Participation of farmers of wheat and barley in Zummar district /Nineveh governorate in drawing up annual agricultural plan and its relationship with some variables.

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Abstract :

The current study objectiveed to determine participation of farmers of wheat and barley in Zummar region for drawing up the annual agricultural plan in Nineveh Governorate in general and each fields of this study and determining correlation between dependent variable (participation level) and independent variables (age, educational level, number of crop cultivation years, cultivation land area).The research community included all farmers of wheat and barley (1200) distributed into 52 villages registered with Cultivation Division of Zummar (*) for year (2021).A proportional random sample (10%) was taken and became final sample size (120) respondents. The questionnaire was used as a tool for data collection. It consisted of three procedures.The first part included independent variables and second part dependent variable (participation level). The third part included obstacles facing of farmers' participation in making decisions related to drawing the annual agricultural plan for wheat and barley crops in Nineveh Governorate.Virtual validity was checked, then stability was calculated by (Krumbach's alpha coefficient) on an initial sample of (20 respondents) that were excluded from research sample, the tool's stability reached (76%).Then data was collected from a sample of (120) respondents. The data was unloaded, tabulated and its classified by Excel program and it was processed statistically by using the statistical program (SPSS).The results revealed that level of participation of farmers in Nineveh Governorate in general is described as low tending to medium. The results showed there are obstacles that stand in way of farmers in formulating agricultural policy in Nineveh Governorate.The most important of which is spread of routine in administrative dealings and issuance of decisions that do not satisfy for all farmers.Also,the results shows that there is a positive significant correlation at probability level (0.05) between participation level and variables (age, educational level).This study recommends involving largest possible number of farmers in drawing the annual plan and giving farmers freedom of expression about drawing the annual agricultural plan.

Keywords: farmers' participation, wheat and barley, annual plan, Virtual validity, Zammar district.

(*) : Zummar Agriculture Division data for agricultural year 2021

Introduction

The participation in making of right decision in all agricultural areas is a very important process (9).The participation is one of the most important functions of farmers because of its importance in improving of living and economic standard of farmers (8). One of the important decisions that farmers must participate in decisions of drawing annual agricultural plans because of its great and direct importance on the quantity and quality of annual agricultural production (11) and that state in turn bears a great responsibility in participation of people of opinion and specialists in this field (4 and 9) of Making

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and Making Rational Decisions.An essential task for success of contemporary organizations and their administrative leaders (2) and the farmer is one of the important links in this chain as he is the direct beneficiary of implementation of successful annual agricultural plans. Therefore, it had to participate with him in decision-making in drawing up their annual plans (7) and similar to developed foreign and Arab Countries that take their farmers originally to make agricultural decisions in the agricultural fields both animal and vegetable (1).Nineveh Governorate is one of the Iraqi governorates that is distinguished by cultivation of wheat and barley and that Agricultural Extension Service is looking forward to serving of farmers (6).Since the participation of wheat and barley farmers in Nineveh Governorate in making the decision related to the annual agricultural plan is a great importance to advance economic level.As well as, to increase the agricultural yield of the two important crops in our country.It was imperative for researchers of agricultural extension to know the level of participation of wheat and barley farmers in agricultural decision for the annual plan and to provide suggestions and recommendations related to this research. So the idea of the research came to answer the following research questions:

1.What is the level of farmers participation of wheat and barley in drawing up the annual agricultural plan related to the cultivation of wheat and barley crops in Nineveh Governorate in general and each of the studied areas (choosing the appropriate variety, financial and material support from the state, management and financing of agricultural operations related to the cultivated crop, Compensation for those affected by crises and disasters, receipt of the crop by the state(?

2.What are the obstacles that stand in way of the farmers participation of wheat and barley in drawing up the annual agricultural policy in Nineveh Governorate?

3.What is the relationship between the level of participation and each of the following independent factors (age, educational level, number of years of cultivation of the crop, Cultivation land area)?

Research objective:

1.Determination of the level of farmers participation of wheat and barley in drawing up the annual agricultural plan related to cultivation of wheat and barley crops in Nineveh Governorate in general.

