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

NATURE POSITIVE FARMING & WHOLESOME FOODS FOUNDATION (N+3F)

ANNUAL REPORT 2022-23

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Introduction

1. About N+3F

The Nature-Positive Farming & Wholesome Foods Foundation (N+3F) is a Section 8 non-profit organization promoting Nature-Positive Farming and Food Systems (N+FFS) at scale across India. The N+3F was initiated on March 13, 2021 and it builds on the mandate of the NPM (Non-Pesticidal Management of agriculture) Network to promote pesticide-free, sustainable agriculture and food systems. The specific objectives of N+3F are:

- To support farming communities, farmers organizations, 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 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 organization, and create an enabling environment for nature-positive farming and wholesome food systems.
- To promote equality and social inclusion by engaging with vulnerable sections like small farmers, Dalits, tribals, women, youth, and consumers with lowpurchasing power.

N+3F has been collaborating with 25 partners, working closely with about 50,000 smallholder farmers on about 62,000 acres, in different agroecological regions of Central, Eastern and Southern India. More details on N+3F can be seen at www.np3f.in.

2. Focus Areas for the Year 2022-23

1. Strengthening and broad basing the partnership with CSOs and other organisations with similar mandates
2. Building the team and building the capacities of the staff
3. Developing and deepening the program components with partners
4. Mobilizing resources

Progress during 2022-23

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 year, N+3F has identified and built working relationships with the various partners, as described under different headings below:

1.1 Intensifying partnerships with existing implementation partners

We continued the partnership with 19 CSOs with whom we have started working as part of a BRLF supported project. We intensified the partnership with these partners by facilitating annual plan preparation and offering customized onsite handholding support for implementation. Some of the partners were also supported in implementing a few activities like setting up small-scale Bio Resource Centres (BRCs), hermetic bags, processing units and vending carts. A WhatsApp group participated by the staff of partner organisations served as a platform to share progress on various interventions and other information related to pesticide-free farming. Selected partners were explored for broadening the scope of partnerships beyond the BRLF intervention areas. As part of this exploration, an exclusive MoU was entered into with some of the partners.

The working relationship with SPS and SAMUHA, long-term practitioners of the NPM approach, was strengthened through interactions and the identification of need-based joint interventions. N+3F engaged with SPS in strengthening their Internal NPM Guarantee Systems, offering Group Certification and in building the capacity of the team on the Farmers Field School method. A pilot on digital MIS and traceability systems for pesticide-free agriculture and food chains was carried out with SPS. SAMUHA was supported for carrying out a study on Field Irrigation Channel based Diversified Cropping Systems in the canal command area and for evolving the NPM package of practices (PoPs) for chilli in the canal command area.

1.2 Building partnerships with new implementation partners

N+3F explored a partnership with more than 14 field-based organisations who are already engaged or interested to engage in nature-positive farming initiatives. Interactions with the key team members and visits to the sites of some of these organisations by the N+3F team were organised to explore the scope of collaboration. Out of these organisations, a partnership was initiated with Vikasana, Harsha Trust, Vikasa and PSI.

1.3 Building strategic and institutional partnership

N+3F has been able to deepen its ties with existing strategic partners and has also explored the possibility of building relationships with new strategic and institutional partners who share similar visions and who are willing to explore joint initiatives. A strategic partnership was strengthened/initiated with the following entities:

1. **Bharat Rural Livelihoods Foundation (BRLF):** A non-financial MoU was entered with BRLF to support its partners in promoting NPM value chain practices; BRLF has been offering funding support to these partners for meeting manpower and capacity building costs.
2. **SELCO Foundation, Odisha:** An MoU was entered for promoting solar energy-based agriculture interventions in collaboration with field partners.
3. **National Coalition for Natural Farming (NCNF):** An interaction was organised with NCNF partners on capacity building related to post-harvest interventions and certification for pesticide-free agriculture and foods.
4. **Friends of Women's World Banking (FWWB)**
5. **Safe Harvest Private Limited,** a leading Indian company that is engaged in the procurement, processing and retailing of a comprehensive range of affordable 'safe food', marketed under its own brand.

Exploration was done with Gramhal and Centurion University, Odisha, for strategic partnerships.

