

Solidaridad



Model Farms and Sustainability

India Veg Oil Mission

**Towards Honorable Prime Minister's Mission to Make
India '*Atmanirbhar*' in Edible Oils**



आत्मनिर्भर भारत

SEA 60th Anniversary Celebration & Awards Ceremony

28th September, 2023 | Mumbai, India

**Dr Suresh Motwani, Programme Head, Vegetable Oils,
Solidaridad**

Vegetable Oils Demand and Supply Scenario in India

Demand

Current Edible Oils
Consumption is 23.5 - 24.0 MnT

The quantum of imports has
surged from ~8 mt to 16
mt between 2013-14 and 2022-23

Vegetable Oil Import Bill has
Gone Up by 118 Per Cent in the
Past Two Years

Palm oil (crude + refined)
constitutes about 62 per cent of
the total edible oils imported

Supply

India is the Largest importer of
edible oil in the world

11.5 MnT of Veg. Oil is
domestically produced

The domestic production of veg
oils fulfills around 33% of total
demand of veg oils and still
there is a gap of 67%



The gap between supply and demand can be significantly fulfilled through increasing the oilseeds productivity and increasing area under oilseeds while replacing cereals like wheat and paddy



YIELD GAPS IN OILSEEDS

Average Yield v/s Potential Yield

Crop	Yield Gap in %
Soybean	50-60%
Rapeseed - Mustard	30-40%
Groundnut	40-50%
Sunflower	80-120%
Safflower	70-80%
Average Yield Gap	50-70%

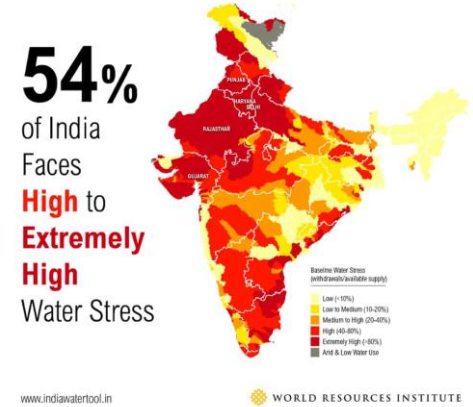


KEY CAUSES OF YIELD GAPS, FARMERS PROFITABILITY & SUSTAINABILITY

- 1. Technological Constraints:** There is still scope of improvement in development of high yielding varieties coupled with appropriate production technologies suitable to different regions. There is huge gap in the availability of quality seeds of improved varieties.
- 2. Socio-economic constraints:** The low income and investment capacities of smallholders on various resources, pricing, market linkages as well as gender related constraints.
- 3. Environmental Constraints:** About 72% area of oilseeds fall under rainfed farming where biotic threats (diseases) and climate vagaries cause severe damage to crops. It is largely grown in poor soil fertility lands such as marginal and sub marginal lands.
- 4. Infrastructural constraints:** Majority of the Vegetable Oil extraction industries are operating on 40-50% capacity (due to poor supplies they are un-able to utilize the full capacity). Apart from this the industries are struggling for sourcing of desired quality raw materials.
- 5. Adoption Gaps of Recommended Agronomic Practices:** There is huge gaps in the adoption of recommended agronomic practices i.e. higher seed rate, lack of seed treatment, inadequate and imbalanced fertilizer use, lack of use of appropriate plant protection measures against pest and diseases. This results into the poor yields.

DEPLETING GROUND WATER TABLE & SOIL DEGRADATION

- ❑ According to World Bank, Already, almost two-thirds - 63 percent - of India's districts are threatened by falling groundwater levels
- ❑ Increased reliance on rainfed agriculture with unpredictable rainfall
- ❑ According to various studies, as majority of Oilseeds are grown in rainfed conditions, which is one of the main reason for overall low productivity
- ❑ Limited access to irrigation water for critical growth stages



SOIL DEGRADATION

- ❑ According to FAO, 33% of the Earth's soils are already degraded and over 90% could become degraded by 2050.
- ❑ Around 100 Mha of land in India is degraded
 - Eroded Soil
 - Loss in Soil Moisture
 - Gully Erosion

Such conditions are leaving farmers more vulnerable and their livelihood is at risk

