

ECONOMIC COMPARISON OF OSTRICH AND
BEEF CATTLE PRODUCTION ON
PASTURE IN OKLAHOMA

By

SHAWNA MICHELLE CRIDER

Bachelor of Science

Northeastern State University

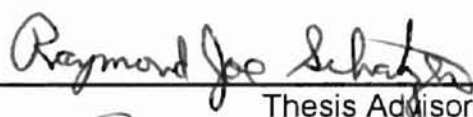
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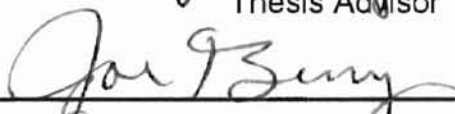
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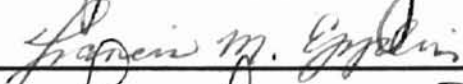
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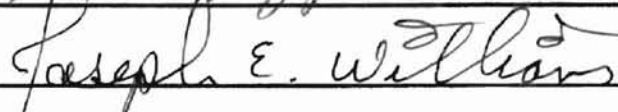
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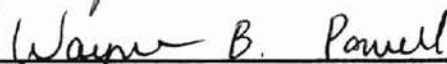
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CHAPTER I

INTRODUCTION

Problem Statement

As a supplemental or alternative form of agriculture, ostrich farming in the United States is still in its infancy. As ostrich products are edging their way into the retail market, the demand for them is increasing, yet some ostrich producers are losing money (Gillespie, Schupp, and Taylor). Currently, commercial producers are struggling with the problem of production costs being more than the value of production. The largest cost faced by producers in the business is feed cost (Hallam). The longer farmers retain birds on the farm, the more feed they have to buy. The age to slaughter a bird for meat processing varies between twelve and fourteen months (Ratite Encyclopedia). However, with decreasing market prices, many producers sell when they can. Trying to ensure the correct weight at the time of slaughter is vital to the industry as slaughterhouses and processors outline more strict requirements on age, weight, and condition of each bird.

As the industry matures, the American Ostrich Association is conducting more research on the production and management of ostriches for meat production. A topic that is being studied is raising ostriches on pasture to

determine if this is a feasible production technique. This researcher could identify no one that had raised the birds strictly on pasture in the United States. However, some farmers have put their breeders on pasture after the breeding season. The costs and returns associated with raising ostriches on pasture have not been estimated. Therefore, producers are apprehensive about stocking birds on pasture. With budget estimates, a producer can see the possibilities for success with a specific method. By reviewing budgets specific to different production situations, a producer can consider their possible use in ostrich production to increase profits.

Many people entering the ostrich industry may not know all of the information that is available about production practices and costs. Therefore, a compilation of the various combinations of options and their associated costs could better inform someone about the industry's profitability or risks. With several budgets presenting mixtures of production techniques, the best production system can be found for a certain set of circumstances.

Objectives

The general objective of this project is to determine the cost of alternative ostrich production systems. The specific objectives are the following:

1. Define alternative ostrich production systems.
2. Prepare enterprise budgets for four types of ostrich production systems.
3. Compare the number of pounds of ostrich with the number of pounds of beef that can be produced per acre on native pasture in Oklahoma.

Hypothesis

Ostrich production on pasture in Oklahoma can compete with Oklahoma's beef production industry, creating a potential alternative for Oklahoma's forage resources.

Conceptual Model

In the study of production economics, one learns that one common goal of a firm is to maximize returns to fixed resources. One way to achieve this goal is to minimize production costs required to produce the optimal level of output. In the case of ostrich production, the largest cost is feed. To reduce these costs, one may consider raising birds on pasture. To determine the costs and returns, it is important to explore both ration costs and foraging costs.

Production economics also teaches that one of the keys to successful farming is management. Management is defined as the decision-making process whereby limited resources are allocated to a number of production alternatives to organize and operate the business in such a way as to attain some objective (Kay 18).

In a report released by the Southern Farm Management Extension committee, decision making relies on four steps. The first step is to gather relevant information. Information such as quantities and prices of resources, inputs, and techniques are required in decision making. Second, the farmer must

list alternative production systems. Next, the farmer must analyze the alternative systems and forecast realistic outcomes of each. By analyzing each system, the farmer can determine which system may be better for his or her specific situation. Finally, a comparison of these outcomes with the farmer's goals and objectives needs to take place. This final step allows the farmer to make a logical decision.

Procedure

Management's first step of planning many times is characterized by budgeting. Budgeting allows producers to organize their physical quantities and values of inputs and outputs. Budgets result in a prediction of the returns that the venture may bring. A budget is a layout for a certain length of time, showing where each dollar is allotted.

An enterprise budget is useful to determine ostrich production returns. The enterprise budget includes estimates of the costs and returns for one unit of the specified enterprise (Casey). In this case, an enterprise budget is used to estimate the costs and returns of an ostrich production system. An enterprise budget consists of two types of costs. These costs include variable and fixed.

Variable costs are those costs that vary with the production level of the specific enterprise. Examples of these costs are feed, labor, seed, and fertilizer. The amount needed of each of these items depends on the response function and the production goal for the season or year. Fixed costs are those costs, which are associated with resources with long term lives. The typical items included in this category are buildings, equipment, and breeding livestock. The

costs associated with buildings, equipment, and breeding livestock include interest, depreciation, taxes, repairs and insurance.

Data from an enterprise budget can be used in a variety of other information summary tools. It can aid in whole farm planning by supplying data for linear programming. The budgets can predict farm specific income or estimate farm size for a set return. It is also very useful for estimating cash flow and cost of production. Enterprise budgets can be modified to meet the farmer's current situation.

CHAPTER II

LITERATURE REVIEW

Ostrich farming, despite marketing problems, is an emerging industry (Jobes). The ostrich industry is changing from a breeder market to a slaughter market. To have a successful switch, the industry needs to lower costs (Dicks and Snell). The most important issue producers have to face in today's emerging enterprise, is that of reducing costs of production, with an emphasis on decreasing feed costs. Bland reports that 75% of the cost of raising poultry is feed costs. However, little research in this particular aspect of the ostrich business has been done (Crawford 1997b). Many feed companies making the feed do not know what nutrients ostriches need, but attempt to develop rations from their knowledge of other poultry rations (Holle). Therefore, the birds may not receive all the nourishment they need to achieve an optimal weight gain.

Some would like to apply the techniques used in raising turkeys on range to ostrich production. Many believe that raising ostriches on pasture could be the key to reducing costs (Moreshead; Crawford 1997b). The use of a pasture system has been used in many parts of Africa. However, the definition of pasture system is different in North America than in Africa. Results from African studies have shown that a small free-range system in Africa has higher fertility and hatching rates than African intensive systems (Hallam).

A bird whose nutritional requirements and eating habits are similar to that of a turkey is the rhea. The rhea has similar nutrient requirement characteristics to the ostrich. Numerous farms in west Texas have begun raising rheas on pasture (Ratite Encyclopedia). The forage in this region consists of brushland, with varieties of thorny brush, cactus, sage, grasses, and mesquite. Even though the rhea's diet is mainly comprised of native forage, they also eat the cattle feed and supplements if ranging with cattle.

Since the nutritional requirements must be considered, it is essential to explore the biological side of ostrich production. There is limited scientific research on the birds' nutritional requirements, but many producers have conducted their own research on what feed, forage or strategy works best in a particular situation (Jefferey). The minimal research does show that the most fundamental ingredient of feed is protein (Rosenfeld). The amino acids vital to an ostrich's diet are lysine and methionine. Malnutrition can occur if these essential amino acids are not included in the feed ration (Rosenfeld). Ostrich and other nutrition experts stress the importance of protein in the diet of the birds. The most efficient feedstuff that satisfies the requirement of protein is the plant (Ratite Encyclopedia).

The issue of grit needs to be considered in any research dealing with ostrich feed because the ostrich must be able to break down its food (Crawford, 1997a). Moreshead studied pastured turkeys, and found that he could eliminate supplemental grit if the turkeys were in sanded pens. However, younger ostriches have no self-control and eat almost everything in sight (Jefferey, Martin,

and Fanguy). In the general poultry case, it has been found that the best grit is flint grit. Flint grit is inexpensive and is the best substance to assist the birds in reducing particle size (Bland).

CHAPTER III

DATA ANALYSIS

The production of ostriches is similar to other livestock and poultry enterprises, in terms of inputs. However, it is important to recognize specific inputs required for each stage of ostrich production. The ostrich enterprise consists of three vital levels of production, 1) breeders, 2) growers, and 3) finishers. For simplicity, each phase is represented by one 12-month period, spanning from April to March. This system was chosen to coincide with the breeding cycle of the ostrich. The budgets were based on one trio.

Jobes' analysis on commercial ostrich production reveals pertinent and significant data regarding the costs and returns of the three separate enterprises. However, since his data collection, new developments have risen concerning production techniques. Three production systems were developed and compared to a confinement system like Jobes'. These systems used estimated dry matter intake in pounds needed by an ostrich to determine pasture quantities (Smith). The amounts of pasture in these systems are a percentage of the dry matter.

Jobes' paper is the basis of much of the data collection needed to compile the following budgets. Before the generation of the budgets, the following assumptions were made:

1. A breeding unit usually consists of two females and one male (trio).
2. One female lays approximately 40 eggs between April and July.
3. The survival rate of the chicks through three months of age is 40 percent.
4. Birds are harvested at fourteen months, which is near 215 pounds for birds on pasture and 250 pounds for confinement birds.
5. From three months to fourteen months, an 8.8 percent death loss occurs.
6. Ostriches will graze native pasture as their main source of feed and gain weight as assumed.
7. Native pasture, along with a supplement, will provide ostriches with their nutritional requirements.
8. The interest rate is 9.1% for fixed assets and 8.8% for operating capital.

Equipment

The price of equipment is important in calculating costs and returns of an enterprise. However, life expectancies, salvage values, repair cost proportions, and labor hours also need to be considered. These values are shown in Table I.

Breeders

The breeding unit is generally enclosed in a chain link pen, approximately 60 by 20 feet (Taylor, Gillespie, and Schupp). All foreign objects such as nails,

TABLE I
COEFFICIENTS AND VALUES FOR
EACH UNIT OF EQUIPMENT

	Price (\$)	Life (years)	Salvage (%)	Repair (%)	Labor (hours)	Jobs Quantity ¹	Pasture Quantity ¹
Breeders							
Ostrich feeders	220	10	20	10	2	1	1
Waterers	324	10	20	0	2	1	1
Ostrich fence	7,500	25	0	45	15	1/16	1/16
Ostrich shed	825	15	0	15	3	1	1
Magnetic sweeper	90	5	0	5	2	1/8	1/8
Male Ostrich	300	35	0	0	0	1	1
Female Ostrich	550	35	0	0	0	2	2
Growers							
Ostrich feeders	220	10	20	10	2	1	1/2
Waterers	324	10	20	0	2	1	1/2
Ostrich egg candler	220	10	0	10	5	1/8	1/8
Incubator	3,000	10	25	0	12	1/16	1/8
Hatcher	500	10	20	25	12	1/8	1/8
Power washer	1,000	2	0	15	2	1/8	1/8
Nursery facility	16,000	10	0	15	10	1/8	1/8
Building equipment	2,500	10	40	50	5	1/8	1/8
Finishers							
Ostrich feeders	220	10	20	10	2	1	1/2
Waterers	324	10	20	0	2	1	1/2
Ostrich fence	7,500	25	0	45	15	1	1/8
Ostrich shed	825	15	0	15	3	1/8	1/8

¹Quantities based on 1 trio.

stones, and wire should be removed before stocking the pen with breeders, so the objects will not be swallowed. A magnetic sweeper is needed to maintain the absence of foreign objects in the pens. At most breeding operations, a shed is placed at one of the 20 feet ends of the pen. The shed is divided into two sections, one for storage and human accessibility, the other for ostriches to eat, drink and receive treatment. The barrier between the species offers a protection device as to not harm either human or bird during routine production operations. The feeding and watering equipment is placed where it is in the reach of both human and ostrich.

Growers

The grower stage of ostrich production requires extensive equipment for success. The first pieces of equipment necessary to continue an operation at the grower stage are the nursery facility and building equipment, which includes the housing of the egg candler, power washer, incubators, and hatchers, all vital to production at this stage. The egg candler and power washer are used after egg collection and are best kept near the other hatching operations.

The nursery facility used for this portion of the grower enterprise must maintain constant temperature, humidity, and airflow to promote successful hatching. When selecting an incubator, it is important to consider the conditions required by the component. The average incubator holds about 50 eggs, and costs approximately three thousand dollars. With 16 females laying an estimated 192 eggs during April and May, 160 eggs in June, and 96 in July, four incubators

will be needed to support the most active months. However, in case of a mechanical failure, an additional incubator should be purchased. For compatibility, manufacturers of ostrich equipment usually build incubators and hatchers to house the same capacity. However, the hatcher is only used for two to three days of the production cycle. Therefore, only one hatcher is needed to support the enterprise. Ostrich producers have discovered that inexpensive hatchers work as well as expensive ones, and therefore spend approximately five hundred dollars for the hatcher (Raines).

To maintain the birds three months and older, pasture, fencing, and a supplement will be needed. Since the same equipment is needed for the grower and finisher enterprises, the requirements are discussed in detail in the finisher section.

Finishers

Since the originality of this study is using pasture as the primary feed, the final production section does not require much equipment. The obvious equipment requirements are fencing, feeders, and waterers. A storage shed should be built to store the supplement feed.

Production

Breeders

Ostriches reach sexual maturity at two to four years old, with the average near two and a half years (Hicks-Aldredge). The breeding unit is ideally, two to

three females per male. In this study, a breeding unit is comprised of two females and one male, referred to as a trio. Oklahoma's ostrich breeding season generally begins in April and occasionally spans into August. However, an important factor to consider during this season is the compatibility of a trio, which should be determined during the beginning of the breeding season. If birds are not compatible, then mating most likely will not take place (Hicks-Allredge).

