



## Native Chickens beyond Meat and Eggs

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### Abstract

The farmers in the rural areas of Bhutan have been rearing native chicken for centuries and the intervention by government to upgrade native chickens and boost their production seems to have remained unfinished goals of many five year plans. Some of the pertinent issues related to native chickens that provide insight into preference for native chicken by the rural communities obtained through informal discussion with elderly people are highlighted herein. The rural communities prefer native chicken to exotic chicken for a number of reasons. For instance, native chickens are robust and cheap source of protein that help women recoup their lost energy during pregnancy and delivery. The native chickens are very agile therefore can escape predators such as eagle and are comparatively resistant to some endemic diseases compared to exotic chickens. Native chicken serves as an object of gift, where grandparents give pullet to their grandchildren with the unspoken message of 'rear this pullet, when it lays eggs, eat the eggs and grow healthy.' Some ethnic groups require specific strains of native chicken to be reared as a symbol of reverence to household deity, while for some communities native chickens serve the purpose of harbouring invisible granny associated with the households. Rural communities also attach medicinal value to meat of certain strains of native chicken. The native chickens are important source of organic manure for growing vegetable. Even the feathers of native chickens are used for various purposes in the households.

**Keywords:** Chicken, culture, deity, egg, meat, native

### Introduction

Native chickens have occupied and still form an integral component of homestead farming in rural Bhutan. Nidup and Passang (2007) reported that 66% of rural community rear chicken for meat, egg, feather, manure and to fulfill social

and cultural needs of rural communities. The native chicken is adapted to the rural settings and they require very low levels of inputs and thrive well under local conditions. The Royal Government of Bhutan, in an attempt to increase the productivity of native chicken, tried to introduce exotic blood through cross breeding by supplying Rhode Island Red roosters during late 1970s; however, this intervention to improve chicken production in homestead farming system did not have any effect (Nidup and Passang, 2007). Nidup *et al.* (2005a) reported that 95% of the rural chicken population is made of native chicken, indicating that the rural

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Received: October 22, 2018

Accepted: October 15, 2019

Published: November 30, 2019

communities prefer native chicken to exotic chicken. Some of the reasons for preference of native chicken over exotic chickens by rural Bhutanese are that the native chickens can scavenge and find feed in the homestead area, can escape from predators like eagle and wild cat, and require less care to be given compared to exotic chickens. These indicate that farmers have experiences in rearing native chicken which are passed down through generations by oral transmission. In addition, there are some specific needs associated with some ethnic group of communities who require native chicken to be reared in the homestead. These socio-cultural values are however poorly documented. Therefore, this paper attempts to compile the reasons as to why the rural communities continue to rear native over improved chickens.

## Materials and Method

The documentation was done through informal talks or discussions with elderly people of rural areas when opportunities were available on occasions such as during annual puja and meetings in villages. Questions were also asked to few senior Lecturers of the College of Natural Resources as these people tended to have knowledge from rural areas.

## Results and Discussion

### *Rooster as the time keeper*

To these days in rural Bhutan, the rooster of native chicken plays a role of 'time keeping' (Figure 1). Native rooster seems to have been acquired the sense of time; always crowing at specific time of the day and night. The rooster crows in the early hours of the morning, at about 4 am and continues to do so at fixed intervals until daylight. During the day the native rooster crows at about ten, twelve and three o'clock which keep farmers informed on the circadian cycle of the day.

According to *Angay Sonam* (pers. comm.), if

there is no rooster in a flock of chicken for about a period of month, one of the oldest hens assume the position of a rooster and starts to crow like a rooster. This also indicates that the native chicken plays a vital role in keeping time for the rural community.



**Figure 1:** A rooster crowing to keep time

### *Native chicken as a reliable source of protein*

The native chicken is known to survive well under minimal management practices. Farmers provide night shelter to protect them from predators and during the day chicken scavenge on the homestead area on a range of feed materials like waste grain, kitchen wastes, insects, worms, and green grasses. This puts less pressure on the farmers to provide feeds, saving cost of buying commercial feeds. The native chicken has the ability to scavenge on the homestead area by scratching and searching for lost grains and hidden insects. These assorted natural feeds pecked and consumed by the native chicken contribute to bright yellowness of egg yolk, which provide higher price in the market. The meat from native chicken is considered to be tastier compared to exotic chicken, and fetch better price for the farmers (*Bhakta Bdr.*, pers. comm.). In the olden days native chicken served as a readily available source of protein for the rural communities. In southern Bhutan, native chickens are still used at the time of celebrations such as in *Dasain* and *Dewali*. In some communities, when a woman gets pregnant in a household, few hens are set aside to brood and hatch chicks which are reared to fed to the mother once the baby is delivered.

#### *Ability to escape from predators*

Native chicken can pick warning calls from wild birds that are seen on homestead premises. Birds such as Bulbul and Drongo send warning calls to alert their kind on sight of possible threat such as eagle, kite or cats. Such warning calls are picked up by native chicken, helping them to escape from predators (Ap Phuntsho, pers. comm.). It has been observed that similar warning calls are sounded by *Mynah* on CNR campus on sight of a kite where sparrows and pigeons flee to safety in response (authors' observation). Also to escape from stray dog attacks the native chicken can fly short distances or fly on to higher grounds like tree branches or fence tops.

