

# The Role of Small Projects in Supporting the Iraqi Economy through the Application of the Principle of the Productive University, Kut Technical Institute Model

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This research aims to apply the principle of the productive university by identifying the productive projects established at the Kut Technical Institute for the production of mushrooms, honey, fish meat, agricultural crops and re-operation of poultry fields for the production of chicken meat, which will enhance food security by relying on local production. The problem of research is not to exploit the natural, physical and human resources available in Iraqi universities to establish projects producing local production and to benefit from academic expertise in the field of local production. The hypothesis of the research stated that the application of the principle of productive university and the establishment and establishment of the productive projects is the right step towards increasing domestic production and the possibility of financing them from the savings of surplus individuals. This study reviewed the agricultural production projects in the Kut Technical Institute and the five projects that were found were analysed for the quantities produced for these five projects for the pilot operation of the first season, as well as the extraction of the percentage of profit for each project separately. The researcher concluded that the implementation of the University's principle of producing productive projects has an effective role in enhancing local production by providing the Institute's employees in particular and consumers in general with animal and plant agricultural products which thus enhances their food security. The researcher recommends the need to prepare a clear economic strategy to activate the application of the principle of the productive university and to exploit the resources and

possibilities available in all Iraqi universities and to put their products on the market as ideal and competitive products for imported goods.

**Key words:** *Economics, projects, agricultural.*

## Introduction

The productive projects are of great importance at all times and at all levels (individual, society, state), regardless of the economic and political system followed, because it is the only way to increase local production and thus achieve self-sufficiency of the population.

The agricultural production projects established at the Kut Technical Institute are a model that is followed in all respects for the purpose of establishing them in a natural environment. This is in the form of fertile land beside the Euphrates river, and humanly through the supervision of the teachers of the institute with agricultural specialisation. The savings of the Institute's private and surplus employees, and thus the exploitation of previously depleted natural, physical and human resources, and the quest for enhanced food security through increased local agricultural production of both plant and animal, using local technology and modernisation technician in the agricultural field and to take advantage of the benefits of biotechnology, all to achieve economic development in the yield of agricultural activity productivity highly.

**Research Problem:** The problem of research is not to invest the inputs (human, material, financial, informatics) available in Iraqi universities in the establishment of productive projects and benefits from academic expertise in the field of local production.

**Research Importance:** The importance of this research in the review of the agricultural projects established at the Kut Technical Institute, by efforts and self-financing, and its success in the production of agricultural crops, poultry meat, fish, honey and mushroom crop as a first step and an experiment with organics through biological control and non-use of pesticides.

Agricultural productivity projects are the panacea to eliminate dependence on imported food and use of depleted natural and human resources in Iraqi universities.

**Research Objective:** The aim of the research is to identify the agricultural productive projects that were established at the Kut Technical Institute as a model for applying the university's principle of producing agricultural crops, poultry meat, fish, honey and fungus crops, and its role in enhancing the food security of the institute's employees.

**Research Hypothesis:** The premise of the research is that the application of the principle of the productive university and the establishment of productive projects is the right step towards increasing domestic production, and the possibility of funding from the savings of individuals who are redundant in the case of transparency and confidence is to exclude the existence of corruption.

**Research Description:** The researcher relied on descriptive research which falls within the descriptive approach in clarifying the principles of a productive university by reviewing the agricultural production bases and studying the agricultural production projects in the technical institute.

**Research Structure:** The research deals with the three main topics of the researcher. The researcher reviewed the agricultural production in the technical institute in the first section. The second topic deals with the five agricultural production projects that have been agreed upon. The third topic focuses on the actual production in the agricultural production projects through analysing the quantities produced to run the demo.

### **The First Topic: The Pillars of Agricultural Production**

Production is generally defined as the activities in which economic resources are transferred to services and goods. While the process of combining agricultural resources together and employing them in a particular agricultural activity and benefiting from them in the creation of a specific commodity or crop, called agricultural production, includes agricultural production on plant and animal production.

Iraq has abundant economic resources that enable it to increase agricultural production to achieve self-sufficiency in food, as well as export surplus agricultural commodities and develop its foreign trade.

