A Case Study for Livestock Farms in Dakahlia Governorate in The Arab Republic of Egypt (Season 2022-2023)

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***Abstract*:** This study evaluates the economic efficiency and productivity indicators—both comprehensive and partial—for initial farm capacities engaged in fattening livestock during the 2022–2023 agricultural season in Dakahlia Governorate, Egypt. The first analysis focuses on a farm at Sherbin Center, Al-Dahriya village, with an average capacity of 30 heads of cattle fattened over a six-month production cycle. Results indicate that the project yielded a 92% return on investment, enabling full loan repayment at its cost, and providing investors with an additional 72% profit in the event of financing via commercial bank loans. The second analysis examines a similar operation at Sherbin Center, fattening an average of 30 heads of buffalo over the same agricultural cycle. Findings demonstrate a 95% profit margin, with the ability to cover loan costs entirely and an additional 75% profit margin for investors utilizing bank financing. Third, the economic performance of a farm at Dekernes Center, Dimshalt village, fattening 24 heads of cattle under a six-month cycle, reveals a 91% profit rate. This covers loan liabilities, leaving investors with approximately 71% additional profit when bank loans are employed. Finally, analysis of a 24-head buffalo fattening operation at the same Dekernes location shows a 94% profit, with successful loan coverage and an extra 74% return for investors under loan financing conditions. These findings confirm robust economic viability and productivity across diversified livestock fattening operations in the region.
Keywords: Livestock fattening, economic efficiency, productivity, Dakahlia, agricultural farms.

I. INTRODUCTION

Livestock production constitutes a fundamental pillar of Egypt's agricultural sector, playing a significant role in ensuring food security and providing nutritional sustenance to the population. Additionally, the sector contributes to employment generation across various stages, including breeding, fattening, and marketing. However, data from the Central Agency for Public Mobilization and Statistics (CAPMAS) reveal a marked decline in livestock numbers, with the total headcount in Egypt dropping from 19.9 million in 2010 to 8.1 million in 2021. This concerning trend highlights the urgency of evaluating and enhancing the efficiency of livestock fattening farms, particularly in regions such as Dakahlia Governorate.

The present research aims to assess the economic efficiency of meat production farms in Dakahlia through a case study approach, with the objective of identifying the current operational status and formulating strategies to improve productivity.

Research Problem:

The core challenge addressed by this study lies in the suboptimal economic efficiency and productivity of cattle and buffalo fattening farms in Dakahlia Governorate. This inefficiency is attributed primarily to inadequate financial resources and the high proportion of underutilized capacity within these farms. Specifically, data indicate that during the 2022-2023 period, farms operated at only approximately 43.4% of their total capacity. Moreover, livestock producers face multiple production constraints that further hinder farm performance and economic viability.

Research Objectives:

This study aims to analyze the key indicators of comprehensive and partial economic efficiency and productivity of buffalo calf and cattle fattening farms within the sampled research area of Dakahlia Governorate during the 2022–2023 agricultural season. The overarching goal is to characterize the current status of these farms in terms of production and economic efficiency and to propose actionable recommendations for the development and enhancement of livestock fattening enterprises.

II. METHODOLOGY

This study employs a mixed-methods case study design to comprehensively analyze the economic efficiency of livestock fattening farms in Dakahlia Governorate.

Data Collection

1. Quantitative Data:

A structured questionnaire was administered to a randomly selected sample of 150 livestock fattening farms. The sample size was determined using Stevens Thompson's sampling formula to ensure statistical validity. The farms sampled represent varying production capacities. Data collected encompass parameters such as farm capacity, input costs, revenues, and profitability indicators.

2. Qualitative Data:

Semi-structured interviews were conducted with farm owners and managers to gain in-depth understanding of operational challenges and management practices. Additionally, direct observations were made during farm visits to contextualize quantitative findings.

