

## REASONS RELATED TO THE DETERIORATION OF POULTRY INDUSTRY FOR BROILERS IN THE MIDDLE AND SOUTHERN REGION OF IRAQ

G.A.A. AL- Ani  
Research

A.A.N.AL- Badri  
Prof.

Dept . of Agric . Extension – college of Agric Eng Sci – University of Baghdad  
Ghsoon.Ali1109@coagri.uobaghdad.edu.iq

### ABSTRACT

The objective of this research is to identify the reasons related to deterioration of the poultry industry for broilers in the middle and southern regions of Iraq. In order to achieve the research goals a questionnaire form consists of two parts was designed, the first part included a quadrilateral scale of (54) items distributed in to eight base fields. The second part included a five scales with (20) items. The results showed that, the imported product field achieved the first position among the reasons that related to the deterioration of poultry industry for broilers, which achieved the highest weighted average by 2.8 degree and a weight percentage of 93.3%. While the direction field of the broilers breeders was ranked the last position among the reasons that related to deterioration in poultry industry for broilers, which achieved the lowest weighted average which is 2.6 degree with weight of 86.6%. The results also, showed that the item start working with the integrated production companies in the poultry industry to produce poultry meat was ranked in the first position among the proposed solutions from the broilers breeders' points of view to face the deterioration of the poultry industry for broilers, which ranked the highest weighted average of 4.9 degrees and a percentage weight of 98%. Finally, the item Control the importer's hatching eggs was ranked the last position among the proposed solutions from the broilers breeders' points of view to face the deterioration in the poultry industry for broilers, which achieved the lowest weighted average by (4.5) degrees and a percentage weight of 90%.

**Keywords :** Anchors foundation , direction of broilers breeders, Bio security.

\*Part of M.Se. Theseis of first auther.

العاني والبديري

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الاسباب ذات الصلة بتدهور صناعة الدواجن لفروج اللحم في المنطقة الوسطى والجنوبية من العراق

أشواق عبد الزراق ناجي البديري

غصون علي احمد العاني

الاستاذ

الباحث

قسم الإرشاد الزراعي ونقل التقنيات - كلية علوم الهندسة الزراعية - جامعة بغداد

### المستخلص

استهدف البحث التعرف على الاسباب ذات الصلة بتدهور صناعة الدواجن لفروج اللحم في المنطقة الوسطى والجنوبية من العراق، نظمت استمارة استبانة تكونت من جزئين، تضمن الجزء الاول منها مقياساً رباعياً تكون من 54 فقرة توزعت على ثمان مجالات اساس وهي { البنى التحتية (المرتكزات الاساس)، البرنامج الوطني، السياسة الزراعية (الدعم الحكومي)، المنتج المستورد، الأوبئة والأمراض ومسبباتها، القدرات البشرية، الاستثمار، توجهات مربي فروج اللحم} ، اما الجزء الثاني منها فقد استخدمت الباحثة مقياساً خماسياً تضمن (20) فقرة. أظهرت النتائج ان مجال المنتج المستورد احتل على المرتبة الاولى من بين الاسباب ذات الصلة بتدهور صناعة الدواجن لفروج اللحم إذ حقق أعلى وسط مرجح وهو 2.8 درجة ووزن منوي قدره 93.3%، بينما احتل مجال توجهات مربي فروج اللحم على المرتبة الاخيرة من بين الاسباب ذات الصلة بتدهور صناعة الدواجن لفروج اللحم إذ حقق أدنى وسط مرجح وهو 2.6 درجة ووزن منوي قدره 86.6%، وأظهرت نتائج البحث ان فقرة بدء العمل مع شركات الإنتاج المتكامل بصناعة الدواجن لإنتاج لحوم الدواجن احتلت على المرتبة الاولى من بين الحلول المقترحة من وجهة نظر مربي فروج اللحم لمواجهة تدهور صناعة الدواجن لفروج اللحم إذ حققت أعلى وسط مرجح وهو 4.9 درجة ووزن منوي قدره 98%، بينما احتلت فقرة وضع رقابة على بيض التفقيس المستورد على المرتبة الأخيرة من بين الحلول المقترحة من وجهة نظر مربي فروج اللحم لمواجهة تدهور صناعة الدواجن لفروج اللحم إذ حققت أدنى وسط مرجح وهو 4.5 درجة ووزن منوي قدره 90%.

