Meeting Minutes

Date: 01.10.2021

Departmental meeting was held in the Principal chamber on 01.10.2021. After discussing with the Principal I/c, Faculty of Physical Sciences and the students of I MPC's, it is resolved to

1. enrich the existing curriculum by initiating a Certificate Course on 'Microgreens' for the benefit of students in this academic year.
2. prepare a proposal seeking permission to initiate the course and submit to the Principal within two days.
3. Details of the Course:

   Course duration: 30-40 days
   Student intake: 20-30
   Formative assessment: 15 Marks (Objective)
   Summative assessment: 25 Marks (Objective)

Principal 3/10/21
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Course Co-ordinator.

Faculty of Physical Sciences:
1. Sri P. Madhu Raju - Lec in Physics
2. Smt. Revathi - Guest faculty Maths
3. Sri R.N. Raju - Guest faculty Comp. Sc

Students: 1. Baby Chandini
2. K. Deepika.

Date: 4.10.2021

From
Dr Ch.Chaitanya
In-charge, Dept. of Botany
SCHVPMR Govt. Degree College
Ganapavaram

To
The Principal
SCHVPMR Govt. Degree College
Ganapavaram

Sub: Curriculum Enrichment for 2020-21 - Dept. of Botany - Proposal for starting a Certificate Course in Microgreens - Request for permission - Reg.

This is to submit that the Dept. of Botany is proposing to start a Certificate Course in **"Microgreens"** during the academic year 2020-21 so as to enrich the existing curriculum for the benefit of the students. Hence, this proposal is submitted seeking your permission.

Course duration:	30 to 40 days
Student intake:	20 to 30
Name of Faculty:	Dr Ch.Chaitanya
Formative Assessment	15 marks (objective type)
Summative Assessment	25 marks (objective type)
Qualifying mark	15

Objectives:

- To educate students on basic concepts of Microgreens.
- To empower students to be self employable by growing microgreens

In-charge, Dept. of Botany

SRI CHINTALAPATI VARA PRASADA MURTHY RAJU
GOVERNMENT DEGREE COLLEGE
GANAPAVARAM-534 198
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Proceedings of the Principal (FAC), SCHVPMR Govt. Degree College, Ganapavaram

Present: ***Dr M. Syambab, M.Sc., Ph. D.,***

Rc.No.21/2/CC-20-21 Dated 6.10.2021

Sub: Dept. of Botany - Proposal for Certificate Course in Microgreens for the academic year 2020- 21- Permission granted - Orders issued - Reg.

The Principal, SCHVPMR Govt. Degree College, Ganapavaram is pleased to grant permission to launch a Certificate Course in **"Microgreens"** by the Department of Botany during the academic year 2020-21. The In-charge, Department of Botany is requested to follow the due procedure for conducting the said course and submit a report thereof.

PRINCIPAL 6/10/21
PRINCIPAL
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Date: 20.10.2021

All the students of BSc MPCs (I) are hereby informed that the Dept. of Botany is going to start a certificate course in Microgreens from 21.10.2021.

Hence, all of you are requested to enroll for the course and make use of it.

* Enrollment forms will be shared in the Day 1, Session 1 itself.
* A copy of course syllabus is enclosed herewith.

Course Design:

- Name of the Course: Microgreens
- Duration: 30-40 days
- Course starts on: 21-10-21, Timings: 4:30 to 5:30pm
- Formative assessment: 15 marks (Objective)
- Summative assessment: 25 marks (Objective)
- 75% of attendance is mandatory to give the final test.
- Qualifying mark is 15 out of 25 (summative test)
- Students who score 15 (or) above will be provided with course completion certificate

Course Coordinator

Principal 20/10/21
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Faculty of Physical Sciences - 1. Sri. P. Madhu Raju (Lect. in Physics)
2. Smt. Renuthi Guest faculty
3. Sri R.N. Raju Guest faculty Comp.Sc

Students: 1. Baby Chandini
2. K. Deepika

S Ch V P M R GOVERNMENT DEGREE COLLEGE. GANAPAVARAM

DEPARTMENT OF BOTANY

Certificate Course on "Microgreens"

Academic Year 2020-21

Total Instructional Hours: 30

Syllabus

Sl.No	MODULE	Hours Allotted
1	**MODULE 1**: Basic parts of plant and parts of a flower	2
2	**MODULE 2**: Seed- embryo-germination of seeds and parts of a seedling	3
3	**MODULE 3**: Microgreens -the basics: What are microgreens, benefits of Microgreens	3
4	**MODULE 4**: Equipment-Lights and Shelves, Trays, Watering Equipment, Seed, Sanitising Seed, Using Fertiliser (or not)	4
5	**MODULE 5**: Growing Medium-Growing Mediums - An Overview, Soil and Hydroponic Matting	4
6	**MODULE 6**: Conditions required - Heat,Humidity,Ventilation,Water and other factors, Choosing a Location.	4
7	**MODULE 7**: Growing & Harvesting Microgreens- Selection of seeds, Soaking seeds, Planting in soil and hydroponic matting, Harvest day, Drying cut greens and packing	4
8	**MODULE 8**: Troubleshooting-Poor germination, Moulds, Clinging Shells	2
9	**MODULE 9:** Cleanliness- Basic Cleanliness, Bleaching trays, Health and Safety, Marketing and Selling-Whom to Aim for, Connecting to Customers	1
10	**MODULE 10**: Demo on growing small scale micro greens	3

