

# Participant Handbook

Sector  
**AGRICULTURE AND ALLIED**

Sub-Sector  
**Agriculture Allied Activities**

Occupation  
**Dairy Farm Management**

Reference ID: **AGR/Q4101, Version 1.0**  
**NSQF Level 4**



**Dairy Farmer**

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**Shri Narendra Modi**  
Prime Minister of India

“ Skilling is building a better India.  
If we have to move India towards  
development then Skill Development  
should be our mission. ”



## Certificate

### COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

**AGRICULTURE SECTOR SKILL COUNCIL**

for

### SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of  
Job Role/ Qualification Pack: **'Dairy Farmer/Entrepreneur'** OP No. **'AGR/Q4101 NSQF Level 4'**

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Authorised Signatory  
(Agriculture Skill Council of India)

## Acknowledgements

We are thankful to all organizations and individuals who have helped us in preparation of this Participant manual. We also wish to extend our gratitude to all those who reviewed the content and provided valuable inputs for improving quality, coherence and content presentation of chapters. This handbook will lead to successful roll out the skill development initiatives, helping greatly our stakeholders particularly trainees, trainers and assessors etc. We are thankful to our Subject Matter Expert **Dr. Suresh Damodaran** who has given the content and helped us in preparation of Participant Handbook.

It is expected that this publication would meet the complete requirements of QP/NOS based training delivery, we welcome the suggestions from users, Industry experts and other stakeholders for any improvement in future.

## About this book

A Dairy Farmer / Entrepreneur is a person who is responsible for various activities involved in dairy farm management. Various decisions pertaining to the viability and sustainability of the dairy farm is taken by the Dairy farmer. He / She ensures proper care of dairy animals, their health and productivity, milking and marketing of the produced milk. The job is to be performed in an efficient manner to allow the production of high quality milk and promote animal well being and comfort. The individual should also be able to demonstrate skills of using various tools and keep records as required. The trainee will enhance his/her knowledge under the guidance of the trainer in the following skills:

- **Knowledge and Understanding:** Adequate operational knowledge and understanding to perform the required task
- **Performance Criteria:** Gain the required skills through hands on training and perform the required operations within the specified standards
- **Professional Skills:** Ability to make operational decisions pertaining to the area of work.

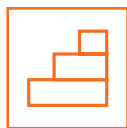
The handbook incorporates well-defined roles of Dairy Farmer like preparation of accommodation for livestock, Feed and water for livestock, forage conservation, entrepreneurship, health & safety at the work place etc. The Dairy Farmer / Entrepreneur should work independently, and has the ability to make various strategic and operational decisions pertaining to his / her area of work. The individual should have clarity and should be result oriented. The individual should also be able to demonstrate skills to use various tools.

We wishes all the best for your future in the Dairy Farming Sector

## Symbols Used



Key Learning Outcomes



Steps



Time



Tips



Notes



Unit Objectives



Exercise

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GOVERNMENT OF INDIA  
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& ENTREPRENEURSHIP



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# 1. Introduction

Unit 1.1 – General Instructions  
Unit 1.2 – Selection of cattle



## Key Learning Outcomes



**At the end of this module, you will be able to:**

- Understand the roles and responsibilities of a Dairy Farmer
- Understand the breeds of cattles
- Select the Cattle for Dairy farming

## UNIT 1.1: Introduction

### Unit Objectives

**At the end of this unit, you will be able to:**

- Understand the roles and responsibilities of a Dairy Farmer
- Understand the breeds of cattles

### 1.1.1 General instructions to Participants

- Greet your instructors and the other participants when you enter the class
- Always be punctual for every class
- Be regular. Candidates who fall short of the required attendance will not be certified.
- Inform your instructor if, for any reason, you need to miss class.
- Pay attention to what your instructor is saying or showing.
- If you do not understand something, put up your hand and seek clarification.
- Make sure you do all the exercises at the end of each module in this book. It will help you understand the concepts better.
- Practice any new skills you have learnt as many times as possible. Seek the help of your Trainer or co-participant for practice.
- Take all necessary precautions, as instructed by your Trainer, while working with electricity, tools and animals.
- Make sure you are neatly attired and presentable at all times.
- Make sure you wear canvas shoes or rubber boots.
- Participate actively in all the activities, discussions and games during training.
- Always take bath, wear clean clothes and comb your hair before you come to class.
- The three most important words you must always remember and use in your daily conversation are PLEASE, THANKYOU and SORRY.

