PORTFOLIO

COURSE:
VEGETABLE CROPS CULTIVATION
(PAG 209316)

TEACHING TEAM:

Prof. Dr. Ir. Benyamin Lakitan, M.Sc

Dr. Susilawati, S.P., M.Si

Dr. Ir. Muhammad Ammar, M.P

AGRONOMY STUDY PROGRAM

FACULTY OF AGRICULTURE

UNIVERSITAS SRIWIJAYA

A. COURSE IDENTITY

Vegetable Crops Cultivation PAG 209316

Module designation	***Vegetable Crops Cultivation***	
Semester (s) in which the module is taught	5th semester/3rd year	
Person responsible for the module	1.Prof. Dr. Ir. Benyamin Lakitan, M.Sc 2.Dr. Susilawati, S.P., M.Si 3.Dr. Ir. Muhammad Ammar, M.P	
Language	Indonesian	
Relation to curriculum	Compulsory Course	
Type of teaching, contact hours	1. Lectures (explanation, discussion) 2. Structured assignment (i.e.: article reading and review) 3. The class size 30-75 students per class 4. Contact hours for lecture are 23.33 hours per semester 5. Total hours practical is 19.83 hours per semester	
Workload (incl. Contact hours, self-study hours)	1. Lectures (2 x 50 minutes) per week or 23.33 hours per semester 2. Structured assignment (i.e.: article reading and review): 2 x 60 minutes per week or 24 hours per semester 3. Self-study: 2 x 60 minutes per week or 24 hours per semester	
Credit points	3 credits (equivalent with 3.79 ECTS)	
Requirements according to the examination regulations	A student must have attended the lecture at least 85% of total lectures and submitted all the assignments prior to join the final exam	
Module objectives/intended learning outcomes CLO=Course Learning Outcomes	After completing this course, a student is expected to:	
	CLO1	Understanding vegetable crops and their development in Indonesia
	CLO2	Understand vegetable plant breeding techniques
	CLO3	Understanding the growth and development factors of vegetable crops
	CLO4	Understand the technique of cultivating some vegetable crops
Content	1. The meaning, role and development of potential vegetables in Indonesia 2. The basics of grouping vegetable crops	

	3. The characteristics of vegetable plant groups 4. The definition of vegetable plant breeding 5. The purpose and role of vegetable plant breeding 6. Procedure and development of vegetable plant breeding techniques 7. Growth and development of vegetable crops 8. Factors of growth and development of vegetable crops 9. The stages of vegetable cultivation techniques 10. The origin, development and nutritional content of chili and potato plants 11. The types of chili and potato plants based on botany and growing conditions 12. The origin, development and nutritional content of cucumber and cabbage plants. 13. The types of cucumber and cabbage plants based on botany and growing conditions.
Examination forms	1. Essays questions 2. Practical works 3. Writing Case Paper 4. Oral presentation
Media employed	LCD, whiteboard, websites
Reading List	1. AVRDC. 1990. Vegetable Production Training Manual. Asian Vegetable Research and Development Centre. Shanhua, Tainan. 447 p. 2. Daliway, M.S. 2017. Classification of Vegetable Crops. Punjab Agriculture University. Punjab, India. 7 p. 3. Rana, M.K. 2021. Fundamentals of Vegetable Production. New India Publishing Agency (NIPA). 300 p. 4. Shinha, N.K., Y.H. Hui and E.Q Evranuz. 2011. Handbook of Vegetables and Vegetable Processing. Blackwell Publishing Ltd. Iowa. 772 p. 5. Badan Pusat Statistik.2012. Konsep dan Definisi Baku Statistik Pertanian 2012. Subdirektorat Pengembangan. 6. Standardisasi dan Klasifikasi Statistik Direktorat Pengembangan Metodologi Sensus dan Survei. 478 hal. ISBN: 978-979-064-592-9. 7. Lakitan, B. 1995. Hortikultura Teori, Budidaya dan Pasca Panen. PT RajaGrafindo Persada. Jakarta. 220 hal. 8. Susilawati. 2017. Mengenal Tanaman Sayuran (Prospek dan pengelompokkan). Unsri Press. Palembang. 114 hal 9. Syukur, M., S.Sujiprihati., R.Yunianti. 2012. Teknik Pemuliaan Tanaman. Penebar Swadaya. Bogor. 348 hal.

	10. Maynard, D.N., Hochmuth, G.J. 2007. Vegetable Growers. Wiley. 11. Adams, C., Early, M., Brook, J., Bamford, K. 2014. Principles of Horticulture: Level 2 1st Edition. Routledge. 12. Dawson, P. 2011. A Handbook for Horticultural Students. Peter Dawson. 13. Capon, B. 2010. Botany for Gardeners, 3rd Edition. Timber Press. 14. Bird, C. 2014. The Fundamentals of Horticulture: Theory and Practice 1st Edition. Cambridge university Press. 15. Pollan, M. 2001. The Botany of Desire: A Plant's-Eye View of the World. Random House Trade Paperbacks. 16. Hodge, G. 2013. Practical Botany for Gardeners: Over 3,000 Botanical Terms Explained and Explored. University of Chicago Press. 17. Poerwanto, R., Susula, A.D. 2021. Teknologi Hortikultura. PT Penerbit IPB Press. 18. Jain, S.M., Ochatt, S.J. 2010. Protocols for In Vitro Propagation of Ornamental Plants. Humana Press. 19. Research publications related to vegetable crops cultivation.