Dr Ch.Chaitanya

Course Coordinator

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Department of Botany

Certificate Course on "Microgreens"

Course Outline

Course Duration	30 to 40 days
Course Fee	Nil
Target Group	BSC MPCs
Student intake	20 to 30 (First Come-First Serve)
Start Date	21.10.2021
No. of Modules	10
Formative Assessment	15 marks (objective type)
Summative Assessment	25 marks (objective type)
Qualifying Mark	15
Name of the Course Coordinator	Dr. Ch.Chaitanya

Student Registration Form

Date: 21.10.2

Name of the Student : G. Jhansi Lakshmi
Admission Number : 6876
Batch : 21-22
Year and Program studying : I BSC (MPCS)
Semester : I

G. J. lakshmi
Signature of the Student

Signature of the Course Coordinator

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Department of Botany

Certificate Course on "Microgreens"

Course Outline

Course Duration	30 to 40 days
Course Fee	Nil
Target Group	BSC MPCs
Student intake	20 to 30 (First Come-First Serve)
Start Date	21.10.2021
No. of Modules	10
Formative Assessment	15 marks (objective type)
Summative Assessment	25 marks (objective type)
Qualifying Mark	15
Name of the Course Coordinator	Dr. Ch.Chaitanya

Student Registration Form

Date: 21.10.2021

Name of the Student : A. Tripnadh
Admission Number : 6867
Batch : 21-22
Year and Program studying : I BSC (MPCS)
Semester : I

A. Tripnath
Signature of the Student

Signature of the Course Coordinator

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(Affiliated to Adikavi Nannaya University, Rajamahendravaram, A.P.)

Department of Botany

Certificate course on "Microgreens"

Academic Year: 2020-21

List of Students Enrolled

Sl.No.	Admn. No.	Class	Name of the Student	Signature of the Student
1	6867	I BSC (MPCs)	AINAPARRU THRINATH	A. Tsthath
2	6868	I BSC (MPCs)	ASAPU LAVANYA	A. Lavanya
3	6869	I BSC (MPCs)	BADDIREDDI BABY CHANDINI	B. B. Chandhini
4	6870	I BSC (MPCs)	BADE PURNA SIRISHA	B. P. Sirisha
5	6871	I BSC (MPCs)	BANKAPALLI MAHIMA RUPA	B. M. Rupa
6	6872	I BSC (MPCs)	BOBBALA VARSHINI	B. Varshini
7	6873	I BSC (MPCs)	BORRA HEMA SINDHU	B. H. Sindhu
8	6874	I BSC (MPCs)	DASARI NANI	D. Nani
9	6875	I BSC (MPCs)	GANDHAM MAHA LAKSHMI KEERTHANA	G. M. L. Keerthana
10	6876	I BSC (MPCs)	GORLI JHANSI LAKSHMI	G. J. Lakshmi
11	6877	I BSC (MPCs)	GORRELA VENKATA LEELA KRISHNA	G. V. L. Krishna
12	6878	I BSC (MPCs)	GUNDUPALLI RAJESH KUMAR	G. R. Kumar
13	6879	I BSC (MPCs)	GURAJALA VAMSI KRISHNAM RAJU	G. V. K. Raju
14	6880	I BSC (MPCs)	JONNADA UMA SANKAR	J. U. Sankar
15	6881	I BSC (MPCs)	KOMATI DEEPIKA	K Deepika
16	6882	I BSC (MPCs)	KOMMULA KAVYA SIVASAI LAKSHMI NARAYANI	K. K. S. L. Narayani
17	6883	I BSC (MPCs)	MADDIPATLA GLORY GRACE	M. G. Grace
18	6884	I BSC (MPCs)	MARIPITTL TRIVENI	M. Triveni
19	6885	I BSC (MPCs)	MATHALA BHANU SRI	M. B. Sri
20	6886	I BSC (MPCs)	MOORA THARUN	M. Tharun
21	6887	I BSC (MPCs)	MOTE LOKESWARI	M. Lokeswari
22	6888	I BSC (MPCs)	MUTYALA CHAKRADHAR	M. Chakradhar
23	6889	I BSC (MPCs)	PETLU PRIYANKA	P. Priyanka
24	6890	I BSC (MPCs)	PONNA JAYARAMA TULASI BHADRA PRIYA	P. J. T. B Priya
25	6891	I BSC (MPCs)	POSINA GOWRI MATHA	P. G. Matha
26	6892	I BSC (MPCs)	RAYAPUREDDI SOMESWARI	R. Someswari

27	6893	I BSC (MPCs)	SANKU NAGA VENKATA SAI RAMYA	S.N.V.S. Ramya
28	6894	I BSC (MPCs)	SAPPA LOKESH DURGA KUMAR	S.L.D. Kumar
29	6895	I BSC (MPCs)	SEEPANI RUPA DEVI	S. R. Devi
30	6896	I BSC (MPCs)	SENAPATHI HEMA	S. Hema
31	6897	I BSC (MPCs)	SRIREDDY HEMALATHA	S. Hemalatha
32	6898	I BSC (MPCs)	TAMMINENI GAYATHRI DEVI	T. R. Mouli
33	6899	I BSC (MPCs)	TANNERU RAJESH MOULI	T. R. Mouli
34	6900	I BSC (MPCs)	UNGARALA SRI SAI SATYANARAYANA VARA PRASAD	U.S.S.S.V Prasad
35	6901	I BSC (MPCs)	VELISETTI PAVANI	V. Pavani

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Date: 29.11.2021

All the BSc MPCs students who are enrolled for the Certificate Course on Microprocessors are hereby informed that there will be a formative assessment on 02.12.2021.

