NATIONAL AGRO FOUNDATION
Annual Report for the year
2014 - 2015

www.nationalagro.org.in
Outreach

Rural Development Initiatives
Consultancy Services for Rural Development
Soil Testing Services
Food Testing Services
Vision:

To create a

“Healthy, Literate and Prosperous Rural India”.

Mission:

Creating replicable models of prosperous rural clusters through ecologically safe, environmentally sustainable farm and non farm sector activities, natural resource management, rural enterprises and human resource development by networking various stakeholders through mutually beneficial partnerships.
Our Proud Moments this year. . . .

• NABL Accreditation from DST, GoI

NAF Laboratory Services Division has been granted accreditation for soil, food and water testing; as per ISO/IEC 17025:2005 International standard by National Accreditation Board for testing and calibration Laboratories (NABL), Department of Science and Technology, Govt. of India for a period of two years from Dec 8, 2014. NAF Soil Testing Lab is the first NGO Soil Testing Lab to get accreditation from NABL.

• Empanelment with National CSR Hub

NAF has empanelled with the National CSR Hub maintained by Tata Institute of Social Sciences (TISS). This empanelment enables NAF to improve its visibility to explore more CSR projects with corporate agencies.

• Tax Exemption under IT 35AC, 1961

The National Committee for Promotion of Social and Economic Welfare, Ministry of Finance, Govt. of India has recommended Rural Upliftment project of NAF and granted approval for 100% tax exemption under Income Tax Act u/s 35 AC for the period of the three years 2014-15, 2015-16 and 2016-17.
**Foreword**

Our Founder Sri C. Subramaniam, while referring to the theme of the first green revolution as “Seed to Grain”, would often talk about the necessity of a second green revolution with the theme “Soil to Market”. National Agro Foundation has drawn the vision and mission and charted its course over the years by ever remaining conscious of this theme. National Agro Foundation, in pursuit of its mission of “creating replicable models of prosperous rural clusters”, has put its energies in several interlinked dimensions without ever failing to lose sight of the whole. In its endeavor to build and acquire the requisite expertise, streamline the operations as well as build and maintain synergy, National Agro Foundation has internally modelled eight functional verticals

- Natural Resources Management
- Technology Services
- Technology Transfer
- Empowerment & Institution Building
- Knowledge Partner cum Resource Centre
- Research and Publication
- Emerging areas and themes
- Internal Strengthening

The introductory paragraph highlights the severely disabling scenario of the primary sector. It is essential to practice several 'Values' concurrently whenever working towards emancipating a 'disability'. National Agro Foundation has realized the inseparable need of practicing four such 'Values' titled 4E viz.

<table>
<thead>
<tr>
<th>Economy</th>
<th>Education</th>
<th>Empowerment</th>
<th>Environment</th>
</tr>
</thead>
</table>

The current report is detailed in the eight functional verticals while remaining silent on the 4E Values, which are embedded in every thought and action.

National Agro Foundation has always had the good fortune of being guided by stalwarts of this country. Such stalwarts have not only limited themselves to advisory positions but have also burnt midnight oil in leading the operations and shaping up the flesh and soul of the organization. Entering into its teen years, the Foundation envisaged experimenting with youngsters from within the organization at the helm of operations, who have been guided and groomed over the years. Taking this a step further, the Foundation also decided to focus more on projects with specific objectives, deliverable and funds rather than on general donations and charity.

National Agro Foundation has enhanced its footprint from the erstwhile two districts [Kancheepuram and Tiruvallur in Tamil Nadu] to five in the current year [addition of Villupuram and Cuddalore in Tamil Nadu and Chittoor in Andhra Pradesh]. The Foundation has also forged partnership with various institutions with the prospective viz.

- Tamil Nadu Banana Producer Company Limited
- National Institute of Rural Development
- Anna University [adjunct lab for B.E. in Agriculture & Irrigation Engineering]

The annual report for the year 2014-15 is presented in the following pages. A glimpse of the activities in the eight verticals can be had in the early chapters while more details on each of them are enclosed later.
Our Partners and Supporters
## Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natural Resources Management</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Technology Services</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Technology Transfer</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Empowerment &amp; Institution Building</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Knowledge Partner cum Resource Centre</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Research and Publication</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>Emerging Areas and Themes</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>Internal Strengthening</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>Transformation [anecdotes]</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>Project titles and sponsors</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>Board of Trustees and Governing Council</td>
<td>21</td>
</tr>
<tr>
<td>12</td>
<td>About our organization</td>
<td>23</td>
</tr>
<tr>
<td>13</td>
<td>NABL accreditation certificate</td>
<td>Back cover - inner</td>
</tr>
</tbody>
</table>
Abbreviations used