Statistical Analysis

1. Descriptive Statistics:

Key economic variables were summarized using measures of central tendency (mean and median) and dispersion (standard deviation) to capture the overall performance trends among farms.

2. Comparative Analysis:

Independent sample t-tests were employed to assess statistically significant differences in economic performance between cattle and buffalo fattening enterprises.

3. Efficiency and Profitability Ratios:

Economic efficiency was further evaluated via key financial ratios, calculated as follows:

- Return on Investment (ROI):

ROI=(Net ProfitTotal Investment)×100 *ROI*=(Total InvestmentNet Profit)×100

- Profit Margin:

Profit Margin=(Net IncomeRevenue)×100 *ProfitMargin*=(RevenueNet Income)×100

These ratios provide clear measures of farm profitability and investment efficiency.

Qualitative Data Analysis

A thematic analysis approach was applied to interview transcripts to extract recurring themes related to operational challenges, resource constraints, and potential strategies for improving economic efficiency.

Expected Outcomes

- Identification of key economic efficiency indicators and socioeconomic determinants influencing livestock fattening performance.
- Development of evidence-based recommendations aimed at enhancing farm productivity and profitability.

Limitations

- The research is localized to Dakahlia Governorate, and therefore the findings may have limited generalizability to other regions.
- Reliance on self-reported data introduces potential risks related to data accuracy and respondent bias.

Ethical Considerations

All participants provided informed consent before data collection, with assurances of confidentiality and privacy throughout the study process.

III. RESULTS AND DISCUSSION

Economic Efficiency and Productivity Indicators for Fattening 30 Heads of Cows at Sherbin Center, Al-Dakahlia Village – Agricultural Season 2022-2023

Table 1 presents the key economic efficiency and productivity indicators for a livestock farm operating at an average capacity of 30 heads of cows over a six-month fattening cycle in Al-Dakahlia village during the 2022–2023 agricultural season. The results reveal an average production output of approximately 11.364 tons of live beef per farm per cycle, with a corresponding total sales revenue of about 154,310 EGP per ton.

The total production value for this cycle was estimated at 1,752,560 EGP, while the labor input averaged 33 man-days. Variable costs accounted for 853,080 EGP per ton, and fixed costs amounted to

around 60,000 EGP per ton. Consequently, the combined total costs stood at 913,080 EGP per ton per production cycle. Total revenues reached approximately 1,752,960 EGP per ton of beef.

Breaking down the costs further, average variable costs were 75,070 EGP per ton, average fixed costs were 5,280 EGP per ton, and average total costs summed to 80,350 EGP per ton of beef. The total gross margin for the cycle was approximately 899,880 EGP, yielding a margin of 79,240 EGP per ton.

Profitability analyses showed that the profit per ton of beef was about 75,960 EGP, with a producer incentive of 47.93%, indicating a strong motivation for investment. The product margin per unit was approximately 73,960 EGP per ton, and the return on each invested Egyptian Pound was estimated at 1.92 EGP, with a net profit of about 0.92 EGP per invested Pound per cycle.

Referring to the return on invested Pound criterion, the initial farm capacity fattening 30 heads of cows yields a net return of 0.92 EGP per invested Pound. Given that the interest rate on loans from commercial banks is approximately 20%, and from the Agricultural Bank of Egypt around 5%, the project demonstrates financial feasibility. Specifically, the farm's return on investment (ROI) of 92% sufficiently covers loan costs from both commercial and agricultural banks. Moreover, in scenarios of borrowing from commercial banks, investors could realize an additional profit of approximately 72%, whereas borrowing from the Agricultural Bank would yield even higher profits.

Discussion

These results clearly indicate that financing fattening farms with an initial capacity of 30 heads of cattle in Al-Dakahlia is economically viable and profitable. The project efficiently covers operational and financial costs, including loan interest, resulting in substantial profits for investors. Therefore, continued investment and support for such initiatives in the region are strongly justified based on the economic indicators observed.

