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SOME FACTORS AFFECTING PROFITABILITY OF BEEF PRODUCTION FARMS UNDER EGYPTIAN CONDITIONS

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A B S T R A C T

This study was carried-out to throw the light on the most important factors affecting economic and productive efficiency of beef production in Egypt through field survey in Kaliobyia, Giza and Monofyia provinces during the period extended from winter 2010 to summer 2012 on random samples of beef production sectors. These sectors were Farmers (Fallah), private and Governmental. The types of fattening animals included in this study were balady cattle (local breed), crossbreeding cattle and buffalo species. Beef production and economic data were collected from a cross-sectional and longitudinal and field survey. During the data collection, the researcher was in intimate contact with the beef holders and managers. Results concluded that the main factors affecting beef production and economic efficiency of beef production farms were feeding types and costs, veterinary management and its costs, fattening period, price of fattening animal, as well as other fixed and variable costs. Also the present study concluded that the most important type of animal and locality of high profitability for fattening were crossbred cattle in Kaliobyia, crossbred cattle in Giza and buffaloes calves in Monofyia as the net profit from them were 2171.16, 1810.49 and 1645.95LE/head and the total return/total costs for them were 121.35, 119.88 and 117.43 respectively.

KEY WORDS: Beef- Costs- Efficiency- Profitability- Returns**.**

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1. INTRODUCTION

Beef production is considered one of the main source which supply human body with proteins, fat as well as other essential vitamins. Meat production is an important process which is well known [27]. Currently, buffalo and cow beef production constitute about 70% of the total meat production in Egypt (80% of this production depend on intensive systems farms and the other 20% from rural production). The world demand for animal products in human diets is steadily increasing due to growth in population and per capita consumption [8]. Cattle are considered as one of the first animals domesticated by man for agricultural purposes. They were aimed to provide milk, meat, hides and other draft purposes .The increase of purchase power in the world economy results in a higher consumption of higher-value and quality foods. These changes in consumption, together with a projected population growth of about 1.1 percent annually in the next decade, lead to an increase in world demand for beef. Beef production projects play very important role in the agriculture system regarding its efficient outcomes compared with other agriculture projects as well as its outstanding role in decreasing the gap between consumption and production [7]. In Egypt, the main human nutritional

problem is the gab that present between demand and actual production as the individual daily requirement is about 30% while only about 19% is available [14].

The beef cattle industry is increasing in importance and became as a vital production. The most important factors affecting beef production include breeds of animals, feed types, quality and costs, veterinary management costs, period of fattening and price of kilogram meat produced as well as fixed and variable costs [31] and [33].

So the aim of this study is to focus on a simple, practical, applicable and scientific methods and factors which include types of fattening animals, locality, age, feed, veterinary management, labor as well as costs and returns relationship for beef production, on which we can depend to achieve the highest profitability for the breeders, decrease the current nutritional-production gab and enlarge the employments possibilities.

2. MATERIALS AND METHODS

2.*1. Study design and duration*

This study was carried out through field survey in different regions of Egypt including Monofyia, Kaliobia and Giza provinces during the period extended from winter 2010 to summer 2012 on random samples of beef production sectors. These sectors include farmers (Fallah), private and governmental farms. The types of fattening animals included in this study were balady cattle (local breed), crossbred cattle (Balady X Friesian) and buffalo species.

2.*2. Methods of data collection*

The data were collected from cross-sectional and longitudinal field survey. During the data collection, the researcher was in intimate contact with the beef holders and managers which include correct prediction records. According to Belay [5] the researcher collects the data by two methods:

a. From the accurate records by monitoring the collected data and system of entry which available in beef production farms of the study areas.
b. From the structured questionnaire method which established by the researcher in accordance with objectives of this study and admitted to the beef holders and managers during the time of interview with main focus on feed types, amounts, costs, veterinary management and animal fattening performance for each interviewing animal fattener households.

