THE REPUBLIC OF UGANDA

Ministry of Agriculture, Animal Industry and Fisheries

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USER GUIDE ON POULTRY REARING









NATIONAL AGRICULTURE ADVISORY SERVICES
NAADS

National Agricultural Advisory Services

POULTRY REARING

Poultry contributes to improved human nutrition and food security by being a leading source of high quality protein in form of eggs and meat. It acts as a key supplement to revenue from crops and other livestock enterprises, thus avoiding over dependency on traditional commodities with inconsistent prices. It has a high potential to generate foreign exchange earnings through export of poultry products to neighboring countries. Poultry is highly prized in many social-cultural functions such as dowry and festivities. The poultry industry in Uganda is relatively new. Its major problem is therefore associated with its further expansion, though care must be taken to avoid overproduction. The industry is characterized by widely diverse methods of production which include the following: village flocks, small-scale commercial flocks and large-scale commercial farms. Constraints in poultry production include: production related constraints (inadequate access to improved breed, access and affordability of feed, disease control); lack of knowledge and skills, inadequate capital at all levels and marketing.

Systems of Management

- Free range
- Semi-intensive
- Intensive

Housing: essential features

- Building a large poultry house ideal for chicken
- Be rainproof
- Be secure from windy rains
- Have smooth surface walls to stop mites and other pests from hiding
- Periodically spraying the poultry unit with insecticide and disinfectants
- Periodically removing the dropping/cleaning the poultry house regularly
- Have good ventilation and in hotter areas at least 2 sides should be partly chicken wire mesh
- Preferably have cemented floor for ease of cleaning and disinfecting
- Be rat-proof
- Using plenty of litter after cleaning the poultry house
- Keeping the right number of birds in poultry houses
- Separating chicks from old birds



A sample of large poultry house ideal for chicken

Management of chicks

- Before chicks arrive at home; make sure that;
  - A brooder is in place
  - Paraffin lamps/electric bulbs/charcoal stove is available
  - Litter for the floor is available
  - 1 m^2 will accommodate 20 chicks upto 4 weeks old.
- Temperature control: 35^{0}C for day-old chicks, 24-27^{0}C for 1 week. Reduce heat as they grow especially at night.

Feeding Exotic chicken

- Broilers – 1 to 3 weeks feed with chick mash, 3 to 6 weeks feed with broiler starter, thereafter with broiler finisher.
- Layers – 1 to 8 weeks feed on chick mash, after 8 weeks introduce growers mash gradually, then with layers mash after drop of first egg.



A man feeding layers

Management of Layers

- Allow for good air circulation in laying house
- Layer needs on average 120 gm of food per day
- Distribute food troughs and water troughs evenly (one basin/50 birds)
- Provide grit at 20 weeks
- Laying nests must be kept in dark places, collect eggs 3 times a day, allow a nest/5 hens
- Provide soft clean litter
- Store eggs with small end down
- Clean dirty eggs with steel wool/coarse leaves (**never** wash them)
- Add greens to the diet and whenever possible vitamins to water
- Debeaking at onset of lay
- Culling when egg production drops below 40%



Laying nests.

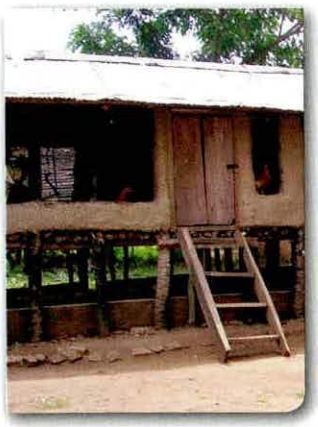
Characteristics of a good layer

- Bright red comb and wattles
- Alert eyes
- Width between pelvic bones should measure at least 2 fingers
- The beak and claws should look bleached
- The cloaca should be moist

REARING LOCAL CHICKEN

Advantages and limitations of rearing local chicken

Advantages of local chicken	Limitations of local chicken
a) They are self-sustaining i.e. can raise their own replacement stock b) They are hardy birds that can survive hard conditions c) Management requirements are not critical as those of commercial exotic breeds d) They are immune to some diseases and parasites e) Their products fetch more money than those from exotic birds	a) They have low growth rate b) They produce fewer small sized eggs and comparatively little meat c) People keep them without commercial intentions d) They have been neglected by breeders/scientists despite their potential



Raised poultry house ideal for local chicken

Improving production of local chicken

1. Control of parasites and diseases
    - External parasites that affect local chicken include: poultry body louse, stick tight flea, poultry lice, ticks, feather mites and leg mites.
    - Control can be done using commercial/synthetic or herbal insecticide.
    - Herbal preparations are cheaper for local chicken but a lot of research is still needed in this area to establish proper dosage.

