ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

III SEMESTER  **AGRICULTURE AND RURAL DEVELOPMENT** TIME: 15HRS

HORD 281 (1) **PRODUCTION TECHNOLOGY FOR VEGETABLES AND SPICES** MARKS:100

w.e.f 2024-2025 (23AK Batch) **SYLLABUS**

**OBJECTIVES:**

* To study about production technology of vegetables.
* To know importance of vegetables crops
* To understand the scientific cultivation methods of vegetables.
* To study classification of vegetables

## Course Outcomes

**CO1:** Classify and explain the importance of vegetables  in human nutrition and national economy.

**CO2:** Outline the agronomical practices for vegetables.

**CO3:** Summarize physiological disorders of vegetables.

**CO4:** Explain disease and pest control and in vegetables and seed production techniques.

**THEORY**

# UNIT – I:

1. Importance of vegetables in human nutrition and national economy – Classification of vegetables - 1) Botanical 2) Based on Hardiness 3) Parts Used 4) Method of culture 5) Season.

2. Tomato- Botanical Name – Family – Origin – Area – Production- Improved varieties and cultivation practices such as time of sowing - Sowing - Transplanting techniques - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield - Storage - Physiological disorders - Disease and pest control and seed production.

3. Brinjal and Chilli - Botanical name – Family - Origin - Area - Production - Improved varieties and cultivation practices such as time of sowing - Sowing - Transplanting techniques- Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield - Storage-Disease and pest control and seed production.

## UNIT – II:

1. Okra - Botanical name – Family - Origin - area - Production - Improved varieties and cultivation practices such as time of sowing - Sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield - Storage - Disease and pest control and seed production.

## 2. Cucurbits – Flowering, sex expression, sex ratio -Ridge gourd, Bitter gourd, Bottle gourd- Botanical name – Family - Origin - Area - Production - improved varieties and cultivation practices such as time of sowing - Sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield - Storage - Physiological disorders - Disease and pest control and seed production.

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# UNIT – III:

1. Melons – Watermelon and Muskmelon - Botanical name – Family - Origin - Area - Production - Improved varieties and cultivation practices such as time of sowing - sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield- Storage - Physiological disorders - Disease and pest control and seed production.

2. Cole crops- Cabbage and Cauliflower -Botanical name – Family - Origin - Area - production-Improved varieties and cultivation practices such as time of sowing - sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield – Storage - Physiological disorders - Disease and pest control and seed production.

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# UNIT – IV:

1. Peas and beans (French bean, Dolichos) - Botanical name – Family - Origin - Area - Production - Improved varieties and cultivation practices such as time of Sowing - sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield –Storage - Physiological disorders - Disease and pest control and seed production.

2. Root crops (Carrot and Radish) - Botanical name – Family - Origin - Area - Production - Improved varieties and cultivation practices such as time of sowing - Sowing - Planting distance - Fertilizer requirements - Irrigation - Weed management - Harvesting - Yield - Storage - Physiological disorders (splitting, forking and cavity spot) - Disease and pest control and seed production.

# UNIT- V:

1. Bulb crops – Onion and Garlic – Botanical name – Family – Origin – Area – Production – Improved varieties and cultivation practices such as time of sowing – Sowing – Planting distance – Fertilizer requirements – Irrigation – Weed management – Harvesting – Yield – Storage – Physiological disorders – Disease and pest control and seed production.

# References text books

1. Pranab Hazra, A. Chattopadhyay, K. Karmakar and S. Dutta. 2010. Modern Technology in Vegetable Production. New India Publishing Agency, New Delhi.
2. Neeraj Pratap Singh, .2007. Basic Concepts of Vegetable Science. International Book Distributing Co. New Delhi. Academic Press, New Delhi.
3. Nempal Singh, Singh, D.K., Singh, Y.K. and Virendra Kumar. 2006. Vegetable Seed Production Technology. International Book Distributing Co. Lucknow.
4. Prem Singh Arya and S. Prakash 2002. Vegetables Growing in India. Kalyani publishers, New Delhi 5. Bose, T. K, Kabir, J., Maity T. K., Parthasarathy V. A.,

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