
AGRICULTURAL ALTERNATIVES

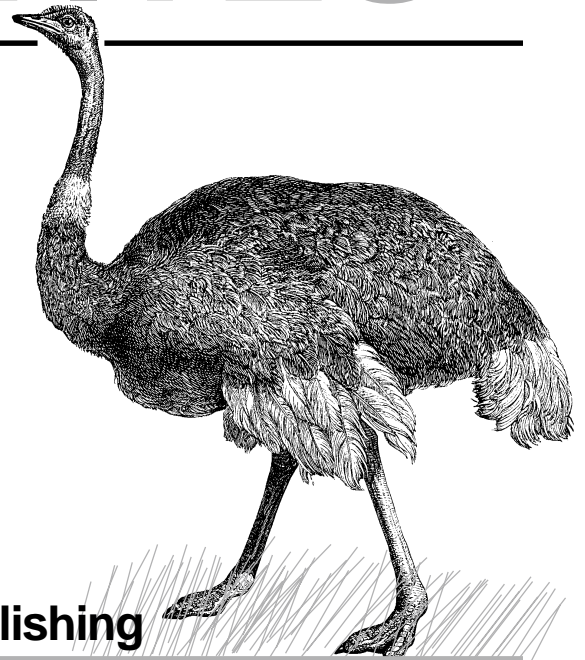
Ostrich Production

The ostrich, a flightless bird that belongs to the ratite family and originates from Africa, is the world's largest living bird. When fully grown, the ostrich weighs approximately 450 pounds and stands eight-feet-tall. Although ostrich farming faded in the United States during the early 1930s, it is now a fast-growing agricultural alternative. It has become popular in the eastern part of the United States during the past five years. Ostrich production can be adopted by small-scale and part-time farmers with adequate investment capital because land and husbandry requirements are minimal.

Marketing

As with any business, the ostrich producer needs to research the markets for his/her product before it is produced. The major market for ostriches is breeding stock. In order for the ostrich industry to become a more viable agricultural enterprise, the markets for leather, meat, and feathers need to be further developed. The ostrich produces three marketable products: the skin, which is soft and durable, the meat which is similar to beef in color, taste, and texture (but is lower in fat and cholesterol), and the feathers. Today the market for ostrich feathers is limited. Ostrich skin boots remain popular and the meat has a gourmet market.

This publication was developed by the Small and Part-time Farming Project at Penn State with support from the U.S. Department of Agriculture-Extension Service.



Establishing

An ostrich operation can be established in several ways. Evaluate the following options and decide which one is best for you. Consider the following:

- The producer can purchase and incubate eggs. This method is lowest in cost, but also highest in risk. Ostrich eggs are white and easily candled; their fertility can be guaranteed once incubation is started. However, a sound knowledge of ostrich egg incubation is required for a successful hatch.
- The producer can purchase chicks more than three months old (the highest mortality rate is from one day to three months). Although more expensive than purchasing eggs or hatchlings, the purchase of chicks at this age will probably prove more cost effective because the mortality rate is greatly reduced after the age of three months.
- The producer can purchase yearlings or young adults. While yearlings are more expensive than chicks, yearlings should be productive within two years.
- The most costly method is the purchase of proven breeders, pairs of birds that have produced fertile eggs together. This method of buying will allow production to begin in the next season.

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Budgeting

Included in this publication are four sample budgets which summarize the costs and returns of purchasing chicks at three months for sale at 12 months, buying chicks at 13 months for sale at 18 to 20 months for breeder stock and slaughter stock, and purchasing a breeder pair. These sample budgets should help ensure that all costs and receipts are included in your calculations. Costs and returns are often difficult to estimate in budget preparation because they are numerous and variable. Therefore, you should think of these budgets as an approximation and then make appropriate adjustments using the “Your Estimate” column to reflect specific situations.

From these sample budgets, it appears that if you can sell in the breeder market you may be able to realize substantial profits. Not all birds can be sold in the breeder market and the extent to which this market can be further expanded is not known. The slaughter market is very limited. With the present price of the animals, the overall profitability of the enterprise is very questionable.

Incubating

The process of hatching can be very rewarding as well as very frustrating. Incubator costs range from \$300 to \$4,500. For the beginner, it may be more profitable to have a custom hatcher who has experience with ostrich eggs do the hatching. If you wish to do your own hatching, get information from the various commercial incubator companies, talk to others who are hatching, and work with poultry specialists on specific incubation questions.

Housing and Fencing

Each pair of ostriches should be considered individually, but the following recommendations can be used as guidelines for fencing, pen size, and shelter.

Ostriches require high tensile or mesh fence that will not allow them to get their heads or legs caught. Ostriches can be quite aggressive and will bite or nip. They will reach over, through, and under any type of fence if possible, and can hurt themselves if their necks or legs get caught. Ostriches can grow to more than eight-feet-tall so the fencing should be at least six-feet high around a recommended running area of one to three acres.

Ostriches need shelter from the extreme cold of winter and heat of summer. The shelter is best placed inside the fenced area where ostriches will have free access. The design of the shelter can range from a plywood three-sided building to a small barn that can be heated if necessary. A shelter measuring 20 feet by 20 feet is adequate for a breeder pair.

