Emerging Trends in Duck Farming in India

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ABSTRACT

In India, there many types of poultry and livestock farming are in practice by the farmers and they earn from it. Poultry farming includes the farming of birds such as chickens, turkeys, ducks, geese, guinea fowl, pigeons, ostrich, emu, partridge, pheasant, etc. One of the famous poultry farming method in India is chicken poultry for the purpose of meat and eggs. Besides chicken, duck also have the same features but it does used as much as chicken. Owing to this matter, in this paper we proposed a series of duck farming and also explain the methods and usage of this farming. Duck growing is a beneficial livestock industry in the world because of its egg, meat and feather. Similar to chicken, ducks are also raised for eggs and meat. As per livestock census 2012, the duck population of India is 32.09 million organizing 12.34 per cent of the total poultry population. The spreading and demographic changing aspects of duck population exposed that they are determined in Eastern, North eastern and Southern states of the country. Duck farming in India is regarded as by wandering, wide-ranging, periodic, and is still whispered in the hands of minor and peripheral farmers and roaming clans. Ducks can be reared in any one of the following three types. They are intensive, semi-intensive and range system. Duck can also be raised incorporated with other farming such as fish farming and/or paddy cultivation. Feeding of duck is also very easy and the feeds are worms, wheat, paddy, oats, kitchen wastes like green leaves, chopped vegetables, and lettuces are used in addition to the feed expected from scavenging. Besides all of these, for a healthy poultry farming well-nourished food are good supplements for the ducks. Ducks are more dynamic and less subject to diseases than chicken and turkeys. For better disease prevention, vaccination is necessary. Hence the duck farming is possible as much as chicken and also it is a profitable in the industry.

Keywords: Poultry farming, duck rearing, feeding, brooding, growing methods, profitable.

1. INTRODUCTION

Duck farming is very famous and completely a beneficial business. Ducks are extremely accessible around the world. There are abundant meats and eggs prolific duck breeds are offered throughout the world. All the contemporary farming ducks around the globe come from the wild birds. Those wild birds surprised around the globe, and some of them have been domestic as a good source of food. Nearly all those birds are from wild duck species. Parenthetically, all chicken of the world comes from red wild hen. One more thing is that, ducks are aquatic organism. Duck education is a gainful stock manufacturing in the globe since of its egg, animal protein and quill. Like chicken, ducks are raised for eggs and meat. Duck eggs are reasonably bigger, weighing about 4.5% of duck’s body weight. Furthermore, ducks are more productive than chicken and more flexible to free-range system of rearing. They also develop faster than chicken. They want humble housing, compared to chicken.

According to the stock survey in 2012, the duck people of India is 32.09 million systematize 8.52 per cent of the total poultry people. By the result of food and agriculture organisation statistics, the duck meat production improved from 0.034 million tonnes to 0.18 million tonnes, pertaining 526 per cent rise in growth rate, in two decades. The spreading and demographic underlying forces of duck population exposed that they are determined in Eastern, North eastern and Southern states of the country. The states such as Assam, Kerala, west Bengal, Orissa, Uttar Pradesh, Andhra Pradesh, Telangana and Tamilnadu are leading duck farming and also population of the ducks. In India duck farming is categorized by nomadic, wide-ranging, regular and also in the method of bigger farming. Customarily Kerala and West Bengal are the most important customer circumstances
for duck egg and meat and one of the details is that duck egg and meat extremely ensembles and rests delicious for their coastal based cooking provisions.

