

Traditional poultry keeping in Northern Ghana

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The first step to take in developing poultry production is a thorough analysis of the present poultry production system. This article is intended to explain the poultry production system in the traditional society of the Mamprusi tribe in Northern Ghana. It is based on a three month's period of research on the spot and a literature survey to get a comprehensive description. This study deals with the integration of poultry (fowl and guinea-fowl) in subsistence economy and in religious and social activities. We will see that poultry is certainly not only a way of getting financial income. On the contrary, poultry has several purposes and is fully integrated into daily life.

Farming resources and place of poultry

The Mamprusi live in a mainly agricultural subsistence society. The household's consumption needs are central to farm operations. The surplus of subsistence farming and any cash crops are sold on the market. In a mainly subsistence farming system three production resources are central: land, capital and labour.

1. Land

In the Mamprusi area land has not been scarce so far. Fortunately the area isn't densely populated. In the first years of use, soil fertility is sufficient, but after a few years fertility declines due to reasons such as the custom of burning the fields in the dry season to clean the land, erosion, or the fact that there is almost no return of organic matter to the fields. This dramatically reduces the organic matter compound.

2. Capital

Capital for the purpose of agricultural production consists of seed for subsistence crops, seed for cash crops, livestock (poultry, sheep, goats and cattle) and tools. Credit facilities are very poor. Most farmers are unable to meet the conditions proposed by the government's Agricultural Development Bank.

3. Labour

Labour is provided by the members of the household. The Mamprusi household consists of the extended family. Including the children, they form the basic labour unit for crop and livestock production.

Of the three production resources labour seems the main limiting factor in production activities. Very often it is seen that small households (husband and wife without children) are very poor compared with households with more wives and/or with more children. The last have more labour available, therefore they are able to cultivate more

land. Apart from that, they produce more per person than the small households. This feature is based on the fact that two persons working together on the same field plant, sow or weed more than two persons working alone on different fields.

Although all households keep livestock, especially poultry, the Mamprusi regard themselves as crop farmers. They have an excellent knowledge of traditional crop production, but quite a rudimentary knowledge of animal husbandry techniques. But even at the present state, animal husbandry is very profitable. Poultry production has almost no inputs. That means that all outputs largely can be considered as profit. The same is true of goat and sheep production. The Mamprusi also keep cattle but these animals are reared by Fulani households in the village.

Poultry in the free range systems

Let us follow an average poultry flock of a Mamprusi household throughout a year.

Every morning the farmer releases his 19 fowls and 6 guinea-fowls from the space under the granary. Some grains are thrown on the ground to feed the birds. Shelter at night and a handful of grain is certainly no more than a supplement. The birds have to scavenge for their diet in and around the compound. This system is called the 'free range system'. A young boy has to take care of the birds during the day. He protects the crops against poultry damage, once in a while he gets a piece of a termite hill to feed the birds and at evening time he confines the birds to protect them from predators.

Fowls lay throughout the year. Guinea-fowls lay only in the rainy season. Fowls produce about 20 eggs a year and guinea-fowls about 50 eggs. This looks very low, but considering the very low inputs, the extreme climatic conditions and the presence of diseases, it is a remarkable production. This production level is enough to maintain the poultry stock size. Even more, there is a surplus. The household uses the surplus for several purposes.

Most of the fowl eggs are used for hatching. Fowls also hatch the guinea-fowl eggs because guinea-fowl are bad brooders. Hatching takes place throughout the year although most of the hens hatch in the rainy season. A reproduction cycle (laying, hatching, taking care of chicks, resting) takes about 20 weeks. That means that fowls hatch 5 clutches in 2 years. Two times the farmer puts guinea-fowl eggs under the brooding hen, three times the fowl eggs. Mortality is large among the young chicks. Out of 10 chicks, only 2 reach the adult stage. Reasons for that are, in order of importance, disease, predators and road accidents. Newcastle disease in particular, kills a lot of poultry in the dry season. Worms are an everlasting burden that weakens the birds. Snakes, birds of prey, cats and dogs reduce the number of surviving chicks. Mortality up to 2 months is 50%. From 2 months up to adult state it is also 50%, resulting in an overall mortality rate of 75%.

Hatchability of guinea-fowl eggs is very low, 45%. Hatchability of fowl eggs is better, 72%.

Farmers keep fowl about three years. Guinea-fowls are kept 2 years. After that production diminishes too much and

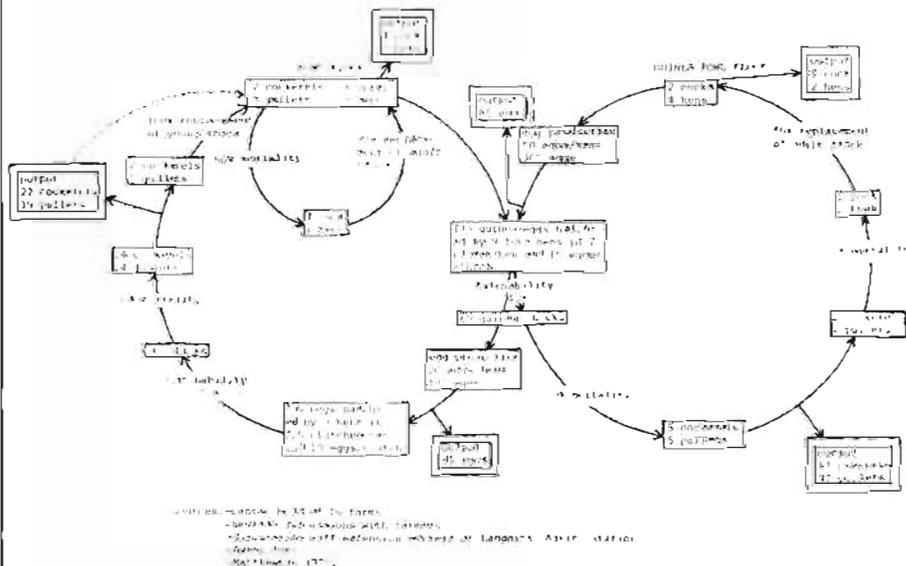


Fig. 1: A model of poultry productions in Northern Ghana.

