

# Pack #103, Item 13

# Type: Backgrounder

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**Backgrounder: Raising guinea fowl for food and income**

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***Why is this subject important to listeners?***

Men and women in many countries can improve their families’ food and nutrition intake *and* make good money at the market by raising guinea fowl. But farmers must follow good practices to reap the benefits!

***What are some key facts?***

* Guinea fowl meat is nutritious and the birds’ eggs and meat are in demand.
* It is often best for hens to incubate eggs and raise keets (young guinea fowl) because guinea fowl mothers are not very attentive to their eggs or young.
* Young birds must be kept warm and safe from predators in simple coops for the first 5-6 weeks of life.

***What are the big challenges of raising guinea fowl?***

* Many keets die young.
* Predators eat a lot of guinea fowl.
* Not much help is available from extension services.
* Women often do not have access to credit to start or to grow a flock.
* It can be hard to purchase reliably healthy keets.

***Key information about raising guinea fowl***

1. **Production systems:** There are three approaches to raising guinea fowl: *free-range (also known as extensive)*, *semi-intensive*, and *intensive*. Most small-scale farmers use the free-range system because it is the least costly. Some use the semi-intensive system.
   * *Free-range:* Large flocks of birds forage freely over a large area of land, and birds usually sleep in trees near houses. There are minimal inputs, no medication, and production and profit are low. The need for capital and the cost of production is low. Predators and thieves are a problem, and there is high mortality from various sources.
   * *Semi-intensive*: Large flocks roam and forage over a limited area, usually fenced. There is usually some housing to shelter birds from heat and cold, and to provide supplementary food and water. Fencing protects birds from predators and theft. Feed costs are low, and birds are less stressed than in intensive production. There are higher cost than free-range, but higher production and profit.

For further information: See documents in *Resource List below*: 1, 3, 4, 5, 6.

1. **Housing guinea fowl**:Housing protects birds from disease, predators, and weather, and makes it easier for farmers to monitor the health of birds, and to collect eggs and manure.

* Types of housing:
  + - * Cages for growers, breeders and layers, made of wood and burglar-proof wire or chicken wire.
      * Brooding cage or house: For hot weather, built from chicken wire, wood, and roofing sheets.
    - Housing should be 20 centimetres above ground
    - Use lanterns or electric bulbs to provide light and heat during the night.
    - After 6 weeks of brooding, growers need separate housing
    - There should be no more than 5-6 keets per square metre (one arm stretch by one arm stretch)
    - Build housing in a shady or airy place.

For further information: Documents 1, 2, 3, 4, 5.

1. **Feeding guinea fowl:** 
   * Free-range birds mostly feed around their nest. The birds have a relatively low need for water, so this is not usually a problem, even in dry areas. In semi-intensive systems, they can be allowed to drink at will. Farmers supplement birds’ natural diet with whole grains (maize, millet, sorghum, and rice), agro-industrial by-products (rice bran, maize bran, pito mash, etc.), white ants, maggots, and termites.
   * Farmers feed birds white ants, maggots, and termites from one day old to six weeks old.

For further information: Documents 1, 4, 5.

1. **Breeding guinea fowl:**

* There are two types of breeding: pure breeding and crossbreeding. *Pure breeding* involves mating individuals within the same species. There are two types of pure breeding: *outbreeding* or outcrossing, which breeds unrelated birds, and *inbreeding*, which breeds related birds.
* The disadvantages of inbreeding include: reduced fertility, reduced litter size, reduced survival, reduced capability of hens to mother keets, reduced growth rate, increase in genetic defects (for example, absence of limbs), reduced libido in males, and reduced resistance to disease.
* To avoid inbreeding, farmers must find eggs outside the farm.
* Crossbreeding is mating different breeds, for example, mating helmeted guinea fowl with white-breasted guinea fowl. It improves performance, and can improve survival and reproduction very quickly. Crossbreeds typically have bigger eggs and larger bodies than purebreds.

For further information: Documents 1, 5.