ACABC  Agri Clinic and Agri Business Centre
CLRI   Central Leather Research Institute
CSIR   Council for Scientific and Industrial Research
CSR    Corporate Social Responsibility
CVWC   Central Village Watershed Committee
DST    Department of Science and Technology
FBO    Farmers' Producers' Organization
FC     Farmers Club
FLD    Frontline Demonstration
FTTF   Farmers Technology Transfer Fund
ICM    Integrated Crop Management
IGNOU  Indira Gandhi National Open University
L&T    Larsen & Toubro Limited
MoU    Memorandum of Understanding
NABARD National Bank for Agriculture and Rural Development
NABL   National Accreditation Board for testing and calibration Laboratories
NAF    National Agro Foundation
NGO    Non-Government Organization
NIRD   National Institute of Rural Development
PGDFSQM Post Graduate Diploma in Food Safety & Quality Management
SEED   Science for Empowerment and Equity Division
SFAC   Small Farmers' Agribusiness Consortium
SHG    Self Help Group
SPC    State Planning Commission
TAFE   Tractor and Farm Equipment Private Limited
TISS   Tata Institute of Social Sciences
TNAU   Tamil Nadu Agricultural University
TNBPCL Tamil Nadu Banana Producer Company Limited
TSRDS  Tata Steel Rural Development Society
Natural Resources Management

“Water is the driving force of all nature” – Leonardo da Vinci

India accounts for 15% of the world population and 4% of the water resources. Water is primarily used for irrigation (75-80%), industry (10%) and drinking and miscellaneous purposes (10-15%). In recent times, water crises have enhanced manifold, owing to demands due to rapid industrializing economy and urbanizing society on the one hand, and falling water tables and water quality issues on the other hand. Even excess water management strategies [flood management] are proving inadequate owing to growing flood frequency and intensity.

Indian economy being agrarian with the livelihood of 65% of the populace dependent on agriculture, scarcity of water has serious socio-economic implications. Moreover, drawing water for irrigation without proper replenishment leads to multiple issues like drinking water scarcity, water pollution, intrusion of minerals impacting public health, etc. Land areas becoming unfit for cultivation owing to loss of natural resources like soil as well as declining soil fertility, which in turn lead to loss of agriculture productivity.

Socio-economic aspects like size of land holding and fragmentation, location of the land in a particular terrain, access to water resources and feasibility of exploiting it, dependence on live-stock for livelihood and firewood for daily needs, involvement in formal and informal education – results in a diverse spectrum of stakeholder relationship and thereby resultant behavior. Watershed Management as a holistic approach has evolved taking all these dimensions into consideration.

National Agro Foundation has diligently maintained the holistic nature of watershed management without ever allowing any diminution neither in any component nor in the sequence of activities right from the inception of the watershed projects it has taken up with the support of NABARD.
NAF is working on four watershed projects covering 20 villages in Kancheepuram district. These are Arasoor [inception in 2006-07], Sirukalathur, Nugumbal and Othivilagam [inception in 2009-10] – totally comprising 5500 hectares with assistance from NABARD. While the earlier years focus on upper stretches of watershed area in terms of structures and works, the latter years focus on middle and lower stretches. All the four Projects are in Full Implementation Stage.

Highlights of project include:

<table>
<thead>
<tr>
<th>Description</th>
<th>2014-15</th>
<th>Since inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants for project activities for 2014-15</td>
<td>Rs. 65.43 lakhs</td>
<td></td>
</tr>
<tr>
<td>Grants for project administration for 2014-15</td>
<td>Rs. 11.66 lakhs</td>
<td></td>
</tr>
<tr>
<td>Total families benefitted</td>
<td>2723</td>
<td></td>
</tr>
<tr>
<td>No. of person-days of labor created by project</td>
<td>8950</td>
<td></td>
</tr>
<tr>
<td>Wages paid for manual labour</td>
<td>Rs. 24.41 lakhs</td>
<td></td>
</tr>
<tr>
<td>Livelihood grant for landless people</td>
<td>Rs.11.29 lakhs</td>
<td></td>
</tr>
<tr>
<td>Total Revolving fund utilized for loan to SHG members</td>
<td>Rs.35.77 lakhs</td>
<td></td>
</tr>
<tr>
<td>Families benefitted by loan from revolving fund</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Grant for supporting agriculture activities</td>
<td>Rs. 5.5 lakhs</td>
<td></td>
</tr>
<tr>
<td>Total Revolving fund utilized for loan for agriculture activities</td>
<td>Rs. 6.58 lakhs</td>
<td></td>
</tr>
<tr>
<td>Families benefitted by loan from revolving fund for agriculture</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total number of training programs conducted</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Following works have been carried out in the project area:-