2.*3. Types of collected data:-*

The collected data (raw data) were beef animals production records and accompanying performance records. These data were classified into different parameters to evaluate the economic, productive efficiencies of beef cattle and buffalo. The data were classified into productive and managerial data**,** which included according to Gong et al. [17].

1- Types of reared animals for fattening (balady, crossbred cattle and buffalo), production sectors (Fallah, Private and Governmental).
2- Types of feedstuffs consumed amounts of feed consumption and feed costs.
3- Purchase price, fattening period (months on feed), initial weight when purchased, sale price and weight at end of fattening period.
4- Vaccination cost, drug cost, disinfectant cost, labor cost, electricity cost and water costs were determined.

During fattening period the body weights and body weight gains were determined monthly.

2.4. Fixed costs

It includes the depreciation of buildings and equipment. The depreciation rates were calculated for the building by dividing the value of building on 25 years and for equipment 5 years [10].

2.5. Variable costs

It includes the prices "LE" of drugs, vaccines, disinfectants, veterinary supervision, feed cost, animal price, labor cost, water and electricity cost according to the prices during the years of the study [20] and [1].

2.6. Returns of beef production

It includes the returns "LE" from (fattened animals sales and manure sale) and return from manure sales, which can be calculated by multiplying total amount of manure/ m^3 excreted by its price according to the prices during the years of the study [15].

Total returns = Returns from fattened animals sales {weight of animal at end of fattening period/ kg X price of kg meat} + Fecal matter {amount of fecal matter produced m^3 X price of m^3}.

2.7. Statistical and economical analyses methods

The collected data were introduced on the computer firstly introduced to Microsoft office excel and then through this program by the researcher. All the productive and managerial parameters affecting beef production as well as their costs and returns were calculated and statistically analyzed for each animal by using different statistical methods of data analysis including:

a-Multivariate, General linear model (GLM) for analysis of variance (ANOVA):- This statistical model was constructed for determination the effect of types of fattening animal within localities on beef production and their interactions on the productive and economic variables affecting beef production.

b- Duncan's multiple range test (DMRT):-

It was done to test the significant differences between the mean values of the analyzed parameters which related to production, costs and returns of beef production [3] and [28].

2.8. Economic measures include

A) Calculations of costs and returns:-

1- Fixed, Variable and Total costs [20].
2- Total returns Net profit [2].

B) Collective measures of efficiency that include percentage of total return to total cost, percentage of total variable cost to total cost, percentage of feed cost to total cost, percentage of feed cost to total variable cost, percentage of net return to total return, percentage of net return to total variable cost and percentage of net return to total cost [4].

C) Partial measures of efficiency [13]

Costs of Kilogram beef from total veterinary management costs were calculated as follow

1. Costs of each Kilogram beef produced from the total veterinary management costs.
2. Total veterinary management costs / total beef produced at end of fattening period.
3. Total veterinary management / total costs percentage.
4. Total veterinary management / total variable costs percentage.

The Measures of the economic and productive efficiency were calculated/ Egyptian pound "LE" to evaluate and assess the productive and, economic efficiency [4].

3. RESULTS and DISCUSION

1. Effect of different types of fattening animals among different localities on feed cost, total veterinary management, selling weight, fattening period, absolute weight gain, daily weight gain and animal sale:

Table (1) showed the significant effect ($P<0.05$) of different types of fattening animal among localities on feed cost, total veterinary management, selling weight, fattening period, absolute weight gain, daily weight gain and selling weight.

The higher value of feed cost was found in crossbred cattle in Monofyia (4558.88 LE per cycle) while lower value of feed cost

was found in balady breed cattle in Giza (2823.62 LE per cycle).

