



SRR & CVR GOVERNMENT DEGREE COLLEGE

(AUTONOMOUS)

ESTD:1937

VIJAYAWADA, NTR DIST., A.P

Institution is ranked by NIRF 101-150 band at NIRF 2020

WEBSITE. www.srrcvr.ac.in E-Mail. srrandcvr@gmail.com

NAAC 4th CYCLE



SRR & CVR GOVT. DEGREE COLLEGE (A) VIJAYAWADA
DEPARTMENT OF MICROBIOLOGY



Internship

Scientific Beekeeping

In association with Krishi Vigyan Kendra, Ghantasala, Krishna (Dist.) Under
National Bee Board (NBB) of Ministry of Agriculture Hyderabad

BSc Microbiology (MBC & MBF)

From 28th Feb To 7th March 2022



Samsung Quad Camera
Gopal Camera

SRR & CVR GOVT DEGREE COLLEGE (a), VIJAYAWADA
DEPARTMENT OF MICROBIOLOGY

To
The Principal
SRR & CVR Govt. Degree College (A)
Vijayawada
Machavaram
Andhra Pradesh

Respected Madam,

Sub: - Department of Microbiology- Student Internship/Training programme - KVK, Ghantasala- Permission -Request - Regarding.

I submit to inform that the department of Microbiology has been planned 7 days student training programme /Internship on "Scientific Beekeeping" in association with Krishi Vigyan Kendra, Ghantasala, Krishna (Dist.), is one of the best organizations under National Bee Board (NBB) of Ministry of Agriculture, Hyderabad to be scheduled from 28th to 7th March 2022. Since our students have industrial production, sources of Food spoilage and Food Preservation in their syllabus in the Course "Food and Industrial Microbiology" and field visit is a part of curriculum. I further inform that the host institute will provide TA, DA and Certification to the participants. Hence I request you to kindly permit 20 BSc (III & II MBC & MBF) students to attend training programme and teaching staff of Dr. D. Jyothi and Dr .K. Aruna, Department of Microbiology and kindly consider my absence as on-duty.

22.2.2022

Thanking you Madam,

Yours Sincerely

1. Dr. D. Jyothi
22/02/2022
2. Aruna
(Dr. K. ARUNA)
22/2/2022

List of Enclosures:

1. List of Students

SRR & CVR GOVT. DEGREE COLLEGE (A), VIJAYAWADA

DEPARTMENT OF MICROBIOLOGY

7 Day Training programme on "Scientific Beekeeping" Krishi Vigyan Kendra, Ghantasala, Krishna (Dist.) under National Bee Board (NBB) of Ministry of Agriculture, Hyderabad. From 28th Feb to 7th March 2022.

LIST OF STUDENTS:

S.NO	Name of the Student	Class	Signature
1	J. Chandini Priya	III BSc MBC	J. Chandini Priya
2	P. Sadhika	III BSc MBC	P. Sadhika
3	V. Rameswar Reddy	III BSc MBC	V. Rameswar Reddy
4	T. Durga Amal Prasad	III BSc MBC	T. Durga Amal Prasad
5	P. Ravi Teja	III BSc MBC	P. Ravi Teja
6	J. Venkateswaralu	III BSc MBC	J. Venkateswaralu
7	K. Kinnera	III BSc MBC	K. Kinnera
8	G. Gopal Rao	III BSc MBC	G. Gopal Rao
9	K. Vagadhan Babu	III BSc MBC	K. Vagadhan Babu
10	B. Aaron Wesley Paul	III BSc MBC	B. Aaron Wesley Paul
11	Ch. Ramdevu	III BSc MBC	Ch. Ramdevu
12	T. Bharathi	III BSc MBC	T. Bharathi
13	T. Teja	III BSc MBC	T. Teja
14	V. Vasanth Srinivas	II BSc MBF	
15	Ch. Pranoy Roy	II BSc MBF	Ch. Pranoy Roy
16	G. Anil Kumar	I BSc MBF	G. Anil Kumar
17	G. Revanth	I BSc MBF	G. Revanth
18	K. Vijay	I BSc MBC	K. Vijay
19	R. Sai Vardhani	I BSc MBC	R. Saithardhani
20	K. Naga Sriya	I BSc MBC	K. Naga Sriya
21	E Bhanu Teja	II BSc MBC	E. Bhanu Teja
22	P. Rajya Lakshmi	II BSc MBC	P. Rajyalakshmi
23	Y. Muthyam	II BSc MBC	Y. Muthyam
24	N. Naga Lakshmi	II BSc MBC	N. Naga Lakshmi
25	Sk. Refatunisa	II BSc MBC	Sk. Refatunisa
26	Abdul Roshini	II BSc MBF	
27	R. Gopi Krishna	II BSc MBF	R. Gopikrishna
28	B. Sowmya	II BSc MBC	B. Sowmya

