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EC67-1421 Nebraska Turkey Production Prospectus

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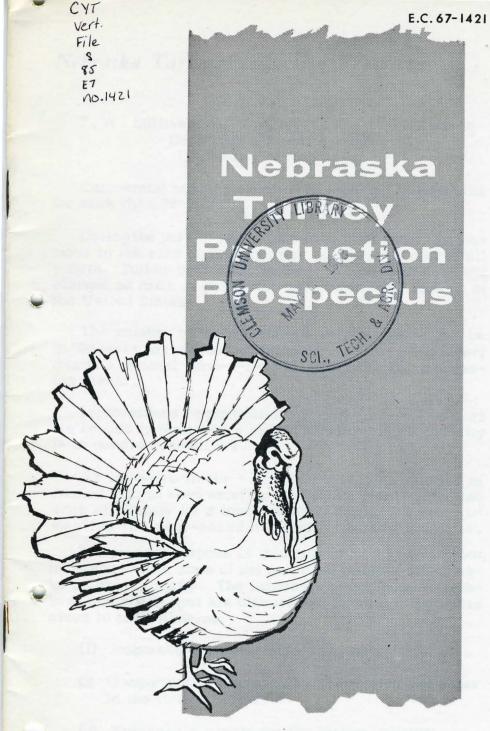
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UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE AND HOME ECONOMICS EXTENSION SERVICE

AND U, S. DEPARTMENT OF AGRICULTURE COOPERATING E. F. FROLIK, DEAN J. L. ADAMS, DIRECTOR

Nebraska Turkey Production Prospectus

by

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Commercial turkey production has existed in Nebraska for more than 25 years.

During the past 10 years there have been minor fluctuations in the size of this industry but little or no overall growth. Turkey production methods in Nebraska have not changed as much as production methods in other regions of the United States.

The number of turkey markets or processing plants in Nebraska has decreased during recent years. However, this is a national trend---fewer and larger turkey processing plants.

Improvements in production and marketing efficiencies are needed in Nebraska's turkey industry, if our industry is to remain competitive.

An increase in the number of turkeys produced is needed also to keep existing processing plants operating more efficiently for a longer season during the year and meeting the year-round demand for turkey products.

The primary purpose of this publication is to present facts and answer some of the questions relative to Nebras-ka's turkey industry. The industry's strong points, problems and challenges are discussed. Special attention is given to the following:

- (1) Nebraska's present turkey industry.
- (2) Comparison of Nebraska to other states and areas in the United States.
- (3) Nebraska's assets for the turkey industry.
- (4) Nebraska's liabilities for the turkey industry.

- (5) Budgets for producing 10,000 turkeys and 30,000 turkeys.
- (6) Sources of finance for expanded turkey production in Nebraska.

Nebraska's Present Turkey Industry

<u>Economic Importance</u> - Turkeys ranked 14th among 28 agricultural items that returned cash income to Nebraska in 1964. Gross income from the sale of turkeys in 1965 was \$4,972,000.

The average annual income from turkeys was \$4,663,000 during the past ten years.

Turkey production provides a market for Nebraska grown feed grains, protein supplements and other feed ingredients.

Approximately 46,000 tons of feed were consumed by turkeys produced and maintained in 1965. This feed was composed primarily of corn, grain sorghums (milo), soybean meal and dehydrated alfalfa meal which are all produced in Nebraska.

In addition, the turkey industry provides a market for labor, building materials, equipment, drugs and investment capital. Turkey processing firms supply jobs and add much to the economic value of the industry in the state.

Production of 100,000 turkeys in a given area will generate an estimated \$1 million of business activity. The number and farm value of turkeys produced in Nebraska and the United States from 1956 to 1966 are presented in Table 1.

<u>Size and Location</u> - Turkey production units were scattered throughout the state on approximately 590 individual farms in 1964. Farms reporting turkeys in Nebraska decreased from 1,076 in 1959 to 590 in 1964. This decrease is consistent with the national trend.