<table>
<thead>
<tr>
<th>S. No</th>
<th>Details of Task carried out</th>
<th>2014-15</th>
<th>Since inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Formation of field bund</td>
<td>Cum 30333.08</td>
<td>137124.08</td>
</tr>
<tr>
<td>2</td>
<td>Deep tilling (Chiseling)</td>
<td>Ha 35.692</td>
<td>239.092</td>
</tr>
<tr>
<td>3</td>
<td>Disc Plough</td>
<td>Ha 1.625</td>
<td>99.625</td>
</tr>
<tr>
<td>4</td>
<td>Farm Pond</td>
<td>Cum 5769.1</td>
<td>12866.1</td>
</tr>
<tr>
<td>5</td>
<td>Cattle pond</td>
<td>Cum 4620.4</td>
<td>5331.4</td>
</tr>
<tr>
<td>6</td>
<td>Sunken Pond</td>
<td>Cum 585.9</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Water absorption trenches</td>
<td>Cum 413</td>
<td>1296.5</td>
</tr>
<tr>
<td>8</td>
<td>Continuous contour trenches</td>
<td>Cum 18</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Channel formation &amp; deepening</td>
<td>RM 6831</td>
<td>34621</td>
</tr>
<tr>
<td>10</td>
<td>Loose boulder structures</td>
<td>24(Different sizes)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Check Dams</td>
<td>4(Different sizes)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Agro horticulture</td>
<td>Nos 12813</td>
<td>29778</td>
</tr>
<tr>
<td>13</td>
<td>Agro forestry</td>
<td>Nos 33835</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>De-silting of village ponds</td>
<td>Cum 1(600 Cubic M Units)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Channel sterilizer / Regulator</td>
<td>Nos 1 (One)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Eri De-silting</td>
<td>Cum 15676.35</td>
<td>21570.35</td>
</tr>
<tr>
<td>17</td>
<td>Percolation Pond</td>
<td>Cum 5543</td>
<td>5543</td>
</tr>
<tr>
<td>18</td>
<td>Baby Pond</td>
<td>Cum 8475</td>
<td>8475</td>
</tr>
<tr>
<td>19</td>
<td>Sluice</td>
<td>Nos 1</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>Man-days</td>
<td>Nos 8950</td>
<td>38608</td>
</tr>
</tbody>
</table>
Technology Transfer

Israel probably is one country in the world where the farmer is assisted at his doorstep with every possible technology service and technology transfer support – which make Israeli farmers and Israeli agriculture one of the most renowned in the world for high productivity under scarce conditions. Back home, there are adequate studies to indicate that the areas where methodical technology transfer and extension services are available, farmer distress is minimal and farm productivity is better. The key thus lies in the Technology Transfer and appropriate extension services.

Two formats of Technology Transfer were carried out during this year. The first format involves analysis of the soil for major, secondary and micronutrients as well other fertility determining parameters and bring about a practical solution on site specific nutrient prescriptions. This format makes a judicious combination of organic, bio and inorganic sources both in soil as well as pest management. This approach brings about nutrient balance which reflects on crop productivity improvement as well as reduced costs due to reduction in usage of pesticides as the conventional methods are replaced with bio technological tools such as traps, herbal extracts, avoidance and repellence technologies [including organic formulations like Panchakaviya and five leaf extract and zinger garlic extract and other growth promoters]. This approach utilizes the locally available materials for use in nutrient balance as well as pest management.

During the year, NAF leveraged the Soil Testing facilities of the Technology Services completely and delivered yeoman results in two distinct projects of farm productivity improvement – across the two districts of Kancheepuram and Cuddalore. A third project also got initiated during this year in Villupuram district in collaboration with TNAU.

Currently, farmers practice intensive farming with injudicious use of fertilizers and pesticides which cause increase in cost of production without commensurate yield and return. Moreover, with continuous application of fertilizers and agrochemicals, the environment is also polluted and the resistance is developed by pests. Conventional practices of farming focuses only on use of major nutrients without adequate attention to secondary and micro nutrients.
Technology Services

Our nations’ founding fathers laid special emphasis on developing scientific temperament and rational thinking towards the path of progress. It is against this backdrop that NAF pioneered the setting up of modern laboratories for soil testing and food testing laboratories knowing fully well the need of technology services in the agriculture sector. NAF spent its initial years in validating the test procedures and crosschecking of test results with a US Laboratory and rendering the entire spectrum of services to Indian farmers and agencies. The soil testing laboratory specialized in accurate analysis of primary nutrients, secondary nutrients as well as micro-nutrients. Similarly the food testing laboratory specialized in

Laboratory Quality Management System as per ISO/IEC 17025:2005 International Standard and was awarded accreditation in December 2014. NAF is first NGO in India to get accreditation in the area of agricultural soil testing.

Analytical services - NAF Soil Testing Lab has been providing comprehensive soil health diagnostic services for agriculture development for the past 14 years. During April 2014 to March 2015, 563 Soil samples, 77 water samples and 91 other samples (compost, leaf, soil for texture etc.) have been tested. Apart from samples from Tamil Nadu, soil samples from other states UP, Maharashtra, Odisha, Madhya Pradesh, Karnataka and Kerala were tested during this period.

NAF Food Testing Lab has been carrying out Analysis of Food products for compliance to FSSAI Standards & Nutritional Analysis for Labeling Purposes. The Microbiological laboratory is testing Food & Water Samples for microbiological quality and swab samples for monitoring Good Food Hygiene, Sanitation and Personal Hygiene Practices. 181 food samples and 177 microbiology samples were tested.

