AGROVISION FOUNDATION

ANNUAL ACTIVITY REPORT

2023-24

IMPROVING AGRICULTURE,
IMPROVING LIVES

AGROVISION FOUNDATION

ANNUAL ACTIVITY REPORT 2023-24

Shri. Nitin Gadkari
Hon'ble Union Minister,
For Road Transport and Highways

OUR CHIEF PATRON'S MESSAGE

Agrovision Foundation is committed to give new concepts in farming and introducing new Agri-Technology every year. Besides knowledge dissemination to achieve prosperous future of farmers, Agrovision Foundation conducts technology transfer in field to demonstrate to farmers and farmers producing companies (FPO), modern techniques of farming. Agrovision works through determination, perseverance, commitment, and confidence for opening new chapter of prosperity in rural Vidarbha region of Maharashtra, which is dominated by rainfed dryland farming community. Advances in machinery have expanded the scale, speed, and productivity of farm equipment, leading to more efficient cultivation of more land. Seed, irrigation, and fertilizers also have vastly improved, helping farmers increase yields. Artificial intelligence, analytics, and other emerging technologies such as use of Drones in farming could further increase yields, improve the efficiency of water and other inputs, and build sustainability and resilience across crop cultivation and animal husbandry. Future agriculture will not only provide food & feed security but shall also make India fuel secured. Due to tiny land holdings, farmers' incomes are not sufficient. One of ways of enhancing farmer incomes is using Digital Technologies in Agriculture to increase the overall efficiency of the agricultural production processes as well as the entire value chain. The focus area in Indian Agriculture, in the recent times has been on enhancing farmer incomes. This took the shape of official government policy after the clarion call of the Prime Minister of India to double farmers' incomes and the subsequent budget announcement to this effect. In the interim Budget 2024, the Indian Government reaffirmed its commitments to digital agriculture by allotting Rs. 400 crores for the Digital Agriculture Mission and additional Rs 600 crores for advancement of technologies in agriculture sector. Such a financial support underscores the Government's recognition of the pivotal role that technology plays in transforming Indian Agriculture.

"The future of food is unequivocally digital, and the future of digital is inevitably AI (Artificial Intelligence). From gene sequencing in seed production to Internet of Things (IoT) networks of implements and sensors that generate data and image recognition technologies that assay and grade crops and commodities, AI applications are being deployed across different aspects of agriculture." India's National Strategy on AI also aims to realize the potential economic and social benefits the technology offers. Further, the National Strategy on AI recognizes agriculture as one of the priority sector areas for implementation of AI driven solutions. AI has made significant contributions to agriculture sector globally by introducing innovative solutions. One of the pivotal role data driven technologies played is the interpretation of AI-based sensors that can be used in managing soil water and nutrition and IoT devised with farm machinery. This facilitates real-time monitoring and decision making empowering the cultivators with actionable insights to optimize crop yields and resource management. There are attempts by Indian companies to equip farmers in some states about it. I am happy that

Agrovision Foundation is disseminating all such advance technology knowledge to the farming community of Vidarbha.

THE MANAGEMENT TRUSTEES OF AGROVISION FOUNDATION

Shri. Ravi Boratkar
President

Dr. C.D. Mayee
Secretary

Shri. Ramesh Mankar
Treasurer

EXECUTIVE MEMBERS OF AGROVISION FOUNDATION

•Shri Sudhir Dive •Shri Anandrao M.Raut
•Shri Milind Tichkule •Shri Prashant Kukade
•Shri Shrish Bhagat

THE LIFE MEMBERS OF THE AGROVISION FOUNDATION

• Shri Shridhar Thakare • Shri Vijay Jadhav • Shri Nitin Kulkarni
• Shri Prashant Wasade • Shri Madhav Kotashthane • Dr. Pinak Dande
• Dr. Sunil Sahatpure • Dr. L B Kalantri • Shri Vaibhav Dange
• Dr. K D Thakur • Dr. Hitendra Singh

CONTENT

FROM PRESIDENT'S DESK.....