Table (1): Effect of different types of fattening animals among localities on feed cost, total veterinary management, selling weight, fattening period, absolute weight gain, daily weight gain and animal sale price

Locality	Types of fattening animals	N	Feed cost	Total veterinary management	Selling weight	Fattening period	Absolute weight gain	Daily weight gain	Animal sale price
Kaliobyia	Balady cattle	46	3023.89±65.01^{cd}	90.21±0.76^{b}	409.32±7.56^{f}	245.06±3.52^{bc}	178.93±6.16^{d}	0.82±0.04$^{d.}$	9941.36±460.04^{de}
	Crossbred cattle	174	3576.23±35.27$^{b.}$	92.01±0.41^{a}	484.65±2.83$^{b.}$	258.05±1.66$^{ab.}$	236.22±2.68$^{b.}$	0.99±0.02$^{c.}$	12054.16±154.09$^{a.}$
	Buffaloes	173	3478.12±39.88^{b}	92.29±0.42$^{a.}$	479.57±2.29$^{bc.}$	257.28±2.59^{ab}	230.24±3.33$^{b.}$	0.95±0.02$^{c.}$	10394.84±78.02$^{c.}$
	Total	393	3470.12±26.07^{B}	91.66±0.26^{A}	473.87±2.17^{B}	256.24±1.43^{B}	227.08±2.20^{B}	0.95±0.01^{B}	10853.22±105.45^{B}
El Giza	Balady	37	2823.63±125.87^{d}	73.97±0.74$^{e.}$	397.58±4.35$^{g.}$	206.94±9.15$^{e.}$	201.31±7.74$^{c.}$	1.13±0.08$^{b.}$	9685.58±165.36$^{e.}$
	Crossbred cattle	46	3594.56±148.13^{b}	75.60±0.35$^{d.}$	457.11±5.33$^{d.}$	243.82±9.35$^{bc.}$	262.11±8.74$^{a.}$	1.47±0.09$^{a.}$	11194.35±123.81$^{b.}$
	Buffaloes	161	3225.24±85.07$^{c.}$	76.88±0.21$^{c.}$	428.85±2.59$^{e.}$	229.09±6.06$^{cd.}$	225.06±4.41$^{b.}$	1.21±0.04$^{b.}$	9203.97±63.30$^{f.}$
	Total	244	3235.61±67.08^{C}	76.11±0.21^{B}	429.57±2.36^{C}	228.60±4.63^{C}	228.43±3.73^{A}	1.24±0.03^{A}	9621.89±72.81^{C}
Monofyia	Balady	31	3636.05±150.17^{b}	74.16±0.45$^{e.}$	424.29±8.70$^{e.}$	224.87±8.70$^{d.}$	179.87±9.68$^{d.}$	0.80±0.07$^{d.}$	10158.45±243.97$^{cd.}$
	Crossbred cattle	124	4558.88±112.59^{a}	74.27±80.23$^{e.}$	516.42±2.8$^{a.}$	269.62±6.75$^{a.}$	227.11±3.15$^{b.}$	0.80±0.02$^{d.}$	12039.68±75.59$^{a.}$
	Buffaloes	52	4410.20±59.27$^{a.}$	74.15±0.34$^{e.}$	472.38±3.52$^{c.}$	258.46±2.93$^{ab.}$	234.88±3.44$^{b.}$	1.01±0.03$^{c.}$	11337.23±84.42$^{b.}$
	Total	207	4383.33±75.55^{A}	74.22±0.18^{C}	491.56±3.38^{A}	260.11±4.42^{A}	221.99±2.81^{C}	0.85±0.02^{C}	11581.49±77.01^{A}

Values (Me ± S.E) capital litters and small litters: Indicated that means within the same column of different breeds among different localities are significantly different at ($P < 0.05$)

This is due to long fattening period of crossbred cattle in Monofyia and more consumption of feed. The differences in amount of feed consumed from breed to another and from locality to another were attributed to the differences in fattening animal requirements from breed to another and differences in length of fattening period. The above mentioned results agreed with Mandour [20] who reported that, the amount of ration consumed differed from breed to another so feed cost differed from breed to another and agreed with Gong et al. [17] who found that, differences in feed costs resulted from the different lengths of feeding period and type of feed.

