



Nature-Positive Farming
& Wholesome Foods Foundation (N+3F)

NATURE-POSITIVE FARMING & WHOLESOME FOODS FOUNDATION (N+3F) A brief report on initiatives



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A brief report on initiatives

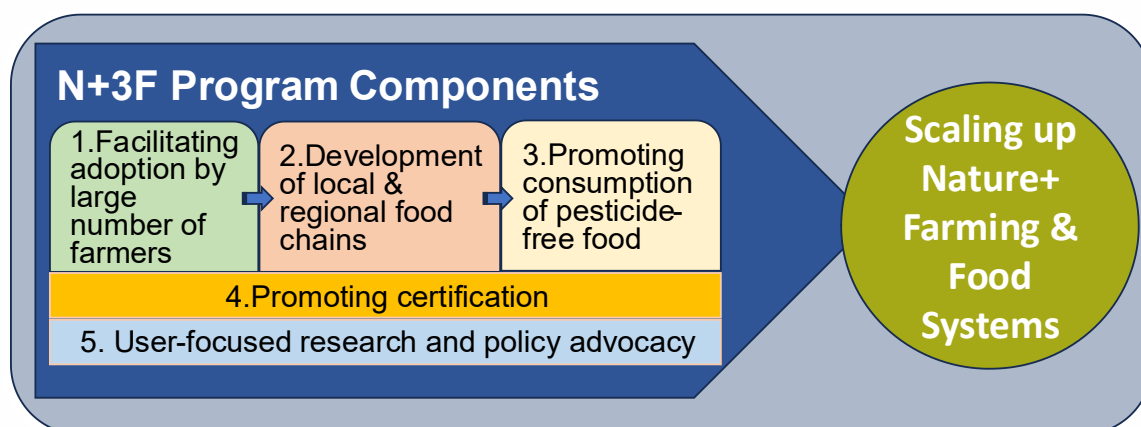
Introduction

1. About N+3F

The Nature-Positive Farming and Wholesome Foods Foundation (N+3F) is a Section 8 non-profit organisation committed to promoting context-specific nature-positive non-extractive food, feed, and fibre production systems that support biodiversity, rebuild fertile soils, store soil carbon, create employment, and supply safe, pesticide-free, wholesome foods. N+3F emerged from the NPM (Non-Pesticidal Management of Agriculture) Network, a civil society collective. It was initiated on March 13, 2021, by seven directors who have rich experience in the development sector. The specific objectives of N+3F are:

- To support farming communities, farmer organisations, NGOs, and other agencies to evolve, establish, and scale up context-based nature-positive farming systems, leading to the elimination of the use of synthetic chemical pesticides and the improvement of soil health and diversity in the cropping systems.
- To facilitate the development of regional/territorial and national value chains for safe, pesticide-free wholesome foods.
- To promote local consumption of pesticide-free foods.
- To build a knowledge base, serve as a resource organisation, and create an enabling environment for nature-positive farming and wholesome food systems.
- To promote equality and social inclusion in N+FFS by engaging with vulnerable sections like small farmers, Dalits, tribals, women, youth, and consumers with low purchasing power.

N+3F espouses a multi-scalar farm-to-plate approach for wider adoption of N+FFS as indicated by its five program components. More details on N+3F can be seen at www.np3f.in



2. Focus Areas for the first five years

Being a new organisation, the following areas were given more focus:

1. Strengthening and broad basing the partnership with CSOs and other organisations with similar mandates
2. Building a team and capacitating the team members
3. Developing and deepening the program components through implementation

Progress made

1. Strengthening and broad basing the partnership

Building fruitful working relationships with different stakeholders in the pesticide-free farming and food space is central to the work of N+3F. Over the last two years and 10 months, N+3F has identified and built working relationships with the various partners, as described under different headings below:

1.1 Implementation partners

A partnership was established with 27 civil society organisations (15 in Odisha, five in Madhya Pradesh, four in Chhattisgarh, two in Karnataka, and one in Andhra Pradesh) by building on the partnership of the NPM Network and by identifying new partners. Preparation of the perspective plan and annual plan was facilitated on a one-to-one basis by the N+3F team. Efforts were made to: (i) strengthen the basics of the nature-positive agricultural program, (ii) scale up the operations and (iii) deepen the program interventions. Partners were nudged to creatively integrate the nature-positive agriculture program with the existing projects and initiatives.

