



# Evaluation of Effective Factors in FMIS in a Farm Enterprise, From Viewpoint of All 75 Jihad Farming Organization's Experts.

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## ABSTRACT

**Objective:** This article is studied possibility of infrastructure in FMIS application in the west Azerbaijan jahad keshavari. **Methodology:** With regard to soil and farming production precise management in adaptation with farm diverse environment and assistance to achieving sustainable development, west Azerbaijan has improved in agricultural modern activities and been evaluated in having precise agricultural administrative potential. Present research is done in Correlation Descriptive method and research tool is questionnaire. With regard the questionnaire validity administrative professionals Within "2014-15", 75 workers were chosen for this survey. **Results:** The data was analyzed by SPSS package and one of the research results shown is the relevant relationship among, technical, management, polices and possibility of usage precise agriculture, **Conclusion:** although among sociological and possibility of usage precise agriculture factors there isn't a significant relationship Also educational, technical and economic variables could forecast 65% of the outcome variable changes.

## 1. Introduction

Agriculture challengeable sector becomes sophisticated in passing time but in addition to science and technology advancements, effective ways are proposed to overcome it. For instance these challenges for indicate are food requirement increase in reason of population growth, increase of hungry people, decrease of fertile farming soils and reduction of underground water tables. (Bagheri, 1380)

Also many of researchers outlined that the current or traditional farming system with chemical overuse destroyed the environment and decrease the natural resources. Recently different strategies for solving these problems implied that we can show one of theme includes precise agriculture.

Precise farming management system to assign, analyse and changing management inside the farm for profitability, stability and optimized protection of farm is based on information and technology. (Breazeale, 2006) in precise farming , management of farming material products is implemented like chemical fertilize , herbicide, seeds and other cases in farm location features with waste decrease target, income increase and preserve habitats quality. Precise agriculture methods are executable in all of dimensions farming production cycle from before implant operation until after harvesting. In this method, desirable technology for enhancement soil level experiment, tillage, implant, fertilizing, spraying, products supervision and harvest is available or will be in near future. Precise farming could be effect on material expenditure and production income. With implementation precise agriculture there is probability of incidence for each of the following cases.

- More product performance with the same level of materials only with changing of those distributions.
- Production performance material decreasing in main value
- More production performance and decrease materials.

Precise farming or special local production management is implied as time and local variable management in farm smaller levels for economic efficiency improvement, farming and decreasing environmental destructive effectives. With this concept of precise farming, main activates is include gathering and interpretation data and usage amount of material's variable. (Fountas et al. 2006)

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In this way needed materials include GIS, GPS, variable rate technology and remote sensors.

Precise farming with the aim of materials precise management, prepare different productive methods for farming producers parts and let to farmers to gather information in target of identifying effective variable on farm potential performance like any other technology. They decide the amount of material variables in the farm and use them in different degrees too.

Research results in the relation of precise farming materials acceptance was done by Batte (2008) showed that amount of acceptance precise farming equipment increase with advisory service, guidance and product supervision. Also this research results in implementation of precise farming had special regarding with use of educational methods. Fountas et al. (2006) also in their research results introduced expert farmers as a channel for information and skill transform to farmers. Also Swinton & Deboer (1998) research results showed that precise farming acceptance develops in the areas that economical investment is accessible. Griffin et al, 2004 in their research reached on this conclusion that low level advisory services are the main reason of low speed of precise farming technology acceptance. One of the Mishra's research conclusions that also done in relation with possibility and precise agriculture usage in India, showed positive impact of implementation precise farming in experimental locations. Also Breazeale (2006) in his research in relation with fertilizing with usage of precise farming methods knew the application of this method with beneficial of operations rate increases, economical production improvement and expenditure compensation.

Swinton & Deboer (1998), in analysing precise farming profitability evolution, reported increase rate of profit in 75% of precise farming in covered areas. Jintong et al. (2002) evaluate precise farming possibility in china and optimized investment in materials, optimized application of natural resources, environmental contamination decrease and high quality production cited conclusion of precise farming usage. Fountas et al. (2006) stated hardware compatibility as a critical factor for acceptance of precise farming.

Also Haapala et al. (2006) knew precise farming compatible, trustable and economical in their research.

