-0.0689	-0.1004	0.0521	0.1115	0.0149
Membership in the rural social groups	-0.012	-0.0933	-0.158	0.0291	0.202	0.032
Willingness to try new technologies	-0.0106	-0.076	-0.0926	0.0753	0.0927	0.0111
Fertility of farm	-0.014	-0.1011	-0.1231	0.1002	0.1233	0.0148
Ratio of Rain-fed farming's share of total revenue	-0.0033	-0.024	-0.0292	0.0238	0.0293	0.0035

* Indicates the Number of Adoption of conservation measures.

(while other variables are fixed), probability of adoption would decrease about 0.05. While for the first level (those who do not adopt any conservation measures), with one unit increase in the education level, probability of rejection of soil conservation would rise about 0.005 or the probability of adoption would decrease about 0.005. The paraphrase of marginal effects for the other ordinal variable is the same as above. The dummy variables are different. It could be mentioned that membership in the rural social groups and willingness to try new technologies have positive effects on probability of adoption in the three upper levels (accepting more than 2 conservation practices) and negative effects of the three lower levels (accepting less than 3 conservation measures). In other words, membership in the rural social groups and willingness to try new technologies cause abatement of probability of adopting less than 3 conservation measures and increase the probability of adopting more than 2 conservation practices.

CONCLUSIONS

According to the present study's findings, it is suggested that the government should employ some supporting policies and assist farmers in adoption of conservation measures, specially the capital-intensive ones, through granting financial aids.

Since the ownership of land is known as an important factor, an appropriate policy should be taken about congenital and co-owned lands to determine their ownerships. This would ease farmers' decision making about investment in land conservation.

The results revealed the importance of farmers' perception of soil erosion and conservation practices and their effects as well as the significance of participation in the soil conservation trainings. Therefore, giving extensional trainings, particularly about crop rotation, leaving straw, and other non-mechanical measures of soil conservation is recommendable. Moreover, raising farmers' awareness about benefits of applying soil conservation techniques and consequences of erosion are suggested. In this case, supportive policies could be contingent on taking part in such training workshops to encourage farmers to participate.

Considering the positive effects of a farm's size and the negative effects of the number of plots on adoption, encouraging peasants to cooperate, consolidating farms, setting agricultural cooperatives and stock farming could be a proper way to apply conservation methods. In this case, government could make supportive policies to encourage farmers, like granting financial aids or supplying some of the essential inputs to the cooperatives.

Since membership in the rural social groups showed a positive effect on adoption of conservation practices, establishing targeted social groups in villages to augment people's knowledge of such issues and lead them to adopt conservation practices could be another recommended policy.

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شناسایی عوامل موثر بر پذیرش عملیات حفاظت خاک توسط برخی دیمکاران ایران

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چکیده

اگرچه در طول دهه های اخیر به منظور معرفی اقدامات حفاظتی خاک، سرمایه‌گذاری بسیار زیادی صورت گرفته است، با این حال تلاش‌های صورت گرفته در این زمینه تا کنون موفقیت محدودی در دستیابی به اهداف خود داشته‌اند. موفقیت محدود چنین تلاش‌هایی ضرورت شناسایی عوامل پیش‌برنده و بازدارنده پذیرش اقدامات حفاظتی معرفی شده را آشکار می‌کند. بنابراین مطالعه حاضر با هدف بررسی عوامل موثر بر پذیرش اقدامات حفاظتی خاک در بین زارعین دیم‌کار شهرستان ایذه در سال

زراعی ۸۸-۱۳۸۷ به انجام رسید. جامعه آماری تحقیق شامل تمام زارعین دیم‌کار شهرستان ایذه بود. اطلاعات لازم برای نیل به اهداف تحقیق از طریق تکمیل پرسش‌نامه از ۱۷۸ کشاورز منطقه جمع‌آوری گردید. . جهت تحلیل داده‌ها از مدل رگرسیونی لاجیت ترتیبی استفاده شد. نتایج تحلیلی حاکی از تاثیربخشی مثبت آگاهی کشاورزان نسبت به مسئله فرسایش و روش های حفاظت خاک، مساحت زمین زراعی، اعطای کمک های بلاعوض و تاثیرگذاری منفی عواملی نظیر تحصیلات و تعداد قطعات بر پذیرش روش های حفاظت خاک در میان کشاورزان نمونه داشت. اعطای کمک های مالی، برگزاری هدفمند کلاس های ترویجی در جهت افزایش سطح آگاهی کشاورزان در زمینه فرسایش خاک و روش های مقابله با آن از پیشنهادات مطالعه حاضر می باشد.