## 1.1.2 Understand the role of dairy farmer

Dairy farming is much more complex and needs to be managed scientifically. Dairy farmer managing a such dairy farm requires broad knowledgeable, wide variety of multi tasking skills and keen business acumen.

### Duties and responsibilities of Dairy Farmer (Manager)

- Spend 50 percent of time in Management of the Dairy Herd and remaining time in supervising employees,
  - Ration preparation and feeding
  - Raising of replacements
  - Milking
  - Upkeep of facilities, grounds and equipment
  - Pasture management
  - Herd management
- Spend 30 percent of time in Herd Health and Reproduction.
  - Treat and care for sick animals
  - Help with difficult births
  - Heat detection
  - Breeding
  - Fill in for sick and vacationing employees
- Spend 20 percent of time in General Office Work and Procurement
  - Record keeping (herd health, production, reproduction inventories)
  - Monthly inventories
  - Order supplies, repair parts, feed
- Knowledge, Skills and Abilities Required:
  - Trained in artificial insemination
  - Knowledgeable of disease and injury treatment and calf pulling
  - Knowledgeable in dairy nutrition
  - Ability to motivate employees
  - Ability to communicate
  - Knowledge of milking procedures
  - Knowledge of and use for Dairy Herd Improvement Records

### Duties and responsibilities of Feeder

- Spend 70 percent to 80 percent work time to perform the duties of feeding and caring for all livestock.
- Keep the animal areas, lots and barns clean and free from manure and extraneous objects.
- Allow the production of a highquality product and promote animal well-being and comfort.

- Feeding Responsibilities:
  - Check all animals on a timely basis (three to four times per day) to be certain they are receiving adequate feed. Be certain clean water is available at all times.
  - Feed cows and calves in a timely manner
  - Be certain lots and barns are cleaned daily Routinely check freshening area and assist in birthing process.
  - Check all lots at least five times per day (dry cow, heifer and calf areas) to be certain cattle are not under stress due to weather conditions.
  - Maintain all equipment as prescribed by manufacturer's suggestions. Be certain all machinery is in working order. Notify manager immediately if any malfunctions occur.
  - Take any necessary feed or forage samples for nutrient testing as required by manager.
  - All pastures and fencing shall be maintained & repaired from time to time. ○All the equipment and tools to be maintained in an orderly manner so that they are readily available for use.
  - Treat sick animals and administer appropriate prescription drugs only when told by the manager.
  - Perform routine vaccinations under supervision of the manager.
  - Assist in any special projects or routine maintenance of farmstead in coordination with the manager
  
- **Duties and responsibilities of Milker**
  
- Spend 70 percent to 80 percent work time to perform the duties of milking and related activities for lactating cows.
- Milking Responsibilities and Procedures:
  - Prepare milking equipment and bulk tank for milking.
  - Bring in cows for milking or help other employees bring in cows if needed or requested.
  - Wear gloves when milking to help prevent spread of mastitis-causing organisms.
  - Follow recommended pre-milking preparation of cattle before milking.
  - Milk all cows in an orderly, proper and consistent manner.
  - Be certain to look at treatment records so that milk from treated cows is not put into the bulk tank.
  - The treatment records should be checked to ensure that milk from treated cows is not put into the bulk tank.
  - The milking parlor, holding area and bulk tank room should be cleaned.
  - All milking equipment shall be operated as recommended by the manager and factory specifications.
  - After milking, be sure all machinery and sanitation procedures are followed according to manufacturer's specification and Grade A Standards of the Public Milk Ordinance.