While breeding, the birds are assumed to be fed a commercial breeder feed. After the season, the ostriches are fed a commercial maintenance feed. Most commercial feeds meet ostriches' nutritional requirements. The required ingredients for each feed are given in Tables II and III and the monthly amounts of feed are shown in Table IV. All systems require the same amount of feed in the breeder stage.

Growers

The hatching and growing stage is the most crucial section of production. During this time, higher mortality rates may be expected. It is important that eggs are collected as soon as possible after laying due to their fragility to heat, humidity, and fellow ostriches. Ten days after incubation, the egg candler is used to check if the eggs are fertile or infertile. Because it is sometimes difficult to determine fertility, any eggs not believed to be fertile can be returned to the incubator for seven more days and then checked again. If no embryo development is apparent in the center of the egg after the second use of the candler, then the egg is likely infertile and is not used in production. Infertile eggs constitute an average of 42 percent of all eggs laid. (Jobes)

TABLE II
NUTRITIONAL GUIDELINES FOR OSTRICHES

	Starter (to 9 wk)	Grower (9 to 42 wk)	Finisher (42 wk to market weight)	Breeder Holding(42 wk to Sexual Maturity)	Breeder (From 4 or 5 wk before onset of egg production)
Metabolizable energy (Poultry Values)					
kcal/lb	1,220	1,115	1,045	900 to 950	1,045
kcal/kg	2,465	2,450	2,300	1980 to 2090	2,300
Protein, %	22	19	16	16	20 to 21
Total sulfur amino acids, %	0.70	0.68	0.60	0.60	0.70
Methionine, %	0.37	0.37	0.35	0.35	0.38
Lysine, %	0.90	0.85	0.75	0.75	1.00
Crude fiber, %	6 to 8	9 to 11	12 to 14	15 to 17	12 to 14
Neutral detergent fiber, %	14 to 16	17 to 20	19 to 22	24 to 27	22 to 24
Calcium, %	1.5	1.2	1.2	1.2	2.4 to 3.5
Non-phytate phosphorus, %	0.75	0.6	0.6	0.6	0.7
Vitamin A, IU/lb	5,000	4,000	4,000	4,000	5,000
Vitamin D ₃ , IU/lb	1,200	1,000	1,000	1,000	1,000
Vitamin E, IU/lb	55	25	25	25	50
Vitamin B ₁₂ , µg/lb	18	9	9	9	18
Choline, mg/lb	1,000	1,000	860	860	860
Copper, mg/lb	15	15	15	15	20
Zinc, mg/lb	55	55	40	40	40
Manganese, mg/lb	70	70	70	70	70
Iodine, mg/lb	0.5	0.5	0.4	0.4	0.5
Sodium, %	0.2	0.2	0.2	0.2	0.2

NOTE: Concentrations of other vitamins and minerals should be similar to those provided for growing turkeys. Current thinking, however, suggests that little, if any, supplemental iron is needed. Source: Scheidler and Sell

TABLE III
CONCENTRATIONS OF SELECTED NUTRIENTS IN INGREDIENTS
USED IN FEEDS OF OSTRICHES AND EMUS

Ingredient	Dry matter (%)	Metabol- izable energy (kcal/lb)	Crude protein	Ether extract	Crude fiber	Neutral Deter- gent fiber	Calcium	Total phos- phorus	Non- phytate phos- phorus	Methio- nine	Cystine	Lysine
							(%)					
Alfalfa meal (17% protein)	92	2,090	17.5	2.5	24.1	45.0	1.44	0.22	0.22	0.24	0.19	0.73
Barley	89	3,400	11.0	1.8	5.5	19.0	0.03	0.36	0.17	0.18	0.24	0.40
Blood meal, spray dried	93	3,625	88.9	1.0	0.6	0.0	0.41	0.30	0.30	1.09	1.03	7.88
Brewer's grains, dried	92	2,080	25.3	6.2	15.5	46.0	0.29	0.52	n.a.	0.57	0.39	0.90
Canola meal	93	2,000	38.0	3.8	12.0	n.a. ⁴	0.68	1.17	0.30	0.71	0.87	1.94
Corn, grain	89	3,560 ²	8.5	3.8	2.2	9.0	0.02	0.28	0.08	0.18	0.18	0.26
Corn gluten feed	90	1,750	21.0	2.5	8.0	45.0	0.40	0.80	n.a.	0.45	0.51	0.63
Cottonseed meal	90	2,400	41.4	0.5	13.6	26.0	0.15	0.97	0.22	0.51	0.62	1.76
Fish meal, Menhaden	92	2,820	60.0	9.4	0.7	0.0	5.11	2.88	2.88	1.63	0.57	4.51

TABLE III (Continued)

Ingredient	Dry matter (%)	Metabol- izable energy (kcal/lb)	Crude protein	Ether extract	Crude fiber	Neutral Deter- gent fiber	Calcium	Total phos- phorus	Non- phytate phos- phorus	Methio- nine	Cystine	Lysine
Meat and bone meal	93	2,150	50.4	10.0	2.8	0.0	10.30	5.10	5.10	0.75	0.66	3.00
Oats, grain	89	3,025 ²	11.4	4.2	10.8	32.0	0.06	0.27	0.05	0.18	0.22	0.50
Oat hulls	92	400	4.6	1.4	28.7	78.0	0.13	0.10	n.a.	0.07	0.06	0.14
Peanut meal	92	2,200	50.7	1.2	10.0	14.0	0.20	0.63	0.13	0.54	0.64	1.54
Peanut hulls	91	440	7.8	2.0	62.9	74.0	0.26	0.07	n.a.	n.a.	n.a.	n.a.
Rice bran, defatted ³	94	2,020	15.1	1.75	13.0	n.a.	0.08	1.77	0.25	0.27	0.28	0.62
Sorghum, grain	87	3,288	8.8	2.9	2.3	18.0	0.04	0.32	n.a.	0.16	0.17	0.21
Soybean meal (44% protein)	89	3,725 ²	44.0	0.8	7.0	n.a.	0.29	0.65	0.27	0.62	0.66	2.69
Soybean meal (48% protein)	90	2,440	48.5	1.0	3.9	n.a.	0.27	0.62	0.22	0.67	0.72	2.96
Soybean hulls	91	720	12.1	2.1	40.1	67.0	0.49	0.21	n.a.	0.12	0.07	0.64

TABLE III (Continued)

Ingredient	Dry matter	Metabolizable energy	Crude protein	Ether extract	Crude fiber	Neutral Detergent fiber	Calcium	Total phosphorus	Non-phytate phosphorus	Methionine	Cystine	Lysine
	(%)	(kcal/lb)	------(%)-----									
Sunflower meal (32% protein)	90	2,515 ²	32.0	1.1	24.0	n.a.	0.21	0.93	0.14	0.74	0.60	1.13
Wheat, grain	87	2,900	14.1	2.5	3.0	n.a.	0.05	0.37	0.13	0.21	0.30	0.37
Wheat bran	89	2,804 ²	15.7	3.0	11.0	51.0	0.14	1.15	0.20	0.23	0.32	0.61
Wheat middlings	88	2,000	15.0	3.0	7.5	37.0	0.12	0.85	0.30	0.21	0.32	0.69
Yeast, Brewer's	93	1,990	44.4	1.0	2.7	n.a.	0.12	1.40	n.a.	0.70	0.50	3.23
Limestone	92						38.0					
Dicalcium phosphate	92						16.0	21.0	21.0			
Oyster shell	92						38.0	0.1	0.1			

¹Data obtained from "Nutrient Requirements of Poultry", National Research Council (1994) unless stated otherwise.

²These ME_n values were obtained from the Dissertation of S.C. Cilliers, University of Stellenbosch (College of Agriculture), Stellenbosch 7600, South Africa. ³Values adjusted from National Research Council (1994) values, according to oil removal. ⁴Information not available.

Source: Scheidler and Sell.

TABLE IV
MONTHLY POUNDS OF FEED
REQUIRED BY BREEDERS

Feeds (in lbs)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Breeder	414	428	414	428	0	0	0	0	0	0	0	0
Maintenance	0	0	0	0	428	414	428	414	428	428	386	428
Starter	0	56	211	581	518	400	38	0	0	0	0	0

Based on 1 trio.

The eggs are placed in an incubator for approximately 40 days and proceed to a hatcher for the remaining two days. After hatching and until three months, the chicks are fed starter feed, described in Table II. Jobes' estimates of feed and vitamin supplement requirements are used in this study. These supplements are given to each chick by a shot every two weeks, for eight weeks. At three months the birds are released to the fenced pasture. The growers' required amounts of native pasture are discussed in the finisher section, since the calculations are identical.

Finishers

Native pasture was selected as the forage due to its constant status. Even though wheat or Bermuda grass may be used as a replacement, a substitute feeding system would need to be implemented during the times when both of these are out of season. A supplement is needed with any pasture, so a device for presenting the feed supplement to the birds is also required. In the study funded by the American Ostrich Association, and conducted by Baltmanis, Blue-McLendon and Angel, the supplement used was held in a box feeder to minimize waste.

Because of a lack of research in ostrich-forage relationships, the amount of pasture needed for the remainder of the enterprise had to be formulated through several numerical manipulations. After a comparison of several sources in Table V, the best weight measurement of ostriches at different ages was determined as represented in Table VI (Smith). The original numbers were

TABLE V
WEIGHT MEASUREMENT
COMPARISON

Age (mo)	Weight (lbs)	Smith	Jobes	Jobes	Hicks-
		Dry matter	Feed Required	Supplement	Allredge Supplement
			(lb/bird/day)		
3	42.90	1.50	1.07	0.3125	1 to 2
4	62.70	1.80	1.57	0.3125	1 to 2
5	86.90	2.68	2.17	0.3125	1 to 2
6	114.62	3.28	2.87	0.3125	1 to 2
7	139.48	3.59	3.49	0.3125	1 to 2
8	161.26	3.76	4.03	0.3125	1 to 2
9	181.28	3.87	4.53	0.3125	1 to 2
10	200.20	3.96	5.01	0.3125	1 to 2
11	211.86	4.75	5.30	0.3125	1 to 2
12	219.78	4.86	5.49	0.3125	1 to 2
13	227.70	4.95	5.69	0.3125	1 to 2

Sources: Smith; Jobes; Hicks-Allredge

converted from grams per bird per day to pounds per bird per day. The number of pounds of feed required to meet an ostrich's nutritional needs is roughly one pound dry matter per 40 pounds of body weight (Jobes). Using the data from Smith, Jobes' data on the amount of feed consumed by each bird, and the number of birds in a given month at specific ages, shown in Table VII, the amount of required dry matter was calculated. These numbers were converted to animal unit month (AUM), since the cattle pasture quantities are presented as AUMS. To convert dry matter to animal units months (AUMS), pounds of dry matter were divided by 730 pounds (Walker). For example, a three-month-old bird in the 50 percent pasture system, requires 16.09 pounds of dry matter for a month, or 0.02 AUMS per month.

To ensure that nutritional requirements are met, the total feed will be comprised of forage and a supplement (Baltmanis, Blue-McLendon and Angel). Three different combinations of forage and supplement have been considered, they are: 50 percent pasture and 50 percent supplement, 75 percent pasture and 25 percent supplement, and 90 percent pasture and ten percent supplement. The quantities of forage for each system, in terms of AUMS, needed for each bird per day are shown in Table VIII.

Since it is assumed that 16 females would produce 192 eggs during the month of April, therefore, 56.8 three-month-olds are present in August. The fifty percent system supporting 56.8 three month old birds would require 1.25 AUMS. This method was used for calculating the total amount of AUMS needed and eventually, the number of acres required to support each system, which is shown

Table VI
FORAGE AND SUPPLEMENT REQUIRED
AT VARIOUS RATIOS

Age (mo)	Weight (lbs)	Dry Matter (lb/bird/day)	Total Dry Matter	50% Feed	50% Supplement	75% Feed	25% Supplement	90% Feed	10% Supplement
----- (lb/bird/month) -----									
3	42.90	1.07	32.18	16.09	16.09	24.13	8.04	28.96	0.80
4	62.70	1.57	47.03	23.51	23.51	35.27	11.76	42.32	1.18
5	86.90	2.17	65.18	32.59	32.59	48.88	16.29	58.66	1.63
6	114.62	2.87	85.97	42.98	42.98	64.47	21.49	77.37	2.15
7	139.48	3.49	104.61	52.31	52.31	78.46	26.15	94.15	2.62
8	161.26	4.03	120.95	60.47	60.47	90.71	30.24	108.85	3.02
9	181.28	4.53	135.96	67.98	67.98	101.97	33.99	122.36	3.40
10	200.20	5.01	150.15	75.08	75.08	112.61	37.54	135.14	3.75
11	211.86	5.30	158.90	79.45	79.45	119.17	39.72	143.01	3.97
12	219.78	5.49	164.84	82.42	82.42	123.63	41.21	148.35	4.12
13	227.70	5.69	170.78	85.39	85.39	128.08	42.69	153.70	4.27
14	235.40	5.89	176.55	88.28	88.28	132.41	44.14	158.90	4.41

Source: Smith

TABLE VII

NUMBER AND AGE OF OSTRICHES BY MONTH

CONSIDERING AN 8.8% DEATH LOSS

Age (mo)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Growers												
3	0	0	0	0	7.1	9.5	8.7	6.3	0	0	0	0
4	0	0	0	0	0	7.0	9.5	8.6	6.3	0	0	0
5	0	0	0	0	0	0	7.0	9.4	8.5	6.2	0	0
6	0	0	0	0	0	0	0	6.9	9.3	8.5	6.2	0
7	0	0	0	0	0	0	0	0	6.8	9.2	8.4	6.1
8	0	0	0	0	0	0	0	0	0	6.8	9.2	8.3
9	0	0	0	0	0	0	0	0	0	0	6.7	9.1
10	0	0	0	0	0	0	0	0	0	0	0	6.7
Finishers												
8	6.1	0	0	0	0	0	0	0	0	0	0	0
9	8.3	6.0	0	0	0	0	0	0	0	0	0	0
10	9.0	8.2	6.0	0	0	0	0	0	0	0	0	0
11	6.6	9.0	8.1	5.9	0	0	0	0	0	0	0	0
12	0	6.6	8.9	8.1	5.9	0	0	0	0	0	0	0
13	0	0	6.5	8.8	8.0	5.8	0	0	0	0	0	0

Based on 1 trio.

