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Nebraska Roaster Production Prospectus

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NEBRASKA ROASTER PRODUCTION PROSPECTUS

by Earl W. Gleaves, T. E. Hartung,
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This publication deals with the prospects of developing a chicken roaster industry in Nebraska.

A chicken roaster is a broiler-type chicken grown to 5-7 lb. in weight and 14-16 weeks of age. About 2.7 to 3.5 lb. of feed are required to produce 1 lb. of roaster. They are successfully grown in flocks of 3,000-10,000 birds. One producer might raise one or more such flocks per year depending upon the facilities and help available.

An efficient roaster industry would involve a minimum of 200,000-300,000 birds with the service industry (hatchery, feed and processing) and flocks located in a relatively small cluster.

There is no commerical chicken roaster production in Nebraska now. However, there is a definite opportunity for such an industry and inquiries from interested product suppliers and potential producers have raised questions about this industry that need to be answered.

The purpose of this prospectus is to pursue some of these questions by discussing:

1. The opportunity for a chicken roaster industry in Nebraska.
2. The feasibility of chicken roaster production in Nebraska.
3. Potential for the roaster industry.
4. Nebraska's assets for roaster production.
5. Nebraska's liabilities for roaster production.
6. Budget and cash-flow for producing 15,000 roasters per year.
7. Suggested procedure for developing a roaster industry in the state.
8. Financing the roaster industry in Nebraska.

The Opportunity for a Chicken Roaster Industry in Nebraska

Nebraska has a local market for several hundred thousand roasters per year. There is no local production. Consequently, the roasters consumed in the state are shipped in from other areas. There is a need to give Nebraska's consumers the best poultry products that can be produced and this can best be accomplished by producing them in Nebraska.

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The state produces adequate quantities of high quality eggs, egg products, turkeys and turkey products to satisfy its own needs. The production efficiency of these products can be improved if their raw product and service suppliers are efficient.

These same suppliers could furnish the roaster input materials such as eggs, feed, medicants, housing and equipment. This would improve the efficiency, thereby improving the efficiency of the existing egg and turkey industries. Thus, there is a need for the roaster industry to help improve the efficiency of the egg and turkey industries in the state.

There is a real need to find related production for Nebraska's turkey processing industry. Turkey processing costs continue to increase each year. Operating costs are too high for present processing plants to exist without an increase in output. This creates an additional reason why a roaster industry is needed in Nebraska.

Chicken roasters can be successfully processed in turkey processing plants. Existing turkey plants could increase their output and reduce their overhead by processing chicken roasters. A roaster industry is needed to help hold an existing industry in the state.

Finally, Nebraska is making a concerted effort to attract new industry to the state. New industry will employ people and improve the economic activity and stability of the state. The roaster industry certainly fits the category of new industry and in addition is an industry that will undoubtedly be located in rural areas. A new roaster industry could help in rural area development.

The Feasibility of Chicken Roaster Production in Nebraska

A feasibility study, entitled "Feasibility of Specialty Poultry Production and Marketing in Nebraska," (E.C. 70-1425) by Earl W. Gleaves, T. E. Hartung, G. W. Froning and J. A. Ranson, indicates that under certain conditions, roaster production and marketing in Nebraska is feasible. A portion of the conclusion section of this report describes the conditions necessary for the success of a roaster industry in the state.

"The conditions are: (1) produce for a specific market and (2) producer must be a part of an organized production and marketing program with close supervision. Both males and females should be grown out as roasters.

"For a roaster industry to be successful in the state it will take someone or some organization to lead and direct it. The leader will need to establish markets, coordinate production and economic sources of chicks and feed for the producer and provide management skill and experience for the project. The producers might work through the project leader on a contract or independent basis depending upon the overall program.

"Independent producers may have difficulty purchasing all of the input materials efficiently, obtaining management skill and developing a market. However, a few producers may have access to these tools and if they do they can be quite successful; especially if they produce only enough birds to supply a nearby market."

The feasibility study indicated also that the greatest potential is for a roaster industry to develop around the Nebraska market. Even though developmental work is needed in the local market, it offers the starting potential for an industry. It was also mentioned that if a roaster industry actually develops, there is then a good potential for entry into the national market.