1.4 Building a working relationship with other stakeholders and service providers

During the reporting period, N+3F has strengthened/initiated working relationships with different agencies offering relevant services in the sustainable agriculture and food chain space. The details are shared below:

- **Aditi Organic Certifications Pvt. Ltd.:** N+3F interacted extensively with Aditi Organic Certifications Pvt. Ltd. to understand different types of organic certification and modalities of certification. The Aditi team helped in refining the Zero-Pesticide Use Agriculture Standards and oriented the N+3F team on the policies, standard operating procedures and work instructions related to the certification of different clients.
- **TraceX and TraceAgtech:** The engagement with TraceX to run a pilot on digital MIS and traceability along with Samaj Pragati Sahayog, and Ram Rahim Pragati Producer Company Limited (RRPPCL) was continued in the reporting year as well. A few other agencies offering comparable services

were also explored. In the process, a working relationship was established with TraceAgtech, an experienced actor in this field.

- **GreenHub:** GreenHub is the first youth and community-based fellowship and digital archive for work related to wildlife, indigenous knowledge and biodiversity. It believes in the use of the visual medium to empower and engage the youth of the region in conservation and social change. N+3F collaborated with GreenHub for video documentation of the salient practices of the partners.
- **GrainPro and ProHarvest:** Safe storage without the use of synthetic pesticides is a critical component of a safe food supply chain. GrainPro and ProHarvest are key actors in this space, and N+3F has built a working relationship with them. They supplied the partners with different safe storage solutions, such as hermetic bags and hermetic cocoons. Furthermore, they also conducted training sessions for the partners on appropriate ways to use these storage technologies.
- **Fabricators and manufacturers of machines:** Over the last year, N+3F has developed relationships with different manufacturers and suppliers of post-harvest equipment such as oil expellers, electric vending carts, etc.
- **Product testing labs:** N+3F is in touch with four labs offering services related to the testing of food products.

Organising Partners Meet 2023

N+3F organised **Partners Meet 2023** to strengthen the partnership with its existing partners and build new collaborations with interested stakeholders in the space of sustainable agriculture. The theme of the event was ‘Deepening and Scaling Up Sustainable Agriculture and Food Systems’. Leaders and key staff from 24 partner non-profit organisations located in the backward tracts of Eastern, Central and Southern India participated in the event. Besides them, speakers and participants from various organisations engaged in alternate agriculture and food systems participated in the event and shared their learnings and perspectives. On the whole, 65 people from various backgrounds participated in the event. An exposure visit was organised to the hub of Safe Harvest Pvt. Ltd. to understand the various operations pesticide-free foods undergo before reaching consumers. 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. 1: N+3F Partners Meet 2023 organised at Hyderabad

2. Building the team and capacities of the staff

We were able to strengthen the N+3F team by filling most of the required positions after an extensive search and multiple rounds of interviews with prospective candidates. Apart from recruiting suitable candidates, we also invested in building their capacities through orientation sessions and exposure visits, by providing suitable guidance to implement various tasks and by facilitating their participation in workshops and webinars relevant to their respective thematic areas.

3. Developing and deepening N+FFS Program Components

3.1 Facilitating the adoption of N+FFS by a large number of farmers

Based on the experience of working with the partners in the first-year, focus was given to facilitating the adoption of *'total system interventions at the farm level'* and promoting viable production clusters. The details of the specific interventions taken up are shared below.

3.1.1 Development of resources on Nature-Positive Farming

a) Publications

N+3F has developed the following set of resources with regard to nature-positive production, based on its work with its partners and learnings from the ground:

- **Training module on initiating and establishing a N+FFS Production Cluster (NPC)**: This training module covers the what and why of NPC and the scope of interventions. It also covers the key interventions to be taken up for initiating an NPC.

- **Compilation of nature-positive package of practices (PoPs) for major crops**: This compilation covers reference PoPs for 47 crops falling in the major crop categories, namely cereals, pulses, oilseeds, vegetables, fruits, spices and non-food crops. This compilation can be referred to by practitioners to develop location-specific nature-positive cultivation PoPs for crops in their working locations.
- **A training module on Agroecological Plant Health Management**: This training module was developed to help in understanding the what, why, and how of managing pests and diseases under NPM agriculture.

b) A short film on nature-positive agriculture

The short film '*Nature-Positive Farming- A holistic alternative*' was produced and disseminated by NPM Network and N+3F during the reporting year. It depicts the harmful consequences of conventional agricultural practices, including the detrimental effects of the use of synthetic pesticides, and emphasizes the need for shifting to nature-positive farming. It shares in detail the preventive, planned, and reactive strategies to be followed at different stages of the crop to improve soil health, crop diversity, and crop health and to get optimum yields. It elucidates the livelihoods, health, and environment-related benefits of nature-positive farming and stresses the need for collective action. This short film can be watched on the N+3F website (www.np3f.in) or directly using the link NATURE POSITIVE FARMING -A Holistic Alternative - YouTube