TABLE VIII
MONTHLY REQUIREMENTS OF AUMS AND ACRES
FOR PASTURE SYSTEMS PER TRIO

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
50% Pasture System												
DM (lbs)	2133	2283	1828	1888	1284	379	592	907	1181	1460	1718	1943
AUMS	3	3	3	3	2	1	1	1	2	2	2	3
Acres	24	27	21	22	15	9	7	10	16	21	24	13
75% Pasture System												
DM (lbs)	3200	3424	2741	2832	1926	1223	887	1360	1771	2190	2577	2914
AUMS	5	5	4	4	3	2	1	2	2	3	4	4
Acres	37	40	31	32	22	26	10	16	14	30	35	33
90% Pasture System												
DM (lbs)	3840	4109	3290	3398	2311	1463	1065	1632	2125	2628	3092	3497
AUMS	1	1	1	1	1	1	2	2	3	4	4	5
Acres	44	47	38	39	26	17	12	19	29	36	42	40

in Table VIII. To convert the resulting pasture totals to acres, a series of steps had to be taken. To discover the number of acres needed to support each system, the number of AUMS was divided by AUMS per acre for that month (Bidwell). From this conversion, the total number of acres needed each month is derived. Therefore, the month requiring the most acres determines the number of acres needed. Results of these calculations are shown in Tables VIII.

The supplement given to the growers and finishers is a self-mixed substance comprising of soybean meal, ground corn, and fishmeal (Baltmanis, Blue-McLendon, and Angel). Using the dry matter percentage of each, shown in Table IX, and the pounds of supplement needed, the required amount of each ingredient was calculated. The monthly totals on both native pasture and supplement ingredients are also provided in these tables.

Other Input Requirements

Breeders

After removing foreign objects from the ground, some producers cover the ground with sand to provide grit for the ostriches. Approximately ten pounds of sand is needed for each trio, therefore, requiring 80 pounds at the beginning of the breeding season in a 16 female system (Jobes). Veterinarian charges and supplies also need to be considered. As with all farming endeavors, there is a risk of infections or diseases from insects. In the case of the ostrich it has been found that buffalo gnats can cause health problems, so disease and pest control medicine is included (Jobes).

TABLE IX
SUPPLEMENT INGREDIENTS
CONVERSION CHART

Ingredient	Percent of supplement	Percent of ingredients	Percent dry matter	lbs of dry matter in 1 lb of supplement
Soybean Meal	40.15	50.04	90	0.5007
Ground Corn	37.59	46.85	90	0.4688
Fish Meal	2.50	3.12	92	0.0305

Source: National Research Council.

Labor is classified as equipment labor, livestock labor, and other labor, which are used as categories throughout the research. The equipment labor is calculated using the labor column shown in the equipment table, Table I. Livestock labor involves the feeding and watering of the ostriches. All other labor includes collecting eggs. Total labor in this portion of the ostrich production cycle was near 23 hours per trio per month, shown in Table X.

Growers

Any expense incurred from veterinarian fees and supplies must be reported for this segment of the enterprise. Equipment labor hours were derived the same as they were in the previous section and feeding and watering was classified as livestock labor. However, other labor included observing and weighing the eggs. The farmer can perform the required labor from November to March, but when the laying season begins, an additional three workers will be needed. Monthly labor requirements are presented in Table X.

Finishers

The majority of the inputs for the finisher enterprise are used in the production portion of the cycle. The only input left to be considered is the veterinarian charges and supplies, which will be minimal due to the lack of accessibility to free ranging birds. The only types of labor needed in the finisher section are equipment and livestock labors. April through October, the month of harvest, require delivery of the supplement and water. The remaining months

TABLE X
AMOUNT OF REQUIRED LABOR HOURS
PER TRIO PER MONTH

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Breeders	1.79	1.79	1.79	2.28	2.28	2.28	1.92	1.79	1.79	1.79	1.79	1.79	23.09
Growers	15.15	15.15	15.15	32.15	35.40	45.15	32.15	13.65	15.15	15.15	15.15	15.15	264.50
Finishers	0.00	0.00	0.00	2.48	2.48	2.48	2.48	2.48	2.48	2.48	0.00	0.00	17.38
Month Totals	16.96	16.96	16.96	36.91	40.16	49.91	36.55	17.92	19.42	19.42	16.94	16.94	304.97

only require equipment labor. Amounts of labor required for the finisher segment of production is shown in Table X.

CHAPTER IV

RESULTS AND COMPARISON

The costs and returns for four different ostrich production systems were calculated. Jobes' feed system budgets were updated. The three pasture budgets considered in this research were based upon Jobes' assumptions. Feed requirements were converted to pasture requirements. The breeding budgets in all four ostrich systems are the same since the variability was in the method of feeding slaughter birds. All budgets are presented in the Appendix.

Results

50% Pasture System

The first pasture system analyzed was the system that defined the dry matter intake to be 50 percent pasture and 50 percent feed supplement. Based on the feeding assumptions, 2,283 pounds of dry matter pasture per 29.8 birds were required in May. Using 730 pounds of dry matter per AUM and the native pasture budget, this system required 26 acres of native pasture in May, shown in Table VIII. Only 163 pounds of dry matter, or 2 acres were needed in October for 25.2.

Costs. Table XI shows a summary of the costs for the 50% pasture system. Feed accounts for the greatest proportion of the operating costs. This

TABLE XI
COST COMPARISON OF 50% PASTURE SYSTEM
AND CONFINEMENT SYSTEM (\$/TRIO)

	Breeder	Grower		Finisher		Totals	
	All	50% pasture	Confinement	50% pasture	Confinement	50% pasture	Confinement
Operating Costs							
Feed	945	1,143	3,158	963	3,474	3,051	7,577
Labor	150	1,168	1,193	113	211	1,431	1,554
Vet/Med	47	356	356	240	272	643	675
Other	230	242	281	35	184	507	695
Total Operating Costs	1,372	2,909	4,988	1,351	4,141	5,632	10,501
Fixed Costs							
Equipment Int	153	270	285	62	376	485	814
Equipment Dep	204	435	459	78	420	717	1,083
Breeders	98	0	0	0	0	98	98
Total Fixed Costs	455	705	744	140	796	1,300	1,995
Total Costs	1,827	3,614	5,732	1,491	4,937	6,932	12,496

includes breeder feed, maintenance feed, starter feed, grower feed, the supplement, and pasture. The feed costs made up less than half of the total operating costs in the pasture system, but comprised over 60 percent of the total costs in the confinement system.

The costs in the confinement and the 50 percent pasture breeder budgets are identical, since variation occurs in the grower and finisher stages of production. The grower costs in the pasture system vary due to the replacement of expensive grower feed with pasture and supplement. Labor, veterinarian, medicine, and all other costs are not effected much, since most of these expenses occur during the beginning of this stage. The total costs of this section in the confinement system are more than one and a half times as much as the pasture system grower costs.

In the finisher segment of production, total costs are reduced by over three thousand dollars per trio. Veterinarian and medicine costs stay relatively the same, whereas labor costs are nearly cut in half and all other costs are one-fifth of the confinement system costs. Fixed costs for the confinement system are greater than those in the 50 percent pasture system, due to the greater amount of equipment needed in the confinement system. After considering both operating and fixed costs in all three stages, the 50 percent pasture system's costs are nearly half the confinement system's total costs.

Returns. Since extensive equipment is needed for ostrich production, especially during the beginning of the grower enterprise, fixed costs are considerable. Because of high fixed costs in the ostrich systems, returns above

all specified costs drastically drop. After all costs are subtracted from the total receipts of \$6,257, a loss of \$675 occurs, shown in Table XII. However, when returns are compared, the pasture system's return is \$4,546 more than the confinement system.

75% Pasture System

The pasture system with 75 percent pasture and 25 percent supplement was considered second. Using the same method and the number of pounds of dry matter required, the total number of acres was determined. This system required 39 acres to support the 29.1 birds in the grower and finisher stages of production in May. Table VIII shows that October only required 887 pounds of dry matter, or 10 acres of native pasture.

Costs. A summary of the costs for the 75% pasture system is presented in Table XIII. Thirty-nine percent of the costs were feeding costs, which were the most expensive of all the costs. However, this percentage is low in comparison to the confinement system where feed costs were over 60 percent of total costs.

Breeder costs in both budgets did not differ since pasture was not used in this segment of production. With grower feed replaced with inexpensive native pasture, feed costs differ by over two thousand dollars. All other costs stay about the same when comparing the confinement and 75 percent pasture system.

The comparison of the pasture system and confinement system in the finisher stage of production creates a broader range in total costs. All costs, except for veterinarian and medicine, have a high variability between the two systems. Labor costs in the pasture system are nearly half the costs in the

TABLE XII

SUMMARY OF BUDGET RESULTS (\$/TRIO)

	50% Pasture System	75% Pasture System	90% Pasture System	Confinement System
Total Operating Costs	5,632	5,019	4,590	10,501
Total Fixed Costs	1,300	1,300	1,300	1,995
Total Receipts	6,257	6,257	6,257	7,275
Returns Above Total Operating Costs	625	1,238	1,667	-3,226
Returns Above All Specified Costs	-675	-62	367	-5,221

TABLE XIII
COST COMPARISON OF 75% PASTURE SYSTEM
AND CONFINEMENT SYSTEM (\$/TRIO)

	Breeder	Grower		Finisher		Totals	
	All	75% pasture	Confinement	75% pasture	Confinement	75% pasture	Confinement
Operating Costs							
Feed	945	909	3,158	603	3,474	2,457	7,577
Labor	150	1,168	1,193	101	211	1,419	1,554
Vet/Med	47	356	356	240	272	643	675
Other	230	238	281	32	184	500	695
Total Operating Costs	1,372	2,671	4,988	976	4,141	5,019	10,501
Fixed Costs							
Equipment Int	153	270	285	62	376	485	814
Equipment Dep	204	435	459	78	420	717	1,083
Breeders	98	0	0	0	0	98	98
Total Fixed Costs	455	705	744	140	796	1,300	1,995
Total Costs	1,827	3,376	5,732	1,116	4,937	6,319	12,496

confinement system. Feed costs with the confinement system are nearly six times the feed costs with the pasture system. The difference in all other costs is \$154.

Fixed costs for the whole system vary in the finisher segment because of a lesser need for equipment. After all costs are considered, the costs of the confinement system exceed the costs of the pasture system by \$6,177 per trio.

Returns. With the average forage raised bird weighing 215, the receipts from selling 29.1 ostrich at one dollar per pound totals \$6,257, shown in Table XII. A loss of \$62 occurs after all costs are subtracted from receipts. When comparison between the pasture system and the confinement system is made, the pasture system's return is over five thousand dollars more.

90% Pasture System

Lastly considered was the 90 percent pasture system. The minimum number of acres of native pasture needed was determined to be 47, as shown in Table VIII. To support the smallest requirement in October, only 12 acres of native pasture were needed for 29.1 birds.

Costs. The costs for the 90% pasture system are shown in Table XIV. Just like the previous pasture systems, feed costs were the largest percentage of total costs at 35 percent. However, the proportion of feed costs in the 90 percent pasture system is lower than the feed cost percentages in the 50 and 75 percent systems.

Similar to the other pasture systems, the breeder costs in this pasture system are identical to the costs in the confinement system. The grower stage

TABLE XIV
COST COMPARISON OF 90% PASTURE SYSTEM
AND CONFINEMENT SYSTEM (\$/TRIO)

	Breeder	Grower		Finisher		Total	
	All	90% pasture	Confinement	90% pasture	Confinement	90% pasture	Confinement
Operating Costs							
Feed	945	714	315	374	3,474	2,033	7,576
Labor	150	1,168	1,193	101	211	1,419	1,554
Vet/Med	47	356	356	240	272	643	675
Other	230	235	281	30	184	495	695
Total Operating Costs	1,372	2,473	4,988	745	4,141	4,590	10,501
Fixed Costs							
Equipment Int	153	270	285	62	376	485	814
Equipment Dep	204	435	459	78	420	717	1,083
Breeders	98	0	0	0	0	98	98
Total Fixed Costs	455	705	744	140	796	1,300	1,995
Total Costs	1,827	3,178	5,732	885	4,937	5,890	12,496

has a difference of over five thousand dollars in feed costs. Other than this variation, costs are approximately the same.

Significant differences occur during the finisher stage of production. Even with veterinarian and medicine costs in range of one another, the costs from the confinement system exceed the pasture system by far. While labor, veterinarian and medicine, and other costs are close, feed costs in the pasture system are one tenth of what costs are in the confinement system. The difference in feed costs creates a drastic contrast of \$6,606 between the pasture system and the confinement system.

Results

The total costs of the 90 percent pasture system equal \$6,932 and total receipts come to \$6,257, which results in a return of \$367, shown in Table XII. The positive return is a direct result of replacing expensive grower feed with native pasture and a supplement comprised of soybean meal, ground corn, and fishmeal. The difference between the 90 percent pasture system and the 75 percent pasture system is over \$300.