B. STUDY LEARNING PLAN

Course Name : Vegetable Crops Cultivation

Code/Credits : PAG 209316

Course Status : Mandatory

Short Description

This course will deal about vegetable crops (Limitation and scope of vegetable crops; Nutritional content); Vegetable plant breeding; Vegetable cultivation techniques in macro and micro fields); Vegetable plant growth factors and grouping of vegetable crops

Objectives

After following this course, students are able to understand, describe (definition, development and grouping of vegetable plants) and apply conventional and modern vegetable cultivation techniques

Mapping of Course Learning Outcomes (CLO)-Program Learning Outcomes (PLO)

CLO	Description	PLO*			
		AV	KC	GS	SS
CLO1	Understanding vegetable crops and their development in Indonesia	8	1, 2	1, 2, 3	1, 3
CLO2	Understand vegetable plant breeding techniques	8	1, 2, 4	1, 2, 3	1, 2, 3, 4, 5
CLO3	Understanding the growth and development factors of vegetable crops	8	1, 2, 4	1, 2, 3	1, 3, 4, 5

CLO4	Understand the technique of cultivating some vegetable crops	8	1, 2, 4	1, 2, 3	1, 3, 4, 5

AV = Attitude and Value; **KA** = Knowledge Competence; **GS** = General Skills; **SS** = Specific Skills

*Details are in the Study Program Curriculum file

Course Outlines:

Face-to-Face:

No.	Course materials	Duration (face-to-face) (minutes)	CLO			
			1	2	3	4
1	Overview the meaning, role and conditions of vegetable development in Indonesia	110	v			
2	The basics of grouping vegetable crops	110	v	v		
3	The characteristics of vegetable plant groups	110	v	v		
4	The definition of vegetable plant breeding	110		v	v	
5	Evaluation I : 1-4	110	v	v	v	
6	The purpose and role of vegetable plant breeding	110	v	v		
7	Procedure and development of vegetable plant breeding techniques	110		v	v	v
8	Evaluation II:1-7	110	v	v	v	v
9	Understand the meaning of growth and development of vegetable crops	110		v	v	v
10	Understand the abiotic and biotic factors of growth and development of vegetable crops	110		v	v	
11	Understand the meaning and stages of vegetable cultivation techniques	110		v	v	v
12	Understanding the origin, development and nutritional content of chili and potato plants	110		v	v	v
13	Understanding the types of chili and potato plants based on botany and growing conditions	110		v	v	v
14	Understand the origin, development and nutritional content of cucumber and cabbage plants.	110		v	v	v
15	Understand the types of cucumber and cabbage plants based on botany and growing conditions.	110		v	v	v
16	Evaluation III: 9-15	110		v	v	v

Outcomes and Assessment

No.	Week	Sub-CLO	Assessment	Percentage of score weight to final score (%)
1	I	1. Understand and be able to explain the meaning of vegetable 2. Understand and be able to explain role and development of potential vegetables in Indonesia	Ask and answer question (face-to-face). At least 5% of students in the class are able to answer the question correctly	
2	II	3. Understand the basics of grouping vegetable crops	Ask and answer questions (face-to-face). At least 5% of students in the class	

			are able to answer the question correctly Assignment.	
3	III	4. Understand and be able to explain the characteristics of vegetable plant groups	Ask and answer questions (face-to-face). At least 5% of students in the class are able to answer the question correctly Assignment.	
4	IV	5. Understand and be able to explain the definition of vegetable plant breeding	Ask and answer questions (face-to face). At least 5% of students in the class are able to answer the question correctly.	
5	V	EVALUATION I (I to IV)	Essay exams Discussion on the answers of the essay exams	25
6	VI	6. Understand and be able to explain the role of vegetable plant breeding	Ask and answer questions (face-to-face). Assignment	
7	VII	7. Understand and be able to explain the procedure and development of vegetable plant breeding techniques	Ask and answer questions (face-to-face). Assignment	
8	VIII	EVALUATION I (I to VII)		35
9	IX	8.Understand and be able to explain the meaning of growth of vegetable crops 9. Understand and be able to explain the meaning of development vegetable crops	Ask and answer questions (face-to-face). Assignment	
10	X	10. Understand and be able to explain the abiotic factors 11. Understand the abiotic and biotic factors of growth and development of vegetable crops	Ask and answer questions (face-to-face). Assignment	
11	XI	12. Understand the meaning and stages of vegetable cultivation techniques	Ask and answer questions (face-to-face).	
12	XII	13. Understanding the origin, development and nutritional content of chili and potato plants	Ask and answer questions (face-to-face). Assignment	
13	XIII	14. Understanding the types of chili and potato plants based on botany and growing conditions	Ask and answer questions (face-to-face). Assignment	
14	XIV	15. Understand and be able to explain the types of flavorant, proper understand the	Ask and answer questions (face-to-face).	

		origin, development and nutritional content of cucumber and cabbage plants.	Assignment	
15	XV	16. Understand the types of cucumber and cabbage plants based on botany and growing conditions.	Ask and answer questions (face-to-face). Assignment	
16	XVI	EVALUATION III (VIII-XV)		40