Greetings to all the members of Agrovision foundation

It is a great pleasure to place before you the annual activity report of AGROVISION FOUNDATION for the year 2023-24. Agrovision foundation. The 14th AGROVISION Exhibition was organized from 24th to 27th November 2023 at PDKV Ground at Dhabha. The exhibition had two conference, two guidance programs, mahila Bachatgat melava and 32 workshops on various topics and inspiring success stories of farmers. The response from the participants and farmers was overwhelming. I thank all visitors, exhibitors, sponsors, and students for their continued support.

In addition, this year we successfully completed two projects, PROJECT HDPS and PROJECT Black Thrips of Chili.

I am extremely happy that Agrovision Foundation has established itself in the region as a knowledge partner by many State and Central Government organizations. It is supporting the efforts of Dr PDKV, Akola and ICAR-Institutes like Central Institute for Cotton Research, Central Citrus Research Institute and National Bureau on Soil Science in disseminating the latest technologies developed by these Institutes. I am happy that the Foundation has developed collaboration with ICAR-CIRCOT, Mumbai and planning to be partner with other Central Institutes in Maharashtra.

I would like to place on record the sincere efforts Dr Mayee and his team in the Foundation in inviting and executing technical demonstration projects in farmers field and making all efforts to showcase the advances to the farmers using the axiom' SEEING IS BELIVING'.

In addition, this year we successfully completed two projects, **PROJECT BANDHAN and PROJECT POSHAN**

PROJECT BANDHAN

The mating disruption technology has been widely experimented and adopted as a tool for the management of pink bollworms on cotton. In the Vidarbha region of Maharashtra, Agrovision Foundation and South Asia Bio-technology Center, Jodhpur have demonstrated the technology on large-scale initiatives in 5 clusters in Nagpur district. Subsequently this year 2022-23 the same was extended throughout the region and 7 clusters were chosen in five district. Viz., Nagpur, Wardha, Yavatmal, Amravati, and Buldhana, in total of 379 acres of area. The technology can be now recommended to the farmers for wider adoption.

PROJECT POSHAN

Agrovision Foundation has undertaken a project called "PROJECT POSHAN" to promote and popularize the new cotton nutrition technology developed by Smartchem Technologies Ltd., a 100% subsidiary of Deepak Fertilizer and Petrochemical Ltd. (STL-DFPCL), Pune. The company has developed a new nutrient unlock technology called CROPTEK-SOLUTION, In fact, imbalanced nutrition, deficiencies of micro elements and lack of awareness about soil nutrition are some of the important reasons for low productivity of cotton in Vidarbha region of Maharashtra. Hence it was necessary to disseminate the knowledge about cotton nutrition and transfer the technology available to farmers for their benefit. The impact will be visible in next season as many farmers who interacted with Agrovision Foundation agreed that they want to use the technology, The farmers rallies were organized at the four demo plots of 0.5 acres in two villages around Nagpur, one at the developed field of Ankur Seeds and other at Shri Shivaji College Farm, Amravati.

Our mission is to establish a Farmer Training and Education Center and Cotton Testing Laboratory at Nagpur to raise the standard of living of Vidarbha farmers, and also to create awareness about innovative and sustainable farming practices. This can be achieved through knowledge transfer through training, workshops and undertaking special projects for farmers.

KEY PROGRAMS AREA

Special Project Undertaken:

- **Survey, Surveillance, Awareness of invasive pest Black Thrips of Chilli and its management in Vidarbha region (2023-24)**
- **Popularization of HDPS Technology in Cotton in Vidarbha Region through Precision Demonstrations (2023-24).**
- **14th Agrovision**

Special Technical Project 1

Survey, Surveillance, Awareness of invasive pest Black Thrips of Chilli and its management in Vidarbha region (2023-24)