West Azerbaijan according to achievements of precise and suitable farming soil and productions management in corresponding with farm different condition and contribution to the achievement of sustainable investment, should has the maximum amount of precise agriculture implementation (as experimental) in the country. With this descriptions Need for research with the main objective usage of evaluation precise farming infrastructure possibility usage from jahad keshavarzi farming expert's point of view is considered essential. To achieve this, a general goal under special goals is considered.

Prioritize requirements (technical, economical, managerial, and educational and sociology) application of precise farming in jahad keshavarzi organization's experts' perspective.

Prioritizing requirements (technical, economical, managerial, and educational and sociology) application of precise farming in jahad keshavarzi expert's perspective.

Prioritizing policies in precise farming application from jahad keshavarzi experts institute perspective.

Evaluation relationship between requirements and policies in precise farming application from jahad keshavarzi experts institute perspective.

In this research possibility application of precise farming turning to clarify and project sustainable possibility and regulating to schedules, organization, resource management and implement goal successfully. According to this important factors evaluate in technology implementation

## 2. Materials and methods

### 2.1 Research method

The According to research objectives, this study is done with description-correlation method. Questionnaire is data gathering tool. For questionnaire codification, theoretical subject according to resources and references evaluate first. The initial interviews were conducted with administrative experts in this subject and primary questionnaire was prepared. To validate questionnaire tool evaluate, designed questionnaire and distribute to Urmia university professors and after needed reformation, questionnaire creditability verified. For experiment tool satiability, 25 questionnaire items were completed by Salsas jahad keshavarzi organization and calculated Cronbach's alpha coefficient for different part of questionnaires was used ( educational 0.779, economical 0.805, technical 0.790 , managerial 0.783 , socialist 0.711 ,policies 0.703 , and underlie features application possibilities 0.805). 75 jahad keshavarzi farming experts were selected for research implementation. In this research to the different field of farming in bachelor and higher graduated that were working during the years "2014-15" in the Urmia jahad keshavarzi is intended agricultural expert. The research Independent variable includes educational factures (15 items), economical (15 items), technical (15 items), managerial (15 items), social (15 items), policies in precise agriculture application (15 items) and evaluation dependent variable fields in precise agriculture possibilities (with 4 items).

To measure each of mentioned factors 5 level Likert scale is used (1- very little degree until so much -5). SPSS software release 16 is used to analyse gathered data. In the description of this section's finding average statistics and changing coefficient and in the analytical findings person coefficient correlation and multiply regression be use.

## 3. Discussion and results

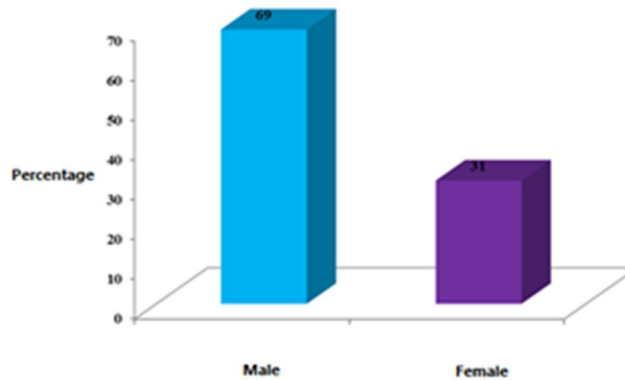
### 3.1 Findings and discussion

#### 3.1.1 Research description findings

Experts in gender frequency distribution indicate most of experts in the study case (69%) were men. Also according to table 1 shows that 23% of the experts were female.

**Table 1. Frequency table of expert's gender**

Percentage	Abundance	Gender
69	52	Male
31	23	Female

**Figure 1. Frequency diagram of expert's gender**

According to table 1 shows that 34% of experts with the most of frequently are in ages between 31 and 40. Evaluation of expert's educational level showed that 81% of respondents have bachelor degree and 19% of themes also have master degree. According to the respondent field of study, the most frequently (19%) is related to horticulture and with the lowest 3% of respondent are plant protection graduated. Most of the respondents (44%) between 11-12 years have work experience. Also 21% of respondents participate in precise farming training courses and 79% of respondents participate in these courses.

And other factors are age of experts and their education relation with agricultural field, job experience and participating in related educational courses.