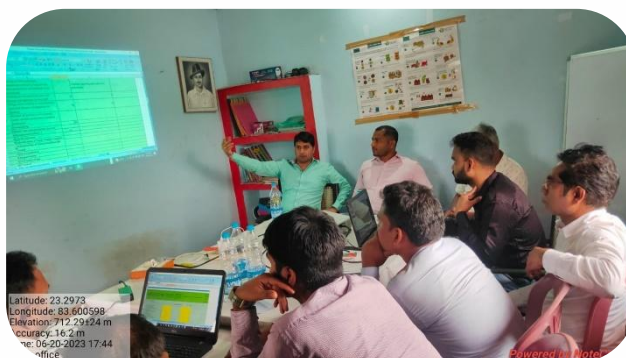


Fig. 1: Annual plan workshop with SGVS Team, Chhattisgarh

1.2 Strategic partners

A strategic partnership was strengthened/initiated with the following entities:

1. Indian Institute of Soil Science (IISS), ICAR, Bhopal
2. Safe Harvest Private Limited
3. Bharat Rural Livelihoods Foundation (BRLF)
4. SELCO Foundation, Odisha
5. National Coalition for Natural Farming (NCNF)

1.3 Service providers and other stakeholders

N+3F has initiated working relationships with the following agencies offering relevant services in the sustainable agriculture and food chain space:

1. Aditi Organic Certifications Pvt. Ltd.
2. TraceX and TraceAgtech
3. GreenHub
4. GrainPro and ProHarvest
5. Fabricators of machines
6. Product testing labs
7. ITC and few other buyers

N+3F organised the **Partners Meet 2023** event in Hyderabad on the theme of ‘Deepening and Scaling Up Sustainable Agriculture and Food Systems’. The two-day event helped to strengthen the relationship with the partners and jointly explore the interventions needed for deepening and scaling up sustainable and pesticide-free farming and food systems.



Fig 2: N+3F Partners Meet 2023 organised at Hyderabad

N+3F engaged with Arya.ag, Veda Vedanta Gurukula Sri Sringeri Sharada Peetham, and Vasundhara and offered customised technical support. For Arya.ag, N+3F facilitated the development of a climate-resilient package of practices for paddy, maize and finger millet for Bihar and Jharkhand. For Vasundhara, support was given for assessing and strengthening their livelihood program with forest-dependent families in Odisha.



Fig 3: N+3F interacting with producer groups and federations in Daspalla, Odisha

2. Developing and deepening N+FFS Program Components

2.1 Facilitating the adoption of N+FS by a large number of farmers

Based on the needs of the partners, focus was given to the following two aspects:

1. *Facilitating the adoption of ‘total system interventions’ by focusing on nature-positive key production practices and context-specific package of practices.*
2. *Promoting viable production clusters by building capacity on saturation approach, workflow, organisation structure, MIS, etc.*

Initiatives taken in this direction include:

2.1.1 Development of resources on nature-positive farming

a) Resource documents

1. Total System Approach in Nature-Positive Farming Systems (N+FS)
2. Key Production Practices (KPP) and assessment of adoption by farmers
3. Creating a flourishing soil microbiome
4. Understanding nutrient management
5. Understanding crop health management, including i) Conceptual framework, ii) Plant defence mechanisms, and iii) Fending pests and diseases through nutrient management
6. Designing, promoting adoption and studying diversified cropping systems
7. Ensuring microbiome-rich seeds
8. Synergistic foliar application as a tool for promoting N+FS
9. Agroecological weed management
10. Improving the nature-positive Package of Practices (PoP)
11. Tools and methods for smallholder farmers to understand and act on soil health and crop nutrient requirements
12. Do-It-Yourself Bioformulations in agriculture
13. Setting up small and medium-scale bio-input production units
14. Assessment of Bio-Resource Centres and planning operations for a crop season
15. Promotion of a cadre of resource farmers
16. An extensive list of references on N+FS
17. Glossary and FAQs on N+FS
18. Establishing an N+ Production Cluster (NPC)

