Economic Analysis of the Graduates Productive-Agricultural and Marketing Activity in the New Lands

The Government or Egypt represented In the Mini try of Agriculture and Land Reclamation, focuses on horizontal expansion by reclaiming and cultivating the desert lands with good potentials for reclamation. The ultimate aim of this policy is to enhance food securitycreate new jobs and reduce population on the narrow Nile valley and Delta. Nubaria is one of the largest horizontal expansion areas nationwide. This attaches special importance to the study of the agricultural production patterns and marketing channels applied by the new graduate settlers. The overarching objectives of this study is to assess production and economic efficiency at farm level, marketing channels being used by the new land owners, marketing costs for the major crops; and to identify factors that encourage settlement of the new graduates in the new lands, with particular reference to problems encountered and solutions thereto. The study uses two types of data: secondary data on production patterns, acreage of crops grown by tbe new graduates and its relative importance to the total area. The other type (primary data) has been collected from a random sample of 150 graduates at three locations;namely Bangar EI-Sokkar, West Nubaria and El Bustan.] For the assessment of economic efficiency, three indicators have been used (1) production elasticity (2) marginal production and (3) commodity return. Cost/benefit functions have been calculated together with farm budget]. Certain frequency indicators and percentag s have been used to describe some data. ’ Major Conclusions of the Study: For wheat, production elasticity was posiuv . Economic efficiency of mechanized labours was higher than human labour. However, irrigation water rticiency was the highest production factor, to be followed only by planting seeds. It was also proven that incre sing the quantity of all factors of production by 1% has resulted in productivity increase by 0.844 ardeb per feddan. For Berseern, all production elasticities were positrve except for irrigation water. Economic efficiency of planting seeds and human labour was the highest among all production factors, whereas it was low for manure and irrigation water. However, increasing production factors by I% has resulted in productivity increase by 0.823 ton per feddan, For Peas, all production elasticity were positive. Economic efficiency of chemical fertilizers was the highest among all production factors. Irrigation water efficiency ranked sec nd and the increase of allproduction factors by I% has resulted i productivity increase by 0.911 ton per feddan. For Faba beans, all production elasticities were positive as well. Irrigation water’s economic efficiency ranked second to that of human labour. However, increasing the quantity of each factor of production by I% resulted in productiv ity increase by 0.778 ardeb per feddan. For the major summer crops (peanut and maize], all production elasticities were positive for peanut. Economic efficiency was highest for irrigation water and manure, followed by human labour and chemical fertilizers. Mechanized labour was not economically efficient. However,increasing all production-input quantities by 1% has resulted inproductivity increase by 0.807 ardeb per fedclan. Likewise, all productionelasticities were positive for maize. Fertilizers and irrigation water werethe most economically efficient factors of production. However, increasing all production input quantities by I% has resulted in productivity increase by 0.985 ardeb per fe dan. Assessment of the cost! benefit functions for the crops grown by graduates revealed the following: For wheat, the square cost function was more expressive of thesignificant

statistical relationship between productivity and total cost perfeddan. from 114 graduates producing wheat, 27 graduate growers were prcduci ng less than the proper volume a f production that min imizes costs. Likewise, the square revenue function was more expressive of the statistical relationship between yield and gross revenue. Only 16 graduate growers, out of the I 14 wheat producers, were producing the proper volume that maximizes profitability. Likewise, the square form of revenue function in the production of berseem was more expressive of statically-significant relationship between yield and gross revenue per feddan (at a level of 0.01). the study also indicated that, out of the 38 graduate berseem growers, 19 growers (50%) were producing a volumeof production that maximizes profitability. By the same taken, the square form cost of revenue functions for peas was more expressive of the statisti ally-significant relationshipsbetween yield and cost and between yield and revenue. However, none ofthe graduate growers of peas has been abl to reach the production volume that maximize profitability. The above-cited conclusion on peas also applies to faba beans,?measure for measure. For peanut, a statistically-significant relationship was detected between yield and cost and revenue functions. The square form was also proven to be more expressive of that relationship. Only 18 graduates (about 30%) out of 62 graduate peanut growers achieved a productivity level that minimizes cost, wherea two graduate growers (3.3%) onlyreached a level that maximizes profitability. For maize, the square form of the yield and cost/revenue functions was more expressive of these statistically-significant relationships. All the respondent graduates achieved a yield that minimizes cost. Out of 40 maize growers 30 graduates (75%) reached a productivity level that maximizes 3Analyzing the annual farm budget, it became quite apparent thatthere exist 16 cropping patterns, including wheat (winter season) peanutor maize or tomato or watermelon (summer season) or a combination ofthose crops. the gross revenue from the area grown to each crop, variablecosts, margin above variable costs and return on land have all beencalculated. The average annual rent p r fed dun at the graduate locationsof Nub aria was estimated at L.E. 575.Graduates depend mainly on loans for their production operationsincluding the agricultural practices and input procurement. By deductinginterest (on variable costs) from the margin, the annual return on farmmanagement was obtained and recorded. When the annual return isdivided by 12 months, the monthly return was obtained’ thus reflecting amonthly income to the graduate grower, being comparable to a jobopportunity.