NAF not only faces the daunting task of maintaining the laboratories to International standards, but also conduct awareness and education programs to propagate the use of these technology services. Recognizing the need of such technology facilities for this nation, Tata Global Beverages Limited supported the initiative of NABL accreditation for the soil and food testing laboratories in soil, food and water testing services. NAF fulfilled all the requirements of www.nationalagro.org.in
This format of technology transfer is by far the quickest and most visible in terms of benefit to the farming community [in terms of reduced costs and increase in yields]. While the format involved a demonstration plot and a control plot for the farmer to experience themselves, many of them started neglecting the control plot in the early stages itself – owing to their developing conviction in the method. A glimpse of the three projects is given below:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Project One</th>
<th>Project Two</th>
<th>Project Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>District operational</td>
<td>Kancheepuram</td>
<td>Cuddalore</td>
<td>Villupuram</td>
</tr>
<tr>
<td>Blocks operational</td>
<td>Chithamur, Acharapakkam, Madurandakam</td>
<td>Kattumannarkoil</td>
<td>Tindivanam</td>
</tr>
<tr>
<td>Project partner</td>
<td>SEED - DST</td>
<td>CSIR – CLRI</td>
<td>SPC - TNAU</td>
</tr>
<tr>
<td>Farmers training</td>
<td>225</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>FLDs</td>
<td>45</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Crops</td>
<td>Paddy, groundnut, horticulture</td>
<td>Paddy, groundnut, horticulture</td>
<td>To begin next season</td>
</tr>
</tbody>
</table>

The second format is titled NatuEco farming which was supported by NABARD. This format is entirely organic approach based. Two models titled “10 guntha” and “Gangamma Model” were separately attempted. AmritMitti and AmritJal are key ingredients for NatuEco farming. Training to the farmers was imparted at Malpani trust, Maharashtra. This project culminated in the current year with 28 farmers adopting 10 guntha model and 21 farmers adopting Gangamma model. Every farmer witnessed the reduced costs and improved yield as well as quality.
Empowerment & Institution Building

NAF’s constant push for ‘Empowerment & Institution Building’ with firm conviction on the set of principles of equality, transparency, knowledge sharing and working for the cause of common good and sustained application over the years has resulted in a wide spectrum of ‘Empowerment & Institution Building’. During the current year NAF has worked on ‘Empowerment & Institution Building’ at multiple levels, without ever losing the clarity of interdependence and inter-operability of the different levels viz.

- Individual [farmer or landless family]
- Self Help Groups
- Farmers' clubs
- Central Village Watershed Committees
- Farmers’ federations and farmers' producer organizations
- Entire village as an entity

A glimpse of the rigorous 'Empowerment & Institution Building' during 2014 -15 is presented below:

- Under the NABARD supported 'Strengthening and Handholding of Farmers clubs and federations, training was carried out in 166 villages. 38 federation level meetings were conducted. 24 training programs were conducted on governance and financial management for the volunteers and office bearers of Farmers Clubs and Farmers Club Federations. On the technical front, training was imparted on soil health management, Farm Machinery, and Integrated Pest & Disease management covering 133 farmers in 6 batches.

- Project proposal have been submitted for Uthiramerur & Thirukazhukundram Farmers Club Federation at IDBI Bank, Chengalpattu. Preliminary survey and data collection has been undertaken from the rest four block level federations so as to submit project proposals on value chain enterprises for funding support from NABARD and banks

- Under the NABARD supported watershed projects, 4 training programs on CVWC, 2 training programs on SHG at village level and one training program on SHG cluster level federation were conducted covering 157 participants

- 114 SHGs have been credit linked with banks to the tune of Rs.4.59 crores in Kancheepuram and Tiruvallur district project areas.

- The Revolving funds under the NABARD supported watershed project as well as NAF’s own funds saw 100% recovery of principal amounts and interests. Principal amount repayment was Rs. 12,55,000/- and interest payment was Rs.1,92,912/- [Interest on reduced Principal is applied in all Revolving Funds]

- Uthiramerur farmer’s federation received an approval of Rs.69.45 lakhs out of which Rs.16.97 lakhs were released to them. They have set up an agricultural inputs shop and procured 5 power tillers with the amount received.

Thirukazhukundram and Acharapakkam farmers' federations were able to leverage the Rs. 10 lakhs provided as subsidy under the 'Custom Hiring Scheme' of the Tamil Nadu Agriculture Engineering Department. They were provided a principal amount of Rs. 25 lakhs from Canara Bank [inclusive of subsidy
Knowledge Partner cum Resource Centre

With a firm footing in the arenas of Natural Resources Management, Technology Services and Technology Transfer as well as a strong conviction in Empowerment & Institution Building, it is but natural that NAF should evolve into being a strong Knowledge Partner cum Resource Centre, being sought by one and all for various purposes. A glimpse of the diversity of NAF serving as Knowledge Partner cum Resource Centre is given below

NABARD approved Centre for conduct of certificate course on Agri Clinic and Agri Business Centre

Training for the 9th batch comprising 26 students and 10th batch comprising 35 students were conducted during the year. Out of a total of 265 candidates who have completed the course [cumulatively], 121 have established Agri Clinic or Agri Business Centre with bank support and NABARD subsidy. Agripreneurs Meet was conducted at CFRD wherein 30 Agripreneurs participated in the program.
NAF approached TAFE for undertaking projects on training and agriculture cluster development project for productivity improvement with CSR of TAFE. A proposal for training of 250 farmers nominated by TAFE was sanctioned. 7 batches covering 146 farmers have been trained under the project.