Attendance is mandatory.

Syllabus for FA-1: Module 1 to Module 5

Course Coordinator

BSc MPCs. 1.

2.

SRI CHINTALAPATI VARA PRASADA MURTHY RAJU GOVERNMENT DEGREE COLLEGE

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DEPARTMENT OF BOTANY

Certificate Course in "MICROGREENS"

Formative Assessment

Max. Marks: 15 Time: 30 minutes

Name of the Student: G. Jhansi lakshmi

Group: I BSc (MPCS) Date: 02.12.2021

Admission No: 6876

Answer all the following (15 X 1 = 15)

1. Microgreens were characterized by high content of?
a) carotenoids
b) chlorophylls
c) organic acid
d) All of the above

2. The protective covering over radical during the germination of seeds is
(a) Coleoptile
(b) Epithelium
(c) Suspensor
(d) Coleorhiza

3. In Higher plants which of the following forms embryo
a) Egg Apparatus
b) Antipodal cell
c) Fertilized ovum
d) Fertilized synergid

4. A mature dicot embryo has
a) one cotyledon
b) two cotyledons
c) three cotyledons
d) Four cotyledons

5. Fertilization of the egg takes place inside
a) anther
b) stigma
c) pollen tube
d) embryo sac

6. Ovule converts into which of the following after fertilization
a) Fruit
b) embryo
c) seed
d) Both a and c

7. The portion of embryonal axis above the level of cotyledons forms?
a) hypocotyl
b) epicotyl
c) both
d) none

8. Microgreens are harvested at
a) radical stage
b) sprout stage
c) first leaf stage
d) both b and c

9. The Benefits Of Growing Microgreens are
a) Low start up cost
b) fast turn around
c) higher nutrition
d) all of the above

10. Optimum Light required for the growth of Microgreens
A.) 4,000K
B.) 3000K
C.) 2000K
D.) 1000K

11. Seeds can be sanitized using
A.) potassium peroxide
B.) hydrogen peroxide
C.) Sodium chloride
D.) sodium hydroxide

12. Which of the following can be used as a growing medium for microgreens
A.) Peat
B.) Hemp
C.) Coco Coir
D.) All of the above

13. Farmers use ----------to increase space productivity
A.) Hydroponics
B.) Vertical Stacking
C.) Aeroponics
D.) None

14. Which method is used as an alternative to vertical stacking?
A.) Hydroponics
B.) Aeroponics
C.) Deep water culture
D.) None

15. Seeds need ---------, warm temperatures and nutrients inorder to start growing
A.) grass
B.) water
C.) leaves
D.) Stem

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DEPARTMENT OF BOTANY

Certificate Course in "MICROGREENS"

Formative Assessment

Max. Marks: 15 Time: 30 minutes

Name of the Student: A. Tripnath

Group: I BSc (MPCS)

Admission No: 6867

Date: 2-12-2021

Answer all the following (15 X 1 = 15)

1. Microgreens were characterized by high content of?
a) carotenoids
b) chlorophylls
c) organic acid
d) All of the above

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(a) Coleoptile
(b) Epithelium
(c) Suspensor
(d) Coleorhiza

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B.) Aeroponics
C.) Deep water culture
D.) None

15. Seeds need ---------, warm temperatures and nutrients inorder to start growing
A.) grass
B.) water
C.) leaves
D.) Stem

CIRCULAR

Date: 22.12.21

All the BSc MPCs students who are enrolled for the Certificate Course on Microgreens are hereby informed that the Instructional classes will end on 22.12.21 and there will be a summative assessment on 27.12.21.

Attendance is Mandatory.

Please note that:

- The qualifying mark is 15 out of 25 for course completion.
- Students with less than 75% of attendance are not eligible to give the test.

Course Co-ordinator.

