



**DEPARTMENT OF HORTICULTURE**  
**FACULTY OF AGRICULTURAL SCIENCES**

**University of the Punjab, Lahore**

<b>Programme</b>	<b>B.Sc. (Hons.) Agriculture</b>	<b>Course Code</b>	<b>HORT-306</b>	<b>Credit Hours</b>	<b>3</b>
<b>Course Title</b>	<b>Summer Vegetables</b>				
<b>Course Introduction</b>					
This course will explore the production, management, and culinary uses of summer vegetables, from warm-season crops like tomatoes, okra and peppers to refreshing favorites like cucumbers and squash.					
<b>Learning Outcomes</b>					
On the completion of the course, the students will:					
<ol style="list-style-type: none"><li>1. Students will be able to recognize and categorize various summer vegetables, including their botanical names and characteristics.</li><li>2. Students will learn about the specific growing conditions, soil, temperature, and watering needs for different summer vegetables.</li><li>3. Students will understand how to plan, layout, and manage a summer vegetable garden, including crop rotation and spacing.</li><li>4. Students will learn techniques for sowing, transplanting, pruning, and training summer vegetables for optimal growth and yield.</li><li>5. Students will understand how to identify and manage common pests and diseases affecting summer vegetables using integrated pest management techniques.</li></ol>					
<b>Course Content</b>				<b>Assignments/Readings</b>	
<b>Week 1</b>	<b>Unit-I</b>				
	1.1 Introduction				
	1.2 Importance and issues				
<b>Week 2</b>	<b>Unit-II</b>				
	2.1 Importance and issues				
	2.2 Types of vegetable farming				
<b>Week 3</b>	<b>Unit-III</b>				
	3.1 Types of vegetable farming				
	3.2 Cultivation of summer vegetables with reference to their acreage				
<b>Week 4</b>	<b>Unit-IV</b>				
	4.1 Cultivation of summer vegetables with reference to their acreage				
	4.2 Production				

	<b>Unit-V</b>	
<b>Week 5</b>	5.1 Production	
	5.2 Botany	
	<b>Unit-VI</b>	
<b>Week 6</b>	6.1 Cultivars	
	6.2 Cultivars	
	<b>Unit-VII</b>	
<b>Week 7</b>	7.1 Climate	
	7.2 Climate	
	<b>Unit-VIII</b>	
<b>Week 8</b>	8.1 Soil	
	8.2 Soil	
	<b>Unit-IX</b>	
<b>Week 9</b>	9.1 Cultural practices	
	9.2 Cultural practices	
	<b>Unit-X</b>	
<b>Week 10</b>	10.1 Maturity indices	
	10.2 Maturity indices	
	<b>Unit-XI</b>	
<b>Week 11</b>	11.1 Harvesting	
	11.2 Grading	
	<b>Unit-XII</b>	
<b>Week 12</b>	12.1 Packing	
	12.2 Quality assurance	
	<b>Unit-XIII</b>	
<b>Week 13</b>	13.1 Marketing	
	13.2 Marketing	
<b>Week 14</b>	<b>Unit-XIV</b>	

	14.1 Production problems	
	14.2 Production problems	
<b>Week 15</b>	<b>Unit-XV</b>	
	15.1 Important weeds	
	15.2 Insect-pests,	
<b>Week 16</b>	<b>Unit-XVI</b>	
	16.1 Diseases and their control.	
	16.2 Diseases and their control.	
<b>PRACTICAL</b>		
<b>Week 1</b>	Use of laboratory equipment	
<b>Week 2</b>	Practice in raising of summer vegetables including mushrooms	
<b>Week 3</b>	Eradication of weeds and control measures of insects and diseases	
<b>Week 4</b>	Harvesting. Harvesting	
<b>Week 5</b>	Grading and packing of vegetables	
<b>Week 6</b>	Economics of summer vegetable production	
<b>Week 7</b>	Visits to vegetable farms and markets.	
<b>Week 8</b>	Laboratory performance overview	
<b>Textbooks and Reading Material</b>		

- Bose, T.K., M.G. Som and J. Kabir. 1993. Vegetable Crops. Naya Prokash, Calcutta-Six, India.
- Biswas, S., M. Datta and S.V. Ngachan. 2011. Mushrooms: A Manual for Cultivation. PHI learning private Ltd., New Delhi, India. Libner, N.S. 2006. Vegetable Production. Vedams Books Pvt. Ltd. New Delhi, India.
- Das, P.C. 2003. Vegetable Crops of India. Kalyani Publishers, New Delhi.
- Decoteau, D.R. 2002. Vegetable Crops. Prentice-Hall of India, New Delhi, India.
- Dhaliwal, M.S. 2008. Handbook of Vegetable Crops. Kalyani Publishers, Ludhiana, New Delhi, India.
- Maynard, D.N. and G.J. Hochmuth. 2007. Knott's Handbook of Vegetable Growers (5th Ed.). John Willey and Sons Inc., New York.
- Rana, M.K. 2008. Scientific Cultivation of Vegetables. Kalyani Publishers, Ludhiana, New Delhi, India.

### Teaching Learning Strategies

1. Lectures
2. Discussions
3. Presentations
4. Quiz
5. Assignments

### Assignments: Types and Number with Calendar

1. Design and plan a summer vegetable garden, demonstrating understanding of vegetable selection, garden layout, and management practices.
2. Summer Vegetable Variety Selection and Management

### Assessment

Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.