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TJAS Tikrit Journal for Agricultural Sciences

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# The Perception Level of The Agricultural Employees to Sustainable Agricultural Development Concept: A Case Study In The Sulaimani Governorate

## ABSTRACT

The study aimed to determine the perception level of agricultural employees to the concept of Sustainable Agricultural Development in the Sulaimani Governorate, determining the level of their perception towards it's fields of (Sustainable Agriculture and Sustainable Development) according to its dimensions social, environmental and economic dimension, also determining the correlation between the perception level of agricultural employees to the concept of sustainable agricultural development and some of the personal and functional variables. The study population included all of the agricultural employees who work in agriculture directorate of Sulaimani and affiliated agricultural departments in all districts of Sulaimani governorate, where totaling (2778) agricultural employees. A stratified proportional random sample was selected of them with the percentage (10%) in all the agricultural sections and departments, thus the sample size became (278) agricultural employees. Study results showed that the perception levels of agricultural employees to the concept of sustainable agricultural development in general were medium tends to rise, the percentage of respondents within the medium and high categories reaching nearly (97%), results also showed that the (60.8%) of the respondents have a medium level of perception to the concept of sustainable agriculture. The results of the study also showed that there was a significant correlation between the perception levels of agricultural employees to the concept of Sustainable Agricultural Development and each of the following variables: age, specialization, duration of employment service, Socialization, location of job, exposure to sources of information related to sustainable agricultural development, attitude towards sustainable agricultural development). Whilst there was no significant correlation between the perceptions level of agricultural employees to the concept of sustainable agricultural development and each of the variables (gender, educational level, duration of agricultural extension service and previous developmental experiences).



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## INTRODUCTION AND RESEARCH PROBLEM

Considering the contemporary changes, communities are racing to implement developmental plans aiming to promote economic and social infrastructure and those communities plans have resulted to improve the life of the individual, toward better level, considering the utilizing the available resources and tools for that improvement, these projects had achieved many outcomes such as increasing production rates and improving living standards through raising capita portion from total national product (Soham *et al*., 2008:2).

Thus, the study development should be oriented in a way that have to save a sustainable development over the next generations by solving the current problems that have occurred both on the natural or constructional environment, and reaching at the equilibrium point between the developments place

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without disturbing the environment, which is the primary attraction component of the place with its natural and constructional capabilities (Al-Uttar, 2008:2).The rapid and unbalanced growth to the industrial developments is accompanying with the numerous of environmental problems those caused the environmental degradation, desertification which reflecting, the human pressure on the environment and causing poverty, unemployment, by passing this combination represents the painful life with the current life (Qassimi, 2012:3).Generally the development means a comprehensive civilization process which differs in its Considering the contemporary changes, communities are racing to implement developmental plans aiming to promote economic and social infrastructure and those communities plans have resulted to improve the life of the individual, toward better level, considering the utilizing the available resources and tools for that improvement, these projects had achieved many outcomes such as increasing production rates and improving living standards through raising capita portion from total national product (Soham *et al*., 2008:2).Thus, the study development should be oriented in a way that have to save a sustainable development over the next generations by solving the current problems that have occurred both on the natural or constructional environment, and reaching at the equilibrium point between the developments place without disturbing the environment, which is the primary attraction component of the place with its natural and constructional capabilities (Al-Uttar, 2008:2).The rapid and unbalanced growth to the industrial developments is accompanying with the numerous of environmental problems those caused the environmental degradation, desertification which reflecting, the human pressure on the environment and causing poverty, unemployment, by passing this combination represents the painful life with the current life (Qassimi, 2012:3).

**Objectives of the Research**: - The research aimed at achieving the following:

1. Determining the perception level of the agricultural employees in Sulaimani governorate to the concept of the sustainable agricultural development in general.
2. Determining the perception level of the agricultural employees in Sulaimani governorate to the concept of sustainable agricultural development in each of the following domain to the concept of the sustainable agricultural development: (domain of sustainable agriculture, domain of sustainable development).
3. Determining the Correlation Relationship between the Perception Level of Agricultural Employees to the Concept of Sustainable Agricultural Development and each of the Following Variables:(Age, Education level, Specializations, Duration of employment service , Duration of agricultural extension service , Socialization, Location of Job, the sources of information relevant to sustainable agricultural development, Attitude Towards to Sustainable Agricultural Development, previous developmental experiences to sustainable agricultural development).

**Justification of the Research**

1. The research contributes to provide the facts and information related to the level of perception of the agricultural employees to the concept of the sustainable agricultural development in the governorate of Sulamani and for the upgrading of sustainable agricultural development in the Kurdistan region in general, while, Kurdistan region is considered a rich area in human and agricultural resources, as they should be dealt in a way that guarantee preservation and maintenance.
2. This research is one of the recent trends to provide data that could be used in subsequent research and could be a starting point for ward studies in the subject of sustainable development, which has received wide international attention in recent years.