Pupils Attendance Register

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1	2	3	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	6	6	7	8	9
6867	1	Ainaraju Trinath		P	a	P	P	P	P	A	P	P	P	a	P	P	P	P	P	a	P	P	P	a	P										22	18	81%	24	72%
6868	2	Aaraju Lavanya		P	P	a	P	P	P	A	P	P	a	P	P	P	P	P	a	P	P	P	P	P	a										22	18	81%	26	78%
6869	3	Baddireddi Baby Chandini		P	P	P	P	a	P	A	P	P	P	P	P	P	P	a	P	P	P	P	P	P	P										22	20	90%	28	84%
6870	4	Bade Purna Srisrcha		P	P	P	P	P	P	A	a	P	P	P	P	P	P	P	P	P	P	a	P	P	P										22	20	90%	30	90%
6871	5	Bankapalli Mahima Rupa		P	P	P	P	P	P	A	P	P	a	P	P	P	P	P	P	P	P	P	P	P	P										22	21	95%	32	96%
6872	6	Bobbala Varshini		P	P	P	P	P	P	A	P	P	P	P	a	P	P	P	P	P	P	P	P	P	P										22	21	95%	31	93%
6873	7	Borra Hema Sindhu		P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P										22	21	95%	30	90%
6874	8	Dasari Nani		P	P	P	P	P	a	A	P	P	P	P	P	a	P	P	P	P	P	P	P	P	P										22	20	90%	27	81%
6875	9	Gandham Mahalakshmi		P	a	P	P	a	P	A	a	P	P	a	P	P	P	P	a	P	P	a	P	P	a										22	15	68%	23	69%
6876	10	Gosli Jhansi Lakshmi		P	P	a	P	P	a	A	P	P	P	a	P	P	P	P	P	a	P	a	P	a	P										22	16	72%	25	75%
6877	11	Gorrela Venkata Leela Krishna		P	P	P	a	P	P	A	a	P	P	P	P	a	a	P	P	P	P	a	P	a	P										22	16	72%	22	66%
6878	12	Gundupalli Rajesh Kumar		P	a	P	P	P	P	A	a	P	P	P	a	P	P	P	a	P	P	P	a	P	P										22	17	77%	22	66%
6879	13	Gurajala Vamsi Krishnamraju		P	P	P	a	P	P	A	P	P	a	P	P	P	P	P	P	a	P	P	P	P	a										22	18	81%	24	72%
6880	14	Jonnada Uma Shankar		a	P	P	P	a	P	A	P	a	P	P	P	a	P	P	P	P	P	a	a	P	P										22	16	72%	24	72%
6881	15	Kamati Deepika		P	P	a	P	P	a	A	P	P	a	P	P	P	a	a	P	P	P	P	P	P	P										22	17	77%	26	78%
6882	16	K.K.S Lakshmi Narayani		P	P	P	a	P	P	A	P	a	P	P	P	P	P	P	P	a	a	P	P	P	P										22	18	81%	29	87%
6883	17	Madipatla Glory Grace		P	P	P	P	a	P	A	P	P	P	P	P	P	P	P	P	P	P	P	a	P	P										22	20	90%	31	93%
6884	18	Maripatla Triveni		P	P	P	P	P	P	A	P	P	P	a	P	P	P	P	P	P	P	P	P	P	P										22	21	95%	31	93%
6885	19	Mathala Bhanu Sri		a	P	P	a	P	P	A	P	P	P	P	P	P	P	P	a	P	P	a	P	P	P										22	18	81%	28	84%
6886	20	Meera Tharun		P	P	a	P	P	a	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	a										22	19	86%	29	87%
6887	21	Mote Kaleswari		P	P	P	P	a	P	A	P	P	a	P	P	P	P	P	P	a	P	P	P	P	P										22	19	86%	28	84%
6888	22	Mutyala Chakradhar		P	P	P	a	P	P	A	P	P	P	P	P	P	a	P	P	P	P	P	P	P	P										22	20	90%	30	90%
6889	23	Potla Priyanka		P	P	P	P	P	P	A	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P										22	21	95%	32	96%
6890	24	P.J.T Bhadra Priya		P	P	P	P	P	P	A	P	a	a	P	P	P	P	P	P	P	P	P	P	P	P										22	20	90%	28	84%
6891	25	Posina Gowri Mallika		P	P	P	P	P	P	A	P	P	P	P	P	a	a	P	P	P	P	P	P	P	P										22	20	90%	26	78%
6892	26	Rayapureddi Someswari		P	P	a	P	P	P	A	P	a	P	P	P	P	P	a	P	a	P	P	P	P	P										22	18	81%	27	81%
6893	27	S.N.V. Sai Ramya		P	P	P	P	a	P	A	P	P	P	a	P	P	P	P	P	P	P	a	P	P	P										22	19	86%	26	78%
6894	28	S.L. Durga Kumari		P	P	P	P	P	P	A	a	P	P	P	P	a	P	P	P	P	P	P	P	P	P										22	20	90%	28	84%
6895	29	Seepani Rupa Devi		P	P	P	a	P	P	A	P	a	P	P	a	P	P	P	P	P	P	P	P	P	P										22	19	86%	28	84%
6896	30	Senapathi Hema		a	P	P	P	P	P	A	P	P	a	P	P	P	P	P	P	P	P	P	P	P	P										22	20	90%	30	90%

Course Co-ordinator

PRINCIPAL (F.A.C.)
S.CH.V.P.M.R. Govt. Degree College
Accredited "B" by NAAC

Pupils Attendance Register

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1	2	3	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	6		7	8	9
6897	31	Sireddy Hemalatha		P	P	a	P	P	P	A	P	P	P	P	a	P	P	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	18	81.1.	28	84.1.
6898	32	Tammineni Gayathri Devi		P	P	P	P	a	P	A	P	P	P	a	P	P	P	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	19	86.1.	28	84.1.
6899	33	Tannoru Rajesh Mouli		P	P	P	a	P	P	A	P	a	P	P	P	P	P	a	P	P	P	P	P	P	P	P	a	P	P	P	P	P	P	P	22	17	77.1.	24	72.1.
6900	34	V.S.S.S.Vara Prasad		P	P	P	P	a	P	A	P	P	P	P	a	P	P	a	P	P	P	P	P	P	P	P	a	P	P	P	P	P	P	P	22	17	77.1.	24	72.1.
6901	35	Velisetti Pavani		P	P	P	P	P	a	A	a	P	P	P	P	P	P	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	19	86.1.	27	81.1.