FACULTY ATTENDING:

1	Dr. D. Jyothi	IN-CHARGE, DEPT. OF MICROBIOLOGY
2	Dr. Kopuri Aruna	LECTURER IN MICROBIOLOGY


SIGNATURE OF IN-CHARGE

PRINCIPAL

SRR & CVR GOVT. DEGREE COLLEGE (A) Vijayawada

Department of Microbiology

Activity Register 2021-2022

Date	From 28th Feb To 7th March 2022
Conducted through (DRC/JKC/ELF/NCC/NSS/Departments etc.)	Department of Microbiology
Nature of Activity (Seminar/Workshop/Extn. Lecture etc.,)	Internship
Title of the Activity	Scientific Beekeeping
Name of the Department/Committee	Department of Microbiology
No. of students participated	28 BSc Microbiology MBC & MBF
Brief Report on the activity	<p>The Department of Microbiology has been planned 7 days student training programme on “Scientific Beekeeping” in association with Krishi Vigyan Kendra, Ghantasala, Krishna (Dist.), is one of the best organizations under National Bee Board (NBB) of Ministry of Agriculture, Hyderabad to be scheduled from 28th to 6th March 2022. Since our students have industrial production, sources of Food spoilage and Food Preservation in their syllabus in the Course “Food and Industrial Microbiology”.</p> <p>The training program emphasized on adopting the techniques of scientific beekeeping and developing entrepreneurship.</p>
Name of the Lecturers who Planned & conducted the activity	Dr .D .Jyothi & Dr.Kopuri Aruna
Signature of the In- Charge	
Signature of the Principal	

DAY 1: INAUGURAL SESSION



WHY BEEKEEPING?



PRE EVALUATION

Day 1:

Session 1: Introduction to National Beekeeping and Honey Mission by Dr Sudha Jacob, Senior Scientist, Entomology, KVK Ghantasala

Govt. of India has approved a new Central Sector Scheme entitled “National Beekeeping & Honey Mission (NBHM)” for 2 years for overall promotion and development of scientific beekeeping in mission mode to achieve the goal of “Sweet Revolution” in the country by giving thrust on capacity building & trainings, specific focus on women, input support for promotion & production, setting up of Integrated Beekeeping Development Centres (IBDCs), other Infrastructures, Digitization /online registration, etc., processing, value addition, market support, etc. & R&D under 3 Mini Missions (MM s)-MM-1, MM-2 & MM-3.

Session 2: Types of Bees and Its importance by Dr Sudha Jacob, Senior Scientist, Entomology, KVK Ghantasala

Apis dorsata, the **giant honey bee**, is a honey bee of South and Southeast Asia, found mainly in forested areas. They are typically around 17–20 mm (0.7–0.8 in) long. Nests are mainly built in exposed places far off the ground, like on tree limbs, under cliff overhangs, and sometimes on buildings. These social bees are known for their aggressive defense strategies and vicious behavior when disturbed. Though not domesticating it, indigenous peoples have traditionally used this species as a source of honey and beeswax, a practice known as honey hunting

Session 3: Study on Bees by Dr Purnachandan Rao, Senior Scientist

- Colony initiation
- Colony migration and decline
- Mating
- Communication

- Foraging
- Worker policing
- Nest recognition and fidelity

Session 4: Practical Examination of Various Bees Dr Sudha Jacob, Senior Scientist, Entomology, KVK Ghantasala