Agrovision Foundation, Nagpur in collaboration with Ankur seeds Pvt. Ltd. and Dhanuka Seeds has successfully implemented campaign of Black Thrips of Chilli. Black Thrips in Cilli crop has emerged as a serious pest during rainy season in India. Initial incidence of the pest was noticed in Guntur Chilli belt of Andhra Pradesh. But subsequently it has spread to all chilli growing areas of the country including Vidarbha. The chilli growing belt of Vidarbha falls in Umrer, Bhivapur Tehsils and the famous Bhivapuri Mirchi is known as a special variety in the region. To make the farmers aware of the pest, incidence, symptoms, detection methods, life cycle and specific control measures the campaign of Chill growers was organized on September 5, 2023 at Umrer. **Hon'ble Shri Raju Parve,** MLA, Umrer flagged off the Black Trips of Chilli Campaign Float at Umrer. It carried the necessary information through booklets, leaflets and other campaign material through entire chilli growing areas. A series of campaigns were undertaken in Umrer, Bhivapur and Mandal area which is intensive chilli growing tract of Vidarbha to educate and empower farmers about the management of the new invasive pest; Black thrips. Agrovision Foundation prepared framework of activities for the coming rainy season right from the start of nursery management till harvest of chilli crop. AF will select the chilli growing areas like Bhivapur, Kuhi and Mandhal for campaign like moving of float carrying the symptoms diagnostic features of the new pest and stages of crops for management. Leaflets, bulletins, hoardings carrying the messages on the management will be done in the crop season. AF will prepare literature on life cycle of the pest for circulation amongst the chilli growers. Radio jingle, attractive educational cartoons and even radio-TV talks on the topic shall be organized. The achievements of the first season campaign are truly visible as farmers are adopting measures that will prevent the onset of the pest attack in coming season.

Special Technical Project 2

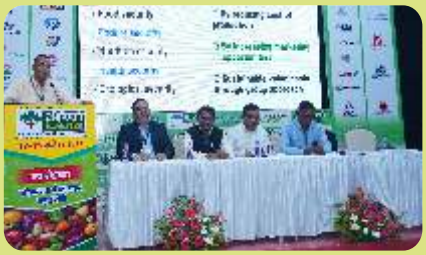
Popularization of HDPS Technology in Cotton in Vidarbha Region through Precision Demonstrations (2023-24)

The Bt technology in cotton gain momentum after its introduction in 2002 reaching a peak of nearly 600 kg lint/ha by 2013-2014. This was something to cheer as the country came out of the stagnant yield at 300 kg lint/ha during the last twenty years of the last century. However, lack of new technology inductions, failing to observethe refugia norms suggested for long term viability of Bt technology and no new agronomic changes resulted in either stagnation or declining trend of cotton productivity after 2014. The causes for India's falling production have been well analyzed now and the way massive efforts are being made to either promote the tested new technologies like mating disruption, HDPS, Nutrition management, micro-irrigation and researching and developing issues of weed management, mechanical cotton picking, it is expected that the country will halt the downward trend in production and productivity. One of approaches for raising the productivity lies in altering the agronomy of the crop particularly in rainfed areas which occupies nearly 62% of cotton production area in the country. Several new Bt hybrids have been recently developed to suit the high-density planting (HDPS). Series of trials through State and Central Governments, private companies are being planned to test the suitability of the HDPS technology. Agrovision Foundation has already established a reputation of conducting successful field trails of cotton in Vidarbha region of Maharashtra for last several years with respect to management of serious pest like; Pink Bollworm, Integrated Nutrient Management etc. by developing rapport with farmers. This year the foundation has undertaken a large-scale field trail on HDPS technology suitability with some new Bt hybrids. RASI seeds company not only encouraged us for the field testing of some hybrids under HDPS technology but also supported the project financially. Ankur Seeds Pvt. Ltd, Nagpur and Mahyco Seeds, Jalna provided their new hybrids for testing under HDPS technology. Three Bt hybrids viz., Rasi THCT-5380, Mahyco-7399 and Ankur Kirti-3066 were planted on three acres each at four locations; Lakhori, Metpanjara (Nagpur Dist.), Talegaon (Wardha Dist.) and Kanshivani (Akola Dist.) in simple block design one after another. A suitable common control plot of commonly grown Bt cotton hybrid was also kept for recording observations. The test cultivars were sown between 27-06-23 to 05-07-23 at 90cm x15 cm. At Nagpur villages some planting was done using the Shaktiman-pneumatic planter while dibbling was done at other places. At the rate of 6 seed packets of 450 g/acre, each hybrid at one location required were 18 packets and for four locations was 72 packets per hybrid. This is one of the large plot demos that is done under this program to check the influence of HDPS technology on cotton yield. Observations were recorded on cotton plant growth like, height, branches, squares, flowers, bolls etc. Simultaneously data on sucking pests and bollworms were also recorded at all the locations. Yield of cotton picked in three to four pickings were compiled for three acres and converted as yield per ha. It was found that the growth of Rasi THCT-5380 was bushy type than other hybrids while the stunting was more intense at Kanshivani than at other locations. Similarly, sucking pest incidence was a bit higher at Kanshivani and Talegaon than other locations. The differences in test hybrids were marginal as none of the pest crossed the economic threshold level. Square damage due to American bollworm was found to be of higher order in control plots than the test hybrids. However very negligible incidence of the pest was observed. Similarly, the damage due to pink bollworm was seen only at later stages of growth at Kanshivani in all the hybrids severe being in control plots. All the test hybrids gave higher seed cotton yield at all the locations. The increase in yield in Rasi THCT-5380 was to the tune of 20 to 90 % with an average of 37%. In case of Mahyco-7399 the rise in yield was in the range of 19 to 71% with an average of 31% while in Ankur Kirti-3066 it ranged from 25 to 90% with mean yield increase of 40%. All the hybrids gave best yield at Kanshivani followed by Talegaon and then the villages in Nagpur Dist. Analysis of the results revealed that rainfall this year played a major deterrent in cotton growth and output. Cotton season rainfall at Nagpur villages was 1244 mm as against 695 mm at Kanshivani and 779mm at Talegaon. It is concluded that HDPS technology is an excellent option available to cotton farmers of Vidarbha region as they will be able to halt the trend of yield deceleration in the Bt technology, which must stay for long time to give maximum benefit to farmers.