**Research Hypotheses**

To achieve the objectives of the research, the researchers has developed the following statistical assumptions:

- There is no significant correlation between the level of perceptions and each of the following variables of agriculture employees in the governorate of Sulaimani to the concept of the sustainable agricultural development:( :(Age, Education level, Specializations, Duration of employment service , Duration of agricultural extension service , Socialization, Location of Job, the sources of information relevant to sustainable agricultural development, Attitude Towards to Sustainable

Agricultural Development, previous developmental experiences to sustainable agricultural development).

**Procedural Definitions**

**Agricultural Employees**: persons who work in agricultural extension and non-extension departments and directorates in the governorate of Sulaimani.

**Agricultural Development**: is a management and maintenance of the natural resources and increasing the agricultural production capacity in Kurdistan region.

**Sustainable Agricultural Development**: it means the perception of the agricultural employees in the governorate of Sulaimani to the concept of management and maintenance of natural resources in the region to ensure the provision of the requirements of current generations without compromising the rights of future generations to guarantee better energy productivity in the agricultural sector.

**Sustainable Agriculture**: it is the successful management of the natural resources and their preserving in a way that allow economic growth on a long-term with a rational administration to each exploited resources aiming to attain the goal of sustainable production.

**MATERIALS AND METHODS:**

**First**: Research Population and Sample Size:

The target population of the research included all of the agricultural employees working in the Directorate of Agriculture in Sulaimani governorate and all of the agriculture department and sectors affiliated, that arrived up to 2778 employees[†] with their different administration levels stratified sample by 10% from the total number was selected to be 278 employees:

**Second: Tools of Research**

The researcher has prepared a questionnaire form as instrument to measure the perception level of the agricultural employees about the concept of sustainable agricultural development. The form was composed of two parts. **first part** included questions in order to gain data related to personal and functional variables of the research, including( age, gender, educational level, specialization, duration of employment service, duration of agriculture Extension service, Socialization, location of job, sources of information relevant to sustainable agricultural development, attitude towards to sustainable agricultural development and previous developmental experiences).**second part** Included statements related to the determination the employee's perception levels in Sulaimani governorate for the concept of sustainable agricultural development. The test statement has been prepared after determining of the main fields and developmental practice that the agricultural employee should perceive and consider it in both the main fields of sustainable agricultural development which are sustainable agriculture and sustainable development. Table 3.2 declares the field and dimension of the measurement.

**Third**:

**Fact Validity**

Means correctness of measurement and its capacity on measuring what is been laid down to be measured. In other word it is the feature needed to measure, the degree of measurements wanted to achieve as goals built for (Al-Hayali, 2008:13). The special literature of the measurement indicates that the best way to ascertain the tool of measurement, it to consult some specialists in order to determine whether the phrases assigned are synchronized with the characters measured. The measurement statement was shown to some specialists in the field of psychology, social, extension, administration, and all their comments and suggestion were taken inconsideration and fixed in the measurements.

**Validity Content**

The content of validity is the way of measurement that represented measured side (Abdul Haviz and Bahia, 2000:175). The measure had been shown to 18 specialists in order to declare that agree the

[†]-The researcher obtained the numbers of the agricultural employees from registers of Agricultural Directorate in Sulaimani Governorate 3rd Oct. 2019

-The sample of pre-test was excluded from the questionnaire from the total population.

tested statement in three levels measurement including (Agree, agree with some amendments, not agree) speculated to 3-2-1 all the statement gained the agreement by the rate of more than 75%.

**Table (1) population and research sample**

| No. | Location of job | The total number of samples | Number of employees of the sample% |
|---|---|---|---|
| 1 | City center (Equipment+Accounts+Note+Planning+Land+Administration+ Agricultural Services + Department of Horticulture Agriculture | 767 | 77 |
| 2 | Department of Agricultural Extension | 274 | 27 |
| 3 | Department of Bakrajo Agriculture | 76 | 8 |
| 4 | Department of Bazian Agriculture | 42 | 4 |
| 5 | Department of Tanjaro Agriculture | 76 | 8 |
| 6 | Directorate of Sharbazher Agriculture (Sharbazher + siwayl) | 84 | 8 |
| 7 | Agriculture Directorate of Ranya (Ranya+Saruchawa) | 187 | 19 |
| 8 | Agriculture Directorate of Dukan (Dukan+Bingrd+Piramagron+Khidran) | 168 | 17 |
| 9 | Agriculture Directorate of Pishder (Pishdar+Sangasar+Zharawa) | 105 | 10 |
| 10 | Agriculture Directorate of Mawat | 46 | 5 |
| 11 | Agriculture Directorate of Saydsadeq (Saydsadeq+Barzinja) | 81 | 8 |
| 12 | Agriculture Directorate of Penjwen (Penjwen+Garmk) | 51 | 5 |
| 13 | Agriculture Directorate of Qaradakh | 27 | 3 |
| 14 | Agriculture Directorate of Sharazoor | 64 | 6 |
| 15 | Agriculture Directorate of Darbandikhan | 87 | 8 |
| 16 | Agriculture Directorate of Halabja (halabja + sirwan +byara) | 207 | 21 |
| 17 | Agriculture Directorate of Chamchamal (chamchamal + aghjalar + qadir karam + sangaw) | 436 | 44 |
| Total | | 2778 | 278 |