b) Nature-Positive Farming: A Holistic Alternative – A short film

2.1.2 Capacity building of partners

One of the major interventions of N+3F is to build the capacities of its partners so they can adopt nature-positive farming systems in their respective areas in a more effective way. Need-based capacity building was offered to the old and new partners. Cross-learning between the partners was also facilitated. Efforts taken include:

1. Exposure visits to SAMUHA and Samaj Pragati Sahayog (SPS), long-standing practitioners of pesticide-free agriculture
2. Total System Interventions, Key Production Practices and grading of farmers
3. Preparation of location-specific PoPs for the focus crops
4. Orientation on the production cluster approach
5. Setting up small-scale and medium-scale bio-input production units
6. Preparation of different types of bioformulations
7. Training on less-known production technologies like waste decomposer, CVR technique, Ganajeevamrutham 2, etc.
8. Training on the Farmers Field School (FFS) method
9. Understanding and application of the science of nature-positive farming systems
Understanding the science covered: i) the role of soil and plant microbiomes, ii) how the adoption of diversified cropping systems helps in rejuvenating the soil health, enhancing resilience to biotic and abiotic stress and enhancing productivity, iii) the nitrogen solution, iv) the phosphorus paradox, v) understanding nutrition management and vii) understanding crop health management. Application of the science of N+FS included i) designing location-specific diversified cropping systems, ii) ensuring microbiome-rich seeds, iii) synergistic foliar application, iv) improving PoPs, and v) measuring crop health using the Brix refractometer.



Fig. 4: Training on KPP, Scoring and Classification of farmers for the staff of MJVS



Fig. 5: Training on preparation of bioformulations to SHG farmers with Vikasana, Karnataka



Fig. 6: Training of Facilitators on the Farmers Field School at Koraput, Odisha

10. Realising Prosperity with Nature-Positive Farming

Organised for farmers and field staff in locations of SPS and SEWA on i) problems related to conventional agriculture, ii) the role of soil and plant microbiomes, iii) the importance of seed microbiomes, iv) reviving soil fertility, and v) Adopting diversified cropping systems.

11. Undertaking action research trials

Themes include: i) evolving location-specific PoP for pesticide-free cultivation of focus cropping systems and measuring outcomes, and ii) evolving location-specific diversified cropping systems

12. Understanding connections between agriculture and nutritional quality of foods

13. Online training on the following topics:

- *Soil health management: CVR technology and Dabholkar method of green manuring*
- *Preparation and use of Ganajeevamurtham Type 2 and CVR Technology, and adoption of the Dabholkar method of green manuring*
- *Deploying Do-It-Yourself Growth Promoters for enhancing crop performance*
- *Innovations in weed management*
- *Agroecological weed management*
- *Agroecological pest management in cauliflower, tomato, chilli and brinjal*
- *Village-level Technology Resource Centre by the People Science Institute*
- *Orientation to Krishi Mitra Software by SPS*
- *Promoting BRCs of different scales by the Green Foundation and*
- *BRC management by Abhishek, an entrepreneur from Andhra Pradesh*

2.1.3 Implementation support

Need-based support was offered in the on-field implementation of the following interventions by the partners:

1. Facilitating the adoption of location-specific PoPs by the farmers
2. Setting up small-scale Bio Resource Centres (BRCs)

N+3F has been supporting its partners in setting up small-scale BRCs to make available needed bio-formulations on time in an accessible place at affordable prices. Support was given to 22 partners for setting up 73 BRCs. These units were run by the women SHGs/producer groups. Besides these, support was given to two partners for setting up



Fig. 7: Support to SSGVS for setting up small-scale BRC

medium-scale BRCs. A range of bioformulations was supplied to 48065 farmers in nearly 123 villages by the 75 BRCs set up by the partners with the support of N+3F.