**Table 2. Distribution of respondent's age**

Age	abundance	Percentage
40 and under 40 years old	43	57%
Over 40 years old	32	43%
sum	75	100%

**Table 3. Distribution of participating in related educational courses**

Participating in courses	abundance	Percentage
Yes	16	21
No	59	79
Sum	75	100

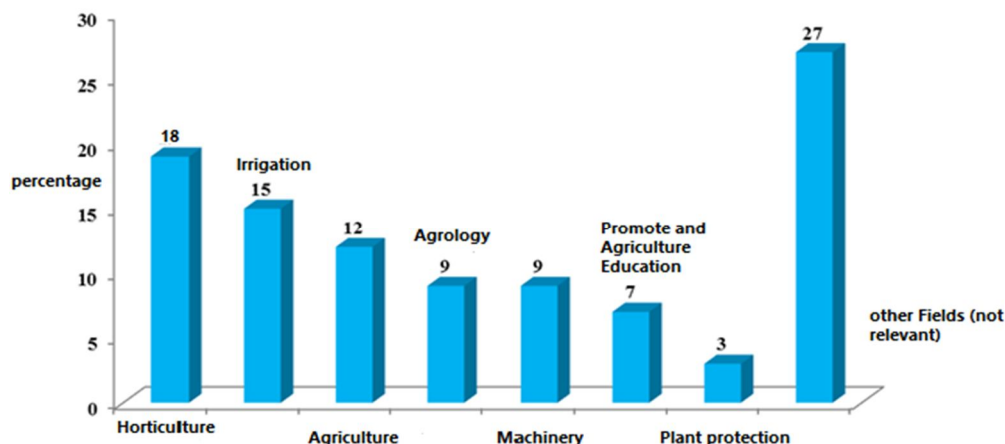


Figure 2. Rate of expert's field of study

### 3.2 Examination of Electrochemical tests

Table 2 findings shows that three factors related classes to external and internal organization periods for experts, trained related professional experts and consultants and consultants and experts for knowledge-based organizations related to agricultural activity-based management information systems at the conferences and workshops for researchers and promotions are the highest educational factors.

It is necessary to mention that, average is used for requirement prioritize in this research, FMIS polices and also FMIS field of use from farm expert's perspective.

Table 4. Educational factor prioritize in the field of FMIS

Priorities	Educational factors	Average
1	Related classes for external and internal organization periods for experts	4/21
2	Trained related professional experts and consultants	4/17
3	Consultants and experts for knowledge-based organizations related to agricultural activity-based management information systems at the conferences and workshops for researchers and promotions.	4/16
4	Joining relevant classes and seminars for promotions and researchers abroad	4/08
5	The introduction of agricultural management information system through local media and special programs for modern agriculture.	4/07
6	Cooperation and invite professionals to teach and transfer of their professional experience.	3/99
7	Distributed brochures, magazines or articles required knowledge necessary for the introduction of technology and how to work with them.	3/89
8	Organizing rich class sessions with knowledge and appropriate period of time.	3/88
9	Content and duration of the job relation and the achievement of objectives in agricultural management information system	3/85
10	The inclusion of concepts and topics related to agriculture management information systems in the agricultural student courses.	3/77
11	Rate of class's topics and courses being activation.	3/76
12	Useful content presented in courses in agricultural management information systems activities within and outside the organization	3/73
13	Meet the needs of the trainees	3/69
14	The practical relevance of the work that you do in the workplace.	3/57
15	The ability of the learning facilitate and quality of related class's facilities.	3/52

Table 5 founding's shows that the highest priorities of economic factors from the expert's perspectives are related to classes for external and internal organization periods for experts and trained related professional experts and consultants and experts for knowledge-based organizations related to agricultural activity-based management information systems at the conferences and workshops for researchers and promotions..

Table 6 findings shows that the highest mechanical priorities from the respondent perspective include implementation of management information system based on agricultural training for farmers in pilot farms in different parts of the target and control and run the technology implemented in that place and express suggestions and recommendations for farmers with a view to analysing the data collected from farmers' fields to achieve the desired efficiency (e.g., interpreting the results of GIS and offer the necessary solutions by experts) and team up with members of various disciplines. Related to all procedures required for expression farm project with equipment based on management information systems, take into account the conditions of the fields

(environmental and soil).

