

Participant Handbook

Sector
AGRICULTURE AND ALLIED

Sub-Sector
Agriculture Crop Production

Occupation
Landscaping and Gardening

Reference ID: **AGR/Q0801, Version 1.0**
NSQF Level 4



Gardener

Published by

Mahendra Publication Pvt. Ltd
E-42,43,44,Sector-7 Noida -201301,
Uttar Pradesh -India

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First Edition, March 2016

ISBN 978-1-111-22222-45-7

Printed in India at

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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. ”



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SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of
Job Role/ Qualification Pack: 'Gardener' QP No. 'AGR/Qo8o1 NSQF Level 4'

Date of Issuance: **Sep 30th 2016**

Valid up to*: **March 31st, 2018**

**Valid up to the next review date of the Qualification Pack or the
'Valid up to' date mentioned above (whichever is earlier)*

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 Ms. Renu Gulia 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 Gardener in the agriculture industry is a very important job role related to landscaping and gardening activity. The job role involves a lot of technical knowhow. He works in familiar, unpredictable, routine, situations of clear choice. Gardener is responsible for taking care of beautification of lawns and gardens for private Houses, Parks, and Hotels in order to attract customers. This job requires the individual to work independently and be comfortable in making decisions pertaining to his/her area of work. The individual should be result oriented. The individual should also be able to demonstrate skills of identifying crops, maintaining garden, use of various tools and decision making for instant problem solving. 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 Gardener like nursery management, propagation of plant material, designing of garden components, Plantation, maintenance and care of a garden, etc. The participant should be result oriented and responsible for his/her own working and learning. The participant should also be able to demonstrate skills of using various tools and decision making for instant problem solving.

We wishes all the best for your future in the Gardening Sector

Symbols Used



Key Learning Outcomes



Steps



Time



Tips



Notes



Unit Objectives



Exercise

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Transforming the skill landscape



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1. Introduction

Unit 1.1 - Introduction to Gardening

Unit 1.2 - Types of Garden



Key Learning Outcomes

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

- Understand the Role of a Gardener
- Study and understand Types of Gardens
- Gain knowledge about the Aesthetic value of garden.

UNIT 1.1: Introduction to Gardening

Unit Objectives

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

- Understand the Scope and importance of gardening
- Understand the role of a gardener

1.1.1 Introduction

Gardening is the practice of growing and cultivating plants as part of horticulture. In gardens, ornamental plants are often grown for their flowers, foliage, or overall appearance; useful plants, such as root vegetables, leaf vegetables, fruits, and herbs, are grown for consumption, for use as dyes, or for medicinal or cosmetic use. Gardening is considered to be a relaxing activity for many people.

Gardening ranges in scale from fruit orchards, to long boulevard plantings with one or more different types of shrubs, trees, and herbaceous plants, to residential yards including lawns and foundation plantings, to plants in large or small containers grown inside or outside. Gardening may be very specialized, with only one type of plant grown, or involve a large number of different plants in mixed plantings. It involves an active participation in the growing of plants, and tends to be labor-intensive, which differentiates it from farming or forestry.

1.1.2 Comparison with farming



Fig 1.1.2 Hand gardening tools

Gardening for beauty is likely nearly as old as farming for food, however for most of history for the majority of people there was no real distinction since the need for food and other useful product trumped other concerns. Small-scale, subsistence agriculture (called hoe-farming) is largely indistinguishable from gardening. A patch of potatoes grown by a Peruvian peasant or an Irish smallholder for personal use could be described as either a garden or a farm. Gardening for average people evolved as a separate discipline, more concerned with aesthetics and recreation, under the influence of the pleasure gardens of the wealthy. Meanwhile, farming has evolved (in developed countries) in the direction of commercialization, economics of scale, and monocropping.