Gaining from the experience of running the BRCs supported by N+3F, a few partners like SIDI, CYSD, SEWA, SSS, Lokadrusti and JMA have set up new BRC units on their own with support from various agencies.

3. Implementing DCS in SPS locations
On-site support was given to the field team and key farmers on i) developing location-specific diversified cropping systems for the prevalent Kharif and Rabi crops, and ii) documenting results and key learnings of the adoption trials.
4. Introduction of waste decomposer and CVR technique of pest management among 25 partners
5. Support for the initiation of new production clusters by a few partners



Fig. 8: DCS farmer in plantation crop at Bhagvanpura location, SPS



Fig. 9: Application of CVR technology in Brinjal crop

2.2 Supporting development of N+ local and regional value chains

Focus was given to the following two aspects:

1. Strengthening farmers' producer organisations (FPOs)
2. Supporting FPOs and CSOs to move up the value chain for pesticide-free foods

Initiatives taken in this direction include

2.2.1 Development of resources on value chain development

a) Resource documents

1. Manual on improving the quality of grains during harvest, storage and handling
2. Guidance manual on non-chemical management of pests in the storage, processing and handling of foods
3. Reference Standard Operating Procedures (SOPs) for Food Business Operators (FBOs) engaged in pesticide-free chains:
These SOPs indicate the ways by which Zero Pesticide Use Agriculture and Foods (ZPUAF) Standards can be practised systematically by FBOs. Reference SOPs covered major operational aspects an FBO needs to give attention to, including i) procurement, ii) storage, iii) processing, iv) packing and labelling, v) cleaning the unit, vi) pest management, and vii) waste management.
4. Toolkit for developing customised SOPs by FBOs in pesticide-free space
5. Guidance manual on financial linkages to FPOs

6. A booklet on the legal compliance of FPOs
7. Technical manual on primary processing of cereals, millets, pulses, and oilseeds
8. Technical manual on the packaging of foods
9. Manual on post-harvest handling of perishable produce
10. Manual on business planning for the small-scale food processing industry

b) Educational film

[Marketing of pesticide-free safe foods by Ram Rahim Pragati Producer Company Limited](#)

– A short film

- *It covers the supply chain practices and protocols followed by Ram Rahim Pragati Producer Company Limited (RRPPCL), Madhya Pradesh, while procuring, storing, processing and marketing pesticide-free produce.*

c) Posters

Educational posters were developed on the following themes:

- *On-farm post-harvest protocols to be followed for avoiding contamination and commingling*
- *Best warehouse management practices for non-perishable produce*
- *Non-chemical management of pests in storage, including traditional and modern methods*
- *Hermetic storage of foods*

2.2.2 Support for FPOs

N+3F considers that Farmers Producer Organisations (FPOs) are an important institutional intervention in the development of markets for the pesticide-free food category. In this perspective, N+3F has been working with partners to strengthen their FPOs. The initiatives taken include:

a) Formation of the FPO

- Training given on steps for FPO formation, mobilisation of shareholders and share capital, selection of Board of Directors and registration procedures
- Supported preparation of proposals to get funds for initiating FPO, like Producer Organization Development Fund of NABARD

b) Customised support to strengthen FPOs

- There was a large variation across the partners in the performance of FPOs. So the N+3F team visited various partners to assess the FPOs promoted by them. Based on the assessment, the following customised training and support were offered to various partners and interested organisations like Janasahajya, YCDA, CYSD, SEWA and Lokadrusti.



