



Vivekananda Kendra Natural Resources Development Project Kanyakumari

Sustainable Agriculture

Milestones



Sustainable Agriculture



The Indian farmers today caught in a vicious cycle fueled by diminishing returns , increasing human greed and market economy .

The need of the hour is to follow the Low Input Sustainable Agriculture by adapting five principals namely (i) Effective harvesting of sunlight (ii) Efficient water utilisation (iii). Integrated nutrient management (iv) integrated pest management and (v) Bio diversity

Biogas slurry based agriculture:



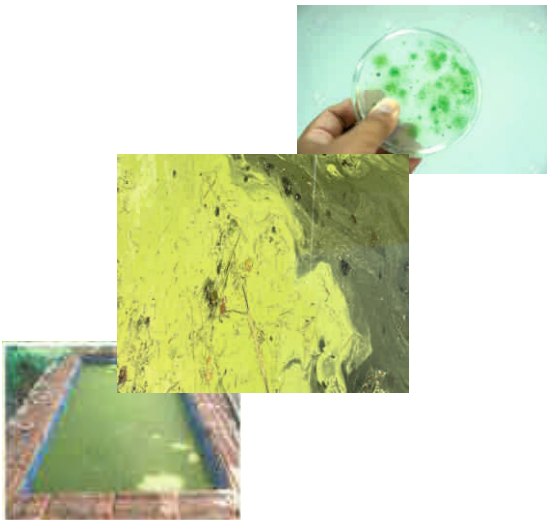
Year 1992-97

1. NADEP Compost -Components -
bio gas slurry and farm waste .Evaluation carried out in
different states and found that it is not effective.

Informed CAPART accordingly.



2. Growing Blue Green Algae with the help of bio gas slurry :
Blue Green Algae or in short BGA is extensively used in the
paddy field. Incidentally, our former President Dr.M.Lakshmi
Kumari did extensive work on BGA during her tenure as a
scientist in Pusa institute (Indian Agricultural Research
Institute, New Delhi).



3. Composting by using Pleurotus
components - coir pith, urea and Pleurotus which
is normally used for growing mushrooms. This
technology was the beginning of our use of coir
pith in subsequent years while developing NPK
rich Bio-manure



Training Programme on Sustainable Agriculture :



S.N	Year	Title	No. of Training	Participants
1.	1998 - 2021	Awareness programme on 'Organic farming'	42	2253
2.	1998 - 2021	Training programme on 'sustainable Agriculture	39	1867
3.	2006 - 2021	ATMA Trainings	17	648
4.	2000	Awareness programme on 'Compost and Biofertiliser'	41	1115
5.	2015 - 2021	Terrace garden	15	287

CAPART

Council for Advancement of People's Action and Rural Technology



ATMA
Kerala



Improving the quantity and oil content of Neem seeds :



VK-Nardep undertook the project from 2001 to 2005. The findings were as follows:

1. Water stress helps in improving the yield
2. Pruning at a proper time has a positive impact on flowering
3. There is a correlation between the nutrients on the overall growth of the plant
4. Curing the seeds for four months gives the maximum oil yield
5. Always wash and dry the seeds immediately to avoid fungus infestation and the resultant contamination of oil with aflatoxin as the oil is used for medicinal purposes

Output:

- (i) No need of making a nursery for neem seedlings. Even a small or medium size tree can be replanted by taking out from the roots and chopping the branches and covering the portion with cow dung
- (ii) Two kernels in one seed was surprising. It may be because of manuring and giving stress etc.
- (iii) Neem cake is a very good input for biogas and the slurry coming out from the unit is very good as a growth promoter / pest repellent. The slurry has a chelating effect





Composting Technologies including Vermi compost



STAR COLLEGE PROGRAMME-2019-2020
Sponsored by
DEPARTMENT OF BIOTECHNOLOGY, GOVT. OF INDIA, NEW DELHI
A One day workshop on Biosolid Waste Management- Vermicompost Technology
10th July 2019
Organised by
MARIAN STAR CENTRE
Department of Botany
St. Mary's College (Autonomous), Thoothukudi- 623001
(Re-accredited with NAAC with 'A+' Grade)

From 1998 onwards.....



33 programmes

Trained 1740 participants



- Forest Department
- Voluntary Organisations
- Colleges and Schools
- Farmers and SHG's

Installed hundreds of vermi-compost units

Bio- Manure programmes :

supported by



कामये दुखतमानाम् ।
प्राणिनाम् अतिनाशनम् ॥



**BIO MANURE/VERMI COMPOST
EXTENSION CENTRE**

SPONSORED BY : KHADI AND VILLAGE INDUSTRIES COMMISSION
REGIONAL OFFICE, MADURAI, TN

IMPLEMENTED BY : VIVEKANANDA KENDRA - nardep
TECHNOLOGY RESOURCE CENTRE
KALLOYILLAI, KANYAKUMARI.



Sl.N	Year	Title	Nos.	part.	Remarks
1.	2004	Bio-manure Entrepreneurs development course	10	500	KVIC & KEDAS, Trivandrum, Kerala
2.	2003-2006	Awareness Programme on Bio-Manure	9	484	KVIC, Madurai
3.	2006-2007	Skill Development Programme - Bio-Manure (4 days)	3	60	KVIC Madurai & Mumbai

Propagation of Azolla Technology :

GOVERNMENT OF INDIA
विज्ञान और प्रौद्योगिकी विभाग
MINISTRY OF SCIENCE AND TECHNOLOGY



जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY



Department of Bio-technology, govt. of India, New Delhi sponsored the following 3 projects and helped us in propagating Azolla technology in a big way Training in usage and propagation of Azolla and Blue Green Algae (BGA)