Farming of ducks has following advantages: For a year, Ducks lay eggs more when compared with the chicken. The size is also large when compared it with the chicken. Ducks requires reduced concern and embellishes well in scavenging surroundings. Ducks complements their feed by scavenging. They also intake fallen grains in paddy fields, beetles, snails, earthworms, minor fishes and other aquatic organisms. From profitable fact of vision, ducks have a extended lucrative life expectancy. They also lay well even in second year. Ducks do not necessitate any extravagant houses like chicken. Ducks are pretty tough, more simply agonized and more resilient to common avian illnesses. Soggy river side, wet land and unfertile moorlands upon which chicken or no other type of stock will embellish, are outstanding quarters for duck farming. Ducks lay 95 – 98% of their eggs in the morning before 9.00 AM. Therefore, we are saving lots of time and labour pays. Ducks are suitable for combined farming systems such as duck-cum-fish farming, duck farming with rice cultivation. In duck-cum-fish farming the composts of ducks serve as feed for the fishes and no other nourish or fertilizer of the pond is essential for fishes. Under assimilated duck farming with rice cultivation, the ducks perform four essential functions viz., interploughing as they examine for food; their bills release up the soil around the rice plants-weeding, insect control and fertilizer. Ducks are worthy slaughterers of potato insects, grasshoppers, snails and cartridges. In areas afflicted liver freaks, ducks can assist to precise the problem. Ducks can be used to allow the forms of water from mosquito pupae and larvae. Ducks are reasonably intellectual, can be tamed easily, and qualified to go to ponds and come back in the evening of their own.

2. MATERIALS AND METHODS

The study was carried out in the Eastern, North eastern and Southern states of India. The selected regions are well endowed with abundant material and resources. It is entirely within the tropics and bounded in the Arabian ocean, Bay of Bengal and Indian Ocean. The region gains high rainfall of about 1200 mm yearly spreading through September to December. The livestock farmers in the region are convoluted in cattle, sheep, fish, goat, rabbits and poultry production. The favourable of the climatic and vegetation characteristics of this region was the goal; it was selected for this study. Also value of declaring for the choice of the southwest of India was in consonance, which information that, India has an estimated poultry population of about 150 million birds essentially determined in the southern region of the country. Three states were randomly selected that make up the geo-political zone. A multi-stage random sampling procedure was used to select fifteen Local Government Areas. One community was randomly chosen from each LGA making up to fifteen societies that were used for the study. Each community was further divided into five wards from which two wards were
subjectively designated giving a total of thirty wards. Five defendants were arbitrarily interviewed from each particular ward for the study resultant in a total of 120 respondents. The primary data were gathered by means of a pre-tested and organised conversation plan while the subordinate data were through textbooks and research publications. The collected data were investigated using occurrences, proportion, charts, means and chi-square analysis.

3. METHODOLOGY

Ducks finds the account for about 9% of the poultry population in India. They are widespread in states like West Bengal, Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Tripura and Jammu and Kashmir. Ducks are principally of home-grown type and reared for egg production on natural scavenging. They have a potential of production of about 130-140 eggs/bird/year. Ducks are pretty tough, more simply ruminated and resilient to common avian diseases. In seats like boggy waterside, marsh and infertile moors where fowl or any other type of store do not thrive, duck education can be better option.

3.1 SYSTEMS OF DUCK REARING

There are many techniques in which ducks can be raised. In exercise farmers can familiarize this rearing system to their own requirements and the resources available

RANGE SYSTEM

The ducks are only kept back surrounded at night. During the day the ducks are unrestricted to roam outside in search of feed. They are fetched inside at night by setting some extra feed in the accommodation. The ducks only necessitate night shelter and nests for laying eggs. Ducks will stay around the place, provided you give them well. An improvement of this system is that the ducks go to the forage and yield it themselves. This way, nutrients become obtainable that the farmer cannot reach otherwise. Some farmers in Asia crowd their flocks to lesion large areas after the rice harvest

RESTRICTED SYSTEM

The ducks are kept surrounded everlastingly, either in a protected shelter or with a run in the open. The ducks will stay in the same place. It is stress-free to keep watch on them and check them. An outdoor run makes it easier to give the ducks access to water, as a pond can be put in the open run area.