In respect to its food producing purpose, gardening is distinguished from farming chiefly by scale and intent. Farming occurs on a larger scale, and with the production of salable goods as a major motivation. Gardening is done on a smaller scale, primarily for pleasure and to produce goods for the gardener's own family or community. There is some overlap between the terms, particularly in that some moderate-sized vegetable growing concerns, often called market gardening, can fit in either category.

1.1.3 Planting in a garden

The key distinction between gardening and farming is essentially one of scale; gardening can be a hobby or an income supplement, but farming is generally understood as a full-time or commercial activity, usually involving more land and quite different practices. One distinction is that gardening is labor-intensive and employs very little infrastructural capital, sometimes no more than a few tools, e.g. a spade, hoe, basket and watering can. By contrast, larger-scale farming often involves irrigation systems, chemical fertilizers and harvesters or at least ladders, e.g. to reach up into fruit trees. However, this distinction is becoming blurred with the increasing use of power tools in even small gardens.

In part because of labor intensity and aesthetic motivations, gardening is very often much more productive per unit of land than farming. The term precision agriculture is sometimes used to describe gardening using intermediate technology (more than tools, less than harvesters), especially of organic varieties. Gardening is effectively scaled up to feed entire villages of over 100 people from specialized plots. A variant is the community garden which offers plots to urban dwellers; see further in allotment (gardening).

1.1.4 Importance

Flowers have been considered as the symbol of grace and elegance and a feast for our eyes. They are used on all religious festival occasions. Flowers are given as a birthday presents, wedding gifts or while meeting sick people and even at funerals. Most Hindu ladies adhere their; hair style with flowers i.e. *Gajara* and *Veni* and it is one of the important floral ornament which will and grace to their beauty. All the people irrespective of their origin, race, sex and cadre love flowers. Generally flowers are offered by devotees in Temple, Gurudwara, Church and Masjids- Flowers are used as a floral decoration. Even dried flowers are also used in flower craft or arrangement of garlands and bouquets are prepared and offered to welcome the dignitaries. When cut flowers are used for vase decoration, that will be a marvelous piece of indoor decoration. Importance of flowers is not restricted to the beautification, decoration or preparation of Gajra, Garland, Veni or Bouquets but also have the industrial importance too. Some flowers like Rose, Jasmynes, Tuberose, Kevda, Bakul are used for extraction of essential oils which is base for preparation of perfumes, scents or attar. From rose Gulkand, Rose water etc. products are also prepared.

1.1.5 Scope

There is a good scope for commercial floriculture. The important factors which decide the scope for Commercial Floriculture are Soil, Climate, labour, Transport and Market. All most all big cities are developing very speedily to accommodate this fast growing population, cement concrete, jungle is also developing at the some rate and thus peoples are now realizing the importance of open space, parks and garden for relaxation, peace of mind, recreation and unpolluted air. Thus, to meet out all these problems bio-aesthetic planning is essential, which runs hand in hand with town planning. In modern life floriculture garden in the country yard is an integral part of the modern life and thus ornamental plants has find a pride of place in home gardening. As far as flower trade is concerned i.e. for cut flowers and loose flowers, it is growing very well in our state because these cut flowers are used for vase decoration and now-a-days there is a craze for indoor decoration. As far as loose flowers are concerned these are mainly used for preparation of gajara, veni, garland and bouquets and thus demand of flowers for these purpose is unending. Thus, taking into consideration the different points i.e. bio-aesthetic planning, floral garden, indoor decoration, social functions and religious functions the demand for floricultural plants is increasing day by day and to meet out the same there is a good scope for growing and raising of Ornamental or Floricultural plants. When Flower Trade is concerned; different flowers like Rose, Chrysanthemum, Gladiolus, Tuberose are demanded in the market as cut flowers. While Aster, Gaillardia, Marigold, Chrysanthemum, Jasmines, Tager^ Nerium as loose flowers.

1.1.6 Role of a Gardener

Gardener in the agriculture industry is a very important job role related to landscaping and gardening activity, in hindi it is commonly known as 'Mali'. The job role involves a lot of technical knowhow. He works in familiar, unpredictable, routine, situations of clear choice. Gardener is responsible for taking care of beautification of lawns and gardens for private Houses, Parks, and Hotels in order to attract customers.