Fig. 10: Interaction with the YCDA team



Fig. 11: Training to SEWA team on strengthening FPO

i) Collective capacity-building sessions on FPO development

- *Basics of FPO management*
- *Exposure visit to Ram Rahim Pragati Producer Company Ltd., a well-performing FPO*
- *Preparation of a business plan for FPOs*
- *Legal compliances to be followed for FPOs*
- *Financial linkages to FPOs*

ii) Customised training for the Board of Directors, FPO staff and NGO staff of individual agencies

iii) Business plan preparation support

- *It involved participatory on-site identification of business opportunities with BODs and staff of VIEWS, vision building on business interventions, and drafting the business plan.*

2.2.3 Capacity building on value chain development

1. Visit the hub of Safe Harvest Private Limited, a leading pan-Indian pesticide-free food market player

2. Hands on training on

- *Hermetic storage technologies and their deployment with GrainPro*
- *TNAU insect traps for monitoring storage pest infestation*
- *Quality checking, aggregation and storage of pesticide-free produce with the support of Ruchi*

3. Workshop on pesticide-free post-harvest operations

- *Organised with the National Coalition for Natural Farming for 25 NGOs in Madhya Pradesh*

4. Training on Standard Operating Procedures (SOPs) for post-harvest operations:

- *Covered precautions to be followed during aggregation in the collection centre to avoid contamination and commingling, robust procedures for grain sample collection, the need for using safe floor cleaners, and good storage practices*

5. Training on quality checking and enhancing the marketability of agricultural produce:

- *This covered best practices for harvesting to minimise losses; proper drying, grading, and storage techniques to preserve nutritional value and prevent spoilage;*



Fig. 12: TNAU model insect trap

and certification requirements to improve access to profitable markets.

6. Training on Development of Agroecological Food Chains

- *Organised with SPS for APF partners and covered defining agroecological food chains, quality parameters to be looked at during procurement, and warehouse management.*



Fig. 13: Training on quality checking, aggregation and storage, Bhubaneswar, Odisha

7. Training on ONDC registration for digital marketing of pesticide-free foods

2.2.4 Implementation support

N+3F has been nudging partners to move forward on the value chain development of pesticide-free produce they are dealing with. In this direction, support was offered to selected partners for the following interventions:

i) Introduction of

- *Hermetic storage technologies*
- *Tamil Nadu Agricultural University insect traps*
- *Equipment for quality checking of crop produce.*
- *The spiral grader and solar dryer.*

ii) Establishing small-scale primary processing units covering millets, pulses, groundnut, mustard and spices for eight partners



Fig. 14: Hermetic cocoon use in SEWA site



Fig. 15: Millet processing unit, GSS, Madhya Pradesh



Fig. 16: Oil processing unit, SSGVS, Chhattisgarh

iii) Machine for packaging the value-added products for 2 partners

iv) Vending carts to market pesticide-free produce in the local area to Lokadrusti, AJSA and MJVS

v) Building market linkages through Buyer-Seller Meets and facilitating interaction with buyers of pesticide-free produce, including ITC and Kisaansay

- vi) Developing customised SOPs by food business operators Applying for grants for the Agroecology Program from IFAD, Harit Bharat Fund and other opportunities



Fig. 17: Buyer-seller meet organised at Khariar, Odisha



Fig. 18: Marketing of pesticide-free produce in the local area by Lokadrusti



Fig. 19: Marketing of pesticide-free chilli to ITC by FPO promoted by SEWA, Odisha

2.3 Developing and Promoting N+ Guarantee Systems (NGS)

Focus was given to the following two aspects in the second year:

1. Facilitating the establishment of an Internal Control System (ICS) for pesticide-free agriculture by the partners and
2. Strengthening certification services for pesticide-free agriculture and food chains

Initiatives taken in this direction include

2.3.1 Development of resources on certification systems

Resource documents developed

- a) [Zero Pesticide Use Agriculture and Foods \(ZPUAF\) Standards.](#)
- b) [Manual on Group Certification for Non-Pesticidal Management \(NPM\) of Agriculture.](#) This manual covered i) Need for Group Certification, ii) Preparation of the Internal NGS Manual, including a) Risk management, b) Internal NPM

*Standards and c) Catalogue of nonconformities and corrective actions
iii) Procedures to implement NGS and iv) Organisational structure and training.*

