

**TRR GOVERNMENT DEGREE COLLEGE
KANDUKUR, PRAKASAM DIST.**



**INTERNAL GREEN AUDIT REPORT
2019-2020**

**TRR GOVERNMENT DEGREE COLLEGE, KANDUKUR, PRAKASAM DT.
ECO CLUB**

Date: 5.06.2019

RESOLUTION

As a part of the Green initiative, the college wishes to conduct the Green audit for the academic year 2019-2020. For making this a reality and success the following staff members are involved in the Green audit committee.

1. D. Vijayasri - Principal (FAC), Chairman of the committee
2. Sri.Shaik Mastan Vali, Lecturer in Botany, Green audit member
3. Sri.K. Srinivas, Lecturer in Zoology, Green audit member
4. Dr.K.R.Shanmugam, Lecturer in zoology, Green audit member
5. Smt.J.Mythri, Lecturer in Chemistry, Green audit member
6. Sri.Ch.Suresh Kumar, Lecturer in mathematics, Green audit member

Principal
T.R.R. Govt Degree College
KANDUKUR - 522105
Prakasam Dist.

Botany	Political Science
Zoology	History
Chemistry	Economics
Physics	Commerce
Mathematics	WEC
Computer Science	NSS
Hindi	NCC
Urdu	Physical Education
Telugu	English

Foreword:

The Internal Audit Team has prepared this report for the **Tikkavarapu Rami Reddy Government Degree College** located at Kovur Road, Kandukur, Prakasam District, Andhra Pradesh - 523105, based on input data submitted by the College. The inputs of the college are derived by inspection and investigation. The details have been consolidated and thoroughly studied and analyzed to generate the report based on a comparative analysis of the existing facilities and the prerequisites formulated by various standards. The Green audit is a study based on the inspection and investigation of data collected over a period of time

Several recommendations are made to convert the institution into an eco-friendly campus. The Management can implement these recommendations based on the availability of funds in phase-wise or at a time to move towards eco-friendly campus.

AKNOWLEDGEMENTS

The Internal Green Audit Team thanks the Tikkavarapu Rami Reddy Government Degree College, Kandukur Prakasam District for assigning this valuable important work of Green and Environment Audit. We appreciate the cooperation extended to our team by the staff during the entire process.

Our special heartfelt thanks to the Chairperson of the entire process, Smt. D. Vijayasri, Principal, for her constant support and encouragement during the entire period of audit.

We thank all the teaching and non-teaching staff for their cooperation and support in successfully completing the Audit process. We also thank all the students of TRR government degree college for their help in enumerating the flora and fauna of the college.

We also thank all the persons who are directly and indirectly involved in the audit process for extending their full support in successful completion of this process.

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INTRODUCTION:

TRR Government Degree College, since its inception in 1966, is catering the needs of rural poor students. Sri Thikkavarapu Rami Reddy garu, Sri. Chenchu Rama Naidu garu came forward to take up the noble task of establishing a college to cater to the needs of the rural students of Kandukur and surrounding mandals in the district. The college has celebrated its Golden Jubilee Celebrations in January 2017. Till to date, the college has been successful in shaping the student's character and their career. Caste, creed, and sex has never stood as barriers here. The college has illustrious Alumni in the form of Sri. I Y R. Krishna Rao, Former Chief Secretary, Govt. of Andhra Pradesh, Sri. Ganta Srinivasa Rao, Former Minister for Human Resource Development, Govt. of Andhra Pradesh, Professor. K. Veeraiah, Former Vice Chancellor, Vikrama Simhapuri University, Nellore along with many Teachers, Govt. Employees, Businessmen and Politicians.

OVERVIEW OF THE INSTITUTION

VISION

To develop the college into a Best Educational Center with adequate physical-digital infrastructure, effective governance, efficient teaching-learning process and student support services thereby transforming the students into Knowledgeable, Skilful, Employable, Responsible, Socially Committed, Environmentally Conscious, Gender Sensitive, Patriotic citizens with special emphasis on socially marginalized and economically poor students

MISSION

- ❖ To develop the college into a Best Higher Education Centre with diverse programs
- ❖ To provide adequate physical and digital infrastructure facilities
- ❖ To provide efficient governance through democratic, transparent, accountable, value based and eco-friendly approaches
- ❖ To create enabling academic environment for effective teaching-learning and assessment process and student support services with student centric approach
- ❖ To impart various soft skills, life skills and employability skills to the students
- ❖ To nurture the students, develop critical-creative thinking, scientific temper, problem solving approach, innovativeness, inclusiveness, patriotism, gender sensitivity, environmental consciousness and social service orientation.
- ❖ To support the faculty to enrich the knowledge and skills which shall be beneficial for their academic progress and the students
- ❖ To collaborate with the stakeholders - Alumni, Industry, Community and Parents for holistic development of the college

INTERNAL GREEN AUDIT TEAM (2019-2020)

1. Smt. D. Vijaya Sri
Green Audit Coordinator &
Principal, TRR Govt. Degree College, Kandukur, Prakasam Dist.
2. Prof. S.B. Padal, Department of Botany, Andhra University.
(Expert Green Audit Member)
3. K. Srinivas,
Green Audit Member
Lecturer in Zoology,
4. Dr. K.R. Shanmugam,
Green Audit member
Lecturer in Zoology
5. Dr. Shaik Mastan Vali,
Green Audit member,
Lecturer in Botany.
6. Smt. J. Mythri,
Green Audit Member,
Lecturer in Chemistry.

Internal Green Audit Committees:

The Green audit members will work under the leadership of the Principal and under the guidance of the IQAC coordinator. The green audit members are assigned different works. They form committees to make the work easy. The various committees and their objectives are as follows

1. Committee on Green practices and Floral Enumeration:

Prof. S. B. Padal, Professor of Botany, Andhra University, will guide the team externally. His expertise in enumerating the plant data, is utilised in the green audit compilation. Dr. Shaik Mastan Vali, Lecturer in Botany takes the lead role.

2. Committee on Fauna Enumeration:

K.Srinivas & Dr.K. R. Shanmugam, Lecturer's in zoology, will take the lead in enumerating the fauna of the area.

3. Environment Audit and Miscellaneous Committee:

Smt J. Mythri, Lecturer in Chemistry and Ch. Suresh Kumar, Lecturer in Mathematics will take the lead in environment audit.

Report of the Green Practices Audit & Floral Enumeration Committee

The following observations are made by the Green Audit members regarding the green practices followed in the college.

1. Plantation programs: It is found that the college is practicing the regular plantation programs in the college. The Greenery and Biodiversity in the college has increased due to the plantation program. The number of gardens were also increased from 1 in 2018-2019 to 2 in 2019-2020. *Syzigium*, *Azadirachta*, *Nerium*, *Ipomoea*, and *Ficus* plants were introduced this year.

2. Azolla culture is practiced in the college. It is found that the *Azolla* is used as a biofertilizer in the college. The dried and wet *Azolla* plant is directly used as a biofertilizer to nourish the garden plants. The water used in the *Azolla* culture is rich in nitrogen source and this water is also used for watering plants after the completion of one *Azolla* cycle. A dedicated pond was constructed with the concrete and covered with shadenet to protect the *Azolla* plant.

3. Kitchen Garden: Beside the *Azolla* pond Kitchen garden is laid to grow the leafy vegetables like *Amaranthus*, *Spinach*, *Methi* and *Coriander*. There is a practice of selling these leafy vegetables to the college staff. The amount accumulated is used as investment for further raising the plants in Kitchen Garden.

4. Hydroponics: The Green Audit team found that the Botany Department is practicing the Hydroponics- soil less culture of plants in the Botany lab. Three different hydroponic units are established in the Botany lab they are Nutrient Film Technology (NFT) model, Dutch Bucket Model, and Deep Water culture. Through NFT model they produced *Amaranthus*. Dutch bucket model is used to grow deep rooted plants like Tomato Capsicum etc. It is found that they produced tomato through this model. Through deep water culture they produced Wheat grass. Though the Hydroponics in Botany lab is in experimental condition it will certainly increase the greenery within the labs and class rooms. The TRR college not only increased the greenery in the college premises but also increased the greenery with in the labs through the Hydroponics.

Clean and Green Program: the college has a strong Eco Club who will take care of the Clean and Green program in coordination with NSS, NCC and Physical Education department. Third Saturday afternoon session of every month is selected for cleaning the campus.

Green Policy: The college adopts a Green policy, which is hosted on the website. It gives the direction for the college to move towards eco-friendly campus.

Report on Floral Enumeration:

The flora of the college is dominated by the dicot plants. The *leguminosae* occupies the lions share in the plants enumerated in the campus area. There is a perfect balance of Trees shrubs and herbs found in the college.

The plants found in the college premises are as follows.

S.No.	Plant Name	Type (Plant/tree/herb/shrub)	Qty.	Plantation
1	<i>Alternanthera flavescens</i>	herb	17	Grown naturally
2	<i>Aegle marmelos</i>	tree	2	students
3	<i>Aerva lanata</i>	herb	35	Grown naturally
4	<i>Agave americana</i>	shrub	5	students
5	<i>Allamanda cathartica</i>	herb	2	staff
6	<i>Alstonia scholaris</i>	tree	8	staff
7	<i>Annona Muricata</i>	tree	1	students
8	<i>Annona reticulata</i>	tree	1	students
9	<i>Annona squamosa</i>	shrub	2	students
10	<i>Araucaria angustifolia</i>	tree	2	staff
11	<i>Areca catechu</i>	tree	2	students
12	<i>Artabotrys hexapetalus</i>	tree	2	staff

13	<i>Azadirachta indica</i>	tree	5	Grown naturally
14	<i>Azolla pinnata</i>	herb	100	staff
15	<i>Bauhinia purpurea</i>	tree	5	students
16	<i>Blumea balsamifera</i>	herb	7	Grown naturally
17	<i>Bougainvillea glabra</i>	shrub	55	students
18	<i>Caesalpinia pulcherrima</i>	shrub	4	Grown naturally
19	<i>Calophyllum inophyllum</i>	tree	1	staff
20	<i>Calotropis gigantea</i>	shrub	10	Grown naturally
21	<i>Caryota urens</i>	tree	8	staff
22	<i>Cassia angustifolia</i>	herb	10	Grown naturally
23	<i>Catharanthus rosea</i>	herb	27	Grown naturally
24	<i>Citrus limon</i>	tree	4	students
25	<i>Citrus reticulata</i>	tree	1	students
26	<i>Citrus sinensis</i>	tree	1	students
27	<i>Cleome viscosa</i>	herb	19	students
28	<i>Clitoria ternatea</i>	herb	2	Grown naturally
29	<i>Cocos nucifera</i>	tree	5	staff
30	<i>Cordia dichotoma</i>	tree	2	Grown naturally
31	<i>Couroupita guianensis</i>	tree	2	staff
32	<i>Crinum asiaticum</i>	herb	3	students
33	<i>Cycas revoluta</i>	shrub	2	staff
34	<i>Delonix regia</i>	tree	3	Grown naturally
35	<i>Dracaena angustifolia</i>	herb	4	students
36	<i>Duranta erecta</i>	shrub	100	students
37	<i>Euphorbia hirta</i>	herb	15	Grown naturally
38	<i>Feronia limonia</i>	tree	4	staff
39	<i>Ficus benghalensis</i>	tree	2	Grown naturally
40	<i>Ficus carica</i>	tree	1	staff

41	<i>Ficus religiosa</i>	tree	5	Grown naturally
42	<i>Gossypium hirsutum</i>	shrub	2	Grown naturally
43	<i>Grewia asiatica</i>	tree	3	Grown naturally
44	<i>Hardwickia binata</i>	tree	4	staff
45	<i>Hibiscus rosa-sinensis</i> ,	shrub	7	students
46	<i>Ixora coccinea</i>	shrub	2	students
47	<i>Jatropha curcas</i>	shrub	1	Grown naturally
48	<i>Kalanchoe pinnata</i>	herb	4	staff
49	<i>Lawsonia inermis</i>	shrub	5	Grown naturally
50	<i>Limonia acidissima</i>	tree	1	staff
51	<i>Mangifera indica</i>	tree	2	Grown naturally
52	<i>Manilkara zapota</i>	tree	2	Grown naturally
53	<i>Millingtonia hortensis</i>	tree	3	students
54	<i>Mimusops elengi</i>	tree	1	staff
55	<i>Moringa oleifera</i>	tree	2	Grown naturally
56	<i>Mussaenda erythrophylla</i>	shrub	2	students
57	<i>Neolamarckia cadamba</i>	tree	2	staff
58	<i>Nerium oleander</i>	shrub	8	Grown naturally
59	<i>Ocimum tenuiflorum</i>	herb	10	Grown naturally
60	<i>Oldenlandia umbellata</i>	herb	15	Grown naturally
61	<i>Parthenium hysterophorus</i>	herb	25	Grown naturally
62	<i>Peltophorum pterocarpum</i>	tree	4	Grown naturally
63	<i>Phoenix dactylifera</i>	tree	1	staff
64	<i>Polyalthia longifolia</i>	tree	10	staff
65	<i>Pongamia pinnata</i>	tree	20	Grown naturally
66	<i>Psidium guajava</i>	tree	10	staff
67	<i>Pterocarpus santalinus</i>	tree	7	staff
68	<i>Roystonea regia</i>	tree	16	staff

