

Republic of Iraq

The Ministry of Higher
Education

& Scientific Research

بسم الله الرحمن الرحيم



University: Diyala
College: agriculture
Department: Horticulture and Land
Scape Gardening
Stage: 4
Lecturer name: Assist. Prof. Khalid
Ibrahim Mustaf
Qualification:
Place of work: University of Diyala

Flow up of implementation celli pass play

Course Instructor	Ass. Prof. Khalid Ibrahim Mustaf				
E-mail	khalidibrahim@uodiyala.edu.iq				
Title	Post harvest physiology of Fruit				
Course Coordinator	Second				
Course Objective	Identify the importance of cold storage.				
Course Description	Studying methods of storing the most important horticultural crops, including student reports with delivery and discussion, and assigns each student in the division to prepare a report on one of				
Textbook	Physiology of fruits after harvest - 1985 - d. Abdul Ilah Mikhilif Al-Ani				
Course Assessments	Theoretical semester tests %	Practical semester tests %	Quizzes %	Final practical test %	Final Exam %
	(25%)	(10%)	(5%)	20%	(40%)
General Notes	Final grade 100%				

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the week	the date	Practical Part	Topics Covered	Notes
1		The economic importance of storage and the amount of loss as a result of storage	Anatomical, morphological and natural traits .	
2		Growth and ripening of fruits and their relationship to phytohormones	Anatomical, morphological and natural traits .	
3		Physiological and chemical changes that occur to fruits during ripening and storage	Study of measures of maturity completion	
4		Measures of completion of growth, maturity and determination of harvest date	Study of the change in hardness and pectins	
5		The mechanism of breathing in fruits during growth, ripening and storage .	Study of the change in the content of fruits of organic acids and pH	
6		artificial ripening of fruits", weight loss after harvest .	Study of the change in the content of fruits of vitamin C	
7		Methods of harvesting, sorting, grading and packaging of horticultural crops and the transactions carried out on them	Study of the change in the content of fruits of total and reducing sugars and pigments	
8		Pre-shipment and storage cooling methods for horticultural crops, refrigerated storage for horticultural crops.	Study of the change in the content of fruits of total and reducing sugars and pigments	
9		Pre-shipment and storage cooling methods for horticultural crops, refrigerated storage for horticultural crops.	Study of the change in the breathing of fruits and methods of estimating the speed of breathing in them	
10		Storage of horticultural crops in a modified air atmosphere	Study of the change in the breathing of fruits and methods of estimating the speed of breathing in them	
11		Storage of horticultural crops in a rarefied air atmosphere	Studying the methods of storing the most important horticultural crops and include student reports with delivery and discussion and assigns each student to the Division to prepare a report on one of the horticultural crops and meet it and discuss it with students and the supervisor of the process .	
12		General principles for determining quality grades and their importance, factors of deterioration of	Studying the methods of storing the most important horticultural crops and	

		the qualitative and nutritional value of horticultural crops after harvest and during storage	include student reports with delivery and discussion and assigns each student to the Division to prepare a report on one of the horticultural crops and meet it and discuss it with students and the supervisor of the process .	
13		Plucking, handling and storing important types of cut flowers and bulbs	Studying the methods of storing the most important horticultural crops and include student reports with delivery and discussion and assigns each student to the Division to prepare a report on one of the horticultural crops and meet it and discuss it with students and the supervisor of the process .	
14		Plucking, handling and storing important types of cut flowers and bulbs	Studying the methods of storing the most important horticultural crops and include student reports with delivery and discussion and assigns each student to the Division to prepare a report on one of the horticultural crops and meet it and discuss it with students and the supervisor of the process .	
15		Plucking, handling and storing important types of cut flowers and bulbs	A visit to one of the cold stores .	

Dean's signature
Prof. Dr. Raaed Ibrahim Khalil
15/1/2025

Teacher's signature
Assoc. Prof. Khaled Ibrahim Mustafa
15/1/2025