

# 21HORT281 PRODUCTION TECHNOLOGY FOR VEGETABLES AND SPICES

Hours Per Week :

L	T	P	C
1	-	2	2

Total Hours :

L	T	P
15	-	30



Source :

<https://images.app.goo.gl/NddpU4og4xC13apZA>

## Course Description and Objectives:

This course will provide students an exposure and hands on experience on production technology of vegetables and spices from nursery to harvesting and post-harvesting handling that includes grading, packaging, storage and seed production techniques

## Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes
1	Knowledge on production technologies of vegetables and spices and capacity to empower farmers on the latest production technologies
2	Practice and promote the production of vegetables and spices in his / her own and other farms

## SKILLS:

- ✓ *Design plan to establish nursery of vegetables and spices crops*
- ✓ *Practice propagation techniques in vegetables and spices crops*
- ✓ *Manage vegetables and spices crops under field conditions*
- ✓ *Participate in transplanting, weeding, irrigation and fertilizers application under field conditions*

**ACTIVITIES:**

- o *Demonstrate nursery raising and direct seed sowing*
- o *Practice transplanting*
- o *Identify vegetables based on morphology*
- o *Calculate economics of vegetables and spices cultivation*
- o *Involved in harvesting, packing and processing activities*

**UNIT - 1**

**Introduction:** Importance of vegetables and spices in human nutrition and national economy

**UNIT - 2**

**Cultivation practices:** Tomato- origin, area, production, improved varieties and cultivation practices such as time of sowing, sowing, transplanting techniques, planting distance

**UNIT - 3**

**Irrigation and harvesting management:** Fertilizer requirements, irrigation, weed management, harvesting, storage, physiological disorders, disease and pest control

**UNIT - 4**

**Seed, leafy vegetables and gourd production:** Seed production brinjal and chilli, okra and leafy vegetables, cucurbits – cucumber and melons, gourds - ridge gourd, bitter gourd, bottlegourd snake gourd

**UNIT - 5**

**Crops, peas, beans and perennial vegetable production:** Cole crops- cabbage and cauliflower, peas and beans (cluster bean, frenchbean, dolichos), root crops (carrot and radish), tapioca and sweet potato, perennial vegetables – drumstick and curry leaf, bulb crops – onion and garlic, black pepper, cardamom, ginger and turmeric, coriander, cumin and fenugreek

**LABORATORY EXPERIMENTS****LIST OF EXPERIMENTS**

1. Identification of vegetables and their seeds
2. Identification of spices crops and their seeds
3. Nursery raising techniques of vegetable crops
4. Direct seed sowing and transplanting
5. Study of morphological characters of different vegetables
6. Study of morphological characters of different spices
7. Physiological disorders of vegetable crops
8. Intercultural operations in vegetable crops
9. Fertilizers application methods
10. Seed extraction methods in vegetables and spices
11. Harvest indices and maturity standards of vegetable crops
12. Harvesting and preparation for market
13. Economics of vegetables and spices cultivation
14. Visit to vegetable farmer fields
15. Visit to vegetable markets to study marketing problems

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**REFERENCES:**

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
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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., and Som M. G., 2002. Vegetable Crops Vol. II & III Naya Prakash, Kolkata
6. Shanmugavelu, K.G., N. Kumar and K.V. Peter 2005. Production Technology of Spices and Plantation Crops. Agrobios (India), Jodhpur