- Internal parasites include worms and coccidia.
- Worms can be eliminated using a potent dewormer preferably given as a tablet because these chickens have low water consumption.
- Deworming should be done at least every month.
- Commercial coccidiostats can be used alternately with herbal preparation. These must be given to birds on 8th, 9th, and 10th days of age. Repeat as directed by veterinarian.
- In early days, vitamins-mineral mixtures should be given to chicks to minimize losses.
- Vaccination of birds especially against New Castle Disease. Target first vaccination at the beginning of the dry seasons, repeat after one month and every four months thereafter.

2. Feeding Local Chicken
   a) Farmers can mix their own feeds using the abundant carbohydrate and protein feed available in their area.
   b) Feeding should be accompanied by green feeds and fruits such as pawpaws.
   c) Only palatable green feeds should be given to birds. Avoid poisonous feeds.

Good and Poisonous /unpalatable green feeds to poultry

Good green feeds to poultry	Poisonous/unpalatable green feeds
a) Macdonald (Kafumbe omukazi)	*a) Datura stromonium* (Amaduudu)
b) Black jack (Ssere)	b) Ferns (Kayongo)
c) Asystasia schimperi (Temba)	c) Fresh cassava leaves
d) Vermonia amygydalina (Omululuuza)	d) Fresh sweet potato leaves
e) Kisanda	e) Tobacco leaves
f) Amaranthus (Ddodo)	f) Nicotina rustica (Ssetaaba)
g) Pawpaw leaves	g) Castor oil leaves (*Ricinus communis)*
h) Ascalepias simulunata (Akabombo)	*h) Siyesbeckaia orientalis* (Sseziwundu)
i) Marmodica fortida (Ebbombo)	i) Sunflower leaves
	j) Irish potato leaves
	k) Tomato leaves
	l) Dichrocephata latifolia (Bbuza)
	m) Tagetes munital (Kawunyira)
	n) Pumpkin leaves (Essunsa)

3. Selective Breeding
   Even in the local birds, there are some laying strains and those that can be developed for meat production.

a) Selecting indigenous Egg Strains from the local stock

- These are usually small chickens with elongated bodies
- They have tail feathers that stand higher than their head
- They are usually birds that lay 25 eggs and above in one laying season under the unimproved situation
- When improvement is done in feeding, disease and parasite control, etc. such birds may not go broody.



Physical features to guide you when selecting indigenous egg strain birds.



Physical features to guide you when selecting indigenous broiler strain birds.

b) Selecting broiler strain from indigenous stock

- These are usually birds whose bodies do not spread out
- They are compact and if you follow their bodies, you can draw a circle around them.
- After selection, the birds in these lines should be bred. Selection and breeding takes a lot of time and effort but we must get started.

The following should be observed in rearing local chicken:

- Vaccination against Newcastle disease
- De-worming
- Remove mites and lice manually or better still using medicated powder
- Provide water as much as possible
- May supplement free range with other feeds e.g. maize bran and concentrates
- Avoid buying chicken in dry seasons because diseases, especially Newcastle, are more rampant in dry seasons
- Avoid buying birds when there is a disease outbreak
- Buy birds of almost the same age i.e. 2-3 months are more ideal. Avoid buying old birds
- Plan for synchronised mating and therefore synchronized reproduction and production to ease management

How to programme/synchronise local birds

a) Assume a farmer has 14 local hens and 2 indigenous cocks
b) Give each bird own nest when they start to lay. A builder's kalai is ideal because it is metallic and can easily be disinfected by heating on fire. Put ash in kalai first then dry grass on top.
c) Boil one egg from each bird and put it in nest as a landmark for each hen. Mark the egg.
d) Remove eggs that are laid on the day they are laid. Write dates on them using pencil and store them together on trays with broad end facing up. Leave boiled egg in nest.

Precaution during egg storage

(i) Do not store eggs in a kitchen where it is hot. Heat may partially incubate the egg and kill the embryos in them
(ii) Do not store them on top of a cupboard because heat from roof may incubate them.
(iii) Keep eggs in a cool secure place.



Egg collection.

Incubation by mother hens

(i) Usually one bird starts incubating by staying overnight on the boiled egg. Leave this hen on the boiled egg for 10 days while it is waiting for other birds
(ii) After the 10 days, give all the birds that would have started incubating (within the 10 days) 17 selected but recently laid eggs
(iii) Leave the birds that refuse to incubate alone
(iv) If you want to eat or sell, eat/sell those which were laid first (old ones).
(v) Avoid giving these eggs to birds: very small, round eggs, very dirty, cracked eggs, extremely pointed eggs, very big eggs, very old eggs.
(vi) When done this way, all birds will hatch on the same day. An egg takes 21 days, 6 hrs to hatch.