The average number of turkeys grown per farm in Nebraska was 1,930 in 1964. However, the major portion of

Table 1--The Number and Farm Value of Turkeys Produced in Nebraska and the United States 1956 to 1966¹

	Nebi	raska	United States		
Year	number	gross value	number	gross value	
1956	955,000	\$4,784,000	76,569,000	\$421,129,500	
1957	907,000	3,865,000	81,232,000	410,221,600	
1958	1,039,000	4,686,000	79,333,000	370,485,110	
1959	983,000	4,768,000	84,294,000	391,967,100	
1960	1,115,000	5,449,000	84,538,000	413,390,820	
1961	1,477,000	4,870,000	107,879,000	529,685,890	
1962	1,151,000	4,582,000	92,113,000	349,108,270	
1963	914,000	4,032,000	93,149,000	408,924,110	
1964	1,139,000	4,619,000	99,306,000	425,029,680	
1965	1,169,000	4,972,000	104,501,000	458,759,390	
1966	960,0002	NA	116,000,0002	NA	

 $^{^{1}}$ U.S. Department of Agriculture and Nebraska Agricultural Statistics. 2 Estimated

Nebraska's turkeys are grown on farms having 5,000 to 30,000 birds. The greater turkey concentrations are in the eastern and central areas, particularly in the south-central counties of the state.

During the past ten years an average of 1,085,000 turkeys were produced annually in Nebraska. The largest number produced in one year was 1,477,000 in 1961, and the smallest number was 907,000 in 1957 during this period.

Turkey production in the United States has increased 51.4% during the past ten years. A total of 76,569,000 turkeys were produced in 1956 as compared to an estimated 116,000,000 in 1966.

Preliminary reports indicate that 11 to 12% more turkeys were produced in 1966 than in 1965.

There have been no major shifts in turkey production from one region of the country to another during recent years. However, production has increased in the West North Central and South Central regions.

States that have shown rapid growth in turkey production during recent years include Minnesota, Wisconsin, Missouri, Arkansas and North Carolina.

NA - Not available

<u>Market Outlets</u> - The number of turkey processing plants in Nebraska has decreased in recent years.

Turkey processing plants at Beatrice, Central City, Oxford, Hastings, Grand Island, Crete, Tecumseh, Norfolk and Sioux City have stopped operation during the past 10 or 15 years. Most of these plants did not handle a large volume of turkeys; however, their presence did influence turkey marketing competition.

Nebraska still has ample marketing outlets or processing plants for turkeys. Figure 1 illustrates the location of these processing plants. Major commercial plants are at Falls City, Nebraska City and Gibbon. Preliminary reports indicate that each of these plants will kill and process at least 700,000 or more turkeys during 1966.

Smaller plants, family-owned and operated, are at Arlington and Lisco, Nebr.

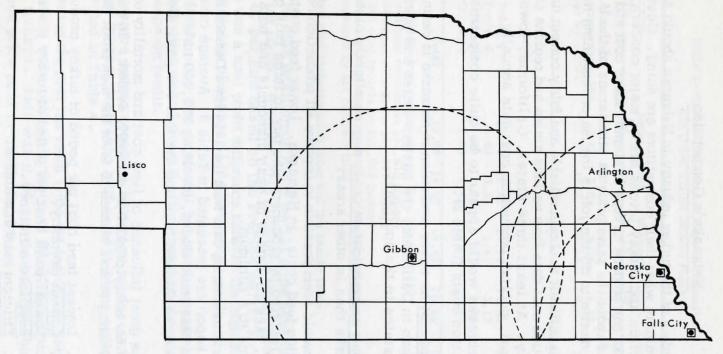
Local poultry processing plants that kill and dress a very small number of turkeys each fall are found at Omaha, Lincoln, Beatrice and other cities and towns throughout the state.

Many turkeys grown outside of Nebraska are purchased by our major processing plants at Falls City, Nebraska City and Gibbon. Each of these plants must lengthen its processing season, process more birds and thereby improve operation efficiency to remain competitive with plants in other regions.

New and expanded turkey production ideally should be located within a 100-mile radius of one of these processing plants (Figure 1). Steps are now being taken to increase turkey production in south central and southeastern Nebraska. It should be mentioned that some turkeys grown in Nebraska are processed in Iowa at Sioux City, Carroll and Storm Lake and at Butterfield, Minnesota.

Figure 1. Locations of Nebraska's major turkey processing plants

7



■ Large, commercial plants

• Smaller, family-owned and operated plants

Nebraska's Competition

Leaders of the turkey industry in Nebraska should study and evaluate what their competitors are doing. Costs of production and turkey prices are of major concern. If Nebraska can produce turkeys at slightly lower cost and sell them at about the same price as other areas of the U.S., then a desire to do the job is the major remaining need.

It is difficult to obtain reliable and fairly current turkey production cost data from various states and regions of the country. At least three states, California, Iowa and Missouri, publish production cost data annually.

Nebraska would appear to be quite competitive in production costs (Table 2).

