

SRI VENKATESWARA UNIVERSITY
B.Sc. DEGREE COURSE IN HORTICULTURE
III- SEMESTER
(Syllabus under CBCS w.e.f. 2021-22)
Basics of Vegetable Science (Olericulture)
(Total hours of teaching – 60 @ 04 Hrs./Week)

Theory :

Learning Outcomes: On successful completion of this course, the students will be able to:

- Distinguish the growing of vegetables according to season and climate
 - Get detailed knowledge on cultivation aspects of different vegetables
 - Understand and explain the special intercultural operations done in vegetable crops
 - Study of morphology and taxonomy of different vegetable crops
 - Study of different varieties of vegetable crops
 - Identify the diseases and pests of vegetable crops and their management
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Unit – 1 : Introduction to Vegetable crops

12 Hrs.

1. Importance of vegetable cultivation in India and Andhra Pradesh.
2. Classification and Nutritive value of vegetables.
3. Area and production of vegetables in India and Andhra Pradesh.
4. Export and import potential of vegetables in India. Constraints in vegetable production and remedies to overcome them.

Unit – 2 : Solanaceous and Leafy vegetables

12 Hrs.

Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, maturing, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Brinjal (b) Tomato (c) *Capsicum* (d) Spinach (e) Coriander and
(d) *Mentha*

Unit – 3 : Root and Tuber crops

16 Hrs.

Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, maturing, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Carrot (b) Beet root (c) Tapioca and (d) *Colossian*

Unit – 4 : Cole crops

08 Hrs.

Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, maturing, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Cabbage and (b) Cauliflower

Unit – 5 : Leguminous vegetables

12 Hrs.

Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, maturing, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Cluster bean (b) Cow pea and (d) *Doritos*

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Practical- Basics of Vegetable Science (Olericulture)
(Total hours of teaching – 30 @ 02 Hrs./Week)

1. Demonstration of seed germination test for a vegetable seed.
2. Demonstration of seed viability test.
3. Identification of vegetable seeds and vegetable crops at different growth stages.
4. Preparing vegetable nursery beds.
5. Raising vegetable seedlings in nursery bed and portrays.
6. Identification of major diseases and insect pests of vegetables.
7. Land preparation for sowing/ transplanting of vegetable crops.
8. Sowing/ transplanting of vegetables in main field.
9. Fertilizer application for vegetable growing.
10. Irrigation practices in a vegetable crop field.

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Model Question Paper for Practical Examination

Basics of Vegetable Science (Olericulture)

Max. Time: 3 Hrs.

Max. Marks: 50

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|---|----------------------------|
| 1. Demonstration of seed germination/ viability test (A). | 10 M |
| 2. Demonstration of preparing nursery bed/ cultivation practice for a vegetable crop (B). | 10 M |
| 3. Identification of material (C & D -Vegetable plants) and writing scientific name, family and uses. | $2 \times 4 = 8 \text{ M}$ |
| 4. Identification of a disease on vegetable plant (E) | 4 M |
| 5. Identification and comment on a cultivation practice (F) | 4 M |
| 6. Record + Viva Voice | $10 + 4 = 14 \text{ M}$ |

Text books :

- **Bose T K et al. (2003)** Vegetable crops, Naya Udhyog Publishers, Kolkata.
- **Singh D K (2007)** Modern vegetable varieties and production, IBN Publisher Technologies, International Book Distributing Co, Lucknow.
- **Premnath, Sundari Velayudhan and D P Sing (1987)** Vegetables for the tropical region, ICAR, New Delhi

Suggested co-curricular activities for Horticulture Core Course -3 in Semester- III :

A. Measurable :

a. Student seminars :

1. Production technology of solanaceous crops.
2. Production technology of leafy vegetables.
3. Production technology of root and tuber crops.
4. Production technology of Cole crops.
5. Production technology of leguminous crops.
6. Special intercultural operations in vegetable crops.
7. Major pests and diseases of vegetable crops and their management.
8. Morphological characters of vegetable crops.
9. Maturity and harvesting indices of vegetable crops.

10. Nutritional aspects of vegetable crops.

b. Student Study Projects:

1. A report on vegetable crops in a locality.
2. Collection and preparation of herbarium of vegetable crops in their locality.
3. A report on various inter-culture practices for a vegetable crop.
4. Study report on nutritional disorders of vegetable crops in a locality.
5. Study report on diseases of vegetable crops in a locality.
6. A report on harvest to marketing for a vegetable crop.
7. A report on use of fertilizers, pesticides and herbicides in a local vegetable crop field.
8. Report on economics of a vegetable crop in their locality.
9. A study report on irrigation practices for vegetable crops in an area.

c. Assignments: Written assignment at home / during '0' hour at college; preparation of charts with drawings, making models etc., on topics included in syllabus.

B. General :

1. Group Discussion (GD)/ Quiz/ Just A Minute (JAM) on different modules in syllabus of the course.
1. Visit to Horticulture University/ Research Station to learn about various vegetable crops.
3. Visit to a vegetable nursery and vegetable crop field.