69	<i>Sansevieria trifasciata</i>	herb	10	staff
70	<i>Santalum album</i>	tree	2	staff
71	<i>Sesbania grandiflora</i>	tree	2	Grown naturally
72	<i>Solanum nigrum</i>	herb	18	Grown naturally
73	<i>Spathodea campanulata</i>	tree	3	students
74	<i>Syzygium cumini</i>	tree	10	Grown naturally
75	<i>Syzygium jambos</i>	tree	1	students
76	<i>Tabebuia rosea</i>	tree	3	staff
77	<i>Tabernaemontana divaricata</i>	shrub	6	students
78	<i>Tecoma stans</i>	shrub	7	students
79	<i>Tephrosia purpurea</i>	herb	50	Grown naturally
80	<i>Terminalia catappa</i>	tree	20	staff
81	<i>Thuja occidentalis</i>	shrub	4	staff
82	<i>Tinospora cordifolia</i>	herb	5	Grown naturally
83	<i>Tridax procumbens</i>	herb	59	Grown naturally
84	<i>yucca aloifolia</i>	shrub	10	students
85	<i>Ziziphus mauritiana</i>	shrub	2	Grown naturally
86	<i>Abutilon indicum</i>	shrub	30	Grown naturally
87	<i>Aloe vera</i>	herb	20	students
88	<i>Dieffenbachia amoena</i>	herb	2	students
89	<i>Costus igneus</i>	herb	3	students
90	<i>Coleus amboinicus</i>	herb	4	students
91	<i>Datura stramonium</i>	herb	15	Grown naturally

Report of the Fauna Enumeration Committee

The committee on Faunal Enumeration headed by K. Srinivas and Dr. KR Shanmugam found that there are 51 common species found in the college premises. They are as follows.

S.NO	COMMON NAME	SCIENTIFIC NAME	PHYLUM
1	MOSQUITO	CULICIDAE	ARTHROPODA
2	BUTTER FLY	RHOPALOCERA	ARTHROPODA
3	COCKROACH	BLATTODEA	ARTHROPODA
4	HOUSE FLY	MUSCADOMESTICA	ARTHROPODA
5	RED WOOD ANT	FORMICA RUFA	ARTHROPODA
6	BEETLES	COLEOPTERA	ARTHROPODA
7	LICE	PHTHIRAPTERA	ARTHROPODA
8	HONEY BEE	APIS	ARTHROPODA
9	BRISTLETAILS	ARCHAEOGNATHA	ARTHROPODA
10	TERMITTE	ISOPTERA	ARTHROPODA
11	DRAGONFLY	ANISOPTERA	ARTHROPODA
12	LADY BUGS	COCCINELLIDAE	ARTHROPODA
13	FRUIT FLIES	DROSOPHILA MELANOGASTER	ARTHROPODA
14	SPIDER	ARANEAE	ARTHROPODA
15	GRASS HOPPER	CAELIFERA	ARTHROPODA
16	TIGER CENTIPEDA	SCOLOPENDRA	ARTHROPODA
17	SNAIL	ASTROPODS	MOLLUSCA
18	DOG	CANISLUPUSFAMILIARIS	CHORDATA
19	CAT	FELISCATUS	CHORDATA
20	HEN	GALLUS DOMESTICUS	CHORDATA
21	CATTLE	BOSTAURUS	CHORDATA
22	GOAT	CAPRA AEGAGRUS HIRCUS	CHORDATA
23	BUFFALO	BUBALINA	CHORDATA
24	MONKEY	MACACA	CHORDATA

25	RAT	RATTUS	CHORDATA
26	DUCK	ANATIDAE	CHORDATA
27	HYLA	HOLARCTICTREE	CHORDATA
28	INDIAN COBRA	NAJA NAJA	CHORDATA
29	BLUE KRAIT	BANGARUS CAERULEUS	CHORDATA
30	CALOTES	EASTERN GARDEN LIZARD	CHORDATA
31	LIZARD	LIZARD	CHORDATA
32	PARROT	PSITTACIFORMES	CHORDATA
33	SPARROW	PASSERIDAE	CHORDATA
34	SQUIRRELS	SQUIRRELS	CHORDATA
35	CROW	CORVUS	CHORDATA
36	VARANUS	VARANUS	CHORDATA
37	AMEABA	AMEABA	PROTOZOA
38	ENTAMEABA	HISTOLITICA	PROTOZOA
39	EUGLENA	EUGLENA	PROTOZOA
40	PARAMECIUM	PARAMECIUM	PROTOZOA
41	ROUND WORM	ASCARIS LUMBICAIDUS	NEMATODES
42	EARTH WORM	PHERITIMA	ANNELIDA
43	LEECH	HIRUDINEA	ANNELIDA
44	BLOOD FLUKE	CYSTOZOMA	PLATY HELMENTHIS
45	CATLA CATLA	CATLA CATLA	CHORDATA
46	LABEO ROHITHA	LABEO ROHITHA	CHORDATA
47	JILABES	TILAPIA	CHORDATA
48	BATS	CHIROPTERA	CHORDATA
49	OWL	STRIGI FORMS	CHORDATA
50	CRANE	GRUIDAE	CHORDATA
51	SILVER FISH	LEPISMA SACCARINA	ARTHROPODA

Report of the Environment Audit Committee

- ❖ The college has gone for testing of soil at three different places in college in three different gardens. The soil Ph in all the three places is slightly alkaline around 8.35. The first garden has got slightly higher Ph of 8.79. The soil is deficient in the macro elements, typical elements like N,P and K
- ❖ The major type of the soil is Red soil.
- ❖ The water holding capacity and porosity of the soil is moderate
- ❖ The soil is suitable for growing tree species like Mango, Red Sanders, Sapota, Azadirachta, *Tamarindus*, *Syzygium*, *figus* species
- ❖ The college has tested its water samples both tap water and bore water. It is found that the pH of the water is slightly alkaline. The water is suitable for growing garden plants. No traces of heavy metals are found in the ground water. The water quality is moderate.
- ❖ The college has got 1 water harvesting pit/ recharge pit, which taps the surface runoff water from the 2 acres surrounding area.
- ❖ The primary sources of water in the college are ground water obtained through the bore and municipal water supply through the taps
- ❖ Daily thousand liters of water is filtered by the RO plant available near the main entrance gate.
- ❖ There are 4 tanks on the terrace with a capacity of 500 l each which supply water to the labs, staff room, waiting room office, Principal chamber and toilets.
- ❖ It is observed that, RO waste water is utilized for watering the garden plants in the college.
- ❖ The plants in the garden are watered as per the climate and requirement. In winter days alternate watering of the plants is taken up where as in hot summer the plants are watered days daily twice (in the early morning and evening)
- ❖ It is observed that college is using energy conserving technology by fitting water flow sensors to the roof top tanks. It is also using digital sockets to control the water flow periodically to hydroponic units.
- ❖ Toilet areas are cleaned twice on daily basis which require the water.
- ❖ Chemistry lab chemical water is diverted in to the pit dug in the first garden
- ❖ Areas of water usage are Urinals(34) Toilets (23), Wash Basins(33), Taps (8- indoors) Taps (5- outdoors)

Report of the Environment Audit Committee

The findings of the 4th Committee:

- ❖ The committee found that the college is creating awareness among the public staff and students through its awareness programs on environment consciousness. Several programs like role

plays, environment day, Say no to plastic, earth day, Ozone day were conducted in the college to create awareness among the staff and students. Few programs like Role plays are uploaded in the you tube for public viewing.

- ❖ The air quality of the college premises is found to be good in winter and rainy seasons. In summer season hot air winds will blow at 10km/hr and make the area filled with dust.
- ❖ It is observed that the wind erosion in TRR GDC premises is more than the water erosion of soil.
- ❖ There are several trees in the college premises which will fix the carbondioxide released in the area. And act as sinks of the corbondioxide.
- ❖ It is observed that Several trees of *Conocarpus* (dubai bush) and *Alstonia* species are planted in the college premises. These plants will release the allergic pollen during the flowering period which is dangerous to the local public.
- ❖ Total number of trees present in the college campus are more than 250, out of these more than 50 are big sized measuring more than 40 ft. the other are 3 - 4ft height.
- ❖ The amount of carbondioxide fixed by the plants in the campus

Recommendations of the Internal Green Audit team:

- ❖ The greenery in the campus should be further increased as per the national forestry norm of one third area of the college campus should be covered by the trees.
- ❖ The green cover of the college is low. Steps should be taken in the coming years to increase the tree cover with huge canopy. The trees with huge canopy sequester more carbon and do enormous help to the environment. The Biodiversity of the college premises should be further increased through introduction of new species.
- ❖ Importance should be given to flowering species which increases the beauty of the college.
- ❖ The tree species which release allergic pollen (*Conocarpus*, *Alstonia*) should be avoided in plantation program
- ❖ Roof top gardening should be encouraged in the college. Hydroponics should be extended to all the labs of the college.
- ❖ *Spirulina* culture should be taken up along with *Azolla* Culture.
- ❖ The organic farming should be taken up by the Botany students of BZC group as a part of project work in their final year. Solid waste management should be strengthened in the

college. Proper scientific approach should be taken to dispose the biomedical and e waste of the college.

- ❖ More RO systems should be installed to meet the demand of water by the students.
- ❖ Water conservation should be done by constructing farm ponds in the college to increase the water table further.
- ❖ More pasture land should be developed to prevent the soil erosion due to wind and water.
- ❖ The college should plan more awareness programs on environment related issues in the college. The college should reach out the public through their offline and online programs beyond the campus to increase the environment education. The college should plan more role plays online quiz etc.

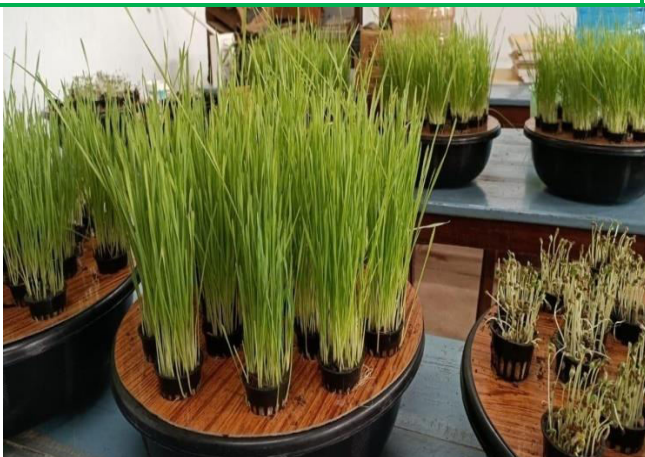
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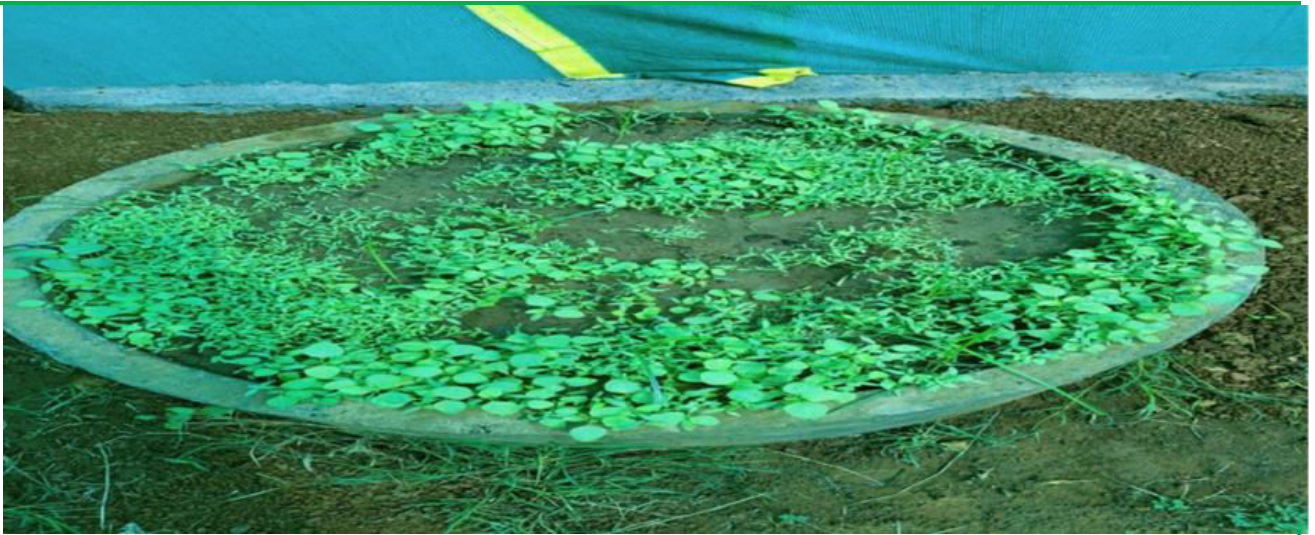
NEW GARDEN - BEFORE AND AFTER ESTABLISHMENT



FULLY SPREAD AZOLLA PLANT IN THE POND



HYDROPONICS IN BOTANY LAB



KITCHEN GARDEN

-END-

TRR GOVERNMENT DEGREE COLLEGE KANDUKUR, PRAKASAM DIST.