**Fourth: Measuring the research variables**: -

The variable variables mentioned in the first part of the questionnaire were measured using the measurements for each variable, while the dependent variable was measured through deduct the current level of agricultural employees in Sulaimani governorate to the concept of the sustainable agricultural development from the record level of 100 degrees .The current actual level

of perception was determined from the degrees of 58 statements, From these 29 statements for Sustainable Agricultural statement giving the range of 10,9,10 for social, , environmental and economic aspect and the other 29 experimental statement were specified on the Sustainable development for the ranges 11,7,11 for social, environmental and economic aspects the Perception Level of the Agricultural Employees represented by the sum of the degrees after answering questions tests posed by the experts. The respondent may gain degrees equal to the value of item in case of correct answer and 0 degree for wrong answer. The degree of every respondents represents the actual level Perception from the original records levels of 100 degrees.

**RESULTS AND DISCUSSION:**

**First Objective: Determining the Perception Level of the Agricultural Employees in Sulaimani Governorate to the Sustainable Agricultural Development Concept in General.**

The results of the study shows that the highest numeric value obtained from respondents about perception level to the concept of the sustainable agricultural development is (99), and the lowest numeric value is (43) and with arithmetic mean value of (83.20), the standard deviation value of (9.61) and the reflect grades of the level of the respondents' perception to the concept of sustainable agricultural development have been classified under three categories by using the law of range and Length Category. And as shown in table (2):

**Table (2) Distribution of the respondents according to the levels of their perception of the sustainable agricultural development concept in general**

| No. | Categories | Frequency | % | Mean | $\bar{x}$ | SD |
|---|---|---|---|---|---|---|
| 1 | Low (43- 61) | 7 | 2.52 | 50.07 | 83.20 | 9.61 |
| 2 | Medium (62- 80) | 190 | 68.34 | 88.34 | | |
| 3 | High (81- 99) | 81 | 29.14 | 74.01 | | |
| Total | | 278 | 100 | | | |

Table (2) shows that the proportion (68.34%) of the respondents who were included in the medium category for the perception level; with mean value of (88.34). And the lowest proportion is (2.52%) within the low category to the perception level; with the mean value of (50.07). From these results shows that the majorities of the respondents have a medium perception level to the concept of the sustainable agricultural development and tends to rise and that the categories of middle and high of perception has respondents formed a proportion of (97%) of the total respondents. Perhaps, this is because of respondents' concern toward the topic of sustainable development and acknowledging its importance and following up all of the published and written materials about it at social media as they are trendy the concepts that they have held the world's attention recently and this does not agree with the studies of (Al-Jubouri, 2013:46) and (Amile and Zaghloul, 2008:301).

**Second Objective: Determining the Perception Level of the Agricultural Employees in Sulaimani Governorate to the Sustainable Agricultural Development Concept in Each Field of the Following Fields to the Concept of the Sustainable Agricultural Development: (Sustainable Agriculture Field, Sustainable Development Field).**

**1. The Field of Sustainable Agriculture:**

The results of the study show that the highest value of the perception level of the respondents to them to the field of the sustainable agricultural is (53), and the lowest (23.5) value and with arithmetic mean value of (43.62) and the standard deviation is (5. 43) and the respondents have been distributed under three categories according to their perception level to the concept of sustainable agriculture, as shown in table (3):

**Table (3) Distribution of the respondent according to their perception levels to the concept of sustainable agriculture**

| No. | Categories | Frequency | % | Mean | x̄ | SD |
|---|---|---|---|---|---|---|
| 1 | Low (23.5 - 33.4) | 14 | 5.03 | 29.29 | 43.62 | 5.43 |
| 2 | Medium (33.5 - 43.4) | 169 | 60.80 | 47.04 | | |
| 3 | High (43.5 - 53) | 95 | 34.17 | 39.68 | | |
| Total | | 278 | 100 | | | |

Table (3) shows that the highest ratio of the respondents is (60.80%) who were included in the medium category; with the mean value of (47.04) and the least level of low proportion is (5.03%) with a mean value of (29.29) and this means that the majorities of the respondents have medium perception level to the concept of the sustainable agricultural development and tends to rise.

The reason behind this result might be that the concept of the sustainable agriculture has received a great attention recently by the media and officials from the agricultural sector in the Kurdistan region, which reflected positively on the agricultural employee's perception to the concept of sustainable agriculture.