Climate Change Impacts



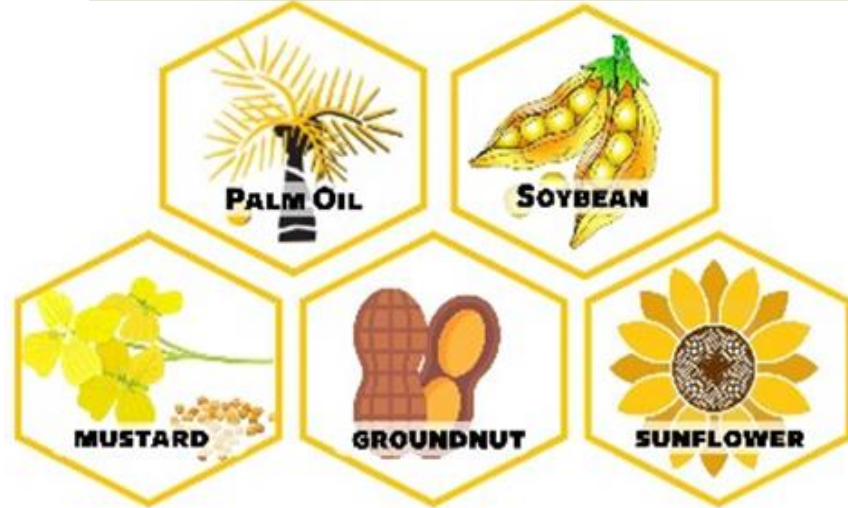


Solidaridad



India Sustainable Oil Mission

Key Veg Oil Commodities



**Supporting Honourable Prime Minister's Mission to
Make India '*Atmanirbhar*' in Edible Oils**

India Sustainable Veg Oil Mission

Key Goals of India Veg Oil Mission 2030



Increased
Production

- ☐ ~50% Increase in the Domestic Vegetable Oil Production

Increased
Area

- ☐ ~30 % Increase in the Area Under Oilseeds, especially Mustard and Groundnut in the Selected States

Reduced
Import
Dependency

- ☐ ~50% Reduction in the Import of Vegetable Oils



VEG OIL MODEL FARMS: KEY OBJECTIVES

Overall objective is to improve profitability and sustainability of oilseeds

1

To showcase comparative advantage of Model Farms compared to traditional production practices with farmers

2

To encourage farmers to learn and adopt climate smart scientific method of crop production

3

Contribute in increasing the area under key oilseeds like Mustard while promoting crop diversification in the wheat and paddy cropping system

4

To contribute towards self sufficiency in Vegetables Oils & to reduce dependency on imported Vegetable Oil

The Social, Environmental and Economic Sustainability are the integral part of Veg Oil Mission



Strategies for Promotion of Sustainable Veg Oil Mission

1



Model Farms and Farm Field Schools

Model Farms are set-up to facilitate “Lab to Lands” & Farm Field Schools are installed for regular extension support to farmers

2



Digital Tools for Precise Advisory

The Automatic Weather Stations and SMART Sensors are installed in the field to provide precise weather and crop based advisories to farmers on their mobile phone

3



Farmer Producer Organizations, FPOs

The FPOs are supported to ensure seed production and availability of quality inputs, access to improved machines and market linkages

4



Diversification through Cropping System Approach

The diversification is facilitated through encouraging oilseeds cultivation while replacing cereals crops like wheat and paddy

5



National Sustainability Standards

The National Sustainability standards like IPOS, ISSS and Regenagri are being promoted to ensure socio-economic and environment friendly sustainable production and trade

SEVEN *SUTRA* OF MODEL FARMS IMPLEMENTATION

1 **Cluster Based Approach:** 4-5 villages chosen in one cluster for extension support through Model Farms.

2 **Training of Trainers:** Prepared trained cadre of extension workers and lead farmers

3 **Farm Field Schools Set-up:** Group training of farmers organized as per crop calendars. Farmer Field Day organized to facilitate sharing of knowledge and promote cross learning

4 **On Field Support System:** to facilitate the adoption of critical practices

5 **Weather Based Advisory Services:** It was extended to farmers in MP and Rajasthan to reduce losses caused due to adverse climate situation and take informed decision on preventive measures.

6 **Use of Innovative Tools and Technology:** Introduced Soil Moisture Indicator (SMI) for Scheduling of irrigation in time. Sowing with raised bed planter or pneumatic planter machine to maintain row spacing so as to enable good branching, flowering and pod formation.