Table No. (1) Indicators Of Economic Efficiency, Comprehensive And Partial Productivity For The Initial Farm Capacity To Fatten 30 Heads Of Cows On Average For a farm cycle of 6 months at The Sherbin center Al_Dahriya Village, For The Agricultural Season (2022-2023).

Discrimination	The Value Of Production Cycle	The Indicator Has Five Cycles Per Year	No.
Ton/Capacity	11.364	Average Farm Productivity	1
One Thousand Pounds/Ton	154.31	Unite Selling Price	2
One Thousand Pounds/Ton	1752.96	Production Value	3
Man/Day	3	Number Of Human Workers	4
One Thousand Pounds/Ton	853.08	Variable Costs (V.C.)	5
One Thousand Pounds/Ton	60	Fixed Costs (F.C)	6
One Thousand Pounds/Ton	913.08	Total Costs (T.C.)	7
One Thousand Pounds/Ton	1752.96	Total Revenue (T.R.)	8
One Thousand Pounds/Ton	75.07	Average Variable Costs (A.V.C)	9
One Thousand Pounds/Ton	5.28	Average Fixed Costs (A.F.C)	10
One Thousand Pounds/Ton	80.35	Average Total Costs (A.T.C)	11
One Thousand Pounds/Ton	899.88	Total Margin Production Cycle	12
One Thousand Pounds/Ton	79.24	Total Margin Per Ton	13

One Thousand Pounds/Ton	73.96	Profit Per Ton And Net Return Per unit	14
One Thousand Pounds/Ton	840.5	Net Farm Return	15
One Thousand Pounds/Ton	47.93	Product Incentive	16
%	73.96	Product Margin Per Unite	17
One Thousand Pounds/Ton	1.92	Return On Pound Spent	18
Pound	0.92	Earn The Pound Spent	19

Source: Collected And Calculated Using A Questionnaire From The Agricultural Season (2022-2023).

Secondary Indicators of Economic Efficiency and Productivity for Fattening 30 Heads of Buffalo at Sherbin Center, Al-Dakahlia Village — Agricultural Season 2022–2023

Table 2 presents the economic efficiency and comprehensive and partial productivity indicators for a farm with an average capacity of 30 heads of buffalo fattened over a six-month production cycle at Sherbin Center, Al-Dakahlia Village during the 2022–2023 agricultural season. The average farm productivity was approximately **11.49 tons** of live buffalo meat per farm cycle, with an average selling price of about **133,740 EGP per ton**.

The total production value for the cycle reached approximately **1,536,670 EGP**. Labor input averaged **3 man-days per day**. Variable costs were estimated at **724,410 EGP per ton**, while fixed costs accounted for approximately **65,000 EGP per ton**. Consequently, total costs per ton equaled around **789,410 EGP per cycle**. Total revenue per ton was approximately **1,536,670 EGP**.

Breaking down the costs, the average variable cost amounted to **63,050 EGP per ton**, and the average fixed cost was **5,660 EGP per ton**. Thus, the average total cost per ton was about **68,710 EGP**. The gross margin for the production cycle was approximately **812,260 EGP**, with a total margin per ton of **70,690 EGP**.

Profitability metrics demonstrated that the profit per ton of buffalo meat was approximately **741,260 EGP**, accompanied by a producer incentive level of **48.62%**. The product margin per unit was about **65,040 EGP per ton**. Return on investment analysis revealed a return of **1.95 EGP per Egyptian Pound invested**, corresponding to a net profit of approximately **0.95 EGP per invested Pound per cycle**.

According to the return on invested Pound criterion, every Pound spent in fattening 30 heads of buffalo generates a net return of **0.95 EGP per cycle**. Considering the loan interest rates of 20% from commercial banks and 5% from the Agricultural Bank of Egypt, the project achieves a **95% profit on the investor's capital**, covering loan costs regardless of the financing source. Moreover, when borrowing from commercial banks, investors realize an additional profit margin of approximately **75%**.