**2. The Field of Sustainable Development**

The results of the study shows that the highest value of the perception level of the respondents to them to the field of the sustainable development is (47.5), and the lowest (17.5) value and with arithmetic mean value of (39.59) and the standard deviation is (5.18) and the respondents have been distributed under three categories according to their perception level to the concept of sustainable development, as shown in table (4):

**Table (4) Distribution of the respondent according to their perception level to the concept of sustainable development**

| No. | Categories | Frequency | % | Mean | x̄ | SD |
|---|---|---|---|---|---|---|
| 1 | Low (17.5- 27.4) | 5 | 1.80 | 20.10 | 39.59 | 5.18 |
| 2 | Medium (27.5 - 37.4) | 209 | 75.20 | 41.91 | | |
| 3 | High (37.5 - 47.5) | 64 | 23.00 | 33.45 | | |
| Total | | 278 | 100 | | | |

Table (4) shows that the highest ratio of the respondents is (75.20%) and they were included within the medium category and with mean value of (41.91) and the lowest proportion of the respondents were among the low category by (1.80%), with a mean value of (20.10), and this means that three - quarters of the respondents described their perception to the concept of the sustainable development as the medium, and the reason can be due to the lack of the respondents' perception or their skepticism to the concept of the sustainable development, perhaps there were involvement of non- agricultural concepts that are somewhat far from the nature of their agricultural **Third Objective: Determining the Correlation Relationship between the Perception Level of Agricultural Employees to the Concept of Sustainable Agricultural Development and all of the Following Variable**

1.Age: -

The respondents were divided into three categories for development on age by using the law of range (low, medium, high). Table (5) shows that the proportion of the respondents in the low age category is (33.80%) and followed by the proportion of the respondents with older ages,

which is located within the high category of (33.50%), and this shows that the largest proportion of the respondents are young, and as shown in table (5):
work performance.

**Table (5) Distribution of the respondents according to their age categories and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | Frequency | % | $\bar{x}$ | SD | The value of the correlation coefficient |
|---|---|---|---|---|---|---|
| 1 | Low (25- 37) | 94 | 33.80 | 44.09 | 10.85 | 0.11* **(*) Significant at 0.05 level.** |
| 2 | Medium (38- 50) | 91 | 32.70 | | | |
| 3 | High (51- 63) | 93 | 33.50 | | | |
| Total | | 278 | 100 | | | |

To find a correlation relationship between the level of perception of respondents to the concept of the sustainable agricultural development and age, the simple correlation coefficient (Pearson) was used which its value reached (0.11), and it's significant at (0.05). This indicates the presence of a significant correlation relationship between two variables and thus, this rejects the null hypothesis in which states that there (is no significant correlation relationship between the level of perception of the respondents to the concept of the sustainable agricultural development and age), and accept with alternative hypothesis, Perhaps it is because the knowledge and perceptions of respondents increases with increase in age, as a result of ongoing reading on the sustainable agricultural development concepts information and experiences that they receive with increasing age. This result is consistent with the studies of (Amin, 2012:190) and (Agahi *et al*, 2011:79) and inconsistent with the studies of (Al-Abasi *et al*., 2014:138) and (Islam, 2011:47).

**2. Educational Level**

The results showed that the highest proportion of the respondents who were graduates from the college of agriculture were (53.23%) and with mean value of (82.79%) and the proportion (28.05%) of the respondents were graduates of high school of agriculture and with mean value of (82.89) and the proportion (15.82%) of the respondents were graduates of the agricultural institute and with mean value of (84.27) and the proportion of (2.87%) of the respondents were those who were higher studies with mean value of ( 87.94) as shown in table(6):
To find a correlation relationship between the degree of the perception level of the respondents to the concept of the sustainable agricultural development and educational level, correlation coefficient ranking( Spearman rank ) was used and its value reached (0.03), which is non-Significant, as there is no correlation relationship between the two variables and therefore, accept the null hypothesis adversely and this is because the majority of the curricula taught at educational institutions in the sulaimani governorate does not include topics on the subject of the sustainable agricultural development and thus there is no relationship between two variables. This result is consistent with the study of Zubaidi (2008:76), and (Al-Abasi *et al*., 2014:138), and is inconsistent with (Amin 2012:190), (Agahi *et al.*, 2011:79), and (Al-Ghanem, 2006:23).

**Table (6) Distribution of the respondents according to their educational Levels and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | Frequency | % | Mean | The value of the correlation coefficient |
|---|---|---|---|---|---|
| 1 | Agricultural High school | 78 | 28.5 | 82.89 | 0.03 n.s |
| 2 | Agricultural Institute | 44 | 15.82 | 84.27 | |
| 3 | College of Agriculture | 148 | 53.23 | 82.79 | |
| 4 | Higher Studies | 8 | 2.87 | 87.94 | |
| Total | | 278 | 100 | | |

**3.Specialization**

When the respondents were distributed according to their specialization, it was shown that the proportion of those respondents who were not specialized in the field of agricultural extension were (75.54%) and with mean value of (83.74), while the proportion of the specialist respondents in the field of agricultural extension were (24.46%) and with the mean value of (81.43), and this means that the majority of the respondents are not agricultural extension specialists as shown in table (7).