7 **Data Tracking and Monitoring:** Farmers data compiled for comparative analysis between Model farms v/s control plot

FACILITATING “LAB TO LANDS” TOGETHER WITH ICAR – INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Working Closely with all ICAR Institutes in Oilseeds and Oil Crops



- ICAR – Indian Institute of Soybean Research
- ICAR – Directorate of Rapeseed – Mustard Research
- ICAR – Indian Institute of Oil Palm Research
- ICAR – Indian Institute of Oilseed Research
- ICAR – Indian Institute of Soil Science
- Department of Agriculture and Farmers Welfare
- *Krishi Vigyan Kendras (KVKs)*



Key Activities

- Front Line Demonstrations (FLDs) - Introduction of improved seed varieties
- Training of Trainers - Farm Field Schools and Field Days
- Seed Production by FPOs

Farmer Field Schools for Efficient Extension

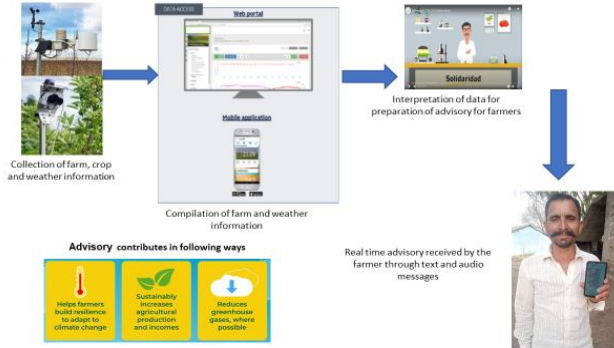


IoT Solutions and AWS for Weather Based Precise Advisory Support

- ❑ Promoting IoT BASE (sensors) solutions and Artificial Intelligence
- ❑ Facilitating transition from traditional delivery channels to ICT-Enabled channel for Smart Agriculture Advisory
- ❑ IoT based weather station and sensors has been established in Target Model Farms areas



SMART AGRI FARMERS ADVISORY SUPPORT SYSTEM



Solidaridad

BENEFITS OF WEATHER BASED ADVISORY SERVICES FOR MODEL FARM FARMERS

- ❑ Helped farmers to mitigate climate induced risk on crop e.g. rainfall, frost, pest incidence etc.
- ❑ Advisory services prepared based on weather information helped farmers take informed decisions on plant protection , frost management etc.
- ❑ Weather forecast advisory on adverse climate condition helped farmers take preventive steps to save the crop like delay sowing on sudden occurrence of rainfall, wait for right weather condition to commence harvesting , schedule irrigation as per soil moisture status at critical stage of flowering and Pod development , burn stubble around the crop field to raise temperature and mitigate frost damage.
- ❑ Direct access to subject experts through toll free number helped farmers get right solution to problems occurring due to climate induced changes.

The partnership with Vodafone India Foundation and Indus Towers Limited is facilitated for integration of IoT solutions

Vodafone
India
Foundationindus
TOWERS

Solidaridad

SMART AGRI-HUB IN MADHYA PRADESH

SMART AGRI HUB WORKING MODEL



- ❑ The SMART AGRI Hub facilitates the convergence of scientific data using disruptive technologies such as mobile/cloud computing, Internet of Things (IoT) etc.
- ❑ Team of experts for monitoring, assessment and generation of real-time advisories and technical knowledge support to farmers, FPOs and agri-tech entrepreneurs
- ❑ The consolidation of agricultural scientific data, statistics, different models and information would help to develop trends, rapid, accurate and compelling recommendations for farmers as well as researchers and policymakers



TheHitavada Bhopal City Line | 2023-09-17 | Page-3 thehitavada.com

Smart Agri Hub revolutionising agriculture by integrating technology, Internet of Things

■ Staff Reporter

The Smart Agri Hub inaugurated in Indira Capital with a collaborative endeavour between the organization Solidaridad, Vodafone Idea Foundation and India Telecom has marked a milestone in the journey towards revolutionising agriculture through the integration of technology and Internet of Things. This initiative aimed at empowering a staggering more than 8 lakh farmers across the country.

This place is equipped with the devices to collect real-time data on soil conditions, weather, crop health, and more. The data empowers farmers to make informed decisions, optimising planting times, irrigation, and crop protection. The Smart Agri Hub shall serve as a platform for Knowledge Centre for Farmers (KCF), Agri-Entrepreneurs and Agri-extension workers.

