**Guinea Fowl Housing Management Practical**

**By**

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Kingdom: Animalia

Phylum: Chordata

Class: Aves

Order: Galliformes

Family: Numididae

Genera

Agelastes

Numida

Guttera

Acryllium

 **REARING SYSTEMS**

Three methods of rearing guinea fowls are free range, semi-free range and intensive system. When kept intensively, low light intensity should be used to reduce possible flightiness. These rearing methods are discussed briefly in the sections below.

**Free range**

This is the predominant rearing method common in Africa. Free range guinea fowl constitutes an important resource for resource-poor farmers in some countries, especially in developing countries.Improvements in this type of farming are of economic importance, because they involve the entire rural population.These improvements include placing drinking water at the disposal of the birds, and protecting their health.

**Semi-free rearing**

For 1000 keets, a starter house of 24 m2is required during the first three weeks of life. This communicates with the rearing house to which chicks are then transferred and which comprises a 40 m2shelter, equipped with perches into an aviary of 200 m2. Guinea fowls may be reared in a house with perches communicating with more or less spacious enclosure, which is surrounded by a wire fence 1.5 to 2 m high. **Pinioning ofkeets intended for breeding is essential in these rearing conditions. Pinioning prevents the birds from flying by putting them out of balance.**

**Intensive rearing**

In this type of rearing birds do not have access to an outdoor enclosure and has replaced semi-rearing because it can give better performance. Light and dark houses may be used. Guinea fowls are raised for breeding on soil or in batteries. For rearing on soil, densities are from 3 to 5 birds per square metre, and the houses are usually equipped with perches. In modern breeding units guinea fowls are usually reared in batteries and artificially inseminated.Drinking spaces of 1cm, 1.5cm - 3.0cm and 3.0-5cmper bird should be allowed for the first 4 weeks, 4-8 weeks , 8-12 and 14-16 weeks old respectively.

**Drinker and feeder Requirements /100 birds**

|  |  |  |
| --- | --- | --- |
| Age (weeks | Drinker Requirement | Feeder Requirement |
| 0-4 | 2 x 4 liter - size | 2 x 1.2m size |
| 4-8 | 4 x 4 liter size | 3 x 1.2m size |
| 8-12 | 4 x 4 liter size | 4 x 1.2m size |
| 14-16 and above | 6 x4 liter size | 5 x 1.2m size |

**Nutrition Management**

In the wild, guinea fowl eat a variety of foods but most importantare weed seeds, and waste grain whichfall to the ground after harvesting of crops. Some common guinea fowl diet includes: fruits, berries, seeds, grass, spiders, insects, worms, molluscs and frogs. Since one of the main sources of wild guineas is insects, guineas have gained popularity for use in reducing insect populations in gardens and around the home, especially becauseunlike chickens, they do not scratch the dirt much and do very little damage to the garden. Suitably formulated diets (starter, grower and finisher) for guinea fowl are available from commercial feed milers..Turkey diets have the advantage of containing an anti-blackhead drug.

**Broiler Guinea fowl feed requirements**

|  |  |
| --- | --- |
| Feed item  | Age in weeks( different phases) |
|  | Starter(0-4) |  Grower (4-8) Grower 8-12 | Finisher 14-16 |  |
| Protein % | 24 | 20 |  18 | 16 |
| Metabolisable energy Kcal/kg | 3200 | 3100 | 3100 | 3100 |
| Amount of feed per day(g) | 25 – 30 | 50-60 | 70-80 | 70-80 |
| Calcium % | 1.2 | 1.00 | o.8 | 0.8 |

**Breeder feed Requirements**

|  |  |
| --- | --- |
| Feed Item | Age in weeks |
|  | Starter (0-4) | Grower (4-8)  | Grower 8-12 | Breeder >16 |
| Protein% | 22 | 18 | 14 | 18 |
| ME kcal/kg | 3000 | 2800 | 2800 | 2800 |
| Amount of Feed Per day (g) | 25 – 27 | 55-60 | 70-80 | 70-90 |
| Calcium% | 0.70 | 0.60 | 2.70 | 3.0 |

**Feed conversion ratios (FCR) are between 3.1 and 3.5 for slaughter**

In its lifetime, the guinea fowl consumes an average of 43 kg of feed, which is 12 kg during growing period and 31 kg during the laying period (Say, 1987). The nutritional characteristics of guinea fowl feed is close to those for chicken, but percentage of lysine and methionine recommended for growth and laying feeds are slightly higher for guinea fowl. In intensive rearing conditions, feed conversion ratios (FCR) are between 3.1 and 3.5 for slaughter at 12 to 13 weeks and mean live weight of 1.2 to 1.3 kg ,adult guinea fowl weighs 1.5 kg and that the young stock is ready for table at 12 to 16 weeks. During this period males and females weigh 1.25 and 1.2 kg, respectively. It is recommended that birds for breeding should be allowed to grow more slowly and naturally.