**Table (7) Distribution of the respondents according to their specializations and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | frequency | % | Mean | The value of the correlation coefficient |
|---|---|---|---|---|---|
| 1 | Agricultural extension | 68 | 24.46 | 81.43 | 0.10* |
| 2 | Agricultural specialties (non - extension) | 210 | 75.54 | 83.74 | |
| Total | | 278 | 100 | | |

* Significant at the 0.05 level

To find a correlation relationship between the degree of the perception level of the respondents to the concept of the sustainable agricultural development and specialization, correlation coefficient ranking (Spearman rank) was used which its value reached (0.10) which is a significant value of (0.05), and this shows there is significant correlation between dependent variables (the perception level of the respondents to the concept of the sustainable agricultural development) and the independent variables (Specializations), thus, this reject the null hypothesis which states (there is no significant correlation relationship between the mentioned variable) and accept alternative hypothesis Which states (there is significant correlation relationship between the mentioned variables), and the reason for this is that the concept of sustainable agricultural development includes a number of concepts that are common to the majority of agricultural disciplines and non-agricultural for the conservation of the natural resources and environment and protection, justice and the distribution of the resources and the general objectives realize its importance and working to achieve all employees regardless of their specialties which led to the emergence of this relationship and are not in accordance with the results of the study of (Amin 2012:190).

**4. Duration of Employment Service**

The respondents were divided into three categories according to the duration of the employment service by using the law of range, and we found that the highest proportion of the

respondents (46.80%) were among low category, and with mean value of the level of their perception (82.13) , the lowest proportion of the respondents is (17.20%) which they were among the high category and with mean value of (85.51) , and that the highest duration of employment service to the respondents which was (40) years, and the lowest duration of employment service was (2) years, as shown in table (8):

**Table (8) Distribution of the respondents according to their duration of employment service and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | frequency | % | Mean | $\bar{x}$ | SD | The value of the correlation coefficient |
|---|---|---|---|---|---|---|---|
| 1 | Low (2- 14) | 130 | 46.76 | 82.13 | 83.28 | 10.19 | 0.18** |
| 2 | Medium (15- 27) | 100 | 35.97 | 83.71 | | | |
| 3 | High (28- 40) | 48 | 17.27 | 85.51 | | | |
| Total | | 278 | 100 | | | | |

** Significant at the 0.01 level.

To find a correlation relationship between the level of the perception of the respondents to the concept of the sustainable agricultural development and the duration of employment service, correlation coefficient ranking (Pearson) was used which its value reached (0.18) which is a significant value at (0.01) level, and this shows there is a significant correlation between variables this reject the null hypothesis of the research and accept alternative hypothesis which states (there is significant correlation relationship between the perception levels of the respondents of the sustainable agricultural development and duration of employment service). The reason may be due to the long duration of employment services within exposed to the different aspects of agricultural tasks and also has more opportunity for participation in the development of training courses, which they had to get to the higher level of perception to the concept of the sustainable agricultural development, and this agrees the study of (Al-Jubouri, 2013:66), and disagrees with the study of (Al-Ghanem, 2006:22).

**5. Duration of Agriculture Extension Service**

The respondents were divided into three categories according to the duration of agriculture Extension service field by using the law of range, and the results of the research shows that the highest proportion of the respondents were (89.60%) and were among low category and whose the term of their services in the extension field were (0-12 years), and the mean level of their perception was (83.08), the lowest proportion of the respondents were (1.40%) which were among the high category and their services in the extension field were between (26-38) years with the value of mean level of (84.00), as shown in table (9):

**Table (9) Distribution of the respondents according to duration of agriculture extension services and its relationship to the perception level of agricultural employees to concept of sustainable agricultural development**

| No. | Categories | frequency | % | Mean | x | SD | The value of the correlation coefficient |
|---|---|---|---|---|---|---|---|
| 1 | Low (0- 12) | 249 | 89.56 | 83.08 | 83.19 | 6.25 | 0.034 N.S |
| 2 | Medium (13- 25) | 25 | 9.00 | 84.22 | | | |
| 3 | High (26- 38) | 4 | 1.44 | 84.00 | | | |
| Total | | 278 | 100 | | | | |

To find the correlation relationship between the perception level degrees of the respondents to the concept of the sustainable agricultural development and to the duration of agricultural extension

services, simple correlation coefficient (Pearson) was used which its value reached (0. 034) which is non- significant at (0.05) level, and this shows there is no significant correlation between variables and agree with the null hypothesis which states (there is no significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and duration of agriculture Extension services).The reason for this, whenever the duration of the work of employment in the agricultural extension less led to the lack of cognition of the employees in the sustainable agricultural development and justification for this can that the employees were busy with working in non-extension tasks that made them to be detached with great role of education that could give them an extension work comparing to stored perceptions in their memories with what that were received from the feelings and modern meanings depends upon the accuracy of the perceptive outputs , whether images or concepts or relations that the impact on the level of their perception to the concept of the sustainable agricultural development , this is consistent with the study of ( Amin, 2012:190).