The higher value of total veterinary management cost was found in buffaloes in Kaliobyia (92.29 LE per cycle) while lower value of total veterinary management cost was found in balady breed cattle in Giza (73.97 LE per cycle). This is due to long fattening period of buffaloes in Kaliobyia than balady cattle in Giza. These results agreed with Attallah [4] and Powell et al. [26] who said that veterinary costs differed significantly ($P<0.05$) among farms due to the differences in farmer's experiences,

veterinary supervision, climatic conditions and diseases incidence.

The longest fattening period for animal was found in crossbred cattle in Balady breed cattle in Giza (206.94 day). These results were in agreement with Yavuz [32] who said that, fattening period can be ranged from 90 to as long as 300 days depending on weight at placement, feeding conditions, and desired finishing weight. However, disagreed with Müftüoğlu et al. [23] who reported that, fattening period ranged from 105-135 day according to age of fattening animal.

The highest absolute weight gain for animal was found in crossbred cattle in Giza (262.11Kg per cycle) while lowest absolute weight gain for animal was found in balady breed cattle in Kaliobyia (178.93 Kg per cycle). These results illustrate that growth rate of crossbred calves was higher than balady calves and due to breed difference that agreed with Thonney [30] who said that crossbred animals grow faster, mature at earlier age and more efficient convertor of feed to meat than native breeds.

The highest daily weight gain for animal was found in crossbred cattle in Giza (1.47 Kg per day) while the lowest daily weight gain for animal was found in balady breed cattle in Monofyia (0.80 Kg per day). These results were in agreement with Bozkurt [6] who said that there were significant (P<0.05) differences among breed types during fattening performance and daily live weight gain. Also these results agreed with ADG of balady cattle ranged from 0.6 to 1.23kg/day, this difference in ADG was most probably due differences in the age, feeding and managerial practice [12] and [11].

The highest selling weight for animal was found in crossbred cattle in Monofyia (516.42Kg) while the lowest selling weight for animal was found in Balady breed cattle in Giza (397.58 Kg). This is due to higher weight of purchased animal. These results were in agreement with Karakök and Özkütük, [18] and Garip et al. [16] who found that the greater profit may be made by breeders if calves enter the feedlot at age of 10-12 months and were fattened for a period of 6-8 months to a live weight of 500-550 kg. But this result disagreed with Oishi et al. [24] who ended fattening period at 714 kg.

The highest value for animal sale price was found in crossbred cattle in Kaliobyia (12054.16 LE) while lowest value for animal sale was found in buffaloes in Giza (9203.97 LE). These results agreed with Tewodros [29] who stated that cattle prices varies among seasons and he found that the major reasons for the cattle price variation were due to the seasonal feed. Also these results agreed with Gong et al. [17] who said that longer fattening period lead to a higher price of buying and selling cattle.

2. Effect of different types of fattening animals among different localities on total returns, total variable costs and net returns/ LE:

Table (2) showed the significant effect (P<0.05) of different types of fattening animals among localities on total returns, total variable costs, total costs and net returns/ LE.

The highest value for total return was found in crossbred cattle in Monofyia (12079.66 LE) while the lowest value for total return was found in buffaloes in Giza (9244.00 LE). These results were in agreement with Fidan [15] who reported that returns of beef production "LE" come from summation of value of fattened animals sales plus value of manure sale) and the return from manure sales is calculated by multiplying total amount of manure/ m^3 excreted by its price. Also these results agreed with Omar [24] and Şahin et al. [27] who reported that total returns had a higher significant difference (P< 0.01) from one breed to another.