3.1.2 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. While the new partners' capacity was built on understanding and initiating nature-positive production interventions and a production cluster approach, the existing partners' capacity was built on streamlining and advancing their operations.

a) Capacity building of new partners

The new partners, Vikasana (Karnataka) and Harsha Trust (Odisha) were promoting conventional agriculture in the past, involving herbicides for weed management and pesticides for controlling insect pests, and came forward to shift their approach towards nature-positive farming. So, necessary efforts were taken to build the capacity of their team on how to operationalize this shift.

An initial orientation on the production cluster approach was given to the Vikasana team members. In the second week of October, a two-day inception workshop was organised for the staff of Vikasana. This was followed by field visits

to understand the major crop production risks and the measures adopted by farmers to tackle them. The Vikasana team was supported to develop location-specific PoPs for the chosen crops and to prepare a three-year action plan. This was followed by training on the preparation of bio-pesticides for staff and farmers.

In the last week of October, a two-day orientation was organised for nine location-level teams of Harsha Trust, covering the following topics: i) the need for shifting to nature-positive farming and food systems (N+FFS); ii) the role of community organization in establishing a viable N+FFS production cluster; iii) developing location specific PoPs; iv) an introduction to NGS and developing location-specific Internal NPM Standards; v) Organisation structure and workflow; and vi) development of a three-year action plan. Further, an exposure visit was organised for the Harsha Trust team to SEWA and SPS, practitioners of pesticide-free agriculture and food chain operations.

b) Capacity building of existing partners

It was observed in the last year that a large number of existing partners required capacity building on how to streamline their farm-level production interventions and how to promote the N+FFS Production Cluster. So, N+3F organised the following capacity building efforts, with the hope that these efforts will translate to results on the ground:

Training on the preparation of location-specific PoPs for the focus crops

On-site orientation was organised for the agriculture professionals, Community Resource Persons (CRPs) of 19 partners on location-specific pesticide-free cultivation PoPs for their focus crops. As a follow-up, 17 partners organised training for farmers on PoPs. In the process, 108 staff of partner organisations, 162 CRPs and 4,089 farmers were trained on PoPs of focus crops.

Fig. 2: Training of staff of JMA on preparation and dissemination of location-specific PoPs

Fig. 3: Training farmers on location specific PoPs in JMA working village by N+3F staff

Training on the Farmers Field School (FFS) method

A two-day Training of Facilitators (ToF) was organised on the FFS method for Eastern India partners in Koraput, Odisha. Mr. Saravanan from Janara Samuha Mutual Benefit Trust (JSMBT), Karnataka, has served as the resource person. Twenty members from 10 organisations participated. Follow-up support was given to a few partners for developing the FFS curriculum for their focus crops. A similar ToF on the FFS method was organised for SPS team members.


Fig. 4: Training of Facilitators on the FFS method in progress at Koraput, Odisha


Fig. 5: Training of Facilitators on the FFS method for the SPS team, Madhya Pradesh

Experience sharing session on running small-scale BRC units

This session was organised for eight partners of Central India to understand the salient operations, benefits realized, and problems faced by the BRCs. Two partners shared their rich experiences in running BRCs, covering the planning of operations, labelling, branding, and marketing the products.

Exposure visit to Samaj Pragati Sahayog (SPS)

An exposure visit was organised for 11 partners from Eastern India to SPS, a pioneer in NPM agriculture, based in the Dewas district of Madhya Pradesh. SPS works with over 9,000 smallholder farmers, a significant number of whom are women, and helps them switch to NPM agriculture. The partners were exposed to the NPM production cluster model and the various production and post-production interventions of SPS.


