

Some Relevant Reason with the Gap between Achieved and Possible Productivity of Two Wheat Cultivars (Ibaa 99 and Abu-Ghraib 3) in Farmers Fields of Wassit Province

Hussain K. AL-TAIY¹, Faiz J. Mohammed²

Baghdad University, College of Agriculture, Department of Extension and Technology Transfer, Iraq

Abstract: *Identify the relationship of all the factors, kind of planted soil, irrigation, administering the soil and the crop and participation or subjecting to extension activities presented to the farmers in order to reduce the productivity gap for wheat crop in Wassit governorate. In order to achieve the objective from the research, a plan for the factors, Data related to the gap of productivity, gathered from (150) farmers distributed according to level of productivity in the amount of (50) farmers for each productivity type (high, medium and low) from agricultural divisions (Tajuddin, Al-Shiheimiya, Kut, Aziziyah, Al-Mowafaqiyah, Al-Bashaer and Al-Hay) by questionnaire and interview. The results concluded that there is relationship between the factors (soil, servicing the soil and the crop, irrigation, subjecting to extension activities) and productivity gap of wheat crop at Wassit farms. the research Has concluded the following conclusions amongst: the soil factors, service of soil and the crop, irrigation, exposure for the extension services related with the productivity gap in wheat crop in the farmers' fields Wassit governorate, whereas the productivity is the outcome of numerous factors, and there is a good chance for sustainable increase in producing wheat crop in all the governorate fields if the services are provided to the farmers starting from improving the soil characteristics and ending in exposure for the extension services, and the researcher has recommended that the Directorate of Agriculture in Wassit governorate.*

Keywords: Gap, Productivity, Wassit, Wheat, Ibaa 99

1. Introduction

The world in the field of agriculture is facing three major challenges, Which are :Improve food security and development while retaining in the same time of natural resources critical and limit the scope of climate change[1], These challenges constitute the pressure for governments, international, regional and national organizations which require significant increases in agricultural production which increase by the year 2050 at a rate of 70% globally and including nearly a rate of 100% in developing countries. This is equivalent to an extra billion tones of cereals to be produced annually compared to production in the period between 2005 and 2007 [2]. and it is expected to grow as the population from now until 2050 from 7.3 billion to more than 9.6 billion people, most of this increase will be in developing regions[3] and that the desired increase in agricultural production normally should get under the big challenges and that the desired increase in agricultural production normally should get under the big challenges of the climate change and energy scarcity and resource degradation and rising food prices[4], as well as the deterioration of one-third of agricultural land as a result of erosion, salinity, stress and chemical pollution of the soil. If soil erosion continues at its present rate, the grain production will fall from the current average of the 93 million hectares of farmland by 40% within the next 50 years[5] billion tons, more than by 800 million tons harvested combined 2014[6]. The issue of food security of the important issues of great global concern is growing day after another as a result of many factors that surround the supply and demand for food, No longer just an economic issue of food but are intermingled and intertwined dimensions of political trends

and strategy and international repercussions[7], The main key in achieving the desired increase in agricultural productivity in a sustainable manner while preserving environmental resources and ensuring food and nutrition security for all is the model provided by the Food and Agriculture "conservation and expansion," Organization, Sustainable intensification of crop production[8].Iraq is facing great and dangerous challenges in the field of food security The necessity to achieve a significant and quick increase in agricultural production, both plant and animal to reduce the large and growing food deficit caused by a lack of production and achieve sufficiency and food security[9].wheat occupies the first position in the list of food and consumer goods[10] and in Iraq, wheat is considered the main strategic crop which is linked to people's lives[11]. Cultivated area in Iraq has reached 7 million acres for season 2013/2014, Perhaps this will be the largest area of planted crop, and it may be difficult to increase them in other years, and production reached about 5.5 million tons with an average yield 592.8 kg/acre[12] and by 2025. the population of Iraq is expected to reach 51 million people, a growth rate of 3%, which requires the production of 8 million tons of wheat crop and productivity of up to 1490 kg / acre[13].The strategic grain crops (wheat and barley) account for 75% to 80% of the cultivated area in the winter season, In rain-fed and irrigated land is influenced by the abundant rains[14], as well as irrigation water and an irrigated area of arable and permanent 44.46 million acres of the 26.2 percentage of the total area of Iraq[15]. The cultivation of wheat crop faces many challenges, particularly the low productivity per unit area, One of the reasons that the weakness of the use of agricultural mechanization, fertilizers and improved seeds and agricultural means of combating