**6. Socialization**

The respondents were divided into two categories depending of Socialization and the results of the study showed those the proportion with a rural upbringing has reached (27.30%) while a great number of them were brought up in the urban areas, it may be caused by cases of immigration that occurred previously to urban communities were accounted for (72.70%), as shown in table (10):

**Table (10) Distribution of respondents according socialization and its relationship to the perception level of agricultural employees to concept of sustainable agricultural development**

| No. | Categories | frequency | % | Mean | The value of the correlation coefficient |
|---|---|---|---|---|---|
| 1 | Rural | 76 | 27.30 | 84.75 | 0.10* |
| 2 | Urban | 202 | 72.66 | 82.62 | |
| Total | | 278 | 100 | | |

* Significant at the 0.05 level.

To find the correlation relationship between the perception level of the respondents to the concept of the sustainable agricultural development and to Socialization, correlation coefficient ranking (Spearman Brown) was used which its value reached (0.10) which is significant at (0.05) level, this shows there is a significant correlation between variables and this agree with alternative hypothesis which states (there is a significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and Socialization variables) and reject the hypothesis null which states (there is no significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and Socialization variable).This result can be explained by what was reported by a specialist from the agriculture variation employees in their knowledge process and then the extent of the integration of perception and understanding to the real concept of development and this was due to the different social and cultural assets in which made the respondents them as superior over the urbanites in their perception ( Al-Slime, Without History:114-156) .

**7. Location of Job**

The respondents were divided into three categories according to their location of job by using the law of range, and the results of the study shows that the highest proportion of the respondents in the cities and towns (44.60%) and the mean value of their perception level was (85.40). While the lowest proportion of respondents working in the center of the governorate by (23.70%) with mean value of (79.42), as shown in table (11):

**Table (11) Distribution of the respondents according to the location of job and its relationship to the perception level of agricultural employees to concept of sustainable agricultural development**

| No. | Categories | frequency | % | Mean | The value of the correlation coefficient |
|---|---|---|---|---|---|
| 1 | Governorate centers | 77 | 27.70 | 81.47 | 0.11* |
| 2 | Cities and towns | 113 | 40.64 | 83.34 | |
| 3 | Township | 88 | 31.66 | 82.93 | |
| Total | | 278 | 100 | | |

* Significant at the 0.05 level

To find the correlation relationship between the perception level degree of the respondents to the concept of the sustainable agricultural development and to location of job, correlation coefficient ranking (Spearman Brown) was used which its value reached (0. 11) which is significant at (0.05) level, this shows there is a significant correlation between mentioned variables and this rejects the null hypothesis which states (there is no significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and location of job) and agrees with the alternative hypothesis which states (there is a significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and mentioned variables).

The reason for this result be may that employees who work in the Cities and towns are closer and more in touch with the environment and natural resources. Thus, they become much more perception of their co-workers working in the center of the governorate in the conservation of natural resources and enable future generations to benefit from them without sacrificing the right of the current generations.

**8. Exposure to the Sources of Information Relevant to Sustainable Agricultural Development**

The respondents were distributed according to their exposure to the sources of information relevant to the sustainable agricultural development into three categories according to the law of the theoretical range. The results showed that the highest proportion of the respondents of (46.10%) were among the medium category, and the mean value of their perception level was (81.60) and the lowest proportion of the respondents was (12.90%) were from the low category and with the mean value of (80.79), but the highest numeric value of the sources of information obtained by the respondents was (18) and the lowest numeric value was (1) and with the mean value of (11.86), and as shown table (12):

**Table (12) Distribution of the respondents according to exposure to the sources of information relevant to sustainable agricultural development and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | Frequency | % | Mean | $\bar{x}$ | SD | The value of the correlation coefficient |
|---|---|---|---|---|---|---|---|
| 1 | Low (1- 6) | 36 | 12.90 | 8 0.79 | 11.86 | 4.58 | $0.27^{**}$ ** Significant at the 0.01 level. |
| 2 | Medium (7- 12) | 128 | 46.10 | 81.60 | | | |
| 3 | High (13- 18) | 114 | 41.00 | 85. 75 | | | |
| Total | | 278 | 100 | | | | |

To find a correlation relationship between the level degree of perception of the respondents to the concept of the sustainable agricultural development and exposure to the sources of information correlation coefficient simple (Pearson) was used which its value reached (4. 63) which is this value being higher than tabular value and the significant value at (0.01) level. This shows that there is a significant correlation between mentioned variables and this rejects the null hypothesis and agrees with the alternative hypothesis which states (there is a significant correlation

relationship between the perception level of the respondents of the sustainable agricultural development and mentioned variables) and the reason behind this result is as much as the employees being exposed to the sources of information causes to increase their perception level to the concepts of the sustainable agricultural development and consistent with the study of ( Al-Attabi and Zubaidi, 2009:226 ), ( Al-Ghanem, 2006:21), and the study of ( Al-Abasi *et al*., 2014:138), and does not agree with the study of ( Oyesola *et al*, 2010:2).

