

Summary

Vegetables are regarded as strategic crops, which provide population with food security, being an essential component of daily food requirements. Consumption of vegetable crops has been escalating over the last decades due to the growth of population and upgraded health and nutrition awareness of citizens.

The objective of this research revolves around analyzing production and marketing activities of major vegetables crops in Kalubia governorate. The aims behind such analysis are to identify the current status of production and marketing mechanism and generate some technical information on physical aspects of function of inputs and outputs to assist growers take the proposed decisions regarding future production and marketing affairs.

The study includes five chapters plus the introduction and summary which contain problem and objectives of the study, methodology and sources of data.

The first chapter covers the reference review of the previous studies on tomato, cabbage and green pea.

The second chapter tackles evolution of the cultivated area, yield / Feddan and total production of the three seasons of the studied crops during 1988-1999. The major findings are:

(1) Concerning tomato the results indicated that annual area of tomato rose by 1055.5 represented 6.03 % for all season and summer season respectively. As for winter and summer

season, tomato area has decreased annually by — 0.38 % and — 4.48 % of average national area. Concerning Kalubia governaorate, tomato area has decreased at an annual rate of — 7.39 %, -16.09 %, 6.48 % and —2.87 % of average cultivated area in the governorate for all seasons, winter; summer season and nili seasons respectively.

Regarding yield per Fadden of tomato at national level, it has increased with respect to all season, winter season, summer season and nili seasons at an annual rate of 3.11 %, 5.48%, 0.58 % and 2.57 % of average yield / f. respectively. Likewise, tomato yield / f. in Kalubia has increased for winter by 1.82 % of yield / f. annually. But yield per Fadden of tomato for all season, summer season and nili season has decreased annually by —0.45 %, -1.22% and — 1.27 % of average yield / f. respectively.

Tomato production in Egypt has increased with regard to all seasons together winter season and summer season at an annual rate of 4.57%, 5.24% and 6.67 5 of average total production. Also, by — 8.32%, -13.92%, -7.79 % and —1.191% of total production for all season together, winter season, summer season and nili season respectively.

(2) Concerning cabbage the findings show:

General time trend indicates that cabbage area in Egypt has increased annually by 1.84%, 1.025%, 7.02 % and 1.36% of average cultivated area for all season together, winter season, summer season and nili season respectively.

As for cabbage area in Kalubia it has increased annually by 1.97%, 12.46%, and 2.89% of average cultivated area

for all season together, summer season and nili season successively. In the meantime, area of winter season has decreased annually by —0.19 % of the average cultivated area.

- Trend of yield If. of cabbage at national level shows an increased for all season together winter season and nili season of estimated by 0.36 %, 0.79% and 1.25% of average yield If. respectively. But yield If. at summer season has fallen by —0.10% of average yield If. annually.
- In Kalubia governorate, cabbage yield If. has also increased for all season together, winter season, summer season and nili season at an annual rate of 2.59%, 1.97%, 3.3% and 2.59 % respectively of average yield per Fadden.
- In Egypt, total production of cabbage has increased annually for all season together, winter season, summer season and nili season by 2.44%, 1.97 % 5.79 % and 2.58 % respectively of average total production. Similarly in Kalubia, total production of cabbage has increased annually by 3.72 %, 1.89 %, 13.14 % and 4.56 % for all season and nili season respectively.

(3) Concerning green pea:

Time trend shows that area at national level has risen annually by 7.83 %, 19.99 %, 21.52 % and 7.49 % of average cultivated area for all season together, winter; summer season and nili season respectively.

- Cultivated pea area in Kalubia has increased for winter season by 6.15 % of average cultivated area.

Time trend of total production of green pea in Egypt shows that it has increased with respect to all season together, winter season , summer season and nili season at an annual rate of 5.15 % , 5.03 % 18.74 % and 11.81 % of average production respectively . As for Kalubia governorate, yield If. of green pea has increased annually by 6.43% of average yield per Fadden.

The third chapters throw light on sample selection technique:

The technique was based on area of each crop / total vegetable crops in the governorate ratio. Therefore, tomato, cabbage and green pea were eventually selected. Total size of the sample 2 % of holders in both Kalub 7 toukh districts, out of which 101 tomatos & cabbage grower in Kalub and 127 pea growers in and Toukh.

The fourth chapter covers statistical and economic estimates of production and cost functions.

Regression analysis was applied to estimate various models. The best ones were selected based on the acceptable economic and statistical parameters.

(1): Statistical and economical analysis of data on production of the studies crops:

- The most factory affecting summer tomato production in Kalubia during 1999-2000 was the number of machinery working hours . This may be attributed to the improved use of machinery in land tillage, irrigation and pest management.

The most factor affecting total production of winter cabbage during 199-2000 were number of seedlings, human labour hours and the amount of pesticides. These variables were found to be of adverse impact on production, if over —use took place.

The most factors affecting positively production of winter green pea was found to be human labour hours and amount of seeds. But machinery working hours was of negative impact on production assuring excessive use of such factor.

(2) Statistical and economic analysis of cost of production:

Cost function Linear for summer tomato indicated a direct proportional relationship statistically insignificant at 0.05 level.

Cost function Linear for winter cabbage indicated inversely proportional relationship statistically insignificant at 0.05 level.

As for winter pea, a direct proportional relationship statistically significant was proveal to exist at 0.01 level between total cost per Fadden of winter green pea and total production in tonnage for holding (less than, Fadden, 1-3 f. and 3-5 f.) marginal cost / ton. Were 199.72, 166.78, 329.9 and 151.61 I.E. Respectively. In the meantime, a direct proportional relationship statistically insignificant 0.05 was found to exist between total cost of production / f. and total production in tonnage for holding tehat exceeded 10 Fadden.

The fifth chapter deals with the economic aspects of the studies crops marketing in Kalubia governorate. Based on the comparative significance of average marketing cost of summer tomato in the sample. It was found that the third category comes on top with respect to that average followed by the second then the first category. Average of total cost of marketing per Fadden had reached 1185.9, 1076.67 and 994.43 L.E./ f. respectively. For winter cabbage. The third category recorded the highest average followed by the second then the first category. The average estimated at L.E. 952.14, 612.44 and 614.89 per Fadden respectively. As for winter green pea, the fourth category was of the lightest average followed by the third, the first, the second and finally the fourth category at estimates of 219.25, 217.26, 193.35, 190.5 and 180.98 L.E. per Fadden respectively.

The marketing efficiency of summer tomato reached 74.3 %, 72.87 %, 71.17 % and 72.75 % for holding categories 1, 2 and 3 respectively. As for winter cabbage the marketing efficiency reached 74.87 %, 75.39%, 66.54 % and 72.03 % for holding categories 1, 2, 3 and the whole sample respectively. As for winter green pea, marketing efficiency reached 90.36 %, 89.75 %, 89.78 %, and 89.3 %. 91.11 % and 89.88 % for holding categories 1, 2, 3, 4, 5 and the whole sample respectively.