1. **Incubation**
   * In free-range systems, guinea fowl start laying at 28-32 weeks of age. Local birds can lay between 50-100 eggs per year, and exotic breeds 200 per year. In free-range systems, guinea fowl often hide their eggs in the bush.
   * *Incubation* is sitting on eggs to hatch them. Free-range guinea hens can be trained to lay in a designated place if they are confined for two weeks, and given feed and water.
   * Because guinea hens do not consistently care for their keets, local fowl hens are better than guinea fowl hens for brooding.
   * Guinea fowl eggs take 24-28 days to hatch. The peak laying period is during the rainy season.

* Farmers should keep brooding hens in a dark, isolated area with a nest of clean dry straw or grass. Hens should be regularly fed and watered close to the nest.

For further information: Documents 1, 5.

1. **Brooding and post-brooding management:**

* *Brooding* is caring for and managing keets soon after hatching until they are able to keep themselves warm without external sources of heat. In natural brooding, the mother provides warmth to the keets and protects them with her wings or body.
* During brooding, place feed and water in troughs that allow easy access and prevent spillage, contamination, or drowning.
* Follow recommended medication routines during brooding.
* Managing birds after brooding until slaughter or laying is less demanding than brooding management. Growers can forage for themselves in free-range systems. But during harvest, they may not get enough protein to grow or lay eggs, and may need supplementation with worms, termites, insects, maggots, soybean cake, fish meal, etc. In the dry season, farmers should add dried greens to avoid vitamin A deficiency.
* Ensure that feed is varied and balanced. Include a variety of ingredients to reduce the possibility of nutritional deficiencies.

For further information: Documents 1, 5.

1. **Managing health and disease:**
   * Keet mortality is mainly due to inadequate or contaminated feeders or drinkers, heat and cold, inadequate space, worms, and accidents. Grower deaths occur from infections and parasitic worms. Diseases are spread through manure and body contact.
   * Birds are more resistant to disease when they are well-fed, well-protected, and healthy.
   * Farmers should be able to recognize the general symptoms of disease, including: coughing, sneezing, gasping, watery eyes, droopiness, bloody/watery/abnormal faeces, a sudden drop in feed and water consumption, and a decrease in egg laying.
   * The main diseases or health problems are: Newcastle disease, Gumboro, Fowl pox, Marek’s disease, cocciodiosis, pullorum, Fowl cholera, flat and round worms, and external parasites such as mites, ticks, fleas, and lice.

For further information: 1, 2, 3, 4, 5.

***Where can I find other resources on this topic?***

1. Issue pack: [Diseases of chickens and how to manage them](http://scripts.barza.fm/radio-resource-packs/103-2/cowpea-production/). Farm Radio International, Pack 103, Item 1.
2. Guinea Fowl International website: <http://guineas.com/>. A lot of useful information, some from Africa, some from elsewhere.
3. J.C. Moreki, undated. *Guinea Fowl Production*. <http://www.gov.bw/Global/MOA/Guinea%20Fowl%20Production.pdf> (224 KB) – from Botswana.
4. National University Extension and Research Liaison Services, Ahmadu Bello University, 2004. *The Production of Guinea Fowl in Nigeria*. <http://www.naerls.gov.ng/extmat/bulletins/Guineafowl.pdf>(999 KB)
5. Animal Production Directorate, Ghana Ministry of Food and Agriculture, 2012. *The Training Manual for Guinea Fowl Production*. (Not online)
6. Zimmi, A. 2013. *Assessment of the potential of Agricultural Extension Delivery on Guinea Fowl Production by SS Farmers in the UER of Ghana*. Master’s thesis, University of Ghana. Downloadable at <http://ugspace.ug.edu.gh/handle/123456789/5449> (1,113 KB)

***Key definitions***

Breeder: Bird raised for breeding purposes

Grower: Bird raised for breeding or for egg-laying

Guinea fowl: A family of birds native to Africa, and commonly raised for meat and eggs in many sub-Saharan Africa countries

Keet: Young guinea fowl

Layer: Birds raised to lay eggs

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