**9. Attitude Towards to Sustainable Agricultural Development**

The respondents have been distributed according to their Attitudes towards sustainable agricultural development into three categories by using the actual extent law and this is due to the lack of ( negative ) category when they were divided on the Theoretical Extent, as it shows that the highest proportion of the respondents of (64.75%) were having positive attitudes towards sustainable agricultural development, and with the mean value of (44.83) and the least proportion of the respondents (3.96%) were having negative attitudes towards sustainable agricultural development, and with mean the value of (29.73), as shown in table(13):

**Table (13) Distribution of the respondents according to their attitude towards to sustainable agricultural development and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | Frequency | % | Mean | $\bar{X}$ | SD | The value of the correlation coefficient |
|---|---|---|---|---|---|---|---|
| 1 | negative (24- 32) | 11 | 3.96 | 29.73 | 42.17 | 4.45 | 0.29** |
| 2 | neutral (33- 41) | 87 | 31.29 | 38.23 | | | |
| 3 | positive (42- 50) | 180 | 64.75 | 44.83 | | | |
| Total | | 278 | 100 | | | | |

** Significant at the 0.01 level

To find a correlation relationship between the perception level of the respondents to the concept of the sustainable agricultural development and attitude towards sustainable agricultural development, Correlation Coefficient simple (Pearson) was used which its value reached (0. 29) which is the significant value at (0.01) level. This shows that there is significant correlation among variables, so agree with the alternative hypothesis which states (there is a significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and the attitude), and reject the null hypothesis. The reason behind this result is that the positive attitudes of the respondents towards sustainable agricultural development make them more open and, in an effort, to recognize the importance of the sustainable agricultural development and to identify its concepts and this agree with the study of (Jonedy, 2012: p 4581), and (Bagheri *et al*., 2008:1389).

**10. Previous Developmental Experiences:**

The respondents have been distributed according to their developmental experiences into three categories by using actual extent law as there was the absences of higher category at the division over the theoretical extent and the results of the study showed that the highest numeric value of the previous development of the experiences acquired by the respondents was (17) and the lowest numeric value was (0) and with mean value of (6.04) and the standard deviation of (3.59). The highest proportion of the respondents of (72.70%) were among low category, and with the mean value of their degree level of perception of (82.62) and the lowest proportion of the respondents of (1.40%) were among the high category and with mean value of (83.67), as shown in table (14): To find the correlation relationship between the degree of the perception level of the respondents to the concept of the sustainable agricultural development and to previous developmental experiences, correlation coefficient simple (Pearson) was used which its value reached (0.07) which is the lower than tabular value and is a significant value. This shows that there is no significant correlation between variables and agree with the null hypothesis which states (there is no significant correlation relationship between the perception level of the respondents of the sustainable agricultural

development and previous developmental experiences) and reject with the alternative hypothesis which states (there is a significant correlation relationship between the perception level of the respondents of the sustainable agricultural development and previous developmental experiences). The reason for this result be may that the respondents feel what is available from information and knowledge sources related with the sustainable agricultural development is new and from current time, perhaps this led them to fail to recognize the importance of the previous development experience, the result is in line with the study (Khan and Akram, 2012:215), and (Ahmed, 2014:6), does not agree with the study of ( Fayed, 2015:501 ), ( Bagheri *et al.*, 2008:1389), and ( Agahi *et al.*, 2011:79).

**Table (14) Distribution of respondents according to their previous developmental experiences and its relationship to the perception level of agricultural employees to concept sustainable agricultural development**

| No. | Categories | Frequency | % | Mean | $\bar{X}$ | S.D. | The value of the correlation coefficient |
|---|---|---|---|---|---|---|---|
| 1 | Low (0- 5) | 202 | 72.70 | 82.62 | 6.04 | 3.59 | 0.07 n.s |
| 2 | Average (6- 11) | 72 | 25.90 | 84.86 | | | |
| 3 | High (12- 17) | 4 | 1.40 | 83.67 | | | |
| Total | | 278 | 100 | | | | |