DAY 2: SESSION 1



DR. SUDHA RANI, SENIOR SCIENTIST Honey Bee Managementt



SESSION 2: DR. JHANSI, PROGRAME CO-ORDINATOR, KVK GHANTASALA

Pesticides and Disorders - Honeybee

SESSION 3:



MR. NAVEEN, Govt. Teacher, Chilakaluripeta,

Scientific beekeeping of *Apis ceranea*

- Colony initiation
- Colony migration and decline
- Mating
- Communication
- Foraging
- Worker policing
- Nest recognition and fidelity

DAY 3: SESSION 1



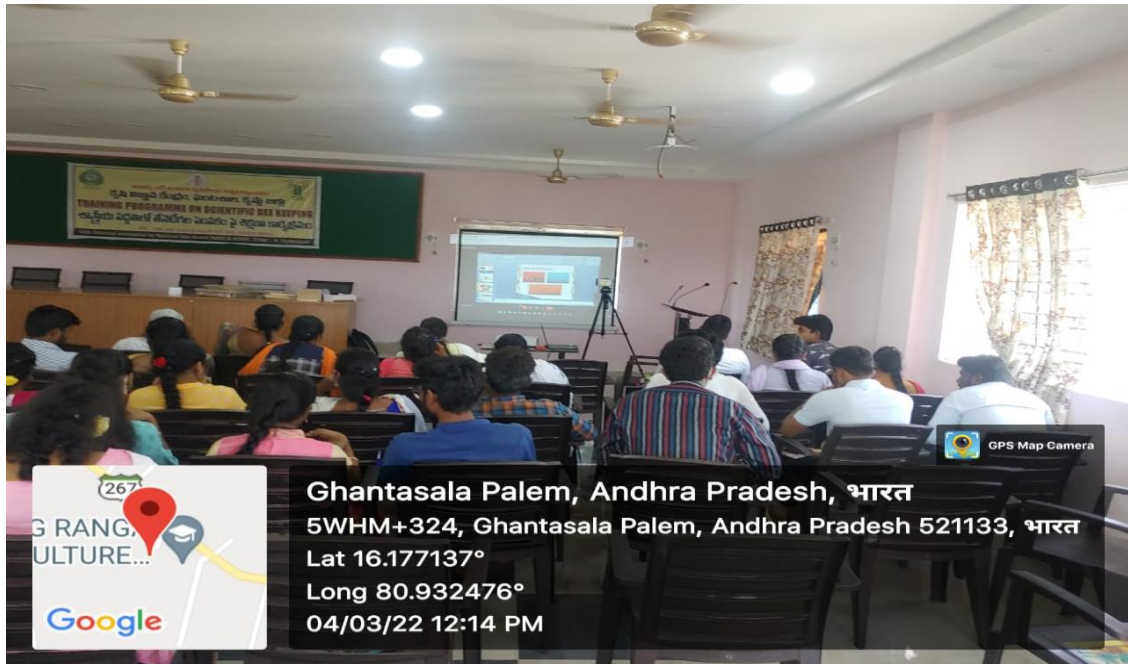
MR. CHINNA BABU, Honeybee farming

SESSION 2:



Tools and Bee Box by Dr Sudha Jacob, Senior Scientist, Entomology, KVK Ghantasala

DAY 4 SESSION 1



ROLE OF POLLENATORS IN CROP YIELD INCREASE BY DR G A D GRACE, RARS, LAM, GUNTUR

SESSION 1



BEEKEEPIN MANAGEMENT

Dr. Mohan Rao, Principal scientist AICRP on Bees, Vijayarai

DAY 5: FIELD VISIT & HANDS ON TRAINING AT AICRP ON BEES, VIJAYARAI



PREPARATION OF SUGAR SYRUP

OBSERVATION OF BROOD RACK





HONRY EXTRACTOR

BEEWAX FOUNDATION SHEET MACHINE

Ovoid brood cells and honey pots within a *Trigona laeviceps* nest



BEEHIVE BOX OBSERVATION

ARTIFICIAL BREEDING OF QUEEN BEE







realme Shot by Ravi_Palepu

AICRP ON BEES, VIJAYARAI



Ghantasala Palem, Andhra Pradesh
5WHM+324, Ghantasala Palem, Andhra Pradesh
Lat 16.177211°
Long 80.932378°
07/03/22 01:06 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.17722°
Long 80.932294°
07/03/22 01:07 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.17723°
Long 80.932306°
07/03/22 01:07 PM