The Smart Agri hub is well-equipped with smart training



The team of Smart Agri hub getting information with the officials.

center, Smart TV, Library crop specific videos. Agri allied extension services, training space for farmers, scientist interactions and lecture sessions, modern farm tools and equipment for promoting efficient farm production, showcasing high yield varieties. This initiative endorses the commitment to empowering farmers and fostering environmental sustainability in the State. In this occasion Dr. Sunesh Misra, General Manager, Solidaridad informed that "Different experts and technical institutions will be associated with the resource centre facilitating technical knowledge and expertise. As it will be a strategic unit, the networking, partnerships and facilitations with government, businesses and other stakeholders will be done through the Smart Agri Hub". Dependence Kumar from Vodafone Idea Foundation said that "Agriculture is the backbone of our nation, and its

modernization is paramount. Smart Agri Hub is an initiative under Smart Agri project that empowers individuals and communities to transition from self-subsistence farming to thriving enterprise farming by harnessing advanced technology and sustainable practices. Smart Agri Hub truly stands as a one-stop solution for technology in agriculture, offering a path to higher productivity, improved livelihoods, and a greener future. The Smart Agri Hub represents the technological and data-driven centerpiece of the Smart Agri Project. It serves as the epicenter of a comprehensive approach aimed at revolutionizing agriculture through the integration of cutting-edge technology, data analytics, and sustainable practices. This holistic initiative is designed to address key challenges of climate change, promote efficiency, and ensure food security for future generations.

Powered by | Documents



Solidaridad

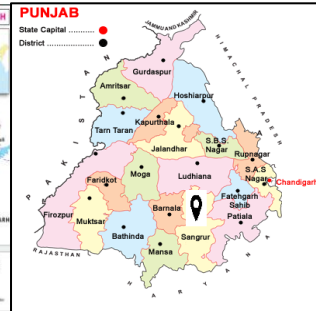
Mission Mustard Model Farms Project

Goal: To increase the production of Rape-Mustard to 225 Lakh tones by 2030

- ❑ A joint initiative of SEA and Solidaridad, initiated in the year 2019
- ❑ ICAR - Directorate of Rapeseed Mustard Research Engaged for Technical Knowledge Support
- ❑ More than 1 lakh farmers are covered with 2100 Mustard Model farms till Rabi season 2022-23 across 4 states i.e. Rajasthan, Madhya Pradesh, Uttar Pradesh and Punjab
- ❑ 4R Approach promoted: Right Time, Right Method, Right Source and Right Place
- ❑ Prepared a cadre of well trained lead farmers and extension worker at the ground



Mustard Model Farm Geographies



Improved Adoption of Practices

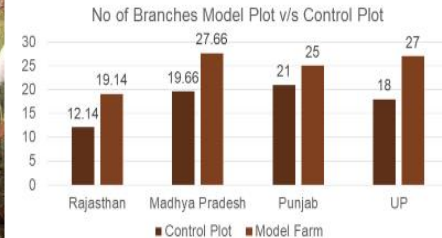
S. No.	GAPs Mustard	Sangrur (Punjab)	Ayodhya (UP)	Rajasthan	Madhya Pradesh
1	Seed Treatment and Seed Inoculation	PSB, Trichoderma, Azotobacter			
2	Split dose of urea	25-27 DAS			
3	Spacing	45cmx5-10 cm			
4	Seed Rate	3 - 4 kg/ha			
5	Nipping	Yes			
6	NPK 19 19 19 spray	Yes			
7	IPM (Integrated Pest Management)	Resistant variety, Seed treatment, Optimum seed rate, spacing, Yellow Sticky Card, neem oil spray, pest surveillance and Integrated plant protection			
8	Major Insect and Disease management	Aphid, Mustard Saw fly, bight though no major attack is observed. Less incidence due to low temperature			
9	Thinning	28-30 DAS			
10	Frost Management	Light irrigation, sulphur spray, smoking around plot.			