Comparison

To determine the best use of native pasture in Oklahoma, a comparison of the ostrich systems and selected cattle systems was made. To make a comparison of these systems, the results were examined on a per head basis and then examined per acre. A comparative table of the ostrich and cattle systems, in terms of costs and returns is shown in Table XV. The 50 percent and

TABLE XV
BUDGET RESULTS FOR PASTURE SYSTEMS
AND CATTLE SYSTEMS (\$/HEAD)

	50% Pasture System	75 % Pasture System	90% Pasture System	Stocker Steer System	Cow-Calf System
Total Operating Costs	193	172	158	616	343
Total Fixed Costs	45	45	45	8	95
Total Receipts	215	215	215	566	333
Returns Above Total Operating Costs	-22	43	57	-50	-10
Returns Above All Specified Costs	-67	-2	12	-58	-105

75 percent pasture systems have negative returns, where the 90 percent pasture system has positive return above all specified costs. All cattle systems result in negative losses. Overall, operating and fixed costs for the cattle systems greatly exceed the ostrich system costs.

All three of the pasture ostrich systems receive \$215 from the sale of one bird, where as, the confinement system receives \$250. The difference in weight gain is a result of different feeding systems. The pasture systems only result in a 14-month-old bird weighing 215 pounds; yet, the confinement system's end product is a 250 pound 14 month old bird. With the assumption that the quality of the ostrich meat is equivalent, the farmer can receive one dollar per pound of live weight.

The 90 percent pasture system is the only system in the study that has an outcome above zero. This positive return is due to the fact that the cost of feed decreased as the grower feed was replaced with pasture. The 50 percent pasture system results of negative \$67 come close to those of the stocker steer system at negative \$58. The cow-calf system had the lowest return of negative \$105.

A comparison of the pounds of weight gain from the enterprises finds that ostrich have a greater weight gain per acre of native pasture than cattle. Both ostrich and cattle enterprises are presented in Table XVI, which shows the total pounds of weight gain per acre. The 215-pound gain is the same for the three ostrich systems. The 50, 75, and 90 percent pasture systems produce a weight gain of 239, 160, and 134 pounds per acre, respectively. However, the stocker steer

TABLE XVI
COST OF DRESSED AND
LIVE WEIGHTS

	50% Pasture System	75% Pasture System	90% Pasture System	Stocker Steer System	Cow Calf System
Total Cost (\$/head)	238	217	202	624	438
Live Weight (lbs/head)	215	215	215	299	432
Dressing Percent	45	45	45	60	60
Dressed Weight (lbs/head)	97	97	97	179	259
Cost (\$) per lb of dressed weight	2.45	2.24	2.08	3.49	1.69
Cost (\$) per lb of live weight	1.11	1.01	0.94	2.09	1.01

system only produces 50 pounds per acre and the cow-calf operation yields 66 pounds of weight gain per acre.

The cost per pound of live weight was calculated to determine the breakeven selling price of each enterprise, shown in Table XVI. The cost to produce one ostrich in a confinement system is \$1.72 per pound, where as the breakeven price of an ostrich in the 50 percent pasture system is \$1.11 per pound. The costs to produce a pound in the 75 and 90 percent pasture systems are \$1.01 and \$0.94, respectively. The lower cost in the 90 percent system is a result of the lower feed costs.

The cow-calf system and 75 percent pasture system both require \$1.01 to produce a pound of live weight. The stocker steer system has the lowest cost per pound, at \$0.72. Even though the stocker steer operation has a lower cost per pound, it does not have the highest returns. The lack of a positive return is caused by the small amount of money received from the sale of the cattle. The ostrich enterprises, especially the 75 and 90 percent pasture systems have total receipts near the amount of total costs, where as the cattle systems do not.

To determine the returns to acre, the cost of native pasture is subtracted from the total costs. The 90 percent pasture system has a \$16 return to one acre, and the 75 percent pasture system has a six dollar return acre. The other three systems have negative returns per acre. Both stocker steer and cow-calf systems come close to breaking even with negative two dollars and negative one dollar, respectively. The 50 percent pasture system yields a negative \$18 per acre return.

From the previous results, summarized in Table XVII, the 90 percent pasture system would be the best choice for native pasture use in Oklahoma. With positive returns per acre and positive returns per trio, producing ostriches using the 90 percent pasture system is a good alternative to cattle production. Another alternative to a stocker steer or cow-calf operation is the 75 percent pasture system. Even though it has negative returns per trio, it has positive returns per acre, both being higher returns than those in the cattle operations.

TABLE XVII
POUNDS PER ACRE, COST PER POUND, AND
RETURNS PER ACRE

	50% pasture system	75% pasture system	90% pasture system	Stocker steer system	Cow-calf system
Live weight (lb/acre)	239	160	134	25	72
Dressed weight (lb/acre)	108	72	60	15	43
Cost per lb of live weight (\$)	1.11	1.01	0.94	0.72	1.01
Cost per lb of dressed weight (\$)	2.45	2.24	2.08	1.20	1.69
Cost per acre (\$)	267	162	125	104	37
Returns per acre (\$)	-18	6	16	-2	-1

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

Conclusions

The ostrich industry is experiencing difficulty in attaining positive returns from production, therefore, emphasizing the need for new production techniques. With feed costs making up the majority of total costs, it is likely that alternative feeding techniques can lower production costs. Enterprise budgets were used to determine the costs and returns. Four systems were considered in developing enterprise budgets, one confinement and three pasture systems. The three pasture systems are comprised of pasture and a supplement. The amount of pasture and supplement are both based on a percentage of required dry matter intake. The three systems are 50 percent pasture, 75 percent pasture, and 90 percent pasture, with remaining needed dry matter from the supplement.

The returns per trio associated with the pasture systems were first compared to those of the confinement system. The returns indicated an extreme difference between confinement and pasture systems. This relationship is due to the fact that the pasture is less expensive than the grower feed. Secondly, the pasture systems were compared to the stocker steer and cow calf enterprises on

a per head basis. These results found that neither beef cattle operation had returns above zero. In fact, the 75 percent and 90 percent pasture systems fared better than both cattle enterprises, with the 90 percent pasture system possessing returns above zero. The 50 percent pasture system returns fell between the stocker steer and cow calf enterprises.

To attain returns above zero, it is important to earn total receipts greater than the total costs. In this study, the stocker steer enterprise had the lowest cost per pound of weight gain, yet it had negative returns. The stocker steer operation had low costs when compared to the other systems, but the lack of receipts totaling near the costs resulted in negative returns. The 90 percent pasture system had both low costs and total receipts greater than the total costs, which resulted in positive returns.

Not only does the 90 percent pasture system have low costs, but the system also produces more meat per acre than the cattle operations. In fact, all of the ostrich enterprises on pasture yield more meat per acre than the cattle enterprises. Combining the higher yield of meat and the higher returns, two of the three ostrich systems have a higher return per acre. These results indicate that the 90 percent pasture system is the best choice for pasture use in Oklahoma.

Recommendations for Further Research

The results in this study were based on the assumption that ostriches can have a weight gain of 215 pounds from three to fourteen months when grazing

native pasture in Oklahoma. Research from a poultry science perspective needs to be conducted to prove the assumption of weight gain on pasture. More information on the quality of meat produced on pasture is also needed to determine a dressed weight percentage. A method, not used in this study that may increase returns is releasing breeders on pasture after the breeding season. If this method were implemented, returns would most likely increase, creating a larger difference between ostrich and cattle returns.

REFERENCES

- . *The Ratite Encyclopedia*. Elrod, Charley and Helen Wilborn, eds. San Antonio: Rattite Records, Inc, 1995.
- . "Making Farm Management Decisions." Southern Farm Management Extension Committee. May 1960.
- Angel, C. Rosalina. "On-Farm Economics." *American Ostrich* 2(1996):21-26.
- Angel, C. Rosalina. "A Review of Ratite Nutrition." *Animal Feed Science and Technology* 60(1996):241-46.
- Baltmanis, Beth, Alice Blue-McLendon, and Rosalina Angel. "The Effect of Feeding a Hay-Supplement Diet on the Performance of Growing Ostriches." *American Ostrich* 3(1997):20-24.
- Bland, David. "The Golden Rules of Feeding Poultry." *Countryside and Small Stock Journal* 82(1998)46-48.
- Casey, James, Raleigh Jobes, and Odell Walker. "Enterprise Budgets A Farm Planning Tool." Ag. Econ. Pap. No. 7707. Oklahoma State University July 1977.
- Crawford, John A. "Pasture, Forage, and Feed Considerations." *The Ostrich News* 6(1997a):20-26.
- Crawford, John A. "Getting Down to the Nitty-Gritty." *The Ostrich News* 7(1997b):27-29.
- Dicks, Michael and Patrick Snell. "The Oklahoma Ratite Industry." Ag. Econ. Res. Pap. No. P950. Oklahoma State University March 1996.
- Gillespie, J., A. Schupp, and G. Taylor. *Journal of Agricultural and Applied Economics* "Factors Affecting Production Efficiency in a New Alternative Enterprise: The Case of the Ratite Industry." 29(Dec 1997):409-418.
- Hallam, M. G. *The Topaz Introduction to Practical Ostrich Farming*. Harare, Zimbabwe: Superior Print and Packaging, 1992.

- Hicks-Aldredge, Karen. "Ostrich Reproduction [Online]." Available [HTTP://www.ostrichesonline.com](http://www.ostrichesonline.com). (September 13, 1998).
- Holle, Daryl. "The Dilution Factor - Part 1 [Online]." Available [HTTP://www.blue-mountain.net/feed/p0000669](http://www.blue-mountain.net/feed/p0000669). (August 14, 1998).
- Jefferey, Joan S., Gregory P. Martin, and Roy C. Fanguy. "The Incubation of Ratite Eggs [Online]." Available [HTTP://gallus.tamu.edu/ratite/ratinc.html](http://gallus.tamu.edu/ratite/ratinc.html). (September 13, 1998).
- Jefferey, Joan S. "Ostrich Production [Online]." Available [HTTP://gallus.tamu.edu/ratite/ostrich.html](http://gallus.tamu.edu/ratite/ostrich.html). (September 13, 1998).
- Jensen, James M., James Johnson, and Stanley Weiner. *Husbandry and Medical Management of Ostriches, Emus, and Rheas*. College Station: Wildlife and Exotic Animal Teleconsultants, 1992.
- Jobes, R. A. "An Economics Analysis of a Commercial Ostrich Production System." Ag. Econ. Pap. No. 9502, Oklahoma State University, January 1995.
- Kay, Ronald D. and William M. Edwards. "Farm Management." Boston:WCB/McGraw-Hill, 1999.
- Moreshead, Jon A. "Raising Turkeys on Pasture." *Countryside and Small Stock Journal* 80(1996)42-46.
- National Research Council. "Nutrient Requirements of Poultry." Washington, D.C.:National Academy Press, 1994.
- Osterhoff, D. R. "Ostrich Farming in South Africa." *World Review of Animal Production* 15(1979): 19-30.
- Raines, Dean. Personal Interview January 1999.
- Rosenfeld, Mark J. "Ratite Nutrition." *The Ostrich News*. 6(1997):35-39.
- Scheidler, Sheila and Jerry Sell. "Nutrition Guide for Ostriches and Emus [Online]." Available [HTTP://ianrwww.unl.edu/pubs/animals/g1303.htm](http://ianrwww.unl.edu/pubs/animals/g1303.htm). (February 2, 1998).
- Smith, W. A. *Practical Guide for Ostrich Management and Ostrich Products*. Stellenbosch: University Printers, 1995.

- Taylor, G., J. M. Gillespie, and A. Schupp. "Costs and Returns Estimates for Ostrich Production." *Journal of the ASFMR* 19(1997): 34-42.
- Ullrey, Duane E. and Mary E. Allen. "Nutrition and Feeding of Ostriches." *Animal Feed Science Technology* 59(1996): 27-36.
- Walker, O. "Beef Pasture Systems for Oklahoma." Research Report P-888, Oklahoma State University, Stillwater, February 1987.

