

Arumugam Pillai Seethai Ammal College

Tirupputtur

Ancillary Botany

Natural Science was started in 1966 for PUC-second group. Prof. S.M.Krishnamoorthy was the first lecturer appointed in 1966 to handle botany subjects. In 1967, major Zoology was introduced in our college with Botany as one of its ancillaries. In the beginning, Botany was an ancillary subject to Major Chemistry also. Later Botany was replaced by Zoology. Prof. Kannan and Rathina Sabapathy were other staff members who worked along with Prof. S.M.Krishnamoorthy. Prof. Kannan left to pursue his Ph.D work. Later Prof. Rathina Sabapathy left for A.V.C College, Mayiladuthurai. In 1976, Mr. V. Rathinam was appointed as demonstrator in the botany department. Prof. SM Krishnamoorthy was elevated to the post of Vice-Principal in 1988. Further, he got retired in December 2000. So, Mr. V. Rathinam served as Head of the Department from 2000 to 2008 till his retirement. He retired in May 2008. In January 2008, Mr. N.Vijayanand was appointed as Lecturer in department.

EQUIPMENTS:

LABORATORY INSTRUMENTS		
S.NO	INSTRUMENTS	NUMBERS
1.	Compound Microscope	26
2.	Dissection Microscope	34
3	Pointer eye piece	4
4	Microtome eye piece	1
5	Graph eye piece	1
6	Extra eye piece (10X)	1
7	Double demonstration eye piece	2
8	Magnifying eye piece	2
9	Scissors	5
10	Microtome	1
11	Bench microtome	1
12	Slide cabinet	1
13	Plant press	1
14	Stop clock	1
15	Bell jar	2
16	Measuring cylinder	4
17	Triple beam balance	1
18	Micro kjeldhal apparatus	1
19	Heating mantle	2
20	Water bath	1
21	Hot plate	1
22	Centrifuge	1
23	Blendar	1
24	Steel rack	3
25	Hygrometer	1
26	Wide field eyepiece	1
27	Round hot plate	1
28	Digital stop watch	1
29	Hot air oven	1
30	Ph meter	1
31	Colorimeter	1
32	Top balance	1
33	Lux meter	1
33	Grinding mill	1
34	Seel container	1
35	Auxanometer	1
36	Klinostat	1
37	Autoclave	1
38	Inoculation hood	1

FUTURE PROGRAMMES

During the academic year 2009-2010, hands on training programme on Mushroom Culture has been introduced for the benefit of students and also to the people of neighbouring villages. By this programme, village peoples especially Self Help Group members will be benefitted as their income source.

From the next academic year, Department of Botany has planned to organize a hands on training programme on various practice involved in organic farming which includes

- Solid Waste Recycling-Vermicomponent
- Floriculture
- Regeneration practices
- Biofertilizers
- Cultivation of Medicinal and Aromatic Plants.
-

UNDERGOING ACTIVITIES:

MAINTENANCE OF MEDICINAL PLANTS GARDEN:

The Institution has allotted one acre of land for Medicinal Plants Garden and Department of Botany and Zoology are jointly maintain this garden since 2008. There are some 65 species of plants are available in this garden and students and staff of all faculty make use of this plat.

✓ **OBJECTIVES OF MEDICINAL PLANTS GARDEN**

- ❖ Awareness generation on Medicinal plants.
- ❖ Biodiversity Conservation.
- ❖ Use plants as home herbal remedies for common ailments.
- ❖ Establish social link between student-parents-neighboring community-researchers and farmers

Along with the faculty members, students belong to Zoology department are maintaining this garden. They spent one hour in a week at regular periodical interval of time. Herbs, Shrub, and tree species are being grown in the garden. Students are involved in the following activities.

- ❖ Bush clearance
- ❖ Weeding

- ❖ Pitting
- ❖ Planting
- ❖ Nursery raising
- ❖ Maintenance of dripping.

The faculty members have given training to the students in the following area.

- ❖ Medicinal plants identification
- ❖ Propagation techniques
- ❖ Nursery techniques
- ❖ Uses of medicinal plants as home remedies for common ailments.
- ❖ Mulching

Highlights of the department:

- ❖ A botanical cum medicinal plant garden is maintained for around an acre.
- ❖ Mushroom culture room is established in our college.
- ❖ Career oriented course on Mushroom production has been planned to take off this year. Irrespective of the branch, all students can be inculcated in this course. A hands- on- training method has been adapted in the course.
- ❖ 20 E-books are maintained in the department.
- ❖ Plant specimens are conserved through herbarium technique.