INTERNAL GREEN AUDIT REPORT 2020-2021

**TRR GOVERNMENT DEGREE COLLEGE, KANDUKUR, PRAKASAM DT.
DEPARTMENT OF BOTANY**

Date: 05.06.2020

STAFF COUNCIL RESOLUTION

Staff council met today in the Principals chamber and resolved following things. As a part of implementing the Green policy of our college, the college wishes to conduct Green and Environment audit for the academic year 2020-2021. For making this a reality and success the following staff members are involved in the Green audit committee.

1. Dr. M. Ravi Kumar, Principal, Chairman & Green Audit Coordinator
2. Dr. P. Raj Gopal Babu, Lecturer in English,
3. Prof. S.B. Padal, Department of Botany, Andhra University. (External Expert Green Audit Member)
4. Dr. Shaik Mastan Vali, Lecturer in Botany, Green Audit Member
5. K. Srinivas, Lecturer in Zoology, Green Audit Member
6. Dr. Shanmugam, Lecturer in Zoology, Green Audit Member
7. J. Mythri, Lecturer in Chemistry, Green Audit Member
8. Dr. Ch. Shankar Rao, Lecturer in Economics, Green Audit Member

The Green audit members should coordinate with each other and form committees to speed up the energy audit process. The committee members should update the latest developments in their audit process to the Principal.

Botany

Zoology

Chemistry

Physics

Mathematics

Computer Science

Hindi

Urdu

Telugu

Political Science

History

Economics

Commerce

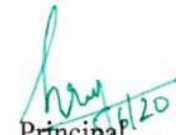
WEC

NSS

NCC

Physical Education

English


Principal
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TRR GOVT. DEGREE COLLEGE
NAAC Accredited B
KANDUKUR-523 105, Prakasam Dt

Foreword:

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We thank all the teaching and non-teaching staff for their cooperation and support in successfully completing the Audit process. We also thank all the students of TRR government degree college for their help in enumerating the flora and fauna of the college.

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Our special heartfelt thanks to the Chairperson of the entire process, **Dr. M. Ravi Kumar**, Principal, for his constant support and encouragement during the entire period of audit.

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INTRODUCTION:

TRR Government Degree College, since its inception in 1966, is catering the needs of rural poor students. Sri Thikkavarapu Rami Reddy garu, Sri. Chenchu Rama Naidu garu came forward to take up the noble task of establishing a college to cater to the needs of the rural students of Kandukur and surrounding mandals in the district. The college has celebrated its Golden Jubilee Celebrations in January 2017. Till to date, the college has been successful in shaping the student's character and their career. Caste, creed, and sex has never stood as barriers here. The college has illustrious Alumni in the form of Sri. I Y R. Krishna Rao, Former Chief Secretary, Govt. of Andhra Pradesh, Sri. Ganta Srinivasa Rao, Former Minister for Human Resource Development, Govt. of Andhra Pradesh, Professor. K. Veeraiah, Former Vice Chancellor, Vikrama Simhapuri University, Nellore along with many Teachers, Govt. Employees, Businessmen and Politicians.

OVERVIEW OF THE INSTITUTION

VISION

To develop the college into a Best Educational Center with adequate physical-digital infrastructure, effective governance, efficient teaching-learning process and student support services thereby transforming the students into Knowledgeable, Skilful, Employable, Responsible, Socially Committed, Environmentally Conscious, Gender Sensitive, Patriotic citizens with special emphasis on socially marginalized and economically poor students

MISSION

- ❖ To develop the college into a Best Higher Education Centre with diverse programs
- ❖ To provide adequate physical and digital infrastructure facilities
- ❖ To provide efficient governance through democratic, transparent, accountable, value based and eco-friendly approaches
- ❖ To create enabling academic environment for effective teaching-learning and assessment process and student support services with student centric approach
- ❖ To impart various soft skills, life skills and employability skills to the students
- ❖ To nurture the students, develop critical-creative thinking, scientific temper, problem solving approach, innovativeness, inclusiveness, patriotism, gender sensitivity, environmental consciousness and social service orientation.
- ❖ To support the faculty to enrich the knowledge and skills which shall be beneficial for their academic progress and the students
- ❖ To collaborate with the stakeholders - Alumni, Industry, Community and Parents for holistic development of the college

GREEN AUDIT TEAM (2020-2021)

1. Dr. M. Ravi Kumar,
Green Audit Coordinator &
Principal, TRR Govt. Degree & PG College, Kandukur, Prakasam Dist.
2. Dr. P. Raj Gopal Babu,
IQAC Co-ordinator, Lecturer in English,
TRR GDC, Kandukur, Prakasam Dt.
3. Prof. S.B. Padal, Department of Botany, Andhra University.
(Expert Green Audit Member)
4. Dr. Shaik Mastan Vali,
Green Audit Coordinator,
Lecturer in Botany, TRR GDC, Kandukur, Prakasam Dt.
5. K. Srinivas,
Green Audit Member,
Lecturer in Zoology, TRR GDC Kandukur, Prakasam Dt.
6. Dr. KR Shanmugam
Green Audit Member,
Lecturer in Zoology TRR GDC, Kandukur, Prakasam Dt.
7. J. Mythri,
Green Audit Member
Lecturer in Chemisry, TRR GDC, Kandukur, Prakasam Dt.
8. Dr. Ch. Shankar Rao,
Lecturer in Economics, TRR GDC, Kandukur

Internal Green Audit Committees:

The Green audit members will work under the leadership of the Principal and under the guidance of the IQAC coordinator. The green audit members have been assigned different works. They form committees to make the work easy. The various committees and their objectives are as follows:

- (i) *Committee on Green practices and Floral Enumeration*
- (ii) *Committee on Fauna Enumeration*
- (iii) *Committee on Carbon dioxide sequestration*
- (iv) *Committee on Natural Resources conservation*
- (v) *Committee on Solid waste management*

Prof. S. B. Padal, Professor of Botany Andhra University, will guide the team externally. His expertise in enumerating the plant data, is utilized in the green audit compilation.

Dr. Shaik Mastan Vali, Lecturer in Botany and Dr. N. Tirupathi Swamy, Lecturer in Botany, will take the lead in enumerating the plant species and calculating the CO₂ sequestration data of the college. They also audit the green practices of the college. They will work under the supervision of the Prof. S. B. Padal.

Dr. KR Shanmugam & K. Srinivas, Lecturers in Zoology, will take the lead in enumerating the fauna of the area along with compiling the data on solid waste management in the college

J. Mythri, lecturer in Chemistry, Dr. K.R Shanmugam & K. Srinivas, Lecturers in Zoology will take the lead in investigating and compiling the data on soil and water conservation measures taken in the college along with environment audit and all other miscellaneous matters not dealt by others.

Dr. Ch. Shankar, Lecturer in Economics and Dr P. Raj Gopal Babu will take part in drafting the green and environment audit report.

Report of the Green Practices Audit Committee

According to the investigations of Green Practices Committee, the following green practices were followed

Plantation programs: It is found that the college is practicing the regular plantation programs in the college. The Greenery and Biodiversity in the college has increased due to the plantation program. The number of gardens were also increased from 1 in 2018-2019 to 3 in 2020-2021. Newly introduced plant species are *Feronia elephantum*, *Aegle mamemelos*, *Annona sqamosa*, *Artocarpus occidentalis*, *Pterocarpus santalinus*, *Syzygium sps.* *Averrhoa carambola*, *Ficus carica*, *Ficus glomerata*, *Musa paradiciaca*, *Artabotrys*, *Santalum album*, *Achras sapota*, *Citrus sinensis*,

Citrus aurantium, *Carissa carundus*, *ziziphus jujuba*, different *Bougainvillea species*, and *Psidium gojava*.

Azolla culture is practiced in the college. It is found that the *Azolla* is used as a biofertilizer in the college. The dried and wet *Azolla* plant is directly used as a biofertilizer to nourish the garden plants. The water used in the *Azolla* culture is rich in nitrogen source and this water is also used for watering plants after the completion of one *Azolla* cycle. A dedicated pond was constructed with the concrete and covered with shadenet to protect the *Azolla* plant.

Kitchen Garden: Beside the *Azolla* pond Kitchen garden is laid to grow the leafy vegetables like *Amaranthus*, *Spinach*, *Methi* and *Coriander*. There is a practice of selling these leafy vegetables to the college staff. The amount accumulated is used as investment for further raising the plants in Kitchen Garden.

Hydroponics: The Green Audit team found that the Botany Department is practicing the Hydroponics- soil less culture of plants in the Botany lab. Three different hydroponic units are established in the Botany lab they are Nutrient Film Technology (NFT) model, Dutch Bucket Model, and Deep Water culture. Through NFT model they produced *Amaranthus*. Dutch bucket model is used to grow deep rooted plants like Tomato Capsicum etc. It is found that they produced tomato through this model. Through deep water culture they produced Wheat grass. Though the Hydroponics in Botany lab is in experimental condition it will certainly increase the greenery within the labs and class rooms. The TRR college not only increased the greenery in the college premises but also increased the greenery with in the labs through the Hydroponics.

Conservation of Medicinal plants and seeds: The Botany department is growing few medicinal plants in the protected fenced garden in their college. Along with this the department is maintaining the seed museum which contain a collection of 40 rare seeds in their department

Clean and Green Program: the college has a strong Eco Club who will take care of the Clean and Green program in coordination with NSS, NCC and Physical Education department. Third Saturday afternoon session of every month is selected for cleaning the campus.

Green Policy: the college has an excellent green policy hosted in the website. It gives the direction for the college to move towards eco-friendly campus.

Report on Plant Enumeration:

The flora of the college is dominated by the dicot plants. The leguminosae occupies the lions share in the plants enumerated in the campus area. There is a equi balance of Trees shrubs and herbs found in the college. The college also has the aquatic flora like *Nelumbo*, *Pistia Lemna*, *Wolffia*, and *Eicchornia*.

The plants found n the college premises are as follows.