These findings clearly demonstrate that fattening buffalo on farms with an initial capacity of 30 heads in Al-Dakahlia is economically viable and profitable. The project successfully covers operating costs and loan servicing obligations, resulting in substantial financial returns for investors. Thus, based on these results, continued investment and support for such buffalo fattening operations is recommended.

Table No.(2) Indicators Of Economic Efficiency Comprehensive And Partial Productivity For The Initial Farm Capacity To Fatten 30 Heads Of Bufffalo On Average for a farm cycle of 6 months at The Sherbin center Al_Dahriya village , For The Agricultural Season (2022-2023) .

Discrimination	The Value Of Production Cycle	The Indicator Has Five Cycles Per Year	No
Ton/ Capacity	11.49	Average Farm Productivity	1
One Thousand Pounds/Ton	133.74	Unite Selling Price	2
One Thousand Pounds/Ton	1537.67	Production Value	3

Man/Day	3	Number Of Human Workers	4
One Thousand Pounds/Ton	724.41	Variable Costs (V.C.)	5
One Thousand Pounds/Ton	65	Fixed Costs (F.C)	6
One Thousand Pounds /Ton	789.41	Total Costs (T.C.)	7
One Thousand Pounds /Ton	1536.67	Total Revenue (T.R.)	8
One Thousand Pounds /Ton	63.05	Average Variable Costs (A.V.C)	9
One Thousand Pounds /Ton	5.66	Average Fixed Costs (A.F.C)	10
One Thousand Pounds /Ton	68.71	Average Total Costs (A.T.C)	11
One Thousand Pounds /Ton	812.26	Total Margin Production Cycle	12
One Thousand Pounds /Ton	70.69	Total Margin Per Ton	13
One Thousand Pounds/Ton	65.03	Profit Per Ton And Net Return Perunit	14
One Thousand Pounds/Ton	747.26	Net Farm Return	15
%	48.62	Product Incentive	16
One Thousand Pounds/Ton	65.04	Product Margin Per Unite	17
Pound	1.95	Return On Pound Spent	18
Pound	95	Earn The Pound Spent	19

Source: Collected And Calculated Using A Questionnaire From The Agricultural Season (2022-2023).

Thirdly, Economic Efficiency and Productivity Indicators for Fattening 24 Heads of Cows at Dekernes Center, Dimashalt Village — Agricultural Season 2022–2023

Table 3 summarizes the economic efficiency and both comprehensive and partial productivity indicators for a farm with an average capacity of 24 heads of cows over a six-month fattening cycle at Dekernes Center, Dimashalt Village, during the 2022–2023 agricultural season. The average farm productivity was approximately **9.34 tons** of live beef per cycle, with an average selling price of around **140,000 EGP per ton**.

The total production value for the cycle was approximately **1,307,090 EGP**. Labor input averaged **3 man-days per day**. Variable costs were estimated at **644,228 EGP per ton**, while fixed costs were approximately **41,000 EGP per ton**. Thus, total costs amounted to about **685,228 EGP per ton** per production cycle. Total revenue per ton stood at roughly **1,307,060 EGP**.

Breaking down the costs further, average variable costs were **68,980 EGP per ton**, and average fixed costs were **4,390 EGP per ton**. Accordingly, the average total cost per ton was **73,370 EGP**. The total gross margin for the production cycle was approximately **663,370 EGP**, yielding a total margin of about **71,000 EGP per ton**.

Profitability indicators showed that the profit per ton of beef was approximately **66,630 EGP**, with a producer incentive level of **47.59%**, reflecting a strong motivation for investment. The product margin per unit was estimated at **66,640 EGP per ton**. Return on investment analysis indicated a return of **1.91 EGP per Egyptian Pound invested**, with a net profit of about **0.91 EGP per invested Pound per cycle**.