- 3 years project - 2000 to 2003

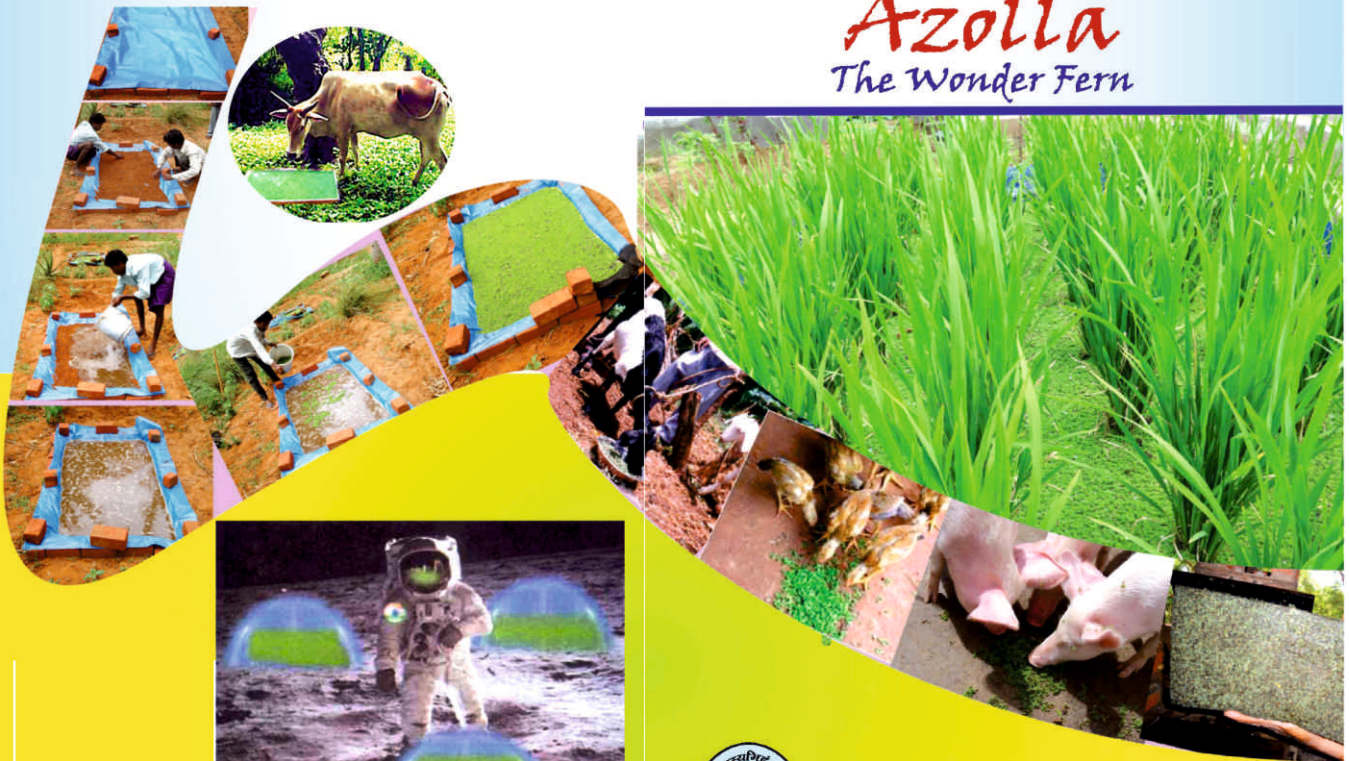
2. Promotion of Azolla as a Bio-feed for Livestock - 2 years project - 2004 to 2007

3. Validating Azolla based feed pellet manufacturing as an income generating employment opportunities for Rural women - 3 years project (2007 to 2011)

2006 -5 days training Organic farming - 21 - Tibetan Refugees

Out Put :

Azolla as a Biofeed is VK-Nardep's contribution to the Nation. All these years, Azolla was known only as a nitrogen fixing plant. However, Vivekananda Kendra - Nardep with the help of agencies like DBT, DST, NDDDB, NRDC and NABARD etc. propagated the technology in different parts of India. More than 7 - 8 lakhs farmers have adapted the technology. Many governments such as Kerala, Jharkhand, Maharashtra etc. are encouraging farmers to opt for this technology.



Azolla
The Wonder Fern

Azolla

*A fern that made the Planet Liveable for the life as we know today....
A fern that saved the planet from ice ages....
Can the same little fern do wonders in sustainable agriculture and
save humanity from the coming ecological crisis ?*



**Vivekananda Kendra - nardep
Kanyakumari - 629 702**



Azolla Programme -Tamilnadu

Year	Programmes	Nos.	Participants	Remarks
2000 - 2021	Azolla training in Tamilnadu	74	1335	General public
2004	Azolla propagation training	2	39	NDDDB Officials, Tamil Nadu
2010	Training on Azolla technology	1	32	Animal Husbandry Officials, Tamil Nadu



Officials from DST, New Delhi visiting Kozhikottupothai to see the work of Azolla Technology



Azolla Programme -Other states

Year	Title	No of training	partici pants	Department
2000	Training programme on 'Azolla and Blue green algae'	1	50	MILMA, Kerala
2000	Training programme on 'Azolla propagation'	1	60	CAPART meeting for NGOs
2003-2013	Azolla training given in Kerala	15	3000	
2004	Azolla propagation training	1	22	NDDDB Officials and Milk Union members, Karnataka
2004	Azolla propagation training	1	17	NDDDB Officials and Milk Union members, Maharashtra
2004-2005	Azolla propagation training	2	50	NDDDB, Animal Husbandry officials and farmers Andhra Pradesh
2005	3 days Training programme on 'Azolla propagation'	1	10	ICRISAT, Hyderabad
2006	5 days Training Programme on Organic Farming	1	21	Tibetian Refugees



Azolla Programme -Other states



Year	Title	No. of training	Participants.	Remarks
2008	2 days Training programme on 'Azolla cultivation'	1	30	Samaj Pragati Sahyog, Indore
2009	2 days Training programme on 'Azolla technology'	1	20	Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad
2012	Training programme on 'Azolla cultivation'	1	25	BAIF, Jharkhand
2010 - 2014	4 days Training programme on 'Enriched Bio-manure and Azolla technology'	9	257	Govt. of Jharkhand
2017	2 days Training programme on 'Azolla cultivation'	1	20	Aryasambhu Krusak Club, Odisha



Azolla as a Biofeed is VK-Nardep's contribution to the Nation. All these years, Azolla was known only as a nitrogen fixing plant. However, Vivekananda Kendra - Nardep with the help of agencies like DBT, DST, NDDDB, NRDC and NABARD etc. propagated the technology in different parts of India. More than 7 - 8 lakhs farmers have adapted the technology. Many governments such as Kerala, Jharkhand, Maharashtra etc. are encouraging farmers to opt for this technology.