كلمات مفتاحية: المرتكزات الاساس، توجهات مربي فروج اللحم، الأمن الحيوي .

\*البحث مستل من رسالة ماجستير للباحث الاول .

## INTRODUCTION

The livestock sector represents a national wealth, and its importance was highlighted in the national economy in general and the agricultural economy in particular to suit its quantitative and qualitative characteristics and development (7). Livestock considers as a major part of the agricultural sector, which is not less important than the vegetation side, the poultry represents an important part of livestock, while broilers are at the forefront of poultry for its nutrition, industry, and commercial importance. Because of the increasing demand for broilers and other products, production systems in this field have evolved to make broilers production an industry, which becomes dependent on multiple technologies that complement each other and has developed rapidly into many technologies starting from the establishment of broilers mothers farms ,hatchery , broilers breeding fields and ending with slaughter house and manufacturing factories (12). Poultry industry for broilers is an important agricultural and economic productivity activity, which is one of the main sources of income in agricultural production in general , It is also one of the cornerstones of food security policy. Poultry industry projects for broilers are characterized by year-round production, with the cycle of broiler production is thus short, ranging from 6 to 7 weeks, this reflects the speed of capital turnover compared to the capital cycle of other types of animal production projects that required (approximately 3-12) months (5). Therefore this industry considers as one of the most reliable pillars in devising solutions to the problem of food shortage in the world, because broilers have the fast growth, food conversion efficiency, and the possibility of large numbers breeding in relatively small areas with short duration. At present, the world is witnessing severe competition among the international poultry industry companies to produce new breeds of broilers, selected on the basis of fast-growing capacity, where the time required to reach weight of 2 kg at 63 days in 1976 was shortened to 35 days in 2001, while the efficiency of food conversion improved from 1.79 in 1996 to 1.65 in 2004 (3). In Iraq, the poultry industry for broilers is one of the

important productive sectors, Although this sector is becoming increasingly important, it remains linked to the movement of world markets by relying on these markets to provide a large part of its requirements (hatching eggs, feeds, medicines and Backup tools). During the 1990s, the economic conditions had halted most production workshops in the poultry industry, affecting the produced quantities of broilers, which has drastically reduced its supply due to the high production costs leading to huge economic loss for the poultry breeders (17). Although most poultry projects stopped production, this did not prevent breeders from taking continuous sustain losses in their fields, resulting in a reduction of the number of project and their available capacity for the period (1990 – 1997). The decrease in the number of detonators and their available energy exceeded 70% and the decrease in the number of slaughter house and their available capacity by 82% during this intervals. In order to reduce the huge damage in the poultry industry, the Ministry of Agriculture has proceeded on the program of rehabilitation of the poultry Industry (National Program) to ensure that broilers is provided at affordable prices to the consumer, while ensuring profitable profit limits for breeders, by supporting entrepreneurs in cooperation with the international Food and Agriculture Organization (FAO). The Ministry provided eggs, feeds, medicines, vaccines by subsidized prices, and the ministry was receiving (80%) of the field production at (890) ID/Kg and selling them to the consumer at (1350) ID/Kg, The total production reached (63,438) tons of broilers meat during the years 1998 to 1999, accounting about 85% of total production in Iraq, while the largest local production was in 2002, achieving 1066 thousands tons of broilers, The increase in broilers supply has resulted in a reduction in its market price from (2875) ID/Kg to (1600) ID /kg (17) . After the year 2003 the suspension of the national program that supports poultry broilers projects showed a clear setback for this important industry because of the state support suspension for breeders, which resulted in the loss of mothers breeds, which is the basis for the poultry industry broilers and the (slaughter house) is completely suspended. Because of