UNIT 1.2: Types of Garden

Unit Objectives

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

- Understand the types of gardening

1.2.1 TYPES OF GARDEN

1. LANDSCAPING OF HOME
2. LANDSCAPING OF INSTITUTE
3. LANDSCAPING OF INDUSTRY
4. ROOF GARDEN

1. LANDSCAPING OF HOME

There are many people who think that landscape gardening relates to gardening only i.e. in large public parks or palaces of the rich. Landscaping as it is done for larger public parks and / or estates can also be implemented in a tasteful and artistic way for a small home ground, though on a smaller scale. The term "small" is a misleading 'one so far as it relates to gardens. The simplest definitive or "small", as suggested by some authors quite appropriately, is an area which can be effectively managed and maintained physically as well as financially by the owner and his family with occasional hired labour for such hard work as digging, mowing, and shearing of hedges. Here, ways will be suggested for landscaping only small residential houses. For larger estates, a combination of landscaping effects suggested for parks and home landscaping may be followed.

There are some basic guidelines for a home landscape. But personal preference plays a considerable role in developing a home garden. The home including its surroundings should be an outward expression of the inner personality and individuality of the owner. Often a common mistake is made by many to copy a successful competitor of a garden competition or a neighbour. This may not suit your own home for various reasons. For example, location aspect of your own garden may be quite different compared to the one which you want to copy. It is advisable to think a lot before even a single digging work starts. It is a matter of great regret that in our country sometimes we spend a fortune in decorating the interior of the house to make it attractive but ignore the outside compound.

Making a Plan Before any actual garden work is undertaken a master plan has to be prepared according to a scale (1: 15 or 1: 20) in which all the features such as house wall, drive-way, paths, flower beds, shrubbery, etc., are plotted. The shaded areas due to large tree canopy or the building itself has to be marked on the plan. A plan prepared on a printed graph paper is of great help. The plan thus prepared should be studied again and again keeping in view what shape a plant will take in the long run. It is frequently observed that people attracted by the graceful form of a young *Araucaria cookii*, plant this in the centre of a lawn or near the house possess the gigantic form and height it will attain after some years. Perhaps the owner of the house will cut this tree when overgrown or it may be retained to the detriment of other plants growing below it. Either way, this is not a good planning. Perhaps, one way of satisfying the urge of a garden lover to grow such beautiful trees in a small compound, is to grow them large concrete tubs and bury the tub growing the tree in the appropriate place, thus giving the impression that the plant has actually been grown on the ground. When this attains a considerable height, say 3-6 m, the tree along with the pot should be lifted and given to someone who can afford to use such a grown-up tree. But it is better not to include such controversial items. If the garden area is sufficiently large, this can be divided into three areas.

(1) Approach or Public Area: This is the area from the street side extending to the entrance of the house. The area may be small or quite large depending upon where the building is situated. The aim is to harmonize or blend the surroundings with the house proper. The approach area should not be overcrowded with large trees. It is better to have doorway or "foundation" plantings with low rowing shrubs and evergreens. Floribunda and miniature roses are also suitable for foundation planting provided sufficient sun, at least during the morning hours, is available. It is important to note that planting in front of the house should neither obscure it nor cut off light and air nor block the windows thus obstructing view of the garden from indoors.

Big trees, if space permits, can go in the backyard but should not be overcrowded in the front. But a few low-growing trees can be accommodated at the appropriate places as next to entrance, if space is available or somewhere in the front lawn. An open spacious lawn with some annuals (cut-and-come again zinnias, salvias, and petunias) or herbaceous perennials (chrysanthemum, *Canna*, and *Impatiens* in shade) can be planned in addition to the foundation plantings.