APPENDIX
BUDGETS

TABLE XVIII
OSTRICH BREEDER BUDGET

OSTRICH BREEDER BUDGET, PER TRIO				67000000
1 EGG PRODUCED EVERY 2 DAYS PER HEN				03/15/99
80 EGGS PRODUCED PER TRIO PER YEAR				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
SAND	YARD	12.00	10.00	120.00
VET. CHARGE	TRIO	30.00	1.00	30.00
BREEDER FEED	LB.	0.20	1,683.60	335.04
MAINT FEED	LB.	0.18	3,353.40	610.32
DISEASE/PEST CONTROL	TRIO	16.80	1.00	16.80
ANNUAL OPERATING CAPITAL	DOL.	0.09	643.13	56.27
EQUIPMENT LABOR	HR.	6.50	11.00	71.50
FEED & WATER LABOR	HR.	6.50	10.50	68.25
OTHER LABOR	HR.	6.50	1.59	10.30
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			54.03
TOTAL OPERATING COSTS				1,372.51
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1%		1,682.03	153.06	
DEPR, TAXES, INSURANCE			203.77	
LIVESTOCK				
ONE MALE OSTRICH		165.00		
TWO FEMALE OSTRICHES		550.00		
INTEREST AT 9.1 %		715.00	65.07	
DEPR, TAXES, INSURANCE			33.43	
TOTAL FIXED COSTS				455.32
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
FERTILE EGGS	EGG	0.00	80.00	0.00
TOTAL RECEIPTS				0.00
RETURNS ABOVE TOTAL OPERATING COST				-1,372.51
RETURNS ABOVE ALL SPECIFIED COSTS				-1,827.84
FEED CONS. IS 4.6 LBS/DAY/BIRD				CRIDER
CONFINEMENT AND PASTURE SYSTEM				20-Apr-99
EGGS TRANSFERRED TO HATCHER AND GROWER BUDGET				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XVIII (Continued)

OSTRICH BREEDER BUDGET

OSTRICH BREEDER BUDGET, PER TRIO
1 EGG PRODUCED EVERY 2 DAYS PER HEN
80 EGGS PRODUCED PER TRIO PER YEAR

67000000
03/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CONT
1 FERTILE EGGS	0.00	0.00	0.00	24.00	24.00	20.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	EGG	1.00	2.00	0.00
OPERATING INPUTS																		
10 NAME	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	STATE	0.00	0.00	0.00	0.00	0.00
11 SAND	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	1.00	YARD	3.00	3.00	0.00
13 VET. CHARGE	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	30.00	1.00	TRIO	5.00	3.00	0.00
17 BREEDER FEED	0.00	0.00	0.00	414.00	427.80	414.00	427.80	0.00	0.00	0.00	0.00	0.00	0.20	1.00	LB.	9.00	3.00	0.00
18 MAINT FEED	427.80	386.40	427.80	0.00	0.00	0.00	0.00	427.80	414.00	427.80	414.00	427.80	0.18	1.00	LB.	10.00	3.00	0.00
20 DISEASE/PEST CONTROL	0.00	0.00	0.02	0.02	0.48	0.00	0.00	0.00	0.48	0.02	0.00	0.00	16.80	1.00	TRIO	12.00	2.00	0.00
EQUIPMENT REQUIREMENTS																		
49 OSTRICH FEEDERS	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.00	1.00	1.00	154.00	5.00	0.00
50 WATERER	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.00	1.00	1.00	155.00	5.00	0.00
52 OSTRICH FENCE	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.00	0.25	0.25	184.00	5.00	0.00
53 OSTRICH SHED	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.00	1.00	1.00	186.00	5.00	0.00
54 MAGNETIC SWEEPER	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.13	1.00	1.00	185.00	5.00	0.00
LIVESTOCK INVESTMENT																		
66 ONE MALE OSTRICH	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.00	1.00	1.00	82.00	5.00	0.00
67 TWO FEMALE OSTRICHES	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	2.00	1.00	1.00	83.00	5.00	0.00
OTHER LABOR																		
72 FEED & WATER LABOR	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	8.50	1.00	HOUR	12.00	7.00	0.00
73 COLLECTING EGGS	0.00	0.00	0.00	0.49	0.48	0.49	0.13	0.00	0.00	0.00	0.00	0.00	8.50	1.00	HOUR	11.00	7.00	0.00
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
TOTAL EXPENDITURES	ACRE	90.55	83.02	90.89	218.60	108.70	98.23	98.63	90.55	96.10	90.99	88.04	90.55	1,301.01				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														-1,301.01				
ANNUAL CAPITAL	DOL	88.24	96.15	0.00	18.22	27.28	35.46	43.68	51.23	59.23	66.81	74.14	81.69	643.13				
EQUIPMENT LABOR	HR	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	11.00				
LIVESTOCK LABOR	HR	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	10.50				
OTHER LABOR	HR	0.00	0.00	0.00	0.49	0.49	0.49	0.13	0.00	0.00	0.00	0.00	0.00	1.59				
TOTAL LABOR	HR	1.79	1.79	1.79	2.28	2.28	2.28	1.92	1.79	1.79	1.79	1.79	1.79	23.09				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	2.20				
	FIXED	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	31.61				
WATERER	VAR.	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	9.72				
	FIXED	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	48.56				
OSTRICH FENCE	VAR.	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	33.75				
	FIXED	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	178.25				
OSTRICH SHED	VAR	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	8.25				
	FIXED	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	99.55				
MAGNETIC SWEEPER	VAR.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.11				
	FIXED	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	2.86				

FEED CONS. IS 4.6 LBS/DAY/BIRD
CONFINEMENT AND PASTURE SYSTEM
EGGS TRANSFERRED TO HATCHER AND GROWER BUDGET

CRIDER
21-Apr-99
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XIX
OSTRICH GROWER BUDGET
CONFINEMENT SYSTEM

OSTRICH GROWER BUDGET, PER TRIO (CONFINEMENT)				67000001
50% HATCH, 80% SURVIVAL AT 3 MONTHS				03/15/99
BEGIN WITH 80 FERTILE EGGS, END WITH 32 CHICKS PER TRIO PER YEAR				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICK VITAMINS	HEAD	2.65	32.00	84.80
STARTER FEED	LBS	0.22	1,803.76	395.02
DISEASE/PEST CONTROL	DOL.	31.60	1.00	31.60
EGGS	EGG	0.00	80.00	0.00
VET CHARGE	HEAD	7.50	32.00	240.00
GROWER FEED	LBS	0.19	14,313.33	2,762.47
ANNUAL OPERATING CAPITAL	DOL.	0.09	1,783.66	156.07
EQUIPMENT LABOR	HR.	6.50	15.75	102.38
FEED & WATER LABOR	HR.	6.50	53.29	346.39
OTHER LABOR	HR.	6.50	114.50	744.25
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			125.01
TOTAL OPERATING COSTS				4,987.98
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		3,130.78	284.90	
DEPR, TAXES, INSURANCE			459.14	
TOTAL FIXED COSTS				744.04
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
TOTAL RECEIPTS				0.00
RETURNS ABOVE TOTAL OPERATING COST				-4,987.98
RETURNS ABOVE ALL SPECIFIED COSTS				-5,732.02
JOBES' UPDATED BUDGETS (CONFINEMENT SYSTEM)				CRIDER
TRANSFER TO GROWER BUDGET END OF MARCH				20-Apr-99
EGGS FROM BREEDER BUDGET				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

CONFINEMENT SYSTEM

50% HATCH, 80% SURVIVAL AT 3 MONTHS
BEGIN WITH 80 FERTILE EGGS, END WITH 12 CHICKS PER TRIO PER YEAR

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OHIO AGRICULTURAL STATE UNIVERSITY

TABLE XX
OSTRICH FINISHER BUDGET
CONFINEMENT SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (CONFINEMENT)				67000002
BIRDS HARVESTED AT 14 MONTHS OLD				3/15/99
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
GROWER FEED	LBS	0.19	18,000.83	3,474.16
DISEASE/PEST CONTROL	DOL.	31.56	1.00	31.56
VET CHARGE	DOL.	7.50	32.00	240.00
ANNUAL OPERATING CAPITAL	DOL.	0.09	410.26	35.90
EQUIPMENT LABOR	HR.	6.50	19.38	125.94
FEED & WATER LABOR	HR.	6.50	13.13	85.31
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			147.95
TOTAL OPERATING COSTS				4,140.82
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		4,127.96	375.64	
DEPR, TAXES, INSURANCE			419.97	
TOTAL FIXED COSTS				795.62
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
14MTH. OLD BIRDS	HEAD	250.00	29.10	7,275.00
TOTAL RECEIPTS				7,275.00
RETURNS ABOVE TOTAL OPERATING COST				3,134.18
RETURNS ABOVE ALL SPECIFIED COSTS				2,338.56
JOBES' UPDATED BUDGETS (CONFINEMENT SYSTEM)				CRIDER
BIRDS TRANSFERRED FROM HATCHER AND GROWER BUDGET				20-Apr-99
8.8% DEATH LOSS				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XX (Continued)

OSTRICH FINISHER BUDGET

CONFINEMENT SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (CONFINEMENT)
BIRDS HARVESTED AT 14 MONTHS OLD
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS

87000002
3/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT CODE	ITEM CODE	TYPE	CONT
1 14MTH OLD BIRDS	0.00	0.00	0.00	0.00	0.00	0.00	6.50	8.80	8.00	5.80	0.00	0.00	250.00	1.00 HEAD	1	2	0	
OPERATING INPUTS																		
	RATE/UNIT																	
9 CHICKS 10mo	0.00	0.00	0.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00 HEAD	1	3	0	
10 CHICKS 9mo	0.00	0.00	0.00	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00 HEAD	2	3	0	
11 CHICKS 8mo	0.00	0.00	0.00	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00 HEAD	3	3	0	
12 CHICKS 7mo	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00 HEAD	4	3	0	
13 GROWER FEED	0.00	0.00	0.00	3,709.82	3,969.53	4,143.49	3,283.01	2,033.88	861.30	0.00	0.00	0.00	0.19	1.00 LBS	5	3	0	
15 DISEASE/PEST CONTRO	0.00	0.00	0.05	0.05	0.42	0.00	0.00	0.00	0.45	0.03	0.00	0.00	31.58	1.00 DOL	7	3	0	
20 VET CHARGE	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	7.50	250.00 DOL	9	3	0	
EQUIPMENT REQUIREMENTS																		
	NUMBER UNITS																	
49 OSTRICH FEEDERS	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	1.00	1.00	1.00	154	5	0
50 WATERER	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	1.00	1.00	1.00	155	5	0
52 OSTRICH FENCE	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	1.00	1.00	1.00	164	5	0
53 OSTRICH SHED	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.13	1.00	1.00	168	5	0
OTHER LABOR																		
	UNITS																	
72 FEED & WATER LABOR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	6.50	1.00 HOUR	12	7	0	
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	1,825.00	2,200.00	2,000.00	1,450.00	0.00	0.00	7,275.00				
TOTAL EXPENDITURES	ACRE	0.00	0.00	1.58	755.18	848.98	867.30	701.23	460.11	248.04	68.58	0.00	0.00	4,014.88				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														3,260.12				
ANNUAL CAPITAL	DOL	0.00	0.00	0.13	85.56	136.15	208.42	0.00	0.00	0.00	0.00	0.00	0.00	410.26				
EQUIPMENT LABOR	HR	0.00	0.00	0.00	2.77	2.77	2.77	2.77	2.77	2.77	2.77	0.00	0.00	19.38				
LIVESTOCK LABOR	HR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	13.13				
TOTAL LABOR	HR	0.00	0.00	0.00	4.64	4.64	4.64	4.64	4.64	4.64	4.64	0.00	0.00	32.50				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR.	0.00	0.00	0.00	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.00	2.20				
	FIXED	0.00	0.00	0.00	4.52	4.52	4.52	4.52	4.52	4.52	4.52	0.00	0.00	31.61				
WATERER	VAR.	0.00	0.00	0.00	1.39	1.39	1.39	1.39	1.39	1.39	1.39	0.00	0.00	9.72				
	FIXED	0.00	0.00	0.00	8.65	8.65	8.65	8.65	8.65	8.65	8.65	0.00	0.00	68.58				
OSTRICH FENCE	VAR.	0.00	0.00	0.00	19.29	19.29	19.29	19.29	19.29	19.29	19.29	0.00	0.00	135.00				
	FIXED	0.00	0.00	0.00	100.71	100.71	100.71	100.71	100.71	100.71	100.71	0.00	0.00	705.00				
OSTRICH SHED	VAR.	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	1.03				
	FIXED	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	12.44				

JOBS' UPDATED BUDGETS (CONFINEMENT SYSTEM)
BIRDS TRANSFERRED FROM HATCHER AND GROWER BUDGET
8.8% DEATH LOSS

CRIDER
21-Apr-99
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXI
OSTRICH GROWER BUDGET
50% PASTURE SYSTEM

OSTRICH GROWER BUDGET, PER TRIO (PASTURE, 50%)				67000501
50% HATCH, 80% SURVIVAL AT 3 MONTHS				03/15/99
BEGIN WITH 80 FERTILE EGGS, END WITH 32 CHICKS PER TRIO PER YEAR				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICK VITAMINS	HEAD	2.65	32.00	84.80
STARTER FEED	LBS.	0.22	1,803.86	395.05
DISEASE/PEST CONTROL	HEAD	31.60	1.00	31.60
EGGS	EGG	0.00	80.00	0.00
VET CHARGE	HEAD	7.50	32.00	240.00
NATIVE PASTURE	AUMS	8.43	11.28	95.09
SOYBEAN MEAL	LBS	0.08	4,612.26	380.51
GROUND CORN	LBS	0.06	3,201.80	192.11
FISH MEAL	LBS	0.28	285.20	80.57
ANNUAL OPERATING CAPITAL	DOL.	0.09	1,403.49	122.80
EQUIPMENT LABOR	HR.	6.50	13.75	89.38
FEED & WATER LABOR	HR.	6.50	51.41	334.17
OTHER LABOR	HR.	6.50	114.50	744.25
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			119.05
TOTAL OPERATING COSTS				2,909.37
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		2,967.58	270.05	
DEPR, TAXES, INSURANCE			434.90	
TOTAL FIXED COSTS				704.95
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
TOTAL RECEIPTS				0.00
RETURNS ABOVE TOTAL OPERATING COST				-2,909.37
RETURNS ABOVE ALL SPECIFIED COSTS				-3,614.32
PASTURE SYSTEM, 50% OF DRY MATTER				CRIDER
EGGS FROM BREEDER BUDGET				20-Apr-99
TRANSFER CHICKS TO FINISHER BUDGET END OF MARCH				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXI (Continued)
OSTRICH GROWER BUDGET
50% PASTURE SYSTEM