According to the return on invested Pound criterion, every Pound invested in fattening 24 heads of cows generates a net return of **0.91 EGP per cycle**. Considering loan interest rates of 20% from commercial banks and 5% from the Agricultural Bank of Egypt, the project achieves a **91% profit on**

the invested capital, adequately covering loan costs regardless of the financing source. Additionally, when financing is obtained from commercial banks, investors realize an additional profit margin of approximately **71%**.

These results demonstrate that fattening 24 heads of cows at Dekernes Center is economically feasible and profitable. The project effectively covers operational expenses and loan obligations, yielding substantial financial returns for investors. Therefore, continuation and possible expansion of such projects in the region are recommended based on this strong economic performance.

Table No.(3) Indicators Of Economic Efficiency Comprehensive And Partial Productivity For The Second Farm Capacity To Fatten 24 Heads Of Cows On Average for a farm Cycle of 6 months At The Dekernis Center, Dimshalt Village for The Agricultural Season (2022_2023)

Discrimination	The Value Of Production Cycle	The Indicator Has Five Cycles Per Year	No
Ton/ Capacity	9.34	Average Farm Productivity	1
One Thousand Pounds/Ton	140	Unite Selling Price	2
One Thousand Pounds/Ton	1307.6	Production Value	3
Man/Day	3	Number Of Human Workers	4
One Thousand Pounds/Ton	644.228	Variable Costs (V.C.)	5
One Thousand Pounds/Ton	41	Fixed Costs (F.C)	6
One Thousand Pounds /Ton	685.228	Total Costs (T.C.)	7
One Thousand Pounds /Ton	1307.6	Total Revenue (T.R.)	8
One Thousand Pounds/Ton	68.98	Average Variable Costs (A.V.C)	9
One Thousand Pounds /Ton	4.39	Average Fixed Costs (A.F.C)	10
One Thousand Pounds/Ton	73.37	Average Total Costs (A.T.C)	11
One Thousand Pounds /Ton	663.37	Total Margin Production Cycle	12
One Thousand Pounds/Ton	71.02	Total Margin Per Ton	13
One Thousand Pounds /Ton	66.63	Profit Per Ton And Net Return Per unit	14
One Thousand Pounds /Ton	622.37	Net Farm Return	15
One Thousand Pounds/Ton	47.59	Product Incentive	16
%	66.64	Product Margin Per Unite	17
Pound	1.91	Return On Pound Spent	18
Pound	0.91	Earn The Pound Spent	19

Source: Collected And Calculated Using A Questionnaire From The Agricultural Season (2022-2023).

Fourth, Economic Efficiency and Productivity Indicators for Fattening 24 Heads of Buffalo at Dimshalt Village, Dekernes Center — Agricultural Season 2022–2023

Table 4 displays the economic efficiency and comprehensive and partial productivity indicators for a farm with an average capacity of 24 heads of buffalo fattened over a six-month production cycle at Dekernes Center, Dimshalt Village, during the 2022–2023 agricultural season. The average farm

productivity was approximately **9.48 tons** of live buffalo meat per production cycle, with an average selling price of approximately **132,240 EGP per ton**.

The total value of production for the cycle reached about **1,253,640 EGP**. Labor input amounted to approximately **3 man-days per day**. Variable costs were estimated at **610,320 EGP per ton**, and fixed costs were roughly **37,000 EGP per ton**, resulting in total costs of approximately **647,320 EGP per ton**. The total revenue per ton of buffalo meat was approximately **1,253,640 EGP**.

Cost breakdowns indicated that average variable costs were about **64,380 EGP per ton**, with average fixed costs at **3,900 EGP per ton**. Therefore, the average total costs per ton amounted to approximately **68,280 EGP**. The total gross margin for the production cycle was approximately **643,320 EGP**, with a margin of around **67,860 EGP per ton**.

Profitability analysis showed the profit per ton of buffalo meat was approximately **63,960 EGP**, coupled with a producer incentive level of **48.37%**. The product margin per unit was estimated at **63,260 EGP per ton**. Return on investment analysis revealed a return of **0.94 EGP per Egyptian Pound invested**, indicating a net profit of about **0.94 EGP per invested Pound per cycle**.