Fig. 6: Exposure visit to SPS interventions by EI partners

3.1.3 Implementation support

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

a) Facilitating the adoption of location-specific PoPs by the farmers

Support was given to all 19 existing partners in evolving location-specific pesticide-free cultivation PoPs for their focus crops. Then they were also supported in disseminating these PoPs among the farmers for adoption.

b) Setting up small-scale Bio Resource Centres (BRCs)

N+3F has been supporting its partners in setting up small-scale BRCs to make available needy bio-formulations on time in an accessible place at affordable prices. On the one hand, these units address the difficulties faced by individual farmers in preparing these bio-formulations on their own, but they also encourage and help

Fig. 7: Support to SSGVS for setting up an additional BRC unit

farmers associated with the partners switch to nature-positive farming practices. These efforts were continued in the reporting year as well. Based on the requirement, support was given to 11 partners for setting up 22 additional BRCs in their locations. These units were run by the women SHGs/producer groups. With these new units 70 units in total were operating in the working villages of 21 partners located across Madhya Pradesh, Chhattisgarh, and Orissa. These units supplied a range of bioformulations to nearly 90 villages, reaching 20,757 farmers in the process. Apart from this, these units have become an additional source of income for 70 SHGs.

3.2 Supporting development of N+FFS regional/territorial value chains

Based on the experience of working with the partners in the first-year, focus was given to the following three aspects in the second year:

1. Strengthening FPOs
2. Supporting FPOs and CSOs to move up the value chain for pesticide-free foods

3.2.1 Development of resources on Nature-Positive value chain development

a) Publications

In addition to updating the pooled resources shared on the N+3F website, N+3F has also produced the following resources with regard to nature-positive value chains to help partners and other needy actors in the sustainable agriculture and food chains space:

- **Technical manual on primary processing of cereals, millets, pulses, and oilseeds**: This manual attempt to give an understanding of the various steps involved in the primary processing of major crops under each of the food grain categories and guides the reader through setting up a processing unit, including the technologies and machinery involved and the layout of the unit.
- **Technical manual on packaging of foods**: This manual attempt to give comprehensive information on the packaging of foods and covers i) an introduction to food packaging; ii) traditional packaging; iii) types of modern packaging materials; iv) packaging machinery; v) packaging requirements for processed foods; and vi) rules and regulations related to packaging.
- **Guidance manual for understanding and leveraging markets for pesticide-free foods**: This manual aims to help the reader understand the basics of food markets, including the food supply chain network, characteristics of agriculture products, components and classification of markets, and various

ways of marketing. It also covers various aspects of markets for pesticide-free foods, including consumer attributes and perceptions, pricing strategies and support programs available.

b) 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
- Hermetic storage of foods
- Non-chemical management of pests in storage including traditional and modern methods

3.2.2 Support for strengthening of 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 the FPOs promoted by them. The initiatives taken during the reporting year are shared below:

a) Customised support given to individual partners

There was a large variation across the partners in the performance of FPOs. So the N+3F team visited various partners in Eastern India to understand and assess the FPOs promoted by them. Based on the assessment, customised training and support were offered to various partners including Janasahaja, YCDA, CYSD, SEWA and Lokadrusti.

Fig. 8: Interaction with YCDA team

Fig. 9: Training to SEWA team on strengthening FPO

b) Collective capacity building sessions organised for the partners

The following collective capacity building sessions were organised based on the common needs of the partners in FPO development:

Training on the basics of FPO management

A two-day in-house training program was conducted in Jeypore, Odisha, in which four FPOs associated with CYSD, FES, and YCDA participated. A total of 16 participants, including CEOs, accountants, field officers, Subject Matter Specialist and Project Managers took part in the event. Topics covered included i) the purpose of FPO, ii) the role of BOD and CEOs, iii) the marketing of produce, and iv) business plan preparation for the next six months and three years. All three organisations benefited from the training in terms of improving their business operations.

Fig. 10: Training on basics of FPO management, Koraput, Odisha

Training on legal compliance for FPOs

An online training was conducted on meeting the legal compliances of FPOs with the support of Ms. Nisha Vijay Patil, Chennai, Tamil Nadu. Twenty-six staff from 19 partners attended the training program. The topics covered included i) the need for support from Company Secretary and Chartered Accountant, ii) mandatory compliances and need-based compliances, iii) the compliance calendar, iv) the consequences of non-compliances, v) share allotment and disbursement and vi) the registers to be maintained in the FPO. Considerable improvements were observed across the partners in terms of meeting the compliance requirements.

