Poultry Farming for Beginners: Part 1

Francois Swanepoel
ARC-Natural Resources and Engineering (Agricultural Engineering campus)

With many new small-scale poultry farmers looming on the horizon, as well as many existing small-scale farmers already in production, the need occurred to provide these farmers with more information about the housing facilities and equipment needed for small-scale poultry production. Issues like general planning of the production system, brooder chick production and building materials and methods are also discussed in this series of follow-up articles.

MARKET AND RESOURCE EVALUATION
Before you can start producing chickens, either as broilers (meat production) or layers (eggs), there are a few factors that must be taken into consideration. The most important are a suitable and reliable market, resources, and financial aspects.

Market
Before you start your production system, make sure that you have a market for your poultry produce. The size of the market will determine the maximum number of broilers or layers that the farmer could farm with to ensure that all his produce will be sold.

The price of the broilers or eggs, at which the farmer can sell his produce on the market, will determine the minimum number of chicks that must be farmed with in order to make a profit.

The distance to the market will affect the cost of getting his or her produce to the market and will determine how often the farmer can get his produce there.

Basic concepts
- Things like feeders, drinkers, structures, feed, and vaccines are all basics you need to have when you are venturing into poultry.
- It is easier to farm with broilers (to produce meat) than with layers (to produce eggs).
• Fresh egg production has small profit margins and small-scale farmers might find it tough to compete with the large suppliers.
• The minimum number of chickens you can start out with to make a profitable business is about 100 broiler chickens.
• A good chicken coop should give your chickens a comfortable and healthy environment that is secure and clean and has enough space for all the chickens.
• A good concept is to dream big but start small and grow your production. Doing that gives you time to learn and correct your mistakes, so that when you go big you know all the ups and downs.
• Feed is the biggest cost, about 60 – 70% of your operational costs.
• The size and location of the land available for poultry production must be considered. Is it large enough for the production of the minimum number of chicks necessary for profit making? Is it in a suitable location to provide a favourable climate in which the chicks can be reared?
• The amount and availability of water is very important. Is there enough water for the chickens and is it reliable and easily accessible?
• Are there materials available for building the poultry house and how many materials must be bought?

• The cost and availability of medicines for diseases must also be included in the planning.
• Is there money available to build the poultry house and to start the production cycle?
• Is the plan economical when taking into consideration the costs and the profits made?

The poultry production cycle
The production cycle starts with the purchasing of day-old chicks from a well-known reliable supplier. Broiler chicks is selling as day old chicks. Layer chicks are reared in brooders until they are sold to be utilized in production units. These are then raised differently according to certain conditions, until ready for market. Fig. 1 illustrates the production cycle of poultry.

BROILERS
Costs
Broilers are bought as one-day-old chicks and reared for a period of six to nine weeks; thus, it is reasonable to have five to seven batches of broilers in a year. Mortality rates is one of the key issues of broiler production, with an average mortality rate of 5 -10%.

Indirect costs per batch or cycle include:
• The cost of the building, which includes
purchase of building material, site preparation, provision of water to the broiler house and storing thereof, as well as maintenance of the building structure

- The cost of equipment, which includes drinkers, feeders, heating equipment, thermometers, packaging
- Transport costs for feed and chickens
- Slaughtering costs (if necessary)

Direct costs per batch or cycle include:
- Price for purchase of day-old chickens
- Bedding for the birds - you can use wood shavings, dry saw dust or chopped straw
- If you are starting with 100 broilers, you will need eight bags of chicken feed, three bags of starter feed, four bags of growing mash, and one bag of finisher feed.
- Medication
- Cleaning and disinfecting products
- Heater fuels (gas, electricity, or paraffin)

Income
Income from broilers can be either at 1,5 kg dressed weight after slaughter, or 2,0 kg live weight per broiler. Multiply the average mass of one broiler by the income per broiler (R/kg) and multiply that by the total number of broilers in the unit. For an extra income, manure may be sold or utilised as compost in a vegetable garden.

LAYERS
Budget for layers
Layers may be bought as day-old chicks and reared till pullet stage at 18 weeks of age, or they can be bought when they are already at 18 weeks old. The layers and growing pullets are housed in different buildings and the economic implications of raising pullets will be the same as for broilers. The level of egg production, egg size, and shell quality decrease each year. Most commercial layers are kept for 2-3 years as their egg production decreases.

Costs
As with broilers, the costs include building material, site preparation, provision of water to the layer house and storage thereof, watering and feeding equipment, as well as laying nests.

Indirect costs:
- Transport costs for feed, pullets, and eggs
- Maintenance of the building structure
- Packaging material for eggs (if necessary)

Direct costs per batch of layers include:
- Price for purchase of pullets
- Feed for layers
- Medication
- Cleaning and disinfecting products

Income
The main income from layers is eggs, about 150 to 230 eggs per layer per year. Layer hens can be sold for slaughtering at the end of their laying cycle, which also provides income. For an extra income, manure may be sold or utilised as compost in a vegetable garden.

ECONOMIC EVALUATION
Before starting a poultry business, it is recommended that the farmer must make an estimate of the annual budget of expenditure and income. This is to find out if there will be sufficient profit as compensation for the farmer’s own labour input when all expenses are paid.

In the next article, aspects of broiler production will be discussed.

Inquiries: Francois Swanepoel at swanepoelf@arc.agric.za

Agri About No 11 July/Julie 2022