Azolla Programme -Other states



Year	Title	No. of Training	Participants	Remarks
2013	Training programme on 'Azolla cultivation' for Chinmayananda Organization for Rural Development, Keonjhar, Odisha	1	75	
2014	3 days Training programme on 'Azolla cultivation'	1	16	ATMA, Ratnagiri, Maharashtra
	Training programme on 'Azolla cultivation'	1	50	Jagdish Sindhu Farm, Haryana
	2 days training programme on 'Azolla cultivation'	1	85	NDRI, Karnal
	Training programme on 'Azolla cultivation'	1	25	CORD, Himachal Pradesh



DST Bio-Farm project



BIOFARM – it stands for Bio Integration Of Farm Activities and Resource Management for small and marginal farmers in different Agro climatic regions of India. Vivekananda Kendra – Nardep was a partner in this all India coordinated project along with sixteen other organizations from different parts of India. The project was executed within the period 2004 to 2007. We selected the tribal village of Kozhikottupottai of Agasteeswaram block for this pilot project.

The idea in this project was to increase the subsystems which will enable the farmers to shift from commercial monoculture to more holistic diversified agricultural system. Biodiversity indicators such as (i) vegetable diversity (ii) herbal diversity (iii) increase in soil micro fauna and flora have shown significant increase. In the process, there has been a significant decrease in medical expenses as well as decrease in market dependency.



Poultry farming 3 training programme 147 farmers attended from Kozhikottupotthai village.



Biofarm farmers and families visit Pulliankudi - a village known for organic farming movement in Tamil Nadu



Green chillies field in hilly area



CIKS - NARDEPworkshop on Indigenous technologies for BIOFARM farmers

Sri. Kasi Ramalingam, aged 65 along with his family - wife and two sons and a daughter - take care of the farm and the homestead garden. While the male members are looking after the main farm, the female members are managing the homestead based systems which include vegetable and herbal garden, poultry and livestock as well as the bio gas plant and Azolla bed. With many subsystems integrated, the family has achieved both income as well as nutrition security. With azolla consumption, the cows are yielding better quality milk. The quality of soil has improved. Vegetable consumption of the family has improved and the market dependency has been reduced. With increase in production and weight of eggs, the egg intake has become self sufficient. Surplus is being sold.



BIOFARM Project Series: 1

இயற்கை வேளாண்மை உயிர் உள்ள நீர்

"எடு போட்ட பயிர்கள் எகிறிலிளையும்"
"குடு இவ்வாத சீடனும் குப்பை இவ்வாத மண்ணும் பாழ்"

விவேகானந்த கேந்திரம் நார்டெப்
இயற்கை வள ஆர்விகுத்தித் திட்டம்
கன்னியாகுமரி - 629 702.

BIOFARM Project Series: 2

இயற்கை வேளாண்மை பஞ்சகவ்யா

"அந்த முச்சிக்கு நொச்சித் தழை"
"அகவிணிய்ப்பூச்சி அவ்வரைக்கு ஆகாது"

விவேகானந்த கேந்திரம் நார்டெப்
இயற்கை வள ஆர்விகுத்தித் திட்டம்
கன்னியாகுமரி - 629 702.

BIOFARM Project Series: 7

இயற்கை வேளாண்மை தாவர பூச்சிவிரட்டிகள்

"நட்டான் நாயுடு பறந்தான் தம்பமான் மழை"
"அந்தி சூசம் அடைடாமைக்கு அறிகுதி"

விவேகானந்த கேந்திரம் நார்டெப்
இயற்கை வள ஆர்விகுத்தித் திட்டம்
கன்னியாகுமரி - 629 702.

BIOFARM Project Series: 8

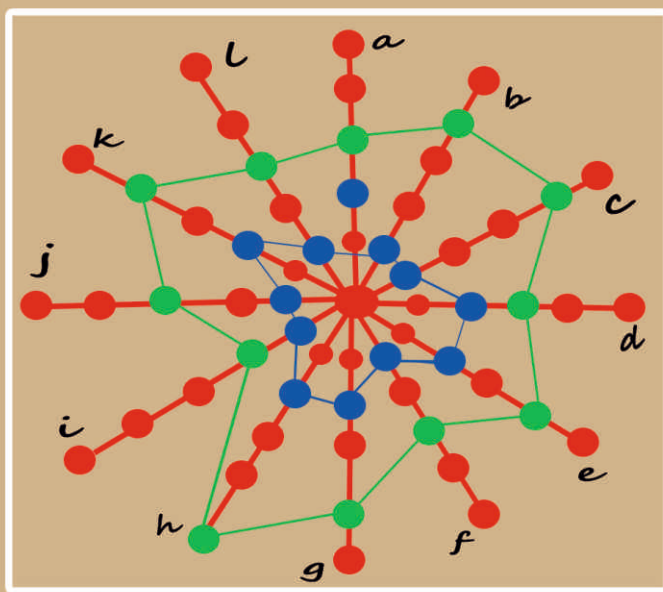
இயற்கை வேளாண்மை பூச்சியைக் கட்டுப்படுத்தும் இனக்கவர்ச்சிப் பொறி (Pheromone Trap)

"பெய்வை செறித்தான் பண்ணை செறிக்கும்"
"அணிய் தலை அபெய்வை அறிப் பணம் செறிக்கும்"

விவேகானந்த கேந்திரம் நார்டெப்
இயற்கை வள ஆர்விகுத்தித் திட்டம்
கன்னியாகுமரி - 629 702.

By increasing and integrating a number of activities and subsystems on the farm, engaging the farm families throughout the year has become a reality.