Course Coordinator

PRINC.
S.C.N.V.P.N.R. Govt. Degree College
Accredited "B" by NAAC
GANAPAVARAM (W.G.Dt.)

SRI CHINTALAPATI VARA PRASADA MURTHY RAJU
GOVERNMENT DEGREE COLLEGE GANAPAVARAM-534 198
ESTD. 1972 • AFFILIATED TO ADIKAVI NANNAYA UNIVERSITY • ACCREDITED NAAC 'B'
DEPARTMENT OF BOTANY

Certificate Course in "MICROGREENS"
Summative Assessment

Max. Marks: 25 Time: 50 minutes
Name of the Student: G. Jhansi Lakshmi Date: 27.12.21
Group: I st BSC (MPCs)
Admission No: 6876

Answer all the following (25 X 1 = 25)

1.The form of hydroponics that does not require a growing medium at all is
(a) Aquaculture
(b) Static solution culture
(c) Medium culture
(d) Aeroponics ✓

2. Hydroponics is a method of cultivation of plants without the use of
(a) water
(b) air
(c) soil ✓
(d) sunlight

3. Which of the following is not true about hydroponics?
(a) Requires high investment
(b) Technical knowledge required ✓
(c) Can be misused to cultivate banned crops
(d) Plants through hydroponics cannot be cultivated everywhere ✗

4. Salts and water in hydroponic plants are absorbed by
(a) Leaves
(b) Stem
(c) Roots
(d) Outer Layer of plants ✓

5. The scientist who used nutrient culture solution in hydroponic cultures was
(a) Knop ✓
(b) Sachs
(c) Wallace
(d) Webster

6. Roots of a plant in hydroponics are submerged in a solution of dissolved
(a) fertilizers ✓
(b) oxygen
(c) mineral salts ✗
(d) chemicals

7. What is the main advantage of Hydroponics?
(a).Decrease in nutrient use.
(b).Decrease in soil use.
(c).Decrease in water use. ✓
(d). All of the above.

8. Which part of the flower becomes the seed?
a. Ovule ✓
b. Ovary
c. Anther
d. Stigma

9. The floral part that produces pollen grains is

A) Sepal
B) Petal
C) Anther
D) Ovary

10. Which is the female reproductive part of a flower?
A) Stamen
B) Pistil
C) Anther
D) Filament

11. Which is the way where plants can produce offspring for the next generation?
A) Making carbon dioxide
B) Making seeds
C) Making nitrogen
D) Making sperms

12. Flower is a modified shoot and is the reproductive organ in a flowering plant.
A) True
B) False

13. Optimum PH required for the growth of Microgreens
A) 6-6.5 PH
B) 4-5.5 PH
C.) 8-9 PH
D.) > 10 PH

14.In monocots, _____ grows rapidly.
A) Coleorhiza
B) Scutellum
C) Radicle
D) Plumule

15. _____ is the process formation of zygote to an embryo
A) Fertilization
B) Syngamy
C) Embryogenesis
D) Blastosis

16. Mention the micro greens used to garnish vegetable salad.
A) Arugula
B) Amaranth
C) Both
D) None

17. Species that are not grown as microgreens might contain ---------- during seedling stage.
A) Toxic alkaloids
B) Cholorphyll
C) Anthocyanins
D) Both B and C

18. Overnight soaking of seeds involves a process known as
A) imbibition
B) transpiration
C) transduction
D) implantation

19. Microgreens may have?
A). Color
B). texture
C). aroma
D). a combination of a, b and c

20. Which of the following species are not suitable to grow as microgreens?
A) Tomato
B) Pepper
C) Egg Plant
D) All of the above

21. Based on the number of cotyledons plants are divided into how many groups?
A) 4
B) 3
C) 2
D) 1

22. The edible portion of the microgreen constitutes of?
A) Single shoot and cotyledons
B) Single shoot and first leaves
C) Both a and b
D) Single soot with radicle

23. Which among the following is one of the major factor for healthy growth of microgreens?
A) light received by the tray
B) temperature maintained in the tray
C) density of seeds in a tray
D) none

24. Which of the following is used as a microgreen?
A) onion
B) beet root
C) Cabbage
D) Califlower

25. Which of the following are reasons for low productivity of microgreens
A) Poor germination
B) infection by moulds
C) Both
D) None

SRI CHINTALAPATI VARA PRASADA MURTHY RAJU
GOVERNMENT DEGREE COLLEGE GANAPAVARAM-534 198
ESTD. 1972 • AFFILIATED TO ADIKAVI NANNAYA UNIVERSITY • ACCREDITED NAAC 'B'
DEPARTMENT OF BOTANY

Certificate Course in "MICROGREENS"

Summative Assessment

Max. Marks: 25 Time: 50 minutes
Name of the Student: A. Tarnath Date: 27.12.21
Group: I BSC (MPCS)
Admission No: 6867

Answer all the following (25 X 1 = 25)

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SRI CHINTALAPATI VARA PRASADA MURTHY RAJU GOVERNMENT DEGREE COLLEGE

GANAPAVARAM-534 198

ESTD. 1972 • AFFILIATED TO ADIKAVI NANNAYA UNIVERSITY • ACCREDITED NAAC 'B'

(Affiliated to Adikavi Nannaya University, Rajamahendravaram, A.P.)