- ❑ **Seeing the results of model farms farmers have started adopting improved practices**
- ❑ **New and improved seed varieties i.e. DRMR 1165-40, DRMR IJ-31 (Giriraj), NRC HB 101, PBR 357 (Raya)**

NO OF BRANCHES PER PLANT IN MODEL FARM V/S CONTROL PLOT



38.9% More Branches in Model Farms



IMPACT: SIGNIFICANT INCREASE IN PRODUCTIVITY OF MODEL FARMS VS CONTROL FARMS

31% Increased productivity in Model Farms

The state of Punjab and Uttar Pradesh has demonstrated the higher increase in productivity i.e. 35 % and 50 % respectively in Rabi 2022-23

53% increase in yield in Rabi 2021-22 according to independent study by MART undertaken in Tonk, Bundi, Baran and Kota Districts of Rajasthan and Mandsaur Dist. of Madhya Pradesh



Model v/s Control			
State	Avg. Productivity (KG/Ha) Control	Avg. Productivity (KG/Ha) Model Farm	% Increase / Decrease of Model over Control
Rajasthan	2070.2	2484.8	+ 20%
Madhya Pradesh	1761	2156	+ 22%
Punjab	2035	2752	+ 35%
Uttar Pradesh	1400	2100	+ 50%

INDIA SUSTAINABLE SOY PROGRAMME

- ❑ Solidaridad is promoting sustainability in soybean cropping system in Central India with around 160000 farmers
- ❑ The programme address key sustainability concerns related to declining agricultural productivity, gender inequality, Health & Nutrition, including depletion of natural resources



Indian Standards for Sustainable Soy

INDIAN STANDARD FOR SUSTAINABLE SOY (ISSS)

The Indian Standard for Sustainable Soy (ISSS) collaboratively developed by Solidaridad, Indian Council of Agricultural Research - Indian Institute of Soybean Research (ISIR) and The Soybean Processors' Association of India (SOPA). The standard is well aligned with similar other national and international sustainability standards, legislations and regulatory mechanism to promote sustainable production and trade.

Key Pillars of ISSS	Key Principles of ISSS
Economically viable	Principle 1 - Sustainable Crop Production Practices (SCPPs)
Socially acceptable	Principle 2 - Comply with the Law
Environmentally compatible	Principle 3 - Community protection and dignified farmworkers promotion
Technologically appropriate and aligned with national legislations and regulatory requirements	Principle 4 - Conservation and restoration
	Principle 5 - Good business practices
	Principle 6 - Continuous improvement and transparency



A group of 10,151 farmers are prepared and successfully certified by the third-party audit agency under the Indian Standard for Sustainable Soy (ISSS)



IMPACT: INDIA SUSTAINABLE SOY PROGRAMME

- ❑ Demonstrated around 35 % increase in average productivity of soy (baseline yield in 2016 was 0.9 tonnes/ha achieved the average of 1.65 ton/ha in 2022 in FLDs)
- ❑ Around 100,530 hectares land has been covered under sustainable management
- ❑ Around 69813 (Male 52381, Female 17432) farmers are implementing good practices in agriculture
- ❑ Prepared 91 Individual Entrepreneurs and 35 FPOs and around 50000 farmers obtain improved services related to agri inputs, seeds, advisory and custom hiring facilities etc.
- ❑ The crop diversification with vegetables not only contributed the availability of fresh and nutritious vegetables for household consumption but is has also contributed towards the significant increase (around 39%) in income as compare with the traditional cropping system.
- ❑ By diversification into Medicinal crop such as Ashwagandha, the average income per hectare earned around Rs 200000 per hectare, whereas the income from wheat crop is around Rs 40000 per hectare.



Solidaridad

IPOS for Sustainable Palm Oil in India

IPOS provides a comprehensive sustainability framework for effective implementation of ambitious mission of Government of India i.e. National Mission on Edible Oil-Oil palm (NMEO-OP)



IPOS- Principles & criteria for sustainable palm oil



	Criterions	Indicators
Principle 1. Overall Continuous Improvement and Transparency	3	7
Principle 2. Compliance with Legal Requirements and Laws	4	10
Principle 3. Good Plantation Practices	4	15
Principle 4. Good Business Practice and commitment to economic and financial viability	2	5
Principle 5. Responsible Community Relations, Fair Labour and Employee conditions	3	21
Principle 6. Conserve and Protect Natural resources, Environment, Bio-diversity and ecosystem	4	18
	20	76

- ❑ **In the year, 2017, SEA and Solidaridad with the support of Indian Institute of Oil Palm Research (IIOPR), SOPOPRAD and many industry stakeholders developed India's own standards for sustainable palm oil – IPOS**

First IPOS Certification Awarded to Godrej Agrovet Ltd



VERIFICATION CERTIFICATE
IPOS- INDIAN PALM OIL SUSTAINABILITY FRAMEWORK
Verification Certificate No: IPOS-VC/CU/867933-1/2019

Control Union herewith certifies that the entity mentioned below is found in compliance **GOLD level with 94%**, in accordance with the Indian Palm Oil Sustainability (IPOS) framework. The IPOS code which covers social, agronomic, occupational health & safety and environmental criteria.