Sustainable Agriculture



- a - Number Of SubSystems.
- b - DIVERSITY ELEMENTS IN EACH SYSTEMS.
- c - Inter - Subsystem Linkage : Resourse Flow.
- d - Intra - Subsystem Linkage : Resourse Flow.
- e - Water Recycled in the farm & Household.
- f - Reduction of external farm Input.
- g - Surplus produce sold in market.
- h - Number of Bio-Digestors.
- i - Reduction in external vegetable Dependency.
- j - Reduction in external Animal protein Dependency.
- k - Redection in Soil Nutrient Loss.
- L - Positive Links to comman Resources.



Before Intervention by Vivekananda kendra-nardep



After Intervention

Biofarm success stories have been put many of the popular Agri-technology Website including that of Tamilnadu Agricultural University, Coimbatore. Government of Kerala have sent their Senior Agri-Officers to Biofarm village for a Field level Orientation in Organic farming and also istaking our help in their organic farming project.

The farmers of the village are very happy as they are getting higher income compared to farmers in their neighbouring village. The biofarm success story was highlighted by all Tamil and Malayalam Farm magazines and a number of T.V.,channels have taken documentaries of the success story which was flashed many times.



Year	Programme	Nos.	Participants
2009 - 2014	Standardisation for selected backyard liquid formulations, bio-pest repellents, growth promoters	7	191

2016 - onwards Developed traditional organic fertilizers, growth promoters, pesticides etc.

- Agni astra
- Neem astra
- Amrita karaisal
- Jeevamritam
- E.M solution
- Sukku astra
- Brahmastram
- Bijamritam





Living water and Panchagavya

Living water is our contribution. We got the idea by reading SPAN magazine. Jim Martin, an American scientist (13 December 1894 – 23 September 1975) accidentally discovered the living water when he came across microorganisms capable of eating the oil spill and multiplying exponentially within a short time. It is made up of the following ingredients.

- ★ Sea water is rich in soil-borne microorganisms such as blue green algae, prokaryotes and eukaryotes and is an important ingredient of living water.
- ★ Dung from the milking or lactating cows as it is rich in calcium.
- ★ Yeast for fermentation.

We found Living water is nothing but Effective Microorganism (EM) which can convert dead soil alive. Even a sandy soil can be converted into vibrant living soil.

Panchagavya too found very effective growth promoters and many farmers are preparing it for their own use and marketing the excess produce. As a time passes, may variations have taken place such as use of sugarcane juice in place of jaggery or addition of yeast in place of any other fruit etc.



Enriched Bio-Manure :

DST-Core support



2015-20

Using Bio waste and Mineral waste



- Other programmes**
- Sneh Samrudhi Mandal, Ratnagiri
1 no - 15 nos
- Unnat Bharat Abhiyan
(Rohini Engg., College)
1no - 20 nos



Azolla Extension Activities :

Year	Programme	Nos.	Participants
2009	Training on Azolla Cultivation	2	43
2010	3 days Capacity Building for Adoption of Technology (CAT)	5	165
2011	3 days training programme on 'Azolla Bio-fertiliser and Bio-feed production technology'	2	53
2015	3 days Capacity Building for Adoption of Technology (CAT)	2	81
2016	3 days Capacity Building for Adoption of Technology (CAT)	1	28
	Awareness and Follow up programme on Livestock Management	6	102
	Training programme on 'Nutrient management' and Bee keeping	1	63
2019	Training programme on Vermi Wash Technology - Rameswaram, Kanyakumari.	2	39



Fish Amino Technology

Supported by



Training programme on

- ✦ Enhanced fish amino' for Ramanathapuram district - 2 programme - 100 participants
- ✦ Enhanced fish amino' for Pudhukottai district - 2 programme - 95 participants



Output:

Enriched Fish amino is the contribution of VK-Nardep to the field of agriculture. Waste rotten fish as well as rejected jaggery is converted with ease by adding papaya latex. After getting trained by VK-Nardep, many entrepreneurs have

Vermi Wash Technology

2018-21

Project Sponsored by



Technical support by:
Excel industries , Bhavnagar

Technology
Deseminated
in Kanyakumari and
Ramanathapuram dist
- 50 units

2 nos - 39 participated - NABARD, chennai
1 no - 29 participated - Agrocel Industries, Bhavnagar
1no - 65 participated - Pasumai vikaten,

I am Meenakshi Sundaram, Erambukadu, Kanyakumari District, Tamilnadu. . I received Vermiwash unit from Vivekananda Kendra. It is very useful to my horticultural garden. I am using it regularly mainly for my Coconut plants. I observed the following changes:

- * More earthworms in the soil which indicates improvement in the soil structure.
- * iCoconut leaves have turned Green from earlier Brown
- * Good usage of water as overhead tank water which passes through the vermi unit comes out as a good nutrient - Vermi Wash.

I wish this technology spreads all over Tamilnadu.



NRDC, New Delhi : Extention Activities

Year	Programme	Nos	Participants
2016	Training programme on 'Production of Fish amino for increasing Agricultural productivity'	9	338
2015	2 days Entrepreneurs Development programme in 'NPK enriched Bio-manure'	3	159
2018	Training programme on 'Home garden for Nutritional security'	7	210



Growing Nutraceuticals on terrace. Ensures Health security. Moreover, Gardening is a great stress reliever

Awareness Programme and Buyers Sellers Meet

2013, 2014, 2015 - 179 participants attended
2020 - 219 participants attended

National Institute of
Agricultural Marketing, Jaipur



A unique gathering of Buyers and Sellers on Platform. Many sellers came with their products and displayed it aesthetically in a stall. Farmers shared their experiences.

A few experts interacted with audience and gave tips on modern marketing techniques. NIAM officials from Jaipur graced the occasion.

Livelihood programme



2018 - Training programme on 'Sustainable Livelihood' - 40 participants

We organised a Livelihood programme in Kanyakumari and Ramanathapuram district by selecting 20 women each. We carried out the following interventions

- I. Terrace / kitchen garden (provided a) manure b) garden tools c) seeds d) seedlings etc.
- ii. poultry
- iii. goatry.

Output - The project helped by way of nutritional security as well as an additional income for the housewives.