Department of Botany

Certificate course on "Microgreens"

Academic Year: 2020-21

RESULT SHEET

SLNo.	Admn. No.	Class	Name of the Student	FA Marks (15)	SA Marks (25)	Total (40)	Grade	Signature of the Student
1	6867	I BSC (MPCs)	AINAPARRU THRINATH	5	15	20	C	A. Trinath
2	6868	I BSC (MPCs)	ASAPU LAVANYA	6	19	25	C	A Lavanya
3	6869	I BSC (MPCs)	BADDIREDDI BABY CHANDINI	4	16	20	D	B. B. Chandhini
4	6870	I BSC (MPCs)	BADE PURNA SIRISHA	5	15	20	C	B. P. Sirisha
5	6871	I BSC (MPCs)	BANKAPALLI MAHIMA RUPA	5	15	20	C	B. M. Rupa
6	6872	I BSC (MPCs)	BOBBALA VARSHINI	14	21	35	A	B. Varshini
7	6873	I BSC (MPCs)	BORRA HEMA SINDHU	13	20	33	A	B. H. Sindhu
8	6874	I BSC (MPCs)	DASARI NANI	8	15	23	C	D. Nani
9	6875	I BSC (MPCs)	GANDHAM MAHA LAKSHMI KEERTHANA	12	21	33	A	G. M. L. Keerthana
10	6876	I BSC (MPCs)	GORLI JHANSI LAKSHMI	13	20	33	A	G. J. Lakshmi
11	6877	I BSC (MPCs)	GORRELA VENKATA LEELA KRISHNA	8	15	23	C	G. V. Lakrishna
12	6878	I BSC (MPCs)	GUNDUPALLI RAJESH KUMAR	8	15	23	C	G. R. Kumar
13	6879	I BSC (MPCs)	GURAJALA VAMSI KRISHNAM RAJU	14	21	35	A	G. V. K. Raju
14	6880	I BSC (MPCs)	JONNADA UMA SANKAR	8	20	28	B	J. Uma Sankar
15	6881	I BSC (MPCs)	KOMATI DEEPIKA	12	21	33	A	K. Deepika
16	6882	I BSC (MPCs)	KOMMULA KAVYA SIVASAI LAKSHMI NARAYANI	13	22	35	A	K. K. S. L. Narayani
17	6883	I BSC (MPCs)	MADDIPATLA GLORY GRACE	10	15	25	C	M. Gl Grace
18	6884	I BSC (MPCs)	MARIPITTI TRIVENI	8	20	28	B	M. Triveni
19	6885	I BSC (MPCs)	MATHALA BHANU SRI	11	23	34	A	M. B Sri
20	6886	I BSC (MPCs)	MOORA THARUN	10	20	30	B	M. Tharun
21	6887	I BSC (MPCs)	MOTE LOKESWARI	10	15	25	C	M. Lokeswari
22	6888	I BSC (MPCs)	MUTYALA CHAKRADHAR	10	15	25	C	M. Chakradhar
23	6889	I BSC (MPCs)	PETLU PRIYANKA	11	23	34	A	P. Priyanka
24	6890	I BSC (MPCs)	PONNA JAYARAMA TULASI BHADRA PRIYA	8	20	28	B	P. J. T. B. Priya
25	6891	I BSC (MPCs)	POSINA GOWRI MATHA	11	23	34	A	P. G. Matha
26	6892	I BSC (MPCs)	RAYAPUREDDI SOMESWARI	10	20	30	B	R. Someswari
27	6893	I BSC (MPCs)	SANKU NAGA VENKATA SAI RAMYA	14	21	35	A	S. N. V. S. Ramya
28	6894	I BSC (MPCs)	SAPPA LOKESH DURGA KUMAR	8	20	28	B	S. L. D. Kumar
29	6895	I BSC (MPCs)	SEEPANI RUPA DEVI	12	21	33	A	S. R. Devi
30	6896	I BSC (MPCs)	SENAPATHI HEMA	12	21	33	A	S. Hema
31	6897	I BSC (MPCs)	SRIREDDY HEMALATHA	13	22	35	A	S. H. Latha
32	6898	I BSC (MPCs)	TAMMINENI GAYATHRI DEVI	10	15	25	C	T. G. Devi
33	6899	I BSC (MPCs)	TANNERU RAJESH MOULI	8	20	28	B	T. R. Mouli
34	6900	I BSC (MPCs)	UNGARALA SRI SAI SATYANARAYANA VARA PRASAD	11	23	34	A	U. S. S. S. V. Prasad
35	6901	I BSC (MPCs)	VELISETTI PAVANI	12	21	33	A	V. Pavani

Grade: > 30– A, 26 to 30 – B, 21 to 25 – C, 15 to 20 – D, < 15 Fail

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GANAPAVARAM-534198. (W.G.Dist.)