Nebraska has the capability to become competitive in roaster production. The state has the raw-product inputs at prices low enough to at least meet production costs of other production areas.

Potential for the Roaster Industry

Even though the potential size of a specialty poultry industry appears small in comparison to the turkey and egg industry in the state, it can develop into an industry of economic importance. The feasibility study mentioned earlier estimated a local Nebraska market for 300-500 thousand roasters per year.

Research work at Ohio State University a few years ago showed that $1.3 million in business was generated around 100,000 laying hens. Using a conservative estimate of half of this amount for 100,000 roasters, there would be $0.65 million in business generated.

The estimate of a potential local market for 300-500 thousand roasters could generate $1.95 to $3.25 million in business in the state.

An average carcass weight of 4.5 lb. times 300-500 thousand roasters could mean an added tonnage of 13.5 to 22.5 million pounds of product for the processing industry. This extra tonnage could decrease the processing costs for both the turkey and roaster industries. In addition, the existing processing plants could show a profit and stay in business.

A roaster industry in Nebraska could be valuable to the existing poultry industries and the state.

Nebraska's Assets for Roaster Production

The discussion thus far has suggested some of Nebraska's assets for roaster production. Other assets have not been mentioned.

A major plus-factor is the availability of all feed ingredients with nearly all of them being grown and processed in the state. Nebraska's production of corn and milo is much greater than the needs for livestock and poultry feeding. Meat and bone scraps, dehydrated alfalfa meal and soybean meal are produced and processed within the state. In addition to these raw products, there are adequate feed mixing facilities in the state that need new business.

Nebraska has land suited to poultry production. It has land producing low income when used for cropping or grazing but well suited for the construction site of roaster houses.

Roaster production can serve as an additional income enterprise. Farm units that might otherwise need to buy additional land or go out of business might be helped by a roaster industry.

The presence of two large turkey processing plants that can process roasters is a real resource. To take full advantage of this asset, roaster production should develop within a 100-mile radius of a processing plant. This will minimize trucking costs and shrinkage.

Another asset is Nebraska's industrious, intelligent people. Many of them are already familiar with good poultry husbandry. They might need additional training in roaster production but the people asset should not be overlooked.

Finally, because there is now no roaster industry in the state, a new industry can be built that will employ the most modern and most efficient production techniques.

Nebraska's Liabilities for Roaster Production

The greatest liability for roaster production in Nebraska is the lack of a developed market. The potential market is good but wholesalers and retailers in the state agree that a steady, reliable supply of a good quality product is needed to develop the market.

A second liability is the lack of an organized production industry. If a roaster industry is to develop in Nebraska it must first find leadership. The need for intensive management in roaster production is great. Roaster growers who are inexperienced, and most will be, need the *regular* guidance and assistance of "management experts" or trained servicemen.

If Nebraska's assets can be exploited and used to their fullest potential and the liabilities reduced, the roaster industry will develop and expand in the state. The assets and liabilities must be balanced or overbalanced toward the assets to obtain maximum profits. This is the key to what's ahead for roaster production in Nebraska.

Budget and Cash-Flow for Producing 15,000 Roasters Per Year

Investments needed in buildings and equipment and operating budgets are outlined:

1. To acquaint beginning roaster growers with expected costs and standards of efficiency.
2. To help potential growers appraise the roaster business contracts that may become available.
3. To help potential contractors develop the roaster business and contracts.

Roaster production units should be of sufficient size to achieve a high degree of efficiency, regarding the use of labor saving equipment and purchase and delivery of chicks and feed.

The minimum size for an efficient roaster production unit is about 5,000 birds per brood. Three broods can be grown with the same house and equipment each year. Therefore, a minimum production of 15,000 roasters in one year is recommended for new growers. This is assuming that a market has been developed to sell the birds at the best advantage.

Such a roaster production unit could be a desirable income enterprise for many diversified farms in Nebraska. It would fit in well with many beef and grain production enterprises. The production of 15,000 roasters in one year would amount to only a part-time enterprise on most family farms. It would probably take a 30,000-40,000 bird unit for a minimum full-time enterprise.

Investment in Building and Equipment

The average estimated costs of the building and equipment necessary to grow 5,000 and 15,000 roasters per year are given in Table 1.