Assignment

No.	Week	Assignment Instructions	Submission Methods	Weight (%)	CLO			
					1	2	3	4
1	II	Students search, discuss and review a scientific article about development vegetables in Indonesia	Print out	20% to total score in the Evaluation I	v			
2	III	Students discuss about the grouping of vegetable	Print out	20% to total score in the Evaluation I	v			
3	VI	Students search, discuss and review a scientific article about vegetable breeding	Soft file in CD	4% to total score in the Evaluation II		v		
4	VII	Students search, discuss and review a scientific article about vegetable breeding (continued)	Soft file in CD	4% to total score in the Evaluation II		v		
5	IX	Students search, discuss and review scientific articles about growth factors of vegetable crops in Indonesia	Soft file in CD	4% to total score in the Evaluation III	v		v	
6	X	Students search, discuss and review scientific articles about growth factors of vegetable crops in Indonesia (Continued)	Soft file in CD	4% to total score in the Evaluation III	v		v	
7	XII	Students search, discuss and review a scientific article about chili plant	Upload in E-Learning	4% to total score in the Evaluation III			v	v
8	XIII	Students search, discuss and review a scientific article about potato plant	Upload in E-Learning	10% to total score in the Evaluation III			v	v
9	XIV	Students search, discuss and review a scientific article about cucumber plant	Upload in E-Learning	10% to total score in the Evaluation III			v	v
10	XV	Students search, discuss and review a scientific article about cabbage plant	Upload in E-Learning	10% to total score in the Evaluation III			v	v

Field Practicum:

No.	Topics	Duration	CLO				Activities in Field
			1	2	3	4	
2	Land clearing and processing	170	v			v	Pre-test, explanation from assistant, practice according to the practical manual,
2	Seeding seed	170		v	v	v	
3	Fertilization	170			v	v	
4	Planting	170			v	v	
5	Maintenance	170			v	v	

6	Harvest	170			v	v	writing the results in worksheet, approval by assistant.
7	Post harvest	170			v	v	
	Distribution of weight in the field practice score: Pre-Test (20%), practicum report (20%), participation (10%), final practicum exam (50%). All student should have 100% of presence in the field, and for those who are unable to attend field practicum, she/he must take a follow-up practicum at another time. Percentage of score weight of field practicum to final score is 25%.						

Contribution of Course Assessment to PLO

Course Assessment	AV	KC	GS	SS	Type
Assignments	8; 10; 11	1; 2	1; 2	2; 4	Formative
Questions in Quiz	8; 10	1; 2	1; 2	2; 4	Summative
Questions in Mid-Term	8; 10	1; 2; 4	1; 3; 4	2; 4; 9; 10	Summative
Questions in Final Exam	8; 10	1; 2; 4	1; 3; 4	2; 4; 9; 10	Summative
Field Practicum	5; 6; 8; 10	1; 2; 4	1; 3; 4	2; 4; 9; 10	Formative

Assignment Assessment Rubric

			Score			
No.	Criteria	Weight (%)	≥ 86	71-85.99	56-70.99	40-55.99
			Excellent	Good	Enough	Bad
1	Format and presentation of written assignment	10	The assignment is presented in accordance with the instructions	There are parts (10%) of the assignment not in accordance with the instructions	There are parts (25%) of the assignment not in accordance with the instructions	There are haff of the assignment not in accordance with the instructions
2	Discussion in the written assignment	50	Information to support the discussion in the assignment is adequate, and the discussion is well organized	Information to support the discussion in the assignment is adequate; however the information is not well written	Information to support the discussion in the assignment is adequate; however the information is copied and pasted in the assignment without paraphrasing	There is not enough information in the assignment. It is just a compilation of information derived from internet searching
3	Publication year of literature	15	Most of literatures cited are up-to	Most of literatures cited are	Most of literatures cited are (≥ 10 years	There is no literature cited

	cited in the assignment		date (≤ 5 years)	between 5-10 years		
4	Number of literatures cited in the assignment	15	There are ≥ 3 literature cited	There are ≤ 3 literature cited	One literature cited	There is no literature cited
5	Submission time	10	Assignment is submitted before the deadline	Assignment is submitted one day after the deadline	Assignment is submitted two days after the deadline	Assignment is submitted after two days from deadline

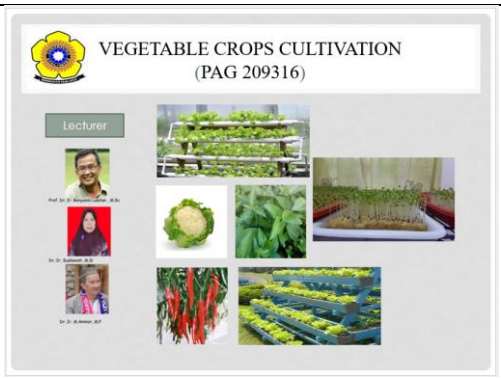
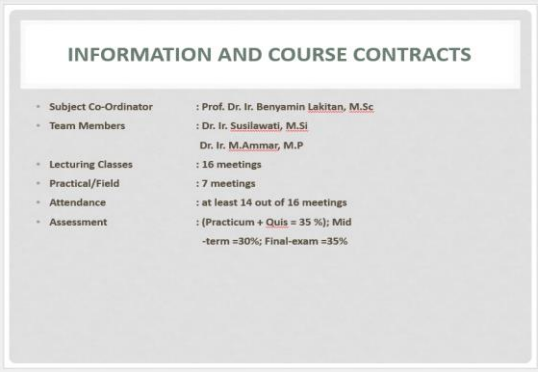
Benchmark for Scoring