The highest value for total variable costs was found in crossbred cattle in Monofyia (11033.98LE) while the lowest value for total variable costs was found in buffaloes in Giza (8000.40 LE). These results agreed with those of Attallah [4] and Toro et al. [31] who mentioned that, total variable costs are the costs that change directly with the level of output produced and also change from time to time, place to place and management to another. The highest value for total costs was found in crossbred cattle in Monofyia (11055.58LE) while the lowest value for total costs was found in buffaloes in Giza (8022.20 LE). This is due to that total costs equal total fixed costs plus total variable costs and total variable costs were higher in crossbred cattle in Monofyia than buffaloes in Giza and it constitutes a large proportion. These results agreed with El-Tahawy [13] who revealed that, the total costs differed significantly from breed to another breed.

Table (2): Effect of different types of fattening animals among localities on total returns, total variable costs, total costs and net returns (LE)

Locality	Types of fattening animals	**N**	Total return	Total variable costs	Total costs	Net returns
Kaliobyia	Balady	46	9548.98±459.98$^{d.}$	8695.24±117.59$^{d.}$	8716.72±295.88$^{d.}$	832.25±142.24$^{f.}$
	Crossbred cattle	174	11955.44±154.09$^{a.}$	9762.78±58.24$^{b.}$	9784.28±72.58$^{b.}$	2171.16±82.73$^{a.}$
	Buffaloes	173	10374.95±78.02$^{c.}$	8981.81±64.20$^{d.}$	9003.18±82.51$^{d.}$	1371.76±59.74$^{cd.}$
	Total	393	10893.21±105.44^{B}	9336.23±45.08^{B}	9357.68±63.25^{B}	1535.53±53.85^{A}
El Giza	Balady	37	9625.43±165.35$^{d.}$	8676.44±111.15$^{d.}$	8698.82±111.19$^{d.}$	926.60±111.73$^{ef.}$
	Crossbred cattle	46	11234.41±123.85$^{b.}$	9401.55±141.59$^{c.}$	9423.92±141.59$^{c.}$	1810.49±115.04$^{b.}$
	Buffaloes	161	9244.00±63.32$^{d.}$	8000.40±63.62$^{e.}$	8022.20±63.61$^{e.}$	1221.80±40.57$^{de.}$
	Total	244	9661.85±72.82^{C}	8367.07±63.31^{C}	8389.06±63.32^{C}	1272.80±42.08^{B}
Monofyia	Balady	31	10198.32±243.98$^{c.}$	9687.11±174.12$^{bc.}$	9708.11±174.15$^{bc.}$	490.20±227.24$^{g.}$
	Crossbred cattle	124	12079.66±75.59$^{a.}$	11033.98±115.45$^{a.}$	11055.58±115.46$^{a.}$	1024.08±135.75$^{ef.}$
	Buffaloes	52	11377.09±84.40$^{b.}$	9709.35±101.83$^{bc.}$	9731.14±101.86$^{bc.}$	1645.95±108.49$^{bc.}$
	Total	207	11621.43±77.01^{A}	10499.52±90.04^{A}	10521.08±90.04^{A}	1100.34±95.15^{C}

Values (M ± S.E) capital litters and small litters: Indicated that means within the same column of different breeds among different localities are significantly different at ($P < 0.05$)

The highest value for net return was found in crossbred cattle in Kaliobyia (2171.16 LE) while lowest value for net return was found in balady breed cattle in Monofyia (490.20 LE). These results agreed with Langemeier et al. [19] who reported that differences in profits per fattening animal were related to differences in feed costs, interest costs, death losses, feed conversions, average daily gains, feeder prices and sale prices. Also these results agreed with net profits are significantly different ($P < 0.01$) for breeds as reported by Omar [25] and Şahin et al. [28]. Also these results agreed with Maria [22] who indicated that, profit comes from the growth of the animals, efficiency of live weight gain and improved carcass value relative to the cost of feed and other inputs.