S.No.	Plant Name	Type (Plant/tree/herb/shrub)	Qty.	Plantation
1	<i>Alternanthera flavescens</i>	herb	17	Grown naturally

2	<i>Aegle marmelos</i>	tree	2	students
3	<i>Aerva lanata</i>	herb	35	Grown naturally
4	<i>Agave americana</i>	shrub	5	students
5	<i>Allamanda cathartica</i>	herb	2	staff
6	<i>Alstonia scholaris</i>	tree	8	staff
7	<i>Annona Muricata</i>	tree	1	students
8	<i>Annona reticulata</i>	tree	1	students
9	<i>Annona squamosa</i>	shrub	2	students
10	<i>Araucaria angustifolia</i>	tree	2	staff
11	<i>Areca catechu</i>	tree	2	students
12	<i>Artabotrys hexapetalus</i>	tree	2	staff
13	<i>Azadirachta indica</i>	tree	5	Grown naturally
14	<i>Azolla pinnata</i>	herb	100	staff
15	<i>Bauhinia purpurea</i>	tree	5	students
16	<i>Blumea balsamifera</i>	herb	7	Grown naturally
17	<i>Bougainvillea glabra</i>	shrub	55	students
18	<i>Caesalpinia pulcherrima</i>	shrub	4	Grown naturally
19	<i>Calophyllum inophyllum</i>	tree	1	staff
20	<i>Calotropis gigantea</i>	shrub	10	Grown naturally
21	<i>Caryota urens</i>	tree	8	staff
22	<i>Cassia angustifolia</i>	herb	10	Grown naturally
23	<i>Catharanthus rosea</i>	herb	27	Grown naturally
24	<i>Citrus limon</i>	tree	4	students
25	<i>Citrus reticulata</i>	tree	1	students
26	<i>Citrus sinensis</i>	tree	1	students
27	<i>Cleome viscosa</i>	herb	19	students
28	<i>Clitoria ternatea</i>	herb	2	Grown naturally
29	<i>Cocos nucifera</i>	tree	5	staff

30	<i>Cordia dichotoma</i>	tree	2	Grown naturally
31	<i>Couroupita guianensis</i>	tree	2	staff
32	<i>Crinum asiaticum</i>	herb	3	students
33	<i>Cycas revoluta</i>	shrub	2	staff
34	<i>Delonix regia</i>	tree	3	Grown naturally
35	<i>Dracaena angustifolia</i>	herb	4	students
36	<i>Duranta erecta</i>	shrub	100	students
37	<i>Euphorbia hirta</i>	herb	15	Grown naturally
38	<i>Feronia limonia</i>	tree	4	staff
39	<i>Ficus benghalensis</i>	tree	2	Grown naturally
40	<i>Ficus carica</i>	tree	1	staff
41	<i>Ficus religiosa</i>	tree	5	Grown naturally
42	<i>Gossypium hirsutum</i>	shrub	2	Grown naturally
43	<i>Grewia asiatica</i>	tree	3	Grown naturally
44	<i>Hardwickia binata</i>	tree	4	staff
45	<i>Hibiscus rosa-sinensis,</i>	shrub	7	students
46	<i>Ixora coccinea</i>	shrub	2	students
47	<i>Jatropha curcas</i>	shrub	1	Grown naturally
48	<i>Kalanchoe pinnata</i>	herb	4	staff
49	<i>Lawsonia inermis</i>	shrub	5	Grown naturally
50	<i>Limonia acidissima</i>	tree	1	staff
51	<i>Mangifera indica</i>	tree	2	Grown naturally
52	<i>Manilkara zapota</i>	tree	2	Grown naturally
53	<i>Millingtonia hortensis</i>	tree	3	students
54	<i>Mimusops elengi</i>	tree	1	staff
55	<i>Moringa oleifera</i>	tree	2	Grown naturally
56	<i>Mussaenda erythrophylla</i>	shrub	2	students
57	<i>Neolamarckia cadamba</i>	tree	2	staff

58	<i>Nerium oleander</i>	shrub	8	Grown naturally
59	<i>Ocimum tenuiflorum</i>	herb	10	Grown naturally
60	<i>Oldenlandia umbellata</i>	herb	15	Grown naturally
61	<i>Parthenium hysterophorus</i>	herb	25	Grown naturally
62	<i>Peltophorum pterocarpum</i>	tree	4	Grown naturally
63	<i>Phoenix dactylifera</i>	tree	1	staff
64	<i>Polyalthia longifolia</i>	tree	10	staff
65	<i>Pongamia pinnata</i>	tree	20	Grown naturally
66	<i>Psidium guajava</i>	tree	10	staff
67	<i>Pterocarpus santalinus</i>	tree	7	staff
68	<i>Roystonea regia</i>	tree	16	staff
69	<i>Sansevieria trifasciata</i>	herb	10	staff
70	<i>Santalum album</i>	tree	2	staff
71	<i>Sesbania grandiflora</i>	tree	2	Grown naturally
72	<i>Solanum nigrum</i>	herb	18	Grown naturally
73	<i>Spathodea campanulata</i>	tree	3	students
74	<i>Syzygium cumini</i>	tree	10	Grown naturally
75	<i>Syzygium jambos</i>	tree	1	students
76	<i>Tabebuia rosea</i>	tree	3	staff
77	<i>Tabernaemontana divaricata</i>	shrub	6	students
78	<i>Tecoma stans</i>	shrub	7	students
79	<i>Tephrosia purpurea</i>	herb	50	Grown naturally
80	<i>Terminalia catappa</i>	tree	20	staff
81	<i>Thuja occidentalis</i>	shrub	4	staff
82	<i>Tinospora cordifolia</i>	herb	5	Grown naturally
83	<i>Tridax procumbens</i>	herb	59	Grown naturally
84	<i>yucca aloifolia</i>	shrub	10	students
85	<i>Ziziphus mauritiana</i>	shrub	2	Grown naturally

86	<i>Abutilon indicum</i>	shrub	30	Grown naturally
87	<i>Aloe vera</i>	herb	20	students
88	<i>Dieffenbachia amoena</i>	herb	2	students
89	<i>Costus igneus</i>	herb	3	students
90	<i>Coleus amboinicus</i>	herb	4	students
91	<i>Datura stramonium</i>	herb	15	Grown naturally

Report on Fauna Enumeration:

The committee on faunal enumeration headed by Dr.I.Anusha found that there are 51 common species found in the college premises. They are as follows.

S.NO	COMMON NAME	SCIENTIFIC NAME	PHYLUM
1	MOSQUITO	CULICIDAE	ARTHROPODA
2	BUTTER FLY	RHOPALOCERA	ARTHROPODA
3	COCKROACH	BLATTODEA	ARTHROPODA
4	HOUSE FLY	MUSCADOMESTICA	ARTHROPODA
5	RED WOOD ANT	FORMICA RUFA	ARTHROPODA
6	BEETLES	COLEOPTERA	ARTHROPODA
7	LICE	PHTHIRAPTERA	ARTHROPODA
8	HONEY BEE	APIS	ARTHROPODA
9	BRISTLETAILS	ARCHAEOGNATHA	ARTHROPODA
10	TERMITTE	ISOPTERA	ARTHROPODA
11	DRAGONFLY	ANISOPTERA	ARTHROPODA
12	LADY BUGS	COCCINELLIDAE	ARTHROPODA
13	FRUIT FLIES	DROSOPHILA MELANOGASTER	ARTHROPODA
14	SPIDER	ARANEAE	ARTHROPODA
15	GRASS HOPPER	CAELIFERA	ARTHROPODA
16	TIGER CENTIPEDA	SCOLOPENDRA	ARTHROPODA
17	SNAIL	ASTROPODS	MOLLUSCA

18	DOG	CANIS LUPUS FAMILIARIS	CHORDATA
19	CAT	FELIS CATUS	CHORDATA
20	HEN	GALLUS DOMESTICUS	CHORDATA
21	CATTLE	BOS TAURUS	CHORDATA
22	GOAT	CAPRA AEGAGRUS HIRCUS	CHORDATA
23	BUFFALO	BUBALINA	CHORDATA
24	MONKEY	MACACA	CHORDATA
25	RAT	RATTUS	CHORDATA
26	DUCK	ANATIDAE	CHORDATA
27	HYLA	HOLARCTIC TREE	CHORDATA
28	INDIAN COBRA	NAJA NAJA	CHORDATA
29	BLUE KRAIT	BANGARUS CAERULEUS	CHORDATA
30	CALOTES	EASTERN GARDEN LIZARD	CHORDATA
31	LIZARD	LIZARD	CHORDATA
32	PARROT	PSITTACIFORMES	CHORDATA
33	SPARROW	PASSERIDAE	CHORDATA
34	SQUIRRELS	SQUIRRELS	CHORDATA
35	CROW	CORVUS	CHORDATA
36	VARANUS	VARANUS	CHORDATA
37	AMEABA	AMEABA	PROTOZOA
38	ENTAMEABA	HISTOLITICA	PROTOZOA
39	EUGLENA	EUGLENA	PROTOZOA
40	PARAMECIUM	PARAMECIUM	PROTOZOA
41	ROUND WORM	ASCARIS LUMBICOIDES	NEMATODES
42	EARTH WORM	PHERETIMA	ANNELIDA
43	LEECH	HIRUDINEA	ANNELIDA
44	BLOOD FLUKE	CYSTOZOMA	PLATYHELMENTHIS
45	CATLA CATLA	CATLA CATLA	CHORDATA

46	LABEO ROHITHA	LABEO ROHITHA	CHORDATA
47	JILABES	TILAPIA	CHORDATA
48	BATS	CHIROPTERA	CHORDATA
49	OWL	STRIGI FORMS	CHORDATA
50	CRANE	GRUIDAE	CHORDATA
51	SILVER FISH	LEPISMA SACCARINA	ARTHROPODA

Report on Environment Audit Committee:

The committee on Conservation of Natural resources investigated on the measures taken by the college management and Eco Club in conserving the soil and water in the college. They found that

- ❖ The college has gone for testing of soil in three different places in college in three different gardens. The soil Ph in all the three places is slightly alkaline around 8.35. The first garden has got slightly higher Ph of 8.79. The soil is deficient in the macro elements, typical elements like N,P, and K
- ❖ The major type of the soil is Red soil.
- ❖ The water holding capacity and porosity of the soil is moderate
- ❖ The soil is suitable for growing tree species like Mango, Red Sanders, Sapota, *Azadirachta*, *Tamarindus*, *Syzygium*, *figus* species
- ❖ The college has tested its water samples both tap water and bore water. It is found that the ph of the water is slightly alkaline. The water is suitable for growing garden plants. No traces of heavy metals are found in the ground water. The water quality is moderate.
- ❖ The college has got 4 water harvesting pits/ recharge pits of various sizes, which taps the surface runoff water from the 20 acres surrounding area.
- ❖ The primary sources of water in the college are ground water obtained through the bore and municipal water supply through the taps
- ❖ Daily thousand liters of water is filtered by the RO plant available near the main entrance gate.
- ❖ There are 4 tanks on the terrace with a capacity of 500 ltr. Each, which supply water to the labs, staff room, waiting room office, Principal chamber and toilets.
- ❖ It is observed that, RO waste water is utilized for watering the garden plants in the college.
- ❖ The plants in the garden are watered as per the climate and requirement. In winter days alternate watering of the plants is taken up whereas in hot summer the plants are watered daily twice (in the early morning and evening)

- ❖ It is observed that college is using energy conserving technology by fitting water flow sensors to the roof top tanks. It is also using digital sockets to control the water flow periodically to hydroponic units.
- ❖ Toilet areas are cleaned twice on daily basis which require the water.
- ❖ Chemistry lab chemical water is diverted in to the pit dug in the first garden
- ❖ Areas of water usage are Urinals(34) Toilets (23), Wash Basins(33), Taps (8- indoors) Taps (5- outdoors)

Report on Solid Waste Management Committee:

- ❖ It is further investigated that the college has established Solid Waste Management Unit in the college. It is located in the garden beside the Main Gate. Here it is observed that the solid waste is segregated in the three pits. The first pit is meant for metal related waste, the second pit is meant for the plastic waste and the third pit is meant for the organic waste where the litter and degradable organic waste is segregated and sent to the vermicompost unit.
- ❖ It is observed that the college runs the vermicompost unit beside the solid waste management segregation pits. Nearly 380 kgs of vermicompost is prepared in the four dedicated pits allotted for vermicompost preparation. Nearly 50 percent of the vermicompost is self consumed by the college for nourishing plants in the garden and rest is sold to the consumers. (Staff, students and local public and farmers)

Report on Environmental issues:

The following environment issues were addressed

- ❖ The committee found that the college is creating awareness among the public staff and students through its awareness programs on environment consciousness. Several programs like role plays, Environment day, *Say no to plastic*, Earth day, Darwin day, Ozone day were conducted in the college to create awareness among the staff and students. Few programs like Role plays are uploaded in Youtube for public viewing.
- ❖ Students also participated in the off the campus environment activities like
 - Online Elocution Program on Impact of covid on environment
 - Role plays

Report on Air Audit - Carbon dioxide sequestration:

- ❖ The air quality of the college premises is found to be good in winter and rainy seasons. In summer season hot air winds will blow at 10km/hr and make the area filled with dust.
- ❖ It is observed that the wind erosion in college premises is more than the water erosion of soil.
- ❖ There are several trees in the college premises which will fix the carbondioxide released in the area. And act as sinks of the corbondioxide.
- ❖ It is observed that Several trees of *Conocarpus* (dubai bush) and *Alstonia* species are planted in the college premises. These plants will release the allergic pollen during the flowering period which is dangerous to the local public.
- ❖ Total number of trees present in the college campus are more than 250, out of these more than 50 are big sized measuring more than 40 ft. The remaining are 3 - 4ft height in length.
- ❖ The amount of carbondioxide fixed by the plants in the campus:

<i>S. No</i>	<i>Age of the Plant</i>	<i>Number of plants</i>	<i>CO₂ sequestration per tree</i>	<i>Total CO₂ sequestered</i>	<i>CO₂ reduction in tons</i>
1	Below 5 years	201	7 lbs per year	1407	0.7035
2	5 - 10 years	20	26 lbs per year	520	0.2600
3	11 - 20 years	11	48 lbs per year	528	0.2640
4	More than 50 years	30	100 lbs per year	3000	1.5000
Total :		376		5455	2.7275

The plants of the college premises fix nearly 2.7275 tons of corbondioxide, which is very less compared to the area of the college.