Name of the VC holding entity: **Godrej Agrovet Limited**
Name of the Pilot sites verified: **Godrej Agrovet Limited**
Address: 1: Village-Polaisigudem, Mandal-Kanavarepukota, District - West Godavari, Andhra Pradesh, India
Address 2: Village - Yerragutapalli, Mandal - Chintalapudi, District - West Godavari, Andhra Pradesh, India
Area (Ha) in Pilot Site: **4907.54** Production Area (Ha, Pilot Site): **4567.54***
Total No. of Verified Farmers in Pilot Site-2012
*Area Irrigation is installed in all gardens of Oil Palm under the pilot area

Name of Products	Estimated Production
FRESH FRUIT BUNCHES (PALM OIL)	5050 MT

Date of audit: : 24/06/2019 TO 30/06/2019
Date of issue of VC: : 13/06/2019
VC valid up to: : 24/06/2020
Date of First issue of VC: : 12/09/2019
Date of Revision: : NA
Place: : Nash Mumbai

Control Union is accredited by IPOS. This VC means the integrity of Control Union and use of all resources in case of interventions as mentioned in the contract or in case of changes or deviations of the above mentioned data. The licensee is obliged to inform Control Union immediately of any changes in the above mentioned data. Only in original and signed certificate is valid.

For Signature: 
Dr. H.P. Singh

For Signature: 
Dr. P. Rethe

For Signature: 
Dr. Mani Madhava

For Signature: 
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

For Signature:
Dr. P. Rethe

For Signature:
Dr. Mani Madhava

A group of 2012 Oil Palm Farmers in West Godavari District, Andhra Pradesh are prepared for sustainable palm oil production following IPOS practices



IPOS IS IMPORTANT FOR INDIA

- ❑ **Booming Indian Market of Palm Oil has a key role in driving the sustainability efforts in the global palm oil sector (*Largest importer of Palm Oil and 2nd largest consumer of Palm Oil in the World*)**
- ❑ **IPOS is a very strong step forward in the direction towards solving the sustainability issues in the Palm oil Sector (*IPOS is developed by the Indian Industries and for the Indian Industries considering the local conditions and realities*)**
- ❑ **Adoption of IPOS would strengthen the role of India in driving sustainability in the sector and mitigate the associated sustainability risks**
- ❑ **IPOS being an unified sustainability standard would reduce duplicity, huge efforts and cost involved in different sustainability certifications (*There are more the 20 sustainability standards for the key vegetable oil commodities globally*)**
- ❑ **IPOS would provide sustainability framework for effective implementation of ambitious Oil Palm Mission of Government of India namely National Mission on Edible Oil-Oil palm (NMEO-OP) to promote oil palm cultivation for making the country *Aatamnirbhar* in edible oils with special focus on North-Eastern States and A&N Islands (*NMEO –OP is aiming to increase area of oil palm to 10 lakh hectares from 3.5 lakh ha during 2019-20 by 2025- 26 (additional 6.50 lakh ha)*)**
- ❑ **Sustainably produced palm oil would help to protect the environment and better social conditions of producers and workers**

IMPACT: OIL PALM MODEL FARMS

Increased adoption of improved practices by Oil Palm farmers Resulted into Increased Yields, Efficient Use of Natural Resources and Reduced Cost of Cultivation



The Fertigation method has been proved to economize water and fertilizer with a corresponding lower expenditure in cost of production and labour towards weeding, fertilization and water application.

It has resulted into around 8-10% increase in yields and better quality of FFBs.



With the technical guidance of Indian Institute of Oil Palm Research (IOPR) we are promoting one species of earthworm i. e. *E. foetida*, which is able to survive in the oil palm biomass. Vermicomposting found to be very useful for Oil Palm Biomass recycling and its application in the soil.

Vermicomposting has contributed towards increased soil moisture and around 20-25 % reduction in irrigation water.



Adoption of regen agri-certification by a group of 2012 farmers.