3.2.3 Capacity building on value chain development

It was observed in the last year that a majority of the partners were in need of capacity building to establish an organised supply chain for pesticide-free crop produce they were promoting in their working area. So, N+3F organised the following capacity building efforts:

Training on quality checking, aggregation and storage of pesticide-free produce

A two-day training was organised on this theme for Eastern India partners in Bhubaneswar by January 2023. Two resource persons from Ruchi Agro Products Pvt. Ltd. shared their experience-based expertise with the participants. Twenty-eight staff members from eight partners participated. Some of the topics covered

include i) best practices and protocols related to large scale and small-scale storage, ii) practices related to storage of pesticide-free produce, and iii) quality checking of produce, sampling procedures, and tools used.

Fig. 11: Training on quality checking, aggregation and storage, Bhubaneshwar, Odisha

Training on hermetic storage technologies

A one-day training on the benefits of hermetic cocoons and bags and their practical use was organised for the SGVS team by N+3F in collaboration with GrainPro. Eight of the SGVS team members participated in the training.

Fig. 12: Training on hermetic storage technologies

3.2.4 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 during the reporting period:

a) Setting up the processing unit

N+3F has supported SEWA to set up a small-scale oil processing unit for the processing of pesticide-free mustard produced by its farmer members. SEWA has planned to produce pesticide-free mustard oil and sell it in the local markets. Lokadrusti was supported in

Fig. 13: Oil extraction unit set up by SEWA, Odisha

preparing a proposal for setting up a neem oil extraction unit to avail support from SELCO Foundation.

b) Marketing pesticide-free produce in the local area using a vending cart

Fig. 14: Vending cart initiative to market pesticide-free foods, Lokadrusti, Odisha

One of the major challenges faced by the partners is marketing the produce cultivated by their farmers as pesticide-free in the local and regional markets. To address this challenge, two partners were supported for a vending cart that will be used for marketing pesticide-free produce in the local area. These partners will initiate marketing in the upcoming season.

c) Adoption of hermetic storage technologies

N+3F has supported MJVS, CARMDAKSH, and SSGVS in the introduction of hermetic bags for storing grains among their members. Towards this end, N+3F has supplied 200 bags of 25 kg capacity and 600 bags of 50 kg capacity. N+3F also supported VIKASA with two hermetic cocoons, each of one MT capacity, to store coffee beans and pulses.

d) Linking partners with buyers of pesticide-free foods

Organising Buyer-Seller Meet: N+3F organised a buyer-seller meeting at Lokadrusti's office located in Khariar. Eight partners participated in the event and showcased the pesticide-free commodities they can supply. Eight buyers from that region participated. They have expressed interest in procuring pesticide-free

Fig. 15: Buyer-seller meet organised at Khariar

produce from the FPOs of the partners and offering better prices for good quality produce. As a follow up to this event, five of the buyers have procured pesticide-free groundnut, redgram, vegetables, maize, and mustard from three FPOs.

Facilitating interface with buyers: Multiple efforts were taken to create an interface between partners and the buyers of pesticide-free produce. The buyers approached in this regard include, i) Safe Harvest Private Limited, ii) ITC-Spices division, iii) Harvest Depot, iv) DeHaat, v) Basna Foods, vi) Ruchi Agro Products Pvt. Ltd., vii) FarmHand, and viii) SNK Industries.

3.3 Developing and Promoting N+FFS Guarantee Systems (NGS)

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

1. Facilitating the establishment of Internal Control System, (ICS) for pesticide-free agriculture and
2. Launching external certification services for pesticide-free agriculture and food chains

3.3.1 Development of resources on certification systems

The following resources were developed during the reporting period:

- **Refining the Zero Pesticide Use Agriculture and Foods Standards**: Support was taken from a senior professional from an organic certification agency for reviewing and improving the standards.
- **Pictorial educational materials on Internal NPM Standards:** The Internal NPM Standards (INS) were illustrated using easy to understand pictures. Then, using these illustrations, posters, flip charts, and handouts were prepared to aid in building the capacity of farmers, especially illiterate farmers. These materials were shared with all the partners. Partners were supported for the dissemination of INS among the farming communities.

Fig. 16: INS training organised by MJVS using pictorial educational material

Fig. 17: Distribution of pictorial INS to farmers by SSGVS

- **Checklist of non-conformities and corresponding corrective action:** This checklist was prepared for auditing at the individual farmer level and at the level of Internal NPM Guarantee Systems/Internal Control Systems of the operators/implementing organisations.