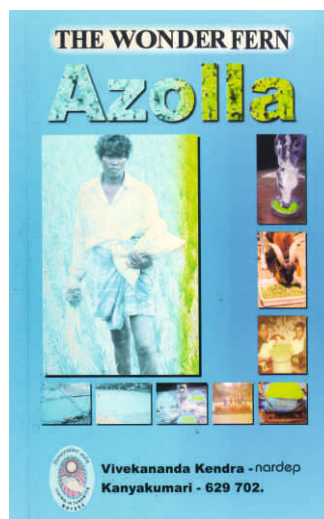
Ms.Poomayil who is 41 yrs old attended our Kitchen Garden training programme on 30 November 2018. Her husband is a fisher man. Both the childrens were pursuing their graduation in Coimbatore. Her household hobby is to grow plants. Except Coconut and papaya tree she is not successful in growing plants especially vegetable plants. Either due to insect infection her plants would die or it will not grow properly. But after attending our training she has received a combo of Grow Bags, Vermi compost, PAnchakavya, Seed Tray, Five plant seeds, Couple of tools Weed remover and plougher and Kitchen garden book in Tamil. Her feedback is that the book is an important asset for her. She will refer on and often in case of any doubts. She is able to grow some 7 plants in her backyard using the grow bags and she is very happy sharing the brinjal growth and the taste of the vegetables are too good. Now she is planning to grow it in the sand in a larger way. She shares that she had inhibitions in applying the boosters but now being organic boosters like Panchakavya gives a fillip to the overall growth. She is confident in applying Panchakavya in the plants.



Publications:

As a part of training, we have brought out the following books:

- ★ Gramodaya park for right living (3 languages- Tamil, Hindi and English)
- ★ Pasumai Vivasaya Thozhil Nudpangal (Green technologies for Sustainable Agriculture)"
- ★ Azolla - A wonder fern (3 languages- Tamil, Hindi and English)
- ★ Manpulu uram (Tamil)
- ★ Manpulu ura neer katumana vazhikatti (Tamil)
- ★ A second look at agriculture (English)
- ★ Velanmiyil maru chinthanai (Tamil)
- ★ Thalir (Nursery techniques - Tamil)
- ★ Vazhai sagupadi (Tamil)
- ★ Enakavarchi pori (Tamil)
- ★ Biogas manure users' guide (English)
- ★ In addition we have capsules by way of power point presentation, youtube and short films.





Webinars:

Date	Topic	No.	Resource persons	Language
17.07.20	Weinar - Miner fruits and value added products	73	Dr.T. Prabhu Dr.Cissie Theeblyn David, KVK, Tirupatisaram	Tamil
24.07.20	Webinar - Micro greens and Health	55	Dr.Cissie Theeblyn David, KVK, Tirupatisaram	Tamil
21.08.20	Webinar " why evenafter spraying medicines crop insects are not dying	46	Dr. L. Murugesan Former profoessor, Cotton Research College, Srivilliputhur	Tamil
28.08.20	Organic Farming - Dept. of Agriculture, Padmanabanputhur	46	Shri.Rajamani	Tami
03.09.20	Organic farming - Dept. of Agriculture, Auchankulam	40	Shri.Rajamani	Tami
31.10.20	Online training programme on "Vermi compost and Vermi Wash technology"	05	Smt.Premalatha	Tamil
10.11.20	Awareness programme on "Vermi Wash technology"	19	Shri.Vijayaragavan	Tamil
21.11.20	Training programme on "NPK Rich Bio-manure"	23	Shri.Vijayaragavan	Tamil
21.11.20	Awareness programme on "Vermi Wash technology"	31	Shri.Vijayaragavan	Tamil
26.11.20	Training on "Farming practices" ATMA, Kanyakumari Dist.South Thamaraikulam, Kanyakumari Dist.	40	Shri.Rajamani	Tamil
12.12.20	Training programme on 'Vermi composting' Sevalaya, Suchidrum Manalikadu, Pechiparai, Kanyakumari Dist	20	Shri.V.Ramakrishnan and Shri.S.Rajamony	Tamil
13.12.20	Training programme on 'Azolla technology' Sevalaya, Suchidrum	35	Shri.V.Ramakrishnan and Shri.S.Rajamony	Tamil

Webinars:

Date	Topic	No.	Resource persons	Language
14&15. 12.20	Online training programme on "Agricultural related technologies" Agricultural college, Thiruvananthapuram	95	Shri.G.Vasudeo, Shri.V.Ramakrishnan Smt.S.Premalatha	English
26.12.20	Online training programme on "Agricultural related technologies" Agricultural college, Padannakkad, Kerala	65	Shri.V.Ramakrishnan and Smt.S.Premalatha	English
22.01.21	Awareness programme on 'Farming technologies' SWASAM Trust, Ambasamudram	60	Shri.Rajamani	Tamil
22.02.21	Training programme skill development for unorganized women labours Stella Maris Institute of Development Studies, Kanyakumari	.50	Shri.Rajamani	Tamil
24.02.21	Farmers' Training programme on "Azolla & AM fungi" Tamil Nadu Agricultural University, Coimbatore	60	Smt.Premalatha	Tamil
13.03.21	Training programme on "NPK rich Bio-manure" preparation Rohini Engg. college, Andarkulam & Athalavilai village	60	Shri.Rajamani & Shri.Vijayaragavan	Tamil





Shri.Rajamony interacting with the trainees during vermi compost training



field visit to our nursery



Visit to Harit Surabhi shop



terrace garden in Vivekanandapuram



Vermiwash - An Elixir for Farmers

Comparative Study of Vermi Wash

"comparative study of vermi wash with a control plot on maize was carried out. Four parameter such as (i) height of the plant (ii) No. of leaves per plant (iii) No. of corns and (iv) weight of the yield, were recorded. Plot with vermi wash showed 20% extra growth which is substantial.



Shri.Gopi, District Coordinator, Hand in Hand India who are maintaining the Resource Recovery Park says that the Vermi Wash liquid is very effective and the plants were blooming like anything. He expressed that he would like to go for one more unit and thereby he can use Vermi wash for more plants and the yield can be more.