Table 1. Estimated average costs of buildings and equipment necessary to grow 5,000 or 15,000 roasters per year.

	Number of roasters			
	5,000 Investment		15,000 Investment	
Item	Total	Per bird/yr.	Total	Per bird/yr.
Brooder and rearing house, allowing 2 sq. ft./bird at $1.75/sq. ft. (a 40' x 250' house)	$17,500	$3.50	$17,500	$1.17
Equipment—includes feeding at 2.5 linear in./bird, watering at .5 linear in./bird and brooding	6,000	1.20	6,000	.40
Total fixed investment	$23,500	$4.70	$23,500	$1.57

The 5,000 bird estimate is based on only one brood of birds per year. It is easily seen from the information in Table 1 that one flock per year is not practical. The costs are too high. The 15,000 bird estimate is based on using the same house and equipment three times each year.

A schedule of three 5,000-bird flocks per year allows 15 weeks for each flock with two weeks and two days for clean-out between flocks.

Floor-space requirements of 2 sq. ft. per bird are based on the space needs for the last few days of the growing period. Consequently, some economics of crowding might be practiced early in the growing period if straight-run birds are used.

The females will go to market at about 10 weeks, freeing up space for the males at the end. Under these conditions an extra 1,000-1,500 birds could be started in the 5,000-bird house.

If either 100% pullets or cockerels are started, then no more than 5,000 birds should be started in the house at one time. Four flocks of pullets could be raised each year. However, the market for light roasters is usually not as good as for heavy roasters.

Three flocks of cockerels are usually more profitable than four flocks of pullets.

Depreciation—Figures in Table 2 were based on a investment of $17,500 for the house and $6,000 for equipment. Accumulating depreciation charges will eventually allow the producer to get his money back from buildings and equipment. He can then spend it to rebuild or to expand the business in some other way. It is a legitimate cost of doing business and should not be overlooked.

The life of the building was assumed to be 15 years and the life of equipment 5 years. This is a fixed investment of $1.57 per bird per year capacity (15,000 birds) for house and equipment. The range in costs for these items in Nebraska will vary from $1.40 to $2 per bird.

Table 2. Budget for growing 15,000 roasters.

Item	Total flock	Per lb. of roaster
	dollars	cents
Expenses: Fixed		
Depreciation		
Building (6.67%)	1,167.25	1.37
Equipment (20%)	1,200.00	1.40
Interest on fixed investment at 8%	1,800.00	2.10
Total fixed expenses	4,167.25	4.87
Expenses: Variable		
Day-old chicks, straight-run, 15,000 at 21 cents	3,150.00	3.68
Fuel, electricity & water	534.00	0.62
Medication	300.00	0.35
Floor litter	150.00	0.18
Interest at 8%	1,050.00	1.23
Taxes	200.00	0.23
Feed[a] 145 tons at $75	10,875.00	12.72
Total variable expenses (except labor)	16,259.00	19.01
Total all expenses	20,426.25	23.88
Receipts:		
7,500 males—5% mortality = 7,125 males, wt. 8 lb. = 57,000 lb. at 15 weeks	15,960.00	28.00
7,500 females—5% mortality = 7,125 females, wt. 4 lb. = 28,500 lb. at 10 weeks	6,555.00	23.00
Total receipts	22,515.00	26.33
Net return to labor and management	2,088.75	2.44

[a]Feed conversion calculated at 3.30 for females and 3.50 for males.

Interest on investment—This is an important and proper part of the cost of production of any commodity. It represents the return or earning power of the capital invested, whether it is furnished by the operator or borrowed at an interest charge. For the operator free of debt, it becomes part of his farm income.

Eight percent, the current rate on long-term loans, was used in calculating values for Table 2.

Reducing fixed costs—Fixed costs can be reduced in this case by starting 1,000 to 1,500 extra chicks in each brood. The reasons this can be done were discussed earlier.

A total increase of 4,000 extra birds for the year would reduce the fixed costs from 4.87 cents per lb. of roaster to 3.81 cents per pound. A reduction of 1.06 cents per lb. in costs could easily mean the difference between a profit and a loss in some years.

