



Ostrich

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Ostriches are the largest living birds in the world. Native to Africa, ostriches are flightless, a characteristic they share with the market saw their original investment increase tenfold. But, as breeding stock numbers increase, potential investors are cautious about potential markets for ostrich.

Physical Attributes

A male ostrich stands between 6 and 9 feet at maturity, while females will range between 5.5 and 6.5 feet tall at maturity. O Domesticated ostriches reach maturity at 2 to 3 years of age. Females mature about 6 months earlier than males. Ostriches n

Even though ostriches are flightless birds, their wings are surprisingly strong. Ostriches use their wings for aggressive display over the beak, on the forehead and around the eyes during the mating season. The normal body temperature range of the ostrich wings. The ostrich is the only bird to have only two toes on each foot. Emus, rheas and cassowaries, which are also classified between 16 to 23 feet per stride and maintain speeds between 30 and 50 miles per hour for 30 minutes.

Breeding

The breeding season for ostriches begins in March and April and can last until September. Breeding season length largely depends on breeding pairs. Groups of one male and two female birds can also be penned together. Bird condition is important because u

Courtship of ostriches involves elaborate displays by both sexes. Shortly after mating, the female will lay between 12 and 15 An inadequate diet may result in less egg production. Ostrich eggs are the largest of all eggs and weigh about 2.75 pounds. T

Breeding Paddock

Ostriches prefer larger paddocks; however, oversized paddocks can cause birds to become wild, skittish and hard to control. shrubs for shade and privacy are advised. The paddock should be enclosed with 5-foot-high wire fence. There should be a d smooth wire is sufficient with posts spaced 10 feet apart. Never use barbed wire as birds will inevitably do serious harm to tl 6 inches deep of clean sand for the birds to roll in.

Ostriches are hardy birds, but they do require protection from snow, ice, extreme wind, cold, rain and sleet. Paddocks should be protected from birds. Also, the shelter protects feed and water from the elements. Feeders and waterers should be positioned so managers can access them during the breeding season.

Feeders should be open-type measuring about 48 inches long by 14 inches wide and 4 to 6 inches deep. Feeders should be placed on a concrete pad and shelled corn should be placed in the feed box. The water pan should be 24 to 30 inches wide and 5 to 8 inches deep. Ostriches should adequately drink. Feeders and waterers should be mounted at the bird's chest height.

Incubation

There are two main methods of incubation for domestic ostrich production, natural and artificial. Many African ostriches produce the strongest chicks survive, which means fewer chicks survive. Also, allowing ostriches to sit on eggs for up to six weeks can reduce the productivity of a female during the day.

If the hen is allowed to sit on the eggs, she will normally lay about one egg every other day for a total of 12 to 15 eggs. The hen will be building a small bank around it.

Producers in the United States usually practice artificial incubation. They generally feel there is too much investment in the natural method. Eggs are gathered twice daily, stored with large ends up or on their sides, cooled to 65 to 70 F and placed in the incubator within 2 to 3 hours.

Only clean, sound eggs should be incubated. Dirt and manure should be gently scraped off or removed with sandpaper. Eggs should be washed in water containing a sanitizing agent and keep water temperature 10 F warmer than the eggs. Sanitizing agents suitable for use in the incubator should be used to prevent spreading of bacteria. Improper cleaning is worse than no cleaning at all. Latex gloves should be worn when handling eggs to prevent contamination.

Good quality incubators and hatchers are necessary. Other than birds themselves, incubators and hatchers should represent the following: Kuhl Corporation, Madison, OH (513/996-3001); Kuhl Corporation, Flemington, NJ (201/782-5695); and G.Q.F. Mfg. Co., Box 1552, Dept. O, Flemington, NJ (609/992-1111).

Ostrich eggs need to be incubated for 42 days. Unless otherwise specified by the manufacturer, the eggs should be incubated at 90 to 95 F. Humidity should be 70 to 80 percent.

Fertile eggs should begin to hatch on the 42nd day. Chicks will usually hatch without assistance within 12 hours after they finish hatching. The yolk sac may not be drawn into the chick's body. If a chick has not hatched after 20 to 30 hours and appears weak, carefully remove the chick from the egg.

After the chicks have hatched, let them dry for 3 to 4 hours in the brooder (90 to 95 F). After the chicks have dried sufficiently, they can be placed in the brooder.

Brooding and Rearing

The brooding facility must protect chicks from predators and inclement weather. The facility should be dry, sanitary and well-ventilated. Newspaper or other slick material as chicks will develop "spraddle legs" which is fatal. Young ostrich chicks will ingest anything they can get their beak on, including burlap for at least 10 days.

Supplementary heat should be provided to keep the temperature about 90 F at chick level in the 4- by 5-foot pen for the first week. However, they should never be allowed to become chilled or overheated. Adult ostriches (older than 1 year) are hardy and do not require supplementary heat.

Feeding

Ostrich chicks may not eat for the first 24 hours while subsisting on the yolk sac. Chicks should be started on a proven commercial starter. Some fresh foods such as chard and spinach contain oxalic acid which impairs the absorption of calcium. Young chicks will help. Continuous light and access to feed for chicks less than 3 weeks of age should be provided.