Recommendation of the Green audit team: 2020-21:

1. The greenery in the campus should be further increased.
2. The green cover of the college is very low. Steps should be taken in the coming years to increase the tree cover with huge canopy. The trees with huge canopy, sequester more carbon and do enormous help to the environment.
3. The Biodiversity of the college premises should be further increased through introduction of new species.
4. Importance should be given to flowering species which increases the beauty of the college.

5. The tree species which release allergic pollen (*Conocarpus*, *Alstonia*) should be avoided in plantation program
6. Roof top gardening should be encouraged in the college.
7. Hydroponics should be extended to all the labs of the college.
8. As the college has got *Azolla* pond, it should plan for *Spirulina* culture also.
9. The organic farming area should be further increased and all the other non biology students should be trained.
10. A certification course on natural farming should be designed.
11. Solid waste management should be further strengthened such that it becomes the role model in the government degree colleges. A prototype of incubation centre should be planned.
12. Proper scientific approach should be taken to dispose the biomedical and e waste of the college.
13. More RO systems should be installed to meet the demand of water by the students.
14. Water conservation should be done by constructing farm ponds in the college to increase the water table further.
15. Water sensors are used for the overhead tanks to detect the water over flow and thus pave a path for water conservation
16. More pasture land should be developed to prevent the soil erosion due to wind and water.
17. The Ph of the soil should be reduced by frequent irrigation for better plant growth
18. The college should plan more awareness programs on environment related issues in the college.
19. The college should reach out the public through their offline and online programs beyond the campus to increase the environment education. The college should plan more role plays online quiz etc.
20. Fire safety measures such as fire-fighting tank, fire alarm and sprinkler system should be adopted to mitigate the fire damage.

Soil Test Reports issued by the Dept of Agriculture in 3 gardens:

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వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

1) రైతు పేరు : T.R.R. Govt. Degree College కోడ్

2) గ్రామము :మండలం: Kandukur

3) మెట్ట లేక మాగాణి : మెట్ట Prakasam (C)

4) సర్వేనెంబరు లేక పొలము పేరు : 297/1 Sample-1

విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	అమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హానీ	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	1.0 లోపు	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ	
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మకము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరం	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరం	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరం	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-I : Soil Health Card



వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

- 1) రైతు పేరు : TRR Govt. Degree College కోడ్.....
 2) గ్రామము :మండలం: Kandukur
 3) మెట్ట లేక మాగాణి :
 4) సర్వేనెంబరు లేక పొలము పేరు : 297/1 Sample-2.....

విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	ఆమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హాని	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	1.0 లోపు	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ	
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మనము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరం	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరం	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరం	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-II : Soil Health Card



వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

- 1) రైతు పేరు : TRR. Govt. Degree College కోడె.....
- 2) గ్రామము :మండలం: Kandukur prajawad
- 3) మెట్ట లేక మాగాణి :
- 4) సర్వేనెంబరు లేక పొలము పేరు : 297/1 sample-3.....

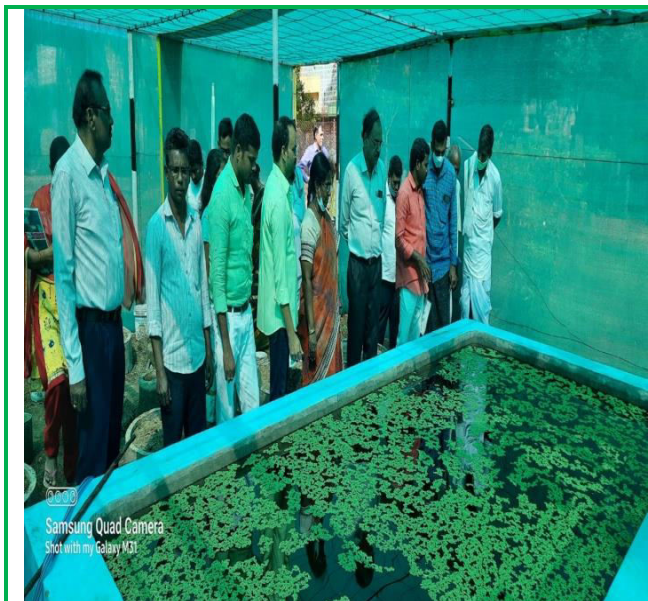
విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	ఆమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హాని	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	0.16	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ	
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మనము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరా	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరా	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరా	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-III : Soil Health Card

PHOTOGRAPHS

AZOLLA POND



Awareness programme to local farmers on Azolla bio fertilizer

సేంద్రియ వ్యవసాయం పై విద్యార్థులకు అవగాహన..

ప్రతి ఒక్కరూ నూతన వ్యవసాయ సాగు పై అవగాహన పెంపొందించుకోవాలి
సి టి ఆర్ ఐ ప్రాంతీయ కేంద్రం అధిపతి డాక్టర్ అనురాధ
ప్రకృతి వ్యవసాయం పై తన అనుభవాలను వివరించిన యువ రైతు జిల్లెలమూడి వెంకటేశ్వర్లు



కందుకూరు కాసుక ప్రతినిధి డిసెంబర్ 30 టి ఆర్ ఆర్ ప్రభుత్వ డిగ్రీ మరియు పీజీ కళాశాల, కందుకూరు నందు గురువారం అజోల బయో ఫర్టిలైజర్ కల్చర్ ప్రాముఖ్యత గురించి సి టి ఆర్ ఐ కందుకూరు వ్యవసాయ ఇంజనీర్ సప్రీన్ రైతులకు మరియు విద్యార్థిని విద్యార్థులకు వివరించారు. వర్మి కంపోస్ట్ తయారీ మరియు వినియోగం గురించి ఆదిత్య, పుట్టగొడుగుల పెంపకం గురించి సుధేష్ట వివరించారు. ఈ యొక్క పద్ధతులను అనుసరించడం ద్వారా పంటలలో మెరుగైన ఉత్పత్తిని సాధించవచ్చని, సేంద్రియ పద్ధతుల్లో పంటలను పండించవచ్చు అని శాస్త్రవేత్తలు రైతులకు, విద్యార్థులకు వివరించారు. ఈ కార్యక్రమ

మానికి అధ్యక్షత వహించిన కళాశాల ప్రిన్సిపాల్ డాక్టర్ రవి కుమార్, సమాజానికి ఉపయోగపడే కార్యక్రమాలు నిర్వహించడంలో తమ కళాశాల ఎప్పుడూ ముందుంటుందని తెలియజేశారు. నేటి సమాజంలో కల్తీ ఆహారం తీసుకొని అనేక అనర్థాలు కొని తెచ్చుకుంటున్నామని, ఈ సేంద్రియ పద్ధతులు ద్వారా ఆహార పదార్థాలు తయారు చేసుకుంటే ఆరోగ్యకరమైన జీవితాన్ని జీవించవచ్చని తెలియజేశారు. కళాశాల వృక్ష శాస్త్ర మరియు జంతు శాస్త్ర విభాగాల అధ్యక్షులలో ఈ కార్యక్రమం నిర్వహించడం జరిగింది. ఈ కార్యక్రమంలో లో సేంద్రియ పద్ధతిలో వ్యవసాయం చేస్తున్న వెంకటాద్రిపాలానికి చెందిన, జే. వెంకటేశ్వర్లు తమ అనుభవాల్ని వివరించారు. సి టి ఆర్ ఐ, కందుకూరు ముఖ్య శాస్త్రవేత్త అయిన డాక్టర్ ఎం. అనురాధ కళాశాల వృక్షశాస్త్ర అధ్యాపకులు డాక్టర్ ఎం తిరుపతి స్వామి, డాక్టర్ ఎస్.కె మస్తాన్ వలి, జంతు శాస్త్ర అధ్యాపకులు, డా. అనూష్, ఎం. జ్యోతి, న్యాక్ సాధన సమితి కోఆర్డినేటర్ సుధీర్ కుమార్, అధ్యాపకులు జె. మైత్రీ, డాక్టర్ ఏడుకొండలు, పి. రాజగోపాల్ మరియు విద్యార్థిని విద్యార్థులు ఈ కార్యక్రమంలో పాల్గొన్నారు.

Paper clipping on the coverage of awareness programme on Azolla Bio-fertilizer to local farmers



VERMICOMPOST UNIT-SOLID WASTE MANAGEMENT



Solid Waste Management Unit



Hydroponic Units in Botany Lab



Wheat Grass plant grown in the botany lab through deep water culture

SEED MUSEUM

As a part of Biodiversity conservation, Department of Botany started conserving the important and rare seeds of flowering plants in the form of a seed museum. The main objective of the seed museum is biodiversity and Taxonomic identification of the seeds of flowering plants. We have collected nearly fifty seeds of different category belonging to cereals, pulses, oil seeds, fruit trees and vegetables. All the seeds bottles are given QR code in which Botanical name, family name and economic importance of different seeds are incorporated. In future we will collect the seeds of rare medicinal plants and conserve in the form of seed museum. We will further increase the number of seed varieties of normal plants.



***Panicum meliorense* Common**

Name: Little millet (Eng.), Kut (Hindi) Samulu (Telugu) Family: Poaceae

Fruit : Caryopsis

Economic Importance:

- (i) Play an important role in digestion.
- (ii) Good for diabetic patients.
- (iii) For 100g of this millet proteins occupy 7.7 g, fiber 7.6g. fat 5.2 g, iron 9.3g Calcium 17g and 207 Calories of energy.

T.R.R.GOVERNMENT DEGREE COLLEGE KANDUKUR



INTERNAL GREEN AUDIT REPORT 2021-2022

**TRR GOVERNMENT DEGREE COLLEGE, KANDUKUR, PRAKASAM DT.
ECO CLUB**

Date: 04.11.2021

RESOLUTION

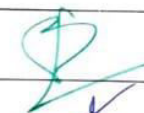
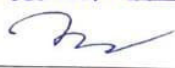
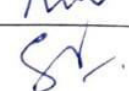
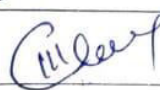
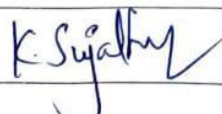
Eco Club met today in the Principal's chamber and resolved following things
As a part of implementing the Green policy of our college, the college wishes to conduct Green and Environment audit for the academic year 2021-2022.

For making this a reality and success the following staff members are selected in the Green audit committee.

1. Dr. M. Ravi Kumar, Principal, Chairman & Green & Environment Audit Coordinator
2. Dr. P. Raj Gopal Babu, Lecturer in English, Green & Environment Audit Member
3. Prof. S.B. Padal, Department of Botany, Andhra University. (External Expert Green & Environment Audit Member)
4. Dr. Shaik Mastan Vali, Lecturer in Botany, Green & Environment Audit Member
5. Dr. N. Tirupathi Swamy, Lecturer in Botany, Green & Environment Audit Member
6. Dr. I. Anusha, Lecturer in Zoology, Green & Environment Audit Member
7. Dr. Ch. Shankar Rao, Lecturer in Economics, Green & Environment Audit Member

8. Dr. K. JONAPHYLIP 9. K. SREENIVASULU LECTURERS IN MATHEMATICS
The Energy audit members should form internal sub committees and coordinate among themselves to speedup the green & environment audit process.


Principal
TRR GOVT. DEGREE COLLEGE
NAAC Accredited B
KANDUKUR-523 105, Prakasam Dt

Botany		Political Science	
Zoology		History	
Chemistry		Economics	
Physics		Commerce	
Mathematics		Library Science WEC	
Computer Science		NSS	
Hindi		NCC	
Urdu		Physical Education	
Telugu		English	

Foreword:

The Internal Audit Team: 2020-21 has prepared this report for the **Tikkavarapu Rami Reddy Government Degree College** located at Kovur Road, Kandukur, Prakasam District, Andhra Pradesh - 523105, based on input data submitted by the College. The inputs of the college are derived by inspection and investigation. The details have been consolidated and thoroughly studied and analyzed to generate the report based on a comparative analysis of the existing facilities and the prerequisites formulated by various standards. The Green audit is a study based on the inspection and investigation of data collected over a period of time

Several recommendations are made to convert the institution into an eco-friendly campus. The Management can implement these recommendations based on the availability of funds in phase-wise or at a time to move towards eco-friendly campus.

AKNOWLEDGEMENTS

The Internal Green Audit Team thanks the Tikkavarapu Rami Reddy Government Degree College, Kandukur Prakasam District for assigning this valuable important work of Green and Environment Audit. We appreciate the cooperation extended to our team by the staff during the entire process.

We thank all the teaching and non-teaching staff for their cooperation and support in successfully completing the Audit process. We also thank all the students of TRR government degree college for their help in enumerating the flora and fauna of the college.

We also thank all the persons who are directly and indirectly involved in the audit process for extending their full support in successful completion of this process.

Our special heartfelt thanks to the Chairperson of the entire process, **Dr. M. Ravi Kumar**, Principal, for his constant support and encouragement during the entire period of audit.