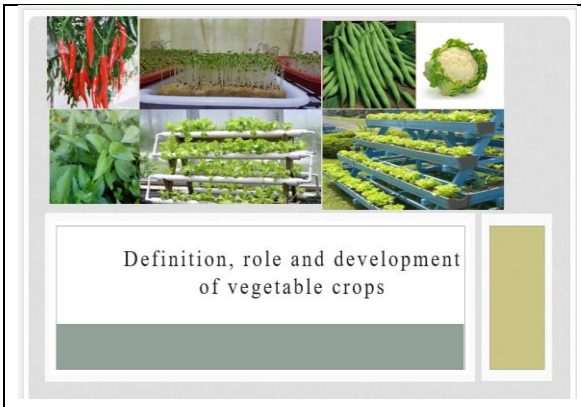
No.	Range of Score	Grade	Description
1	86.00 - 100.00	A	Excellent
2	71.00 – 85.99	B	Good
3	56.00 – 70.99	C	Fair
4	40.00 – 55.99	D	Bad
5	<40.00	E	Worst

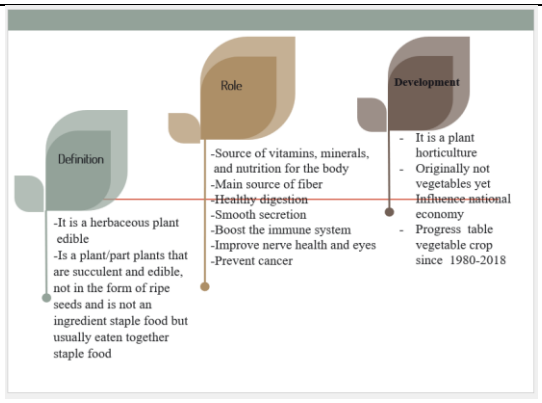
Remedial Exam:

Students are allowed to join Remedial Exam if the score is under 60 out of 100.
Result of Assessment Palembang Class

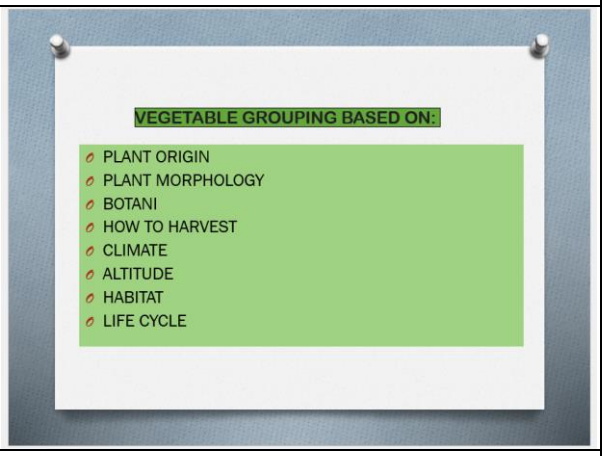
Course materials in Power Point Slides

Week 1	
	

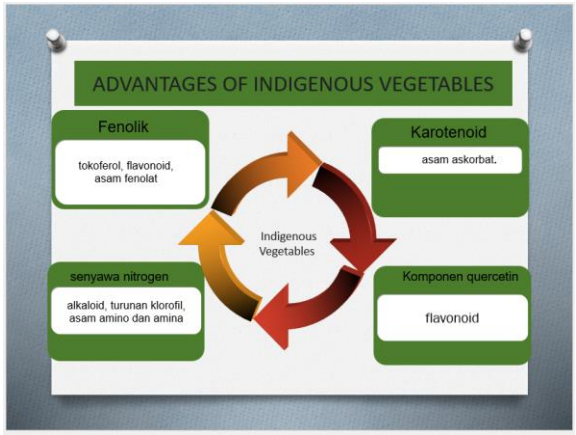

Definition, role and development of vegetable crops

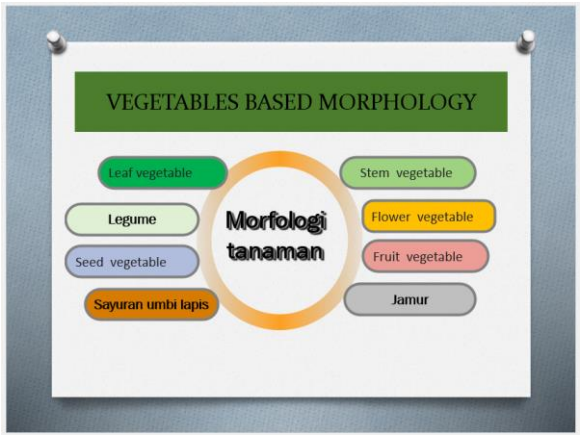

Definition
-It is a herbaceous plant edible
-Is a plant/part plants that are succulent and edible, not in the form of ripe seeds and is not an ingredient staple food but usually eaten together staple food
Role
-Source of vitamins, minerals, and nutrition for the body
-Main source of fiber
-Healthy digestion
-Smooth secretion
-Boost the immune system
-Improve nerve health and eyes
-Prevent cancer
Development
- It is a plant horticulture
- Originally not vegetables yet
Influence national economy
- Progress table vegetable crop since 1980-2018


VEGETABLE GROUPING


VEGETABLE GROUPING BASED ON:
PLANT ORIGIN
PLANT MORPHOLOGY
BOTANI
HOW TO HARVEST
CLIMATE
ALTITUDE
HABITAT
LIFE CYCLE

Week 2 & 3


ADVANTAGES OF INDIGENOUS VEGETABLES
Fenolik
tokoferol, flavonoid, asam fenolat
Karotenoid
asam askorbat.
Indigenous Vegetables
senyawa nitrogen
alkaloid, turunan klorofil, asam amino dan amina
Komponen quercetin
flavonoid


VEGETABLES BASED MORPHOLOGY
Leaf vegetable
Stem vegetable
Legume
Morfologi tanaman
Flower vegetable
Seed vegetable
Fruit vegetable
Sayuran umbi lapis
Jamur

VEGETABLE BREEDING

- COURSE:
- VEGETABLE CROPS CULTIVATION
- (PAG 209316)

Week 4,6 & 7

- The term vegetable plant breeding has the same meaning as *vegetables improvement*
- Plant breeding includes two meanings, namely :
  1. Plant breeding as a science
  2. Plant breeding as an art

VEGETABLE PLANT BREEDING

As : Science

- An activity of manipulating genetics to change the nature or genetic constitution of an individual. The ml activity includes hybridization (crossing).