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

TABLE XXII
OSTRICH FINISHER BUDGET
50% PASTURE BUDGET

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 50%)				67000502
BIRDS SLAUGHTERED 14 MONTHS OLD				3/15/99
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.000	7.600	0.00
CHICKS 9mo	HEAD	0.000	9.200	0.00
CHICKS 8mo	HEAD	0.000	10.400	0.00
CHICKS 7mo	HEAD	0.000	4.800	0.00
NATIVE PASTURE	AUMS	8.430	13.420	113.13
SOYBEAN MEAL	LBS	0.083	5446.409	449.33
GROUND CORN	LBS	0.060	5103.560	306.21
FISH MEAL	LBS	0.283	332.074	93.81
VET CHARGE	HEAD	7.500	32.000	240.00
ANNUAL OPERATING CAPITAL	DOL.	0.088	132.537	11.60
EQUIPMENT LABOR	HR.	6.50	4.250	27.63
FEED & WATER LABOR	HR.	6.50	13.125	85.31
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			23.87
TOTAL OPERATING COSTS				1350.88
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		683.51	62.20	
DEPR, TAXES, INSURANCE			77.46	
TOTAL FIXED COSTS				139.66
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
14MTH. OLD BIRDS	HEAD	215.00	29.10	6256.50
TOTAL RECEIPTS				6256.50
RETURNS ABOVE TOTAL OPERATING COST				4905.62
RETURNS ABOVE ALL SPECIFIED COSTS				4765.96
PASTURE SYSTEM				CRIDER
50% OF DRY MATTER				20-Apr-99
8.8% DEATH LOSS				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXII (Continued)

OSTRICH FINISHER BUDGET

50% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 50%)
BIRDS SLAUGHTERED 14 MONTHS OLD
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS

67000502
3/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CONT
1 14MTH. OLD BIRDS	0.00	0.00	0.00	0.00	0.00	0.00	8.50	8.80	8.00	5.80	0.00	0.00	215.000	1.00	HEAD	1	2	0
OPERATING INPUTS																		
	RATE/UNIT																	
9 CHICKS 10mo	0.00	0.00	0.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
10 CHICKS 9mo	0.00	0.00	0.00	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
11 CHICKS 8mo	0.00	0.00	0.00	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
12 CHICKS 7mo	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
16 NATIVE PASTURE	0.00	0.00	0.00	2.92	3.13	2.50	2.59	1.60	0.68	0.00	0.00	0.00	8.430	1.00	ALMS	2	3	0
17 SOYBEAN MEAL	0.00	0.00	0.00	1188.05	1289.07	1016.12	1049.81	850.19	275.36	0.00	0.00	0.00	0.083	1.00	LBS	3	3	0
18 GROUND CORN	0.00	0.00	0.00	1111.39	1189.18	952.16	983.54	809.28	258.03	0.00	0.00	0.00	0.080	1.00	LBS	4	3	0
19 FISH MEAL	0.00	0.00	0.00	72.32	77.38	61.95	64.00	39.64	16.79	0.00	0.00	0.00	0.283	1.00	LBS	5	3	0
20 VET CHARGE	0.00	0.00	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0.00	0.00	7.500	32.00	HEAD	6	3	0
EQUIPMENT REQUIREMENTS																		
													NUMBER	PROP	CHECK	EQUIP	TYPE	CONT
													UNITS	OF COST	FIGURE	CODE		
49 OSTRICH FEEDERS	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.50	1.0000	1.0000	154	5	0
50 WATERER	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.50	1.0000	1.0000	155	5	0
52 OSTRICH FENCE	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.13	1.0000	1.0000	164	5	0
53 OSTRICH SHED	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.13	1.0000	1.0000	166	5	0
OTHER LABOR																		
72 FEED & WATER LABOR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	8.50	1.00	HOUR	12	7	0
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	1367.50	1892.00	1720.00	1247.00	0.00	0.00	6256.50				
TOTAL EXPENDITURES	ACRE	0.00	0.00	0.00	265.17	279.89	235.13	241.11	170.48	104.27	15.80	0.00	0.00	1323.26				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														4933.24				
ANNUAL CAPITAL	DOL	0.00	0.00	0.00	22.10	45.42	65.02	0.00	0.00	0.00	0.00	0.00	0.00	132.54				
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00	0.00	4.25				
LIVESTOCK LABOR	HR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	13.13				
TOTAL LABOR	HR	0.00	0.00	0.00	2.48	2.48	2.48	2.48	2.48	2.48	2.48	0.00	0.00	17.38				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR.	0.00	0.00	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.00	1.10				
	FIXED	0.00	0.00	0.00	2.28	2.28	2.28	2.28	2.28	2.28	2.28	0.00	0.00	15.81				
WATERER	VAR.	0.00	0.00	0.00	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.00	0.00	4.86				
	FIXED	0.00	0.00	0.00	3.33	3.33	3.33	3.33	3.33	3.33	3.33	0.00	0.00	23.28				
OSTRICH FENCE	VAR.	0.00	0.00	0.00	2.41	2.41	2.41	2.41	2.41	2.41	2.41	0.00	0.00	18.68				
	FIXED	0.00	0.00	0.00	12.59	12.59	12.59	12.59	12.59	12.59	12.59	0.00	0.00	86.13				
OSTRICH SHED	VAR.	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	1.03				
	FIXED	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	12.44				

PASTURE SYSTEM
50% OF DRY MATTER
& 8% DEATH LOSS

CRIDER
21-Apr-99
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXIII
OSTRICH GROWER BUDGET
75% PASTURE SYSTEM

OSTRICH GROWER BUDGET, PER TRIO (PASTURE 75%)				67000751
50% HATCH, 80% SURVIVAL AT 3 MONTHS				03/15/99
BEGIN WITH 80 FERTILE EGGS, END WITH 32 CHICKS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICK VITAMINS	HEAD	2.65	32.00	84.80
STARTER FEED	LBS.	0.22	1,803.86	395.05
DISEASE/PEST CONTROL	DOL.	31.60	1.00	31.60
EGGS	EGG	0.00	80.00	0.00
VET CHARGE	HEAD	7.50	32.00	240.00
NATIVE PASTURE	AUMS	8.43	16.91	142.55
SOYBEAN MEAL	LBS	0.08	2,407.15	198.59
GROUND CORN	LBS	0.06	2,273.44	136.41
FISH MEAL	LBS	0.28	128.96	36.43
ANNUAL OPERATING CAPITAL	DOL.	0.09	1,354.59	118.53
EQUIPMENT LABOR	HR.	6.50	13.75	89.38
FEED & WATER LABOR	HR.	6.50	51.41	334.17
OTHER LABOR	HR.	6.50	114.50	744.25
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			119.05
TOTAL OPERATING COSTS				2,670.79
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1%		2,967.58	270.05	
DEPR, TAXES, INSURANCE			434.90	
TOTAL FIXED COSTS				704.95
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
TOTAL RECEIPTS				0.00
RETURNS ABOVE TOTAL OPERATING COST				-2,670.79
RETURNS ABOVE ALL SPECIFIED COSTS				-3,375.74
PASTURE SYSTEM, 75% OF DRY MATTER				CRIDER
EGGS FROM BREEDER BUDGET				20-Apr-99
TRANSFER CHICKS TO FINISHER BUDGET END OF MARCH				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

OSTRICH GROWER BUDGET

75% PASTURE SYSTEM

30/2/175
1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXIV
OSTRICH FINISHER BUDGET
75% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 75%)				67000752
BIRDS SLAUGHTERED 14 MONTHS OLD				3/15/99
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
NATIVE PASTURE	AUMS	8.43	20.12	169.61
SOYBEAN MEAL	LBS.	0.08	2,768.74	228.42
GROUND CORN	LBS.	0.06	2,594.29	155.66
FISH MEAL	LBS.	0.28	173.46	49.00
VET CHARGE	DOL.	7.50	32.00	240.00
ANNUAL OPERATING CAPITAL	DOL.	0.09	92.56	8.10
EQUIPMENT LABOR	HR.	6.50	4.25	27.63
FEED & WATER LAOR	HR.	6.50	11.25	73.13
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			23.87
TOTAL OPERATING COSTS				975.41
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		683.51	62.20	
DEPR, TAXES, INSURANCE			77.46	
TOTAL FIXED COSTS				139.66
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
14MTH. OLD BIRDS	HEAD	215.00	29.10	6,256.50
TOTAL RECEIPTS				6,256.50
RETURNS ABOVE TOTAL OPERATING COST				5,281.09
RETURNS ABOVE ALL SPECIFIED COSTS				5,141.44
PASTURE SYSTEM				CRIDER
75% OF DRY MATTER				20-Apr-99
8.8% DEATH LOSS				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXIV (Continued)

OSTRICH FINISHER BUDGET

75% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 75%)
BIRDS SLAUGHTERED 14 MONTHS OLD
BEGIN WITH 32 CHICKS AND END WITH 28.1 BIRDS

67000752
3/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CONT
1 14MTH OLD BIRDS	0.00	0.00	0.00	0.00	0.00	0.00	8.50	8.80	8.00	5.80	0.00	0.00	215.000	1.00	HEAD	1	2	0
OPERATING INPUTS																		
RATE/UNIT																		
8 CHICKS 10mo	0.00	0.00	0.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
10 CHICKS 8mo	0.00	0.00	0.00	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
11 CHICKS 8mo	0.00	0.00	0.00	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
12 CHICKS 7mo	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
16 NATIVE PASTURE	0.00	0.00	0.00	4.38	4.69	3.78	3.88	2.40	1.01	0.00	0.00	0.00	8.430	1.00	AUMS	2	3	0
17 SOYBEAN MEAL	0.00	0.00	0.00	582.93	633.83	507.48	524.24	372.74	137.54	0.00	0.00	0.00	0.083	1.00	LBS.	3	3	0
18 GROUND CORN	0.00	0.00	0.00	555.60	583.93	475.52	491.08	349.28	128.88	0.00	0.00	0.00	0.060	1.00	LBS.	4	3	0
19 FISH MEAL	0.00	0.00	0.00	38.15	38.65	35.80	31.95	22.73	8.38	0.00	0.00	0.00	0.283	1.00	LBS.	5	3	0
20 VET CHARGE	0.00	0.00	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0.00	0.00	7.500	32.00	DOL	8	3	0
EQUIPMENT REQUIREMENTS																		
NUMBER UNITS PROP OF COST CHECK FIGURE EQUIP CODE TYPE CONT																		
48 OSTRICH FEEDERS	0.0000	0.0000	0.0000	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.0000	0.0000	0.50	1.0000	1.0000	154	5	0
50 WATERER	0.0000	0.0000	0.0000	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.0000	0.0000	0.50	1.0000	1.0000	155	5	0
52 OSTRICH FENCE	0.0000	0.0000	0.0000	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.0000	0.0000	0.13	1.0000	1.0000	164	5	0
53 OSTRICH SHED	0.0000	0.0000	0.0000	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.1428	0.0000	0.0000	0.13	1.0000	1.0000	166	5	0
OTHER LABOR																		
UNITS CODE CODE																		
72 FEED & WATER LAOR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	8.50	1.00	HOUR	12	7	0
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	1387.50	1892.00	1720.00	1247.00	0.00	0.00	6256.50				
TOTAL EXPENDITURES	ACRE	0.00	0.00	0.00	0.00	184.99	193.98	167.75	170.05	133.96	85.56	3.41	0.00	947.78				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														5308.72				
ANNUAL CAPITAL	DOL	0.00	0.00	0.00	0.00	15.42	31.58	45.56	0.00	0.00	0.00	0.00	0.00	92.58				
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.00	0.00	4.25				
LIVESTOCK LABOR	HR	0.00	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	11.25				
TOTAL LABOR	HR	0.00	0.00	0.00	0.00	2.48	2.48	2.48	2.48	2.48	0.61	0.00	0.00	15.50				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR	0.00	0.00	0.00	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.00	1.10				
	FIXED	0.00	0.00	0.00	2.28	2.28	2.28	2.28	2.28	2.28	2.28	0.00	0.00	15.81				
WATERER	VAR	0.00	0.00	0.00	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.00	0.00	4.86				
	FIXED	0.00	0.00	0.00	3.33	3.33	3.33	3.33	3.33	3.33	3.33	0.00	0.00	23.28				
OSTRICH FENCE	VAR	0.00	0.00	0.00	2.41	2.41	2.41	2.41	2.41	2.41	2.41	0.00	0.00	16.88				
	FIXED	0.00	0.00	0.00	12.59	12.59	12.59	12.59	12.59	12.59	12.59	0.00	0.00	88.13				
OSTRICH SHED	VAR	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	1.03				
	FIXED	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	12.44				

PASTURE SYSTEM
75% OF DRY MATTER
8.8% DEATH LOSS

CRIDER
21-Apr-99
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXV
OSTRICH GROWER BUDGET
90% PASTURE SYSTEM

OSTRICH GROWER BUDGET, PER TRIO (PASTURE 90%)				67000901
15% NONHATCH, 50% HATCH, 40% SURVIVAL AT 3 MONTHS				03/15/99
BEGIN WITH 80 FERTILE EGGS, END WITH 32 CHICKS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICK VITAMINS	HEAD	2.65	32.00	84.80
STARTER FEED	LBS.	0.22	1,803.86	395.05
DISEASE/PEST CONTROL	DOL.	31.60	1.00	31.60
EGGS	EGG	0.00	80.00	0.00
VET CHARGE	HEAD	7.50	32.00	240.00
NATIVE PASTURE	AUMS	8.43	20.32	171.30
SOYBEAN MEAL	LBS	0.08	957.33	78.98
GROUND CORN	LBS	0.06	906.63	54.40
FISH MEAL	LBS	0.28	51.24	14.48
ANNUAL OPERATING CAPITAL	DOL.	0.09	1,320.66	115.56
EQUIPMENT LABOR	HR.	6.50	13.75	89.38
FEED & WATER LABOR	HR.	6.50	51.41	334.17
OTHER LABOR	HR.	6.50	114.50	744.25
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			119.05
TOTAL OPERATING COSTS				2,472.99
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1%		2,967.58	270.05	
DEPR, TAXES, INSURANCE			434.90	
TOTAL FIXED COSTS				704.95
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
TOTAL RECEIPTS				0.00
RETURNS ABOVE TOTAL OPERATING COST				-2,472.99
RETURNS ABOVE ALL SPECIFIED COSTS				-3,177.94
PASTURE SYSTEM, 90% OF DRY MATTER				CRIDER
EGGS FROM BREEDER BUDGET				20-Apr-99
TRANSFER CHICKS TO FINISHER BUDGET END OF MARCH				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXV (Continued)