the diminishing role of the state and the lack of support and standing beside the local product, it has made it vulnerable to loss due to price fluctuations, dumping policy and the absence of laws that protect the local product on the one hand, and encouraging it to produce on the other, in addition to the destruction of several thousands of fields, which caused a big setback for this vital industry (17). Most of the workshops of this industry (hatchery, fields, slaughter houses, feed factories) are located in (Abu Ghraib, Tarmiya, Madaen, etc), as well as the problem of maximum production capacity. which has led to a significant decline in the poultry industry(11). And despite the economic importance of food for poultry industry projects for broilers, the production of meat chicken is still below the required level that achieves self-sufficiency (5). Iraq has the human and material resources required for agricultural development in this area if it is well invested economic resources as it is able to achieve self sufficiency (13). AS many people consider educators an obstacle to wishful thinking if they are deprived of government support, we need to change this idea (4), in order to achieve this Agricultural Extension workers are required to choose from information provided by the research bodies that benefit the educators, they need technical skills to use information such as scientific recommendations and knowledge on the agricultural side, which need to be simplified and interpreted (16). Agricultural extension systems and rural development systems provide the conditions that lead to ways and means of exploiting available resources to modernize the agricultural sector and increase its competitiveness in the market (local, regional, global ) (6). The objective of the research was to identify the reasons related to the deterioration of poultry industry in the middle and southern region of Iraq, as well as to identify the solutions proposed from the viewpoint of meat broilers to confront the deterioration of poultry industry in the middle and southern region of Iraq, noting that the size of the gap widened and the effect of this big deficit in local production to cover the need of meat consumers.

## MATERIALS AND METHODS

**Research methodology:** This research comes within the framework of surveys that falls within the descriptive curriculum, which is based on describing reality and accessing facts by collecting certain data that are relevant to an organization, management, or community. They were then analyzed and the results of the analysis of those data were announced in order to produce a set of scientific proposals and recommendations that could guide future improvement of the situation (15).

### Investigation area

This research included all governorates of the central and southern regions of Iraq

### Society and research sample

This research included all the governorates of the middle regions of Iraq and they are (Baghdad, Anbar, Diyala, Salah al-Din, Karbala, Najaf al-Ashraf, Babil, and Wasit). Moreover, all the governorates of the southern regions of Iraq, which they are (Dhi Qar, Dr. Yuaneh, Maysan, Basra and Muthanna). A 68% were withdrawn from the middle regions governorates to be the search area five governorates, which are (Baghdad, Babil, Najaf al Ashraf, Wasit, Anbar), as well as, 68% were withdrew from the southern region governorates to be the search area of three governorates, which are (Muthanna, Dhi Qar, and Diwaniyah). A random sample of 20% was withdrawn from the broilers breeders in the middle regions governorates and their numbers were (628) breeders, resulted in a sample size of (126) respondent, in addition to a random sample was also withdrawn by 20% for broilers breeders in the southern regions governorates and their numbers were (249) breeders, resulted in a sample size of (50) respondent, therefore, the total respondent's number were (176) respondent.

### Scales building

For the purpose of achieving the research objectives, the researcher used a questionnaire form to collect data related to the research topic due to the suitability of the research methodology. The priority fields and items of the questionnaire were prepared in their initial form according the literature and scientific sources related to the poultry industry for broilers. As well as, consulting experts in poultry, consulting agricultural extension

experts for their guidance. In addition, consult the opinions of some broilers breeders and consult the opinions of some veterinarians in the preparation of this questionnaire. The questionnaire for the search consisted of two parts, the first part included eight base fields, It is {infrastructure, The national program, agricultural Policy (government support), imported product, Epidemics, diseases and reasons, human capabilities, investment and broilers Breeders directions }. These items were distributed to the previous fields as (7, 6, 11, 6, 10, 4, 4, 6) respectively, while the constituent items of these areas were reached (54), and for the second part it was (20) items.

### **1- Questionnaire development phase (fields and items presentation to the specialized experts):**

The preliminary fields and items of the questionnaire were presented to the experts and specialists in the poultry field and their number were (12), as well as the agricultural expert and their number were (4), to indicate their approval level on it, and what amendments are needed to finalize the questionnaire, through a special questionnaire (expert questionnaire), with accepted scale consists of three levels are (accept, accept with modification and not accepted).

### **2- Determination Phase of the accepted standard (cutoff point) for final formulation of the questionnaire components**

The cutoff point is a commonly term that used in the psychological and pedagogical research (18), it is the degree to which the field or item should achieve in the average degree of expert accepted for its retention in the questionnaire. The cutoff point was identified as (75%), meaning that the paragraphs remain in their initial form if they have a percentage (75%) or more than the upper class of the accepted scale. The cutoff point for the two-part questionnaire was achieved the experts accepted, where the first part of the causes scale related to the deterioration of the poultry industry for broilers has reached its cutoff point with (92%), while the second part of the proposed solution scale from the point of view of broilers breeders to face the deterioration of the poultry industry was achieved (98.1%).