3. Effect of different types of fattening animals among different localities on Total return/ Total cost, Feed cost / Total cost, Feed cost/ Total variable cost, Net return/

Table (3): Effect of different types of fattening animals among localities on Total return/Total cost, Feed cost / Total cost, Feed cost/ Total variable cost, Net return/ Total return, Net return/ Total variable costs and Net return / Total costs

Locality	Types of fattening animals	N	Total return/ Total cost	eed cost / Total cost	Feed cost/ Total variable cost	et return/ Total return	et return / Total variable costs	et return / Total costs
Kaliobyia	Balady	46	106.11±1.31$^{e.}$	30.40±1.46$^{f.}$	30.48±1.46$^{f.}$	7.85±1.12$^{f.}$	5.52±1.80$^{e.}$	6.10±1.71$^{e.}$
	Crossbred cattle	174	121.35±0.57$^{a.}$	35.66±0.44$^{e.}$	35.74±0.44$^{e.}$	18.21±0.39$^{a.}$	21.39±0.92$^{a.}$	21.35±0.89$^{a.}$
	Buffaloes	173	115.70±0.76$^{c.}$	38.20±0.39$^{cd.}$	38.29±0.39$^{cd.}$	13.11±0.55$^{c.}$	15.65±0.92$^{c.}$	15.70±0.90$^{c.}$
	Total	393	118.20±0.51^{A}	36.13±0.33^{C}	36.21±0.33^{C}	14.78±0.37^{A}	17.01±0.76^{A}	17.08±0.72^{A}
El Giza	Balady	37	110.74±1.32$^{d.}$	31.51±1.17^{f}	31.59±1.17$^{f.}$	9.22±1.13$^{d.}$	10.77±1.32$^{d.}$	10.74±1.32$^{d.}$
	Crossbred cattle	46	19.88±1.43$^{ab.}$	37.71±1.13$^{cde.}$	37.80±1.14$^{cde.}$	16.06±0.99$^{b.}$	19.93±1.44$^{ab.}$	19.88±1.43$^{ab.}$
	Buffaloes	161	115.60±0.58$^{c.}$	9.78±0.88$^{bc.}$	39.89±0.89$^{bc.}$	3.16±0.43^{c}	5.65±0.58$^{c.}$	15.60±0.58$^{c.}$
	Total	244	115.67±0.53^{B}	38.14±0.67^{B}	38.24±0.67^{B}	13.11±0.40^{B}	15.72±0.54^{B}	15.67±0.53^{B}
Monofyia	Balady	31	105.50±2.41$^{e.}$	37.15±1.16$^{de.}$	37.23±1.16$^{de.}$	3.76±2.12$^{g.}$	5.52±2.41$^{e.}$	5.50±2.4$^{e.}$
	Crossbred cattle	124	110.44±1.15$^{d.}$	40.83±0.55$^{b.}$	40.91±0.55$^{b.}$	8.05±1.14$^{e.}$	10.46±1.15$^{d.}$	10.44±1.15$^{d.}$
	Buffaloes	52	17.43±1.29$^{bc.}$	45.41±0.58$^{a.}$	45.51±0.58$^{a.}$	14.33±0.92$^{c.}$	17.47±1.29$^{bc.}$	17.43±1.29$^{bc.}$
	Total	207	111.46±0.88^{C}	41.43±0.44^{A}	41.52±0.44^{A}	8.99±0.82^{C}	11.48±0.88^{C}	11.46±0.88^{C}

Values (Me ± S.E) capital litters and small litters: Indicated that means within the same column of different breeds among different localities are significantly different at (P<0.05)

Total return, Net return/Total variable costs and Net return / total costs (%):

Results in Table (3) explained the significant effect (P<0.05) of different types of fattening animals among localities on Total return/ Total cost, Feed cost/Total cost, Feed cost/ Total variable cost, Net return/ Total return, Net return / Total variable costs and Net return / Total costs.

The highest percentage for total return/total cost was found in crossbred cattle in Kaliobyia (121.35%) while lowest percentage for total return/total cost was found in balady breed cattle in Monofyia (105.50 %). These results agreed with Şahin et al. [27] who reported, total return/total cost are highly significantly different (P<0.01) from one breed to another.