OSTRICH FINISHER BUDGET

75% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 75%)
BIRDS SLAUGHTERED 14 MONTHS OLD
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS

87000752
3/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CONT
1 14MTH OLD BIRDS	0.00	0.00	0.00	0.00	0.00	0.00	6.50	8.80	8.00	5.80	0.00	0.00	215.000	1.00	HEAD	1	2	0
OPERATING INPUTS																		
RATE/UNIT																		
9 CHICKS 10mo	0.00	0.00	0.00	7.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
10 CHICKS 9mo	0.00	0.00	0.00	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
11 CHICKS 8mo	0.00	0.00	0.00	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
12 CHICKS 7mo	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	HEAD	1	3	0
16 NATIVE PASTURE	0.00	0.00	0.00	4.38	4.69	3.78	3.88	2.40	1.01	0.00	0.00	0.00	8.430	1.00	ALMS	2	3	0
17 SOYBEAN MEAL	0.00	0.00	0.00	582.83	833.83	507.48	524.24	372.74	137.54	0.00	0.00	0.00	0.083	1.00	LBS.	3	3	0
18 GROUND CORN	0.00	0.00	0.00	555.80	583.83	475.52	491.08	349.28	128.88	0.00	0.00	0.00	0.060	1.00	LBS.	4	3	0
19 FISH MEAL	0.00	0.00	0.00	36.15	38.85	35.80	31.95	22.73	8.39	0.00	0.00	0.00	0.283	1.00	LBS.	5	3	0
20 VET CHARGE	0.00	0.00	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0.00	0.00	7.500	32.00	DOL	6	3	0
EQUIPMENT REQUIREMENTS																		
													NUMBER	PROP	CHECK	EQUIP	TYPE	CONT
													UNITS	OF COST	FIGURE	CODE		
48 OSTRICH FEEDERS	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.50	1.0000	1.0000	154	5	0
50 WATERER	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.50	1.0000	1.0000	155	5	0
52 OSTRICH FENCE	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.13	1.0000	1.0000	164	5	0
53 OSTRICH SHED	0.0000	0.0000	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.0000	0.13	1.0000	1.0000	166	5	0
OTHER LABOR																		
72 FEED & WATER LABOR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	8.50	1.00	HOUR	12	7	0
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	1387.50	1892.00	1720.00	1247.00	0.00	0.00	6258.50				
TOTAL EXPENDITURES	ACRE	0.00	0.00	0.00	184.99	193.98	167.75	170.05	133.98	85.56	3.41	0.00	0.00	947.78				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														5308.72				
ANNUAL CAPITAL	DOL	0.00	0.00	0.00	15.42	31.58	45.56	0.00	0.00	0.00	0.00	0.00	0.00	92.56				
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00	0.00	4.25				
LIVESTOCK LABOR	HR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	11.25				
TOTAL LABOR	HR	0.00	0.00	0.00	2.48	2.48	2.48	2.48	2.48	2.48	0.81	0.00	0.00	15.50				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR.	0.00	0.00	0.00	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.00	1.10				
	FIXED	0.00	0.00	0.00	2.26	2.26	2.26	2.26	2.26	2.26	2.26	0.00	0.00	15.81				
WATERER	VAR.	0.00	0.00	0.00	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.00	0.00	4.80				
	FIXED	0.00	0.00	0.00	3.33	3.33	3.33	3.33	3.33	3.33	3.33	0.00	0.00	23.28				
OSTRICH FENCE	VAR.	0.00	0.00	0.00	2.41	2.41	2.41	2.41	2.41	2.41	2.41	0.00	0.00	18.88				
	FIXED	0.00	0.00	0.00	12.59	12.59	12.59	12.59	12.59	12.59	12.59	0.00	0.00	88.13				
OSTRICH SHED	VAR.	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	1.03				
	FIXED	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	12.44				

PASTURE SYSTEM
75% OF DRY MATTER
8.6% DEATH LOSS

CRIDER
21-Apr-99
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXVI
OSTRICH FINISHER BUDGET
90% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 90%)				67000902
BIRDS SLAUGHTERED 14 MONTHS OLD				3/15/99
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
CHICKS 10mo	HEAD	0.00	7.60	0.00
CHICKS 9mo	HEAD	0.00	9.20	0.00
CHICKS 8mo	HEAD	0.00	10.40	0.00
CHICKS 7mo	HEAD	0.00	4.80	0.00
NATIVE PASTURE	AUMS	8.43	24.16	203.67
SOYBEAN MEAL	LBS	0.08	1,089.39	89.87
GROUND CORN	LBS	0.06	1,020.82	61.25
FISH MEAL	LBS	0.28	66.42	18.76
VET CHARGE	DOL	7.50	32.00	240.00
ANNUAL OPERATING CAPITAL	DOL	0.09	68.45	5.99
EQUIPMENT LABOR	HR.	6.50	4.25	27.63
FEED & WATER LABOR	HR.	6.50	11.25	73.13
EQUIPMENT FUEL, LUBE, REPAIRS	DOL			23.87
TOTAL OPERATING COSTS				744.16
FIXED COSTS		AMOUNT	VALUE	
EQUIPMENT				
INTEREST AT 9.1 %		683.51	62.20	
DEPR, TAXES, INSURANCE			77.46	
TOTAL FIXED COSTS				139.66
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
14MTH. OLD BIRDS	HEAD	215.00	29.10	6,256.50
TOTAL RECEIPTS				6,256.50
RETURNS ABOVE TOTAL OPERATING COST				5,512.34
RETURNS ABOVE ALL SPECIFIED COSTS				5,372.68
PASTURE SYSTEM				CRIDER
90% OF DRY MATTER				20-Apr-99
8.8% DEATH LOSS				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXVI (Continued)
OSTRICH FINISHER BUDGET
90% PASTURE SYSTEM

OSTRICH FINISHER BUDGET, PER TRIO (PASTURE 90%)
BIRDS SLAUGHTERED 14 MONTHS OLD
BEGIN WITH 32 CHICKS AND END WITH 29.1 BIRDS

87000902
3/15/99
STATE

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	ITEM	TYPE	CONT
1 14MTH OLD BIRDS	0.00	0.00	0.00	0.00	0.00	0.00	6.50	8.80	8.00	5.80	0.00	0.00	215.00	1.00	BIRD	1.00	2.00	0.00
OPERATING INPUTS																		
	RATE/UNIT																	
9 CHICKS 10mo	0.00	0.00	0.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	HEAD	1.00	3.00	0.00
10 CHICKS 9mo	0.00	0.00	0.00	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	HEAD	1.00	3.00	0.00
11 CHICKS 8mo	0.00	0.00	0.00	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	HEAD	1.00	3.00	0.00
12 CHICKS 7mo	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	HEAD	1.00	3.00	0.00
16 NATIVE PASTURE	0.00	0.00	0.00	5.26	5.63	4.51	4.86	2.88	1.22	0.00	0.00	0.00	8.43	1.00	ALIMS	2.00	3.00	0.00
17 SOYBEAN MEAL	0.00	0.00	0.00	237.23	237.84	203.30	209.91	130.03	55.08	0.00	0.00	0.00	0.08	1.00	LBS	3.00	3.00	0.00
18 GROUND CORN	0.00	0.00	0.00	222.30	237.86	190.50	198.70	121.85	51.81	0.00	0.00	0.00	0.08	1.00	LBS	4.00	3.00	0.00
19 FISH MEAL	0.00	0.00	0.00	14.48	15.48	12.40	12.80	7.93	3.38	0.00	0.00	0.00	0.28	1.00	LBS	5.00	3.00	0.00
20 VET CHARGE	0.00	0.00	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0.00	0.00	7.50	32.00	DOL	8.00	3.00	0.00
EQUIPMENT REQUIREMENTS																		
	UNITS OF COST FIGURE CODE TYPE CONT																	
49 OSTRICH FEEDERS	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.50	1.00	1.00	154.00	5.00	0.00
50 WATERER	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.50	1.00	1.00	155.00	5.00	0.00
52 OSTRICH FENCE	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.13	1.00	1.00	164.00	5.00	0.00
53 OSTRICH SHED	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.13	1.00	1.00	166.00	5.00	0.00
OTHER LABOR																		
	UNITS CODE CODE																	
72 FEED & WATER LABOR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	6.50	1.00	HOUR	12.00	7.00	0.00
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																		
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	1,397.50	1,892.00	1,720.00	1,247.00	0.00	0.00	8,258.50				
TOTAL EXPENDITURES	ACRE	0.00	0.00	0.00	136.93	142.64	125.32	127.62	100.15	74.47	3.41	0.00	0.00	718.54				
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT														5,539.96				
ANNUAL CAPITAL	DOL	0.00	0.00	0.00	11.41	23.30	33.74	0.00	0.00	0.00	0.00	0.00	0.00	68.45				
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.00	0.00	4.25				
LIVESTOCK LABOR	HR	0.00	0.00	0.00	1.88	1.88	1.88	1.88	1.88	1.88	0.00	0.00	0.00	11.25				
OTHER LABOR	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
TOTAL LABOR	HR	0.00	0.00	0.00	2.48	2.48	2.48	2.48	2.48	2.48	0.61	0.00	0.00	15.50				
MACHINERY AND EQUIPMENT COSTS PER MONTH																		
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL				
OSTRICH FEEDERS	VAR.	0.00	0.00	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.00	1.10				
	FIXED	0.00	0.00	0.00	2.26	2.26	2.26	2.26	2.26	2.26	2.26	0.00	0.00	15.81				
WATERER	VAR.	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.00	0.00	4.86				
	FIXED	0.00	0.00	0.00	3.33	3.33	3.33	3.33	3.33	3.33	3.33	0.00	0.00	23.28				
OSTRICH FENCE	VAR.	0.00	0.00	0.00	2.41	2.41	2.41	2.41	2.41	2.41	2.41	0.00	0.00	16.88				
	FIXED	0.00	0.00	0.00	12.59	12.59	12.59	12.59	12.59	12.59	12.59	0.00	0.00	88.13				
OSTRICH SHED	VAR.	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.00	1.03				
	FIXED	0.00	0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	12.44				

PASTURE SYSTEM
90% OF DRY MATTER
8.8% DEATH LOSS

CRIDER
38,271.00
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

TABLE XXVII
COW-CALF BUDGET
WARM SEASON PASTURE

COW-CALF, SPRING CALVING, WARM SEASON PASTURE				11000000
COST/RETURN PER COW - RANCH SIZE UNIT				09/15/97
WINTER DM IS 25% NON-LEGUME HAY				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
NON-LEGUME HAY	LBS.	0.03	964.00	24.10
41-45% PROT.SUP.	LBS.	0.13	299.00	38.87
19-20% PRO.FEED	LBS.	0.08	367.00	29.36
SALT & MINERALS	LBS.	0.08	30.00	2.40
SUMMER PASTURE	AUMS	8.43	8.01	67.52
WINTER DRY PAST.	AUMS	8.43	3.53	29.76
VET SERVICE	HD.	2.80	1.00	2.80
VET-MD-SUPPLIES	HD.	14.65	1.00	14.65
MARKETING EXPENSE	CWT.	1.75	4.32	7.56
PERSONAL TAXES	HD.	5.30	1.00	5.30
HERD BULLS	CWT.	85.00	0.12	10.31
HAULING	CWT.	0.35	4.32	1.51
ANNUAL OPERATING CAPITAL	DOL.	0.09	139.18	12.18
MACHINERY LABOR	HR.	6.50	4.46	29.02
EQUIPMENT LABOR	HR.	6.50	0.04	0.27
LIVESTOCK LABOR	HR.	6.50	5.29	34.39
MACHINERY FUEL, LUBE, REPAIRS	DOL.			32.06
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			1.18
TOTAL OPERATING COSTS				343.24
FIXED COSTS		AMOUNT	VALUE	
MACHINERY				
INTEREST AT	9.1%	53.45	4.86	
DEPR, TAXES, INSURANCE			10.46	
EQUIPMENT				
INTEREST AT	9.1%	13.43	1.22	
DEPR, TAXES, INSURANCE			2.59	
LIVESTOCK				
BEEF COW		720.00		
BULL		49.95		
BEEF HEIFER		60.00		
HORSE		3.40		
INTEREST AT	9.1%	833.35	75.83	
TOTAL FIXED COSTS			94.97	
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
STR CALVES (4-5)	CWT.	94.00	1.92	180.74
HFR CALVES (4-5)	CWT.	79.00	1.27	100.01
COMMERCIAL COWS	CWT.	42.00	0.87	36.67
AGED BULLS	CWT.	49.00	0.14	6.65
HEIFERS(600-700)	CWT.	74.00	0.12	8.95
TOTAL RECEIPTS				333.03
RETURNS ABOVE TOTAL OPERATING COST				-10.21
RETURNS ABOVE ALL SPECIFIED COSTS				-105.18
88% CALF CROP AT 210 DAYS. 2YR FCH; 1000# MATURE COWS:				LALMAN, PEEL
2% COW DEATH LOSS EXCLUDED IN COW SALES				24-Oct-97
3% SHRINK OFF CATTLE WTS.				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXVII (Continued)