<u>Feed cost</u> for turkey production in Nebraska is definitely less than in California, the eastern states and possibly some states in the southeast.

<u>Poult and medication costs</u> may be slightly higher in Nebraska than in other areas.

It would seem possible to improve all production costs, including feed costs, in Nebraska. Lower feed costs are being reported by producers who buy in large bulk quantities, take advantage of cash discounts and hold feed wastage to a minimum.

Some interesting data from the 1964 Iowa Demonstration Flock Report are presented in Table 3. Average cost and income data on 30 flocks, involving 253,000 turkeys, are compared to the four high and the four low profit flocks.

The great influence of feed cost and mortality on income from turkey production is clearly evident. In general the following factors seemed to favor the high profit flocks:

- 1. Lowest feed cost per pound of turkey produced.
- 2. Lowest mortality.
- 3. Lowest poult cost per pound of turkey produced.
- 4. Best feed efficiency.
- 5. Efficient market weights.

Table 2--Turkey Production Costs in Nebraska and Other States (Mixed Flocks)

Production factor	Nebr.	Iowa (2)	Missouri (3)	Calif.	North Carolina (5)
Feed cost/Cwt. Feed conversion, lbs. Average wt., lbs.	\$ 3.50 3.45 20.0	\$ 3.22 3.86 19.7	\$ 3.93 3.49 20.58	\$ 3.75 3.80 19.9	\$ 3.65 3.48 18.49
Cost/lb. turkey					
a. Feed, ¢ b. Poult, ¢ c. Labor, ¢* d. Other, ¢	12.08 3.60 .40 3.00	12.43 3.55 .28 2.66	13.74 3.61 .37 1.77	14.25 3.17 1.76 1.51	12.88 3.63 1.88 1.98
	MAL			ey try i y	TO THE LOCAL PROPERTY OF THE PARTY OF THE PA

- (1) Estimated from partial records for 1965 and 1966
- (2) 1964 cost records on 253,610 turkeys
- (3) 1964 cost records on 147,377 turkeys
- (4) 1965 cost records on 600,962 turkeys
- (5) 1964 and 1965 cost records on 1,728,305 turkeys produced by six contract firms.

The high profit group had a market price advantage of 0.3¢ per pound. However, this difference would amount to only 6¢ per bird based on the average market weights. There was a total profit difference between the high and low profit flocks of almost \$1.04 per turkey produced.

Market price was important but management ability, disease control and overall efficiency had the greatest influence on profit.

Average prices received by turkey producers in the United States, Nebraska and certain other states are presented in Table 4.

During the past ten years (1955-64 inclusive) Nebraska producers were paid an average of 23.0¢ per pound for their turkeys. This was 0.8¢ per pound less than the average price paid in the United States.

^{*}Labor cost includes hired labor and not family labor.

Table 3--Cost and Income Data on Selected Mixed Flocks
(Towa - 1964) *

and the Report and the second	Average (30 flocks)	4 High Income	4 Low Income
Number poults started			
(Includes extras)	253,610	36,374	29,515
Mortality (Percent)	13.5%	8.8%	14.2%
Pounds feed/turkey produced	76.7#	76.7#	82.7#
Pounds feed/pound of turkey			
produced	3.86#	3.83#	4.40#
Feed cost/100 pounds	\$3.22	\$2.98	\$3.18
Expenses/pound of turkey			
produced			
a. Feed	12.43¢	11.41¢	14.12¢
b. Poult	3.55¢	3.24¢	3.83¢
c. Insurance	0.24¢	0.31¢	0.25¢
d. Depreciation	0.70¢	0.57¢	0.92¢
e. Medication	0.33¢	0.12¢	0.54¢
f. Interest on investment	0.50¢	0.38¢	0.74¢
g. Financing charge	0.29¢	0.23¢	0.41¢
h. Miscellaneous	0.60¢	0.25¢	0.69¢
i. Hired labor	0.28¢	0.13¢	0.18¢
Cash costs	(17.72¢)	(15.69¢)	(20.02¢
Total cost/pound turkey			
produced	18.92¢	16.64¢	21.68¢
Income			
a. Receipts/pound	20.37¢	20.55¢	20.25¢
b. Family labor and Managerial	1.46¢	3.92¢	-1.42¢
Return/pound			(loss)
c. Family labor and Managerial	28.84¢	78.45¢	-26.54¢
Return/bird			(loss)
Weights at Market Age			
a. Toms	24.8#	25.1#	24.2#
b. Hens	12.6#	14.3#	12.7#
c. Average of both	19.7#	20.0#	18.6#

^{*1964} Iowa Turkey Demonstration Flock Report, P-305 A & B

Nebraska's turkey prices were slightly less than prices paid in Iowa and Minnesota during this period. Turkey prices in Missouri averaged 0.5 φ less than in Nebraska. Prices in North Carolina were 1.6 φ greater than the national average.