This will provide them opportunity to increase the carbon sequestration level on farms there by promoting carbon farming and linkages with voluntary carbon markets

Groundnut Model Farms

Key Highlights

- ❑ In the Kharif season, 2023-24, 125 groundnut model farms have been established with the objectives to demonstrate the improved technologies, seed varieties and practices among farmers
- ❑ Around 15000 farmers are covered in the selected districts of Western Madhya Pradesh and Northwestern Rajasthan states of India

Key Impact

- ❑ Greater awareness among farmers about the Groundnut cultivation and its agronomic practices
- ❑ ~25-30% increase in yield is expected



नीमच में किया किसान प्रक्षेत्र दिवस का आयोजन



नीमच। मूलभूत जलवायु सुदृढ़ कार्यक्रम के अंतर्गत किसान प्रक्षेत्र दिवस का आयोजन किसानों को नैसर्गिक जलवायु प्रभावों से निपटने में मदद के लिए किया गया।

इस अवसर पर मुख्य अतिथि डॉ. के.पी. शर्मा (सी.डी.एस.), डॉ. मुरली मोहन (सी.डी.एस.), डॉ. किशोरी देवी (सी.डी.एस.), मूलभूत जलवायु सुदृढ़ कार्यक्रम के अंतर्गत किसान प्रक्षेत्र दिवस का आयोजन किया गया।

प्रमुख अतिथि किसानों के बीच (सी.डी.एस.), डॉ. किशोरी देवी (सी.डी.एस.), डॉ. मुरली मोहन (सी.डी.एस.), डॉ. के.पी. शर्मा (सी.डी.एस.) के बीच आयोजित किया गया।

इस अवसर पर मुख्य अतिथि डॉ. के.पी. शर्मा (सी.डी.एस.), डॉ. मुरली मोहन (सी.डी.एस.), डॉ. किशोरी देवी (सी.डी.एस.), मूलभूत जलवायु सुदृढ़ कार्यक्रम के अंतर्गत किसान प्रक्षेत्र दिवस का आयोजन किया गया।

प्रमुख अतिथि किसानों के बीच (सी.डी.एस.), डॉ. मुरली मोहन (सी.डी.एस.), डॉ. के.पी. शर्मा (सी.डी.एस.) के बीच आयोजित किया गया।

इस अवसर पर मुख्य अतिथि डॉ. के.पी. शर्मा (सी.डी.एस.), डॉ. मुरली मोहन (सी.डी.एस.), डॉ. किशोरी देवी (सी.डी.एस.), मूलभूत जलवायु सुदृढ़ कार्यक्रम के अंतर्गत किसान प्रक्षेत्र दिवस का आयोजन किया गया।

Set-up of Farmers Training cum Resource Center

Sunflower Model Farms

HIGHLIGHTS OF THE PROJECT

**Project Area- Block Gajapati,
Odisha**

**40 Demonstration Plots were
set up covering 20 acres land**

**Germination of seeds
ensured prior to sowing**

**Adoption of water efficient
technology to provide
consistent moisture**

**Sowing with row spacing and
plant spacing to optimize
plant growth**

**Production of around 2.5
quintal per acre obtained**



MADHYA PRADESH FARMERS INTERACT WITH HONORABLE PRIME MINISTER SHRI NARENDRA MODI



It was a proud moment and a great honour for Solidaridad and Vodafone Idea Limited from our SmartAgri farmers in Madhya Pradesh and Maharashtra, who are implementing the SmartAgri project, to receive the words of encouragement from Honorable Prime Minister Shri Narendra Modi Ji, during the India Mobile Congress held in New Delhi.

WOMEN EMPOWERMENT IN AGRICULTURE & ENTREPRENEURSHIP



Women are Empowered through Economic Opportunities

- Access to knowledge and technologies
- Entrepreneurship – Soy Food based enterprises, custom-hiring, bio-inputs, vegetables etc.

Redefining Culture and Norms

- Women are becoming more and more equal partner with their male counterparts in decision-making process both with in households, agriculture activities
- Leadership role in community institutions – FPOs, Panchayat

Healthy Women and Healthy Family

- Improved knowledge about nutritious diet and inclusion of soy
- Access and affordability for nutritious food

EMPAANELED WITH SFAC – GOVERNMENT OF INDIA AS A CBBO FOR THE FORMATION AND PROMOTION OF 10000 FPOS IN MADHYA PRADESH & RAJASTHAN

- ❑ Our expertise in the development and promotion of FPOs goes a long way back
- ❑ We are the first organization, instrumental in developing the first FPO of the country



Institutional
Strengthening

Business Planning, Access to
Finance, Infrastructure for
Storage, processing and value
addition along with tools like
Certification/ Traceability etc.