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INTRODUCTION:

TRR Government Degree College, since its inception in 1966, is catering the needs of rural poor students. Sri Thikkavarapu Rami Reddy garu, Sri. Chenchu Rama Naidu garu came forward to take up the noble task of establishing a college to cater to the needs of the rural students of Kandukur and surrounding mandals in the district. The college has celebrated its Golden Jubilee Celebrations in January 2017. Till to date, the college has been successful in shaping the student's character and their career. Caste, creed, and sex has never stood as barriers here. The college has illustrious Alumni in the form of Sri. I Y R. Krishna Rao, Former Chief Secretary, Govt. of Andhra Pradesh, Sri. Ganta Srinivasa Rao, Former Minister for Human Resource Development, Govt. of Andhra Pradesh, Professor. K. Veeraiah, Former Vice Chancellor, Vikrama Simhapuri University, Nellore along with many Teachers, Govt. Employees, Businessmen and Politicians.

OVERVIEW OF THE INSTITUTION

VISION

To develop the college into a Best Educational Center with adequate physical-digital infrastructure, effective governance, efficient teaching-learning process and student support services thereby transforming the students into Knowledgeable, Skilful, Employable, Responsible, Socially Committed, Environmentally Conscious, Gender Sensitive, Patriotic citizens with special emphasis on socially marginalized and economically poor students

MISSION

- ❖ To develop the college into a Best Higher Education Centre with diverse programs
- ❖ To provide adequate physical and digital infrastructure facilities
- ❖ To provide efficient governance through democratic, transparent, accountable, value based and eco-friendly approaches
- ❖ To create enabling academic environment for effective teaching-learning and assessment process and student support services with student centric approach
- ❖ To impart various soft skills, life skills and employability skills to the students
- ❖ To nurture the students, develop critical-creative thinking, scientific temper, problem solving approach, innovativeness, inclusiveness, patriotism, gender sensitivity, environmental consciousness and social service orientation.
- ❖ To support the faculty to enrich the knowledge and skills which shall be beneficial for their academic progress and the students
- ❖ To collaborate with the stakeholders - Alumni, Industry, Community and Parents for holistic development of the college

GREEN AUDIT TEAM (2021-2022)

1. Dr. M. Ravi Kumar,
 - a. Green Audit Coordinator &
 - b. Principal, TRR Govt. Degree & PG College, Kandukur
2. Dr. P. Raj Gopal Babu,
 - a. IQAC Co-ordinator, Lecturer in English &
 - b. TRR GDC, Kandukur.
3. Prof. S.B. Padal, Department of Botany, Andhra University.
 - a. (Expert Green Audit Member)
4. Dr. Shaik Mastan Vali,
 - a. Green Audit Coordinator &
 - b. Lecturer in Botany, TRR GDC, Kandukur.
5. Dr. N. Tirupathi Swamy,
 - a. Green Audit Member &
 - b. Lecturer in Botany, TRR GDC, Kandukur.
6. Dr. I. Anusha,
 - a. Green Audit Member &
 - b. Lecturer in Zoology TRR GDC, Kandukur.
7. Dr. K. Jona Phillip,
 - a. Green Audit Member &
 - b. Lecturer in Mathematics, TRR GDC, Kandukur
8. K.Sreenivasulu,
 - a. Green Audut Member &
 - b. Lecturer in mathematics, TRR GDC, Kandukur.
9. Dr. Ch. Shankar Rao,
 - a. Green Audut Member &
 - b. Lecturer in Economics, TRR GDC, Kandukur

Internal Green Audit Committees:

The Green audit members will work under the leadership of the Principal and under the guidance of the IQAC coordinator. The green audit members have been assigned different works. They form committees to make the work easy. The various committees and their objectives are as follows:

- (i) *Committee on Green practices and Floral Enumeration*
- (ii) *Committee on Fauna Enumeration*
- (iii) *Committee on Carbon dioxide sequestration*
- (iv) *Committee on Natural Resources conservation*
- (v) *Committee on Solid waste management*

Prof. S. B. Padal, Professor of Botany Andhra University, will guide the team externally. His expertise in enumerating the plant data, is utilized in the green audit compilation.

Dr. Shaik Mastan Vali lecturer in Botany and Dr. N. Tirupathi Swamy lecturer in Botany, will take the lead in enumerating the plant species and calculating the CO₂ sequestration data of the college. They also audit the green practices of the college. They will work under the supervision of the Prof. S. B. Padal.

Dr. Anusha, Lecturer in Zoology, will take the lead in enumerating the fauna of the area along with compiling the data on solid waste management in the college

Dr. Shaik Mastan Vali lecturer in Botany and Dr. N. Tirupathi Swamy lecturer in Botany will take the lead in investigating and compiling the data on soil and water conservation measures taken in the college.

Dr. K. Jona Phillip, Lecturer in mathematics and K.Sreenivasulu, Lecturer in mathematics will take the lead in environment audit and all other miscellaneous matters not dealt by others.

Dr. Ch. Shankar Rao , Lecturer in Economics and Dr P. Raj Gopal Babu will take part in drafting the green and environment audit report under the guidance of Prof. S.B. Padal.

Report of the Green Practices Audit Committee

According to the investigations of Green Practices Committee, the following green practices were followed

Plantation programs: It is found that the college is practicing the regular plantation programs in the college. The Greenery and Biodiversity in the college has increased due to the plantation program. The number of gardens were also increased from 1 in 2018-2019 to 3 in 2020-2021. Newly introduced plant species are *Feronia elephantum*, *Aegle mammoselos*, *Annona squamosa*, *Artocarpus occidentalis*, *Pterocarpus santalinus*, *Syzygium sps.*, *Averrhoa carambola*, *Ficus carica*, *Ficus glomerata*, *Musa paradisiaca*, *Artabotrys*, *Santalum album*, *Achras sapota*, *Citrus sinensis*, *Citrus aurantium*, *Carissa carandas*, *Ziziphus jujuba*, different *Bougainvillea species*, and *Psidium gojava*.

Azolla culture is practiced in the college. It is found that the *Azolla* is used as a biofertilizer in the college. The dried and wet *Azolla* plant is directly used as a biofertilizer to nourish the garden plants. The water used in the *Azolla* culture is rich in nitrogen source and this water is also used for watering plants after the completion of one *Azolla* cycle. A dedicated pond was constructed with the concrete and covered with shadenet to protect the *Azolla* plant.

Kitchen Garden: Beside the *Azolla* pond Kitchen garden is laid to grow the leafy vegetables like *Amaranthus*, *Spinach*, *Methi* and *Coriander*. There is a practice of selling these leafy vegetables to the college staff. The amount accumulated is used as investment for further raising the plants in Kitchen Garden.

Hydroponics: The Green Audit team found that the Botany Department is practicing the Hydroponics- soil less culture of plants in the Botany lab. Three different hydroponic units are established in the Botany lab they are Nutrient Film Technology (NFT) model, Dutch Bucket Model, and Deep Water culture. Through NFT model they produced *Amaranthus*. Dutch bucket model is used to grow deep rooted plants like Tomato Capsicum etc. It is found that they produced tomato through this model. Through deep water culture they produced Wheat grass. Though the Hydroponics in Botany lab is in experimental condition it will certainly increase the greenery within the labs and class rooms. The TRR college not only increased the greenery in the college premises but also increased the greenery within the labs through the Hydroponics.

Conservation of Medicinal plants and seeds: The Botany department is growing few medicinal plants in the protected fenced garden in their college. Along with this the department is maintaining the seed museum which contain a collection of 40 rare seeds in their department

Clean and Green Program: the college has a strong Eco Club who will take care of the Clean and Green program in coordination with NSS, NCC and Physical Education department. Third Saturday afternoon session of every month is selected for cleaning the campus.

Green Policy: the college has an excellent green policy hosted in the website. It gives the direction for the college to move towards eco-friendly campus.

Report on Plant Enumeration:

The flora of the college is dominated by the dicot plants. The leguminosae occupies the lions share in the plants enumerated in the campus area. There is a equi balance of Trees shrubs and herbs found in the college. The college also has the aquatic flora like *Nelumbo*, *Pistia Lemna*, *Wolffia*, and *Eicchornia*.

The plants found n the college premises are as follows.

S.No.	Plant Name	Type (Plant/tree/herb/shrub)	Qty.	Plantation
1	<i>Alternanthera flavescens</i>	herb	17	Grown naturally
2	<i>Aegle marmelos</i>	tree	2	students
3	<i>Aerva lanata</i>	herb	35	Grown naturally
4	<i>Agave americana</i>	shrub	5	students
5	<i>Allamanda cathartica</i>	herb	2	staff
6	<i>Alstonia scholaris</i>	tree	8	staff
7	<i>Annona Muricata</i>	tree	1	students
8	<i>Annona reticulata</i>	tree	1	students
9	<i>Annona squamosa</i>	shrub	2	students
10	<i>Araucaria angustifolia</i>	tree	2	staff
11	<i>Areca catechu</i>	tree	2	students
12	<i>Artabotrys hexapetalus</i>	tree	2	staff
13	<i>Azadirachta indica</i>	tree	5	Grown naturally
14	<i>Azolla pinnata</i>	herb	100	staff
15	<i>Bauhinia purpurea</i>	tree	5	students
16	<i>Blumea balsamifera</i>	herb	7	Grown naturally
17	<i>Bougainvillea glabra</i>	shrub	55	students
18	<i>Caesalpinia pulcherrima</i>	shrub	4	Grown naturally
19	<i>Calophyllum inophyllum</i>	tree	1	staff
20	<i>Calotropis gigantea</i>	shrub	10	Grown naturally
21	<i>Caryota urens</i>	tree	8	staff
22	<i>Cassia angustifolia</i>	herb	10	Grown naturally
23	<i>Catharanthus rosea</i>	herb	27	Grown naturally

24	<i>Citrus limon</i>	tree	4	students
25	<i>Citrus reticulata</i>	tree	1	students
26	<i>Citrus sinensis</i>	tree	1	students
27	<i>Cleome viscosa</i>	herb	19	students
28	<i>Clitoria ternatea</i>	herb	2	Grown naturally
29	<i>Cocos nucifera</i>	tree	5	staff
30	<i>Cordia dichotoma</i>	tree	2	Grown naturally
31	<i>Couroupita guianensis</i>	tree	2	staff
32	<i>Crinum asiaticum</i>	herb	3	students
33	<i>Cycas revoluta</i>	shrub	2	staff
34	<i>Delonix regia</i>	tree	3	Grown naturally
35	<i>Dracaena angustifolia</i>	herb	4	students
36	<i>Duranta erecta</i>	shrub	100	students
37	<i>Euphorbia hirta</i>	herb	15	Grown naturally
38	<i>Feronia limonia</i>	tree	4	staff
39	<i>Ficus benghalensis</i>	tree	2	Grown naturally
40	<i>Ficus carica</i>	tree	1	staff
41	<i>Ficus religiosa</i>	tree	5	Grown naturally
42	<i>Gossypium hirsutum</i>	shrub	2	Grown naturally
43	<i>Grewia asiatica</i>	tree	3	Grown naturally
44	<i>Hardwickia binata</i>	tree	4	staff
45	<i>Hibiscus rosa-sinensis,</i>	shrub	7	students
46	<i>Ixora coccinea</i>	shrub	2	students
47	<i>Jatropha curcas</i>	shrub	1	Grown naturally
48	<i>Kalanchoe pinnata</i>	herb	4	staff
49	<i>Lawsonia inermis</i>	shrub	5	Grown naturally
50	<i>Limonia acidissima</i>	tree	1	staff
51	<i>Mangifera indica</i>	tree	2	Grown naturally

52	<i>Manilkara zapota</i>	tree	2	Grown naturally
53	<i>Millingtonia hortensis</i>	tree	3	students
54	<i>Mimusops elengi</i>	tree	1	staff
55	<i>Moringa oleifera</i>	tree	2	Grown naturally
56	<i>Mussaenda erythrophylla</i>	shrub	2	students
57	<i>Neolamarckia cadamba</i>	tree	2	staff
58	<i>Nerium oleander</i>	shrub	8	Grown naturally
59	<i>Ocimum tenuiflorum</i>	herb	10	Grown naturally
60	<i>Oldenlandia umbellata</i>	herb	15	Grown naturally
61	<i>Parthenium hysterophorus</i>	herb	25	Grown naturally
62	<i>Peltophorum pterocarpum</i>	tree	4	Grown naturally
63	<i>Phoenix dactylifera</i>	tree	1	staff
64	<i>Polyalthia longifolia</i>	tree	10	staff
65	<i>Pongamia pinnata</i>	tree	20	Grown naturally
66	<i>Psidium guajava</i>	tree	10	staff
67	<i>Pterocarpus santalinus</i>	tree	7	staff
68	<i>Roystonea regia</i>	tree	16	staff
69	<i>Sansevieria trifasciata</i>	herb	10	staff
70	<i>Santalum album</i>	tree	2	staff
71	<i>Sesbania grandiflora</i>	tree	2	Grown naturally
72	<i>Solanum nigrum</i>	herb	18	Grown naturally
73	<i>Spathodea campanulata</i>	tree	3	students
74	<i>Syzygium cumini</i>	tree	10	Grown naturally
75	<i>Syzygium jambos</i>	tree	1	students
76	<i>Tabebuia rosea</i>	tree	3	staff
77	<i>Tabernaemontana divaricata</i>	shrub	6	students
78	<i>Tecoma stans</i>	shrub	7	students
79	<i>Tephrosia purpurea</i>	herb	50	Grown naturally

80	<i>Terminalia catappa</i>	tree	20	staff
81	<i>Thuja occidentalis</i>	shrub	4	staff
82	<i>Tinospora cordifolia</i>	herb	5	Grown naturally
83	<i>Tridax procumbens</i>	herb	59	Grown naturally
84	<i>yucca aloifolia</i>	shrub	10	students
85	<i>Ziziphus mauritiana</i>	shrub	2	Grown naturally
86	<i>Abutilon indicum</i>	shrub	30	Grown naturally
87	<i>Aloe vera</i>	herb	20	students
88	<i>Dieffenbachia amoena</i>	herb	2	students
89	<i>Costus igneus</i>	herb	3	students
90	<i>Coleus amboinicus</i>	herb	4	students
91	<i>Datura stramonium</i>	herb	15	Grown naturally

Report on Fauna Enumeration:

The committee on faunal enumeration headed by Dr.I.Anusha found that there are 51 common species found in the college premises. They are as follows.