3.3.2 Support for the initiation of Internal NPM Guarantee Systems (INGS)

Continuing the efforts of the last year, N+3F undertook the following efforts to build the capacity of the partners for initiating INGS in their working locations:

- An onsite orientation on NGS and demonstration of NGS launching were organised with five Chhattisgarh partners and six Odisha partners.
- Training cum demonstration of Group-level farmers diary and internal auditing were organised for six central Indian and seven eastern Indian partners.

Fig. 18: NGS launching demonstration by N+3F staff at CYSD, Orissa

Fig. 19: Internal audit demonstration in chickpea by N+3F staff at MJVS, MP

During the reporting period, INGS was initiated by twelve partners in the Kharif season, covering 18 crops and 5479 farmers and thirteen partners in rabi season covering 16 crops and 4202 farmers.

3.3.3 Launching external certification for pesticide-free agriculture and foods

a) Development of necessary operational documents

1. A set of documents including Standard Operating Procedures, Work Instructions, Forms and other documents needed for initiating external certification of producer organisations was prepared.

2. A note on Pesticide-free Farming and Foods Certification was prepared and shared with the partners.

b) Orientation for potential clients

1. Orientation session on external certification was organised for SPS and SGVS.

2. An orientation on Pesticide-free Agriculture and Foods Certification was given to 24 partners in the Partners Meet 2023.
3. Posters on external certification and INGS were prepared and disseminated during the Partners Meet.

c) Initiation of external certification

External inspection was carried out in SGVS for mustard and SPS for wheat and chickpea.

3.4 Promoting household consumption of safe, wholesome foods

3.4.1 Development of Resources on safe, wholesome foods

a) Development of promotional materials

An attempt was made to develop promotional materials that can be used by partners and other stakeholders to popularise pesticide-free foods with different target groups. A presentation and a set of awareness posters were developed in English and Hindi, covering the need for shifting to pesticide-free foods and various ways to make pesticide-free foods available to family members.

b) Resources on pesticide-free foods

Resources on the topics i) Negative effects of pesticides, ii) Grow your own food, iii) Foods grown without pesticides, and iv) Protecting from pesticides were collated and shared on the website.

3.5 Carrying out user-friendly research and policy advocacy

3.5.1 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) A pilot on digital MIS and traceability of N+ foods

This pilot was initiated in the last year with SPS, RRPPCL, and TraceX to learn how blockchain technology can aid in strengthening the legitimacy of nature-positive foods in consumer markets and in improving the efficiency of operations of CSOs, farmers organisations and MSMEs engaged in N+FFS. It was continued in the reporting year as well. During the reporting year, the pilot was extended to 1066 farmers in the Kantaphod location of SPS. The second-year pilot built on the customization efforts taken in the first year to capture the adherence to Package

of Practices (PoPs), Internal NPM Standards (INS), the workflow of the agricultural program, and the protocols and operational procedures followed from farm gate procurement until the NPM foods leave the custody of RRPPCL. A classroom cum field-based training was offered by TraceX for the SPS and RRPPCL teams at the beginning of the season, followed by need-based handholding during the season.

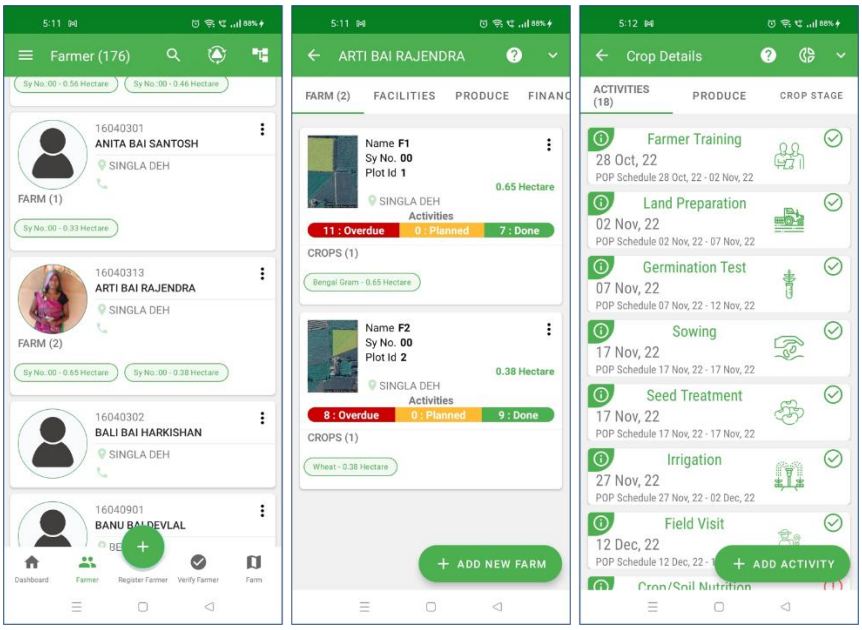

Fig. 20: Screenshot of the Foodsign App showing the details of the plot and production Practices adopted in chickpea