COW-CALF BUDGET

WARM SEASON PASTURE

COW-CALF, SPRING CALVING, WARM SEASON PASTURE COST RETURN PER COW - RANCH SIZE UNIT WINTER DM IS 25% NON-LEGUME HAY												11000000 09/15/97 STATE Annual Capital Month 10.00											
LINE	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00					
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT	CODE	CODE	TYPE	CONT				
1 STR CALVES (4-5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	84.00	4.37	CWT	7.00	2.00	0.00					
2 HFN CALVES (4-5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	79.00	4.22	CWT	8.00	2.00	0.00					
3 COMMERCIAL COWS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	42.00	8.73	CWT	17.00	2.00	0.00					
4 ADDED BULLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.00	12.58	CWT	20.00	2.00	0.00					
5 HEIFERS (500-700)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.00	8.05	CWT	17.00	2.00	0.00					
OPERATING EXPENSES																							
8 NON-LEGUME HAY	150.00	150.00	150.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	160.00	150.00	0.00	1.00	LBS	111.00	3.00	0.00					
10 41-45% PROT SUP	23.00	20.00	43.00	44.00	0.00	0.00	0.00	0.00	0.00	27.00	22.00	22.00	0.13	1.00	LBS	116.00	2.00	0.00					
11 16-20% PROT FEED	50.00	51.00	82.00	52.00	0.00	0.00	0.00	0.00	0.00	8.00	34.00	18.00	0.08	1.00	LBS	128.00	3.00	0.00					
12 SALT & MINERALS	2.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	0.08	1.00	LBS	103.00	3.00	0.00					
13 SUMMER PASTURE	0.00	0.00	0.00	0.00	1.36	1.33	1.35	1.27	1.44	1.13	0.86	0.60	8.43	1.00	ALMS	150.00	3.00	0.00					
14 WINTER DRY PAST	0.57	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.57	8.43	1.00	ALMS	157.00	3.00	0.00					
15 VET SERVICE	0.00	0.10	0.10	0.00	0.25	0.25	0.00	0.00	0.15	0.15	0.00	0.00	2.85	1.00	HO	411.00	3.00	0.00					
16 VET MD SUPPLIES	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	14.85	1.00	HO	418.00	3.00	0.00					
17 MARKETING EXPENSE	0.00	0.00	0.00	0.00	0.12	0.00	0.40	0.00	0.00	0.00	0.00	0.00	1.75	1.00	CWT	413.00	3.00	0.00					
18 PERSONAL TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	HO	442.00	3.00	0.00					
19 HERD BULLS	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.00	12.00	CWT	18.00	3.00	0.00					
20 HAY FND	0.00	0.00	0.00	0.00	0.12	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CWT	484.00	3.00	0.00					
MACHINERY REQUIREMENTS																							
31 PICKUP, 3/4 TON	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53					
32 STOCK TRAILER, 18 FT	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03					
EQUIPMENT REQUIREMENTS																							
40 LYST HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
50 FEEDING EQUIP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
LIVESTOCK INVESTMENT																							
60 BEEF COW	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08					
67 BULL	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08					
68 BEEF HEIFER	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08					
69 HORSE	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04					
OTHER LABOR																							
72 LIVESTOCK LABOR	0.50	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72					
MAJORITY OF RECEIPTS AND EXPENDITURES																							
CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL									
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.85	0.00	0.00	308.47	0.00	333.03									
TOTAL EXPENDITURES	ACRE	23.88	30.48	43.88	26.13	17.88	22.17	14.84	14.17	16.82	34.72	24.78	30.31	213.95									
RETURNS TO LAND, LABOR, CAPITAL														19.08									
ANNUAL CAPITAL																							
DOE	8.88	8.12	12.78	14.88	15.70	17.55	17.31	18.48	20.04	0.00	2.08	4.58	138.18										
MACHINERY LABOR	HR	0.88	0.68	0.88	0.88	0.17	0.12	0.17	0.13	0.13	0.13	0.21	0.88	0.68	4.48								
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04								
LIVESTOCK LABOR	HR	0.50	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	5.28									
TOTAL LABOR	HR	1.18	1.40	1.40	0.57	0.74	0.57	0.54	0.54	0.54	0.54	0.96	1.18	1.18	9.00								
MACHINERY AND EQUIPMENT COSTS PER MONTH																							
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL									
PICKUP, 3/4 TON	VAR	4.48	4.48	4.48	0.88	0.88	0.88	0.88	0.88	0.88	0.88	4.48	4.48	27.11									
STOCK TRAILER, 18 FT	FIXED	1.88	1.88	1.88	0.30	0.30	0.30	0.30	0.30	0.30	0.30	1.88	1.88	12.82									
	VAR	0.21	0.21	0.21	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	4.86									
	FIXED	0.21	0.21	0.21	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	3.30									
LYST HANDLING	VAR	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.88									
	FIXED	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	2.52									
	VAR	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.33									
FEEDING EQUIP	FIXED	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.18									

MIN COW CROP AT 215 DAYS 2% FOR 1800 WINTER COWS
2% COW DEATH LOSS EXCLUDED IN COW SALES
2% SHAWK OFF CATTLE WTS
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

LALMAN PEEL
09/15/97
1234

TABLE XXVIII
STOCKER STEER BUDGET
WARM SEASON PASTURE

STOCKER STEERS ON WARM SEASON PASTURE				13120007
COST/RETURNS PER HEAD, 100 OR MORE HEAD				09/15/97
SPRING CALVES HELD 330 DAYS, ROUGHED THROUGH WINTER				STATE
OPERATING INPUTS	UNITS	PRICE	QUANTITY	VALUE
STR CALVES (4-5)	CWT.	94.00	4.36	409.84
SUMMER PASTURE	AUMS	8.43	2.92	24.62
41-45% PROT.SUP.	LBS.	0.13	162.00	21.06
SALT & MINERALS	LBS.	0.08	17.50	1.40
MARKETING EXPENSE	CWT.	1.75	7.50	13.13
VET SERVICE	HD.	8.00	1.00	8.00
VET MEDICINE	HD.	6.00	1.00	6.00
WINTER DRY PAST.	AUMS	8.43	1.50	12.65
21-25% PROT.SUP.	LBS.	0.09	526.00	47.34
CUSTOM HAULING	CWT.	0.35	11.86	4.15
ANNUAL OPERATING CAPITAL	DOL.	0.09	409.23	35.81
MACHINERY LABOR	HR.	6.50	1.50	9.75
EQUIPMENT LABOR	HR.	6.50	0.03	0.18
LIVESTOCK LABOR	HR.	6.50	1.56	10.11
MACHINERY FUEL, LUBE, REPAIRS	DOL.			11.09
EQUIPMENT FUEL, LUBE, REPAIRS	DOL.			0.79
TOTAL OPERATING COSTS				615.90
FIXED COSTS		AMOUNT	VALUE	
MACHINERY				
INTEREST AT	9.1%	20.46	1.86	
DEPR, TAXES, INSURANCE			3.81	
EQUIPMENT				
INTEREST AT	9.1%	8.95	0.81	
DEPR, TAXES, INSURANCE			1.73	
TOTAL FIXED COSTS				8.22
PRODUCTION	UNITS	PRICE	QUANTITY	VALUE
STEERS (700-800)	CWT.	77.00	7.35	565.95
TOTAL RECEIPTS				565.95
RETURNS ABOVE TOTAL OPERATING COST				-49.95
RETURNS ABOVE ALL SPECIFIED COSTS				-58.17
AVE NET GAIN 0.95/DAY, 2% DEATH LOSS				PEEL, HOBBS
3% SHRINK OFF CATTLE				24-Oct-97
41% PROTEIN SUPPL. IN SUMMER AS NEEDED				1234
DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS				
OKLAHOMA STATE UNIVERSITY				

TABLE XXVIII (Continued)

STOCKER STEER BUDGET

WARM SEASON PASTURE

STOCKER STEERS ON WARM SEASON PASTURE
COST/RETURNS PER HEAD, 100 OR MORE HEAD
SPRING CALVES HELD 330 DAYS, ROUGHED THROUGH WINTER

13120007
09/15/97
STATE

Annual Capital Month
8

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
PRODUCTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	WEIGHT	UNIT CODE	ITEM CODE	TYPE	CONT	
1 STEERS (700-800)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	77.00	750 CWT.		13.00	2.00	0.00	
OPERATING INPUTS										RATE/UNIT									
9 STR CALVES (4-5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	84.00	4.38 CWT.		7.00	3.00	0.00	
10 SUMMER PASTURE	0.00	0.00	0.00	0.00	0.57	0.58	0.58	0.58	0.61	0.00	0.00	0.00	8.43	1.00 ALMS		150.00	3.00	0.00	
11 41-45% PROT.SUP.	23.00	24.00	24.00	17.00	0.00	0.00	0.00	0.00	30.00	0.00	22.00	22.00	0.13	1.00 LBS.		116.00	3.00	0.00	
12 SALT & MINERALS	1.50	1.50	1.50	1.50	1.70	1.70	1.70	1.70	1.70	0.00	1.50	1.50	0.08	1.00 LBS.		103.00	3.00	0.00	
13 MARKETING EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	0.00	0.00	1.75	1.00 CWT.		413.00	3.00	0.00	
14 VET SERVICE	0.00	0.00	0.00	0.00	0.70	0.10	0.10	0.10	0.00	0.00	0.00	0.00	8.00	1.00 HD.		411.00	3.00	0.00	
15 VET MEDICINE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	6.00	1.00 HD.		410.00	3.00	0.00	
16 WINTER DRY PAST.	0.21	0.21	0.23	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.21	8.43	1.00 ALMS		157.00	3.00	0.00	
17 21-25% PROT.SUP.	91.00	96.00	100.00	65.00	0.00	0.00	0.00	0.00	0.00	0.00	89.00	89.00	0.09	1.00 LBS.		111.00	3.00	0.00	
18 CUSTOM HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.50	0.00	4.38	0.00	0.35	1.00 CWT.		308.00	3.00	0.00	
MACHINERY REQUIREMENTS										HOURS				NUMBER		POWER		MACH	
31 PICKUP, 3/4 TON	0.11	0.11	0.11	0.11	0.06	0.06	0.06	0.06	0.06	0.00	0.11	0.11	DEC	XXXXX	ORCKRS	UNIT	CODE	TYPE	
32 STOCK TRAILER, 16 FT	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.03	0.03	0.03	0.00	1.00	10.00	0.00	4.00	
EQUIPMENT REQUIREMENTS										NUMBER		PROP		CHECK		EQUIP		CONT	
49 LVST HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	12.00	5.00	2.00	
50 FEEDING EQUIP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	83.00	5.00	2.00	
OTHER LABOR										PRICE		NUMBER		UNIT		ITEM		CONT	
72 LIVESTOCK LABOR	0.15	0.15	0.15	0.15	0.07	0.07	0.07	0.07	0.13	0.00	0.40	0.15	8.50	1.00 HR.		12.00	7.00	0.00	
MONTHLY SUMMARY OF RECEIPTS AND EXPENDITURES																			
CATEGORY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL						
TOTAL RECEIPTS	ACRE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	565.95	0.00	0.00	0.00	565.95						
TOTAL EXPENDITURES	ACRE	15.38	15.94	16.48	14.28	11.80	7.08	7.08	13.08	26.54	0.00	427.60	805.87						
RETURNS TO LAND, LABOR, CAPITAL, MACHINERY, OVERHEAD, RISK, AND MANAGEMENT													-40.02						
ANNUAL CAPITAL	DOL	38.18	39.49	40.86	42.05	43.03	43.82	44.21	45.30	0.00	0.00	35.63	36.88	409.23					
MACHINERY LABOR	HR	0.17	0.17	0.17	0.17	0.10	0.10	0.10	0.10	0.10	0.00	0.17	0.17	1.50					
EQUIPMENT LABOR	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
LIVESTOCK LABOR	HR	0.15	0.15	0.15	0.15	0.07	0.07	0.07	0.07	0.13	0.00	0.40	0.15	1.58					
TOTAL LABOR	HR	0.32	0.32	0.32	0.32	0.17	0.17	0.17	0.17	0.22	0.00	0.57	0.32	3.08					
MACHINERY AND EQUIPMENT COSTS PER MONTH																			
ITEM	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL		HRS USE			
PICKUP, 3/4 TON	VAR.	0.33	0.33	0.33	0.33	0.42	0.42	0.42	0.42	0.42	0.00	0.83	0.83	7.69		0.81			
FIXED	VAR.	0.41	0.41	0.41	0.41	0.19	0.19	0.19	0.19	0.19	0.00	0.41	0.41	3.41					
STOCK TRAILER, 16 FT	VAR.	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.31	0.31	3.40		0.33			
FIXED	VAR.	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00	0.21	0.21	2.27					
LVST HANDLING	VAR.	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.57					
FIXED	VAR.	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.18	0.18	1.78					
FEEDING EQUIP	VAR.	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.02	0.02	0.22					
FIXED	VAR.	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.00	0.07	0.07	0.78					

AVE NET GAIN \$85/DAY, 2% DEATH LOSS
3% SHRINK OFF CATTLE
41% PROTEIN SUPPL. IN SUMMER AS NEEDED

PEEL, HOBBS
09/15/97
1234

DEVELOPED AND PROCESSED BY DEPARTMENT OF AGRICULTURAL ECONOMICS
OKLAHOMA STATE UNIVERSITY

2
VITA

Shawna Michelle Crider

Candidate for the Degree of

Master of Science

Thesis: ECONOMIC COMPARISON OF OSTRICH AND BEEF CATTLE
PRODUCTION ON PASTURE IN OKLAHOMA

Major Field: Agricultural Economics

Biographical:

Personal Data: Born in New Orleans, Louisiana, December 12, 1975,
the daughter of Mr. and Mrs. Herb Kelly. Married in Harrison,
Arkansas, October 25, 1997 to Mr. Kenneth Randy Crider.

Education: Graduated from Cleveland High School, Cleveland,
Oklahoma, in May, 1993; received Bachelor of Science in Mathematics
from Northeastern State University in July 1997; completed
requirements for the Master of Science degree at Oklahoma State
University in May, 1999.

Professional Experience: Graduate Research Assistant, January 1998 to
April 1999; Teaching Assistant, August 1997 to December 1997,
Department of Agricultural Economics, Oklahoma State University.