2.Determination of the of farmers participation of wheat and barley in drawing up the annual agricultural plan related to cultivation of wheat and barley crops in Nineveh Governorate in each of the following fields of study (choosing the appropriate variety, participating in making decisions related to the annual plan with decision makers, managing and financing related agricultural operations crops and compensation for those affected by crises and disasters(.

3.Determination of the obstacles that stand in a way of the farmers participation of wheat and barley in a decision to formulate the annual agricultural policy in Nineveh Governorate.

4.Finding the correlation relationship between the level of participation and each of the following independent variables (age, educational level, number of years of cultivation of the crop, cultivation land area).

Research importance:

The importance of the research lies in benefits of the participation of wheat and barley farmers in making agricultural decisions related to the annual plan that state sets each year, and drawing up the appropriate agricultural policy that serves a large segment of farmers, especially wheat and barley growers and animal feed.

Research hypotheses:

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1.There is no significant correlation between participation in decision-making of drawing the annual agricultural plan and age variable.

2.There is no significant correlation between participation in decision-making of drawing the annual agricultural plan and educational level variable.

3.There is no significant correlation between participation in decision-making of drawing the annual agricultural plan and variable of number of year crop cultivation .

4.There is no significant correlation between participation in decision-making of drawing the annual agricultural plan and variable area of the cultivated land.

Materials and methods

Research Methodology:

The descriptive approach was used in the current research because it is the most appropriate research method, and it provides real descriptive data about reality to be studied and reality is accurately described.

Search region:

The research area is limited to the Zammar Agriculture Division, Nineveh Governorate which includes a large number of farmers registered with Zammar Agriculture Division who work of agricultural extension.

Research community:

The research included all farmers wheat and barley registered with Zammar Agriculture Division for Agricultural year (2020).Who numbered 1200 of farmers.A simple proportional random sample of 10% was chosen. The sample size was 120 respondents distributed over 52 villages.

Data collection tool:

First part:

Independent factors: it includes some personal characteristics of the respondents, namely (age, educational level, number of years of cultivation of the crop, cultivation land area).

It was measured as follows:-

1. Age: It was measuring by giving one score for each year .

2.Educational level: it was measured by alternatives (illiterate, read and write, primary, intermediate, middle school, institute, college, higher certificate) and were given numerical codes **(**1,2,3,4,5,6,7,8) respectively.

3.Number of years of crop cultivation: It was measured by giving one degree for each agricultural year.

4.Cultivation land area: It was measured by giving one degree for each acres.

Second Part: The dependent variable, which is level of farmers participation of wheat and barley of Zummar region in drawing up the annual plan.

This variable included (24) paragraphs distributed over three areas: (choosing the appropriate type, participating in making decisions related to the annual plan with decision makers, managing participate and financing agricultural operations related to the crop and compensating those affected by crises and disasters) at a rate of (8) paragraphs for each field. It was measured on a quadrilateral scale that included the following alternatives: (Do not participate, little participate , rarely participate, always).These alternatives were given numerical values which are (1,2,3,4) respectively.

The honesty and persistence:

Validity: It is the extent to which the scale meets specific purposes and uses for which it was designed (12). In order to verify the apparent sincerity and for purpose of ascertaining the validity of paragraphs laid down in their initial form.They were

presented to specialists and experts in fields of agricultural extension,Agricultural Extension Department at the College of Agriculture and Forestry,University of Mosul. It obtained the approval of arbitrators at a rate of (80%) and this indicates its validity to measure what it was designed for and suggestions of experts about some amendments were taken into account. So the number of paragraphs became (26) paragraphs, and thus the questionnaire was ready for collecting primary data. .

2.Stability: Stability means the stability of results if the scale is repeated after a period of time on same group of individuals after a period of 15 days (10). In order to find stability, a random exploratory sample (test-pre) with a size of (20) farmers was selected from research sample, which was excluded from research sample and thus the final sample became (120) respondents. The purpose of which is to ensure clarity of the questions in questionnaire form and for the purpose of finding the reliability coefficient for scale items and its validity by using Alpha-Gronbach's stability coefficient (Alpha-Gronbach) because this method is used to estimate the stability of trends and opinion polls and it gives the minimum estimated value of reliability coefficient (14) and Alpha-Gronbach's value depends on finding relationship between the variance of each paragraph and total variance.Allam**,** (5**)** mentioned that if the value of stability coefficient reaches (0.80) or more.It is considered acceptable and indicates the stability of the scale.

