This short course was developed in response to a Training Needs Analysis that was conducted by the Department of Community Development and Skills Training Resource Unit to Provinces in the Highlands, New Guinea Islands and Momase regions. Ducks are very easy to look after and do not cost much to care for them. For those who wish to obtain skills in duck raising, there are many benefits that can be achieved to sustain the family, such as extra income from sale of eggs, meat and a good source of food for the family etc. There are 5 modules in this short course.

**RATIONALE**

This short course was developed in response to a Training Needs Analysis that was conducted by the Department of Community Development and Skills Training Resource Unit to Provinces in the Highlands, New Guinea Islands and Momase regions. Ducks are very easy to look after and do not cost much to care for them. For those who wish to obtain skills in duck raising, there are many benefits that can be achieved to sustain the family, such as extra income from sale of eggs, meat and a good source of food for the family etc. There are 5 modules in this short course.

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Course: RAISING DUCKS
Module code: AF011iv
Modules title: Breeding ducks

Module 1: Introduction to duck farming
Module 2: Duck shelter and equipment
Module 3: Rearing ducks
Module 4: Breeding ducks
Module 5: Processing and marketing ducks
Breeding Ducks

Competency Profile: Raising ducks

**Duties**

A. Introduction to duck farming

B. Duck shelter and equipment

C. Rearing ducks

D. Breeding ducks

E. Processing and marketing ducks

**Task**

A1. Benefits of raising ducks

A2. Requirements for raising ducks

A3. Breeds of ducks

B1. Select site for a duck shelter

B2. Build a duck shelter

B3. Identify equipments for raising ducks

C1. Feed ducks

C2. Handle ducks

C3. Identify sex of ducks

C4. Prevent diseases of ducks

D1. Select and mate ducks

D2. Hatch ducklings

D3. Care for ducklings

E1. Slaughter ducks

E2. Market duck products
Program: AGRICULTURE  
Course: RAISING DUCKS  
Module code: AF011iv  
Module: Breeding ducks  
Duration: 2 hour 40 minutes

Content:
D1: Select and mate ducks
• Features to consider when selecting ducks for breeding
• Mating mates for ducks.
• Mating ratio of drakes to ducks

D2. Hatch ducklings
• Period of incubation
• Collect and clean dirty eggs
• Store eggs
• Set female duck
• Hatching

D3. Care for ducklings
• Requirements of a brooder
• Timing of brooding

Pre-requisite: There are no pre-requisites to this module.

Method: This module should be delivered using the following Methodologies:
• Lecture
• Demonstration
• Practical activity
• Discussion

Instructor: The ideal instructor to deliver this course
• should have a Certificate in Tropical Agriculture or equivalent or
• Must have gone through Training Methodologies
• Or must be an experienced duck farmer

Assessment method: The participant will be assessed using the following assessment approaches:
• Written/Oral tests
• Demonstration of practical tasks through activities
• Direct Observation

Assessment condition:
- All materials and equipments will be provided.
- Assessment will be conducted in farm environment

REFERENCES:
1) Muscovy ducks  
Website: http://www.echonet.org/

2) Bauer, F., 1980 Muscovy ducks, Rural development Hand book  
No: 15, Publications, Section, Dept of Agriculture and Livestock,  
PO Box, 419, Konedobu, N.C.D, P.N.G

3) Muntwiler, M., 2003 Duck Farming Trainer Manual,  
The Salvation Army Agricultural Program, PMB, 3,  
Kainantu, E.H.P, P.N.G
APPENDIX 1: Training and Assessment guide

Task D1: **Select and mate ducks**
Suggested minimum instructional time: **40 minutes**

Learning outcomes
1.1 Identify and explain features of good ducks for breeding
1.2 State the mating age for ducks
1.3 State the mating ratio for ducks

Teaching strategy:
Learning activities for the trainee must include the instructor to:
• Discuss the features of good ducks for breeding.
• State the appropriate mating age for ducks and explain the relationship to egg size and fertility.
• Explain the importance of correct mating ratio for ducks.

Assessment condition:
Trainee must be given access to:
i) Information and handouts
ii) Live ducks at mating age (if possible)

Assessment criteria:
1.1.1 Identify and explain without error features of good ducks for breeding.
1.2.1 State in accordance with the information given the correct mating age of ducks.
1.3.1 State without error the mating ratio for ducks.

Assessment method:
To demonstrate achievement of the above criteria the trainee will be given:
• oral questions
• or written questions

Task D2: **Hatch ducklings**
Suggested minimum instructional time: **1 hour**

Learning outcomes
2.1 State the incubation period for ducks
2.2 Demonstrate collection and cleaning of eggs
2.3 Explain storing of eggs
2.4 Explain setting of female ducks
2.5 Explain natural hatching of eggs.

Teaching strategy:
Learning activities for the trainee must include the instructor to:
• Discuss the incubation period for ducks.
• Explain and demonstrate proper collection and cleaning of eggs.
• Explain the importance of proper storage of eggs and the effect of eggs stored for more than 7 days
• Explain the importance of availability of feed and water to ducks sitting over eggs.
• Explain the natural hatching of ducklings and identify the situations where help will be given to a hatching duckling.