epidemics in the agricultural production process[16], if we compare the productivity per acre in Iraq with neighboring countries such as Saudi Arabia, which amounted to 1,536 kg / acre and also in Egypt 1,635 kg / acre[17]. Figure: 1

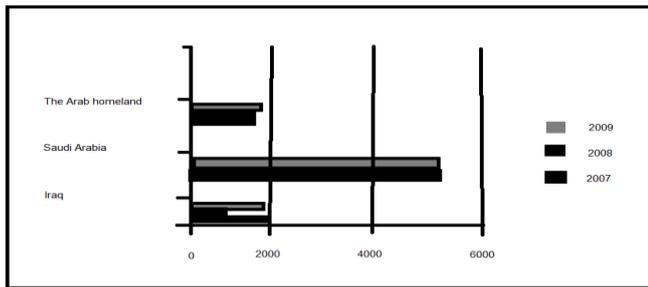


Figure 1: The productivity of wheat crop in Iraq, compared to some of the Arab countries

It clears a large gap in productivity of up to more than 1,000 kg / acre, If this gap is calculated on the level of 7 million acres it will become clear and there is a loss is estimated at 7 million tons a year, or about 56 trillion Iraqi Dinars, The loss for the farmer and for the society and country, So, most of the farmers in Iraq are poor[18] and Iraq is forced to import which cost the country hundreds of millions of dollars annually, Iraq imports annually more than 2.5 million tons of wheat in more than a decade and a half, According to Al-Masar satellite channel (Iraqi satellite channel) in 2008, the Iraqi Ministry of Trade has contracted to import 4.5 million tones[19], The Ministry of Agriculture has seen an increase in production and vertical expansion of the most important and the best of these factors based on the deployment of high-productivity varieties, as well as the use of other factors (all kinds of fertilizers, irrigation talking... etc). In order to achieve self-sufficiency and sustainability of the crop, the Ministry of Agriculture has implemented a number of projects and development programs, which tracks the deployment and equipping of the cultivated soil type, crop, irrigation, soil management and crop, participation or exposure to the activities of guidance provided to farmers in the productivity gap with the farmers of the province of Wassit. peasant varieties of high productivity, particularly wheat cultivars (Iba'a 99) and (Abu Ghraib 3). That an output of 1,500 kg / acre under the good administration of the crop, land and water and under the appropriate provision of extension services and equipment in quality and timing[20], as these varieties are of the most actively traded and grown in wide spaces. The amount distributed seeds of it in the growing season for the year 2012-2013 67% of the amount planted in Iraq[21]. The Wassit province from among the provinces, which is characterized by a capacity of cultivated crop area, reached in the 2014-2015 year, about 900,000 acres, but the average production in the past years amounted to 700 kg/acre[22] while quite a few farmers in the province has made the production possible, which amounted to 500 kg/acre[23] in exchange for other numbers of farmers who achieved the productivity of the amount 1500 kg / acre in other areas[24]. From the above it illustrated a significant productivity gap between the productivity of farmers in their fields and productivity potential of those items which are imported costing hundreds of billions of Dinars, It is a loss for farmers and for the country, so the food security and overall achievement and increase the productivity of wheat

crop in particular entails possible to achieve productivity in the province as a strategy, is necessary and appropriate to achieve that goal, Therefore, the current research aims to identify the link between all of these factors:

2. Research Method

Approach was used comparative study of a single diagnostic studies curriculum, Which stems descriptive approach in conducting research, it included research community cultivation of wheat crop at the county level and a total of 25,000 farms spread over 17 Agricultural Division, Sample was chosen by 42% of the agricultural Divisions in the province, Distributed according to their regions (north, middle, south) and by level of productivity (high output at a rate of 1000 kg / acre upwards) and (Medium production at a rate of 600 - less than 1,000 kg / acre) and (weak productivity, less than 600 kg / acre), Number of Divisions stood at selected 7 Divisions, namely: Taj Al-Din, Al-Sheheemiyah, Kut, Al-Aziziya, Muwafaqiya, al-Bashaer, Al-Hay), and identified a sample of 150 farmers are distributed according to the level of productivity by 50 per farmer productivity category (high/ medium/low). peasant association were selected from one each for Agricultural Division represents the desired production level studies in the research sample and by 25% for each peasant farmer association.

3. Methods and Means of Data Collection

The research sample using the questionnaire opposite way in collecting data from farmers as well as access to official documents and statistical reports issued by the (Directorate of Agriculture in Wassit / Department of Planning and Follow-up) as well as meet some of the workers in the Department of Agriculture and agricultural divisions. The data gathered over the months: October and November and December 2015 and January 2016, Statistical software was used to analyze the data for the purpose of study, the moral differences used to compared between the averages, the moral differences which has compared between the different ratios by applying the (chi square test 2) Within the different axes and paragraphs as well as the use of percentages and arithmetic averages

4. Results and Discussion

4.1 Summary Search Results

The average production of wheat crop in the fields of farmers researched for the years 2012/2013 - 2013-2014 / 2015 between 250-1755 kg / acre with an average rate of 700 kg / acre That 63% of the farmers ranging productivity 250-751 kg / acre as in Table -1-

Table 1: Distribution farmers researched as the average productivity of wheat crop for the years 2012/2013 - 2013-2014 / 2015

Average production kg / acre	Number of farmers	%
250-500	52	35
501-751	42	28
752-1002	31	21
1003-1253	19	13
1254-1504	4	3
1505-1755	2	2

From Table 2 we conclude the following:

Most of the farmers productivity is Weak / Medium, with a gap between the productivity achieved and the total average productivity estimated at 450 kg/acre, and the gap between the productive potential and the average production of the province estimated at 1055 kg/acre, and the gap between productivity achieved and productivity potential estimated at 1505 kg/acre, and farmers accounted for 28% is the ratio closest to the average production of the province, The presence of 39% proportion of the peasant their Productivity above the average production of the province.

2- Factors related to soil productivity gap:

Soil type: 86% of the respondents farmers of the high-class productivity stated that the land planted with wheat crop is Reclaimed, and 92% and 100% of the respondents farmers of (medium and weak) productivity stated that their land planted with wheat crop was reclaimed. Table 2

Table 2: Distribution of peasants from the research sample by producing wheat crop categories, cultivated soil type

Productivity categories	Soil type					
	not Reclaimed	%	Semi Reclaimed	%	Reclaimed	%
weak	50	100	0	0	0	0
Medium	46	92	4	8	0	0
High	0	0	7	14	43	86
Total	96		11	22	43	

From Table 2 concludes the following:

The respondents of high-class production, most of their land are reclaimed and the reclaimed land is high productivity for the reason: It's high fertility and good drainage of water and with high bacterial activity.

(B) soil formation: All respondents from high-productivity category stated that their land planted with wheat crop is mixed land, and the peasants of medium / weak production category stated that their land planted with wheat crop is heavy clay Lands. Table 3:

Table 3: Distribution of peasants subject of research by its production of wheat crop categories and composition of the cultivated soil:

Productivity categories	Soil type			
	Heavy clay	%	Mixed	%
weak	50	100	0	0
Medium	50	100	0	0
High	0	0	50	100