Prices paid for live turkeys are influenced by market grade, trucking distance, processing plant efficiency, competition and other factors.

Nebraska's Assets for Turkey Production

Discussion and comparisons thus far have suggested some of Nebraska's assets for turkey production. Other

Table 4--Average Prices Paid Turkey Producers in the United States, Nebraska and Other States, 1955-64 Inclusive

Average price paid producers, cents per lb.							
Year	U.S.	Nebr.	Iowa	Minn.	Mo.	N. Carolina	Calif.
1955	30.2	29.3	30.6	29.2	29.5	30.9	28.8
1956	27.2	26.1	26.0	26.2	25.7	29.9	26.9
1957	23.4	23.4	22.1	22.2	22.5	25.0	21.9
1958	23.9	23.0	23.4	24.1	22.5	27.3	22.7
1959	23.9	24.2	23.4	22.7	22.6	26.5	24.9
1960	25.4	24.5	24.4	25.3	24.3	26.0	25.5
1961	18.9	16.8	16.8	17.6	15.8	22.7	19.4
1962	21.6	20.7	21.7	21.1	20.5	21.7	20.5
1963	22.3	22.0	22.5	22.4	21.6	21.8	21.7
1964	21.0	20.2	21.3	20.5	19.8	21.9	20.8
Av.	23.8	23.0	23.2	23.1	22.5	25.4	23.3
1965	22.2	21.2	NA	NA	NA	NA	NA

^{*}U.S. Department of Agriculture, Statistical Bulletin No. 357 (May 1965).

NA - Not available

assets for this industry have not been mentioned. Several factors that favor turkey production in Nebraska are discussed in the following paragraphs.

A major asset 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 still much greater than it needs for livestock and poultry feeding.

Meat and bone scraps, dehydrated alfalfa meal and soybean meal are produced and processed within the state.

A large, modern plant for processing soybeans will be constructed in Lincoln during 1967. This plant will process approximately 33,000 bushels, or 1,000 tons, of soybeans daily. Solvent-extracted soybean meal, the primary protein supplement in poultry feeds, will be produced in this

plant. This asset for turkey production should be used to a greater advantage by growers in Nebraska.

Much land in Nebraska is well suited for turkey production. Income from cropping and livestock grazing are low in many areas of the state. Land in these areas could be suited for the construction site of turkey production buildings.

The sandy soils of south-central and western Nebraska are well suited for turkey range areas, as are the rolling, sandy loam areas of southeastern Nebraska.

Another definite asset for turkey production is the large number of farm units that need additional income enterprises. This is especially true in the southeastern part of the state where average farm income is less than \$2,500 annually. Turkey production would seem to be an ideal enterprise for many farms in this area and other parts of Nebraska.

The presence of three large turkey processing plants is a real asset to the industry. To take full advantage of this asset new and expanded turkey production should be developed within a 100-mile radius of a processing plant to minimize trucking cost. One-hundred mile radiuses from each commercial turkey processing plant in Nebraska are drawn on Figure 1.

Nebraska's Liabilities for Turkey Production

The wide dispersion of turkey flocks in Nebraska is a liability to this industry.

Turkey production units were scattered throughout the state on 590 individual farms in 1964. This dispersion or scattering increases both production and marketing costs.

The cost of delivering feed ingredients, mixed feeds and poults is increased.

Lack of concentration of turkey flocks often makes the cost of needed service too high.

The distance that some turkeys are trucked to market reduces the price received by many producers in Nebraska.

The need for intensive management has not been recognized by some growers who have failed. Turkey growers who are inexperienced especially need the <u>regular</u> guidance and assistance of "management experts" or trained service men.

In certain other states this service is often provided by feed companies, hatcheries or other firms that have a large volume of turkey business. Very few firms in Nebraska now have a sufficient volume of turkey business to justify the cost of a well trained service man. However, the increased volume of turkey business that some firms hope to achieve may hinge on this factor.

New turkey growers must receive and follow advice that is reliable, experienced and timely.

The majority of Nebraska's turkey growers are not geared up for extended production. Greater efficiency in production, processing and marketing of turkeys can be achieved by growing turkeys over a longer season.