Agrovision Central India's Largest Agri Summit

Exhibition Space and Arrangement

Spanning a vast area of 60,000 sqm, Agrovision 2023's exhibition space was comprehensively organized with 11,000 sq.m of covered exhibition area, 4000 sqm of outdoor exhibition facilitating live demonstrations and interactive sessions, 2100 sqm of inaugural dome, Dr. M S Swaminathan Conference Hall of 450 sqm and a Workshop area covering 1125 sqm. In addition to these, there were dedicated areas for registration counters, site office, help and information centers and VIP lounge for dignitaries.

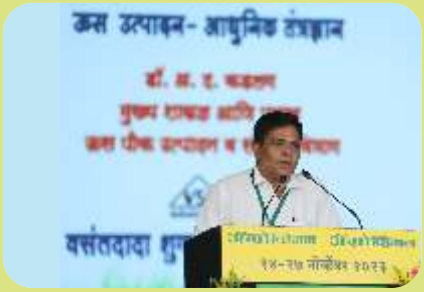


Topics of Workshops

The event hosted over 425 exhibitors from all categories in agriculture and allied businesses representing the diverse nature of the sector. This included over 50 Agritech startups, introducing new ideas and innovations, and more than 100 MSMEs, showcasing their contributions to the industry. The mix of participants at Agrovision 2023 highlighted the event's role as a significant platform for the exchange of ideas and advancements in agriculture.

Special Workshops

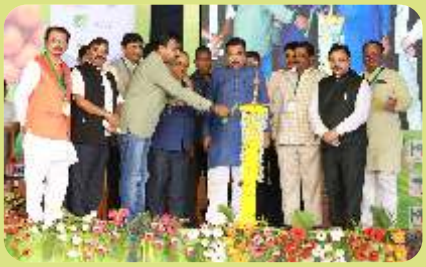
At 14th Agrovision series of special workshops were organized, which were led by policymakers, and successful farmers and entrepreneurs. Dairy Development Opportunities in Vidarbha witnessed participation from 5500 farmers. Shri. Radhakrisna Vikhe Patil, Minister for Dairy Development, Animal Husbandry and Revenue, Government of Maharashtra was the Chief Guest on the occasion. During the workshop, Shri. Nitin Gadkari virtually laid the foundation stone of Mother Dairy's proposed state of the art mega milk processing plant at Butibori, Nagpur. Development of Inland Fisheries highlighted business opportunities in various areas of inland fisheries in Vidarbha like prawns' culture, aquaculture, value added fish products, ornamental fishery, among others. The workshop witnessed participation from 1000+ farmers. Former Energy Minister of Maharashtra