As for Murad and Suleiman, (13) were mentioned that if the value of the stability coefficient is more than (0.70), it is considered acceptable, and value of stability coefficient of the variable dependent on the current research has reached (76%), and thus the tool is considered stable and acceptable.

Data collection:

After the questionnaire was ready for data collection. It was distributed to selected sample which numbered (120) respondents after excluding the initial sample of (20 respondents).

Statistical means:

After completing the data collection then checking unpacking and tabulating them in organized tables on Excel program according to the research objectives. They were analyzed using the SPSS (Social Package Sciences Statistical) program (3).

Results and discussion:

1.The first objective: Determine the level of farmers participation of wheat and barley in decision to draw up the annual agricultural plan related to cultivation of wheat and barley crops of Zummar Region in general.

The results showed that farmers' participation level ranged between (26-86) with an average of (52) and a standard deviation of (7.2) on a scale whose theoretical value ranged between (24-96). The respondents were divided into three categories were using range as shown in table (1).

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Table 1. Respondents distribution were according to level of participation in drawing up the annual plan in general.

Categories	No.	Percentage	Level of participation
Low (26 - 46).	65	54.17%	35
Medium (47 - 65)	35	29.16%	53
High (more than 66).	20	16.67%	71
Total	120	100.00%	

$\bar{X}$= 52. S.D.=7.2 .

It is clear from table (1) that highest percentage of respondents was in low category (54%) of the respondents followed by medium category (29%). So the participation level of wheat and barley growers of Zummar area was low tending in general. The reason for this may be that the state does not attach importance to farmers for taking their opinion.

2.The second objective: Determine participation level of wheat and barley farmers in decision to draw up the Annual Agricultural Plan related to cultivation of wheat and barley crops in Nineveh Governorate for each following fields of study (Selecting appropriate variety, participating in making decisions related to the annual plan with decision makers, managing and financing agricultural operations related to the crop and compensating those affected by crises and disasters).

The first field Choosing the appropriate variety: The results showed that farmers' participation level ranged between (11-28) with an average of (21) and a standard deviation of (5.5) on a scale whose theoretical value ranged between (9-32) and respondents were divided into three categories using term and as in table (2).

Table 2. Respondents distribution according to level of participation in drawing up the annual plan in field of choosing appropriate category.

Categories	No.	Percentage	Level of participation
Low (11 - 17).	62	51.67%	9
Medium (18 - 24).	40	33.33%	20
High (more than 25).	18	15.00%	28
Total	120	100.00%	

$\bar{X}$= 21. S.D.=5.5 .

It is clear from table (2) that highest percentage of respondents was in low category and their percentage reached (52%) of respondents percentage followed by the middle category and their percentage was (33%) so the participation level of wheat and barley growers in the Zummar area in choosing the appropriate variety was in low tending to medium and perhaps the reason for this is that selection of the variety is made according to what the state has in terms of a plan and the farmers have no opinion as to what suits their requirements.

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The second field:Participation in making decisions related to annual plan with decision makers:

The results showed that farmers' participation level ranged between (10-30) with an average of (14) and a standard deviation of (4.2) on a scale whose theoretical value ranged between (9-32) and respondents were divided into three categories by using the range, as in table (3).

Table 3. Respondents distribution according to level of participation in drawing up the annual plan in field of participation in decision-making related to annual plan with decision-makers.

Categories	No.	Percentage	Level of participation
Low (10 - 16).	53	44.16%	12
Medium (17 - 23).	31	25.84%	19
High (24-30).	36	30.00%	27
Total	120	100.00%	

$\bar{X}$= 14. S.D.=4.2 .