S.NO	COMMON NAME	SCIENTIFIC NAME	PHYLUM
1	MOSQUITO	CULICIDAE	ARTHROPODA
2	BUTTER FLY	RHOPALOCERA	ARTHROPODA
3	COCKROACH	BLATTODEA	ARTHROPODA
4	HOUSE FLY	MUSCADOMESTICA	ARTHROPODA
5	RED WOOD ANT	FORMICA RUFA	ARTHROPODA
6	BEETLES	COLEOPTERA	ARTHROPODA
7	LICE	PHTHIRAPTERA	ARTHROPODA
8	HONEY BEE	APIS	ARTHROPODA
9	BRISTLETAILS	ARCHAEOGNATHA	ARTHROPODA
10	TERMITTE	ISOPTERA	ARTHROPODA
11	DRAGONFLY	ANISOPTERA	ARTHROPODA

12	LADY BUGS	COCCINELLIDAE	ARTHROPODA
13	FRUIT FLIES	DROSOPHILA MELANOGASTER	ARTHROPODA
14	SPIDER	ARANEAE	ARTHROPODA
15	GRASS HOPPER	CAELIFERA	ARTHROPODA
16	TIGER CENTIPEDA	SCOLOPENDRA	ARTHROPODA
17	SNAIL	ASTROPODS	MOLLUSCA
18	DOG	CANISLUPUSFAMILIARIS	CHORDATA
19	CAT	FELISCATUS	CHORDATA
20	HEN	GALLUS DOMESTICUS	CHORDATA
21	CATTLE	BOSTAURUS	CHORDATA
22	GOAT	CAPRA AEGAGRUS HIRCUS	CHORDATA
23	BUFFALO	BUBALINA	CHORDATA
24	MONKEY	MACACA	CHORDATA
25	RAT	RATTUS	CHORDATA
26	DUCK	ANATIDAE	CHORDATA
27	HYLA	HOLARCTICTREE	CHORDATA
28	INDIAN COBRA	NAJA NAJA	CHORDATA
29	BLUE KRAIT	BANGARUS CAERULEUS	CHORDATA
30	CALOTES	EASTERN GARDEN LIZARD	CHORDATA
31	LIZARD	LIZARD	CHORDATA
32	PARROT	PSITTACIFORMES	CHORDATA
33	SPARROW	PASSERIDAE	CHORDATA
34	SQUIRRELS	SQUIRRELS	CHORDATA
35	CROW	CORVUS	CHORDATA
36	VARANUS	VARANUS	CHORDATA
37	AMEABA	AMEABA	PROTOZOA
38	ENTAMEABA	HISTOLITICA	PROTOZOA
39	EUGLENA	EUGLENA	PROTOZOA

40	PARAMECIUM	PARAMECIUM	PROTOZOA
41	ROUND WORM	ASCARIS LUMBICAIDUS	NEMATODES
42	EARTH WORM	PHERITIMA	ANNELIDA
43	LEECH	HIRUDINEA	ANNELIDA
44	BLOOD FLUKE	CYSTOZOMA	PLATY HELMENTHIS
45	CATLA CATLA	CATLA CATLA	CHORDATA
46	LABEO ROHITHA	LABEO ROHITHA	CHORDATA
47	JILABES	TILAPIA	CHORDATA
48	BATS	CHIROPTERA	CHORDATA
49	OWL	STRIGI FORMS	CHORDATA
50	CRANE	GRUIDAE	CHORDATA
51	SILVER FISH	LEPISMA SACCARINA	ARTHROPODA

Report on Environment Audit Committee:

The committee on Conservation of Natural resources investigated on the measures taken by the college management and Eco Club in conserving the soil and water in the college. They found that

Soil Audit:

- ❖ The college has gone for testing of soil in three different places in college in three different gardens. The soil Ph in all the three places is slightly alkaline around 8.35. The first garden has got slightly higher Ph of 8.79. The soil is deficient in the macro elements, typical elements like N,P, and K
- ❖ The major type of the soil is Red soil.
- ❖ The water holding capacity and porosity of the soil is moderate
- ❖ Tree species like Mango, Redsanders, Sapota, *Azadirachta*, *Tamarindus*, *Syzygium*, *ficus* species grow well in these soil.

Water Audit:

- ❖ Water samples, both bore water and municipal water are tested. It is found that the Ph of the water is slightly alkaline. The water is suitable for growing garden plants. No traces of heavy metals are found in the ground water. The water quality is moderate. Ph of tap water and the municipal water are 8.56 and 8.14 respectively.

- ❖ The college has got 4 water harvesting pits/ recharge pits of various sizes, which taps the surface runoff water from the 20 acres surrounding area.
- ❖ The primary sources of water in the college are ground water obtained through the bore and municipal water supply through the taps
- ❖ Daily fifteen hundred liters of water is filtered by the RO plant available near the main entrance gate in the ground floor and the first floor. A new RO water plant was installed in the first floor of the building beside the Women Empowerment Cell.
- ❖ There are 4 tanks on the terrace with a capacity of 500 ltr. Each, which supply water to the labs, staff room, waiting room office, Principal chamber and toilets.
- ❖ It is observed that, RO waste water is utilized for watering the garden plants in the college.
- ❖ The plants in the garden are watered as per the climate and requirement. In winter days alternate watering of the plants is taken up where as in hot summer the plants are watered days daily twice (in the early morning and evening)
- ❖ It is observed that college is using energy conserving technology by fitting water flow sensors to the roof top tanks. It is also using digital sockets to control the water flow periodically to hydroponic units.
- ❖ Toilet areas are cleaned twice on daily basis which require the water.
- ❖ Chemistry lab chemical water is diverted in to the pit dug in the first garden
- ❖ Areas of water usage are Urinals(34) Toilets (23), Wash Basins(33), Taps (8- indoors) Taps (5- outdoors)

Report on Solid Waste Management Committee:

- ❖ It is further investigated that the college has Solid Waste Management Unit in the college. It is located in the garden beside the Main Gate. Here it is observed that the solid waste is segregated in the three pits. The the first pit is meant for metal related waste, the second pit is meant for the plastic waste and the third pit is meant for the organic waste where the litter and degradable organic waste is segregated and sent to the vermicompost unit.
- ❖ It is observed that the college runs the vermicompost unit beside the solid waste management segregation pits. Nearly **400** kgs of vermicompost is prepared in the four dedicated pits allotted for vermicompost preparation. Nearly 50 percent of the vermicompost is self consumed by the college for nourishing plants in the garden and rest is sold to the consumers. (Staff, students and local public and farmers)

Report on Air Audit - Carbon dioxide sequestration:

- ❖ The air quality of the college premises is found to be good in winter and rainy seasons. In summer season hot air winds will blow at 10km/hr and make the area filled with dust.
- ❖ It is observed that the wind erosion in college premises is more than the water erosion of soil.
- ❖ There are several trees in the college premises which will fix the carbondioxide released in the area. And act as sinks of the corbondioxide.
- ❖ It is observed that Several trees of *Conocarpus* (dubai bush) and *Alstonia* species are planted in the college premises. These plants will release the allergic pollen during the flowering period which is dangerous to the local public.
- ❖ Total number of trees present in the college campus are more than 250, out of these more than 50 are big sized measuring more than 40 ft. The remaining are 3 - 4ft height in length.
- ❖ The amount of carbondioxide fixed by the plants in the campus:

S.No	Age of the Plant (A)	Number of plants (B)	CO ₂ sequestration per tree (C)	Total CO ₂ sequestered in lbs (D) = BxC	CO ₂ reduction in tons (F)= D/2000
1	Below 5 years	315	7 lbs per year	2205	1.1025
2	5 - 10 years	20	26 lbs per year	520	0.2600
3	11 - 20 years	11	48 lbs per year	528	0.2640
4	More than 50 years	30	100 lbs per year	3000	1.5000
Total :		376		6253	3.1265

The plants of the college premises fix nearly **3.1265** tons of corbondioxide, which is very less compared to the area of the college.

Report on Environmental issues:

The Committee headed by the Dr. K. Jona Phillip, Lecturer in Mathematics and K. Sreenivasulu, Lecturer in mathematics have made the following observations regarding the environment issues.

- ❖ The committee found that the college is creating awareness among the public staff and students through its awareness programs on environment consciousness. Several programs like role plays, Environment day, *Say no to plastic*, Earth day, Darwin day, Ozone day were conducted in the college to create awareness among the staff and students. Few programs like Role plays are uploaded in Youtube for public viewing.
- ❖ Students also participated in the off the campus environment activities like
 - Water conservation program at CTRI

- Impact of chemical fertilizers and pesticides on agriculture at CTRI
- Organic farming at Venkatadripalem village, Kandukur.
- ❖ The air quality of the college premises is found to be good in winter and rainy seasons. In summer season hot air winds will blow at 10km/hr and make the area filled with dust.
- ❖ It is observed that the wind erosion in TRR GDC premises is more than the water erosion of soil.
- ❖ There are several trees in the college premises which will fix the carbondioxide released in the area. And act as sinks of the corbondioxide.
- ❖ It is observed that Several trees of *Conocarpus* (dubai bush) and *Alstonia* species are planted in the college premises. These plants will release the allergic pollen during the flowering period which is dangerous to the local public.
- ❖ Total number of trees present in the college campus are more than 250, out of these more than 50 are big sized measuring more than 40 ft. the other are 3 - 4ft height.
- ❖ The amount of carbondioxide fixed by the plants in the campus
- ❖ The plants of the college premises fix nearly **3.1265** tons of corbondioxide which is very less considering the area of the college.

Recommendation of the Green Audit team:

1. The greenery in the campus should be further increased as per the national forestry norm of one third area of the forest should be covered by the trees.
2. The tree cover of the college is very low. Steps should be taken in the coming years to increase the tree cover with huge canopy. The trees with huge canopy sequester more carbon and do enormous help to the environment.
3. The Biodiversity of the college premises should be further increased through introduction of new species.
4. Importance should be given to flowering species whicg increases the beauty of the college.
5. The tree species which release allergic pollen (*Conocarpus*, *Alstonia*) should be avoided in plantation program
6. Roof top gardening should be encouraged in the college.
7. Hydroponics should be extended to all the labs of the college.
8. As the college has already got *Azolla* pond, it should plan for *Spirulina* culture also.
9. The organic farming area should be further increased and all the other non biology students should be trained.
10. A certification course on natural farming should be designed.

11. Solid waste management should be further strengthened such that it becomes the role model in the government degree colleges. A prototype of incubation centre should be planned.
12. Proper scientific approach should be taken to dispose the biomedical and e-waste of the college.
13. More RO systems should be installed to meet the demand of water by the students.
14. Water conservation should be done by constructing farm ponds in the college to increase the water table further.
15. More water sensors are used for the overhead tanks to detect the water over flow and thus pave a path for water conservation
16. More pasture land should be developed to prevent the soil erosion due to wind and water.
17. The Ph of the soil should be reduced by frequent irrigation for better plant growth
18. The college should plan more awareness programs on environment related issues in the college.
19. The college should reach out the public through their offline and online programs beyond the campus to increase the environment education. The college should plan more role plays online quiz etc.
20. Fire safety measures such as fire-fighting tank, fire alarm and sprinkler system should be adopted to mitigate the fire damage.