INTERNAL SYSTEM

The inner scheme is for large-scale duck farms, where the manufacture is developed to decrease labour costs. The scheme requires more asset than the other two scheme of housing. Cultivator has to give all nourish and water and clean it frequently. If correctly manage, growth can be fast and manufacture cheap. Give a big shallow storage space place with water so that ducks can spotless and bathe. Like open drinkers they have to be situated over a drained area enclosed with wire or slatted floor.

3.2 BREEDS FOR FARMING

Amongst the breeds that are used for laying egg in the farms, Khaki Campbell is the best producer. Specific egg production of just about an egg a day in this breed for well over twelve months has been chronicled and drove be an average of excess of 300 eggs/duck/year are not unusual. Khaki Campbell ducks weigh about 2 to 2.5Kgs, and drakes 2.2 to 2.4 Kgs. Egg size varies from 68 to 80gms. The most famous and popular duck very-well-known by the world is White Pekin for table purpose. It is fast rising and has low feed consumption
with fine quality of meat. It reaches concerning 2.1 to 2.6 Kgs of body heaviness in 45 days of age, with a feed exchange ratio of 1:2.3 to 2.7 Kgs.

3.3 FEEDING FOR DUCKS

In most of the farms in India, the farmers used to feed the ducks in the method of country-side. Furthermore, the farmers of the farms fed up with wheat, rice, rice bran, coconut stem powder or somewhat which is eaten by the ducks. In some farms, the farmers are treating their poultry very effective and also feed them nutritious foods which are brought from markets. According to a survey, in Tamilnadu the duck farmers are fed their ducklings’ different diets according to age. Subsequently in addition to those feed received from foraging, insect, snails, kitchen waste, paddy grains and weeds are the food sources for ducks. The wastes from ducks are used as the fertilizer for the rice paddy. Duck farmers in Kerala, Andhra Pradesh and Tamil Nadu feed mature ducks with the mixture of locally obtainable feed element.

Ducks must never have right of entry to feed devoid of water. During the first eight weeks, birds must always have right to use to feed, but advanced on they may be fed twice a day i.e. first in the morning and then late afternoon. Khaki Campbell duck ingests about 15.5 Kgs. of feed up to 20 weeks of age. After that the ingestion varies from 120 gms and beyond per bird per day and subject to the rate of production and accessibility of greens. Recommended nutrient necessities for layer and broiler ducks, feed scale for Khaki Campbell duck, regular live weight and feed consumption of broiler ducks and feed procedures keep an eye on at Duck Farm are provided. The suggested nutrient requirement for egg and meat type duck are tabulated below:

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>CHARACTERISTICS</th>
<th>STARTER DUCK</th>
<th>GROWER DUCK</th>
<th>LAYER DUCK</th>
<th>BROILER STARTER DUCK</th>
<th>BROILER FINISHER DUCK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Moisture, % (Max.)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Crude Protein, % (Min.)</td>
<td>20</td>
<td>17</td>
<td>18</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>Crude fibre, % (Max.)</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>4.</td>
<td>Acid insoluble ash, % (Max.)</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Salt, % (Max.)</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
</tr>
<tr>
<td>6.</td>
<td>Calcium, % (Min.)</td>
<td>1.30</td>
<td>1.30</td>
<td>3.30</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>7.</td>
<td>Phosphorous (Available), % (Min.)</td>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>8.</td>
<td>Linoleic Acid, % (Min.)</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
</tr>
<tr>
<td>9.</td>
<td>Lysine, % (Min.)</td>
<td>1.20</td>
<td>0.70</td>
<td>0.75</td>
<td>1.30</td>
<td>1.20</td>
</tr>
<tr>
<td>10.</td>
<td>Metabolizable Energy (Kcal/Kg) Min</td>
<td>2700</td>
<td>2600</td>
<td>2700</td>
<td>2900</td>
<td>3000</td>
</tr>
</tbody>
</table>
3.4 WATERING OF DUCKS

However ducks are water fowls and fond of water, in contradiction of the prevalent legend among farmers, water for swimming is not necessary at any stage of rearing. Though, water in drinkers or water canals providing in the house must be adequately profound sufficient to permit the absorption of their heads and not themselves. If they cannot ensure this, their eyes will get scabby and grumpy and in some cases, sightlessness may occur. In adding, they also spotless their bill at regular intervals and clean them to keep it clean.

