Ph.D. thesis abstract

An Economic Study of Strawberries Production and Export in Egypt
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ABSTRACT

The study problem represented in the inability of the production quantity of sugar cane to cover the needs from sugar consumption. This study mainly aimed to arrive for the economics of sugar cane as well as the economics of sugar beet. This is done by studying the changes of the area and productivity of an feddan and the total production of sugar cane and its counterpart to sugar beet. As well as the development of sugar production and consumption in Egypt, and a study of the sugar feddan gap, production costs and the net revenue of sugar cane and sugar beet crops in Egypt. All this during the years of the study period (2004-2018).

The study was based on descriptive economic analysis and analytical econometrics to achieve the above-mentioned objectives.

First: The economics of sugar cane production in Egypt.

The annual rate of change in the area of sugar cane was about 0.4%, which is a very low rate because the areas of sugar cane cultivation are specific and almost constant. The decrease growth rate in the feddan productivity of sugar cane was about 1%, which is a very low rate. The annual growth rate of the total production of sugar cane has reached about 0.4%, which is a low rate that cannot be commensurate with the rate of population increase. Therefore, an increase in sugar consumption is expected and the gap between production and consumption will continue for a long period of time.

The increase in cane sugar can contribute by increasing the sugar extraction factor from the sugar cane crop, as this factor is increasing by about 9.4% annually. This is considered as an increase in the yield of sugar per feddan and thus an increase in the amount of sugar extracted from sugar cane. This was reflected in the production of cane sugar, where the annual growth rate of sugar production reached about 15%, i.e. its quantity amounted to about 155 thousand tons annually. However, this does not prevent sugar from being imported from abroad because the gap between sugar consumption and sugar production is relatively large. Therefore, Egypt imports the rest of its sugar needs, as the annual growth rate of these imports reached about 6.9%, or about 59 thousand tons annually. It is strange that Egypt exports cane sugar, as its exported quantity reached about 431 thousand tons in 2018. This was reflected in the self-sufficiency rate of cane sugar, which reached about 84% in 2018.

As for the production costs of sugar cane, it amounted to about 18339 pounds per feddan, including the value of the feddan rent. The average of value of the net revenue of sugar cane was about 8906 pounds in 2018.

Second: The economics of sugar beet crop.

The annual growth rate of the sugar beet crop area was about 10%, equivalent to about 36.14 thousand feddans. Its area reached about 492.71 thousand feddans in 2018. The annual rate of change of productivity was about 7%. The annual growth rate of the sugar beet crop reached about 21.06 million tons in 2018. The extraction factor reached 14.92% in 2018. The production of beet sugar reached about 10.38 million tons in 2018. The amount of imports amounted to about 615 thousand tons of beet sugar. To cover the shortfall in sugar production in 2018.

As for the total costs per feddan of sugar beet, it amounted to about 8,613 pounds, including the feddan rent in 2018. The annual growth rate of total feddan costs was about 11.8%, which is a relatively large increase. The value of the net revenue of sugar beet was about 4023 pounds. The self-sufficiency rate of sugar beet in 2018 was about 71.5%. So a relatively large amount of sugar is imported to cover the total consumption. As sugar production reached about 2,163 thousand tons in 2018, while consumption reached about 3024 thousand tons, and then the deficit in sugar production was about 861 thousand tons in 2018, this amount of sugar is imported to cover consumption of it so that there is no crisis in the available quantity. For consumption, knowing that the rate of self-sufficiency in sugar was about 71.5% in 2018.
In light of these research results, a number of recommendations can be drawn, the most important of which are the following:
1. Reclamation of new lands to be cultivated with sugar beet.
2. Work on developing new varieties of sugar cane and sugar beet to increase the current productivity of the feddan.
3. Using agricultural drainage water in cultivating sugar beet, as well as well water, to solve the problem of water shortage necessary for irrigation.
4. Using modern technology in performing agricultural operations to improve feddan productivity.

In light of these research results, a number of recommendations can be drawn, the most important of which are the following:
1. Reclamation of new lands to be cultivated with sugar beet.
2. Work on developing new varieties of sugar cane and sugar beet to increase the current productivity of the feddan.
3. Using agricultural drainage water in cultivating sugar beet, as well as well water, to solve the problem of water shortage necessary for irrigation.
4. Using modern technology in performing agricultural operations to improve feddan productivity.
ثالثًا: التصنيف بالمحتوى المحمول بنجر السكر:

أما بالنسبة لجملة تكاليف الفدان بنجر السكر فقد بلغت نحو 8613 جنيهًا بما في ذلك إيجار الفدان في عام 2018. وقد بلغ معدل النمو السنوي لجملة تكاليف الفدان نحو 11.8% وهي زيادة كبيرة نسبياً. وقد بلغت قيمة صافي العائد الفدائي لينجر السكر نحو 4023 جنيهًا. كما بلغت نسبة الاكتفاء الذاتي من بنجر السكر في عام 2018 نحو 71.5% لذا يتم استيراد كمية كبيرة نسبياً من السكر لتغطية الاستهلاك الكلبي منه. حيث بلغ الإنتاج السكر نحو 2163 ألف طن طن في عام 2018 في حين بلغ الاستهلاك نحو 3024 ألف طن ومن ثم يكون العجز في إنتاج السكر نحو 861 ألف طن في عام 2018، يتم استيراد هذه الكمية من السكر لتغطية الاستهلاك منه حتى لا يكون هناك أزمة في الكمية المتاحة للاستهلاك.

علماً بأن نسبة الاكتفاء الذاتي من السكر بلغت نحو 71.5% في عام 2018.

في ضوء تلك النتائج البحثية يمكن استنباط عدد من التوصيات أهمها ما يلي:

1. استخدام التكنولوجيا الحديثة في أداء العمليات الزراعية لتحسين الإنتاجية الفدانية لكلا المحصولين قصب السكر وبنجر السكر.

2. العمل على استدامة أصناف جديدة لقصب السكر وبنجر السكر لزيادة إنتاجية الفدان الحالية.

3. استصلاح أراضي جديدة يتم زراعتها بنجر السكر.

4. استخدام مياه الصرف الزراعي في زراعة بنجر السكر وكذلك مياه الآبار لحل مشكلة نقص المياه اللازمة للري.