Based on the return on invested Pound criterion, every Pound invested in fattening 24 heads of buffalo generates a net return of **0.94 EGP per cycle**. Given the loan interest rates of 20% from commercial banks and 5% from the Agricultural Bank of Egypt, this project achieves a **94% profit on invested capital**, sufficiently covering loan costs from either financing source. Additionally, financing through commercial banks yields an additional investor profit margin of approximately **74%**.

The results suggest that fattening 24 heads of buffalo at Dekernes Center, Dimshalt Village, is an economically viable and profitable undertaking. The project effectively covers both operational costs and loan servicing requirements, producing substantial financial returns for investors. Consequently, the continuation and expansion of such projects is recommended, given the clear economic success evidenced by the data.

Table No.(4) Indicators Of Economic Efficiency Comprehensive And Partial Productivity For The Second Farm Capacity To Fatten 24 Heads Of Buffalo On Average For A farm Cycle Of 6 Month At The Dekernis Center, Dimshalt Village For The Agricultural Season (2022-2023)

Discrimination	The Value Of Production Cycle	The Indicator Has Five Cycles Per Year	No
Ton/ Capacity	9.48	Average Farm Productivity	1
One Thousand Pounds/Ton	132.24	Unite Selling Price	2
One Thousand Pounds/Ton	1253.64	Production Value	3
Man/Day	3	Number Of Human Workers	4
One Thousand Pounds/Ton	610.32	Variable Costs (V.C.)	5
One Thousand Pounds/Ton	37	Fixed Costs (F.C)	6
One Thousand Pounds/Ton	647.32	Total Costs (T.C.)	7
One Thousand Pounds/Ton	1253.64	Total Revenue (T.R.)	8
One Thousand Pounds/Ton	64.38	Average Variable Costs (A.V.C)	9
One Thousand Pounds/Ton	3.9	Average Fixed Costs (A.F.C)	10
One Thousand Pounds/Ton	68.28	Average Total Costs (A.T.C)	11
One Thousand Pounds/Ton	643.32	Total Margin Production Cycle	12
One Thousand Pounds/Ton	67.86	Total Margin Per Ton	13

One Thousand Pounds /Ton	63.96	Profit Per Ton And Net Return Perunit	14
One Thousand Pounds /Ton	606.32	Net Farm Return	15
%	48.37	Product Incentive	16
One Thousand Pounds/Ton	63.96	Product Margin Per Unite	17
Pound	1.94	Return On Pound Spent	18
Pound	0.94	Earn The Pound Spent	19

Source: Collected And Calculated Using A Questionnaire From The Agricultural Season (2022-2023).

Comparative Analysis of Economic Efficiency Among Four Livestock Fattening Farm Capacities

A comparative evaluation of the four initial farm capacities studied reveals notable differences in economic efficiency and net returns per production cycle during the agricultural season 2022–2023:

- The farm fattening **30 heads of cows** at Sherbin Center, Al-Dahreia village, generated a net return of approximately **92 EGP per cycle**.
- The farm fattening **30 heads of buffalo** at Sherbin Center, Al-Dahreia village, achieved the highest net return of about **95 EGP per cycle**.
- The farm fattening **24 heads of cows** at Dekernes Center, Dimshalt village, produced a net return of approximately **91 EGP per cycle**.
- The farm fattening **24 heads of buffalo** at Dekernes Center, Dimshalt village, recorded a net return of around **94 EGP per cycle**.

From these results, the **best-performing farm capacity** is the 30-head buffalo fattening operation at Sherbin Center, delivering the highest net return of **95 EGP per cycle**, followed closely by the 24-head buffalo farm at Dekernes Center with **94 EGP per cycle**. The 30-head cow farm at Sherbin Center generated a return of **92 EGP per cycle**, while the 24-head cow fattening farm at Dekernes achieved **91 EGP per cycle**. Summarily, the returns per invested Egyptian Pound are: **95, 94, 92, and 91** respectively.