3.5 BROODING OF DUCKS

Ducklings may be clutch on wire ground, litter or battery. The dark era of layer ducklings is 3-4 weeks. For animal protein type ducklings, dark for 2-3 weeks is enough. In common, in winter season, brooding period may spread out up to 1-2 weeks longer than the steady period. Offer hover space of 95-100 sq.cm per duckling under the brooding period. A 100 watt bulb can brood 30-40 ducklings. The temperature of 32°C is preserved during the first week. It is condensed by about 3°C per week till it influences 24°C during the fourth week. In wire floor, space of 0.5 sq. per bird and in litter 1 sq. per bird is adequate up to three weeks of age. Water in the drinkers should be 5.0-7.5 cm deep, just necessary to drink and not to incline themselves. In deep litter brooding, the width of the litter will be 3 cm and above to fascinate the excess humidity in the ducks’ comports.

3.6 HEALTH CARE

Ducks are more energetic and less affected by diseases than chicken and turkeys. If infections occur, it is most expected the consequence of unhygienic environment and faulty administration or inherent weakness due to breeding. With the purpose of know whether a duck is sickening you first have to recognise how a strong duck aspects. The most important characteristics of healthy and unhealthy ducks are listed in the Table 2.

Table 2: Major characteristics features of healthy and illness ducks.

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Characteristics</th>
<th>Healthy ducks</th>
<th>Unhealthy ducks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General condition, first impression</td>
<td>Lively</td>
<td>Listless, unusually quiet</td>
</tr>
<tr>
<td>2</td>
<td>Weight</td>
<td>Good</td>
<td>Often light</td>
</tr>
<tr>
<td>3</td>
<td>Growth rate</td>
<td>Normal</td>
<td>Too slow</td>
</tr>
<tr>
<td>4</td>
<td>Eyes</td>
<td>Lively, bright</td>
<td>Listless, dull</td>
</tr>
<tr>
<td>5</td>
<td>Cloacae (genital / anal area)</td>
<td>Large, soft, moist, pink</td>
<td>Shrivelled, dry, discoloured</td>
</tr>
<tr>
<td>6</td>
<td>Skin</td>
<td>Soft, loose</td>
<td>Wrinkled, dry</td>
</tr>
</tbody>
</table>
Table 3: Vaccination schedule

<table>
<thead>
<tr>
<th>Name of the vaccine</th>
<th>Route</th>
<th>Age of ducks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duck Cholera (Pasteurellosis)</td>
<td>Subcutaneous Ducklings, Adults</td>
<td>3-4 weeks</td>
</tr>
<tr>
<td>Duck Plague</td>
<td>Subcutaneous Adults</td>
<td>8-12 weeks.</td>
</tr>
</tbody>
</table>

The most significant information in this table articulates how to identify a healthy duck: how it must be growing, how the eyes and cloaca (genital/anal area) gaze and how the skin sensations. A worthy way of fetching acquainted with how a in good physical shape duck looks is to commonly study ducks for a short while. This does not malicious you have to pick up each duck every day, but just avail about 15 minutes detecting the flock travelling around, noticing how the ducks appear and whether they are eating well. Worthy cleanliness and immunizing ducks are the two most essential features of averting ducks becoming ill.

Some diseases are so contagious or so mutual that it is means protecting the ducks to guard them. If duck keeping is very common in the area it is particularly useful vaccinating your ducks.

4. COMBINED DUCK REARING SYSTEMS

Duck possession syndicates well with additional forms of farming. In these systems the different farms of production accompany each other and the farmer will have improved production and more income. Waste and by-products are used. It shelters two well-known combined systems.