Though, a staff member takes care of the entire functioning of the botany department, an innovative curriculum has been designed and put in force.

The following fruitful activities have been taken:

- ❖ Medicinal garden has been established in the Botanical Garden near the main block also. Our students have learned a lot of things regarding medicinal flora.
- ❖ Training is imparted in the cultivation of Mushroom and Sowing and Rearing of Nursery Plants have been spread to Village folk and Self Help Groups.
- ❖ For the benefit of our students, Bridge course, remedial and enrichment course are conducted to equip them with all the basic principles of Botany. These methods help them to pursue the course with greater enthusiasm.
- ❖ Priority is given to take the students to library during free hours in order to inculcate in them the Self- Learning Methods.

Books:

- Books in the department library : 52

RESUME IN BRIEF:

- ➔ M.Sc., M.Phil., Ph.D.
- ➔ Nine papers presented in international and national symposium.
- ➔ 8 papers presented in international journals.
- ➔ 3 workshops attended in Algae, biotechnology and environmental biology field.
- ➔ 3 training programmes attended about teaching methodology and efficiency.
- ➔ 2 symposium participated only.
- ➔ 4 orientation programme attended (Regular, NSS, RRC programmes).
- ➔ Currently as Board of Studies member in Saraswathi Narayanan College, Madurai.

RESEARCH ACTIVITIES:

Programme	Area of research	Research topic	Year of study
M.Phil	Plant biotechnology	<i>In vitro</i> regeneration and conservation of medicinal plant <i>Bacopa monnieri</i> (L). Pennell.	2001-2002
Ph.D	Biofertilizers	Growth promoting efficiency of selected seaweeds on vegetable crops.	2003-2010

PAPERS PRESENTED IN INTERNATIONAL/ NATIONAL/STATE/REGIONAL LEVEL SEMINAR:

1. Presented an **Poster paper** in the National Symposium on Relevance of Plant Biochemistry and Biotechnology- Modern Trends by the department of Biochemistry, The American College, (March 1-3,2001)
2. Presented an **Oral Paper** in the National Seminar on Plant Taxonomy in Nation Development organized by the Department of Botany, Goa University, Goa (September 26-27,2002)
3. Presented a **Poster paper** in the National symposium on Improving Crop Productivity in an ecofriendly environment; Physiological and Molecular approaches organized by G.B.Pant University of Agriculture and Technology, Pantnagar, Uttranchal. (October 15-17, 2003)
4. Presented an **Oral paper** in the National Symposium on Seaweeds-2004 ; National Symposium and Exposition organized by the Central Marine Fisheries Research Institute, Cochin, Kerala (January 22-24, 2004)
5. Presented an **Oral Paper** in the National Symposium on Marine Plants, their chemistry and Utilization held at Suganthi Devadason marine Research Institute, Tuticorin- 628 001. (June 23-25,2005)
6. Presented an **Oral paper** in the State level Seminar on Technology of Organic Farming for Rural development” organized by Alagappa Government Arts College, karaikudi. (September 25-26, 2008)

7. Presented an **Poster Paper** in the National Conference on Current trends in Algal Biodiversity and Biotechnology organized by Centre For Advanced Studies in Botany, University of Madras, Chennai (February 7-8, 2008).
8. Suresh, C., Palanikumar, P., Sathishkumar, S., Gopinath, G.V., M. Karthigeyan, and **Vijay Anand, N.**, 2008. Exogenous application of *Turbinaria decurrens* on growth and biochemical constituents of *Cyamopsis tetragonoloba*.
9. Parveen Taj, A., Revathy, M., Meena, N., & Jayanthi, AR., Gopinath, G.V., and **Vijay Anand N.** 2008. Growth promoting effects of different organic supplements on *Cyamopsis tetragonoloba* (L) seedlings.