An effort was made to extend a similar pilot to a few other partners. Among many interested service providers, one agency was identified, and an agreement was entered into with it.

b) Feasibility study for undertaking Field Irrigation Channel (FIC) based diversified Cropping Systems (DCS) intervention

Praramba has been promoting the adoption of pesticide-free agriculture among the farmers in the canal command area in Raichur district for more than a decade. It has observed the following issues: i) contamination of pesticide-free plots from the nearby farms through irrigation water and pesticide drift, and commingling from the use of combined harvesters as these plots were scattered across the command area; ii) monoculture of paddy across the canal command area, which resulted in an imbalance in the ecosystem, deterioration of soil fertility, a decline in food diversity and reduction in the farmer's income; and iii) water scarcity for the tail-end farmers in some seasons as paddy, a high-water requiring crop, is cultivated throughout the command area during both seasons. Praramba envisage shifting to diversified cropping systems and the adoption of pesticide-free cultivation method by all the farmers in the canal command area as the way forward. To understand the scope for the same, a feasibility study on FIC-based

DCS intervention was carried out in the Narayanpur Right Bank Canal (NRBC) command area of the Upper Krishna Project (UKP) region of Deodurg Taluk in Raichur District of Karnataka by Praramba with the support of N+3F. Distributary-10 was selected for the study. The major findings of the study include:

a) About 80% of the area has been under paddy, mostly grown by upper and middle reach farmers, which results in seepage that does not allow even the interested downstream farmers to go for crops other than paddy.

b) Almost, half of the plots were in elevated position and the rest fell under downstream position for most of the farmers, which shows that there is scope to reduce the area under paddy cultivation from 80% to 50%.

c) Reducing the area under paddy to 50% and adopting Modified System of Rice Intensification for paddy cultivation can result in significantly reducing the seepage issue faced by the downstream farmers and addressing the issue of tail-end water deprivation.

d) There is scope for the introduction of diversified cropping systems if collective effort is taken.

e) Combining DCS with pesticide-free cultivation can result in increased farm income, soil fertility enhancement, and higher water-use efficiency.

Fig. 21: Bird's eye view of the area opted for undertaking DCS intervention

c) A trial on the adoption of the NPM approach in canal-irrigated chilli

Chilli is one of the major crops in Deodurg taluk and is grown in the canal-irrigated area to the extent of 3700 ha. Chilli has been facing serious pest management problems that have led to high pesticide usage. Around 10–15 sprays were given in a season at the cost of Rs 14,000-20,000 per acre. More use of synthetic pesticides in irrigated chilli has been one of the major reasons for the presence of pesticide residues not only in the same crop but also in other food crops such as paddy grown in the same region. A trial on the adoption of the Non-Pesticidal Management (NPM) approach in canal-irrigated chilli was undertaken by JSMBT in the rabi 2022-23 in the Upper Krishna Project command area of Deodurg Taluk in Raichur district of Karnataka. It was found that the yield obtained in the NPM plot was on par with that of the conventional plot, and the cost of cultivation could be reduced in the NPM plot to the extent of Rs. 7270 per 0.25 acre.

Fig. 23: Trial on NPM chilli by JSMBT, Raichur

3.5.2 Documentation of salient practices

An attempt was made to document initiatives of N+3F and salient practices and achievements of selected partners. A case study of Lokadrusti was completed and the initiative of N+3F to promote small-scale BRCs in collaboration with partners was documented in an article. With the support of GreenHub a short film on the efforts of some of the partners in Odisha to promote NPM interventions was developed.

3.5.3 Sharing of resources on N+FFS

This work which was initiated last year was continued in the reporting year also. 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. Pooled resources included 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) for the perusal of stakeholders.

Acknowledgement

We are deeply thankful to Caring Friends for their continuous support for the past two years, which was profoundly helpful in building the team, strengthening the partnership, positioning the organization and shaping up the program components. We also place on record our heartfelt appreciations to our partners for their enthusiastic engagement in and contributions to joint initiatives on promoting nature-positive farming and food systems on a scale.