Soil Test Reports issued by the Dept of Agriculture at three gardens:

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వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

1) రైతు పేరు : T.R.R. Govt. Degree College కోడ్

2) గ్రామము :మండలం: Kandukur

3) మెట్ట లేక మాగాణి : మెట్ట Prakasam (C)

4) సర్వేనెంబరు లేక పొలము పేరు : 297/1 Sample-1

విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	అమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హాని	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	1.0 లోపు	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ	
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మకము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరం	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరం	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరం	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-I : Soil Health Card



వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

- 1) రైతు పేరు : TRR Govt. Degree College కోడ్.....
 2) గ్రామము :మండలం: Kandukur
 Prakasham dist
 3) మెట్ట లేక మాగాణి :
 4) సర్వేనెంబరు లేక పొలము పేరు : 2971 Sample-2.....

విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	ఆమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హాని	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	1.0 లోపు	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ	
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మనము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరం	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరం	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరం	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-II : Soil Health Card



వ్యవసాయ శాఖ - ప్రకాశం జిల్లా

భూసార సమాచార పట్టిక (సాయిల్ హెల్త్ కార్డు)

- 1) రైతు పేరు : TRR. Govt. Degree College కోడ్.....
 2) గ్రామము :మండలం: Kandukur
Prakasam
 3) మెట్ట లేక మాగాణి :
 4) సర్వేనెంబరు లేక పొలము పేరు : 297/1 Sample-3.....

విశ్లేషణ ఫలితాలు

1. నేల స్వభావము	తేలిక	మధ్య	బరువు		
2. ఉదజని సూచిక (pH)	ఆమ్లము	తటస్థము	అల్పక్షారము	మధ్యక్షారము	అధికక్షారము
ఎ) తేలిక నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 7.8 వరకు	7.9 నుండి 8.4 వరకు	8.4 కన్న ఎక్కువ
బి) బరువు నేలలు	6.5 కన్న తక్కువ	6.6 నుండి 7.3 వరకు	7.4 నుండి 8.4 వరకు	8.5 నుండి 9.0 వరకు	9.0 కన్న ఎక్కువ
3. లవణ సూచిక (ఇ.సి)	సామాన్యం	మొలకెత్తుట కష్టం	లవణసాంద్రత తట్టుకోలేని పంటలకు కష్టం	పంటలకు హాని	
() మి.మో / సెం.మీ.					
ఎ) తేలిక నేలలు	0.16	1.0 లోపు	1 నుండి 2	2 నుండి 3.0	3 కన్న ఎక్కువ
బి) మధ్యరకం నేలలు	1.5 వరకు	1.5 నుండి 3	3 నుండి 4.5	4.5 కన్న ఎక్కువ	
సి) బరువు నేలలు	2.0 వరకు	2 నుండి 4	5 నుండి 6.0	6.0 కన్న ఎక్కువ	
4. ముఖ్యపోషకాల స్థాయి	తక్కువ	మధ్యస్థాయి	ఎక్కువ		
ఎ) సేంద్రియకర్మనము	0.5% కన్న తక్కువ	0.5% నుండి 0.75%	0.75% కన్న ఎక్కువ		
బి) లభ్య నత్రజని కె.జి./లు ఎకరా	0 నుండి 112 వరకు	112 నుండి 224 వరకు	224 కన్న ఎక్కువ		
సి) లభ్య భాస్వరము కె.జి./లు ఎకరా	0 నుండి 10.0	10 నుండి 24	24 కన్న ఎక్కువ		
డి) లభ్య పోటాష్ కె.జి./లు ఎకరా	0 నుండి 58	58 నుండి 136	136 కన్న ఎక్కువ		

Garden-III : Soil Health Card

Water Sample Reports issued by the Soil Testing Lab-Ongole

Municipal Drinking Water

సాగునీటి పరీక్షా ఫలితముల పత్రము - భూసార పరీక్షా కేంద్రము, ఒంగోలు.

రైతు పేరు : T. R. R. College గ్రామము : Kandukuru
తేది : 11/2/2022 మండలం : Kandukuru

పరీక్షా కేంద్రం పేరు.	నీటి వనరు నామం	మిశ్రిత లక్షణాలు / లక్షణాలు							సల్ఫేట్	సమగ్ర సోడియం క్లోరైడ్	సోడియం లాంఛన్ రేషియో	శరణి Class
		తీవ్రతని సూచిక (pH)	లవణ విరాళం సూచిక (E.C)	కార్బోనాట్	హైడ్రోజన్	మగ్నీషియం Ca+Mg	కాల్షియం	క్లోరైడ్				
526	Tap water	8.56	2.0	0.8	16.4	19.6	—	23.4	Med	3.2	0.12	C ₃ S ₁ T ₁ Ch ₁ S

I. ముఖ్య అంశాలు:
మొదటి అంశం: సి-యస్ : తక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
ఈ నీరు అన్ని వేలంకు, పైర్లకు అన్ని పరిస్థితులలో పనికి వస్తుంది.

II. రెండవ అంశం:
సి-యస్ : మధ్యస్థ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : ఎక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : ఎక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
ఈ నీరు మంచి యాజమాన్య పద్ధతులతో, మురుగు వనరు కల్పించి జాగ్రత్తగా వాడుకోవాలి.

III. మూడవ అంశం:
సి-యస్ : ఎక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
ఈ నీరు సాధారణంగా సాగుకు పనికిరాదు. లవణాలను తట్టుకోగల పైర్లకు (ప్రత్తి, రాగి, ఇవాల, ధనియాలు) ప్రత్యేక యాజమాన్య పద్ధతులు పాటించి, వాడుకోవాలి. మురుగు వనరు తప్పని సరిగా కల్పించాలి.

VI. నాణ్యత అంశం:
సి-యస్ : ఎక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
ఈ నీరు సాగుకు పనికిరాదు.

సహాయ వ్యవసాయ సంబాలకులు,
భూసార పరీక్షా కేంద్రము
ఒంగోలు.

Bore Water

సాగునీటి పరీక్షా ఫలితముల పత్రము - భూసార పరీక్షా కేంద్రము, ఒంగోలు.

రైతు పేరు : T. R. R. College గ్రామము : Kandukuru
తేది : 11/2/2022 మండలం : Kandukuru

పరీక్షా కేంద్రం పేరు.	నీటి వనరు నామం	మిశ్రిత లక్షణాలు / లక్షణాలు							సల్ఫేట్	సమగ్ర సోడియం క్లోరైడ్	సోడియం లాంఛన్ రేషియో	శరణి Class
		తీవ్రతని సూచిక (pH)	లవణ విరాళం సూచిక (E.C)	కార్బోనాట్	హైడ్రోజన్	మగ్నీషియం Ca+Mg	కాల్షియం	క్లోరైడ్				
527	Municipal water	8.14	0.53	0	7.0	4.2	—	6.0	low	2.8	0.75	C ₂ S ₁ I (low)

I. ముఖ్య అంశాలు:
మొదటి అంశం: సి-యస్ : తక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
ఈ నీరు అన్ని వేలంకు, పైర్లకు అన్ని పరిస్థితులలో పనికి వస్తుంది.

II. రెండవ అంశం:
సి-యస్ : మధ్యస్థ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : ఎక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : ఎక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
ఈ నీరు మంచి యాజమాన్య పద్ధతులతో, మురుగు వనరు కల్పించి జాగ్రత్తగా వాడుకోవాలి.

III. మూడవ అంశం:
సి-యస్ : ఎక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : తక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : మధ్యస్థ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, తక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, మధ్యస్థ సోడియం కలిగిన నీరు.
ఈ నీరు సాధారణంగా సాగుకు పనికిరాదు. లవణాలను తట్టుకోగల పైర్లకు (ప్రత్తి, రాగి, ఇవాల, ధనియాలు) ప్రత్యేక యాజమాన్య పద్ధతులు పాటించి, వాడుకోవాలి. మురుగు వనరు తప్పని సరిగా కల్పించాలి.

VI. నాణ్యత అంశం:
సి-యస్ : ఎక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, ఎక్కువ సోడియం కలిగిన నీరు.
సి-యస్ : చాలా ఎక్కువ లవణాలు, చాలా ఎక్కువ సోడియం కలిగిన నీరు.
ఈ నీరు సాగుకు పనికిరాదు.

సహాయ వ్యవసాయ సంబాలకులు,
భూసార పరీక్షా కేంద్రము
ఒంగోలు.

PHOTOGRAPHS

Huge Banyan Tree in front of college building



Organic Farming



AZOLLA Pond



Kitchen Garden



SOLID WASTE MANAGEMENT



Involvement of Students in Vermicompost preparation



Involvement of Staff & Students in nourishing the plants with vermicompost from vermicompost unit



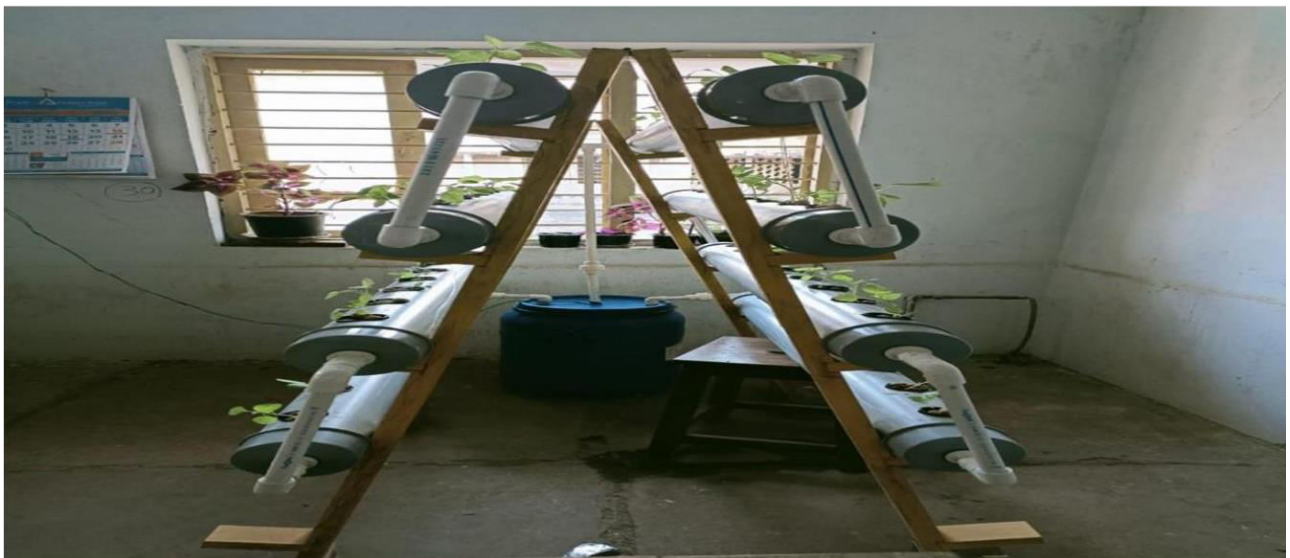
Staff purchasing the vermicompost from the Zoology Department



HYDROPONICS: Hydroponics unit 1 - NFT model (Nutrient Film technology)



HYDROPONICS UNIT – 01 NFT MODEL



STUDENTS NURTURING THE HYROPONICS SEEDLINGS



DUTCH BUCKET MODEL: TOMATO PLANT



SEED MUSEUM

As a part of Biodiversity conservation, Department of Botany started conserving the important and rare seeds of flowering plants in the form of a seed museum. The main objective of the seed museum is biodiversity and Taxonomic identification of the seeds of flowering plants. We have collected nearly fifty seeds of different category belonging to cereals, pulses, oil seeds, fruit trees and vegetables. All the seeds bottles are given QR code in which Botanical name, family name and economic importance of different seeds are incorporated. In future we will collect the seeds of rare medicinal plants and conserve in the form of seed museum. We will further increase the number of seed varieties of normal plants.

Importance of seed Museum

1. Biodiversity Conservation
2. Identification of seeds by the students

1. Setaria italic (Sample Seed)

Common Name: Fox Tail Millet (English), Korralu (Telugu), Kangli(Hindi)

Family: Poaceae

Fruit : Caryopsis

Economic Importance:

- i. Two times more proteins than Rice
- ii. Increases Disease resistance
- iii. Good for Diabetic Patients
- iv. 100 g of this millet contain 60.9 g of carbohydrates, 12.3 g of proteins, 6.3g of fiber, 4.3 g of fat, 2.8mg of Iron, 3.2 mg of Niacin, 31 mg of Calcium and 473 Calories of Energy



ORGANIC FARMING HARVESTING



LAND PREPARATION