Eggs can also be collected and taken to a hatchery instead of incubation by mother hens.

4. Economics of production

- Usually 80% of hens are programmable i.e. 11 in this example
- If each is given 17 selected eggs (11x17 =187 eggs)
- Hatchability is usually 90% i.e. (11x15= 165 day old chicks)
- 3 to 5 hatchings are possible per bird though 7 hatchings are possible if birds sit on the eggs consecutively.(You must provide adequate water and feed)
- Remember to change water frequently
- Therefore with 14 birds, a farmer may hatch (4x165) =495 to (5x165) = 825 chicks with possibility of 1159 chicks if seven hatches are attained per year.

General Disease control Practices

The following can only be used as guidelines for disease control, for proper disease diagnosis and treatment, consult the veterinarian.

- Don't overcrowd brooders
- Adequate ventilation
- Feed must be of good quality
- Give clean water ad-lib
- Don't mix young and older birds
- Clean poultry house
- Dispose of dead birds quickly and isolate sick ones
- Provide disinfectant at entrance to house
- **NB**: Antibiotics should never be used to replace good management and should be used on prescription by a veterinarian.

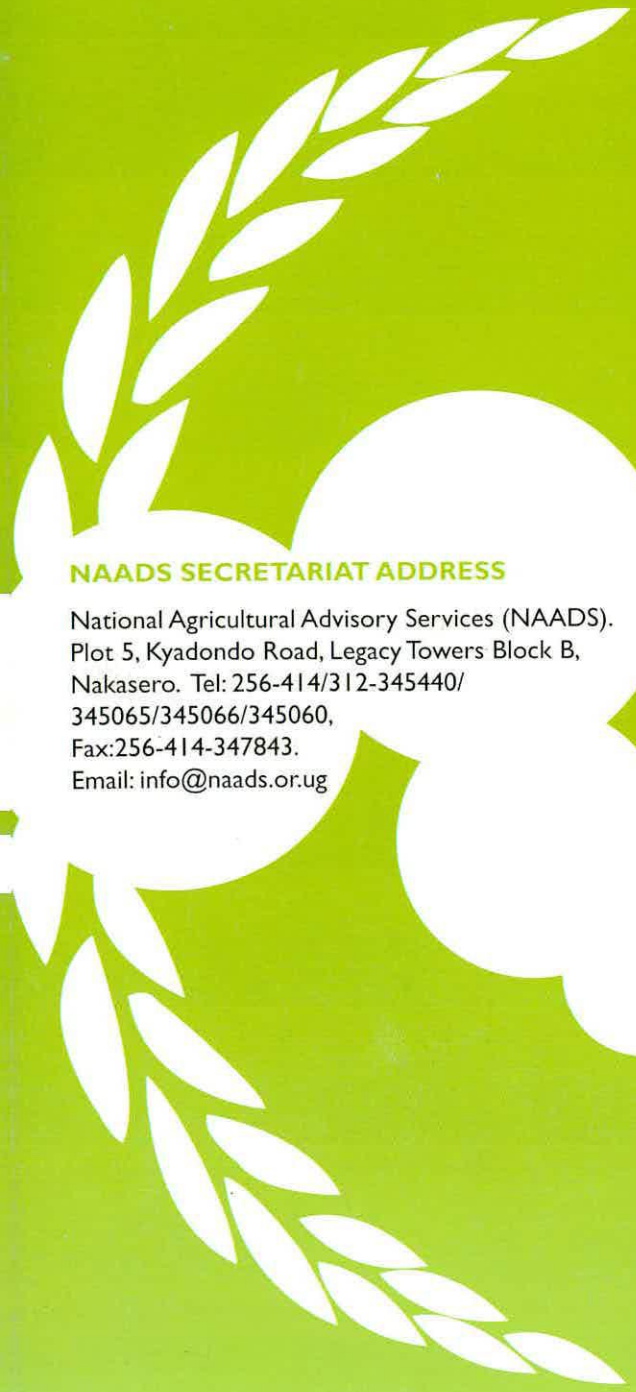
Signs of ill health

- Dullness
- Reduced feed intake
- Reduced water intake
- Low egg production
- Reduced growth rate
- Rough coat

Record keeping

It should include:

- Production data e.g. number of eggs produced
- Amount of food eaten
- Health interventions e.g. treatment
- Deaths
- Sales and purchases



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