### **3- Final Questionnaire Preparation phase**

Based on the results of the previous phase, the fields and items remained unchanged with regard to causes scale that related to the deterioration of the poultry industry for broilers to the majority of experts accepted. The second part of the questionnaire related to proposed solution scale from the point of view of broilers breeders to face the deterioration of the poultry industry for broilers, while the items remained unchanged and there was no change in the all experts accepted.

### **4- Validity and reliability of the Questionnaire test phase**

#### **a- Validity test**

The validity test meaning is to reveal the suitability of the scale components for the purpose of what designed for (8). In other words, making sure that the scale components measure what is supposed to be measured, which is known as ostensible validity (9), and to verify the ostensible validity. The questionnaire of the two scales was presented to a number of experts in the field of agricultural extension whose number were (4), as this has been stated, The validity of the content was concerned with the clarity of the scale components in terms of meaning, formulation and logical design (19). Or how they are represented on the measured sides (2), and in order to verify of the topic content, the two-part questionnaire that composed of two parts was presented to a number of experts in the poultry field and their number were (12). The specialists in the field of evaluation and measurement indicate that the group of arbitrators who has competence, experience and their numbers (5–9) They can judge the ostensible validity and content of the scale item (1).

#### **b- Reliability test**

The reliability test means the scale's ability to give the same degree, If re-applied the same time or subsequent times to the same respondent's (10) was conducted in August (2018) in the Baghdad governorate/two district (Abu Ghraib, Taji) on a random sample of (16) boilers breeding distributed in both districts, and were excluded from the research sample when collecting data, The aim of the pre-test was to verify the clarity of the paragraphs, diagnose and treat the locations of difficulty, and how long it takes for the respondent to

answer the items, and the researcher used to measure the reliability of the Alpha Cronbach test for the measure of the causes related to the deterioration of poultry industry for broiler, as the amount of reliability (0.88), while The second part, which relates to the scale of the proposed solutions from the point of view of the broiler breeder to face the deterioration of the poultry industry, is also used as the formula for the Alpha Cronbach equation, where the amount of reliability (0.91) is a good indication of the compatibility of the questionnaire paragraphs.

#### **Scale measurement**

For the causes and solutions measurement a questionnaire form is designed for broilers breeders, using a quadrilateral scale to measure the reasons related to the deterioration of the poultry industry for broilers, consisting of levels (always, sometimes, rarely and never affecting) and gave its weights (3-2-1-0) respectively, the scale degree ranged from (0 – 162), and to measure the proposed solutions from the point of view of broilers breeders to face the deterioration of the poultry industry for broilers, it has used a five-scale, consisting of levels (very accepted, accepted, Somewhat accepted, not accepted and Absolutely accepted) and gave its weights (5-4-3-2-1) on the Respectively, the scale degree ranged from (1 – 100).

#### **Data collection process**

The research data have been collected using the questionnaire form as a tool to obtain the needed data to achieve the research objective, the interview was conducted with the respondents. The questionnaire is one of the most important means of data collection and is widely used in many different human, social and scientific research (14), and this process took time between (27/10/2018- 12/1/2019).

#### **Data analysis process**

After completing the data collection process, questionnaires are empty and manual analysis was used to analyze data statistically, in addition to using Microsoft Excel program to tabulate the data accurately. The data were then organized in tables to present the results, and then come up with conclusions, recommendations, and suggestions that highlight, which consider as the most important findings of the researcher.

#### **Statistical methods**

The researcher used arithmetic averages, weighted rate, and percent weight, as well as the Alpha Cronbach equation in the analysis of research data.

#### **RESULTS AND DISCUSSION**

**First objective: To identify the causes that related to the deterioration of the poultry industry for broilers in the middle and southern regions of Iraq within the following base fields: { infrastructure, the national program, agricultural Policy (government support), imported product, Epidemics, diseases and reasons, human capabilities, investment and broilers Breeders directions}.** The research results showed that the highest weighted average was (2.8) degrees obtained by the field (imported product) with a percentage weight of (93.3%), and the lowest weighted average was (2.6) degree obtained from the field (direction field of broilers breeders) with the percentage weight (86.6%). The imported product area has been ranked at the first position, and this may be due to the fact that, the majority of broilers breeders has confirmed that the imported product was one of the most important reasons that have greatly affected the local product, due to the opening of border outlets and the lack of control over the imported product, which leading to entry of large quantities of imported product into Iraq. This has negatively affected on the production quantities of broilers meat and has negative effect on the local product, and one of the related causes and is of greater importance than other causes of the deterioration of the industry. As for the direction field of the broilers breeders, it achieved the last position, which may be due to the lack of material and moral support for the broilers breeders that lead to the majority breeders were unwilling to broilers projects, which caused a huge losses for these project and the poor operating with the maximum productive capacity, fearing from the economic losses that may occurred due to the epidemics and diseases spread, which negatively affected the production quantities that achieved by the meat broilers producer. This field is considered one of the related reasons and, to a

lesser degree, the other causes in this industry deterioration.