**Table 5. Economic factors priorities**

Priorities	Economic factors	Average
1	Provide Credits required and sufficient funding for research related to agriculture management information system based on farmers' fields	4/24
2	Providing adequate funding and credits required for the preparation of the necessary equations applications for farmers	4/20
3	Payment of bank loans to farmers and precise agricultural authorities to fund and encourage.	4/13
4	Providing enough subsidies for agricultural inputs and equipment based on the introduction of a management information system.	4/12
5	Payment of financial assistance and incentives to agricultural companies in charge of management information systems in the field of agriculture-related classes and practical application.	4/11
6	Encourage farmers to implement agricultural-based management information systems (such as free internet or low-cost) for direct or non-direct funds.	4/08
7	Expenditure in creating solutions to ensure better quality products.	4/07
8	Expenditure in creating the necessary measures to ensure that the consumer market for sale.	4/04
9	Expenditure in creating the necessary measures to ensure that products in less time	4/01
10	Incentives and introduce farmers expenditure to use farm management information systems that have been able to achieve returns.	4
11	Insurance guarantee for agricultural products at a lower cost and with encouraging.	3/92
12	Expenditure to create solutions for agricultural products export.	3/89
13	Expenditure in creating the necessary explanations and solutions to ensure higher productivity.	3/88
14	The cost of recruiting students and activists in the agricultural sector to monitor and participate in agricultural land	3/84
15	Expenditure for free related classes for farmers.	3/81

**Table 6. Technical factor priorities**

Priorities	Technical factors	Average
1	Implement a management information system based agricultural training for farmers in pilot farms in different parts of the target and control and run the technology implemented in that place.	4/25
2	Express suggestions and recommendations for farmers with a view to analysing the data collected from farmers' fields to achieve the desired efficiency (e.g., interpreting the results of GIS and offer the necessary solutions by experts)	4/17
3	Team up with members of various disciplines. related to all procedures required for expression farm project with equipment based on management information systems, taking into account the conditions of the fields (environmental and soil)	4/16
4	The use of agriculture-related information technology-based information systems management experts and farmers at the farm.	4/09
5	Continue to express the most appropriate methods to farmers in the use of agricultural technology based on management information systems in all stages of agricultural activities in order to provide farmers' fields for the next crop season.	4/08
6	To organize and process the data in management information systems and data processing software as used.	4/01
7	Providing equipment and technology capabilities for researchers and promotions for the use of agricultural technology based on modern management information systems.	3/97
8	Construction sites and canters to analyse data collected from farms levels required by agricultural organizations for the use of modern agricultural purposes.	3/92
9	Technology equipment needed for agricultural management information systems in agricultural	

	extension and education will be provided. To make progress in agriculture and enhance the quality of agricultural work.	<b>3/91</b>
10	Providing necessary equipment related to information technology for agricultural applications such as computer-based management information systems. For farmers, especially those with limited literacy, or smartphone.	<b>3/88</b>
11	Using a computer can enhance the flexibility in time and space efficiency of promotional activities implementation of agricultural extension and research with agricultural management information system.	<b>3/79</b>
12	Available telecom infrastructure, network and media coverage and user fees for rural and agricultural communities.	<b>3/69</b>
13	Agricultural technology equipment be required to provide in the management information systems for real needs of farmers.	<b>3/61</b>
14	Technology equipment required to supply agricultural management information systems to reduce costs of acquisition and transfer of information.	<b>3/55</b>
15	Required equipment technology in agricultural management information system to exchange views and experiences and provides farmers suitable environment.	<b>3/47</b>

\*Average range is between 1 and 5

according to table 7 in relation to management factors three first factors are the needs for effective management and proper implementation of agriculture-based on advanced management information systems and management informed of the most recent scientific knowledge and information related to their jobs in relation of the agriculture management information systems and the third is paving the way for a partnership with local non-governmental organizations for activities in the field of agricultural research and extension based on advanced management information systems.