More turkeys will need to be started in late January or early February. This will allow three groups of turkeys to be brooded successively in the same building.

Such extended production will require more semi-confinement and confinement rearing facilities. Extended production of turkeys would permit continuous operation of processing plants from June through December.

Nebraska's assets and liabilities for turkey production have been closely balanced in recent years. At least this would seem to be the situation, because turkey numbers have not greatly increased or decreased during the past 15 years.

If assets can be exploited and used to their fullest potential and liabilities reduced, the turkey industry will progress and expand in Nebraska.

Financial Requirement and Operating Budgets for Producing 10,000 and 30,000 Turkeys

The investments neededin buildings and equipment and operating budgets have been outlined:

- (1) To acquaint beginning and experienced turkey growers with current costs and standards of efficiency.
- (2) To provide a check list from which turkeymen can evaluate and compare their production and cost levels.
- (3) $\underline{\text{To help}}$ present and potential growers appraise turkey contracts.

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

The minimum size for an efficient turkey production unit is approximately $5,000~\rm birds$. However, two flocks of $5,000~\rm birds$ can be reared in one season and make double usage of the brooder building and equipment.

Therefore, the production of 10,000 turkeys in one season seems very logical and is suggested for new growers.

Such a turkey production unit should be a desirable income enterprise for many diversified farms in Nebraska. It would fit in well with most beef, dairy and grain production enterprises.

The production of 30,000 turkeys in one season could be the major or sole enterprise for many family farms in Nebraska. This size unit would probably require some hired labor to handle peak work loads such as cleaning out brooder houses, debeaking, moving birds, etc.

Investment Needed in Buildings and Equipment - The average estimated costs of buildings and equipment necessary to grow 10,000 or 30,000 turkeys per season are presented in Table 5. It should be emphasized that these are average costs for more or less ideal facilities. Lower costs that these could very possibly be achieved. Twenty to 40 acres of land would be needed for producing each 10,000 turkeys

Table 5--Estimated Average Costs of Buildings and Equipment Necessary to Grow 10,000 or 30,000 Turkeys per Season

	Number of	Turkeys
Item	10,000*	30,000**
Brooder house with a concrete floor, allowing 1.25 sq. ft. per poult @ \$1.75/sq. ft.	\$10,937.00	\$21,875.00
Brooding equipment (includes feeding, watering and heating equipment)	1,250.00	2,500.00
Pole house(s) for semi-confine- ment rearing, allowing 1.5 sq. ft. per turkey (plus 20 sq. ft. of yard space/turkey) @ \$0.70 per sq. ft.	5,250.00	10,500.00
Portable range shelters, allow- ing 1.0 sq. ft. per turkey @ \$0.40 sq. ft.	2,000.00	4,000.00
Rearing equipment (includes feeding and water equipment, bulk feed wagon and manure spreader) TOTAL Fixed Investment	11,500.00 \$30,937.00	21,500.00 \$60,375.00

^{*}Assume one brood (5,000) would be reared in semiconfinement and a second brood (5,000) on range.

In estimating building and equipment needs for growing 10,000 turkeys, it was assumed that two groups of 5,000 turkeys would be brooded successively in the same building. Sufficient rearing facilities (buildings and equipment) were included for 10,000 turkeys in two age groups.

^{**}Assumes first brood (10,000) would be reared in a semiconfinement unit, the second brood (10,000) on range and the third brood (10,000) using the semi-confinement unit again.

An example of a production and marketing schedule for growing 10,000 turkeys would be as follows:

- Mar. 14 Start first brood of 5,000 day-old poults.
- May 9 Move first brood to semi-confinement pole shed.
- May 23 Start second brood of 5,000 day-old poults.
- July 18 Move second brood to portable range shelters.
- <u>Aug. 8</u> Market approximately 2,325 hens of first brood at 21 weeks of age.
- Sept. 12 Market approximately 2,275 toms of first brood at 26 weeks of age.
- Oct. 17 Market approximately 2,325 hens of second brood at 21 weeks of age.
- Nov. 21 Market approximately 2,275 toms of second brood at 26 weeks of age.

In estimating building and equipment needs for growing 30,000 turkeys, it was assumed that three groups of 10,000 turkeys would be brooded successively in the same building.

Sufficient rearing facilities (buildings and equipment) were included for only 20,000 turkeys. It would be quite possible to use the same rearing facilities for the first and third broods, which would be about 18 to 20 weeks apart in age.