After 3 weeks of age, give chicks all the starter they can eat in two 20-minute feeding periods. Good quality alfalfa pellets, or access to pasture, be sure there are no stagnant pools of water. Young chicks can die from ingesting stagnant water.

Chicks should be fed good quality game bird or turkey grower from eight weeks to maturity in two daily meals. Continue to provide access to water.

Breeding birds in drylot should be fed a high quality ratite, turkey or game bird breeder diet. Also, birds should have access to water.

Restraint

Handling ostriches can be dangerous to the bird and handler. A mature ostrich is capable of delivering a kick of up to 500 pounds to tame them. Tamer birds are much easier to handle than wild birds and are less prone to injure themselves.

For young chicks, simply grasp the birds by the legs and pick them off the ground. At least four experienced people are needed through, protect the handlers who are placing a hood over an ostrich's head. Once birds are hooded, they should settle down

Ostriches should be transported in an enclosed trailer so they can not stick their heads out. There should not be sharp objects to prevent falling and possible leg injuries. Old rugs or carpets are often effective for good footing on trailer floors. Different sources about bird safety, do not hesitate to call an experienced person for advice.

Getting Started

There are several ways to begin producing ostriches. The least expensive method is to buy eggs and hatch them. This is probably the best method, they are roughly two to three years from producing saleable chicks. Fertile eggs are currently being advertised for \$100. A proven breeding pair of ostriches will cost between \$50,000 and \$75,000. However, saleable chicks may be produced within

Ostriches may be purchased at any age from day-old through mature birds, at prices ranging from \$1,500 to \$30,000 depending on the prospective producer, access to capital, experience with ostriches, and type of facilities available. For most people

It is important to begin with high-quality, unrelated breeding stock. A producer should purchase from a reputable breeder with

Economics

Markets for ostriches are currently breeder markets with value determined as much by nostalgia as the value of products produced. The main products from ostrich are 1) a red meat which is lower in fat and cholesterol than turkey, 2) leather which is extremely durable, and, at that point, 12 to 14-month-old 100 pound birds should be selling for \$800 to \$1,000.

The following economic and cash flow budgets were developed to provide current costs of production and possible cash flow at 9.75 percent interest. The opportunity cost of equity capital was 4 percent. Buildings, facilities, incubators and equipment budget include opportunity costs of equity capital (4 percent). The cash flow budget only includes interest owed on debt capital.

Selling unrelated pairs of ostrich chicks is not possible with one pair of breeding ostriches. Thus, sale prices of chicks are much higher. While returns to owner labor and management and cash flow (Table 2) seem to indicate that the ostrich business is quite

Table 1. Production coefficients for a pair of breeding ostriches, North Dakota, 1993

Eggs collected/hen		35	
Hatching rate (%)		90	
Chicks fed to 12 weeks			16
Chick death loss (hatching-3 months) (%)	50		
Total feed per chick (to 1 year) (lbs)		170	
Total feed per mature bird per year (lbs)	2,000		
Selling price per 12-week-old chick		\$2,500	
Selling price per 6-month-old chick		\$4,496	
Selling price per 12-month-old chick		\$6,600	
Breeding pair value		\$50,000	
Buildings		\$10,000	
Fencing			\$3,000
Incubators, feeders, waterers		\$9,500	
Feed cost/ton of pellets*			
Starter-grower			\$366.40
Mature ratite feed		\$356.00	
Annual operating expenses per pair			
Worming, medicine and veterinarian		\$100.00	
Building and facilities maintenance		\$50.00	
Utilities and fuel		\$700.00	

*Personal communication with Trace Whiffler, Whiffler Ranch & The Roost

Table 2. Economic and cash flow budgets for a mature pair of breeding ostriches, North Dakota, 1993.

	Economic Budget		Cash	Flow Budget
	----- Per Pair -----			
Returns				
Live bird sales	\$60,852.23	\$60,852.23		
Gross revenue		\$60,852.23	\$60,852.23	
Variable costs				
Feed			\$871.42	\$871.42
Worming, vaccination and identification	100.00	100.00		
Utilities and fuel		700.00	700.00	
Interest			114.91	81.48
Total variable costs		\$1,786.33	\$1,752.90	
Fixed costs				
Building ownership		\$687.50	\$487.50	
Fencing ownership		206.25	146.25	
Incubators, feeders and waterer ownership		653.13	463.13	
Depreciation on fixed assets		3,500.00	xxxx.xx	
Breeding pair ownership		3,437.50	2,437.50	
Insurance			2,500.00	2,500.00
Total fixed costs		\$10,984.38	\$6,034.38	
TOTAL LISTED COSTS		\$12,770.71	\$7,787.28	
Returns over variable costs		\$59,065.90	\$59,099.33	
Returns to labor, management and equity		\$48,081.52	xxxxxx.xx	
Cash flow (debt service, family living)		xxxxxx.xx	\$53,064.95	

The economic budget is generated by charging market rates for all resources needed for product

The cash flow budget is an estimate of the out-of-pocket cash needed to run the enterprise, including not only direct go into this enterprise?" Total cash expenses are subtracted from total cash receipts to calculate the net cash which

Acknowledgment

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For further information:

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