

# MUSCOVY DUCKS

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## ECHO TECHNICAL NOTE

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### BREED DESCRIPTION

The Muscovy is a heavy bird, suitable mainly for meat production. Under good management, with proper feeding, the drakes (male ducks) will reach 4.0-4.5 kg and the ducks 2.0-2.5 kg at 16 weeks, which is usually the age at which the birds are sold to be eaten. Most of the Muscovys are pure white but black ones also exist. There is also a full range between black and white. All the birds develop red flesh around their eyes and at the base of their bills. In older drakes, it may even appear on the back of the neck and wings. With good feed, the ducks will lay about 90 eggs per year and will hatch ducklings very successfully. The breed is very hardy and can get a lot of its feed requirement in foraging. Traditionally, the Papua New Guinea (PNG) Farmer does not feed its poultry and relies on natural incubation for breeding. The Muscovy duck is ideally suited for the PNG village conditions.

### RAISING DUCKS

FROM 0 TO 6 WEEKS

#### *Site of the Projects*

For a duck project, choose a place: (1) close to the village, to be able to look after the ducks easily, (2) where there is good shade (if the ducks stay a long time in the sun, they may get sick), (3) where there is green fresh grass for the ducks to eat and find insects, (4) not close to a pig fence (very often, pigs kill and eat ducks), (5) where hawks do not usually fly, (6) near a creek or pond, if possible. Avoid places that are dry, sunny, or covered with kunai grass.

#### *Housing*

A small house of 3 x 5 m, made out of bush material will be enough for 20 ducklings. Make two windows to give plenty of light inside this house, as ducklings will not grow well in a dark place. Make the house cat and dog proof. In a corner of the house, make a small, covered room (of about .5 x .5 x .3 m) where the ducklings can go and sleep or huddle together out of the wind if they are cold. On the floor, put some deep litter. This can be sawdust, shavings, coffee skin, or dry, finely chopped kunai. This deep litter should never become wet.

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### *Feeding & Water*

Although it is a bit costly, it is recommended to feed the ducklings with a commercial feed for the first six weeks. Broiler starter, pullet starter, broiler finisher are suitable. Do not use layer mash or crumble, pullet grower or developer as these feeds are too low in protein. A duckling will eat about 3 kg of feed for this period. At the end of the fifth week, start to feed some locally produced feed with the commercial ration. Anything that people eat is suitable for ducklings. Choko, both leaves and fruits are very good for ducks. Cook the feed.

Do not keep more than 40 ducklings at any time. Otherwise, it is most likely that garden produces will be in short supply and the ducks will not grow well. If more than 40 ducklings hatch at about the same time, it would be best to sell some to other interested farmers.

Water must be available inside the house all the time. Troughs made out of bamboo are quite good. It is better to have a creek or a pond where the ducks will be able to drink and wash later on, but it is not absolutely necessary. 44-gallon drums cut lengthwise, or a big cooking pot in the ground will be enough, provided that they are refilled regularly.

### *Care for the Ducklings*

It is best to raise the ducklings away from the rest of the flock as quite often drakes or other ducks will pick at and kill day old ducklings as they come out of the nest. Take the ducklings away from the mother as soon as they are completely dry and fluffy and raise them in the way described earlier. One can either use a part of the old duck house or build a completely new one to raise these new batches of ducklings.

On the coast, and up to 1000 m, the ducklings can look after themselves very well. For the first five weeks, they must stay inside the house all the time. During the sixth week, they can start to go out, a few hours every day. It would be best to have somebody to check them during that time. In the Highlands (above 1000 m), cold weather might be a problem for the first two weeks. Here are a few possible solutions: (1) Keep the ducklings in a centrally situated brooder for two weeks before distribution. (2) Make a small round enclosure, about one meter in diameter with flat iron, woven bamboo, strong cardboard box, etc. and cover it with old bags, leaving an uncovered strip, about 30-cm wide in the middle. Put a kerosene lamp inside the enclosure, in the strip not covered by the bags. (3) Take a box (beer carton or the like) and make a few holes in it. Every night, or when the weather is very cold, put the ducklings in the box and close it. Let the ducklings out in the morning, or when the weather improves. During the day, do not keep the ducklings inside the box for more than two hours. (A beer carton will be enough for 10 ducklings.)

### FROM 6 WEEKS TO 4 MONTHS

After six weeks, the ducks can be fed entirely on locally produced feed--sweet potatoes, taro, banana, pumpkin, choko, etc. Anything good for people is good for ducks. The food must be cooked. To know how much feed to give to the ducks, follow this simple rule: If the ducks eat everything within half an hour and nothing is left, they are still hungry. Cook more next time. If after half an hour, the ducks start to wander away from the feed, and some of it is still left, they have had enough.

Feeding ducks locally produced feed is not enough. Every day, they must be able to graze. It is only in grazing that ducks will get the protein necessary for their growth. These proteins will mainly be insects and grass seeds that are not found on bare ground or in short grass. Even a very big fence will not give enough grazing land because as soon as all the grass is finished, the ground will be laid bare and hard by grazing and trampling of the duck feet. There must be no fence around a duck house. A fenced-in project is a project that will fail. It is better to have a few ducks lost to dogs or other predators than to have the whole flock dying due to protein

deficiency. Protein deficiency will result in: (1) Poor growth--the duck will never be heavy enough to eat, (2) no feathers--the duck will be cold, sick and will die, (3) no eggs--the duck will never lay eggs.

The best way to look after ducks after six weeks is to keep them overnight in the house and let the ducks out at about 8 o'clock in the morning. They will be hungry and active and look for insects and grass. Before sunset, feed the ducks. It will help if the owner always calls his ducks in the same manner (call, bell, etc.). They will come quickly by themselves and will not need to be rounded up. Lock the duck for the night. Put water in the house.