Ghantasala Palem, Andhra Pradesh
5WHM+324, Ghantasala Palem, Andhra Pradesh
Lat 16.177229°
Long 80.932319°
07/03/22 01:06 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177211°
Long 80.932311°
07/03/22 01:07 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177209°
Long 80.932303°
07/03/22 01:07 PM

PRESENTATION OF CERTIFICATES



Ghantasala Palem, Andhra Pradesh

5WHM+324, Ghantasala Palem, Andhra Pradesh

Lat 16.177208°

Long 80.932304°

07/03/22 01:08 PM



Ghantasala Palem, Andhra Pradesh, India

5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India

Lat 16.177205°

Long 80.932308°

07/03/22 01:08 PM



Ghantasala Palem, Andhra Pradesh, India

5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India

Lat 16.177219°

Long 80.932302°

07/03/22 01:08 PM



Ghantasala Palem, Andhra Pradesh

5WHM+324, Ghantasala Palem, Andhra Pradesh

Lat 16.17721°

Long 80.932309°

07/03/22 01:08 PM



Ghantasala Palem, Andhra Pradesh, India

5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India

Lat 16.17721°

Long 80.932303°

07/03/22 01:09 PM



Ghantasala Palem, Andhra Pradesh, India

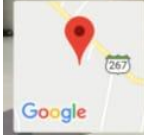
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India

Lat 16.177196°

Long 80.9323°

07/03/22 01:09 PM

PRESENTATION OF CERTIFICATES



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.17718°
Long 80.932304°
07/03/22 01:09 PM



Ghantasala Palem, Andhra Pradesh,
5WHM+324, Ghantasala Palem, Andhra Pradesh 5
Lat 16.177214°
Long 80.932301°
07/03/22 01:10 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.17718°
Long 80.932326°
07/03/22 01:10 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177213°
Long 80.932302°
07/03/22 01:10 PM



Ghantasala Palem, Andhra Pradesh,
5WHM+324, Ghantasala Palem, Andhra Pradesh 5
Lat 16.177206°
Long 80.932287°
07/03/22 01:11 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177213°
Long 80.932301°
07/03/22 01:10 PM

PRESENTATION OF CERTIFICATES



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177216°
Long 80.9323°
07/03/22 01:12 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.17721°
Long 80.932297°
07/03/22 01:11 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177216°
Long 80.9323°
07/03/22 01:12 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177219°
Long 80.93231°
07/03/22 01:11 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177213°
Long 80.932298°
07/03/22 01:11 PM



Ghantasala Palem, Andhra Pradesh, India
5WHM+324, Ghantasala Palem, Andhra Pradesh 521133, India
Lat 16.177206°
Long 80.932293°
07/03/22 01:11 PM

PRESENTATION OF CERTIFICATES



INTERNSHIP “SCIENTIFIC BEEKEEPING”

In association with Krishi Vigyan Kendra, Ghantasala, Krishna (Dist.) Under National Bee Board (NBB) of Ministry of Agriculture Hyderabad

BSc Microbiology (MBC & MBF) SRR & CVR Govt. Degree College (A), Vijayawada

From 28th Feb To 7th March 2022

ACKNOWLEDGEMENTS

We express our deep sense of gratitude to Dr. K. Bhagya Lakshmi, Principal SRR & CVR Govt. Degree College Autonomous, and Vijayawada for her support and constant encouragement to upgrade the knowledge and skills of students.

We wish to express our sincere thanks Dr. K. Jhansi, Program Coordinator, KVK Ghantasala, Krishna District and Course Director, Dr Sudha Jacob, Senior Scientist, Entomology, KVK Ghantasala for providing internship to Microbiology students.

D. Jyothi

Anil

PRINCIPAL