However, crowding can be overdone and actually result in poor growth, poor feed conversion and no profit. Approach the idea of putting more birds in the house with caution.

Cash flow—It is vital to know where you stand in regard to money at all times in your poultry operation. A cash flow projection will provide this information.

The cash flow sheet in Table 3 is on a basis of 15,000 roasters, purchased at one day of age in three 5,000-bird flocks. The females are kept for 10 weeks and the males for 15. Return and cost values used in Table 2 were also used in Table 3. These figures show the high expense periods as well as income periods.

Table 3. Cash flow sheet for 15,000 roasters.

	Month					
Summary item	**1**	**2**	**3**	**4**	**5**	**6**
Birds in flock 1st of month	5,000	4,935	4,871	2,403		4,970
Production (lb. finished roaster)			9,500	19,000		
Receipts ($)						
Females			2,185			
Males				5,320		
Total to date			2,185	7,505		
Expenses ($)						
Variable						
Feed	347.81	931.88	1,207.50	1,135.31	173.89	1,105.76
Other	1,273.66	173.67	173.67	173.67	1,273.66	173.67
Fixed	347.27	347.27	347.27	347.27	347.27	347.27
Total outlays this period	1,968.74	1,452.82	1,728.44	1,656.25	1,794.82	1,626.70
Total outlays to date	1,968.74	3.421.56	5,150.00	6,806.25	8.601.07	10,227.77
Receipts over expenses to date				698.75		

Chicks—The cost of day-old straight-run broiler chicks, purchased in 5,000-bird lots, will vary from 18 to 21 cents in Nebraska. The 21-cent value used in Table 2 is on the high side of the range. This was done because special effort should be given to obtain broiler chicks that are especially adapted for roaster production and this may cost extra.

These prices are too high in comparison to broiler prices in the Southeastern United States and if a roaster industry develops, it should first find a source of chicks that can be purchased at a competitive price.

Feed—The cost of roaster feed will vary from $85 per ton for the starter to $65 per ton for the finisher. However, to make calculation easier an average cost of $75 per ton was used for the budget information.

The total feed needed to produce both sexes was considered in the budget. Feed conversion values of 3.3 lb. feed/lb. gain for pullets and 3.5 lb. feed/lb. gain for males were used in Table 2.

Other variable costs—Items such as floor litter, fuel, electricity, water and taxes will vary considerably depending on the locality and level of management.

Interest on operating capital was calculated on 90% of the total expense for the year at 8%.

Return to labor and management—A working operator with some help from his wife and family can do all of the work required for 15,000 roasters. The project should require less than a half-time equivalent for one man. If family labor is utilized, a good operator would need to spend less than a third or a fourth of the time caring for the roasters.

Table 3. Cash flow sheet for 15,000 roasters (con't.).

	Month					
Summary item	**7**	**8**	**9**	**10**	**11**	**12**
Birds in flock 1st of month	4,905	2,451	5,000	4,935	4,871	2,403
Production (lb. finished roaster)	9,500	19,000			9,500	19,000
Receipts ($)						
Females	2,185				2,185	
Males		5,320				5,320
Total to date	9,690	15,010			17,195	22,515
Expenses ($)						
Variable						
Feed	1,207.50	1,135.31	347.81	931.88	1,215.04	1,135.31
Other	173.67	173.67	1,273.65	173.67	173.67	173.67
Fixed	347.27	347.27	347.27	347.27	347.27	347.27
Total outlays this period	1,728.44	1,656.25	1,968.73	1,452.82	1,735.98	1,656.26
Total outlays to date	11,956.21	13,612.46	15,581.19	17,034.01	18,769.99	20,426.25
Receipts over expenses to date		1,397.54				2,088.75

The net returns to labor and management presented in Table 2 may be used to estimate hourly earnings for labor inputs. Earnings for capital inputs are already included in the budget. Management income can be computed by subtracting labor costs from net return to labor and management.

Cost and return variations—Costs and returns for a 15,000-roaster project will vary from manager to manager and from time to time.

Data presented in Tables 1-3 are a composite of the information gained from consultants and pilot studies conducted at the University of Nebraska and outstate (See E.C. 70-1425—Feasibility of Specialty Poultry Production and Marketing in Nebraska). This information should be realistic and practical, something that every producer has a chance to at least match. However, it will depend on the individual and the times.