The highest percentage for feed cost/ total variable cost was found in buffaloes in Monofyia (45.51 %) while the lowest value for feed cost/ total variable cost was found in balady breed cattle in Kaliobyia (30.48 %). While the highest percentage for feed cost/ total cost was found in buffaloes in Monofyia (45.41 %) while the lowest percentage for feed cost/ total cost was found in balady breed cattle in Kaliobyia (30.40%). These results were due to difference in localities, feed types, animal's age and seasonal variation. These results agreed with Maria [21] who said that feed is the key to profitable cattle rising and animal raiser must formulate feeds based on his animal's age, desired weight gain and moisture content of available feeds. Also these results agreed with Belay [5] who mentioned that cattle fattening was time bounded activity considering the available resources like feed, labor and demand of the market and stated that the annual feed supply varied both in quantity and quality so value for feed cost/ total variable cost

and value for feed cost/ total cost differ from breed to another.

The percentage for net return /total return was found higher in crossbred cattle in Kaliobyia (18.21 %) while percentage for net return /total return was found lowest in balady breed cattle in Monofyia (3.76%). These results were due to difference in net return and total returns from breed to another breed. These results agreed with Şahin et al. [27] and Mostafa [22] who said that, net return /total return are significantly different (P<0.01) from breed to another breed

The highest percentage for net return/total variable costs was found in crossbred cattle in Kaliobyia (21.39%) while the lowest percentage for net return/total variable costs was found in balady breed cattle in Monofyia (5.52%). This is due to breed difference and difference in localities, feed types, weight of animal at purchase, feed costs and veterinary management cost. These results agreed with Omar [25] who reported that net return/total variable costs are significantly different (P<0.01) from breed to another.

The highest percentage for net return/total costs was found in crossbred cattle in Kaliobyia (21.35%) while the lowest percentage for net return/total costs was found in balady breed cattle in Monofyia (5.50 %). These results were in accordance with Mostafa [22] who said that net return/total costs are significantly different (P< 0.01) from breed to another.

4. Costs of kilogram beef from total veterinary management costs, Total veterinary management costs/Total costs and Total veterinary management costs/Total variable costs:

Results in table (4) explained partial efficiency measures (Piaster) and costs of kilogram beef from total veterinary management costs which differed significantly at (P<0.05) among types of fattening animals of different localities on beef cattle. The highest value for costs of kilogram beef from total veterinary management costs was found in balady breed cattle in Kaliobyia (22.30 Piaster) while the lowest value for cost of kilogram beef from total veterinary management costs was found crossbred cattle in Monofyia (14.45Piaster). These results agreed with Atallah [4] and Omar [25] who said that, medication, vaccination, disinfections and veterinary supervision costs (veterinary costs) differed significantly (P<0.05) among farms due to the differences in farmer's experiences, veterinary supervision, climatic conditions, diseases incidence and seasons. The highest percentage for total veterinary management cost to total costs was found in balady breed cattle in Kaliobyia (4.53%) while the lowest percentage for total veterinary management cost to total costs was found in crossbred cattle in Monofyia (0.67%). And the highest percentage for total veterinary management cost to total variable costs was found in balady breed cattle in Kaliobyia (5.30%) while the lowest percentage for total veterinary management to total variable costs was found in crossbred cattle in Monofyia (0.68%).These results were in accordance with Atallah [4] and Demircan et al. [9] who said total veterinary management to total variable costs differ significantly from breed to another.