- Milking Related Activities:
  - Help to get cattle in barn if necessary.
  - Maintain treatment records and identify treated cows with appropriate markers, such as leg bands, etc.
  - Assist in ordering supplies by making a list and bringing to the manager's attention any items in short supply.
  - If unable to be present at scheduled working hours, the manager must be given sufficient notice to arrange for a substitute milker. Clip udders, freeze brand and perform other procedures that promote accurate identification and animal well-being.
- Other Responsibilities (approximately 20 percent to 30 percent of daily work schedule) as Assigned by the Manager.
- These responsibilities may include, but are not limited to the following responsibilities:
  - Care of springers and cows at calving
  - Feeding and care of calves
  - Feeding, cleaning and care of milking herd
  - Maintenance of free-stalls
  - Heat detection, A.I.
  - Record keeping
  - Cleaning and maintenance of office building
  - Maintenance of grounds, pasture, fences
  - Maintenance of vacuum pumps

### 1.1.3 Cattle Crossbred



Female



Male

1. **Name:** Jersey Crossbred

2. Crossbred

3. **State:** All India

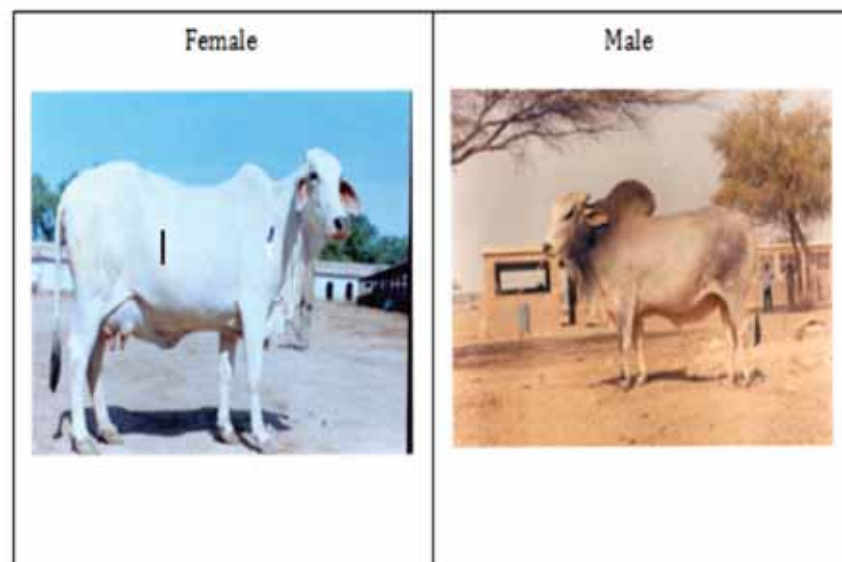
4. **Purpose:** Food – Milk:

5. **Milk yield per lactation(kg):** 1749 - 2147

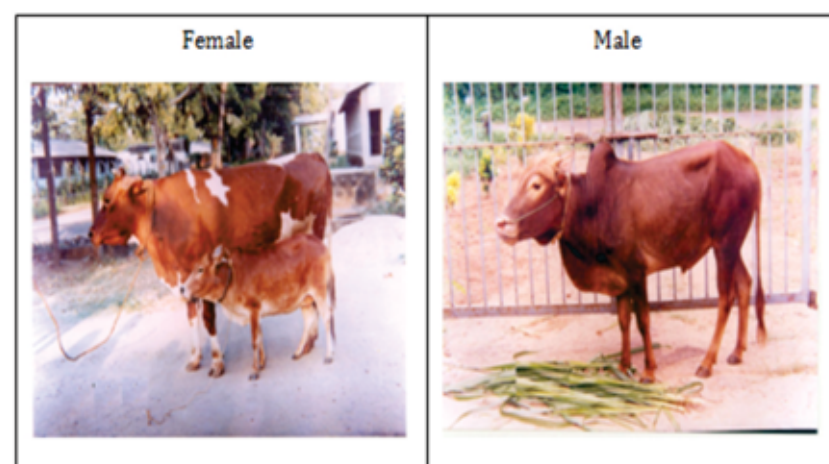


- 1. **Name:** Holstein Friesian Crossbred
- 2. Crossbred
- 3. **State:** Hilly and Temperate regions (All India)
- 4. **Purpose:** Food – Milk:
- 5. **Milk yield per lactation(kg):** 3000 - 3500