Table 3 concludes that the peasants of high-class production, all lands are mixed and that mixed land with high productivity for the following reasons: Agricultural

operations are carried out easily, with a high bacterial activity, as well as a few water retention, and are considered good and high permeability and rich in organic matter ventilation which improves the physical specifications And peasants research topic of the middle class and the poor production of heavy clay land productivity being weak suffer from water retention and accumulation due to the lack of permeability leading to flooding. **C-The Salinity of the soil:** Respondents of high-class production their land is salty, and that the Respondents of the middle-class output said that the land affected by salinity, while the Respondents of weak class production said that the land is salinity. Table 4:

Table4: Distribution of peasants subject of research by the categories production of wheat crop and cultivated soil salinity

Productivity categories	Soil salinity							
	High	%	Medium	%	Affected by salinity	%	Non-saline	%
Weak	33	66	17	34	0	0	0	0
Medium	0	0	1	2	49	98	0	0
High	0	0	0	0	0	0	50	100

Table 4 concludes that the class of the high-class production of all non-saline lands and territories, non-salt is highly productive because they do not suffer from the problem of high concentration of dissolved salts and which caused the osmosis high pressure which affects the growth and yield of winning and the middle class of production category, most of the land where the crop is grown sensitive to salinity and the class of weak production category, most of the land where the crop is grown (medium / high salinity).The search Find out the outcome that there is a link between the soil and production.

3. Service soil and crop:

(A) The application of the agricultural cycle:

Respondents of class (high) output stated that the land planted with wheat crop is the land where apply to the agricultural cycle

Table 5: Distribution of peasants subject of research by its production of wheat crop categories and the application of the agricultural cycle

Productivity categories	the application of the agricultural cycle			
	Does not apply	%	apply	%
weak	50	100	0	0
Medium	32	64	18	36
High	0	0	50	100
Total	82		68	

and 100.64% of the Respondents categories of productivity (medium / weak) sequentially stated that the land planted with wheat crop is the land where does not apply to the agricultural cycle, Table 5.

From the table 5, we conclude that the Respondents all of the high-class production apply the agricultural cycle, but the Respondents of weak production class do not apply agricultural cycle, and Respondents of medium productivity category does not apply the agricultural cycle, The implementation of the agricultural cycle has impact on

biological nitrogen fixation and promote efficient use of water and disrupt the lives of weeds, pests and disease factors cycle, which will reflect positively on productivity.

B- Flipping

Respondents of high-class production whom land planted with wheat crop and made Flipping and conduct process, Respondents of class (medium / weak) stated that their land which planted with wheat crop lands where Flipping process does not take place. Table 6:

Table 6: Distribution of peasants subject of research by the categories of wheat crop production and hold Flipping process

Productivity categories	Flipping			
	Does not Flipping	%	Flip	%
weak	50	100	0	0
Medium	50	100	0	0
High	0	0	50	100

Table 6 concludes that respondents from high-productivity category they all made Flipping ground, and respondents of the class (medium / weak), all of them do not Flipping land Flipping easier to hold plowing process and smoothing and leveling and also help to grow the jungles of the seeds in the soil for the purpose of disposal.

C-Tilling

Respondents from high-class / medium productivity that land planted with wheat crop is the land where the tillage operation is conducted using a moldboard plow and respondents from weak production category stated that the land planted with wheat crop is the land where tillage was conducted using Softening machine. Table : 7

Table 7: Distribution peasants research sample by its production of wheat crop categories and a tillage operation.

Productivity categories	Tilling			
	Use Softening	%	Use Moldboard plow	%
weak	50	100	0	0
Medium	0	0	50	100
High	0	0	50	100

From Table 7 we conclude that respondents in both categories (high / medium) are all tilling their land using a moldboard plow and the impact of this machine in the prescription pill and the weight of a thousand holds grains and protein content, which will reflect positively on productivity.