An example of a production and marketing schedule for growing 30,000 turkeys follows:

- <u>Feb. 7</u> Start first brood, 5,000 male and 5,000 female, day-old poults.
- Apr. 4 Move first brood to semi-confinement pole sheds.
- Apr. 18 Start second brood, 5,000 male and 5,000 female, day-old poults.

- June 13 Move second brood to range shelters.
- June 27 Start third brood, 5,000 male and 5,000 female, day-old poults.
- <u>July 4-11</u> Market approximately 4,650 hens from first brood at 21 or 22 weeks of age.
- <u>Aug. 8</u> Market approximately 4,550 toms from first brood at 26 weeks of age.
- Aug. 22 Move third brood to semi-confinement pole sheds, where first brood was reared.
- Sept. 12 Market approximately 4,650 hens from second brood at 21 weeks of age.
 - Oct. 17 Market approximately 4,550 toms from second broad at 26 weeks of age.
 - Nov. 21 Market approximately 4,650 hens from third brood at 21 weeks of age.
 - Dec. 26 Market approximately 4,550 toms from third brood at 26 weeks of age.

Rearing Systems - Either of three systems, portable range shelters, semi-confinement, or full-confinement may be used in rearing turkeys from about 8 weeks to market age. The most widely used system in Nebraska is portable range shelters, which requires the least initial investment and the most land area. Semi-confinement and full-confinement require greater initial investment, but less labor and land than the portable range shelter system. Both portable range shelters and semi-confinement pole sheds have been listed in the building needs herein.

It is not possible at this time to determine which rearing system would be most satisfactory for Nebraska growers. This will be influenced by local conditions such as soil type, slope and drainage of land, predators and the individual grower's situation. The trend nationally is toward more semi-confinement and confinement rearing.

Operating Budgets for Growing 10,000 and 30,000 Turkeys - The estimated operating expenses and receipts for growing 10,000 or 30,000 turkeys in one season are presented in Tables 6 and 7, respectively. These budgets were calculated based on the anticipated use of buildings and equipment presented in Table 5 and the production schedules listed previously. Various items listed in these budgets are discussed in the following paragraphs.

Table 6--Operating Budget for Growing 10,000 Turkevs*

Theres	m-+-1 (11-	Per lb. of
Item	Total flock dollars	turkey
Expenses - Variable	dollars	Cents
Day-old poults, 10,000 @ \$0.65	6,500.00	3.57
Fuel, electricity and water	400.00	0.22
Medication	600.00	0.33
Floor litter	100.00	0.05
Interest	1,000.00	0.55
Taxes	200.00	0.11
Feed, 312.5 tons @ \$70	21,875.00	12.02
Total variable expense	30,675.00	16.85
(except labor)		
Expenses - Fixed		
Depreciation		
Brooder building (6.67%)	729.53	0.40
Semi-confinement pole		
sheds (10%)	525.00	0.29
Range shelters (20%)	400.00	0.22
Equipment (20%)	2,550.00	1.40
Interest on fixed investment	1,661.25	0.91
Total fixed expenses	5,865.78	3.22
Total all expenses	36,540.78	20.08
Name of the contract of the co		
Receipts - Assumption		
4,550 toms of first brood		
marketed at 26 weeks, average	0.4.0.40.00	01 00
wt. 26.0 lbs.	24,843.00	21.00
4,650 hens of second brood		
marketed at 21 weeks, average	14 222 62	22 50
wt. 13.7 lbs.	14,333.62 39,176.62	$\frac{22.50}{21.52}$
Total receipts	39,170.02	21.52
Net return to labor & manage-		
ment	2,635.84	1.45

^{*}Mortality calculated at 7% for hens and 9% for toms. Feed conversion calculated at 3.30 for hens and 3.50 for toms.

Table 7--Operating Budget for Growing 30,000 Turkeys*

T+ one	Total flock	Per lb. of
Item	dollars	turkey
Expenses - Variable	dollars	Cents
	10 000 00	2 20
Day-old poults, 30,000 @ \$0.60	18,000.00	3.30
Fuel, electricity and water	1,200.00	0.22
Medication	1,800.00	0.33
Floor litter	300.00	0.05
Interest	3,000.00	0.55
Taxes	600.00	0.11
Feed, 937 tons @ \$70	65,559.00	12.01
Total variable expense	90,459.00	16.57
(except labor)		
Ermanga Eirrad		
Expense - Fixed		
Depreciation (6.670)	1 450 00	0 07
Brooder building (6.67%)	1,459.06	0.27
Semi-confinement pole	1 050 00	0 10
sheds (10%)	1,050.00	0.19
Range shelters (20%)	800.00	0.15
Equipment (20%)	4,800.00	0.88
Interest on fixed investment	3,622.50	0.66
Total fixed expenses	11,731.56	2.15
Total all expenses	102,190.56	18.72
Receipts - Assumption 13,650 toms marketed at		
26 weeks, av. wt. 26.0 lbs.	74,529.00	21.00
13,950 hens marketed at	74,020.00	21.00
21 weeks, av. wt. 13.7 lbs.	43,000.87	22.50
Total receipts	117,529.87	$\frac{22.50}{21.52}$
TRAINING TO WARRE WELL TO BEING THE		
Net return to labor & manage-	15 220 23	0.03
ment	15,339.31	2.81