It is clear from table (3) that highest percentage of respondents was in low category and their percentage amounted to (44%) of respondents percentage followed by high category and their percentage was (30%) so the participation level of wheat and barley farmers of Zummar area in the field of participation in taking of decisions related to the annual plan with the decision-makers were low and tended to rise and perhaps this reason is the marginalization of farmers and lack of consideration for their opinions, even if only a small part of them.

The third field: Managing and financing agricultural operations related to the crop and compensating those affected by crises and disasters.

The results showed that farmers' participation level was between (12-32) with an average of (17) and a standard deviation of (6.3) on a scale whose theoretical value ranged between (9-32). The respondents were divided into three categories by using a range as shown in table (4).

Table 4. Respondents distribution according to level of participation in drawing up the annual plan in field of managing and financing agricultural operations related to the crop and compensating those affected by crises and disasters.

Categories	No.	Percentage	Level of participation
Low (12 - 18).	45	37.50%	35
Medium (19- 25).	27	22.50%	53
High (26-32).	48	40.00%	71
Total	120	100.00%	

$\bar{X}$= 17. S.D.=6.3 .

It is clear from table (4) that highest respondents percentage was in high category and their percentage reached (40%) of the percentage of respondents and followed by low category (37.5%).

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So the participation level of wheat and barley growers of Zummar area is management and financing of agricultural operations related to the yield and compensation for those affected by crises and disasters were high and tended to decline and this may be because agricultural policy enjoys flexibility in field of management and compensation and participation of farmers in opinion because they are beneficiaries and harmed and at the same time they manage their affairs of agricultural plans and therefore they must be involved in decision-making even if it is relative.

1.The third objective: to identify the obstacles that stand in way of the participation of wheat and barley farmers in decision to draw up the annual agricultural policy in Nineveh Governorate.

This study showed that farmers of wheat and barley of Zummar district face five obstacles that prevent them from participating in drawing up the annual plan and they are arranged according to their importance from respondents' point of view, as shown in table (5).

Table 5. Most important obstacles facing the respondents in order of importance.

Obstacles	**Replicates**	**weight percentile**	**Ranking**
The lack of decision that satisfies all farmers regarding the annual plan.	40	33.3	1
They are not allowed by influential to express their opinions and its share.	34	28.3	2
Not addressing the problems they face.	32	26.6	3
They do not take their views into consideration and do not accept anyone's point of view.	28	23.3	4
Assigning workers tasks outside of our specialty so that we do not participate in decision-making with them.	25	20.8	5

Table (5) shows the obstacles facing the respondents and it was found that obstacle that came in first place is (absence of a decision that satisfies all farmers regarding the annual plan), where the percentage weight for it was 33.3%.Perhaps the reason is that annual plans in place be a personal opinion and a few influential individuals. A handicap (assigning workers to tasks far from our specialization so that we do not participate with them in decision-making) occupied the last rank, as its percentage weight was (20.8%), which indicates that influential are not interested of farmers opinions for reasons that serve their interests and decisions that satisfy themselves only.

Fourth objective: Finding the correlation relationship between the level of participation and each of the following independent variables (age, educational level, number of years of cultivation of the crop, area of cultivated land).

1. Age:

The respondents were distributed into three categories: (highest participation rate was in middle category (45%), as shown in table (6(.

Table 6. Distribution of respondents according to age.

Categories	No.	%	Cyperman correlation coefficient (r)	P.value (sig).	∞
Low (25 - 35).	40	33.33	0.084	0.323	0.05
Medium (36 - 46).	54	45.00			
High (47 - 58).	26	21.67			
Total	120	100.00 %			

In order to find the relationship between level of participation and age variable, Pearson correlation coefficient was used, whose value was (0.084), and significance of relationship was verified by relying on the (P.value) which amounted to (0.323) which is greater than the value (0.05), and thus it is not significant at the probability level (0.05). Therefore, we accept the statistical hypothesis, and this indicates that age has nothing to do with participation in decision-making.

2. Educational level:

The respondents were distributed according to the range into eight levels, and the highest percentage was at the elementary level, where their percentage reached (37%), as shown in table (7(.

Table 7. Distribution of respondents according to educational attainment.