- c) Pictorial educational materials on internal NPM standards.
- d) A template for the Internal NPM Guarantee Systems Manual for easing its preparation by the practitioners.
- e) Training materials on Community-centric Group Certification: *These materials address the training needs of the staff of producer organisations and farming communities engaged in pesticide-free agriculture and certification. These were translated into Hindi and Odia.*

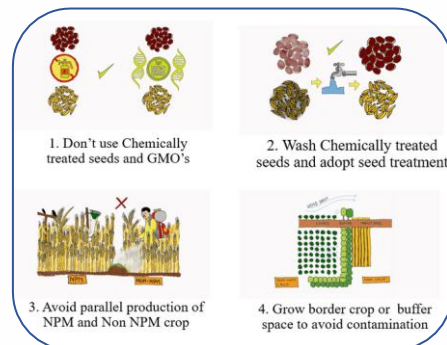


Fig 20: Pictorial Internal NPM standards

- f) **Pesticide-free Agriculture and Foods Certification, a crucial step for the wider reach of safe and wholesome foods**- An article on the experience of N+3F in developing and offering pesticide-free certification
- g) A film on the protocols to be followed in the supply chain of pesticide-free agricultural produce titled [Marketing of Pesticide-free Safe Foods by Ram Rahim Pragati Producer Company Ltd.](#)

2.3.2 Support for setting up Internal NPM Guarantee Systems (INGS)

Setting up INGS is a prerequisite for group certification. Support offered to clients includes the following:

- Orientation on community-centric group certification
- Exposure visits to SAMUHA, a practitioner of INGS.
- Support for preparation of INGS manual
- Onsite orientation and launching of INGS to farming communities
- Training on group-level farmers diary and other certification -related documents.
- Onsite training cum demonstration of internal auditing to internal inspectors
- Aiding in developing SOPs for RRPPCL and Nandini Agro
- Training on improving INGS to partners already engaged in certification
- Aiding in updating INGS manual
- Training on Community-centric group certification to field staff and farming communities



Fig 21: Training on internal NPM standards by MJVS, Madhya Pradesh



Fig 22: Training on Community-centric group certification to Federation members of SPS, MP

2.3.3 Offering certification services for pesticide-free agriculture and foods

1. Development of operational documents



Fig 23: Logo accompanying pesticide-free certification of N+3F

- ZPUAF Standards, Policies, Standard Operating Procedures, work instructions, and formats for certification of various food chain actors like farmers groups, individual producers, large areas under pesticide-free agriculture, wild collection, food business operators, livestock and poultry production units, beekeepers and input suppliers.
- A fee structure for certifying producer organisations and food business operators
- Pesticide-free food logo

2. Reaching out to potential clients

- Orientation on external certification to potential clients
- Brochures on group certification and FBO certification shared through website

3. Offering certification services

- Group certification: Offered to eight producer organisations covering 15206 small farmers in 26351 acres in 16 locations across Madhya Pradesh, Orissa, and Chhattisgarh since 2022. Crops certified include redgram, wheat, bengalgram, chilli, mustard, paddy, maize, brinjal, finger millet, and onion.
- Food business operator certification: Certified Safe Harvest Private Limited (SHPL), a leading pan- Indian company marketing pesticide-free foods, and Ram Rahim Pragati Producer Company Limited (RRPPCL), a well-known FPO located in Madhya Pradesh



Fig 24: External inspection of wheat fields of SPS by N+3F



Fig 25: Inspection of SHPL hub by N+3F

2.4 Promoting household consumption of safe, wholesome foods

Some of the initiatives taken under this program component include:

2.4.1 Development of resources on safe, wholesome foods

- Development of awareness posters on the negative impacts of use of pesticides and how to opt for safe foods
- The launch and dissemination of the awareness film 'Choose Safe, Choose Right'



2.4.2 Collating resources and awareness materials

Resources and awareness materials on i) Negative effects of pesticides, ii) Grow your own foods, iii) Foods grown without pesticides, and iv) Protection from pesticides were pooled and shared on the website.