As : An art

- The ability to discriminate and select traits and a group of individuals according to the tastes of the breeder or the user (consumer).

PLANT BREEDING

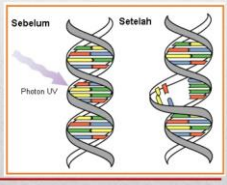
- Production/Yield
- Quality of yield

→ Tendency of breeding vegetable plant traits:

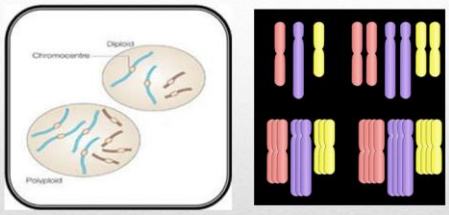
1. The edible portion is higher than non edible(High harvest index).
2. Short-lived
3. Few seeds

The Purpose of Vegetable Plant Breeding

- is a process by which the genetic information of an organism is changed, resulting in a mutation. It may occur spontaneously in nature, or as a result of exposure to mutagens. It can also be achieved experimentally using laboratory procedures.

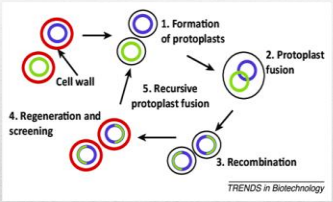


MUTAGENESIS

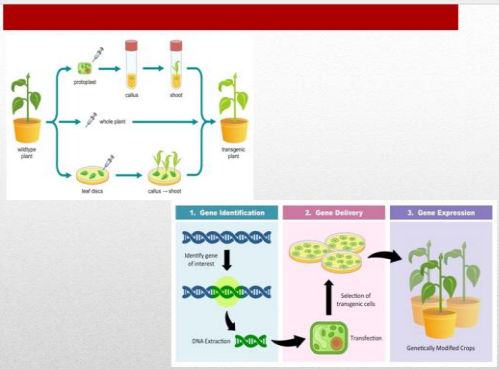


POLYPLOIDI

- Somatic **fusion**, also called **protoplast fusion**, is a type of genetic modification in plants by which two distinct species of plants are **fused** together to form a new hybrid plant with the characteristics of both, a somatic hybrid.



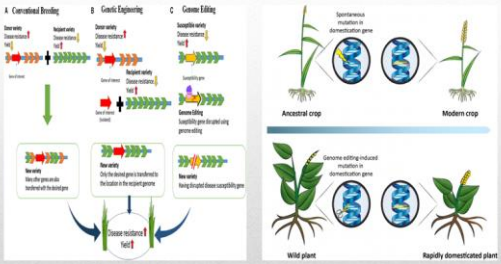
PROTOPLAST FUSION



TRANSGENESIS

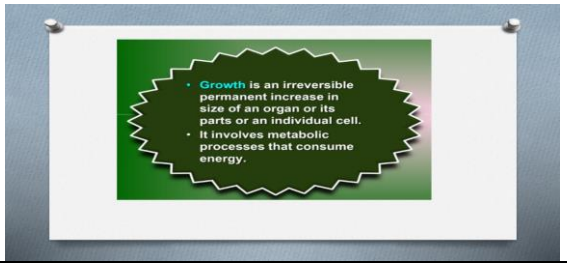
- **Genome editing** is a way of making specific changes to the DNA of a cell or organism. An enzyme cuts the DNA at a specific sequence, and when this is repaired by the cell a change or 'edit' is made to the sequence

GENOME EDITING



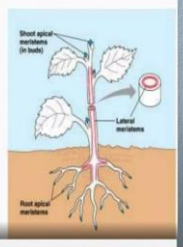
GENOME EDITING

Week 9



Types of Growth-
Classified by Developmental Stages

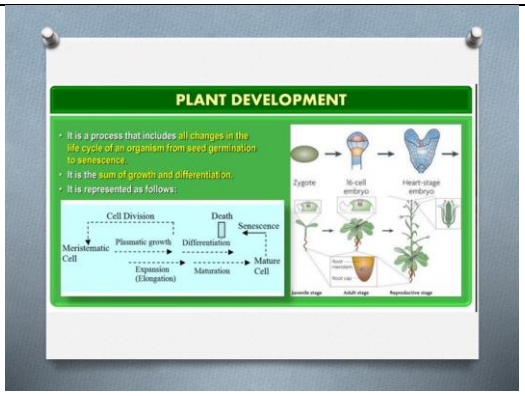
Primary growth:
Apical meristems extend roots and shoots by giving rise to the primary plant body
Secondary growth:
Lateral meristems add girth by producing secondary vascular tissue and periderm.