### **First: The Components of Agricultural Production at the Kut Technical Institute**

#### ***Natural and Human Resources***

The Institute was established by the Finnish company and opened in 1980 as a specialised agricultural institute in the preparation and graduation of middle cadres specialised in plant and animal production. Therefore, the Kut Agricultural Institute is one of the institutes established scientifically and developed by a global company and in an ideal area for agriculture 1200 dunums. The Institute has an integrated complex for the production of poultry from the fields and the laboratory of feed and massacre, as well as a complex to produce red meat from the fields of cows and sheep and massacre also was equipped with

cows of high quality imported from France and Australia, and was available for the production of natural honey. As for agricultural land, the fruit orchard has been established by the grapes of high quality varieties of production, as well as an olive orchard and a palm grove, all under the supervision of the professors of the institute specialised in agriculture and the holders of higher certificates both according to its specialisation, which made them practice their specialties. For scientific and advanced methods in a timely manner, as well as providing support and funding they need Lama. It was once recounted by a professor of agriculture that all they asked at that time was answered for them and has asked devices for medical room surgery animals were primed by!

Because of the confusion of the former regime and the lack of an economic strategy that manages the resources and possibilities towards achieving the goals, the Institute was transformed from agricultural to technical institute in 1988. At this time it was limited to three specialisations (technological, medical, administrative), and no agricultural specialisation (or it could have been at this time that one of the model agricultural departments was established). And the drainage on large amounts. This shift led to a large-scale campaign in time to eliminate and destroy all the agricultural facilities located in the Institute and they were converted to serve the new disciplines, even orchards and agricultural land was leased to people who do not belong to agriculture. This led to the destruction of the orchards completely and this shift in the Institute is a clear picture of the poor planning of the former regime. If the Institute remained on the agricultural specialisation with the addition of new disciplines then it may have become a prominent and significant role in agricultural production, especially in the period of the economic siege, which lasted more than ten years, as well as a place for preservation of the agricultural facilities that the Institute owns.

From the above, it is clear that the Institute possesses natural elements typical of agricultural production represented in the fertile agricultural lands and beside the river Gharraf, which provides it with the water required for agricultural production. The human resources are available as the institute has retained the agricultural specialisation as well as a small number of high degree holders Agricultural specialisation, and the need for labour is available and abundant, because most of the population of the areas surrounding the Institute of agriculture have a significant experience.

### ***Financial Resources***

The issue of finding and providing the source of funding for agricultural production projects is one of the main determinants of it. As well as being one of the important obstacles that often faces agricultural projects in the stage of financing also, and this includes all investment projects in general. The Institute relies on budget allocations in its spending and does not allow its law to spend on agricultural projects and does not allow the disbursement of

revenues that are collected according to the law and therefore comes from the role of the administration in search of sources of funding from within the Institute, which is the achievement that is referred to by boys through experience and know-how. The knowledge of higher management of the Institute has taken advantage of the rise in salaries and wages after 2003, which is reflected in the high savings capacity of all members of the Institute, opening the door to engage them in participating in the establishment of agricultural projects in the Institute through funding them; both according to their financial ability and their optional contract is attached in Annex (1).

In spite of receiving offers from outside the employees, it was limited to funding and contracted with members of the Institute exclusively; despite the reluctance of some of the participants to participate in these projects. This reluctance was because they had participated in some projects during the time of the previous regime that they did not find useful at the time, but the management of the Institute was able to. The total sum of one hundred and fourteen million three hundred and fifty thousand dinars (114350000) was not received in one payment, but continued to open the door of participation, as it is noted that some participants were paying monthly. The amount is in excess of its expenses. For the month, the most striking thing is the participation to a large amount, which represents the savings of the previous period.

As the participation of some technicians and administrators in descending order to (10,000,000,13 million, 6500000,7500000, 2500000, 2 million) dinars, as well as the participation of the senior management of the Institute (\$ 5000000) dinars indicates that the conviction is sufficient and high confidence that the amounts of Baidi Amina, pervasive in all parts of the state, as well as overcome. Consequently, financial resources were made available from staff-centric and interest-free amounts.

### **The Second Topic: Agricultural Production Projects at the Kut Technical Institute**

Based on the Institute's agricultural production components, it was agreed to establish five projects as follows:

- Fish Farming Project.
- Poultry Raising Project.
- The Project Of Greenhouses For The Production Of Agricultural Crops.
- The Project Of Producing Agricultural Mushrooms.
- Production Of Honey Project.

