

TEACHING PLAN: Production Technology of Vegetable Crops

SCHOOL: (SOAS) SCHOOL OF AGRICULTURAL SCINCES		ACADEMIC SESSION: 2023 – 2024		FOR STUDENTS’ BATCH: 2022-2026		
1	Course No.	AHR-T-201				
2	Course Title	Production Technology of Vegetable Crops				
3	Credits	1+1				
4	Learning Hours		Contact Hours	45		
			Assessment	09		
			Guided Study	09		
			Total hours	63		
5	Course Objective	1. To give knowledge about importance and scope of vegetables and spices in human nutrition. 2. To know about origin, geographical distribution, soil and climate requirement of vegetable crops. 3. Familiar with different improved varieties and methods of sowing in different vegetables. 4. Knowledge of various inters cultural operations and their management for vegetable crops. 5. Knowledge of crop protection measure in different crops				
6	Course Outcomes	1. Students will understand practical knowledge on specialized production techniques of vegetables and spices. 2. Students understand will Importance of vegetables & spices in human nutrition improved and national economy. 3. Students will knowledge about quality requirement and production and techniques. 4. Managing skill for solving field problems.				
7	Outline syllabus:					
7.01	Paper Code	Unit	Introduction	Page Numbers ¹	Lect ures	
7.02	AHR-T-201	Unit I	1. Importance of vegetables & spices in human nutrition and national economy	1-7	1	
			2. kitchen gardening,	19-22	2	
			3. Production Technology of Tomato,	34-51	1	
			4. Production Technology of Brinjal,	51-62	1	
		Unit II	5. Production Technology of Chilli and Capsicum,	62-75	4	
			6. Production Technology of Cuurbits such as Cucumber, Melons, Gourds, Pumpkin.	192-215		
			1. Production Technology of French bean,	160-165	1	
			2. Production Technology of Peas	150-159	1	
Unit III	3. Production Technology of cole crops (Cabbage, Cauliflower and Knol-khol)	92-111	4			
	1. Production Technology of Bulb crops such as Onion, Garlic;	132-149	2			
	2. Production Technology of Root crops such as Carrot, Radish, Beetroot.	112-131	2			
	Unit IV	1. Production Technology of Tuber crops such as Potato;	75-91	2		
2. Production Technology of Leafy vegetables such as Amaranth, Palak.		216-226	2			
3. Production Technology of Perennial vegetables.		287-293	2			
8	Course Evaluation					

8.1	CA: 10%	
8.1.1	Attendance	25 %
8.1.2	Homework	2 Assignments, 50%
8.1.3	Quizzes	2 Quizzes, 25%
8.1.4	Projects	-
8.1.5	Presentation	-
8.1.6	Any other	Practical Examination- 30%
8.2	MTE	10%
8.3	End-term examination: 50%	
9	Text Books & References	
9.1	Text book	1. Textbook Of Vegetables Tubercrops & Spices (ICAR), (S & Narendra Singh Thamburaj)
9.2	References	1. Vegetables (B.R.Choudhary), Vegetable Crops (P. Singh)
9.3	Video References	1.

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code.Unit I (1)	✓				✓
Paper Code. Unit I (2)	✓	✓	✓	✓	
Paper Code. Unit I (3)	✓	✓	✓	✓	
Paper Code.Unit II (1)	✓	✓	✓	✓	
Paper Code. Unit II(2)	✓	✓	✓	✓	
Paper Code. Unit II(3)	✓	✓	✓	✓	
Paper Code.Unit III (1)	✓	✓	✓	✓	
Paper Code.Unit III (2)	✓	✓	✓		
Paper Code.Unit IV (1)	✓	✓	✓		
Paper Code.Unit IV (2)	✓	✓	✓	✓	✓
Paper Code.Unit IV (3)	✓	✓	✓		✓
Paper Code.Unit IV (4)	✓	✓	✓		✓
Paper Code.Unit IV (5)	✓	✓	✓		
Paper Code.Unit IV (6)	✓	✓	✓		
Paper Code.Unit IV (7)	✓	✓	✓	✓	

QUESTION BANK

Unit 1 Section A

1. Horticulture is the study that includes
 - a). Fruits, vegetables and flowers
 - b). All food crops
 - c). Vegetable gardens and lawns near hotels only
 - d). Some bush crops and apples
2. According to dieticians, the amount of greens and vegetables should be in every person's food?
 - (a). 150 gm.
 - (b). 180 gm.
 - (c). 249 gm.
 - (d). 280 gm.
3. Pungency in chilli is due to..?
 - (a). Sinigrin.
 - (b). Isothyosinate
 - (c). Capsaicin.
 - (d). None of the above.
4. Stacking is done for..?
 - (a). Onion.
 - (b). Tomato.
 - (c). Brinjal.
 - (d). Potato.
5. Origin place of brinjal is..?
 - (a). Iran.
 - (b). China.
 - (c). India.
 - (d). Pakistan.
6. Timely harvesting is a most important step in?
 - (a). Pumpkin.
 - (b). Cucumber.
 - (c). Tomato.
 - (d). Okra.
7. Arka manik is a variety of..?

- (a). Pumpkin.
- (b). Cucumber.
- (c). Squash.
- (d). Water melon.