In relation to prioritising effected social factors in using FMIS from responders, the priorities are: attempt to coherent farmers for agricultural organization for two-way relationship between policy makers and farmers efforts to unite the farmers and to form farmer's organizations for bilateral relations between farmers and planners and trying to consolidating the farmers and researchers at all stages of activity based on management information system and evaluation the results of precision farming applications.(Table 8)

**Table 7. Managerial factors priorities**

<b>Priorities</b>	<b>Managerial Factors</b>	<b>Average</b>
1	The need for effective management and proper implementation of agriculture-based on advanced management information systems	<b>4.20</b>
2	Management informed of the most recent scientific knowledge and information related to their jobs in relation of the agriculture management information systems.	<b>4.17</b>
3	Paving the way for a partnership with local non-governmental organizations for activities in the field of agricultural research and extension based on advanced management information systems.	<b>4.12</b>
4	The availability of international scientific research centers in the field of agriculture-based advanced management information systems through collaboration and partnership with them.	<b>4.07</b>
5	The farmers' knowledge of the limitations of cultivation in the use of advanced based of management information systems	<b>4.01</b>
6	The need for effective management and correct application of agricultural related organizations for effective expression-based management information systems.	<b>3.93</b>
7	Managers should consider interest, talent, cognitive abilities and personality, and intelligence in determining the employee's career.	<b>3.92</b>
8	Management should be aware of the effect of encouraging and rewarding cooperation efficient and profitable, farmers and experts in projects related to agricultural management information system.	<b>3.98</b>
9	To improve the management process responsible for the units implement new and updated methods contentiously.	<b>3/85</b>
10	The management should proportion between the equipment , environment and type of the work	<b>3/79</b>
11	The use of co-management experts and officials involved limits in activities related to farmers be high	<b>3/72</b>
12	Management should choice number of needed staff for operation in the organization based on organization chart.	<b>3/65</b>
13	A management with the social systematic attitude and the ability to see things as integrated collection so that all parts and components in relation to each other understood.	<b>3/59</b>

14	Academic researcher attitude and understanding of the impact of technology on modern agricultural management.	3/53
15	Management's ability to organize and prioritize the allocation of other resources to programs related is involved to agricultural management information system.	3.52

**Table 8. Social Factors prioritises**

Priorities	Social Factors	Average
1	Attempt to coherent farmers for agricultural organization for two-way relationship between policy makers and farmers	4/16
2	Efforts to unite the farmers to form farmer's organizations for bilateral relations between farmers and planners	4/08
3	Trying to consolidating the farmers and researchers at all stages of activity based on management information system and evaluation of the results of precision farming applications	4/01
4	The amount of each of the experts and farmers knowledge from agricultural management information system business objectives, policies, organization and knowledge of the requirements associated with the job that led to the group's knowledge	4
5	Adequate and continuous efforts to achieve organizational goals each from experts and farmers on agricultural management information systems, leading to useful working group	3/96
6	There be Social responsibility in the organization as the organization's commitment to preserve, care for and help the community of experts and stakeholders in the activities	3/95
7	Trying to develop interconnected networks and transfer the information, review the relations between farmers and the relevant authorities to raise or Social increase farmers' knowledge and expertise on the rights and status to increase, resulting in the expectations of the Agriculture enterprise	3/91
8	Social organizations culture of shared values, social ideals and joint together the members of organization and farmers	3/89
9	Trying to provide a sense of personal responsibility for the experts know themselves against the farmers and vice versa	3/88
10	Agricultural management information system acceptance by the farming community with financial and budgetary feasibility and profitability of the farmers	3/85
11	Create a sense of rapport and trust between the Commonwealth of experts to farmers to adopt management systems and related information out of traditional agriculture	3/84
12	Administrators and managers of organizations decision with a comprehensive view and protect the public interests and unity of the country, decisions and overall strategy to their affairs.	3/81
13	The condition of promotion and dissemination of successful modern agriculture for farmers	3/79
14	The values, norms and beliefs of farmers are respected and ethical values in the work and activities are expected to follow	3/73
15	Trying to create agriculture relationship in branches receive special offers and accountability and consultation between the relevant authorities in the context of agriculture and farmers 'management information systems.	3/65

\*The average range is between 1 and 5

According to table 9 we can see that the highest priorities in relation with policies are having the value of the agricultural policy of the current management information systems after every season for the proper implementation of the plan in the next growing season and the agricultural scheme was higher agricultural management information system is a key element in the context of the macro-structure and agricultural policy and rural development and the third is, implementing agriculture-based project management information system under an important element in the context of the macro-structure of agriculture and agricultural policy and rural development.

