



# Smallholder Innovation Series

A BRIEF ON HOW TO SUCCEED AS A SMALLHOLDER FARMER

## Poultry



### What is Poultry Farming?

For the majority of smallholders, growing crops is not enough to meet the financial and nutritional needs of their household. One useful tool in addressing both of these issues is to start poultry farming. Poultry farming, the raising of domesticated chickens, ducks and other fowl, is an effective way to supplement smallholder incomes and improve food security in rural households. When done properly, poultry farming produces a regular source of eggs and meat for commercial and household consumption. This provides farmers with additional income from local sales as well as improved nutritional access to the protein-rich products that come from poultry.

## Benefits of Poultry Farming

- *Income generation* for smallholders. Smallholders raising poultry are able to earn money year-round from selling eggs and meat. It has been estimated that farmers raising 50 dual-purpose birds (birds used for eggs and meat) can raise their net value to over USD \$850/year.
- *Increased protein production* for households. Protein is generally in short supply in the developing world and poultry products, known for being high in protein, can significantly increase household nutrition
- *Benefits women* who comprise the largest portion of chicken farmers in the developing world. Poultry farming is not as physically demanding as other types of farming and can be done near the home, which makes it appealing to smallholder women who must also care for the family.<sup>1</sup>



## Poultry to Farm

**-Chicken:** The appeal of chickens comes with their versatility. They produce eggs, provide meat, eat bugs, provide organic manure, and are relatively easy to keep. On average, egg-laying chickens provide 4-6 eggs each week, which means three or four chickens can keep a family well fed. In a shelter, they require around 4 square feet per bird and consume ¼ pound of feed each day. Note that chickens prefer to roost at night so we recommend including elevated places to roost in your shelter.

**-Duck:** Ducks are also great for producing eggs and providing meat. Although there are a wide variety of ducks, with a wide variety of benefits and needs, most species require 4 square feet per bird in a shelter. They require water to bathe and eat and generally consume ¼ pound of feed each day. Ducks are omnivores and enjoy eating tadpoles and small lizards as much as lettuce, tomatoes and bread. Ducks are content to sleep on the ground.



**-Turkey:** Turkeys are primarily raised for meat however the birds also produce 2-3 eggs each week, which can be prepared like chicken eggs. Turkeys don't

require a shelter as long as they are able to roost in nearby trees at night. Turkeys eat ½ pound of feed each day, although significantly less if they are actively foraging. Turkeys weigh around 20lbs each and can effectively guard a flock of smaller birds.

**-Guinea fowl:** Known for being low-maintenance, many farmers keep guinea fowl without any shelter, as they can fly to nearby trees to roost. If kept in a shelter the birds require 2-3 square feet per bird. Guineas eat almost no feed in summer months because they are expert foragers. They lay 20-30 eggs per year, usually in the spring and summer, and their meat is commonly regarded as more flavorful than chicken. Many farmers keep guinea fowl to protect smaller birds and reduce pests, such as ticks, mice, rats, and snakes.

**-Goose:** Geese can 20-40 eggs each year, and goose eggs are significantly larger than those from other domestic birds. In many areas they are valued for their dark meat. Geese are also useful for weeding around broad-leafed crops as they eat the grasses that compete for nutrients. In a shelter, geese require 10 square feet per bird and water to help them eat (enough to submerge their beaks). Geese kept in pasture need little grain to supplement their diet. Those only eating grain require ½ pound each day. Geese are content to sleep on the ground.

**-Quail:** Also known for being low-maintenance, quail are diminutive and only require one square foot per bird in a shelter. They don't roost and prefer to lay their eggs (over 200 per year!) in private corners. Quail are generally very skittish and prefer to have many places to hide. Quail eggs are small and speckled commonly considered a delicacy. Quail meat is held in similar regard however, yield is very small per bird. Quail require large areas to roam about and only eat 15g of feed each day. Due to their small size quail are at high risk of predation. Quail must be kept away from household pets and secure from predators at all times. <sup>2</sup>





## How to Start Poultry Farming

1. Decide the type of poultry farm to run: Are you interested in producing eggs, meat or birds themselves? Your decision will determine the type of poultry you choose and how you set up your operation

2. Decide the type of poultry to raise: Will you raise chickens, ducks, turkey, geese, guinea fowl, or quail? Or some combination? Deciding what birds you will raise will determine your input and construction requirements.



3. Build the housing system: What housing system makes the most sense for the birds you want to raise? Different birds have different requirements. Make sure you know what the birds need before you start building.

4. Acquire all inputs: Purchase enough feed, vitamins and medicine for your brood. Make sure there is enough for the entire flock. Consult local traders and fellow poultry farmers for feeding requirements of your specific species.

5. Buy your poultry: Get your birds settled in their new home.

6. Vaccinate your birds: Make sure all your birds are vaccinated against local diseases to prevent high mortality. Remember, healthy birds lay healthy eggs and have the best meat.<sup>4</sup>

### Poultry Farming Changing Lives in Kenya

For Mercy Wairimu, a chicken farmer in Nakuru County, Kenya, life has dramatically improved over the past ten years. Thanks to the Kenya Agricultural Productivity and Agribusiness Project (KAPAP) she was able to expand her business from a few chickens to over 1,000 birds. Her chickens which are an improved Krollier variety, mature in just four months, weigh 4-6kg when fully grown, and lay eggs every day. Mercy says she used to sell her chickens to friends and neighbours but now, with a larger brood, she is able to sell them in supermarkets. She is also able to purchase inputs, such as vitamins and vaccines, at higher volumes for a lower price. Chicken farming has led to great prosperity for the Wairimu household, where Mercy has been able to use the income to send her students all the way to university!<sup>3</sup>

## Things to Consider

While not necessary, there is some equipment that poultry farmers find very useful including:

- Drinkers and Feeders- to give birds access to food and water throughout the day
- Nests and Perches- some birds prefer to use these to rest
- Lighting system- to help see in your shelter: If your birds are regularly outside this isn't an issue
- Crates- some birds prefer to have crates around as places to hide and lay eggs
- Incubator- to increase the birth rate of fertilized eggs
- Waste disposal system- to remove unwanted waste. Most poultry waste can be used as an organic fertilizer.
- Egg tray- to hold all eggs
- Cages- to transport birds



### References

1. Rollings, H. 2016. "Opportunities offered by smallholder chicken farming in Africa" <https://africacgg.net/2016/08/10/opportunities-smallholder-chicken/>
2. Lie-Nielsen, K. 2017. "Consider These 6 Types of Poultry For Your Farm" <https://www.hobbyfarms.com/poultry-types-consider-farm/>
3. The World Bank. 2016. "Climate-Smart Poultry Farming Brings Prosperity to Kenya's Smallholders" <https://www.worldbank.org/en/news/feature/2016/10/24/climate-smart-poultry-farming-brings-prosperity-to-kenyas-smallholders>
4. Lipumba, I. 2017. "How to Start a Successful Poultry (Chicken) Farming Business" <https://www.zoomtanzania.com/blog/how-start-successful-poultry-chicken-farming-business/>