Training Program on Agriculture Productivity Improvement with TAFE

Training program with Sundaram Fasteners Limited (SFL)

Sundaram Fasteners sponsored farmers training program titled “Training of Farmers on Farm productivity Improvement and Agri Value Chain Enterprises” was conducted for eight batches covering 261 farmers.
Training Program for Tata Steel Rural Development Society (TSRDS)

Farmers As part of exploration of joint projects in agriculture development by TSRDS and NAF, farmers with TSRDS were trained on agriculture productivity improvement at NAF to begin with. Accordingly, the first batch of farmers from Jharkhand and Odisha attended 4 days training program on hi-tech vegetable cultivation at NAF during December 15th – 19th, 2014.
Program Study Centre for PGDFSQM of IGNOU

Sessions are in progress for two batches comprising 50 students [first batch comprising 23 students and second batch comprising 27 students]

Adjunct Lab for Anna University

NAF Food Testing Laboratory has been declared Adjunct Lab for B.E (Agriculture & Irrigation Engineering) students of TNAU. 36 students are utilizing the lab facilities

Student projects – ME students of Anna University, BE students of RMK Engineering College and Jeppiaar Engineering College, Chennai, M.Sc [Food Technology & Management] students of MOP Vaishnav College and SIET College did their projects at NAF during the year

NAF Andhra Pradesh Centre conducted 3-month Tailoring Training Program course for two batches comprising 97 women at Sodam Training Centre. A 45 day Industrial Sewing Machine Operator training program was conducted for 80 women with sponsorship from APITCO and M/s Chaitanya Builders, out of which 45 women got placements in garment industry

Farm School Program – 110 students from 3 schools visited NAF campuses for an exposure to agriculture and rural environment.

NAF team members’ participation as resource persons – NAF team members viz. Ms. R.Kalpana, Sri J. Saibaba, Sri D.Kumaravelu, Sri JeganMohan Reddy participated in various conferences, meetings and training programs to share their expertise and experience.
iNautix Technologies and their Principals The Bank of New York Mellon Corp Inc (BNYM), USA has empanelled NAF as a field partner for their Community Partnership Initiatives and Employee Volunteering Program. The volunteers participating at NAF received the Global Best Volunteering award
Right from its inception, NAF has strongly believed in the necessity of carrying out research [pure as well as adaptive] in the areas of its involvement in order to be able to lay a strong foundation for the long term. The management of NAF has encouraged the field staff and leaders to take up research at an individual level.

The Technology Services vertical has taken the lead in carrying out research. The Tissue Culture Laboratory undertakes research in the area of micro-propagation of medicinal plants. With the increase in demand for herbal products and need for conservation of rare medicinal plants; micropropogation of medicinal plant varities is gaining momentum. Bacopa monneri (Brahmi), Leucus aspara (Thumbai), Hybanthus enneaspermus (Oridhal Thamarai), Costus igneus (Insulin plant), Centella asiatica (Vallarai), Andrographis paniculata (Nilavembu) and Acalypha indica (Kuppaimeni) are being sub culture Laboratoryed at NAF Plant Tissue Cult. Callus phytochemical screening and compound identification is in progress.

One of the team's research paper and another students' research project [supported by the Tissue Culture Laboratory] led to publications in peer reviewed Journal:


With decade of rich experience in agriculture and rural development, NAF has increased its footprint to five districts [across two states] in the current year and envisages reaching out to eight districts [across four states] in the prospective [2015-16]. Exploring thematic as well as locale specific partners is an essential pre-requisite for such a growth trajectory. A brief on further such explorations:

**Watershed Program**

A CSR initiative of Larsen & Toubro Limited

The CSR department of Larsen & Toubro commissioned NAF to conduct a pre-assessment study across four states of Tamil Nadu, Gujarat, Rajasthan and Madhya Pradesh focusing on areas with acute water crisis and severe sanitation problems, in order to be able to carry out meaningful activities for their corporate social responsibility initiative. Suitable areas were first located based on studying the terrain and aerial survey using Google maps and GIS software – which were then complemented by ground level study. Based on the initial presentations, L&T asked NAF to focus initially on Coimbatore. The Integrated Community Development Projects in Chettipalayam and Pappampatti were inaugurated on March 26, 2015 at Coimbatore.
TNAU – NAF Joint Project on Lean Farming

This project has been sanctioned by State Planning Commission which is to be implemented by TNAU and NAF in Villupuram District. The project is for duration of 1.5 years which commenced in December 2014. The project outlay is Rs.25.39 lakhs and the villages to be covered are 30. The aim of the project is to improve the yields of various crops using “Lean Farming” methods. The initial set of activities have been carried out in Villupuram district as described in the chapter on “Technology Transfer”.