**Second objective: Identify the proposed solutions from the point of view of broilers breeders to face the deterioration of the poultry industry for broilers in the middle and southern regions of Iraq.** The results of the research showed that the highest weighted average was (4.9) degree obtained by the item (start working with the companies in production integrated poultry industry for the production of poultry meat) and with a percentage weight of (98%), and the lowest weighted average was (4.5) degree obtained by (placement control of imported hatching eggs) item and a percentage weight (90%). The Start working item with integrated poultry production companies has been ranked in first position, meaning that broilers meat breeders have largely emphasized the need to start working with these types of companies. This, in turn, leads to a revival of the industry's reality and return its activity through the operation of the closed poultry industry workshops and offered new job due the need of manpower at the same time, these companies may take responsibility of the base poultry industry rings (mothers fields, hatchery) to ensure the production of high-quality chicks with convenient, streamlined insurance to provide broilers breeders with chicks and thus produce large quantities of meat broilers products of good quality and desired to the customer, So this item is one of the most appropriate and most important solutions than other solutions to face the deterioration of the industry. While placing a control item over imported hatching eggs has ranked in the last position, which means when the control is placed by the competent authorities to inspect the imported hatching eggs with the latest devices and equipment. This action prevent the importation of poor quality hatching eggs that causes a significant losses to broilers breeders as it is a big problem that facing the broilers. Therefore, it is necessary to control the importation of hatching eggs from known global origins with government support for broilers breeders, so this item was one of the most appropriate solutions and less important than other solutions to the deterioration of the industry. It

can be conclude from the research, that the field of imported products was one of the most influential causes in the deterioration of the poultry industry for broilers, the least affected was the area of directions of breeders as compared to other causes. As well as, the start of working with the companies of the integrated production of poultry industry to produce poultry meat one of the most influential solutions to face of the deterioration of the poultry industry for broilers, while the least affected was the regulation of imported hatching eggs in comparison with other solutions. The researcher recommended that, it is necessity the Ministry of Agriculture or the governmental agencies with operational or legislative relationship should develop a legislation and laws in the control field of border crossings to limit or control the quantities of imported product to Iraq. In addition, the role of strict control in border outlets on the imported products of poor quality should be activated, moreover, it is necessary to work with the integrated production companies in the poultry industry, as they are large investment companies that capable of operating the poultry industry workshops for suspended broilers and rehabilitation of destroyed projects and the provision of adequate support for them will increase the productivity. Thus, the profits of broilers breeders increase by reducing the cost of production, which means improving the economic and social level of broilers breeders in particular and of Iraq economic in general. The researcher suggests that the results of this study should be taken into consideration by the Ministry of Agriculture and its branches, all the relevant parts, represented in (Poultry Research Station, the General Company for Livestock Services, the General Authority for Agricultural Guidance and Cooperation and the Guidance, Training and Rehabilitation Service). For the purpose of identifying the causes that led to the deterioration of the industry and of working to resolve them or to overcome them as much as possible and also to revive them, In addition, the Ministry of Agriculture and its branches should be continuously coordinated with the Ministry of Science and Technology, poultry associations, veterinarians, college of agricultural

engineering sciences to take the opinions and suggestions. Moreover, training courses for agricultural guides should be conducted by the Guidance Department for Training and Rehabilitation in all governorates of Iraq to develop the necessary information and skills in how modern technologies and equipment are used in poultry industry. Furthermore, workshops for broilers and how to teach broilers breeders in implementing vital security in their fields, In addition to, the need for attractive training courses and orientation seminars for broilers breeders by the General Authority for Agricultural Guidance and cooperation and with the Veterinarians participation to provide the necessary information and how to take health and scientific measures to prevent the spread of epidemics and diseases that cause mortality in broilers fields as well as how to use modern technologies and devices in other countries.

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