Assessment condition:
Trainee must be given access to:
i) Information and handouts
ii) Eggs/storage facilities

Assessment criteria:
2.1.1 State without error the incubation period for ducks.
2.2.1 Eggs are collected and cleaned in the morning.
2.3.1 Storing of eggs is explained.
2.4.1 Setting of female ducks on eggs is explained.
2.5.1 Natural hatching of eggs is explained.

Assessment method:
To demonstrate achievement of the above criteria the trainee will be given:
• oral questions
• or written questions
• Practical activity

Task D3: **Care for ducklings**
Suggested minimum instructional time: **1 hour**

Learning outcomes
3.1 Explain the importance of brooding ducklings
3.2 Identify the requirements of a brooder
3.3 State the brooding period for ducklings in the coastal and highlands areas.

Teaching strategy:
Learning activities for the trainee must include the instructor to:
• Discuss the importance of brooding ducklings.
• Identify the requirements of a brooder and explain their importance in relation to the safety of the ducklings.
• Explain the brooding period of ducklings in coastal and the highlands areas.
**breeding ducks**

**Assessment condition:**
Trainee must be given access to:
1. Information and handouts

**Assessment criteria:**
3.1.1 Explain without error the importance of brooding ducklings.
3.2.1 Identify and explain in accordance with given information the requirements of a brooder.
3.3.1 State without error the brooding period for ducklings in the coastal and highlands areas.

**Assessment method:**
To demonstrate achievement of the above criteria the trainee will be given:
- Oral questions
- Written questions

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**APPENDIX 4: Instructional notes**

**D1. Select and mate ducks**
The best time to choose ducks for breeding is when they are fully grown at about 4 months of age.

**1.1 Features to consider when selecting ducks for breeding.**
When choosing ducks for breeding the following points need to be taken into consideration:
- The duck should look healthy, strong and active.
- It should have well-shaped legs, feet, wings, back and head.
- Any ducks with deformed body parts should not be chosen for breeding.

**D2. Hatch ducklings**

**2.1 Period of incubation**
Most ducks will hatch their eggs after 28 days of incubation except for the muscovy ducks it takes at least 35 days to hatch.

**Muscovy duck**
35 days to hatch

Muscovy ducks are very good mothers. They hatch their own eggs, but for other breeds of ducks which do not hatch their eggs, muscovy ducks or even chickens can be used to hatch their eggs.
2.2 Collect and clean dirty eggs.
Most ducks lay their eggs during the night or early in the morning. Eggs must be gathered first thing in the morning to prevent them becoming dirty and to keep breakages to a minimum. If ducks are laying while you are collecting, allow them to stay on the nest and delay collection to about two hours later.
Collected eggs which are dirty should be cleaned with a piece of warm damp cloth.

Small eggs should not be kept for hatching, they are likely to be sterile (there will be no duckling inside) and even if they hatch, the ducklings will be small and weak, and will die within a week or two.
A simple way to check if an egg is too small, is to pass it through measuring hole 45 mm in diameter made on a piece of plywood. If the egg passes through the hole it should be eaten or sold. If the egg does not pass through the hole, keep it to hatch.

When you are collecting eggs handle them carefully. If you shake them too much, they may not hatch.

2.3 Store the eggs.
A good number of eggs to be set under a mother duck are between 10-12 eggs. While waiting for more eggs to be laid, you can store the eggs in a cool dry place in your house. The eggs must be stored for less than 7 days.

2.4 Set the female duck.
After you have collected the required number of eggs which are less than 7 days old, place them under a broody duck in the nest.

Make sure that when eggs are placed under a duck for incubation, there is enough food and water available nearby.
Do not let the duck go far to look for food and water, the eggs may get cold and not hatch.

2.5 Hatching
On the 28th (day for other duck eggs) or 35th day (muscovy ducks), the chicks will start breaking out of the shells little by little. It may take as long as two (2) days until all the baby ducks are hatched.
breeding ducks

As the baby ducks hatch, take away the pieces of broken shell from the nest. As soon as the baby ducks are hatched, they should be removed and placed in the brooder. Small ducklings need special care. It is best to raise them away from the rest of the flock as quite often the drakes and other ducks peck at them and may kill young ducklings as they come out of the nest.

3.1 Requirements of a brooder:
The brooder must provide the basic following basic requirements:
• Warmth for the ducklings

At night cover the brooder with an old bag to protect the ducklings from cold or provide a heater such as lamp or light especially during the first week.
• Provide stock feed (starter feed) or cooked food and water at all times
• Make sure that the ducklings are safe from cats, dogs, rats, pigs etc.
• Protect them from getting wet and getting cold in the rain.

3.2 Timing of brooding.
The ducklings can be let out to the flock after about 4-6 weeks in the brooder. By this time they should be able to eat the same food as older duck and grown enough feathers to keep them warm at night.

5. Points to consider when replacing breeding stock.
The following points should be observed when deciding which ducks should be removed from breeding:
• Drakes which have been breeding for two years
• Female ducks which have been breeding for three years
• Female ducks which have not been laying eggs after 12 months should be removed from the flock.

D3. Care for the ducklings
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