My name is Shri.Arumugam, Thalakulam, Monday Market Post, Kanyakumari District, Kuranthancode Block. I am a progressive farmer and having 1-acre horticulture garden and have planted sapota, guava, jack fruit, Mangoes and spices. I have established a Vermi wash unit with the help of Vivekananda Kendra – Nardep. Earlier, leaves of my mango trees were yellowish and the growth was not up to the mark. After the application of vermi wash, I found a good change within 2 months. Now, my trees are lush green



My name is B.Dinesh, G.P.N.Nursery, Pottayadi, Kanyakumari District. I am doing the business of nursery raising and selling of plants. My nursery is famous as I have varieties of plants such as: Ornamental plants, Medicinal plants, Agricultural plants, Horticultural plants, Floriculture plants and orchids etc.,

I find a tremendous difference in the growth of the nursery as well as plants after establishing vermi wash unit. Now, (i) my seedlings are growing fast (ii) seedlings developed more roots and (iii) cuttings are germinated without any wastage. Thanks to Vivekananda Kendra – Nardep for providing me this new technology of vermi wash.



Training programme details	Nos	participants
Training programme on “Composting technologies and Production of NPK rich Bio-manure”	2	23
Training programme on “Terrace garden”	2	28
Training programme on “Azolla technology”	2	65
Training programme on “vermi wash technology	5	93





2021-22

In December month we installed 19 nos. of “Vermi Wash units” at different places of Kanyakumari district. The programme was sponsored by Agrocel Industries Private Limited, Bhuj-Kutch, Gujarat.



NPK Rich Manure unit installed at 20 places





1. Training on Azolla Technology

- 4 Progm. - 59 participants



Participants learnt , Package of practices for Azolla cultivation ,Nutrient value ,Azolla cultivation for feed and bio-fertilizer purpose, Pest and disease management of Azolla Cultural practices for optimisation of quality and quantity.

Participants felt that the Azolla technology is simple and cost effective. Azolla can be used as an ideal feed substitute for Dairy cattle. After implementing this technology, we will spread this in our relatives and friends circle.

2 . Training on Vermi Wash technology :

Participants Learnt - What is Vermi wash, Mass scale production of Vermi wash, Specialties of Vermi wash , Nutrient value of Vermi wash, Field application of Vermi wash for different type of crops.

Participants felt, the new system introduced by the Vivekananda Kendra is very simple and cost- effective to produce more vermi wash than regular vermi compost system and considerably reduce the space and good for Farmers . Vermi wash can be taken at a time of more than 200 litres. It can be used for an area of 5 to 20 acres.

- 6 Progm. - 128 participants



3. Training“Preparation of Liquid Bio-formulations”

3 Progm. - 82 participants



Participants learnt - Different types growth promoters, Panchagavya , Fish amino, Amrita karaisal (Jeevamritam), Bijamritam , Compost tea, Themor karaisal , Multi-grains solution, Cow ark Factors involving in preparation, Storage techniques and application for different type of crops.

Participants felt that instead of purchasing in the market , we will start to prepare the growth promoters in our home and save the money

2022-23

4. Training programme on “Organic farming”



– 7 programmes - 260 attended

Participants learnt Benefits for organic farming, Seed treatment Methods for increasing soil fertility (nutrient management), Crop rotation, Bio-control techniques for pest control, Four tier agricultural system, Irrigation management etc.

4 programmes - 44 participants

Participants learnt preparation of potting mixture, Selection of vegetables and fruits, Different types of composting techniques , Water management, Pre & Post harvesting techniques, Usage of waste materials for the terrace, Horizontal and vertical gardens.

5. Training programme on “Terrace garden”



Following Agriculture products prepared at J.C.Bose Nursery for Local Farmers:

seed packet - 2073 nos.

Grow Bag -152 nos.

Neem Cake - 102 kgs.

Plants -1158 nos.

Dry Ginger Astra -5.5 liters

Agni Astra -81 liters ,

Azofert -50 packets

Azolla -137 packets ,

Bijamirtham - 15.5 liters

Biomanure7 ,

Bio Pesticides -19 liters

Brahma Astram -39 liters

Sale Of Earth Worms-39 kgs.

E.M solution - 55.5 liters

Fish Amino - 675 liters.

Living Water 13 liters

Neem Astram - 12 liters

Neem Oil - 87.5 liters

Vermi compost - 2560 kgs.

Jeevarmirtham - 27.5 kgs.



2023-24

Agriculture Training programme:

- ★ Training programme on “Bio-manure technology” was held at Vivekanandapuram on 7th May,2023 . 03 participants attended this programme. Smt.S.Premalatha was the resource person.
- ★ Training programme on “Composting technologies” was held at Vivekanandapuram on 24th June 2023. One person attended this programme. Smt.S.Premalatha was the resource person.
- ★ Training programme on “Integrated waste reuse technologies” was held at Vivekanandapuram on 25th August 2023. 20 participants attended this programme. Shri.V.Ramakrishnan and Smt.S.Premalatha was the resource persons. The programme was sponsored by Scott Christian College, Nagercoil.
- ★ Training Programme on “Azolla cultivation” was held at Vivekanandapuram, Kanyakumari on 30th September 2023. One person attended this programme. Smt.S.Premalatha was the resource person.
- ★ 25 farmers from Krishi Vigyan Kendra, Tirupatisaram, Kanyakumari dist. Visited Vivekanandapuram on 14th February 2024. They learned Sustainable agricultural technologies
- ★ Training programme on “Bee Keeping” was held at Vivekanandapuram on 26th March 2024. 02 participants attended this programme. Smt.S.Premalatha was the resource person





2023-24

Livelihood Project - Harit Aajivika , Rameswaram



L & T Technologies Services, Bangalore sanctioned a Livelihood project at the Aspirational district of Ramanathapuram . The project is a boon to Rameswaram as Livelihood is one of the verticals of Green Rameswaram project which was initiated by Vivekananda Kendra – Nardep. In this project we are trying to increase and integrate a number of activities and sub-systems by which the farm families will remain engage throughout the year. For example, composts, growth promoters etc. will integrate with kitchen garden, while Azolla will be an input for poultry and goatry. Thus even if one sub-system fails, the farmer can depend on the other for sustainability.



The modus operandi was as follows:

- ▲ To begin with we organised awareness programmes to explain the scheme at 11 places with 309 participants
- ▲ During Awareness programme, stakeholders were exposed to different green technologies which can help the families in nutritional security, health security and financial security as a part of livelihood project.
- ▲ Survey forms were given and 103 beneficiaries selected based on the personnel interviews and field visits.