Table 10, shows the results of respondent consent level priorities in relation with precise farming possibility application features that the tow highest priority are related to cost effectiveness adaptable technology.

**Table 9. Polices priorities**

Priorities	polices priorities	Average
1	Having the value of the agricultural policy of the current management information systems after every season for the proper implementation of the plan in the next growing season	4/08
2	Implementing agricultural scheme based on agricultural management information system is a key element in the context of the macro-structure and agricultural policy and rural development.	3/92
3	Needed researches on farming management information systems for planers and policy makers	3/84

	according to the next related researches priorities.	
4	Having a policy on the allocation of agricultural inputs to agricultural shortages based on management information systems	3/81
5	Implementation of projects in the vicinity of the same products at the same plant (co-culture) to farmers with small farms for the purpose of implementation of agriculture-based Management Information Systems.	3/80
6	Supportive government policies including price support, input support, compensation products or policies of price support policy is that the guaranteed price.	3/79
7	Support the agricultural sector through a number of ways because if one of these methods using is restricted or prohibited supportive of alternative methods can be used.	3/77
8	Structuring of the country's trade by creating restrictions on imports that raise domestic prices and enhance agricultural production support	3/72
9	A tax system with correction of the investment policy for the agricultural sector, by reducing the tax rate on investment ground for more investment in this sector and as a result, provide more production leading to job creation and employment and improve the trade balance.	3/69
10	An increase in government investment policy in the sector to raise production as well as the raising of public services thus enhances the rate of agricultural support.	3/56
11	Having pro-farmer policies of some products that have a lot of volatility. Lead to lack of flexibility in pricing strategies and raise the costs of production.	3/51
12	The policy to increase subsidies to agricultural inputs and the distribution of agricultural inputs at lower prices.	3/44
13	Implementing policies that competitive agricultural activities in comparison with other financial activities and funding service activities, especially the traders profitable and competitive	3/41
14	be the form of laws and anti-dumping measures (import into the country for less than value) is	3/33
15	Breakdown of payments by policy support for different institutions, or law firm that specified payments for each product.	3/32

\*Co-culturing system: the implementation of culture same products operation in small farmers' fields that are near to each other.

**Table 10. Prioritize the characteristics of the underlying precision farming applications.**

Prioritize	Features	Average	Standard Division	Coefficients of variation
1	Cost effectiveness	4/21	0/664	0/157
2	Adaptable technology	4/08	0/784	0/192
3	access able technology	3/80	0/870	0/229
4	Existent technology.	3/71	0/785	0/212

\*The average range is between 1 and 5

Also to examine the relationship between requirements (educational factors, economical, technical, management, social) and policies in precise agriculture application and dependent variable possibility of precise farming implementation, Pearson Correlation Coefficient is used. Based on table 11 foundations, educational, economic and technology factors having the most correlation with dependent variable (using FMIS underlie possibilities). In statistical view at the 0.05 level of significance all of the social, economic, education, policy, technical and managerial having direct correlation with dependent variable. In the 0.01 level of significance the social, economic, education, technical and managerial factors with dependent variable are in direct relationship. In fact in 0.01 level of significance, only policy factor with dependent variable do not show a meaningful relation.

### 3.3 Assignment equation estimate possibility in precise farming usage.

In this research for possibility of precise farming usage forecasting multiply regression is used to achieve equation in step by step method. After entering all of independent variables with meaningful correlation, only variables of educational, economic and technical factors remained in equation. These variables are able to explain 69% of dependent variables. On the other hand, evaluation standard regression coefficient indicate that educational factor variable ( $\beta=0.456$ ) have more portion in forecasting the possibility of precise farming usage

**Table 11. The relation between usage of precise farming and possibility of its usage**

Coefficient of correlation	Independent variables	Dependent variables
0.642**	Educational factor	Possibility of using prices agriculture
0.540**	Economic factor	
0.483**	Technical factor	
0.331**	Managerial factor	



0.406** 0.239*	Sociology Polices	
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\*meaningful in 0.05 level

\*\*meaningful in 0.01 level

Table 12. The result of multiply regression analysis.