Promotion of Farmers Producer Organizations

NAF has signed a Memorandum of Agreement with TN Small Farmers Agribusiness Consortium (SFAC) for promoting one FPO in Villupuram District. The project outlay is Rs.20.45 lakhs for 3 years. The three project involves activities like mobilization of 1000 primary producers of pulses, training and handholding them on best agriculture practices, develop pulses based business proposals, register the group under Companies act and to start business which may include input center, common machinery services center, primary processing, godown, transport vehicle for marketing, bank credit linkage and tie up with industries and consumers.

Similarly, NAF has also signed a MoU with NABARD as Resource Institution for promotion of 5 FPOs in Tamil Nadu for the period of three years. Two FPOs in Thiruvallur, one FPO each in Kancheepuram, Villupuram and Cuddalore are to be promoted in three years with each FPO covering 500 farmers.

MoU with Tamil Nadu Banana Producer Company Ltd.

Realizing the importance of partnering with various agencies for its outreach programs, NAF has signed a MoU with Tamil Nadu Banana Producer Company Limited for Rejuvenation of Traditional Banana Varieties on January 30, 2015 on the occasion of 105th Birth Anniversary of our Founder Mr. C Subramaniam. The techniques of genome sequencing and tissue culture of traditional banana varieties would be explored. This is expected to cater to the needs of banana farmers throughout India in terms of supply of disease free high quality saplings.

MoU with National Institute of Rural Development - NAF has signed a MoU with National Institute of Rural Development (NIRD) on March 17, 2015 for working together on farm and non farm skills development, action research and academic programs on rural management.
Internal Strengthening

NAF, since inception, has always accorded high priority for internal institutional strengthening. Two aspects were focused upon – one, enhancing individual and team potential thru participation in various capacity building programs and two, continuously improving the systems and procedures within the organization.

The fruits of such internal strengthening can be seen in NAF being awarded NABL accreditation for its soil and food testing laboratories, the first of its kind in the NGO sector. Senior team members pursuing a PhD program in their line of interest and at the same time, completely in synergy with NAF activities is another such hallmark. The decision of the board to appoint senior experienced team members to head the operations of the organization as it enters its teen years is another milestone.

Pursuing the NABL accreditation as well as fine tuning the operations with a young team heading the operations of the organization consumed the energies within the organization – leaving little scope for focusing on capacity building of various team members and similar activities. A small list of such participation is given below. NAF and its management will be continuing to pursue further capacity building and internal strengthening measures in the prospective.

✧ Mr. Jeganmohan Reddy D participated in Training on Enhancing NGO Efficiency at XIME, Bangalore – October 9th to 11th, 2014. The training sessions were on NGO Management, Project Preparation, Presentation, Innovative ideas, Financial Management.

✧ Mr. Jeganmohan Reddy D participated in three days National workshop cum exhibition on "Popularization and Commercialization of Low Cost Agricultural Technologies" during February 4th to 6th, 2015.

✧ Ms. R Kalpana participated in State Credit Seminar organized by NABARD on February 3rd, 2015.

✧ Mr D Kumaravelu participated in Program on “Engaging NGOs as BCs” at BIRD, Lucknow during April 2014

✧ Mr. Jeganmohan Reddy D, Project Officer (Sodam Project) attended India’s Largest Exhibition on Agriculture, Farm Machinery, Dairy, Poultry, Livestock Equipment & Agri Processing Technology on August 24th 2014.
The Mission of NAF to “Create Replicable Models of Prosperous Rural Clusters” necessitates an effective and efficient “Outcome Monitoring System” to be in place or in simple words, track the transformation brought about by its spectrum of activities. NAF always had the benefit of accomplished senior people visiting the project activities to draw inferences as well as offer valuable feedback.

With the NAF decision to enhance its footprint, it is imperative to have a well-defined system of “outcome monitoring” or tracking transformation. This report presents a few anecdotes of such transformation.

**The “half-teachers” and ambassadors of watershed program**

The team from NAF interacted with Sri Jyothi of Kumuli village and Sri Punniakotti of Nugumbal village, who have been active participants in the watershed program since its inception. While they were requested to narrate their experience in their own words, they were also asked about their capability to be prospective ‘teachers’ / ‘watershed implementing experts' and their assessment about the rest of the farmers / village folk in terms of knowledge accrual and participation in watershed program. The responses given by both of them were broadly similar, hence being presented here as one.

During the initial days, when NAF approached the villages for watershed activities, the skepticism was high and farmers had many doubts and suspicions, especially about their own land – will they have control over it, whether some irreversible damage will be inflicted upon it, whether the boundaries will be re-written, and whether the structures being talked of would impact their agricultural activities. When a check dam construction would be talked about, the farmers will first try and avoid it being in their land boundaries. Constant pursuit and training by NAF led to slow acceptance of the various activities. Farmers especially took time to accept since the benefit of various structures started to be visible only after one – two years. Today, after more than 5 – 6 years of activities, every farmer is rejoicing at the benefits they have been able to get. Many are able to draw water from the wells for two paddy crops and a third horticulture crop. The farmers are restricting themselves, not because of water availability, but because of the need to allow the land to rest and rejuvenate.