### ***The Fish Farming Project***

This is one of the agricultural projects that works on raising fish and producing fish meat to the local markets at subsidised and competitive prices relieving the burden on the general public and members of the Institute in particular, as well as creating a job opportunity for a certain segment of the people of the governorate as well as a number of associates in their participation in the committees. The organisation prepared two basins with an area of 5000m<sup>2</sup> and its fabrication, preparation and preparation of a water line and the construction of a special guard room. It also included the cultivation of a green area for the production of green plant feed and concentrated dry feed, with an area of 5 dunums (12,500 m<sup>2</sup>). The capacity of the 2,500-hectare basin has been raised for a period of four to six months to reach 2 kg and three cycles.

### ***The Project of Greenhouses***

The greenhouse project for the production of vegetable crops is one of the most important crops in Iraq for its large nutritional value. It is rich in minerals and salts and contains adequate amounts of starch and protein. Sugar and fatty acids and vitamins, including what is a summer crop, a winter crop, and is consumed in large quantities for the adoption of the population in their daily diet is complementary to grain, and this reflects the growing importance occupied by the production of vegetable crops in the overall Plant C.

This project achieves an economic gain in supporting the agricultural movement in the Kut district and benefits from the technical expertise of some of the employees of the institute (the agricultural competencies) works to attract customers from the districts and districts through the provision of products.

Agriculture, with competitive prices, reduces the burden on citizens, as well as creating jobs and reducing unemployment. The structures of the green houses were constructed with four structures covered with plastic (2 layers), four drip irrigation systems and a drip irrigation basin. The economic feasibility of this project has been prepared and the revenue cycle for six months is guaranteed according to the following quantities for each crop and for one year.

1. Tomato crop 6000 kg
2. Crop cucumber 6000 kg
3. Eggplant yield 12000 kg
4. Pepper crop 4000 kg

### ***Mushroom Cultivation Project***

The fungus contains vitamins, many active compounds, minerals and a high proportion of dietary fibre, which has a lot of benefits to the body, it is considered the first alternative to meat (Central Technical University, 2015); (Muwafaq Ali al-Khalil and others, 2001).

The project for the production of agricultural mushrooms is one of the successful agricultural projects because the basic raw materials used in production are available locally, such as wheat straw and chicken meat, which is one of the basics of preparation of soil used in mushroom cultivation and the high productivity and sales prices encourage the product throughout the year. Domestic mushrooms lack local markets and dispense with the importer of high prices. A mushroom plant was established in the institute inside a 28m<sup>2</sup> building made of a heat-insulated sandwich. An iron dam has been manufactured with three floors with a capacity of 3.5m<sup>2</sup>, with a total area of 31.5m<sup>2</sup> and a preparation basin of 5m x 5m<sup>2</sup>. Air conditioning mixing process for heating and cooling with external air. The plant is equipped with air exhausts to control the flowing water vapor to guarantee a humidity of 80% to 95%, in addition to cooling and heating devices operated by external controllers and refrigerators to save the product. The sales cycle consists of three stages (catapults). The first batch starts after twenty days of planting followed by the second cut after ten days from the end of the first cut and 35% from the first cut. The third batch of production begins ten days after the end of the second cut and 30% from the second cut.

### ***Honey Production Project***

God has blessed the Almighty bees in the Koran, and this indicates that it is one of the blessings that manifests the ability of the Creator Almighty in the origin of this bee of honey that enables healing people of diseases. Along with this, is the development of experiments, research and scientific studies to grow interest in the production of honey to heal through it's healing capacity. It has many benefits and in many different ways, this justifies the increasing demand for honey continuously. The honey production project is one of the agricultural production projects that will supply the local market with pure honey instead of the imported honey that fills the markets, as well as the quality of local honey. The institute contains many trees and plants which are ideal environments for bees. When he was an agriculturist. The workers in the past are still involved and have accumulated experience in the field of beekeeping. This was clear when the establishment of the liquidated was purchased for only four cells and then the proliferation of six cells then purchased five cells to be a total of fifteen cells, and each cell contains several floors. Cell production ranges from 8 kg to 15 kg depending on the size of the cell and the amount of nectar obtained.