^{*}Mortality calculated at 7% for hens and 9% for toms. Feed conversion calculated at 3.30 for hens and 3.50 for toms.

<u>Poults</u> - The cost of day-old poults purchased in quantities of 5,000 to 10,000 will vary from 50 to 75¢ each in Nebraska. Smaller orders are usually filled for 65-70¢ per poult; the price per poult is usually less with orders of 10,000 or more.

"Distressed poults" are sometimes available for less than 50¢ each. However, poor survival and growth may often inflate the final cost of such poults in producing a pound of turkey. <u>Feed</u> - The cost of turkey feed will vary from \$60 to \$85 per ton. The same feed cost (\$70/\$ton) was used in calculating the operating budget for both 10,000 and 30,000 bird units. However, the feed cost per unit should be lower for the larger unit.

The total feed needed to produce both sexes was considered in operating budgets listed herein. Feed conversion values of 3.30 for hens and 3.50 for toms were used in the calculations presented in Tables 6 and 7.

Other Variable Costs - Items such as floor litter, fuel, electricity, water, taxes and interest will vary considerably depending on the locality and level of management.

Interest on operating capital was calculated on 90 percent of the total expense at 6% for 240 days.

 $\underline{\text{Depreciation}}$ - Calculations for depreciation were based on buildings and equipment previously listed as needed for growing 10,000 and 30,000 turkeys.

The life of brooder houses was assumed to be 15 years.

A useful life of ten years was assumed for semi-confinement pole sheds, and five years for range shelters, brooding equipment and rearing equipment.

Depreciation costs per pound of turkey were considerably less in the budget for 30,000 turkeys. This was due to greater use of buildings and equipment with three broods of birds rather than two broods as in the 10,000 bird budget.

<u>Interest on investment</u> - This is a proper part of the production cost of any commodity. It represents the return or wage for the capital invested, whether it is furnished by the operator or borrowed at a cost of interest. For the operator free of debt it becomes part of his farm income.

Six percent, the current rate on long-term loans, was used in calculating values for Tables 6 and 7.

Return to labor and management - Iowa records have shown that the average turkey producer spends about 10 hours per 100 poults in taking care of a flock from day-old to market.

Using this guideline, about 1,000 man hours would be required to care for 10,000 birds. This would be less than one-half time work for one man. If some family labor could be utilized, a good operator would need to spend less than one-third or one-fourth of his time caring for 10,000 turkeys.

However, the growing of 30,000 turkeys as outlined herein would require one operator working full time, some family labor and perhaps some hired labor for peak work periods.

The net returns to labor and management presented in Tables 6 and 7 may be used to estimate hourly earnings for these services or inputs. Management income could be computed by subtracting the operator's labor cost from the net return to labor and management.

Cost and return variations - The operating budgets presented in Tables 6 and 7 will probably not fit any single situation in Nebraska because they are composites of several operations. Data in Table 8 were designed to help make adjustments for comparisons to specific situations.

In using these adjustments, it should be kept in mind that they are listed independently of each other. Two or more of these adjustment items may interact in such a way that several changes may be necessary.

It can be seen from the cost and return figures in Table 8 that rather small changes in management can mean the difference between a profit or a loss in turkey production. All of this is an important part of business management and is the reason records must be kept, studied and used.