Today farmers from neighboring villages like Poongunnam and Esoor keep on approaching us asking about taking up watershed activities in their villages – as they can distinctly perceive the benefits. However, farmers of our own watershed project area are content in reaping the benefits of the watershed program, and not keen on progressing further like farmers' clubs, farmers' federation and farmers' producers' organization. They mostly await benefits to be delivered to them while lacking the initiative to take things forward by themselves.

We are familiar with all the structures of watershed, we know the methodology of assessing their placement, and we can do estimates as well as carry out works [including supervision] in any new area. We can state that we are 60 – 75 % capable of being prospective teachers, and would like be teachers, if we had a chance. Of course, we never thought of this till you asked the question.
Accruing Self-Reliance with a little support

The NAF team interacted with Mrs. Suguna of Sirunagar village in the presence of watershed committee members. Mrs. Suguna was recipient of a loan for procuring a milch cow. She was asked to narrate her own experience especially about how she felt she grew economically with the loan.

I had one milch cow with me and was looking at my day-to-day cash requirement since my two children were college going, needing cash for travel, etc. I felt that another milch cow would supplement my income, especially liquidity and approached my SHG with a request. The SHG approved my request and presented my case to the watershed committee. The watershed committee assessed my loan repayment character and approved my loan which was disbursed by NAF. I have never defaulted on my loan instalments. As time passed, not only was I able to get the requisite cash to take care of my college going children, I was also able to save money from my agriculture activities and sale of milk from two cows. Today, I have been able to buy a third milch cow without taking loan from anyone.

The watershed committee members out vouched for the fact that there is not a single defaulter amongst all the names they have proposed [and they will also not allow someone to be a defaulter].

Seizing an opportunity to grow

The NAF team interacted with Mr. V. Vedagiri of Cheyyur, who had done the ACABC certificate course at the Chunambedu campus of NAF in the current year.

I have done my diploma in agriculture and set up this agriculture input shop at Cheyyur. I normally visit farmers' fields' right from the morning and continue till late in the evening. I have been a diligent student during my college days and this helped me in stabilizing my business. I was looking forward to expanding my business when a friend told me about the ACABC program as well as the bank support it provides [a loan to the extent of Rs. 25 lakhs with a 36% subsidy]. Till then I had not heard about NAF. The friend added that the ACABC course is open only for agriculture graduates and post-graduates and not for diploma holders. I left my desire in abeyance.

When I heard of some success stories of ACABC, I decided to visit the Chunambedu Centre myself and was pleasantly surprised to know that I am eligible. I immediately enrolled and my batch had 27 participants. Most of us were diligent and the attendance was good. The NAF ACABC course was a good refresher course on all aspects for me and it helped me rejuvenate. On completing the course, I submitted a proposal with Karur Vysya Bank and I was granted my loan and subsidy. Prior to this my turnover was around Rs. 25 lakhs and it has grown by about Rs. 10 lakhs now.

While some of my batchmates have applied for loan for various agri businesses, others found it easy to get jobs with companies dealing in agriculture inputs since people with ACABC certification are in demand in these companies.
The Uthiramerur Farmers' Federation was formed by aggregating 50 farmers’ clubs – 35 formed and facilitated by NAF while the remaining were formed and facilitated by two other NGOs viz. Hand-in-Hand and CRDS. NABARD asked NAF to train and facilitate this federation. Based on the training and awareness programs conducted, the Uthiramerur federation took a lead in shaping its own activities. The office bearers of the federation, though belonging to different political affiliations, decided to function in the federation apolitically. They even adopted a verbal resolution to come to federation meetings in neutral clothing [leaving aside the dress code of respective political outfits]. In spite of their respective clubs being mentored by different NGOs, they did not allow this factor to come into play – giving prominence only to performance and character. Thus the office bearers are from clubs mentored by all the 3 NGOs.

The next challenge to the Uthiramerur federation came from the banks. Though the federation was originally approved a loan of Rs. 85 lakhs, this was not disbursed as the banks wanted a collateral. The banks refused the federations’ commitment and resolutions as security. The Uthiramerur federation then came out with a list of volunteers who pledged their personal assets for the federations’ cause. Based on assessment and evaluation of these assets, NABARD reduced its sanction to Rs. 69.45 lakhs and released the first installment of Rs. 16.97 lakhs in January 2015. Assets procured with this release were first registered in the names of individuals who pledged their personal assets and then operations were started by the federation – hiring the machines / selling agriculture inputs, etc.
Knowledge Partner cum Resource Centre

- **Anna University:** Lab Sessions were completed for 18 B.Tech (Food Tech), V semester Students and 23 Students of M.Tech (Food Tech)

- **Student Projects:** Two ME students of Anna University and 3 BE students of RMK Engineering College carried out projects on preservation by pulsed electric field of milk and fruit juices respectively.

- 5 Students of II M.Sc (Food tech and Management) of MOP Vaishnav College are carrying out their project in new Product development.

- Anti-Microbrial study on Green Tea and Black Tea are carried out by one PG student of SIET College.

- Microbiological Shelf life study is being carried out on new product developed by five PG students of MOP Vishnava College.