Fig 2.1.1 Floribunda rose



Fig 2.1.1 Impatiens balsamina



Fig 2.1.1 Zinnia

(2) Work or Service Area: The work or service area can be convenient, orderly and attractive. Wherever feasible this and the living area should be situated at the back of the house as these need seclusion or privacy. This area includes the kitchen garden, compost bin, nursery, tool shed, and garage. Some people like to include the children's swings and the slide in this portion as the children can be kept under surveillance from the kitchen. This should be separated from view by planting a thick hedge or a row of bushy shrubs, as this is considered as the shabbiest part in any garden.



Fig 2.1.1 Service area

(3) Private Garden Area or Living Area: This is generally termed as the outdoor living area, where people sit out in the winter to enjoy the sun or rest in the summer under an arbour or shade of tree. This area should be easily approachable and visible from the living (drawing-room) or dining-room, screened from unsightly objects and for privacy. In the western countries people prefer a terrace and this is the place where it should come. There should be some shaded sitting spot such as a tree or arbour with garden benches. Landscaping can help you effectively cover your outdoors thereby helping you block unpleasant views from outsiders or your own neighbors. Building huge walls to achieve this would be undesirable when the same can be achieved beautifully through landscaping. Garden benches offer a real opportunity to add utility, color and beauty to the landscape. Comfortable and attractive items are now available in a wide variety of low maintenance outdoor furniture. Outdoor furniture must be large enough to be practical and must be in scale with its surroundings. Built-in furniture has the added value of being permanently in place and enhancing the overall design. Occasionally the surface of a retaining wall or raised planter can serve as a seating area. The living terrace is the most usual place for outdoor furniture. A wide stretch of lawn with shrub border or few annual beds or a rose garden can also be included in this section. A tennis court or a play area has to be included here, if there is enough room.



Fig 2.1.1 Play area

But before actual planning one has to first decide what one wants for one's house. A choice has to be made from the following. Whether the garden is needed (a) as an outdoor having room with a long stretch of lawn and terrace (b) as a fenced-in playground (c) as a show piece with collection of exotic and rare plants or (d) a yielder of vegetables and fruits or cut flowers for the house is to be determined first. Some may like to add to the list a large tree for shade or trees to attract birds. It is to be considered first what should be the major theme of the garden. If somebody is fascinated with flowers, the borders are to be planned wide to fulfill his desire. People fond of vegetables and fruit may like to reserve the major portion of the area for this purpose with possibly a little area left around the house for a pleasure garden. But, if the garden is desired as a place for outdoor living, a vast expanse of lawn with minimum of beds and borders has to be planned. Some novices may like to combine the good qualities of all these themes and incorporate in his garden. This is bound to create a mess of everything and the ultimate result will be a garden good for nothing. Many people advise not to include any pool or formal rock garden or the kind in a home garden. But there is no harm if a formal or informal play pool can fit in with the overall design, with or without a fountain or a rock garden. A statue or sun dial can also be well fitted in some spacious compounds.



Fig 2.1.1 Lily pool

Some Points to Ponder In designing a house some more thinking is necessary. To keep down maintenance cost and time, an untrimmed hedge should be preferred over trimmed one, open lawns and shrubs need less attention than annual flower beds. If the beds and borders in a lawn are edged with stone or brick no hand-clipping of grass will be required. A pool needs to be cleaned occasionally and one should ponder twice before including this in the plan. The water outlets in the garden should be fixed at appropriate places so that the hoses are not dragged to long distances. The above suggestions are for reducing the labour cost which is especially relevant in industrially advanced countries where labour is costly. Fortunately in India, labour is not so costly' and one can include one or two features needing help of manual labour. To create privacy, shrubs, trees, hedges, fences, or creepers trained on the wire-mesh structure supported by G.I. pipe pillars or angle iron can be grown. The trees are used when height is required, otherwise hedges and / or other types of screens should be preferred. Lighting is required in the light specially for terrace area and paths. The same electricity points can be utilized for running an electric lawn mower.