Managing for Health and Productivity

Ostriches have developed unique characteristics in order to adapt and survive. These characteristics make ostriches different from other birds in terms of management and nutrition. To ensure that your ostriches are healthy and productive, you should practice appropriate management techniques. Consider the following:

- When changing from one feed to another, do so gradually over a ten-day period.
- Make certain your birds get enough exercise. Exercise helps to prevent leg problems and decrease the incidence of impactions.
- Minimize moving birds from one location to another, either within the same production unit or to another.
- Carefully check pens for and remove any object that can be picked up and swallowed.
- Mixing grit with feed may help to decrease the incidence of impactions.

Nutrition

As with any livestock, the nutritional needs of ostriches are different at different stages of development.

■ Hatchlings – hatching to two days of age. Provide water and start chicks on a good quality turkey or game bird starter ration containing at least 26 percent protein. Chicks should receive continuous light. The first week after hatching it is imperative that the yolk sac be completely absorbed. Running seems to help the chick absorb the yolk sac. This is the most difficult stage in raising ostriches. Chicks will eat anything and tend to eat too much. Impaction is the most common reason for death.

■ Chicks – two days after hatch to approximately six months of age. Feed a good starter crumble either from the ratite rations developed by certain feed companies or a regular chicken starter with at least 26 percent protein. Chicks should receive the starter crumble ration at all times during the first three weeks. After the first three weeks, feed all they can consume in two, short (20 minutes), daily feeding periods. Alfalfa pellets should be available on a continuous basis. Vitamins and electrolytes for poultry should be added to the drinking water at the recommended level for the first two to three weeks of age.

■ Yearlings – six months to approximately 18 months of age. Use a commercial ratite grower feed or a turkey-broiler grower feed. Protein should be 24 to 26 percent and fiber should be 11 to 12 percent when the birds are not on grass.

■ Adult – when the birds are sexually mature. Use a layer ration or a breeder ration from a commercial ratite feed company and supplemental alfalfa pellets or cubes. Pellets or cubes are less wasteful and easier to feed than hay.

Always have clean water available to all birds at all stages of development. Waterers should be rinsed daily and scrubbed with soap and water every three days. Grit is also essential to an ostrich diet. Small stones or commercial grit is best.

Breeding

Three types of ostriches are raised commercially: black, blue, and red. Ostriches are normally paired off for breeding. Hens will start laying anywhere from 24 to 36 months of age. Hens tend to mature earlier than males. The breeding season is between February and August. The female can lay up to 20 eggs per year; the egg incubation process takes approximately six weeks.

General Information Contacts

Zoann Parker
Penn State Cooperative Extension
1383 Arcadia Road, Room 1
Lancaster, PA 17601-3149
(717) 394-6851

Publications

Animal Finder's Guide
P.O. Box 99
Prairie Creek, IN 47869

Exotic Livestock & Wildlife
Attn: Janet Sands
424 W. Griggs
Las Cruces, NM 88005

The Ostrich News
P.O. Box 860
502 "C" St.
Cache, OK 73527-0860
(405) 429-3765

The Ratite Marketplace
P.O. Box 1613
Bowie, TX 76230
1-800-972-7730

Wings and Hooves
Editor: Mark Lowry
714 Poyntz, Suite B
Manhattan, KS 66502

Associations

American Ostrich Association
227 W. Magnolia, Suite 210
Fort Worth, TX 76104

Prepared by Zoann Parker, associate extension agent, George L. Greaser, senior research associate in agricultural economics, and Jayson K. Harper, assistant professor of agricultural economics.

Sample Ostrich Chick Budget

Starting with a male and female chick purchased at three mounts and sold at 12 months of age.

Item	3 to 12 months of age	Your estimate
Receipts		
Chicks sold	\$18,000.00	_____
Meat	\$0.00	_____
Leather	\$0.00	_____
<i>Total receipts</i>	\$18,000.00	_____
Variable costs		
Cost of chicks	\$9,000.00	_____
Feed costs	\$60.00	_____
Utilities	\$6.00	_____
Supplies, misc. exp.	\$6.00	_____
Insurance	\$720.00	_____
Interest on three birds	\$607.50	_____
Marketing costs	\$100.00	_____
<i>Total variable costs</i>	\$10,499.50	_____
Fixed costs		
Build., equip., fencing	\$200.00	_____
Insurance, taxes	\$2.00	_____
<i>Total fixed cost</i>	\$202.00	_____
Total costs	\$10,701.50	_____
Returns		
Net returns over variable cost	\$7,500.50	_____
Net returns	\$7,298.50	_____