#### *Resistance to some endemic diseases*

Native chicken is resistant to some endemic parasitic diseases like coccidiosis, round worms and some bacterial diseases. This probably is due to sustained long-term exposure to disease agents that helped them develop immunity against these diseases. In addition, native chicken is also reared for more than seventy-two weeks in rural areas which might be imparting vertical immunity that help resist diseases. Native chicken also engage in dust 'bathing' which help them remove parasites such as fleas and mites.

#### *Native chicken as an object of gift*

According to Nidup *et al.* (2008) native chicken in rural areas serve as an object of gift; a family having a large flock of native chicken when visited by relatives gives pullets as gifts. At times, boiled eggs are sent as gift to relatives or are taken as gift while visiting relatives as a gesture of good will (Angay Sonam, pers. comm.). To add value and make attractive, egg shell is dyed red or pink using plants dye. In lower *Kheng*, during traditional marriage, hard boiled eggs are given as gifts to all male members in the family of the bride by groom's parents (Penjor, 2008).

#### *Native chicken as symbol*

In southern Bhutan, the *Subba* community rears Frizzle (Figure 2) as a symbol of household deity (Nidup *et al.*, 2008). During *Bhim Singh Pooja*, a Subba family used to sacrifice a rooster annually to appease the household deity (Nidup *et al.*, 2008). Such a need for a strain of native chicken by certain community (Nidup *et al.*, 2005b) indicates that such strain may have evolved through selective breeding.

When Bonism and Shamanism rituals were prevalent in olden days, animals were sacrificed to appease local deity. For example, *Haaps* used to sacrifice Yak to appease *Ap Chundu* (Phub Dorji, pers. comm.). However, such sacrificial object shifted from large animals to smaller animals like native chicken. In lower *Kheng*, where *Shamanism* is still practiced, eggs are used instead of live animals. An egg is also offered to the local deity during the *puja*; the offered egg is skillfully wrapped inside a small bamboo basket and hung by the eaves of the house. At times, the native chicken – hen or rooster is offered to the local deity that is said to reside at the source of community drinking water with the prayers that the deity protects the water source and supplies water constantly.



**Figure 2:** Frizzle hen

#### *Native chicken as carrier of invisible granny*

According to Ap Phuntsho (pers. comm.), in a village named *Shalintoe* under Phangkar Geog in Zhemgang, each household is said to possess an invisible granny called *Aiela*. It is said that at every meal, the first take from the pot has to be

served to the granny by placing the offering on top of the cooking stove. Thereafter, the meal is served to the family members. In olden days, when roads were not constructed, any traveler picking any edible item such as corn cob or cucumber from any homestead garden would fall sick and complain of headache and vomiting. The local people claim that this is the result of the granny punishing the trespasser. The only solution to such punishment is that an elderly member from where the granny belonged has to perform a ritual to appease the granny (Ap Phuntsho, pers. comm.).

#### *Native chicken as medicine*

Native chicken with black feathers is said to possess black skin and dark red blood. Meat from such chicken is claimed to possess medicinal properties. The wellbeing and cure from eating the meat of such chicken could possibly be due to psychological influence. Frizzle, according to Subba community, produces very tasty meat, which is attributed to free and effective air circulation beneath feathers – due to head ward curling of feathers in Frizzle. Generally, meat of native chicken is said to be tastier (Bhakta, pers. comm.) and of superior quality when medicinal value is added, making native chicken costlier even in rural area. Better taste of the native chicken meat could be attributed to the scavenging ability of the native chicken which allows them to consume a range of diets including insects, worms and plant materials found on the homestead premises.

#### *Native chicken as source of manure*

Chicken manure is rich in nitrogen, potassium and phosphorus (Chandra, 2014) which make chicken manure one of the best and easiest sources of fertiliser. An average sized hen can produce one cubic foot of manure in every six months and provides organic matter that in-

creases water holding capacity and the fertility of the soil (Duncan, 2005). In rural areas, farmers prefer chicken manure to cow due to presence of higher nitrogen content.

#### *Other uses of native chicken*

Native chicken also plays vital roles in among the rural Bhutanese communities. For instances, feathers are used for fletching the traditional arrows and primary feathers are used in making *Khuru* (dart) which is popular sport next to archery in Bhutan. Dart has become a popular sport among women as well (Kuensel, 2018). Feather is also used to clean dust and to suppress itchiness inside ear. It is also used to detect touch sensation on skin in lepers. Feather dusters or cleaners are available for dusting home appliances or cars. Therefore, considering the number of roles played, native chicken is a multipurpose beast of burden in the rural communities.

## **Conclusions**

The native chicken has multipurpose roles in the life of rural communities in Bhutan. Since the farmers use native chicken in the best possible ways, the government's intervention to upgrade egg production through cross breeding with the exotic chickens have made little impact due to the ability of the native chicken to escape predation and scavenge food on their own. The native chicken has socio-cultural, religious and economic values. Besides these values beyond meat and eggs, some of the native chicken breeds such as the Frizzle have the potential to serve as a genetic reservoir which is not discussed in this paper. Therefore, further study is required to understand the contribution of native chickens in genetic conservation as well.

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