5 days Training programmes were conducted in 2 batches of 50 each with the following syllabus

- 1) Poultry management
- 2) Goatry management
- 3) Kitchen/herbal garden
- 4) Azolla technology
- 5) NPKrich Bio-manure
- 6) Vermi compost
- 7) Fish amino



In addition, basic training on (I) accounting (ii) quality control (iii) marketing and (iv) banking system was also given.





2023-24

Implementation of Technology

Stake holders were new to the technologies. So Co-ordinators visited each and every house to motivate and to fill the gaps if any from time to time. Kit was given to the stakeholders having the followings components



Vermi compost tank



Goatry



Poultry



Bucket and jaggery
For Fish Amino



Azolla kit



Nursery Tool kit



Seedlings and grow bag



Growth Promoters



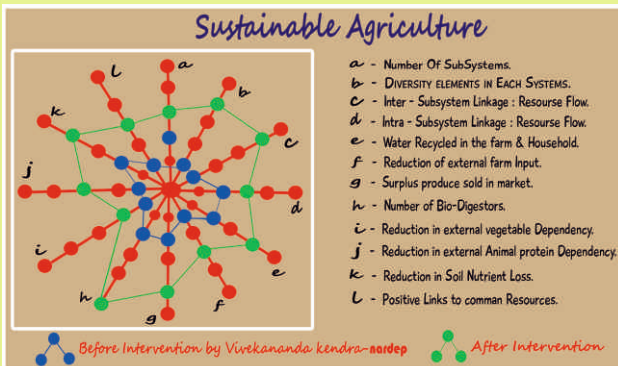
Follow up programme :



Three Follow up programmes organised for 103 stakeholders. They shared their experiences and gave feedback. During question answer time our coordinators cleared their doubts. Participants expressed their happiness of Azolla and Fish Amino technology.



Integrated Farming system



We designed the project based on our earlier experience of Biofarm which was a collaborative effort with the Dept. of Science and Technology, Govt. of India. In this Aajeevika project we are trying to increase and integrate a number of activities and sub-systems by which the families will remain engage throughout the year For example, composts, growth promoters etc. will integrate with kitchen garden while Azolla will be an input for poultry and goatry. Thus even if one sub-system fails, the farmer can depend on the other for sustainability.

Harit Aajeevika: Ms. Shanthi's transformational Journey with Vivekananda Kendra NARDEP

Ms. Shanthi narrates her experience as follows

"In the village of Erakadu, nestled within the landscapes of Rameswaram Island, a transformational journey began for me, courtesy of the CSR Grant provided by L&T Technology Services through Vivekananda Kendra NARDEP. As a partner of this project, I found myself embarking on a path towards sustainable livelihoods, armed with newfound knowledge and resources.

Receiving three goats, ten country chicks, and an array of tools including a Kitchen Garden Kit, Vermi compost tray, Fish amino preparation bucket, and Azolla Feed bed marked the beginning of my venture. Little did I know, these seemingly humble provisions would soon become the pillars of my prosperity.



The introduction of Azolla feed for my goats and hens proved to be a game-changer. Witnessing their enhanced health and productivity was not just gratifying, but financially rewarding. The size of eggs increased significantly, and the nourishment they provided became evident in the flourishing of my livestock.

Moreover, the utilization of Fish amino acid as a growth booster for my plants unleashed unprecedented yields. The productivity of my jasmine plants doubled, allowing me to harvest 1000 flowers daily compared to a mere 500 before. With each bloom representing a valuable commodity in the market, my earnings saw a substantial surge.

In confronting challenges such as the infestation of red ants on my mango trees, I found innovative solutions at hand. Root spraying of Panchagavya mixed with water and the strategic application of soap water effectively eliminated the pests.

From an income of Rs. 15,000 per month to now envisioning the possibility of reaching Rs. 20,000/- to Rs.22,000/- the impact of this initiative on my financial well-being has been profound. Beyond the tangible gains, it has instilled in me a sense of empowerment and resilience.



In this project we are tried to increase and integrate a number of activities and sub-systems by which the farm families will remain engaged throughout the year. For example, composts, growth promoters etc. will integrate with kitchen garden, while Azolla will be an input for poultry and goatry. Thus even if one sub-system fails, the farmer can depend on the other for sustainability.

Modus of oprendy :

- ▲ To begin with we organised awareness programmes to explain the scheme at 11 places with 309 participants
- ▲ During Awareness programme, stakeholders were exposed to different green technologies which can help the families in nutritional security, health security and financial security as a part of livelihood project.
- ▲ Survey forms were given and 120 beneficiaries selected based on the personnel interviews and field visits.
- ▲ 5 days training programme conducted 120 beneficiaries 3 programmes as 40 each
- ▲ During training programme kitchen garden kit , Garden tool kit, Azolla cultivation , fish amino, Poultry management, Goatry management, Different type of composting technologies and pest management taught
- ▲ Kitchen garden kit, Fish amino kit, Azolla kit, 3 goats and 10 Poultry chicks distributed to 120 stakeholders at different intervals.
- ▲ Field visit to every beneficiaries house for guidance
- ▲ Follow up programme conducted - 120 beneficiaries, 3 camps 40 each.
- ▲ Follow up programme taken up for earlier years 100 beneficiaries as well.





Output/ Impact :

- ★ Stakeholders were empowered in the new technologies of Azolla, Panchagavya and Fish amino
- ★ A few farmers started feeding Azolla to the cattle and poultry. In the process, they increased their income
- ★ 2 kg of Azolla to the cattle enhances 15% milk yield and SNF also
- ★ Poultry gives pink coloured better quality eggs which fetches more price
- ★ Azolla also helps in improving the health of the cattle and the poultry also
- ★ A few entrepreneurs started preparing Fish amino on a bigger scale and sold to the nearby farmers at the rate of Rs.500 per litre and increased their monthly income.
- ★ Fish amino not only works as a pest repellent but also as a growth promoter
- ★ The project helped in nutritional security as the family started getting organic vegetables and organic eggs in their daily diet.
- ★ Goatry too helped in enhancing the monthly income
- ★ Apart from economic benefits of the project it has environmental, social and cultural impact as stakeholders switched over to organic way of life. Promoted leadership as well as community learning and in turn improved their health

Ms. Janani – A Champion of Organic Living :

A 40-year-old from Deekshidharkollai, established a terrace garden using the kit provided through training. Her organic spinach became a household favorite in the village. She also succeeded in Azolla cultivation, reducing feed costs and improving the milkyield.