D- Smoothing

Respondents class (high / medium) production said that their land where the smoothing operation is conducted, and that the respondents of class (weak) stated that their land where the smoothing process did not take place. Table : 8

Table 8: Distribution of respondents by peasants production categories of wheat crop and a smoothing

Productivity categories	Smoothing			
	Do not Use Smoothing	%	Use Smoothing	%
weak	50	100	0	0
Medium	0	0	50	100
High	0	0	50	100

From Table 8 we conclude that the productivity of the two categories (high / medium) all lands where the smoothing took place, the respondents of (weak) productivity category where the smoothing does not take place. The holding of integrated farming operations increase the winning rate of 50-100%, depending on the nature of the crop and the installation of cultivated soil.

E- The source of seeds

Respondents from class (high / medium) production stated that their seed source are brought from certified seed production companies, and the respondents of a class (weak) productivity mostly stated that the source of the seed, upon self savings or domestic markets and companies. Table: 9

Table 9: Distribution of respondents by peasant production of wheat crop and source of seed categories

Productivity categories	source of seeds		
	markets	self savings	Seed companies
Weak	31	14	5
Medium	0	0	50
High	0	0	50

From Table 9 we conclude that multiple sources of seed production and adoption of high /medium categories productivity on seed production companies:(Mesopotamia company, Iraqi, Seed Technology) and the adoption of a class (weak) production to more than one source. The use of improved seeds and recommended one which give the highest production of the unity of all the crop area and is one of the important factors for vertical production increase.

F- The amount of seeds

54% of the respondents of a class (high / medium) production stated that the quantity of seeds used for per acre is more than 30-less than 45 kg / acre, and that the respondents of a class (weak) said that the amount allocated per acre of seeds is less than 30 kg / acre. Table: 10

Table 10: Distribution of respondents by peasant production of wheat crop and the quantity of seeds categories

Productivity categories	amount of seeds					
	More than 45-less than 60 kg / acre	%	More than 30- less than 45 kg / acre	%	less than 30 kg / acre	%
Weak	0	0	0	0	50	100
Medium	3	6	27	54	20	40
High	23	46	27	54	0	0

From Table 10 we deduce the presence of more than one amount of seeds added to the soil which shows that the quantity processed for farmers is few and do not cover the actual need, which forcing peasants to rely on the seeds of self-financing in their fields or buy from the local markets

which are not pure varieties or a mixture of more than one category, and these in turn affect productivity.

G-Planting Date

Respondents of a class (high) stated that production preferred date for agriculture is in the period between (15/11 to 1/12), and the farmers of class (medium / low) said that the deadline favorite for planting the seed is in the periods that precede or lag behind in the above date. Table: 11

Table 11: Distribution of respondents by peasant production of wheat crop categories and planting date

Productivity categories	Planting Date					
	1/10-15/10	%	After 10/12	%	15/11-1/12	%
Weak	8	16	36	72	6	12
Medium	5	10	40	80	5	10
High	0	0	0	0	50	100

From Table 11 we deduce multiple periods for planting the seeds of wheat, The respondents from high-class sow their seeds during the period which is the ideal time for planting and the respondents in both categories (medium / weak) mostly sow their seeds after 10/12. The delays or early planting date for the deadline leads to a decline in the rate of production of all crops.

H- Agriculture method:

respondents from high-class production stated that the method adopted in the cultivation of agriculture seeds is by using the fertilized seed dispersal machine and the respondents of the middle class using seed dispersal machine, respondents from (weak) category stated that the method adopted in the cultivation of seeds is by hand prose. Table: 12

Table12: Distribution of respondents by peasant production of wheat crop categories and the way agriculture

Productivity categories	Agriculture method							
	Scattering by hand	%	sower	%	Sowing machine	%	Fertilized sowing machine	%
Weak	39	78	11	22	0	0	0	0
Medium	0	0	4	8	40	80	10	20
High	0	0	0	0	0	0	50	100

From Table 12 we deduce the existence of more than one way to plant seeds, and the respondents from the high-class production machine using fertilized seed dispersal and which distributes fertilizer with the seed, which is reflected positively on productivity.