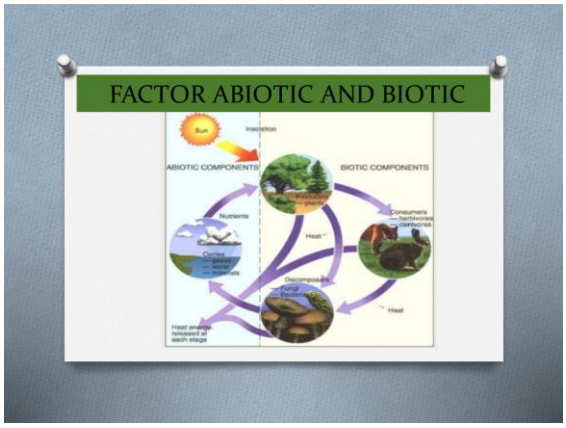
Vegetative Phase

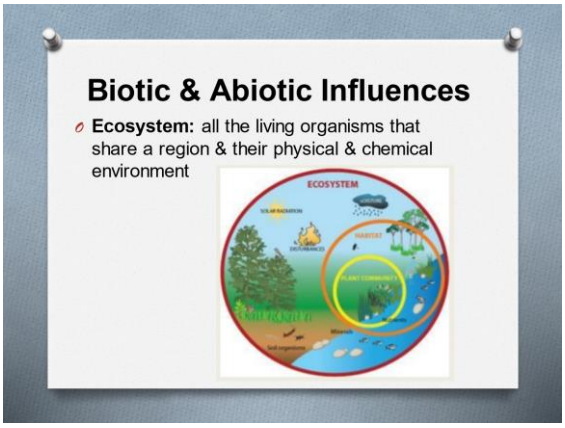
- • From seed germination through growth of the primary supportive structure
- • Three important processes:
- – Cell division
- – Cell enlargement
- – Cell differentiation (initial stages)

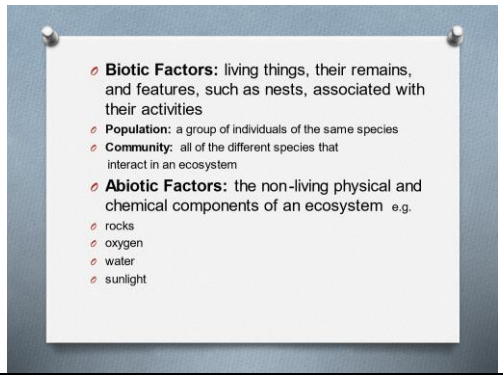

PLANT DEVELOPMENT

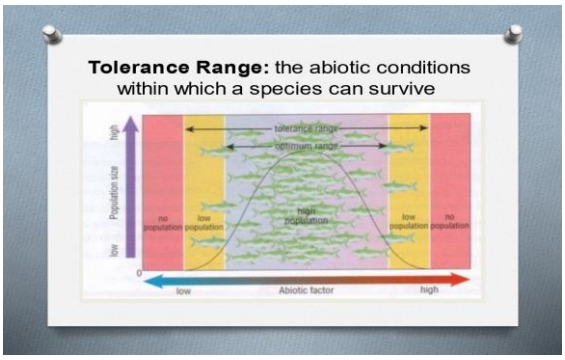

PLANT DEVELOPMENT
It is a process that includes all changes in the life cycle of an organism from seed germination to senescence.
It is the sum of growth and differentiation.
It is represented as follows:
Cell Division
Death
Senescence
Meristematic Cell
Plasmatic growth
Differentiation
Expansion (Elongation)
Maturation
Mature Cell
Zygote
16-cell embryo
Heart-stage embryo

Week 10

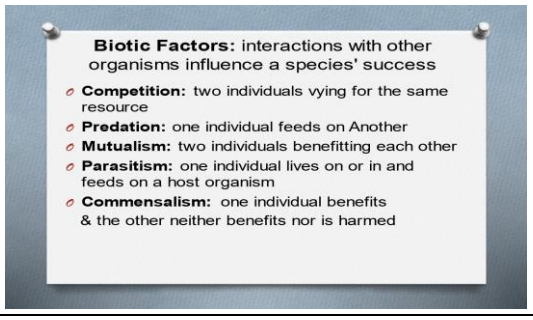

FACTOR ABIOTIC AND BIOTIC
Sun
Insolation
ABIOTIC COMPONENTS
BIOTIC COMPONENTS
Nutrients
Heat
Decomposers
Heat


Biotic & Abiotic Influences
Ecosystem: all the living organisms that share a region & their physical & chemical environment
ECOSYSTEM


Biotic Factors: living things, their remains, and features, such as nests, associated with their activities
Population: a group of individuals of the same species
Community: all of the different species that interact in an ecosystem
Abiotic Factors: the non-living physical and chemical components of an ecosystem e.g.
rocks
oxygen
water
sunlight


Tolerance Range: the abiotic conditions within which a species can survive
tolerance range
optimum range
high
Population size
low
no population
low population
high population
low population
no population
0
low
Abiotic factor
high


Tolerance Range: the abiotic conditions within which a species can survive
Key abiotic factors:
-light availability
-water availability
-nutrient availability
-temperature


Biotic Factors: interactions with other organisms influence a species' success
Competition: two individuals vying for the same resource
Predation: one individual feeds on Another
Mutualism: two individuals benefitting each other
Parasitism: one individual lives on or in and feeds on a host organism
Commensalism: one individual benefits & the other neither benefits nor is harmed

Achievement of CLO (Indralaya Class)

STUDY PROGRAM : AGRONOMY (INDRALAYA CLASS)
ACADEMIC YEAR : 2021/2022 (ODD)
COURSE : VEGETABLE CROPS CULTIVATION (3 CREDITS)
ROOM : RK C1106
SCHEDULE : FRIDAY (09:50 - 11:30 WIB)