**Cattle**



- 1. **Name:** Tharparkar (White Sindhi, Grey Sindhi, Thari)
- 2. **Indigenous bred**
- 3. **State:** Gujarat, Rajasthan (Tharparkar animals are found along the Indo-Pak border covering Western Rajasthan and upto Rann of Kutch in Gujarat.)
- 4. **Purpose:** Food – Milk:
- 5. **Milk yield per lactation(kg):** 1749 - 2147



- 1. **Name:** Vechur (White Sindhi, Grey Sindhi, Thari)
- 2. **Indigenous bred**
- 3. **State:** Kerala (Kuttanad, a unique agricultural tract, which covers Alappuzha, Kottayam and Pathanamthitta; and Kasaragod districts of Kerala.)
- 4. **Purpose:** Food – Milk: Dung - Manure
- 5. **Milk yield per lactation(kg):** 561



Female



Male



**1.Name:** Red Sindhi (Malir (Baluchistan), Red Karachi and Sindhi)

**2. Indigenous bred**

**3.State:** The original breeding tract is in Pakistan but some organised herds are available in Orissa, Tamil nadu, Bihar, Kerala and Assam states of India.

**4.Purpose:** Food – Milk:

**5.Milk yield per lactation(kg):** 1840 - 2600

Female



Male



**1.Name:** Sahiwal (Lambi Bar, Lola, Montgomery, Multani and Teli)

**2. Indigenous bred**

**3.State:** Punjab,Rajasthan ()

**4.Purpose:** Food – Milk:

**5.Milk yield per lactation(kg):** 2325 - 2750

Female



Male



**1.Name:** Punganur ( )

**2. Indigenous bred**

**3.State:** AP (The breed tract is confined to the taluks of Punganur and adjacent taluks of Vayalpad, Madnapalli and Palamaner in Chittoor district of Andhra Pradesh..)

**4.Purpose:** Food – Milk: Work – Draught: Transportation

**5.Milk yield per lactation(kg):** 546 - 1100

Female



Male



1. **Name:** Rathi

2. **Indigenous bred**

3. **State:** Rajasthan (Rathi animals are particularly concentrated in Loonkaransar tehsil of Bikaner district which is also known as Rathi tract.)

4. **Purpose:** Food – Milk:

5. **Milk yield per lactation(kg):** 1560 - 2810

Female



Male



1. **Name:** Motu (Deshi)

2. **Indigenous bred**

3. **State:** Odisha (Southern part of Malkangiri district and adjoining area of Chhattisgarh and Andhra Pradesh. Heavy concentration is in Motu, Kalimela, Podia and Malkangiri area of Malkangiri district in Orissa. Sandy and clay type soil is predominant. Most of the area is covered with forest.)

4. **Purpose:** Food – Milk:  
Work – Draught: Manure

5. **Milk yield per lactation(kg):** 0 - 140

Female



Male



1. **Name:** Ongole  
(Nellore)

2. **Indigenous bred**

3. **State:** Andhra Pradesh  
(The breeding tract extends all along the coast from Nellore to Vizianagram.)

4. **Purpose:** Food – Milk:  
Work – Draught:

5. **Milk yield per lactation(kg):** 798

Female



Male



1. **Name:** Khariar  
(Deshi)

2. **Indigenous bred**

3. **State:** Odisha  
(Nuapada district and adjoining area in Kalahandi and Balangir district. Heavy concentration is in Khariar, Komna, Sinapali and Boden blocks of Nuapada district)

4. **Purpose:** Food –  
Milk: Work – Draught:  
Manure and fuel

5. **Milk yield per lactation(kg):** 0 - 450