I- Fertilization method:

respondents from high-class production said that the method used to add chemical fertilizer is carried out using a fertilized seed dispersal machine, and 80.100% of the respondents of the (average/weak) categories stated that the addition of chemical fertilizers are prose by hand. Table: 13

Table 13: Distribution of respondents by peasant production of wheat crop categories and fertilize method

Productivity categories	Fertilization method			
	Prose by hand	%	Using machine fertilized seed	%
weak	50	100	0	0
Medium	40	80	10	20
High	0	0	50	100

From Table 13 we concludes that the respondents in the high-productivity category using fertilized seed dispersal machine to add fertilizer, their output will be high, as the characteristics of this machine make it distances seed and securing the necessary quantity of fertilizer near the seed. as for the respondents of category (average / weak) productivity They use manual prose which makes it less productivity, Because it is from the traditional methods of agriculture.

J- Jungle Abu Suef:

76% of respondents, a high class production, said that their land was free of the Jungle, and 66.100% of the respondents of the class (weak/medium) production in sequentially said that their fields were infected by mentioned jungle.

Table: 14

Productivity categories	Jungle Abu Suef			
	Existing	%	Does not exist	%
weak	50	100	0	0
Medium	33	66	17	34
High	12	24	38	76

From Table 14: we concludes that respondents from high-class production, their fields were free of bushes, and that respondents of weak categories production their fields were infected by jungle and the respondents from medium-class production, most of the fields were infected by jungle, The damage were caused by the jungle that is proportional to the density fields because whenever jungle ratio increased field led to bigger crop loss.

K- The use of pesticides jungle:

100.84% of the respondents said that their fields were struggling using jungles pesticides, The respondents of the category (weak) production stated that their fields are struggling and not using jungles pesticides. Table: 15

Table 15: Distribution of respondents by peasants production categories of wheat crop and by the use of pesticides jungles

Productivity categories	The use of pesticides jungle			
	Use of Pesticides	%	Does not Use of Pesticides	%
weak	50	100	0	0
Medium	8	16	42	84
High	0	0	50	100

Table 15 conclude that more than half of the respondents are struggling jungles and it is one of the most important pests that threaten their fields, they are also the most prominent challenges facing the productivity increases, because they compete with plants in the water and the light and the space available and the cause as well as the lack of grain and lower grain weight.

L- Root rot:

Respondents from the high-productivity category said that their fields were free of root rot disease, and 66.100% of the respondents of a class (low / medium) production said that the fields infected with the mentioned disease. Table: 16

Table 16: Distribution of respondents by peasants production categories of wheat crop and by the infected with the Root rot

Productivity categories	Root rot			
	Existing	%	Does not exist	%
weak	50	100	0	0
Medium	33	66	17	34
High	0	0	50	100

Table 16 conclude that respondents from high-productivity category, their fields free of root rot disease, and respondents from medium-productivity category, most of the fields infected with the disease, We have learned from the foregoing that the composition of the soil planted with wheat crop for the categories of (medium / low) production are considered heavy clay suffer from water logging when adding irrigation water during irrigation, increase the amount of water collects at the roots of the plant that causes the roots to rot -in addition- to the lack of a plant's ability to absorb nutrients well and thus lead to a lack of production.

M- Rust:

76% of respondents from the high category said that their fields were free of rust disease, respondents in both categories (low/medium) said that the fields infected with the mentioned disease. Table: 17

Table 17: Distribution of respondents by peasants production categories of wheat crop and by the rust disease

Productivity categories	Rust			
	Existing	%	Does not exist	%
weak	50	100	0	0
Medium	50	100	0	0
High	12	24	38	76

From Table 17, we conclude that respondents from high-class their fields were free from rust disease, and The respondents of a (low/medium) class, all their fields were infected with rust, Rust disease infect in wheat plant stalk and is one of the strains diseases that devastating the plant. World Food Organization of the United Nations has launched a Web site to track the disease because of the threat to productivity reached the conclusion that the existence of a link between the soil and crop and productivity.