NO.	NIM	NAME	EV1	EV2	EV3	FINAL SCORE	GRADE	OVERALL ASESSMENT
1	05091181924001	MUHAMMAD FEDRIAN	89	90	88	88,95	A	Achieved
2	05091181924002	MUHAMMAD FEBRYAN PRATAMA	92	94	90	91,90	A	Achieved
3	05091181924004	LINDA SULISTIANI	94	94	94	94,00	A	Achieved
4	05091181924005	NOURISH HARITUA SITINJAK	86	92	80	85,70	B	Not Achieved
5	05091181924006	PUTRI LIA ANANDA	85	88	82	84,85	B	Not Achieved
6	05091181924007	ANGGI PURNAMA SARI	87,5	89	86	87,43	A	Achieved
7	05091181924008	RIZKA RAHMAWATI	86	86	86	86,00	A	Achieved
8	05091181924009	CAHYANI FADILLAH	87	89	85	86,90	A	Achieved
9	05091181924010	ALYA MAHARDIKA PUTRI IRANI	92	90	94	92,10	A	Achieved
10	05091181924011	DINDA ASARI	87,5	93	82	87,23	A	Achieved
11	05091181924012	LILY NUR FADHILAH	89,5	93	86	89,33	A	Achieved
12	05091181924013	REGITA RAMALYA	92,5	95	90	92,38	A	Achieved
13	05091181924015	RAWINDA GUSRIFANI	89	92	86	88,85	A	Achieved
14	05091181924016	PUTRI AGUSTINA LESTARI	86	86	86	86,00	A	Achieved
15	05091181924017	SRI APRILIANI	88,5	90	87	88,43	A	Achieved
16	05091181924018	LISA AMELIA	88	92	84	87,80	A	Achieved
17	05091181924095	NOVI INDASARI	91	92	90	90,95	A	Achieved
18	05091281924019	RIZKY BUDIYANI FADIL MUHAMMAD NASRULLAH	89	92	86	88,85	A	Achieved
19	05091281924020	AHMAD FAUZI	91	92	90	90,95	A	Achieved
20	05091281924021	INDRA ADVENT SIMAMORA	89,5	93	86	89,33	A	Achieved
21	05091281924022	THERESIA APRILA SARENG	92	92	92	92,00	A	Achieved
22	05091281924024	LILI SAFITRI DONY	89	92	86	88,85	A	Achieved
23	05091281924025	AMANAH KAMILATUNNISAH	87	88	86	86,95	A	Achieved
24	05091281924026	MUHAMMAD AL GHIFARI	84	84	84	84,00	B	Not Achieved
25	05091281924027	RINALDY SITORUS	96	96	96	96,00	A	Achieved
26	05091281924028	JUNITA MURNI SIAHAAN	89,5	87	92	89,63	A	Achieved
27	05091281924030	AHMAD RIFAT NUR MUSTOPA	92	92	92	92,00	A	Achieved
28	05091281924031	ASSIFA INTAN CAHYANI	86,5	87	86	86,48	A	Achieved
29	05091281924032	SHABINA RARAKANA NURDUWANATI.JDR	90,5	95	86	90,28	A	Achieved
30	05091281924033	APRILIA ANGGUN PUTRISARI	96,5	97	96	96,48	A	Achieved
31	05091281924034	LARAS INDAH LESTARI	94	92	96	94,10	A	Achieved
32	05091281924035	KHARISMA	88	92	84	87,80	A	Achieved
33	05091281924036	ANNISA SALSABILA	89,5	87	92	89,63	A	Achieved
34	05091281924038	IHZA BASTARI CAHYA	85	86	84	84,95	B	Not Achieved
35	05091281924091	ADE RIZKI MUFARAZ	91	95	87	90,80	A	Achieved
36	05091281924093	ALHILLAL SYAFAAT	89	92	86	88,85	A	Achieved
37	05091281924094	TIARA NANDA FRANSISKA	86,5	87	86	86,48	A	Achieved
38	05091281924096	NADIA RAHMA	89,5	93	86	89,33	A	Achieved
39	05091281924097	NABILAH PUTRI CAHYA	87,5	87	88	87,53	A	Achieved
40	05091281924098	LILI ANGGRAINI	90,5	93	88	90,38	A	Achieved
41	05091281924099	ANGGUN SEPTIANI	88,5	89	88	88,48	A	Achieved
42	05091281924100	YUPITA SARI REZEKI	88,5	89	88	88,48	A	Achieved
43	05091281924101	ADELLA SAFIRA RAHMAN	88	92	84	87,80	A	Achieved
44	05091281924102	GRETA SMARADANA PATRIAVERA	85,5	87	84	85,43	B	Not Achieved
45	05091281924103	ZERIKA REGINA RAMADHAN FITRI	91	92	90	90,95	A	Achieved
46	05091281924104	SIYAM TRIYANI	88,5	87	90	88,58	A	Achieved
47	05091281924105	MARTINA ANGELIA PURBA	90,5	93	88	90,38	A	Achieved
48	05091381924042	JENERO TAKBIR SABANE	43,5	40	87	59,68	C	Not Achieved
49	05091381924043	MUHAMMAD HAFIZH ALFARISI	88,5	93	84	88,28	A	Achieved
50	05091381924047	ACIL ABDUL RAHMAT	86,5	89	84	86,38	A	Achieved
51	05091381924054	RANI MARINA	86,5	87	86	86,48	A	Achieved
52	05091381924055	FENTI MONICA	88	86	90	88,10	A	Achieved
53	05091381924058	ZENDI ALHAMAMI	88	92	84	87,80	A	Achieved
54	05091381924068	MIFTAHUL JANNAH	89	88	90	89,05	A	Achieved
55	05091381924072	NYOTO HERMAWAN	88	92	84	87,80	A	Achieved
		AVERAGE PER CLASS	**88,22**	**89,67**	**87,49**	**88,44**		
		ACHIEVEMENT	**Achieved**	**Achieved**	**Achieved**	**Achieved**		