Categories	No.	%	Cyperman correlation coefficient (r)	P.value (sig).	∞
1.Ignorant .	19	15.86	0.097	0.473	0.05
2.Read and write	23	19.16			
3.Primary.	44	36.66			
4.Intermediate.	15	12.50			
5.Preparatory.	12	10.00			
6.Institute.	3	2.50			
7.College.	2	1.66			
8.High certificate.	2	1.66			
9.Total	120	100.00%			

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In order to find the relationship between the participation level and certificate variable.The Cyberman correlation coefficient was used whose value was (0.097) and was significance relationship and was verified by relying on (P.value) which amounted to (0.473) which is greater than value (0.05) and thus it is not significant at the probability level (0.05). Therefore, we accept allternative hypothesis and perhaps the reason for this is that most farmers do not rely on testimony but on experience in participating in the decision.

3.Number of years of cultivation of the crop:

The respondents were divided into three categories, and highest percentage was in category (more than 10 years) and its percentage was (62%) as shown in table (8).

Table 8. Distribution of respondents according to the number of years of cultivation of the crop.

Categories	No.	%	Cyperman correlation coefficient (r)	P.value (sig).	∞
Less than 5 years .	33	27.50	0.173	0.032	0.05
5 – 10 years.	25	20.83			
More than 10 years	62	51.67			
Total	120	100.00 %			

To find the relationship between level of participation and variable number of years of crop cultivation. The Pearson correlation coefficient, whose value was (0.173), was used at probability level (0.05), so we reject alternative hypothesis and accept the research hypothesis that states (there is a significant correlation between the two variables), and this may be due to the fact that those who have more than 10 years of service participate in decision-making.

4.Cultivated land area: the respondents were distributed according to the extent into three categories, and the highest percentage was in the high category (62%), as shown in table (9).

Table 9. Distribution of the respondents according to the cultivated land.

Categories	No.	%	Cyperman correlation coefficient (r)	P.value (sig).	∞
Low (less than 50 acres).	19	15.83	0.147	0.039	0.05
Medium (51 – 150 acres).	28	23.33			
High (More than 151 acres).	73	60.84			
Total	120	100.00 %			

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In order to find the relationship between level of participation and variable number of years of service. The Pearson correlation coefficient was used which amounted to (0.147) and the significance of relationship was verified by relying on (p.value) which amounted to (0.039) which is less than value (0.05) and thus it is significant at level of probability (0.05).Therefore, we reject null hypothesis and accept the research hypothesis which states (there is a significant correlation between two variables). This may be attributed to fact that majority of farmers are those who have a large area and in turn are considered decision-makers who own least land area.

Conclusions and Recommendations

First, conclusions:

The results of the study showed the following:

1.The level of participation of wheat and barley growers in the decision to draw up the annual agricultural plan was low. We conclude from this that the state marginalizes the participation of wheat and barley growers in the Zummar area in drawing up the plan and the reason may be due to lack of confidence on part of the decision makers with the participation of farmers in this decision .

2.There are obstacles that stand in way of the level of participation of wheat and barley farmers in Nineveh Governorate in drawing up the annual agricultural plan in Nineveh Governorate. The most important of which is spread of routine in administrative dealings and the issuance of decisions that do not satisfy all farmers.

3.The study showed a significant relationship between the variables of land area, number of years of cultivation for the crop, and level of participation in the annual agricultural plan. We conclude from this that farmers' participation is that those who had a large area of land and more years of cultivation had a share in drawing up the annual agricultural plan in the Zummar area, but in a small way, and perhaps the reason for this is that farmers refrain from cultivating their lands and this is an economic loss on the country. This forced them to participate in the cultivation of their land.

Second: Recommendations:

1.Involve all farmers in drawing up the annual plan for the cultivation of wheat and barley of Zummar area.

2.Staying away from the routine that prevents the freedom to participate in drawing up the annual plan.

3.Taking the opinions of farmers and not marginalizing them in everything related to decisions related to the cultivation of wheat and barley.

4.The state selects objective, competent employees who have experience in planning and drawing up the agricultural plan.

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