Table 4: Effect of different types of fattening animals among different localities on Costs of kilogram beef from total veterinary management costs, Total veterinary management costs/Total costs and Total veterinary management costs/Total variable costs

Locality	Types of fattening animals	N	Costs of kilogram beef from total veterinary management costs	Total veterinary management costs/Total costs	Total veterinary management costs/Total variable costs
Kaliobyia	Balady	46	22.30±0.21 [a.]	4.53±0.64 [a.]	5.30±0.86 [a.]
	Crossbred cattle	174	19.08±0.11 [a.]	0.94±0.33 [b.]	0.95±0.01 [b.]
	Buffaloes	173	19.32±0.10 [a]	1.36±0.31 [b.]	1.60±0.60 [b.]
	Total	393	19.55±0.09 [A]	1.55±0.33 [A]	1.74±0.44 [A]
El-Giza	Balady	37	18.71±0.23 [a.]	0.84±0.72 [b.]	0.85±0.01 [b.]
	Crossbred cattle	46	16.61±0.21 [a.]	0.80±0.65 [b.]	0.81±0.01 [b.]
	Buffaloes	161	18.02±0.11 [a.]	0.96±0.34 [b.]	0.97±0.01 [b.]
	Total	244	15.27±0.08 [B]	0.91±0.01 [B]	0.92±0.01 [B]
Monofyia	Balady	31	17.75 ±0.26 [a.]	0.76±0.78 [b.]	0.77±0.01 [b.]
	Crossbred cattle	124	14.45±0.13 [a.]	0.67±0.39 [b.]	0.68±0.01 [b.]
	Buffaloes	52	15.74±0.19 [a.]	0.68±0.60 [b.]	0.77±0.01 [b.]
	Total	207	15.27±0.17 [B]	0.71±0.01 [C]	0.72±0.01 [C]

Values (Mean ± SE) capital litters and small litters: Indicated that means within the same column of different breeds among different localities are significantly different at ($P < 0.05$)

The present results concluded that, the main factors affecting beef production and economic efficiency of beef production farms were feeding types and costs, veterinary management and its costs, fattening period, price of fattening animal, as well as other fixed and variable costs. Also this study conclude that the most important animal of high profitability for fattening are crossbred cattle in Kaliobyia, crossbred cattle in Giza and buffaloes calves in Monofyia as the net profit from them were 2171.16, 1810.49 and 1645.95 LE/head and the total return/total costs for them were 121.35, 119.88 and 117.43, respectively.

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مجلة بنها للعلوم الطبية البيطرية
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بعض العوامل المؤثرة على أربحية ماشية إنتاج اللحم تحت الظروف المصرية

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الملخص العربي

هدفت هذه الدراسة إلى تسليط الضوء على أهم العوامل التي تؤثر على الكفاءة الاقتصادية و الإنتاجية لمزارع ماشية إنتاج اللحم في مصر، وقد أجريت الدراسة في الفترة من 2010 حتى نهاية 2012 على البيانات التي تم تجميعها من عينات عشوائية من قطاعات مختلفة لمزارع ماشيه إنتاج اللحم والتي تشمل المزارع الحكومية والخاصة والفلاحين ، والتي تقع في محافظات القليوبية والجيزة و المنوفية على البيانات التي تم جمعها لسلالات الأبقار البلدي والأبقار الخليط والجاموس. وقد تم جمع البيانات من السجلات المتاحة في مزارع إنتاج اللحوم ومن خلال طريقة الاستبيان للمزارع ومن خلال الأسئلة لأصحاب المزارع والمربين. ومن خلال هذه الدراسة نستخلص أن العوامل الرئيسية المؤثرة على الكفاءة الانتاجيه والاقتصادية لمزارع ماشية إنتاج اللحم وهي : نوعية الأكل وتكلفته والرعاية البيطرية وتكلفتها وفترة التسمين وسعر الحيوان ، كما تتضمن التكاليف الثابتة والمتغيرة ، وأظهرت النتائج أيضا أن أفضل سلاله للتسمين من حيث أعلى أربحية هي السلالة الخليط في الابقار وذلك في محافظة القليوبية ونفس السلالة أيضا في محافظة الجيزة و الجاموس في محافظة المنوفية حيث ان صافي الربح لهم على التوالي 2171.16 و 1810.49 و1645.95 جنيها مصريا والنسبه بين العائد الكلي والتكاليف الكليه كانت لهم ايضا على التوالي 121.35 و 119.88 و 117.43.

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