Achievement of CLO (Palembang Class)

STUDY PROGRAM : AGRONOMY (PALEMBANG CLASS)
ACADEMIC YEAR : 2021/2022 (ODD)
COURSE : VEGETABLE CROPS CULTIVATION (3 CREDITS)
ROOM : ROOM 01
SCHEDULE : FRIDAY (09:50 - 11:30 WIB)

NO.	NIM	NAME	EV1	EV2	EV3	FINAL SCORE	GRADE	OVERALL ASESSMENT
1	05091181924014	AFIFAH ZAHWA	91,5	93	90	91,43	A	Achieved
2	05091381924044	MEGA SARIANA PANJAITAN	86	86	86	86,00	A	Achieved
3	05091381924045	HILWA HILMANA	88,5	87	90	88,58	A	Achieved
4	05091381924046	FAUZIAH SALSABILA PUTRI	89	88	90	89,05	A	Achieved
5	05091381924049	RAHMAT HIDAYATULAH	87,5	89	86	87,43	A	Achieved
6	05091381924050	UMEIR HAEKAL	87,5	89	86	87,43	A	Achieved
7	05091381924051	HAMDI YASEIR	90	93	87	89,85	A	Achieved
8	05091381924052	WIWINDRA	89	92	86	88,85	A	Achieved
9	05091381924056	TRIA MEILANI	88	89	87	87,95	A	Achieved
10	05091381924057	MUHIBBAN PUTRA KENCANA	89,5	93	86	89,33	A	Achieved
11	05091381924059	KELVIN RIZKY ARYADUTA SEMBIRING	90,5	92	89	90,43	A	Achieved
12	05091381924060	RIZKI SIMANJUNTAK	89,5	89	90	89,53	A	Achieved
13	05091381924061	MUHAMMAD NAUFAL FAKHRIAL	91	92	90	90,95	A	Achieved
14	05091381924062	OCHTAVIA PUTRI HAMIDIA	88	88	88	88,00	A	Achieved
15	05091381924063	RUBEN PAKPAHAN	86,5	89	84	86,38	A	Achieved
16	05091381924065	DELLAH TIAN SAPUTRI	88,5	87	90	88,58	A	Achieved
17	05091381924066	NURAINI	82,5	85	80	82,38	B	Not Achieved
18	05091381924067	KHUSNUL NUR LINDA	87,5	89	86	87,43	A	Achieved
19	05091381924069	YONATHAN IMMANUEL SIAHAAN	87	88	86	86,95	A	Achieved
20	05091381924070	HILAL NUR MUHIDIN	92	94	90	91,90	A	Achieved
21	05091381924071	MAYSYURO	84,5	89	80	84,28	B	Not Achieved
22	05091381924073	TRI OKTAPRIANSYAH	89,5	93	86	89,33	A	Achieved
23	05091381924074	NIR LIANSA AKRAM	87,5	87	88	87,53	A	Achieved
24	05091381924075	YASHA PERMATASARI	84,5	85	84	84,48	B	Not Achieved
25	05091381924076	HUDZAIFAH MUHDAR	43	40	86	59,15	C	Not Achieved
26	05091381924077	DESTY DIANA SARI	90	86	94	90,20	A	Achieved
27	05091381924078	SUCI SEPTRIANDA	89	88	90	89,05	A	Achieved
28	05091381924080	PURNAMA INDAH	86	85	87	86,05	A	Achieved
29	05091381924083	IREY YOLANDA	92,5	95	90	92,38	A	Achieved
30	05091381924084	NAOMI JUNITA SILABAN	88,5	89	88	88,48	A	Achieved
31	05091381924086	MUHAMMAD NAUFAL AKBAR	86,5	89	84	86,38	A	Achieved
32	05091381924087	HERA APRILIANI	91	92	90	90,95	A	Achieved
33	05091381924088	WIDIAWATI	82,5	85	80	82,38	B	Not Achieved
34	05091381924089	PUTRI VALENTINE	89,5	89	90	89,53	A	Achieved
35	05091381924090	KASMIRANDA	93	94	92	92,95	A	Achieved
		AVERAGE PER CLASS	**87,06**	**87,94**	**87,31**	**87,47**		
		ACHIEVEMENT	**Achieved**	**Achieved**	**Achieved**	**Achieved**		

Percentage of CLO Achievement (Indralaya Class)

No.	Evaluation	Max. Score	Score	CLO1	CLO2	CLO3	CLO4
1	QUIZ	100	88.22	v	v	v	
2	MID-TERM	100	89.67	v	v	v	v
3	FINAL EXAM	100	87.49		v	v	v
	Total	300	265.38	177.89	265.38	265.38	177.16
	Minimum			88.95	88.46	88.46	88.58
	achievement is 80			v	v	v	v

Percentage of CLO Achievement (Indralaya Class)

No.	Evaluation	Max. Score	Score	CLO1	CLO2	CLO3	CLO4
1	QUIZ	100	87.06	v	v	v	
2	MID-TERM	100	87.94	v	v	v	v
3	FINAL EXAM	100	87.32		v	v	v
	Total	300	262.31	175.00	262.31	262.31	175.26
	Minimum			87.50	87.44	87.44	87.63
	achievement is 80			v	v	v	v