Some factors that can drastically influence the outcome of such a project are:

1. Chick cost.
2. Feed cost.
3. Feed conversion.
4. Disease in the flock.
5. Mortality.
6. Incidence of breast blisters—a major problem in roaster production.
7. Size of the flock.
8. Number of groups per year.
9. Market value of finished product.

The key is to keep the first six variables as low as possible and the last three, especially the last one, as high as possible.

Suggested Procedure for Developing a Roaster Industry in the State

Service industry representatives such as hatcherymen, feed mixers, processors and bankers should meet and discuss the possibilities of developing a roaster industry in Nebraska. If it is decided that Nebraska will have a roaster industry, then several details need to be worked out.

Decide who will lead the industry. The contribution and extent of participation of each interested party should be decided.

It might be decided, for example, that a contract program is the best way to go and that a hatcheryman will supply and finance the chicks, a feedman will supply and finance the feed, a banker will supply the needed finances and the processor will process the birds and supply a market. The producer might supply growing facilities and labor. All parties would then receive a share of the returns from the project.

There is always the possibility that any one of the different segments of the poultry industry might decide to carry the whole program alone. This is a good alternative if the segment that decides to do this is adequately financed and has a staff of people who can handle such a project. There are companies in the state that could handle a small roaster industry if they decide to do so.

Individual producers can and may develop small roaster projects with small state-approved processing facilities and sell to their own local market. However, for the roaster industry to develop it will take many producers with a market outlet that will permit production to develop to the size that the industry can become efficient.

Regardless of how it is finally decided that the industry will be started, there are specific steps that much be taken:

1. A leader must come forward.
2. A market must be found and developed.
3. A financing program must be found and developed.
4. A production-processing complex must be developed.
5. Management and technological skills must be applied.
6. Production must be coordinated with a market.
7. Efficiency must be built into the new industry.

Financing the Roaster Industry in Nebraska

Contracts are one form of financing. They have already been discussed briefly. However, even if a contract program develops in the state, the contractors may need financing and all individuals may not be interested in the contract. Therefore, information on sources of money may be helpful to individual producers and contractors alike.

There are several sources of capital available to a poultry businessman. Sources of both long-term and short-term loans need to be used. Each source of capital should be considered and checked carefully. Length of the loan and interest rates must be in line with what the business can return.

Internal

1. Capital which has been previously set aside.
2. A poultry businessman contributing his own labor to the enterprise may delay some of the labor payments to himself and use this money for operating capital.

External

Few poultry businessmen are fully able to finance an expanded poultry enterprise from available internal capital. There are, however, several sources of finance available to him:

1. *Banks.* Banks vary widely throughout Nebraska in their willingness to provide financing for poultry production enterprises. When available, it usually is in the form of mortgages on fixed investment.

2. *Federal Land Bank Loans.* Money can be made available through Federal Land Bank Loans to purchase land, equipment and livestock. These loans may also be used to refinance existing mortgages, pay other debts, construct and repair buildings, improve farm and ranch lands and pay operating expenses.

Lending policies vary widely throughout the country and to date there has been very little of this money going into poultry operations in Nebraska. However, Federal Land Bank Loans are a popular source of money in some other states.

3. *Farmers Home Administration.* This is another agency of the Federal Government which has provided money for poultry operations. This agency has a flock size limit which may not permit expansion. However, it might be a source of money for someone wanting to get started.

4. *Production Credit Associations.* Production Credit Associations have financed several turkey operations in Nebraska and might be interested in financing roasters. These associations can be an excellent source of short-term loans but may consider longer term loans for financing facilities.

5. *Feed Companies.* Many feed companies provide credit as a service to their customers and to assure themselves of feed volume. This source of finance serves a real purpose but it must be recognized that if financing is secured elsewhere, cash discounts for feed should provide a real savings in feed cost.

6. *Equipment Companies.* Equipment companies have a large stake in the new fixed investments of a poultry enterprise and many will provide financing for the enterprise.

7. *Stock Corporation.* This is a relatively new method of financing poultry enterprises which is growing rapidly. Often nonfarm people with money to invest are interested in buying stock in a corporation where they can see a return on their money.