Sig	T	Beta	B	
			-0.394	Constant number
0.000	5.061	0.400	0.367	Educational factors(X <sub>1</sub> )
0.000	5.453	0.396	0.419	Technical Factors(X <sub>2</sub> )
0.000	4.256	0.330	0.318	Economic factors(X <sub>3</sub> )
R=0.804    R <sup>2</sup> =0.647    sig=0.000				
Y=a <sub>1</sub> +b <sub>1</sub> x <sub>1</sub> +b <sub>2</sub> x <sub>2</sub> +b <sub>3</sub> x <sub>3</sub> Y=-0.394 + 0.367 X <sub>1</sub> + 0.419 X <sub>2</sub> +0.318X <sub>3</sub>				

In confirmation the results of present research, Batte (2008) Swinton & Deboer (1998) in their research implied to positive and meaningful relation among educational and economic factors with acceptance of precise farming materials. Fountas et al. (2006) implied to meaningful relation among educational factor and acceptance and promotion of precise farming. In Davis et al., (1998) research existence of a meaningful relation among economic and social factors with possibility of precise farming usage was indicated.

#### 4. Conclusion

Thickness of The findings of this study, intended to investigate the necessary infrastructure for the implementation precise farming within of Jihadi Keshavarzi experts perspective in West Azerbaijan province, showed that from the respondents' point of view, the most important factors: educational, economic, social, technical, managerial, social and policy making for the implementation of precise farming are related to the following activities in the respective order of importance: 1) training sessions for farmers, 2) allocation of sufficient credits and budget to relevant research in precise farming implementation in the fields, 3) experimental execution of precise farming schemes for the usage and promotion of technology in a few districts in the province, 4) appropriate management for the implementation of precise farming on the farms, 5) organization of farmers to actively them in mutual contact with policy makers and planners, 6) assessment of accurate farming schemes after each harvest for the efficient implementation of the aforementioned project in the following season. Of all the variables, only the educational, economical, and technical factors were able to predict a small number of changes in the possibility of precise farming implementation (Bordbar & Hosseini, 2009).

Pay attention to meaningful relation shows that how much among educational factors and possibility of precise farming usage be more, in the field of precise agriculture and farmers and expertise obtain higher knowledge and skills, their inclination getting more for technology usage and implementation. In other hand how much amount of subsidy and credit proposition getting more and considered more funds for technology implementation therefore the amount of technology usage increase. In addition, meaningful relation among technical factor and possibility of technical usage, case more attention to these factors in order to implement technology. Since the one of the most important notes in technology implementation is pay attention to managerial factors, we should trying to improve farmers and experts managerial skills of farmers and experts. Also having correct and related policies is one of the important infrastructures in order to achieve more correct and more prompt technology (Salehi et al. 1387).

The significant relationship between educational factors and the possibility of precise farming implementation indicates that if farmers are given more training about precise farming implementation, and if the farmers and experts improve their knowledge skills, they are more inclined to apply precise farming schemes. On the other hand, if more credits, subsidies, and budget are allocated to the application of technology, there will definitely more inclination to use the technology. In addition, the significant correlation between the educational factors and the possibility of technology application indicates that more attention should be given to these factors to achieve the goal of technology application. Since one of the important factors in the implementation of this technology is give special heed to managerial factors, attempts should be made to improve the managerial skills of farmers and experts. To implement this technology faster and more efficiently, appropriate and relevant policy making is also one of the essential infrastructures (Salehi, 1387).

In this regard, it is recommended that to improve awareness levels of farmers on precise farming, training sessions be held so that in addition to training given to familiarize farmers with this technology, the technical know-how is also provided for them. Besides, in order to do practical and relevant research to precise farming implementation, the government must allocate more budgets to scientific research centers (Daberkow, 2004).

To promote the technology of precise farming implementation, farming exhibitions should be held with the cooperation of Jihad e keshavarzi and pioneer farmers so that other farmers will gain an insight into the merits of this technology, and by implementing this technology the confidence of the pioneer farmers will be enhanced. It is necessary that the government arrange an accurate plan to include a policy of implementing precise farming in the national development plan, pay special attention to education factors, and make an attempt to promote precise farming implementation through the provision of necessary educational infrastructures. After the economic infrastructures (provision of subsidies to purchase equipment) have been established, technical

factors which also play a great role in completing the project can be provided through advisory expertise and supportive services. They help to facilitate the implementation of precise farming schemes.

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