WORKSHOPS ATTENDED

1. Workshop on Enhancing Public Awareness on the Ecological and Environmental Status of the River Basins conducted by Madurai Kamaraj University (June 29-30, 2001).
2. Workshop on Microbial Biotechnological and Bioinformatics conducted by Center for Advanced studies in Botany, Madras University (January 7-10, 2005).
3. Workshop on Taxonomy of Algae conducted by Centre for Advanced studies in Botany, Madras University (June -23-29, 2008)

PAPER PUBLISHED IN NATIONAL/INTERNATIONAL JOURNALS:

1. **Vijayanand,N.**, Ashok,V., Rathinavel,S. and Natarajan K.K. 2003. *In vitro* regeneration and conservation of medicinal plant *Bacopa monnieri*(L). Pennell. In: Plant diversity, Human welfare and conservation (eds. MK.Janarthanam & D.Narasimhan). Goa University, Goa. India.pp. 366-369.
2. Ashok V, **Vijayanand N.** and S.Rathinavel. 2004. Biofertilizing efficiency of seaweed liquid extract of *Hydroclathrus clathratus* on *Sorghum vulgare*. Seaweed Research Utilization, 26 (1&2): 181-186.
3. Rathinavel S, **Vijayanand .N** and Ashok.V. 2005. *In vitro* regeneration of *Sesbania aegyptiaca*- A valuable medicinal plant. Plant archives Vol.5 (2) pp 353-356.
4. Rathinavel,S, Ashok.V and **Vijayanand. N.** 2005. Growth promoting Efficiency of liquid extract of a marine alga *Stoechospermum marginatum* on cluster bean. Plant Archives Vol. 5 (2): pp 497-502.

5. S. Sivasangari Ramya, S. Nagaraj and **Vijayanand N** 2010. Biofertilizing efficiency of brown and green algae on growth, biochemical and yield parameters of *Cyamopsis tetragonolaba* (L.) TAUB. *Recent Research in Science and Technology* 2010, 2(5): 45-52.
6. Nagaraj,S, Karuppasamy K, Sundararaj, R. Jayapriyan, K.R, **Vijayanand N**, Arulmurugan P and Rengasamy N. 2011. Chemoprotective action of *Haematococcus pluvalis* Flowtow astaxanthin on Wistar male rats *Hepatocarcinogenesis* induced by (DEN) dimethylnitrosamine. *Journal of Pharmacy Research* 2011, 4(5), 1503-1056.
7. Sivasangari Ramya, S. Nagaraj and **Vijayanand N** .2011. Influence of Seaweed liquid extracts on growth, biochemical and yield characteristics of *Cyamopsis tetragonolaba* (L.) Taub. *Journal of Phytology*, 3(9): 37-41.
8. S. Nagaraj, P. Arulmurugan, M.G. Rajaram, K. Karuppasamy, K.R. Jayappriyan, R. Sundararaj, N. Vijayanand, R. Rengasamy. 2012. Hepatoprotective and antioxidative effects of C-phycoyanin from *Arthrospira maxima* SAG 25780 in CCl₄-induced hepatic damage rats. *Biomedicine & Preventive Nutrition* 2 (2012) 81–85

PARTICIPATION IN INTERNATIONAL/NATIONAL/STATE/ REGIONAL LEVEL SYMPOSIUMS:

1. National symposium of Algae in agriculture and food industry held at P.G and research Dept. of Plant Biology and Plant Biotechnology, Pachaiyappas College. Chennai (September-20&21,2008).
2. National conference on Global warming – Now and Then (NCGW- 2010) held at School of Marine Sciences, Alagappa University, Thondi Campus, Thondi. (March 18th and 19th, 2010).

TRAINING PROGRAMMES

1. Training Programme on Internal quality assurance cell conducted by Thiagarajar college, Madurai (January- 20 & 22, 2006)
2. Participated in One day Orientation programme conducted by Thiagarajar college, Madurai (February-11,2007)
3. Training programme on Teacher competence Enhancement conducted by Thiagarajar college, Madurai. (December- 3 & 4 ,2007)

ORIENTATION AND REFRESHER COURSES:

1. Participated in Orientation Programme for NSS Programme Officers held at Alagappa University, Karaikudi (February- 24, 2009).
2. Participated in 10 day orientation Programme for NSS Programme Officers held at Avinashilingam deemed university for women, Coimbatore, organized by NSS Regional Orientation Centre (September 20-29th, 2010).
3. Participated in one month Orientation Programme Madurai Kamaraj University, Madurai from 5.10.2011 to 5. 11.2011.