At four months, the ducks will have reached their biggest weight. Under village conditions, it will be about 2.0 kg for the drakes and 1.2 kg for the ducks. They should then be eaten or sold as after that their meat will become quite tough. Do not keep a small duck in the hope that it will grow fatter. It is usually a waste of time and feed.

### BREEDING DUCKS

As it is cheaper for a farmer to produce his own ducklings than to buy them from the outside, he should do his own breeding. Only the best ducks and drakes must be kept for breeding. In this way only, the ducklings hatched on the project will be strong and healthy. Do not keep any birds that have deformed wings, with the tip of wings pointing outside. Otherwise, there will be more and more of them on the project. Do not keep any bird that is smaller than the rest of the flock. Big parent birds produce big ducklings. The ducks kept for breeding will be the heaviest ones, of round appearance and with a belly that is close to the ground. The drake will be the heaviest one, with a belly parallel to the ground. Do not keep any drake that looks like it is standing with the breast much higher than the belly. Do not keep more than 10 ducks for breeding. Otherwise, it is probable that the garden produces will be in short supply to feed the flock and all the birds will do poorly. Keep two drakes for up to five ducks and three for up to ten ducks. Ducks can be kept for up to three years, but drakes should be changed every second year as after that they do not mate regularly and fertility decreases.

### *Laying*

Under village conditions, ducks will start to lay eggs at 8 1/2 - 9 months of age. The first eggs will be small and should not be used for hatching. Small eggs are likely to be sterile (they will not produce a duckling) and even if they hatch, the duckling will be small and weak and will probably die within the first week. An egg is big enough for hatching when it weighs more than 72 g or if its diameter is more than 45 mm. The easiest way to check if an egg is suitable for breeding is to make a hole of exactly 45 mm in a piece of plywood or timber. If the egg passes through the hole, it is too small and must be eaten or sold. If it does not pass through the hole, it must be kept for breeding. The poultry Research Centre at Labu has a few of these measuring holes.

A duck will lay between 10 and 20 eggs. After that it will become broody and sit. If the ducklings are taken away from the mother after hatching, it will start to lay again after two to four months, depending on feeding. There are no laying seasons for ducks in Papua New Guinea. They lay all through the year.

If it happens that, in a project, ducks are not laying after 12 months, there is something wrong. Most probably, the ducks are underfed and protein deficient. They will never lay eggs and all the ducks should be eaten or sold and the project terminated. However, it happens that healthy ducks (fully feathered, weighing more than 1.3 kg) do not lay, for some, yet unknown, reason. If this happens, shift the project to a new site, in a different type of vegetation. If there is no improvement within the next six months, terminate the project. In many projects, it happens that a duck does not lay. It should be eaten or sold as soon as it is noticed. A non-laying duck can be recognized by the following signs: (1) it is heavier than the other birds, (2) the flesh around the eyes is very red, like a drake instead of being pink or orange, (3) the space between the two pelvic bones (pointing on both sides of the vent) is about one finger wide instead of 2 or 3.

### *Nests*

Nests should be provided for the ducks to lay their eggs. There should be at least as many nests as there are mothers. Otherwise, they will disturb each other for favorite nests or try to sit two to a nest, which is a bad thing. Two mothers in a nest will hatch fewer ducklings than one alone as more eggs will roll out and more ducklings will be trampled under their feet.

The nests should be about 30 x 30 x 40 cm (12 x 12 x 16") and be covered. This should prevent two mothers sitting together and drakes attempting to mate a sitting mother. Put a strip of timber, about 5 cm (2") wide in front of the nest, to prevent eggs from rolling out and to provide bedding such as sawdust, coffee skin, etc. Keep the nest clean at all times.

### *Role of the Drake*

It is widely believed on Papua New Guinea that a male is necessary for a female bird (chicken, duck, turkey, etc.) to lay eggs. This is not true. A female bird will lay as long as it has enough good feed and it is not sick. If a male (rooster, drake, tom turkey, etc.) is present, the birds will mate and the eggs will be fertile and hatch. If there is no mate, the egg will be sterile, will rot, and will never hatch even if the mother sits. If a duck does not lay, do not blame the drake and try to replace it, but improve feeding or look for disease.

### *Handling of Eggs*

Another false belief is that if people handle eggs, they will not hatch anymore. Fresh eggs can be picked up and stored in a house for up to seven days. They will still be hatched if given to a duck to sit on. Eggs that are warm because a mother is sitting on them can also be handled but they must be quickly put back under the mother, before they cool off. A warm egg that cools off for a long time will become bad and rot. However, if eggs roll out of the nest during the night, it usually pays to put them back in the nest as most of them will still hatch. This is true at least for the coastal areas.

### *Hatching*

Muscovy ducks have to sit for five weeks (35-37 days) before the ducklings will hatch. It will take between 12 and 24 hours between the first crack on the shell and the times when the duckling is fully out. As a rule, do not try to help the duckling to hatch. The only exceptions are if the duckling's head is already free but the rest of the body is "glued" to the egg shell or if the shell is cracked all around and the duckling does not have the strength to make the complete break through.

Do not enlarge a small crack. Normally, all the eggs should hatch within two days (as the ducklings start to develop inside the eggs only when the mother starts to sit non-stop). If after these two days there are still some eggs left, they should be checked. If the egg looks blue or has blue spots or streaks, or if when it is shaken it sounds like water is inside, it is bad and must be thrown away.

If the egg looks shiny and white, and if it stays warm even if the mother walks away for a while, it is a good one. It will be best to give it to another sitting mother. If there are none, the old mother can keep sitting, but not more than two weeks otherwise it will lose too much weight and might die. When there are no more eggs in the nest, clean it and put some fresh bedding material in it.