Initial resource requirements

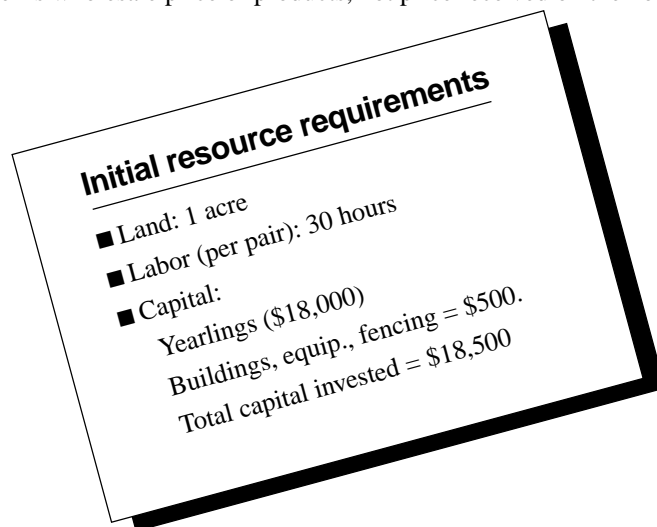
- Land: 1 acre
- Labor (per pair): 60 hours
- Capital:
 - Chicks (\$9,000)
 - Buildings, equip., fencing = \$2,000.
 - Total capital invested = \$11,000

Sample Ostrich Yearling Budget

Starting with a 13-month old male and female to be sold at 18 to 20 months.

Item	Breeders for slaughter	Value of birds	Your estimate
Receipts			
Yearlings	\$25,000.00	\$0.00	_____
Meat ^a	\$0.00	\$2,200.00	_____
Leather ^a	\$0.00	\$1,200.00	_____
<i>Total receipts</i>	\$25,000.00	\$3,400.00	_____
Variable costs			
Cost for chicks	\$18,000	\$18,000	_____
Feed costs	\$89.60	\$89.60	_____
Utilities	\$2.00	\$2.00	_____
Supplies, misc. exp.	\$2.00	\$2.00	_____
Insurance	\$2,160.00	\$0.00	_____
Interest on investment	\$1,215.00	\$1,215.00	_____
Marketing costs	\$100.00	\$5.00	_____
<i>Total variable costs</i>	\$21,568.60	\$19,313.60	_____
Fixed costs			
Buildings, equip., fencing	\$100.00	\$100.00	_____
Insurance, taxes	\$5.00	\$5.00	_____
<i>Total fixed costs</i>	\$105.00	\$105.00	_____
Total costs	\$21,673.60	\$19,418.60	_____
Returns			
Net returns over variable costs	\$3,431.40	(\$15,913.60)	_____
Net returns	\$3,326.40	(\$16,018.60)	_____

^a Value for slaughter is wholesale price of products, not price received on the hoof



Ostrich Breeder Budget

One breeding pair purchased at two years of age.

Item	Year 3	Year 4	Year 5	Year 6	Year 7	Your estimate
Receipts						
Price per chick	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	_____
Number of chicks sold	5	8	11	14	17	_____
<i>Total receipts</i>	\$22,500	\$36,000	\$49,500	\$63,000	\$76,500	_____
Variable costs						
Feed adults	\$850	\$850	\$850	\$850	\$850	_____
Feeding chicks for 3 months	\$25	\$40	\$55	\$70	\$85	_____
Utilities	\$400	\$400	\$400	\$400	\$400	_____
Supplies, vet, misc. exp.	\$200	\$200	\$200	\$200	\$200	_____
Custom hatch ^a	\$5,625	\$9,000	\$12,375	\$15,750	\$19,125	_____
Insurance	\$4,400	\$4,400	\$4,400	\$4,400	\$4,400	_____
Interest on breeder pair	\$314	\$314	\$314	\$314	\$314	_____
Marketing costs	\$250	\$400	\$550	\$700	\$850	_____
<i>Total variable costs</i>	\$12,064	\$15,604	\$19,144	\$22,684	\$26,224	_____
Fixed costs						
Cost of breeders	\$7,857	\$7,857	\$7,857	\$7,857	\$7,857	_____
Build., equip., fencing	\$500	\$500	\$500	\$500	\$500	_____
Chick house	\$400	\$400	\$400	\$400	\$400	_____
Micro chip reader and chip	\$375	\$375	\$375	\$375	\$375	_____
Incubator and hatch ^a	\$0	\$0	\$0	\$0	\$0	_____
Brooder room	\$20	\$20	\$20	\$20	\$20	_____
<i>Total fixed costs</i>	\$9,152	\$9,152	\$9,152	\$9,152	\$9,152	_____
Total costs	\$21,541	\$24,756	\$28,296	\$31,836	\$35,376	_____
Returns						
Net returns over variable cost	\$10,436	\$20,396	\$30,356	\$40,316	\$50,276	_____
Net returns	\$1,284	\$11,244	\$21,204	\$31,164	\$41,124	_____
Net present value over five years (time use of money) ^b			\$78,554			_____

^a Producers can either use custom hatching facilities or learn to do the hatching.

^b Net present value is used to calculate the returns from a long-term investment at the time the investment is made.

Initial resource requirements

- Land: 2 acres
- Labor (per pair): 30 hours
- Capital:
 - Breeders (\$55,000)
 - Buildings, equip., fencing = \$5,800.
 - Total capital invested = \$60,800

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Issued in furtherance of Cooperative Extension Work, Acts of Congress May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture and the Pennsylvania Legislature. L.F. Hood, Director of Cooperative Extension, The Pennsylvania State University.

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