**Health Management**

**Age (in Days) Medication**

1-2 Glucose in water

6 Antibiotic plus vitamin premix\*

10Coccidiostat

16 Newcastle (HB1)

23Gumboro

25 Antibiotic plus vitamin premix

30Coccodiostat

35 Dewormer

38 Fowl pox

44Coccodiostat

49 Newcastle (Lasota)

52 Antibiotic plus vitamin premix

56Dewormer

60Coccidiostat

84 Fowl pox

98Dewormer

112 Newcastle (Lasota)

\*-**Vitamins: (A, C, D3, E, K, riboflavine,thiamine, B6, B12, pantothenate)**

**Management of Breeding Stock**

Guinea hens start to lay in the spring (with increasing daylight) and continue laying for about 6-9 months. The egg laying period can be extended and early fertility improved by using artificial lighting.Domesticated guinea breeding birds are usually allowed free range. However, on some farms the breeders are kept confined during laying period in houses equipped with wire-floored run porches. They are difficultto confine in open yards unless their wings are pinioned or one wing is clipped. In theirwild state, guinea fowls mate in pairs. This tendency prevails also among domesticated guineas, ifmales and females in the flock are equal in number. Artificial insemination of breeders is practised in some countries such as Australia. The birds are kept in cages with males being individually caged.

**Mating ratio**

Under domestic conditions, it is not necessary to mate the birds in pairs to obtain fertile eggs.High ratios of females to males result in poor fertility. According to United States Department of Agriculture (USDA), when guineas are kept closely confined, one male may be mated with six to eight females and several hens will use the same nest. However, a ratio of 1 male to 5 females appears to give optimal fertility. Breeders are usually kept for 2 or 3 seasons.

**Hatching Egg Collection**

Under normal temperature conditions hatching eggs should be collected four times a day. However, under extremes of heat (over about 28 oC) or cold (below about 5 oC) more frequent collection is recommended. High ambient temperature is one known cause of eggshell quality problems.During heat stress, feed intake is depressed and egg weight declines. Eggs should be stored in a temperature range of 15.5-18.5 oC and a relative humidity of 70-80%. If held for over 7 days before setting, hatchability declines progressively with increasing storage time. Other factors affecting hatchability are egg size, egg shape, shell quality and variations in incubator temperatureas well as excessive shell porosity. Shell quality from young breeder flocks is usually good and hatches are high, but as the birds continue through their laying year shell thickness and shell quality deteriorate and hatchability declines. Hen on soil lays 70 to 100 eggsper annum and 170-180 eggs per annum in cage system.

**Hatchery Management (Incubation)**

Eggs can be hatched either naturally or artificially. Egg handling prior to incubation is of paramount importance. Eggs should be collected at least 4 times daily and very dirty eggs discarded. As already mentioned the normal incubation period for guinea eggs is 26 to 28 days and 24 to 25 days for the crossbreeds. The incubation method is the same as for turkey eggs. Natural methods of incubationare generally used in small flocks. For larger flocks, incubators are more satisfactory. It is common to use chicken hensfor hatching a small number of guinea eggs as they are more adaptable than guinea hens. Guinea hens usually are too wild to be set anywhere except in nests where they have become broody. As soon as some of the guinea keets hatch and begin to move about, the guinea hen is likely to leave the nest, abandoning the eggs that are not hatched. These eggs may hatch if, while still warm, they are placed under another broody hen or in an incubator. Twelve to 15 eggs may be set under a guinea hen; 20 to 28 may be set undera large chicken hen. It is, however, necessary that hens are treated for lice beforethey are set. Forced-draft incubators should be operated at about 37.5 and 37.2oC and 57 to 58% humidity. During incubation, eggs must be turned regularly (minimum of three times) each day for the first 25 days for pure guineas and 21 days for crossbreds.

In Setter. for 25 days-temperature, 99.5F and relative humidity is 65-75%

In Hatcher.for 3 days-temperature, 98.5F and relative humidity is 85-90%

**Rearing and brooding**

Guinea chicks are known as keets. Although guinea keets may be raised in the same manner as chicks and baby poults (e.g., in brooder houses and brooders), they are subject to chilling during the first few weeks. Keets need to be brooded for about 4-weeks to avoid mortality due to chilling.. If not reared intensively, keets should be given access to outsidepens to range by 10 weeks of age. All types of poultry brooders may be suitable for keets and should operate between 37 oC and 37.5 oC from day old being reduced by 4-5 oC each week. Keets can be weaned off heat at 4 weeks if the weather is suitable. The stocking density for guinea fowls in intensive rearing is 10 birds / m2. It is also suggested that if guineas are raised in broiler-style housing up to 14 weeks of age they require about 900 cm2of floor space per bird. Good shavings are important in brooding if brooding is on the floor. Keetscan also be brooded on wire, the same as chickens. Initially a cover (clean Hessian) may need to be placed over the wire mesh to stop keets from falling through. A smooth cover such as paper is not satisfactory and can lead to leg problems.

**Varieties**



* Pearl gray
* Royal purple
* White
* Lavender(light blue)
* Coral blue
* Buff
* Porcelain(pastle blue with white dots)
* Violet
* Bronze
* Pewter (gray color)
* Pied (two colors half whit half blue, black r other)