2.5 Carrying out user-friendly research and policy advocacy

Some of the initiatives taken under this program component include the following:

2.5.1 User-friendly research on N+FFS

The following need-based action research initiatives were taken up to advance the N+FFS interventions of partners:

- A pilot on digital MIS and traceability of pesticide-free agriculture and foods-Done in collaboration with four partners to develop a suitable MIS meeting the requirements for better implementation of the agricultural program and certification.
- Review of Krishi Mitra Software, a MIS software developed and used by SPS, for improving the data captured and functionality.
- A feasibility study on Diversified Cropping Systems (DCS) with pesticide-free agriculture practices in canal-irrigated agroecosystems: Carried out in the command area of the Upper Krishna Project (UKP) of Raichur District, Karnataka, by Praramba, with the support of N+3F. The study indicated that there is scope for DCS and it can result in increased farm income, enhanced soil fertility, and higher water-use efficiency.
- Trials on the adoption of the pesticide-free approach in chilli: Trials in canal-irrigated

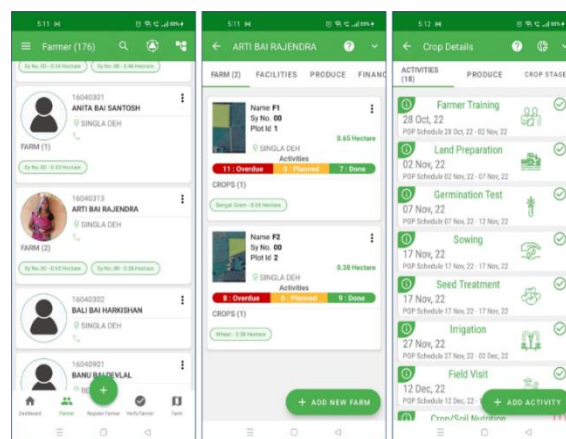


Fig. 26: Screenshot of the TraceX Foodsign App showing the details of the plot and production

chilli were carried out in the Rabi 2022-23 in the Upper Krishna Project command area of Raichur district, Karnataka, with JSMBT, and in garden-land-based chilli in Bhikangaon, Madhya Pradesh, with SPS. Both trials indicated that chilli cultivation is not only feasible using pesticide-free practices but also leads to significant savings in cultivation costs and higher net profits for farmers.



Fig. 27: Bird's eye view of the area studied for DCS intervention



Fig. 28: Trails on Pesticide-free chilli by Praramba, Raichur

2.5.2 Documentation of salient practices

- A case study of pesticide-free agriculture initiatives of Lokadrusti, Odisha, was developed.
- An article on the experience of N+3F titled "Expediting the adoption of agroecological approaches through the promotion of small-scale Bio-Resource Centers (BRCs)" was accepted by LEISA for publication in the June 2023 issue.
- N+3F contributed to the online consultation "New Food System Integrated Program to support the transformation of food systems into nature-positive, resilient, and pollution free system" organised by the Global Forum on Food Security and Nutrition (FSN Forum) of FAO.
- N+3F contributed to the article 'Five reasons why plant health and agroecology are inextricably linked' developed by the Agroecology Coalition, which was published on LinkedIn, Facebook and Twitter.

2.5.3 Sharing of resources on N+FFS

Different resources pertaining to the production, post-harvest, and consumption promotion aspects of Nature-Positive Farming and Food Systems were gleaned from pertinent sources, sifted through, and pooled. These resources include academic papers, reports, articles, videos, and webinars and cover the recent advances in this space regionally, nationally, and internationally. These curated resources were put up in an organised manner under the relevant heads on the N+3F website [Home \(np3f.in\)](https://np3f.in) for the perusal of stakeholders.

Acknowledgement

We are deeply thankful to Caring Friends for their continuous support for the past five years, which has been profoundly helpful in building the team, strengthening the partnership, positioning the organisation and shaping up the program components. We are also profoundly thankful to individual donors for their timely support. We also acknowledge with gratitude the contributions and continuous support of our partners and clients to our joint initiatives on promoting nature-positive farming and food systems on a large scale.