Maximizing Sugarcane Cultivation

Through Technology reinstated the importance of sugarcane as the only cash crop in the region that assures growing income every year, and why the farmers should start planning to grow sugarcane. The workshop was guided by Shri. Nitin Gadkari, Mrs. Kanchan Gadkari, and Dr. Ashok Kadgal, Senior Scientist, Vasantdada Sugar Institute, Pune. 2500+ farmers from Vidarbha and adjoining areas participated in this workshop. Doubling Orange and Citrus Production Using Modern Technology focused on maximizing the production and emphasized the impact it will have in creating prosperous farmers in Vidarbha. This workshop was guided by Dr A.K. Das, Chief Scientist NRCC, Dr. Dinesh Paithnkar, Dr. Harihar Kousdikar, under the guidance of Shri. Nitin Gadkari. 3000+ farmers were present for the workshop.

Guidance Programme

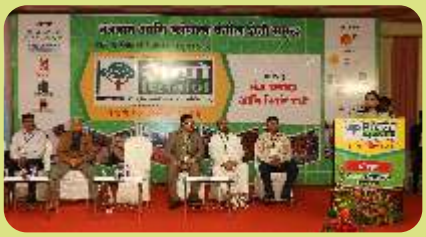


FPO/FPC Formation

Focused on giving detailed information about the various aspects required to form successful FPO like financial assistance, availability of modern technology, raw material, marketing network etc. The workshop was presided by Shri. Nitin Gadkari, guest of honour was Shri. Anup Kumar, Additional Chief Secretary, Agriculture Department, Shri. Vilas Shinde, Sahyadri Farms, delivered the keynote, and other esteemed dignitaries present at the workshop shared their insights. The workshop was well attended by 4500+ FPO Directors.

Mahila Bachat Gat Melawa

Mahila Bachat Gat Melawa saw participation from 5750 women members of various women self-help groups. Ms. Aditi Tatkare, Minister for Women and Child Development, Maharashtra, was guest of honor and the workshop was presided by Shri. Nitin Gadkari. Women were given information about financial assistance available for self-help groups and were provided guidance on packaging, branding, and marketing their products. A special small exhibition of products manufactured by women self-help groups was arranged in Agrovision.

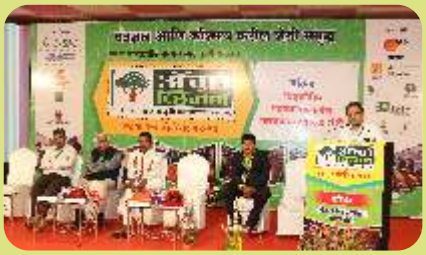


Orange Cultivation

Orange has one of the importance fruit crops of Vidarbha and has good potential for export, processing, and marketing. Using advance technology in production can help farmers to get quality products. Agrovision Foundation Invited experts to guide farmers, also invited successful farmers to share their experience. The focus of the guidance was on Global comparison, soil health, micro nutrients management, disease and remedies, cultivation technology, Post harvesting technology, marketing, and value addition.

Conference Programme: Food Processing: Opportunities and Challenges

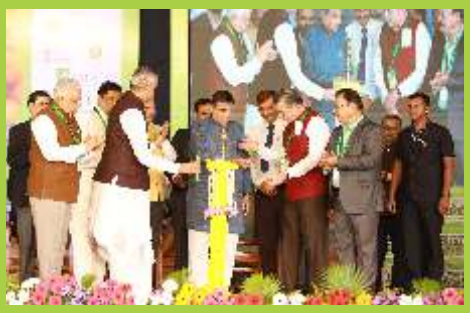
A 2-day conference on Food Processing: Opportunities and Challenges in Central India was organized during 14th Agrovision in association with LIT Alumni Association which was attended by 1200 delegates. The conference was inaugurated by Shri. Nitin Gadkari, Dr. Harshdeep Kamble, Industry Secretary, Shri. Rajiv Mankar, Vice Chancellor LIT University, Dr C. D. Mayee, and other dignitaries. Over the course of 2 days, 10 panel discussions with 35 experts were held focusing on various aspects of the processing industry like quality control, use of packaging materials, FSSAI certifications, distribution, supply chain, and consumer marketing. As part of their individual presentations industry leaders, academicians, entrepreneurs, and policymakers shared their experiences and insights with the delegates and engaged in interactive Q&A sessions.