### **The Third Topic: The Reality of Actual Production in Agricultural Production Projects For the First Season**

The agricultural production projects were carried out directly by the employees of the Institute, regardless of the amount of contribution or not. A central committee was formed under the chairmanship of Mr. Dean and the membership of holders of higher degrees in agricultural specialisation. This committee supervises sub-committees. The project was the standard in which experience, knowledge and knowledge of the project was formed on the approval of the members and was not mandatory. These committees have the main role in the operation of projects, has been hiring experienced workers both according to the project and its need, as well as the formation of other committees specialised in the marketing of production and each project. Their previous experience in how to sell the product, how work was structured and the high level of coordination required meant that Mnqubl teachers enjoyed working projects for exercising their competence in practice.

Agricultural projects are a good example of working in public and moving away from dark, secret dark houses (Rahman, 2009); (Abdul Wahab, 1980).

This was done in an open and transparent manner, through holding public symposia through which presentations were made exclusively on the projects and the steps reached by the process of establishing the projects in minute details, which led to the interest of the rest of the participants to contribute to it. The contribution of one of the members to thirteen million dinars, enhances the possibility of eliminating rampant corruption through the reliance on the administration of fair and sincere dedication to work, which was characterised by the committees of productive events, headed by the Dean of the Institute who played a major role in the establishment of agricultural projects and exploitation of the natural and human resources owned by the Institute and the use of the savings without interest.

#### ***Analysing the Quantities Produced for Experimental Operation for the First Season***

The agricultural production projects were started by each committee responsible for the agricultural project. The first season was the experimental operation of all projects. The following are the quantities produced and the percentage of profit for each project.

#### ***Fish Farming Project***

Fish production was raised as a first meal in two basins and then the production was sold. The total revenue amounted to 35050750 Dinars, while the total expenditure was 515 million Dinars, the highest profit rating among agricultural projects which reached 85% kg of fish meat as shown in the table below.

**Table 1:** Production quantities, total revenue, total expenditure and profits for agricultural production projects products for the first season

Rate %	Profit )IQD	Expense )IQD(	Total revenue )IQD(	Produced amount	Project
85%	29900750	5150000	35050750	KG 8762	Fish breeding
68%	16228150	7632350	23860500	Bird 9544	Poultry farming
66%	5567250	3253000	8455250	KM20910,500	Plastic houses
75%	1502000	500000	2002000	Kg 1001	Mushroom Production
68%	5355000	2520000	7875000	Kg 225	Honey Production

**Source:** Prepared by the researchers based on the Ministry of Higher Education and Scientific Research, Middle Technical University, Kut Technical Institute, Finance Unit - the committee supervising the projects.

The increase in the quantity produced from this project, was reflected in the high profit rate which led to the committee overseeing the project to create a large new field (6 acres) and six thousand fish. The project was developed by raising the fingerlings in one of the small ponds, after which the big basin would be supplied and sold and the remainder sold from the irrigated ponds. The remaining poultry feed was used for fish fingerlings. The committee supervising the project created a balanced diet. This is the opposite of the production of meat in fish, as it is characterised by the taste of fairly similar river fish, with good quality free of pesticides and chemicals (Fadel, 2010); (Committee supervising agricultural projects for the year 2015).

### ***Second: Poultry Meat Production Project***

The turnout of meat consumption of poultry is increasing continuously for the provision of animal protein to the consumer, and the projects of production of poultry meat quickly in the productive cycle, making it the forefront of economics in agricultural production.

Two meals of meat chicken were produced, with 5,000 birds per meal. The two meals were sold to all the employees of the institute. Regardless of their contribution to agricultural projects, the demand was very high, because of its low price compared to prices in the market; as the sale was at a price higher than the wholesale price and below the single price. As well as the quality of the product, as the mixing and composition of chicken feed in the Institute by specialised professors and scientific rates between natural ingredients away from chemicals, which was reflected on the production of meat in chickens.

The sale of the product inside the Institute added a new advantage of disposal and the lack of marketing costs and high profit rate to 68% of the total revenue capacity 23860500 dinars, while the total expenditure of both parties 7632350 dinars and the production of 9544 birds and as shown in table 1.