Recommendations

Based on the comparative analysis and research findings, the following recommendations are proposed to enhance the economic viability and productivity of livestock fattening farms in Dakahlia Governorate:

1. **Formation of Specialized Cooperatives:** Establish cooperative economic entities dedicated to buffalo fattening to enhance collective efficiency and market competitiveness.
2. **Utilization of Alternative Nutritional Feeds:** Promote the adoption of alternative feed sources with high nutritional value to optimize feed costs and animal growth rates.
3. **Creation of Support Funds:** Establish financial support mechanisms or funds targeting animal production projects, especially those focusing on Egyptian buffalo and cow fattening.
4. **Maximizing Production Capacity:** Encourage farms to utilize their total production capacity fully by increasing the number of fattening cycles per year rather than limiting to a single cycle.
5. **Enhanced Veterinary Care and Quarantine:** Prioritize veterinary care and quarantine measures to control and prevent epidemic diseases such as foot-and-mouth disease and lumpy skin disease.
6. **Securing Supply Chains for Feed and Veterinary Inputs:** Ensure consistent availability of fattening inputs—green fodder, dry feed, concentrated feeds—and veterinary supplies like medicines, vaccines, and serums to sustain healthy livestock production.

This comparative assessment supports a strategic focus on buffalo fattening farms as a priority for expansion, followed by cow fattening operations, to maximize profitability and sustainability within the region.

IV. References

1. Fikry, A. (2015). *Economic study of the production and marketing of red meat in the Arab Republic of Egypt* (PhD thesis). Department of Agricultural Economics, Faculty of Agriculture, Al-Azhar University.
2. Badawy, E. M., & others. (2016). The productive and economic efficiency of fattening farms of buffalo calves in Beheira Governorate. *Egyptian Journal of Agricultural Economics, 26*(1).
3. Zaater, O. M., & others. (2012). Economics of production of livestock fattening farms in Gharbia Governorate. *Egyptian Journal of Agricultural Economics, 22*(4).
4. Thompson, S. K. (2012). *Sampling* (3rd ed.). Simon Fraser University.
5. Metwally, Y. M. (2001). An economic study of meat in light of economic liberalization. *Egyptian Journal of Agricultural Economics, 11*(1).

V. Appendices

Table No.(1) In The Appendix The Number Of Licensed And Operating Lifestock Farms The Received Loons, The Total A annual Capacity Actual Production, And Idle Capacity During Season (2022-2023).

(Center)	Number of farms	Importance%	Total Energy Head	Importance%	The Actual Energy (Head)	Importance%	Broken Power(Head)	Importance%
Mit Ghamer	20	6.99	292	2.31	251	3.47	41	0.76
Age	17	5.94	1825	14.42	1098	15.16	727	13.43
Sinbellaween	10	3.6	1005	7.44	670	6.25	335	6.19
Mansoura	15	5.24	1491	11.78	845	11.67	646	11.94
Belqas	12	4.20	830	6.56	364	5.93	466	8.61
Tlkha	13	4.55	675	5.33	193	2.67	482	8.91
Sherbin	59	20.63	1725	13.63	1139	15.73	586	10.83
Dekernes	62	21.68	1878	14.84	1120	15.47	758	14.61
Mit Swead	11	3.85	445	3.52	220	3.04	225	4.16
Tami Al-Amdid	32	11.19	988	7.81	642	8.86	346	6.39
Manzala	18	6.25	625	4.94	422	5.83	203	3.75
Miniat Al-Nasr	17	5.94	875	6.91	270	3.84	597	11.03
Total	286	100	12654	100	7242	100	5412	10090
Average	24	-	1055	-	604	-		

Directorate Of Agricultural In Dakahlia Governorate , Department Of Records And Statistics, Season (2022-2023).