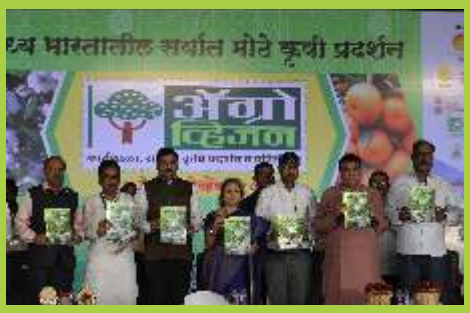


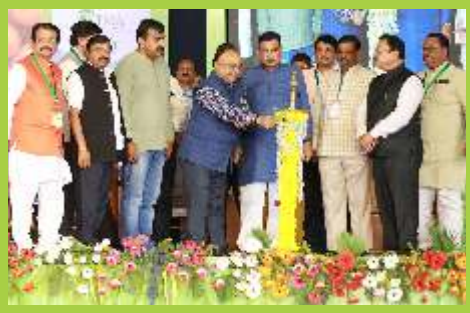
Inland Fisheries: Opportunities in Vidarbha

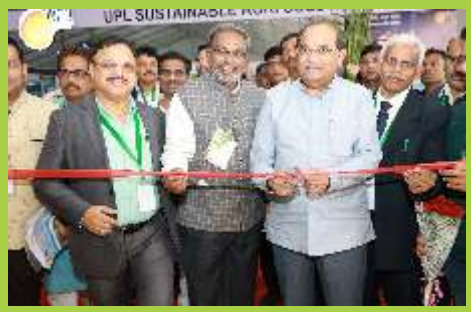
Vidarbha has tremendous scope for the fisheries, the availability of ponds in many parts of Vidarbha, provide ample of opportunities for fish farming. The conference was held to guide fish farmers on new technologies in fisheries, importance of processing and marketing opportunities for processed fish. Importance of soil and Water Quality in fish Culture, value added fish products, fish seed Production and rearing and many more areas were discussed to increase production and fish farmers income. Success stories in the fisheries were major attraction for the farmers. The conference was very well received by participated farmers.

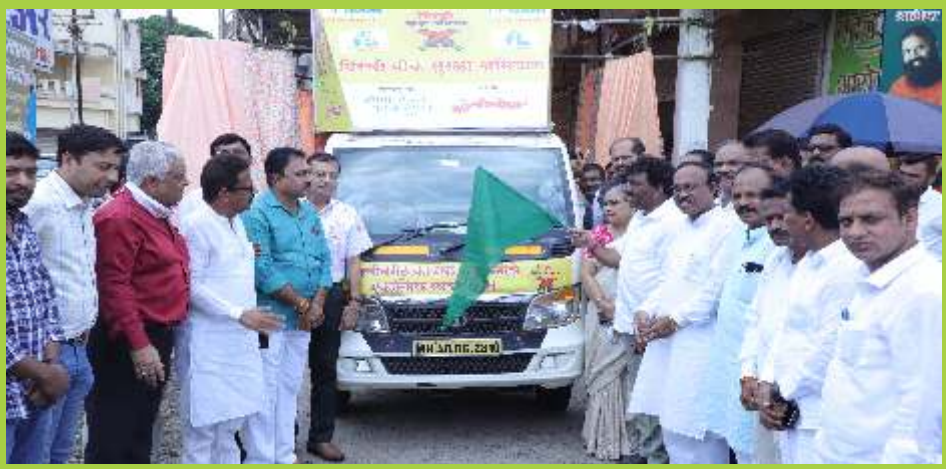
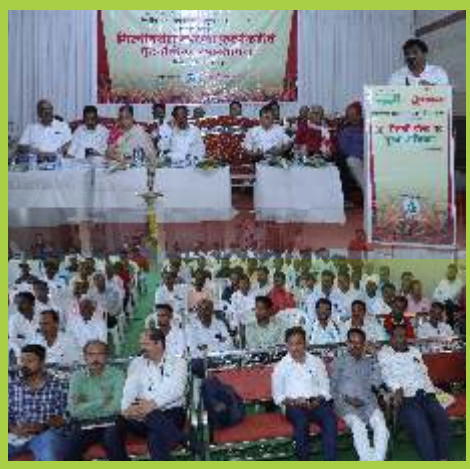
Glimpses Of Activities





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