Fourth: The focus of irrigation properties, which includes the following:

A- Irrigation style:

Respondents from the high-productivity category said they were using runoff irrigation, and The respondents of the (weak/average) category were using pumping irrigation. Table: 18

Table 18: Distribution of respondents by peasants production categories of wheat crop and by irrigation style

Productivity categories	Irrigation style			
	pumping	%	runoff	%
weak	50	100	0	0
Medium	50	100	0	0
High	0	0	50	100

from Table 18 we conclude that respondents from high-productivity category, they were all using runoff irrigation and their productivity were high because of the abundance of water quota allocated for irrigation because the irrigation projects of the kind lining and lack of water waste. as for respondents of (low / medium) productivity category who use pumping irrigation, the share of water is insufficient compared to the high productivity category, because of the irrigation projects is lined and frequent abuses on irrigation projects, In addition to the need for irrigation pumps on kerosene, which is expensive, making their productivity (medium / low).

B- Number of irrigations:

Respondents of high productivity category said they irrigate their fields 6 irrigations, and 100.66%, and respondents of a class (medium/low) productivity irrigate their fields 4 irrigations. Table: 19

Table 19: Distribution of respondents by peasants production categories of wheat crop and by number of irrigations

Productivity categories	Number of irrigations			
	4 irrigations	%	6 irrigations	%
weak	50	100	0	0
Medium	33	66	17	34
High	0	0	50	100

From Table 19 we conclude that respondents from high-productivity category who irrigate their fields 6 irrigations be high productivity because scientific research has proved that the crop irrigated 6 times be high productivity, as for respondents from the class (medium/weak) productivity who watered their fields 4 irrigations be weak productivity. general outcome was that there is a link between productivity and characteristics of irrigation.

Fifth: the pivot of exposure to extension services include the following:

A- Participation in meetings guide way:

50.100% of the respondents from high/medium category production said they participated in the meetings guide way and 100% of respondents from weak productivity category did not participate in the meetings guide way. Table: 20.

Table 20: Distribution of respondents by peasants production categories of wheat crop and by participation in meetings guide way

Productivity categories	Participation in meetings guide way			
	Did not participate	%	participate	%
weak	50	100	0	0
Medium	25	50	25	50
High	0	0	50	100

From Table 20, we conclude that respondents from high-class productivity they were provided with services and activities guide way, The guiding activities is an important source in the development of farmers' skills and expand their contacts and in spreading modern agricultural cultures.

B- Attending seminars

Respondents from the high-productivity category said they attended seminars guide way, and 100% of the respondents of the class (medium / low) productivity did not attend those seminars. Table: 21

Table 21: Distribution of respondents by peasants production categories of wheat crop and by attending seminars

Productivity categories	Attending seminars			
	Did not attend	%	attend	%
weak	50	100	0	0
Medium	50	100	0	0
High	25	50	25	50

From Table 21, we conclude that respondents of high-class productivity continue to attend seminars hosted by the National Program for the Development of the cultivation of wheat in collaboration with the Department of Agriculture in the province, in the places covered by the program. But the respondents of categories (low / medium) production did not attend those seminars because they are far from their places of residence about distance of more than 100 km north or south of the province.

It is well known that the presence of extension activities is an important resource in the development of knowledge, skills and dissemination of agricultural culture.

The outcome is that there is a link between exposure to extension services and productivity, since productivity is holds numerous factors interact.

5. Conclusions and Recommendations

The factors: soil, soil and crop service, irrigation, exposure to extension services, all of which are relevant to gap in the production of wheat crop in a peasant farmer in Waset province.

There is a good chance to permanent increase in the production of wheat crop in a peasant farmer in Wasset province, by providing the necessary services to farmers ranging from improving soil characteristics and ending with exposure to extension services.