Section B

1. The deficiency of vitamin-A caused by-
2. Punjab lal is a variety of –
3. Seed rate of chilli-
4. Botanical name of cucumber
5. Seed rate of pumpkin

Section C

Section D

1. Write down the cultivation practice of tomato on the basis of-
 - a) Botanical name
 - b) Origin
 - c) Chromosome number
 - d) Nursery Preparation
 - e) Varieties
 - f) Seed rate
 - g) Manure Fertilizer
 - h) Important Disease and its Control
2. Write the cultivation of chilli with special reference to
 - a) Botanical name
 - b) Origin
 - c) Chromosome number
 - d) Nursery Preparation
 - e) Varieties
 - f) Seed rate
 - g) Mannure Fertilizer
 - h) Plant protection
3. Write down the psychological disorder of tomato in detail, their symptom and management also.
4. Please describe the determinate and indeterminate type of tomato.
5. Write the different form of tomato with their botanical name.

UNIT 2

SECTION A

1. Scientific name of knolkhol is..?

- (a). B. oleracea.
- (b). B. caulorapa.
- (c). B. chinensis.
- (d). B. O. var. cpitata.

2. Excessive respiration rate is found in..?

- (a). Pea.
- (b). Onion.
- (c). Cabbage.
- (d). Cucumber.

3. Scientific name of cabbage is..?

- (a). *B. o. var. botrytis*
- (b). *B. o. var. caulorapa*
- (c). *B. o. var. chinensis*
- (d). *B. o. var. capitata*

4. Scientific name of cauliflower is..?

- (a). *B. oleracea var. botrytis*
- (b). *B. caulorapa*
- (c). *B. chinensis*
- (d). *B. O. var. capitata*

5. Scientific name of pea is..?

- (a). *Pisum sativum*
- (b). *Phaseolus vulgaris*
- (c). *Phaseolus lunatus*

Section B

1. Whiptail is a physiological disorder of which vegetable crop?
2. Aroma of cabbage is due to which compound?
3. Protogyny is present in which vegetable crop?
4. Toxic substance present in French bean-
5. Ancestor of cauliflower-

Section C

1. Write the name of physiological disorders in cauliflower.
2. What is sauerkraut
3. Write the different group of varieties of cauliflower
4. Write the varieties of knol khol
5. Write about the scooping.

Section D

1. Write the full package practices for cultivation of Cabbage.
2. Write the name of physiological disorders in cauliflower also mention the symptom and management of all physiological disorder
3. Write down the cultivation practice of garden pea on such points-
 - a) Botanical name
 - b) Origin
 - c) Chromosome number
 - d) Edible part
 - e) Varieties
 - f) Seed rate
 - g) Seed Sowing and Mannure Fertilizer
 - h) Plant protection
4. Write the full package practices for cultivation of French bean

5. Write the full package practices for cultivation of Cauliflower.

UNIT 3
SECTION A

1. Scientific name of onion is..?

- (a). *Allium cepa*
- (b). *Allium sativum*
- (c). *Allium porum*.
- (d). *Allium vavilovii*

2. Scientific name of garlic is..?

- (a). *Allium cepa*
- (b). *Allium sativum*
- (c). *Allium porum*.
- (d). *Allium vavilovii*

3. Seed viability of onion

- (a). 1 year
- (b). 2 year
- (c). 3 year
- (d). 4 year

4. Onion bulb stored at

- (a). 0.0-4.5⁰C
- (b). 7.0-8.5⁰C
- (c). 10.0-14.5⁰C
- (d). 15.0-18.5⁰C

5. Causal organism of purple blotch disease of onion

- (a). *Alternaria porii*
- (b). *Fusarium oxysporium*
- (c). *Aspergillus niger*
- (d). *Urocystis capsulae*

SECTION B

1. Write the name of tear inducing substances in onion.
2. Protandry present in which vegetable crop.
3. Write the name of Onion hybrids using CMS system
4. Ancestor of garlic
5. Long day variety of onion

SECTION C

1. Write the name of varieties of Asiatic Raddish and European Raddish.
2. Write the name of varieties of Asiatic Carrot and European Carrot.
3. Please differentiate the Asiatic Raddish and European Raddish.

4. Please differentiate the Asiatic Carrot and European Carrot.
5. Write about the thinning in beet root.

SECTION D

1. Write down the psychological disorder of carrot in details.
2. Write the production technology of carrot
3. Write the production technology of radish
4. Write the production technology of onion
5. Write the production technology of garlic

UNIT 4 SECTION A

1. The frost resistant variety of potato is..?

- (a). K. Jivan.
- (b). K. Shitman.
- (c). K. Badshah.
- (d). K. Jyoti.

2. Family of spinach is..?

- (a). Basellaceae.
- (b). Solanaceae.
- (c). Lamaceae.
- (d). Malvaceae.

3. Family of colocasia is..?

- (a). Alliaceae
- (b). Aracaceae.
- (c). Dioscoreceae.
- (d). Apiaceae.

4. Family of New Zealand Spinach is..?

- (a). Azioaceae.
- (b). Apiaceae.
- (c). Araceae.
- (d). Liliaceae.

5. Scientific name of Indian Spinach is..?

- (a). Beta vulgaris.
- (b). Spinacea oleracea.
- (c). Basella alba.
- (d). Tetraginia expensa.

6. Which is a perennial vegetable crop?

- (a). Yam.
- (b). Brinjal.

- (c). Okra.
- (d). Potato.

SECTION B

1. Chromosome numbers of potato is-
2. Kufri Jyoti is a variety of –
3. Seed rate of potato is kg/ha-
4. Seed rate of amaranthus
5. Origin of asparagus
6. Family of asparagus

SECTION C

1. What is TPS technique in potato?
2. What is SPT technique in potato?
3. Write down the psychological disorder of potato in detail.
4. Mention the name of different types of perennial vegetable crops.
5. Write the different varieties of moringa

SECTION D

6. What is TPS technique in potato? Write in brief.
7. Describe in details about SPT
8. Write the production technology of amaranthus
9. Write the production technology of palak
10. Write the production technology of asparagus