## CONCLUSION

1. Results of the study showed that the general perception level of agricultural employees in Sulaimani Governorate to the concept of sustainable agricultural development was medium tends to high, it can be concluded the success of the developmental devices in the Sulaimani Governorate, including agribusiness and rural development department in faculty of agricultural Sciences, University of Sulaimani in highlighting on this concept and create awareness and good perception to its importance to the agricultural employees.
2. The results of the study showed superiority the perception level of agricultural employees in Sulaimani Governorate in the field of sustainable agriculture, on the level of their perception in the field of sustainable development; it can be concluded the need of more information about sustainable development in Sulaimani Governorate for increased the perception level of agricultural employees in the field of sustainable development.
3. The results of the study showed that the most of agricultural employees have non extension specialties. This mean need to increases the number of Agricultural extension agent to be work at agricultural departments in Sulaimani Governorate.
4. The results showed a significant correlation between the perception level of agricultural employees to the concept of sustainable agricultural development in general and each of the following variables: (age, specialization, duration of the employment service, Socialization, location of job, sources of information relevant to sustainable agricultural development, and attitude towards sustainable agricultural development), as a result it can be concluded that any increase in each of these independent variables lead to an increase in the perception level of agricultural employees to the concept of sustainable agricultural development.
5. The study found no significant correlation between the perception level of agricultural employees and each of the following variables: (gender, educational level, duration of agricultural extension service, and previous developmental experiences) from this concluded that, these variables have not relationship to the perception level of agricultural employees and do not effect of their levels of perception to the concept of sustainable agricultural development.

## RECOMMENDATIONS AND SUGGESTION

1. The directorate of agriculture in Sulaimani governorate and the rest of the agricultural departments have to promote positive perceptions which resulted by studies found in the study to agricultural employees towards the concept of sustainable agricultural development by organizing training courses to them which focused topics on the latest information and practices related to

sustainable agricultural development and all its aspects in order to develop their knowledge and improve perceptions.

2. The responsible authorities for the agricultural sector in Sulaimani Governorate should focus on the provide scientific research and researchers, because it is one of a key to sustainable agricultural development, and conduct more researches and studies on the topic of sustainable agricultural development in preparation for the establishment of appropriate mechanism for developing sustainable agriculture on a large scale.

3. Conduct studies includes variables which not included the current study may be related to the perception of respondents and on their basis to explain some of the results obtained by this study.

4. Developing courses related of sustainable agricultural development is added to the curricula of all academic departments in the colleges of agriculture in Sulaimani Governorate to provide the cadres with specialized information in the concept of sustainable agricultural development to work in the agricultural directorates and agricultural centers in this Governorate, with necessity to develop agricultural extension departments and sustainable development in all agricultural colleges and institutes in this Governorate.

5. Activating the role of agricultural extension in the region and focus on the process of transfer research results, especially in the field of sustainable agricultural development with necessity to the formation of a specialist extension in this field working on the dissemination of sustainable recommendations widely, and expand the role of the private sector in sulaimani governorate and increase its investments in agricultural projects for sustainability of agricultural development.

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# مستوى إدراك الموظفين الزراعيين لمفهوم التنمية الزراعية المستدامة: دراسة حالة في محافظة السليمانية

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**الكلمات المفتاحية:**
إدراك، الزراعة المستدامة، التنمية المستدامة، موظف الزراعي.

**الخلاصة**

هدفت الدراسة إلى تحديد مستوى إدراك العاملين في الارشاد الزراعي لمفهوم التنمية الزراعية المستدامة في محافظة السليمانية، وتحديد مستوى ادراكهم نحو مجالات (الزراعة المستدامة والتنمية المستدامة) وفقًا لأبعادها الاجتماعية والبيئية والاقتصادية، وكذلك تحديد علاقة الارتباط بين مستوى إدراك العاملين الزراعيين لمفهوم التنمية الزراعية المستدامة وبعض المتغيرات الشخصية والوظيفية.. وشمل مجتمع الدراسة جميع االمرشدين الزراعيين العاملين في مديرية الزراعة بمحافظة السليمانية والمديريات الزراعية التابعة في جميع مديريات محافظة السليمانية حيث بلغ عددهم (2778) مرشدا زراعيا وعاملا بالإرشاد الزراعي. تم اختيار عينة عشوائية تناسبية طبقية منهم بنسبة (10٪) في جميع الاقسام والمقاطعات الزراعية ليصبح حجم العينة (278) مبحوثا. أظهرت نتائج الدراسة أن مستوي إدراك العاملين بالإرشاد الزراعي لمفهوم التنمية الزراعية المستدامة بشكل عام كانت متوسطة يميل إلى الارتفاع، وبلغت نسبة المبحوثين ضمن الفئتين المتوسطة والعالية ما يقارب (97٪)، كما أظهرت النتائج أن (60.8٪) من المستجيبين لديهم مستوى متوسط من الإدراك لمفهوم الزراعة المستدامة. كما أظهرت نتائج الدراسة أن هناك علاقة ارتباط معنوية بين مستويات إدراك العاملين الزراعيين لمفهوم التنمية الزراعية المستدامة وكل من المتغيرات التالية:العمر، التخصص ، مدة خدمة التوظيف،التنشئة الاجتماعية، موقع العمل، التعرض. إلى مصادر المعلومات المتعلقة بالتنمية الزراعية المستدامة، اتجاه نحو من التنمية الزراعية المستدامة). بينما لا توجد علاقة ارتباط معنوية بين مستوى تصورات العاملين الزراعيين لمفهوم التنمية الزراعية المستدامة وكل من المتغيرات (الجنس، المستوى التعليمي، مدة خدمة الإرشاد الزراعي، الخبرات التنموية السابقة).