S Ch V P M R GOVERNMENT DEGREE COLLEGE. GANAPAVARAM

DEPARTMENT OF BOTANY

Certificate Course on "Microgreens"

Academic Year 2020-21

Report

Certificate Course on Microgreens started on 21st October 2021 with a target to provide basic knowledge and scope for self employment to non Biology students. Thirty-five students from I MPCs were enrolled and completed the course successfully. The course included basics of structure and parts of a plant, embryo, basic difference between dicots and monoctos and microgreens. To extend the knowledge of students, a demo session on the growing of microgreens were also included. The demo and hands on experience of a growing easily available seeds as microgreens enabled the students to learn the handling of plants. The students were confident to grow the available microgreens like, fenugreek, beetroot, spinach, wheat, dhaniya etc., on their own and also learned the common mistakes that would occur during germination of seeds and maintainence of microgreens. As a part of learning we had grown these microgreens, harvested. oN the day of harvest we made a salad and tasted. This gave a wonderful experience to the students to taste the microgreens

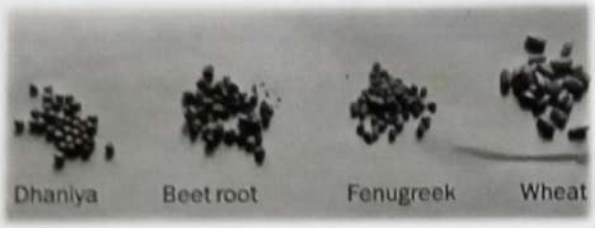
Learning Outcomes

- Gain basic knowledge of plants and microgreens
- Gain confidence at sowing seeds, plant care, and harvesting.
- Plant microgreen seeds in containers in groups.

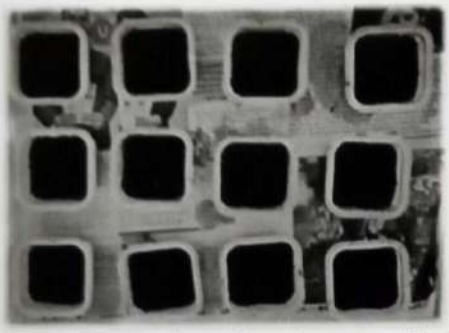
Dr.Ch.Chaitanya

Course Coordinator

PRINCIPAL
S.CH.V.P.M.R.Govt.Degree College
GANAPAVARAM-534198. (W.G.Dist)