Bridging the gap in production in light of contemporary trends for agricultural production, which emphasizes the increase in productivity while maintaining the ecosystems require the interaction of a variety of factors, including the application of agriculture "sustainable intensification of crop production", which focuses on producing more of the same area of land with minimize the negative environmental impacts. The researcher recommended to the cultivation of Waset province, in addition to the Directorate of the Ministry of agriculture to bridge the gap in the production of the wheat crop in the province to increase productivity and sustain

throughout the province, especially on small farms as land is reclaimed Considering that a central goal for the coming years. The Ministry of Agriculture and through the executive its specialized agencies and in coordination with the ministries to accelerate the spread of model "condensation sustainable production of the crop" through the broad and rapid deployment of agricultural policies and agricultural technology and practices which constitute key elements in this system, as well as the supply of inputs and improve marketing and lending and follow-up and continuous evaluation of production of the crop.

References

- [1] Food and Agriculture Organization of the United Nations' 2015 State of Food and Agriculture: Social Protection and Agriculture: Breaking the cycle of poverty in the countryside, Rome.
- [2] Food and Agriculture Organization of the United Nations 2011, Conservation and expansion, policy-making manual on sustainable intensification of smallholder, Rome.
- [3] Food and Agriculture Organization of the United Nations 2016, Conservation and expansion in practical side, rice and wheat terms: A Guide for grain production in a sustainable way, Rome.
- [4] Food and Agriculture Organization of the United Nations, Conservation and expansion, Previous reference, 2011.
- [5] Food and Agriculture Organization of the United Nations, Conservation and expansion in practical side, previous reference, 2016.
- [6] Food and Agriculture Organization of the United Nations, Conservation and expansion, previous reference, 2011.
- [7] Al-Sahely, Mabrouk, 2013, the repercussions of the food gap in the Arab national security, Juma bin Mahdi, Algeria.
- [8] Food and Agriculture Organization of the United Nations, Conservation and expansion, previous reference, 2011.
- [9] Al-TAIY, Hussain Kudhayer, 2008, Improve the dissemination of agricultural cultures regime in Iraq, a dialogue of thought magazine., addition 7
- [10] Al-Yonus, Abdul Hameed Ahmed, 1998, Production and improve field crops, Part 1, the Directorate of National Library for printing and publishing, Baghdad.
- [11] Al-TAIY, Hussain Kudhayer, 2012, planning guide way program, Lectures to graduate Studies students (Higher Diploma), Agricultural Extension specialization, Faculty of Agriculture, University of Baghdad.
- [12] Central Bureau of Statistics and Information Technology, Group full statistical, 2014, Iraq.
- [13] Al-Hakeem, Abdul Hussain Nori, 2013, Studies in Iraqi agriculture, Future cultivation, part 1.
- [14] Sarhan, Sabar Mutlak, 2011, The development of the cultivation of strategic crops (wheat corp) in Iraq, the Faculty of Administration and Economy, Journal, Issue
- [15] The Ministry of Planning, National Development Plan 2009.2010 to 2014, the first part, the plan document, Baghdad, Iraq..

- [16] The Arab Organization for Agricultural Development. 2014, Yearly book for Arab Agricultural Statistics, Vol. 33, Khartoum.
- [17] The Ministry of Planning, National Development Plan, previous reference, 2009.
- [18] Al-TAIY, Hussain Kudhayer, previous reference, 2008.
- [19] The Ministry of Agriculture, 2001, the working plan of the Ministry of Agriculture for the years: 2011 to 2014, Iraq.
- [20] Al-Hagami, Esa Swadi & Al-Ukayli, Usama.
- [21] Kadhum, 2013, A study to measure the technical and economic efficiency, A study to measure the technical and economic efficiency of certified varieties of wheat crop in the irrigated areas in Iraq for the agricultural season 2012-2013, Journal of the Iraqi Agricultural Sciences, addition. 4.
- [22] The Ministry of Agriculture, General Authority for Agricultural Research, private statistical brochure for agricultural crops data. 2012, (Guidance leaflet).
- [23] Al-TAIY, Hussain Kudhayer, previous reference, 2008.
- [24] Wassit directorate of Agriculture, planning and follow-up department, records of agricultural seasons 2012-2013-2013-2014/2014-2015