- Three B.Tech Biotechnology students from SRM University, Chennai have completed Internship cum Training for three weeks. (June 2014)

- One student from Sastra University, Thanjavur has completed Internship cum Training for three weeks. (June 2014)

- 2 B.Tech students from Jeppiaar Engineering College, Chennai doing 3 months project course (Jan to March 2015).

- 110 students from three schools (Hussain Memorial Mat. Hr. Sec. School, HLC International School and Manthan School) visited NAF Centres for educational-cum-exposure program on Agriculture & Rural Environment.

- 27 B.E Agri Engineering students from Anna University visited NAF as part of their curriculum to understand the agriculture and rural set up

- Shri J. Saibaba, Head – Food Safety delivered a lecture on “Food and You” at Anna Adarsh College for women on Aug 20th 2014.

- Shri J.Saibaba delivered a lecture on “Risk analysis” to Karnataka Food Safety Officers and Designated officers on September 26th, 2014 and October 28th, 2014 organized by CONCERT Chennai.

- Ms. R Kalpana delivered a lecture on 'Laboratory Quality Management' at Shri A M M Murugappa Chettiar Research Centre on February 25th, 2015.
## Project titles and sponsors

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Title of project / activity</th>
<th>Sponsors / Partner institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accreditation of Soil and Food Testing Laboratories by NABL</td>
<td>Tata Global Beverages Limited</td>
</tr>
<tr>
<td>2</td>
<td>Adjunct laboratory for agriculture engineering &amp; irrigation students</td>
<td>Anna University</td>
</tr>
<tr>
<td>3</td>
<td>Certificate course on “Agri Clinic &amp; Agri Business Centre”</td>
<td>NABARD</td>
</tr>
<tr>
<td>4</td>
<td>Farmer’s Federation</td>
<td>Tamil Nadu Small Farmer’s Agribusiness Consortium [TNSFAC]</td>
</tr>
<tr>
<td>5</td>
<td>FTTF Handholding Project</td>
<td>NABARD</td>
</tr>
<tr>
<td>6</td>
<td>IMPACT Project</td>
<td>CSIR – CLRI</td>
</tr>
<tr>
<td>7</td>
<td>Lean farming</td>
<td>TNAU, TN State Planning Commission</td>
</tr>
<tr>
<td>8</td>
<td>Natural Eco farming [NatuEco]</td>
<td>NABARD</td>
</tr>
<tr>
<td>9</td>
<td>Participatory Watershed Management Program – Pre-Assessment Study</td>
<td>CSR – L&amp;T</td>
</tr>
<tr>
<td>10</td>
<td>Popularization of integrated pest management and soil health management technologies (ICM) for sustainable crop productivity improvement</td>
<td>Science for Empowerment &amp; Equity Division, Department of Science &amp; Technology [SEED – DST]</td>
</tr>
<tr>
<td>11</td>
<td>Post Graduate Diploma in Food Safety and Quality Management – program study centre</td>
<td>IGNOU</td>
</tr>
<tr>
<td>12</td>
<td>Diploma in Watershed Management – program study centre</td>
<td>IGNOU</td>
</tr>
<tr>
<td>13</td>
<td>Training farmers on farm implements</td>
<td>TAFE</td>
</tr>
<tr>
<td>14</td>
<td>Training farmers on watershed project planning and management</td>
<td>TATA STEEL, Jamshedpur</td>
</tr>
<tr>
<td>15</td>
<td>Watershed projects – Arasoor, Sirugalattur, Nugumble, Othivilagam</td>
<td>NABARD</td>
</tr>
</tbody>
</table>
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• **Vice Chancellor, Anna University, Chennai (Ex-officio member)**
About Us

National Agro Foundation is a registered Charitable Trust working for Socio-Economic Empowerment of the rural communities in India for the past 14 years.

In line with the Vision and Mission of the Foundation, we have taken up various grassroots interventions for “Integrated Rural Development” in Tamil Nadu and Andhra Pradesh.

Achievements:

- **Agriculture Productivity Improvement** to the tune of 30 – 115 % in various crops at smallholder farms through **Lean Farming**

- **Soil and water conservation** including Afforestation leading to increased water availability and green cover

- **Skill Training** in Farm Sector and **Agri Entrepreneurship Development** for various stakeholders comprising of farmers, youth, women, bankers, NGOs, farmers associations etc.

- **Quality Laboratory services** related to Soil Fertility, Food safety, Water and Tissue Culture offered to farmers and other stakeholders pan India.

- **Empowerment of small holder farmers** through formation of Farmers Producer Organisations

- Partnerships and Networking with various Government Agencies and Corporates established for effectual Rural Development.
NATIONAL AGRO FOUNDATION - LABORATORY SERVICES DIVISION

has been assessed and accredited in accordance with the standard
ISO/IEC 17025:2005
“General Requirements for the Competence of Testing & Calibration Laboratories”
for its facilities at
Research & Development Centre, Anna University Taramani Campus, CSIR Road, Taramani, Chennai, Tamil Nadu

in the discipline of
CHEMICAL TESTING

Certificate Number T-3228
Issue Date 08/12/2014
Valid Until 07/12/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

N. Venkateswaran
Program Manager

Anil Relia
Director

Prof. Ashutosh Sharma
Chairman