Linkages with
potential
Markets



**BHARATKHAND
CONSORTIUM**
of Farmer Producer Organizations

भारतखंड कंसोर्टियम ऑफ फार्मर प्रोड्यूसर आर्गेनाइजेशन

Bharatkhand Consortium of Farmer Producer Organizations

Bharatkhand Consortium of Farmer Producer Company Limited is a federation of Farmer Producer Organizations (FPOs) which was established under the Companies Act-2013 (18 of 2013) on 31 March 2023

We aim to Build a Sustainable Eco-system for Sustainable FPOs

एफ.पी.ओ. व्यवसाय विकास कार्यशाला



बोर्ड सदस्यों का लाल किला, दिल्ली पर 77वें स्वतंत्रता दिवस समारोह में आगमन-15 अगस्त 2023



भारतखंड कंसोर्टियम ऑफ फार्मर प्रोड्यूसर कंपनी लिमिटेड

परिचय

भारतखंड कंसोर्टियम ऑफ फार्मर प्रोड्यूसर कंपनी लिमिटेड किसान उत्पादक संगठनों (FPOs) का एक राष्ट्रीय स्तर का संघ है जिसकी स्थापना कंपनी अधिनियम-2013 (18 of 2013) के अंतर्गत 31 मार्च- 2023 को भोपाल, मध्य प्रदेश में हुई है। भारतखंड कंसोर्टियम का गठन लघु कृषकों का कृषि मूल्य शृंखलाओं में समावेश और सदस्य FPOs का संस्थागत विकास एवं उचित बाजारों से जुड़ाव के साथ-साथ FPOs और कृषि के क्षेत्र में नवाचारों के माध्यम से समुचित समृद्धि लाना है।

परिकल्पना

इस कृषि मूल्य शृंखलाओं में लघु कृषकों के समावेश के साथ-साथ किसान उत्पादक संगठनों (FPOs) आधारित टिकाऊ व्यवसाय मॉडल स्थापित करने और इन्हें बड़े पैमाने पर लागू करने के लिए प्रोत्साहित हैं और इस तरह लघु कृषकों और कृषि में समुचित समृद्धि की परिकल्पना करते हैं।

उद्देश्य

इस कृषि मूल्य शृंखलाओं में किसान उत्पादक संगठनों (FPOs) के माध्यम से लघु कृषकों की भागीदारी बढ़ाने और (FPOs) आधारित टिकाऊ व्यवसाय मॉडल स्थापित करने के लिए प्रयासरत हैं इन प्रयासों से भारतखंड कंसोर्टियम का लक्ष्य इस तरह के वातावरण का निर्माण करना है जहां लघु कृषकों को उनकी उपज का उचित मूल्य मिले, प्रकृति के साथ संतुलन में उत्पादन करने के साथ-साथ कृषि मूल्य शृंखलाओं में लघु कृषकों की बेहतर भागीदारी हो सके और समग्र ग्रामीण अर्थव्यवस्था में मजबूती बने।

Solidaridad



RECOMMENDATIONS: 5 PILLARS TO MAKE INDIA SELF-SUFFICIENT IN VEG OILS

1**Development of Oilseeds Hubs**

Develop the Key Potential States of India i.e. Madhya Pradesh, Rajasthan, Maharashtra, Telangana, Karnataka, Gujrat, Punjab, Haryana & NE

2**Govt. Endorsement for Sustainability Standards**

In order to ensure the sustainability, the Govt. should endorse the IPOS, ISSS sustainability standards

3**Launch of NMEO-Oilseeds**

In-line with the NMEO-OP, the NMEO-Oilseeds is need to be launched

4**Public-Private Civil Society Partnership**

Public-private Civil Society Partnership need to be encouraged for further replication of best practices of Model farm project

5**Development of Seed Hubs**

Seed hubs to be developed in the potential clusters in order to ensure the availability of quality and improved seed varieties

CHANGE
THAT MATTERS

Questions/Suggestions/Additional Information

suresh@solidaridadnetwork.org



solidaridadnetwork.org



@solidaridadnetw



/company/solidaridad



/solidaridadnetwork



/solidaridadnl