4.1 DUCK REARING INTEGRATED WITH PADDY CULTIVATION

The integrated system of duck rearing and paddy cultivation is the one which is beneficial to the owners both financially and also customarily. In paddy fields ducks eat dangerous insects and snails, this is benefit for the paddy and at the similar time the ducks get nourishing feed. The farmer ranges threats. For example if the rice produce is low there is still a harvest of eggs and duck meat. Wandering duck farming is a technique of duck farming accomplished by the poor agricultural labourers in South India. Farmer starts duck farming during December by rearing ducklings. Ducklings were acquired from large farmers. By February as the yield of second crop of paddy is over the labourers’ starts relocation with the ducks. The paddy cultivators of Tamil Nadu and Kerala generally welcome the ducks. The ducks nourish on gone away paddy grains on the field as well as snails and small fishes. Water rousing produced by the ducks happenings constrains the progress of weeds concluded photosynthesis discount when the water becomes scrambled. Their deeds also develop the rice root, stalk and leaf development, thereby quickening rice growth.

In accumulation, a condensed requests of insecticides and fertilizers assistances the biological system. During night the ducks are residing on the fields. One or two hours after sunrise, the ducks are allowed, by which time egg laying is more or less finished and eggs can easily be gathered. Owner of the land are given duck eggs as recompense. The ducks create well by nutritious on paddy fields and the fields in turn become productive by duck mouldings.
4.2 DUCK REARING INTEGRATED WITH FISH PONDS

The surplus and excreta from the duck shelter can be reprocessed and may be used for fish culture in the combined duck-fish farming. This can be automatically up warding the production of natural food in the ponds, which in turn develops the fish production. By incorporating the duck and fish culture, more earnings can be attained. This provides the worthy benefits to the farmers. If the ducks are permitted to insist easily in the fishponds, the waste can be distributed equally in the ponds and it can also be used as good manure to the fish which are accumulated in the pond. As a consequence of these, expenses for manure, feedstuff, complementary nourishment for fish is reduced. Since the ducks are in the fishponds, it inhibits the progress of the aquatic weeds and improves the ecological production of the ponds. As a result of the swimming action of the ducks, the quantity of oxygen in the ponds gets improved. Ducks eat the weeds, insects, larvae, worms etc. accumulate in the pond, and hence there is no need to add more additional feed to them.

In this type of duck farming method along with fish, the fishes with less than 10 cm cannot be put in the pond because they are eaten by the ducks. Fish seeds can be encouraged at the rate of 15000 numbers/ha. Based on the natural surroundings of the fishpond and the accessibility of fish seeds the providing concentration may vary. Growing of ducks depends upon the type of the species and egg laying capability. To develop more meat and egg from the duck-fish method, suitable administration plays a significant role. The protection have to be well ventilate and motionless of squander water have to be forbidden.

4.3 DUCK, FISH ALONG WITH PADDY CULTIVATION

In the same field where paddy is being cultivated duck and fish can be reared together. By this method, the farmers can be earned more and more throughout the year.

CONCLUSION

Ducks are more productive and yield about 25 eggs more than courtyard chicken. Moreover, the Size of the duck egg is 10-15 gram greater than chicken egg. They have more profitable and prolific life because they lay eggs during second and third year also. Hence it will decrease the nourish cost. In general, ducks have the habit of laying eggs in the morning time since it is very easy to collect those eggs and have no fear about the missing of the eggs. Duck farming is having interdependent association with paddy cultivation, so paddy cultivation and ducks can be combined in the whole paddy agriculture extents. These are reasonably intellectual birds and they can be simply skilled for their everyday routine and it decreases the labour for supervision. They are pretty resilient birds and can be definitely agonised and are unaffected to common avian diseases. Broiler or green ducks are very fast developing than chicken, with improved growth ratio and feed proficiency. In India, duck farming is an emerging and can be developed by many places by the farmers on their own interest. It desires lot of consciousness in people for its improvement in prospecting future.

REFERENCES