The poultry project has been suspended for the spread of the bird flu epidemic in the Wasit province. Although the poultry project of the Institute has not been affected, the consumer is reluctant to buy local production when the disease is spreading.

### **Third: Greenhouses Project**

The production was carried out by three plastic houses as an experiment. The sale was almost daily, with a total production of 8455 kg of vegetables that were sold directly inside the institute. The demand for the products of this project was often greater than that of the factory. The supervisor of the project used organic fertiliser and did not use pesticides too which was vital and therefore left a clear impact in the quality of the product taste and maintained the glasses and stay fresh for a period of time. This is as well as the absence of a side effect on human health, knowing that this type of product is twice the price for His instances of vegetables.

The total revenue for this project amounted to JD (8455250), while the total expenses amounted to (3253000) JD to reach a profit rate of 66% as shown in Table 1.

### **Fourth: Mushroom Production**

After completing the establishment of a mushroom production plant, the first meal was produced and it was about 1001 kg on the first three batches, 450 kg, the second, 350 kg, and the third, 201 kg. As a test for this project, after the success of this meal and the demand to buy the products of the lab, the committee supervising this project expanded through the use of a system to increase the cultivated area from 21m<sup>2</sup> to 80m<sup>2</sup> (What are the benefits of mushrooms); (Maazahim, 2012); (Ministry of Higher Education and Scientific Research).

Characterised by its pure white colour and ideal size, as well as the taste of being fresh and not staying in the refrigerated store, was a direct sale on the day of the catapult. Note that the Institute was approached by several parties for the use of the Commission supervising the plant in order to establish plants inside and outside the province.

### **Fifth: Production of Honey**

A new canopy was created for the hives, and the use of clover flowers for the bees, as well as the various trees and flowers scattered in the gardens of the Institute was characterised by the committee overseeing this project that has knowledge and scientific expertise practical in the field of beekeeping (Nahhalin experienced).

Two hundred and twenty-five kilos of honey were produced during the season of Kalipetose trees and other plants, and was sold at a subsidised price and the amount of thirty five thousand dinars (35000) per kg. The honey produced in the institute and the certificate of specialists in the production of honey taste of being 100% natural and extracted from trees as well as natural and wild plants, which is distinguished from the rest of the honey produced in other houses in the Wasit province. The committee managed to produce a quantity of royal food, which is used in the treatment of infertility in both sexes, which makes the price is high with the price of one gram to ten thousand dinars and the quantities are very limited. There is a process in the process of experimentation and in its early stages, the use of bee stings in the treatment of various diseases such as rheumatism joints and sinuses have cured bee stings.

### **The Fourth Topic: Conclusions and Proposals**

#### ***Conclusion***

1. The Institute has almost typical components for the establishment of agricultural production projects in two agricultural and plant production sectors.
2. The issue of finding and providing a source of financing for projects can be overcome by relying on the saving ability of the employees and investing the accumulated funds without interest by opening them to participate in the establishment of agricultural projects.
3. When providing sufficient satisfaction and confidence in the public that their money is in safe hands will lead to overcome the problem of funding.
4. When senior management is honest, sincere and dedicated in its transparent and transparent work, it will promote the elimination of corruption.
5. Products and agricultural production projects are sold directly to the consumer so that there were no marketing expenses, but demand was greater than production in most cases and this indicates the quality of the free of pesticides and chemicals and the use of organic fertilizer.
6. Agricultural production projects have been instrumental in providing the Institute's private employees and general consumers with agricultural and animal products and thus enhancing their food security.



### ***Recommendations***

1. The need to prepare a clear economic strategy to manage and activate the resources and possibilities available in all Iraqi universities.
2. Working to activate the application of the university's productive principle and put its products on the market as ideal and competitive products for imported goods.
3. To spread the idea and the method of financing agricultural projects in the Kut Technical Institute as an ideal way to finance projects in all government units and as an alternative to privatisation and thus will be the best way to integrate the public sector with the private sector and stems from the Iraqi reality.
4. Grant necessary facilities in all aspects by the Ministry of Agriculture and provide the necessary support and encourage such projects as a step to restore local production for the advancement, which leads to the disposal of the invoice of agricultural products imported expensive.



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