	fowls	guinea-fowls	total
cocks	1	1	2
hens	3	2	5
cockerels	22	13	35
pullets	19	11	30
eggs	45	65	110

Fig. 2: Total yearly production of an average poultry stock.

farmers cull them. Figure 1 shows a combination of all the above mentioned production parameters. It shows the yearly production cycle of an average poultry flock.

If we add up the outputs of figure 1 we get the total yearly output. This is shown in figure 2.

Every year a household can use approximately 110 eggs, 65 young birds and 7 old ones for several purposes.

Use of poultry

For a better conception of the role of poultry in the Mamprusi society it is necessary to know exactly the purposes for which households keep poultry. Figure 3 indicates briefly the five major uses and benefits of poultry and eggs.

It is very difficult to determine the most important purpose. How do you compare the spiritual benefit of sacrifice with the financial benefit of sale? A sequence of purposes based on numbers of poultry used has very little to do with the order of importance.

Sacrifice is an act whereby the slaughtering of animals, or an offering of food or other substances is made to a spiritual being or a cosmic force. In the Mamprusi society, ancestors influence every day life. Sacrifice is an easy way to please them but also to ask a favour of them. Fowl cocks are the most popular sacrificial animals. Guinea-fowl cocks are not used. The colour of the birds play an important role. People sacrifice a red cock to the ancestors if they wish rain or a good harvest. A white cock is used when they are grateful. A black cock is sacrificed when they ask protection from evil things like diseases, war or quarrels. Because of these customs, red, white and black cocks have more value. Sometimes the prices are doubled. This has consequences on breeding activities.

Farmers never cull a black, white or red cock. At funerals sacrifices take place to recommend the dead person to his ancestors. Also soothsayers and traditional doctors prescribe a sacrifice to cure a sick person or to ask for a safe journey.

A very interesting fact is the role a cock plays in a judgement. When, for example, a woman is accused of witchcraft, the village chief cuts off the head of a cock and allows him to run. The way the cocks dies, on his back or on his breast proves the truth of the accusation. Sacrificed animals are not lost to consumption. The blood is for the ancestors but the meat is divided among the male members of the household. Sale of young birds and eggs happens to get some petty cash for entertaining friends at the market, buying cigarettes, petrol, etc.. Sale takes place on the

Use	Poultry		Eggs		benefit
	%	no.	%	no.	
sacrifice	35	25	-	-	spiritual/nutritional
sale	28	20	18	70	ready cash
consumption	15	11	5	20	nutritional
gift	13	9	5	20	social links/prestige
breeding stock	10	7	-	-	capital/wealth
hatching	-	-	71	270	reproduction
	100	72	100	380	

Fig. 3: The uses and benefits of poultry and eggs.

market. Prices fluctuate during the year. In the hungry season when the granaries get empty and the crops are still growing, the prices of poultry are low. At that time traders from the South come to buy poultry and sell them in big cities like Kumasi and Accra. Sometimes middlemen are involved. They buy the birds in the villages and sell them at the market or to traders. This is not a full job but an extra activity besides farming.

Poultry products which are sold contributes about 15% to the annual financial income. If we look at the resources needed for this contribution and compare them with the resources needed to produce, for example, one bag of groundnuts, poultry husbandry is a well-paid activity. It is labour and capital extensive compared with crop farming.

Home consumption is an other use of poultry. In Mamprusi society, women, circumcised girls and first-born children are not allowed to eat eggs or meat. These products are only taken by elderly men, male visitors and young children. The reason for this taboo is unclear. A reason could be that women believe that their behaviour can effect their unborn child and this includes the food they eat during pregnancy. Animals look more human than plants do and it does not take much imagination to fear that the unborn child may pick up animal characteristics if the mother eats animal products. More-over eggs are closely related to reproduction and so are potentially dangerous.

Guinea-fowls are, more than fowls, used as a gift to visitors. To give is a wealth increasing action but also an act to please the receiver. Farmers are willing to save for agricultural equipment or other materials. Livestock is used as a saving account. The offspring, like chicks, are the interest of the saving account.

Conclusion

This study makes clear that poultry husbandry is much more than a financial income generating activity. Poultry also has a social and a spiritual benefit and plays an important role in subsistence economy. Western developing agencies are mostly dealing with the economical purpose of poultry keeping. New techniques of husbandry and exotic breeds are easily introduced. Very often these programmes fail. An exotic hen, for example, will not survive the rural conditions because she is not able to scavenge her diet. To give such exotic hens a complete diet conflicts with the traditional way of poultry keeping. Exotic breeds need exotic management. An other example is the fact that the Mamprusi do not accept exotic cocks as sacrificial animals. So, if poultry production has to be improved, then

there is a need of programmes which are adapted to local conditions and traditional values. Planning such programs start with a thoroughly analysis of the present production system. This study is a contribution to that analysis.

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