Seeds in petri plate Seeds Soaked

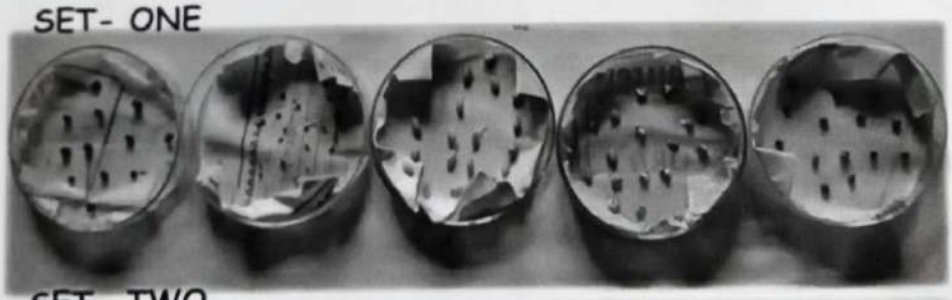


Preperation of Small Containers with vermicompost

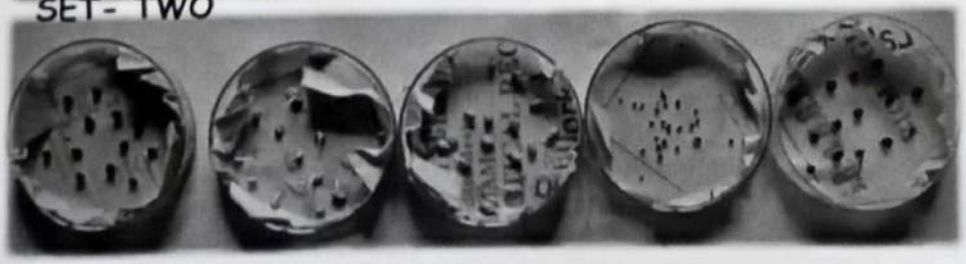
Placing seeds in growing medium

Germination in petriplates

SET- ONE



SET- TWO



Germination in vermiculite/nutrient soil mixture

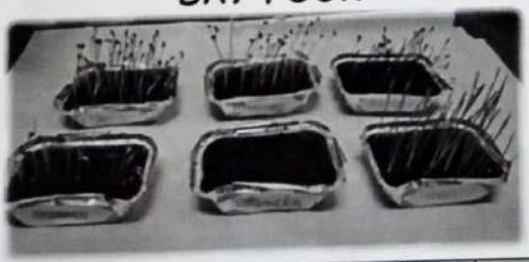
DAY ZERO

DAY ONE

DAY TWO

DAY THREE

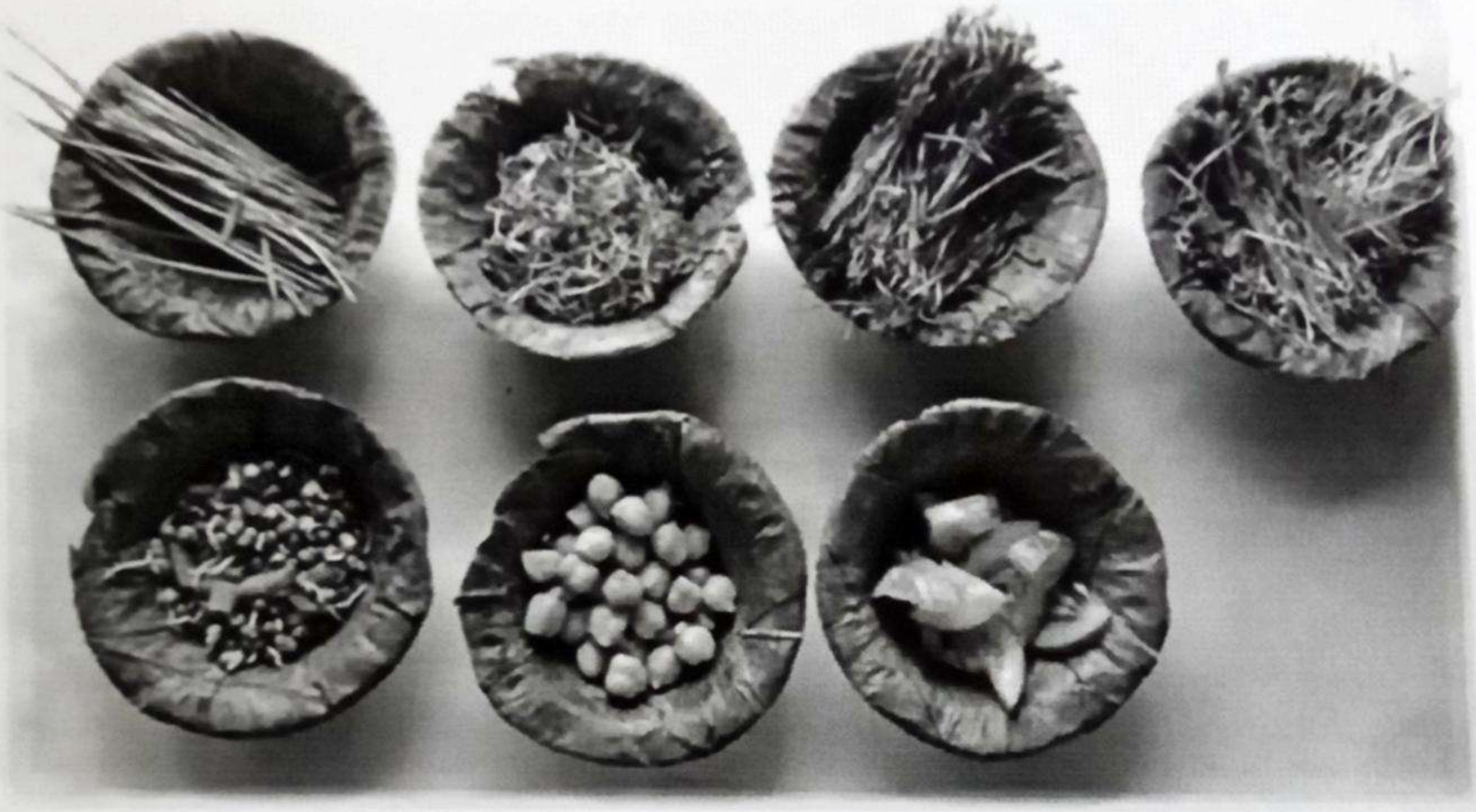
DAY FOUR



DAY FIVE

Sl.No	Day	methi	spinach	mustard	wheat	coriander	beetroot
1	zero	0	0	0	0	0	0
2	one	1	0	0	0	0	0
3	two	25	0	25	13	0	0
4	three	30	13	27	29	0	15
5	four	30	25	27	30	0	30
6	five	30	25	27	30	0	30
Total germination %		100	83.33	90	100	0	100

A salad was made using the microgreens in our laboratory itself.



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GANAPAVARAM-534 198
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CERTIFICATE

This is to certify that

AINAPARRU THRINATH,I MPCs (Admission No. 6867)

of

SCHVPMR GOVERNMENT DEGREE COLLEGE, WEST GODAVARI, ANDHRA PRADESH has successfully completed the certificate course in **"MICROGREENS"** conducted from 21 October to 27 December, 2021 offered by the Department of Botany with grade "**C**".

Dr Ch.Chaitanya
Course Coordinator

Dr M. Syambab
Principal

SRI CHINTALAPATI VARA PRASADA MURTHY RAJU
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GANAPAVARAM-534 198
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CERTIFICATE

This is to certify that

GORLI JHANSI LAKSHMI,I MPCs (Admission No. 6876)

of

SCHVPMR GOVERNMENT DEGREE COLLEGE, WEST GODAVARI, ANDHRA PRADESH has successfully completed the certificate course in **"MICROGREENS"** conducted from 21 October to 27 December, 2021 offered by the Department of Botany with grade "**A**".

Dr Ch.Chaitanya
Course Coordinator

Dr M. Syambab
Principal