“My garden is now a source of pride and purpose. I feel empowered to teach others and care for my family with dignity.”





Training on Soil Analysis :

Training on "Soil Analysis" was held at Vivekanandapuram on 16th April, 2025 . 30 farmers from Kanyakumari dist. attended this programme. Dr. Arun Kumar and Shri. Ram Mohan from Murugappa Chettiar Research Institute, Chennai acted as the resource persons. Farmers brought soil samples for analysis. After analysis, solution for improving the soil was provided.



One day training programme

Adds on training on "Agricultural technologies" was held at Vivekanandapuram on 5th April, 2025 . 23 students attended this programme. Smt. S. Premalatha and Shri. L. Murugan were the resource persons. The programme was sponsored by Sree Ayyappa college, Nagercoil.



Training programme on Natural farming was held on 6th November. 58 students including faculty attended this training. The training was sponsored by School of Agricultural Science, Joy University, Tirunelveli. Shri. V. Ramakrishnan, Director and Smt. S. Premalatha were the resource persons.



Cow based Circular Economy: Harit Urja

Sponsored by:  L&T Technology Services

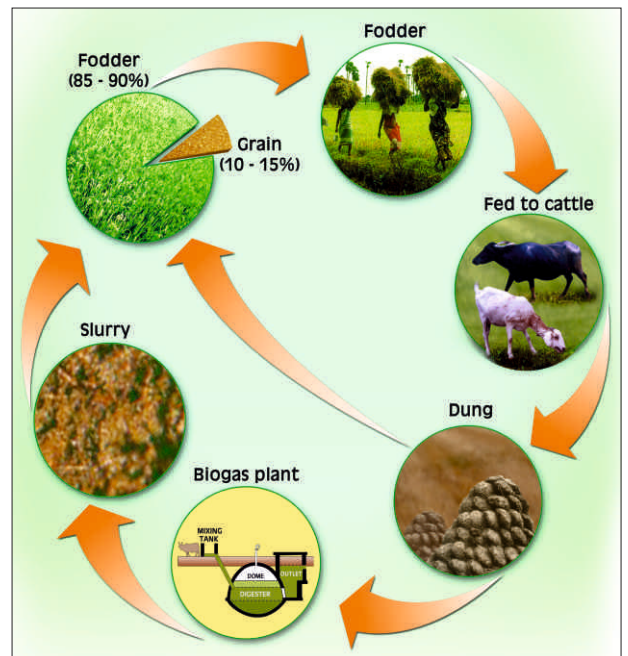


Vivekananda kendra nardep wanted to show the importance of “cow based circular economy” to community as we are in this field since last four decades .

Circular economy → Cow → Cow dung → Biogas plant → out let slurry → Fodder → Grain for human use → Fodder for cattle → Cycle will continue.

We executed the project in Kanyakumari dist.

- ★ 8 places Awareness programme conducted 134 farmers attended
- ★ Selected 40 beneficiaries from the awareness programmes.
- ★ Installed portable biogas plant of one cum capacity plant - 40 nos
- ★ Training on “biogas slurry based value added products” conducted. Taught Panchagavya, Jeevamrita, Vermi compost, Vermi wash, Azolla etc.
- ★ Shakti Surabhi Biogas plant, Vermi compost tray, Azolla kit, Panchagavya drum, fish amino kit distributed among 40 farmers
- ★ Biogas used for cooking purpose, and Biogas slurry for value added products such as vermi compost and panchagavya.
- ★ A few farmers directly fed the outlet slurry to the field.
- ★ Fish Amino prepared as a pest repellent and growth promoter. Azolla bed developed with the help of given kit and azolla given to the cattle for increasing the milk yield.
- ★ Beneficiaries doubts cleared during Follow up training programmes.





Output / Impact:

- Stakeholders were empowered about the use of Biogas slurry such as:
 - It works as a liquid fertilizer
 - It improves the quality of the soil
 - Plants absorb the fertilizer quickly because of mineralization
- Stakeholders started using slurry for the following:
 - For preparing Vermi compost (multi-purpose use in farming)
 - For Azolla propagation (as a cattle feed to the cow and poultry)
 - Panchagavya preparation (as a growth promoter and pest repellent)
- ★ Couple of farmers (Shri.P.Rajapondi, Balasubramaniapuram) started manufacturing Vermi compost out of the farm waste and started selling in his own shop and thus increasing the monthly income of Rs.300/- to Rs.500/
- ★ Farmer Shri. P.Ramakrishnan, Ezhusattupattu had a miraculous experience of Azolla technology. After feeding 2 kgs of Azolla per day, the milk yield has increased by 15%. i.e. minimum one liter increase after feeding the Azolla. The government rate is Rs.45/- liter. Thus Shri. Ramakrishnan started getting additional income of Rs.1350/- per month.
- ★ Farmers of Kozhikottupottai made use of Panchagavya, not only as a growth promoter but also as a pest repellent. They had wonderful results in their backyard garden where they are growing tomato, brinjal and chilli etc.
- ★ Earlier tomato and brinjal used to get infested with pest which they got rid off by using Panchagavya. In the process, they saved minimum Rs.300/- per month on chemical pesticide and got better organic yield and thus more income.
- ★ Apart from the above, all the stakeholders are using biogas for cooking and thus saving 0.43 kg per day of LPG which is equivalent to $0.43 \times \text{Rs.}62 = 26.66 \times 30 = \text{Rs.}800/-$ per month
- ★ Cow based Circular economy cannot be measured in the conventional accounting system. It has an additional (i) Environment benefit (ii) Conservation benefit (iii) Energy benefit and last but not the least (iv) Social benefit.





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