Table 8--Some Management Cost and Receipt Variables and
Their Effect in Turkey Production

STAL STREET, ST		1. a 1 E 8 1	Effect		
Item*	Budget Base	Variation	on	Flock: 5,000 hens and 5,000 toms	Per lb.
Management				dollars	cents
Management: Feed, lbs./lb. turkey Feed, lbs./lb. turkey	hens 3.30 toms 3.50 Av. 3.43	± 0.2 lb. ± 0.2 lb. Av.0.2 lb.	costs costs total	±\$ 445.94 ± 828.10 ± 1274.10	$\frac{+\ 0.70}{-\ 4.0.70}$ Av.0.70
Market wt., lb., 21 wks. Market wt., lb., 26 wks.	hens 13.7 toms 26.0 Av. 19.85	$\frac{\pm 0.5 \text{ lb.}}{4 0.5 \text{ lb.}}$ Av. 0.5 lb.	receipts receipts Total	±\$ 523.12 ± 477.75 ± 1000.87	
Percent mortality (hens 7%, toms 9%)	8.0	<u>+</u> 1.0	cost	<u>+</u> \$ 218.35	0.12
Cost: Poult/each Feed/ton Brooder house/poult Equipment/poult	\$ 0.65 70.00 1.09 1.28	+ \$0.05 + 2.00 + 0.25 + 0.25	cost cost cost	+\$ 500.00 + 625.00 + 166.75 + 500.00	0.27 0.34 0.09 0.27
Receipt: Av. price/lb. Av. price/lb.	hens \$0.225 toms \$0.21 Av. 0.215	± 0.005	receipts receipts total	+\$ 318.52 + 591.50 + 910.02	0.50 0.50 Av. 0.50

^{*}Each of the items is shown independently of each other. Two or more may interact and this should be considered.

Financing Expanded Turkey Production in Nebraska

The greatest opportunity in turkey production in Nebraska will be in units of 10,000 birds and up. This means that a considerable amount of capital will be needed to start the operation.

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.

<u>Internal.</u> 1. Capital which one has 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.

<u>External</u>. 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 turkey 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. These associations can be an excellent source of short-term loans but may consider longer term loans for financing facilities.
- 5. Feed Companies. The budget in Table 6 shows that about 60% of the cash costs of turkey production is for feed. Many feed companies therefore 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 finance is secured elsewhere, cash discounts for feed should provide a real savings in feed cost.
- <u>6. Equipment Companies</u>. Equipment companies have a large stake in new fixed investment 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 non-farm people with money to invest are interested in buying stock in a corporation where they can see a return on their money.
- 8. Contract Production. This also is a relatively new method of financing in Nebraska that is growing rapidly. Under this system the contractor, who is usually a hatcheryman, a feedman or a processor, supplies supervision, management, poults, feed, vaccines and a market. The turkey grower supplies the house, equipment and labor.

The grower then receives a certain price or a certain percentage of the gross income for each pound of turkey produced. In the case of a certain price per pound, there is often a percentage of the net profit returned to the grower. Thus profits, expenses and risks are shared by the grower (contractee) and the hatcheryman, feedman, or processor (contractor).

Contracts can aid in securing loans for development of production facilities.

SUMMARY

The future of turkey production in the United States is bright for the years ahead.

Turkey production in our country has increased 51.4% during the past ten years, from 76.6 million in 1956 to an estimated 116.0 million in 1966. This production growth was possible because of gains in the per capita consumption and export of turkey.

The average consumption of turkey in the United States was about 7.8 pounds per person in 1966 as compared to 5.2 pounds in 1956. Per capita turkey consumption has increased an average of 5% each year since 1956.

Convenience turkey items such as boneless rolls and roasts have stimulated this increase. It has been estimated that 35% of the turkeys produced in 1966 was sold in these forms.

Turkey is now both an every-day and a festive food. Turkey exports have increased from \$7 million in 1960 to \$20 million in 1965.

Nebraska does have some definite assets for turkey production. Major assets are:

- (1) Availability and price of feed ingredients.
- (2) Suitability of land areas.
- (3) <u>Presence</u> of marketing outlets (three large commercial processing plants are located within the state).
- (4) <u>Need</u> for additional income enterprises on many farms.

There are certain drawbacks or liabilities for this industry. The following might be classified as liabilities:

- (I) \underline{Lack} of any great concentration of clustering of turkey production units, especially near existing processing plants.
- (2) \underline{Lack} of intensive management on some farms and well coordinated service programs to supervise and direct new growers.
- (3) <u>Inadequate</u> facilities for extended production over a longer season.

The state's assets and liabilities for turkey production have been closely balanced in recent years. At least this would seem to be the situation, because turkey numbers have not increased or decreased during the past 15 years.

If assets can be exploited and used to their fullest potential and liabilities reduced, the turkey industry will progress and expand in Nebraska.

Continued expansion of turkey production in the United States seems certain, due to increasing population, per capita consumption and export of turkey. Nebraska is in a good position to capture a good share of this expanded production.