ISAP
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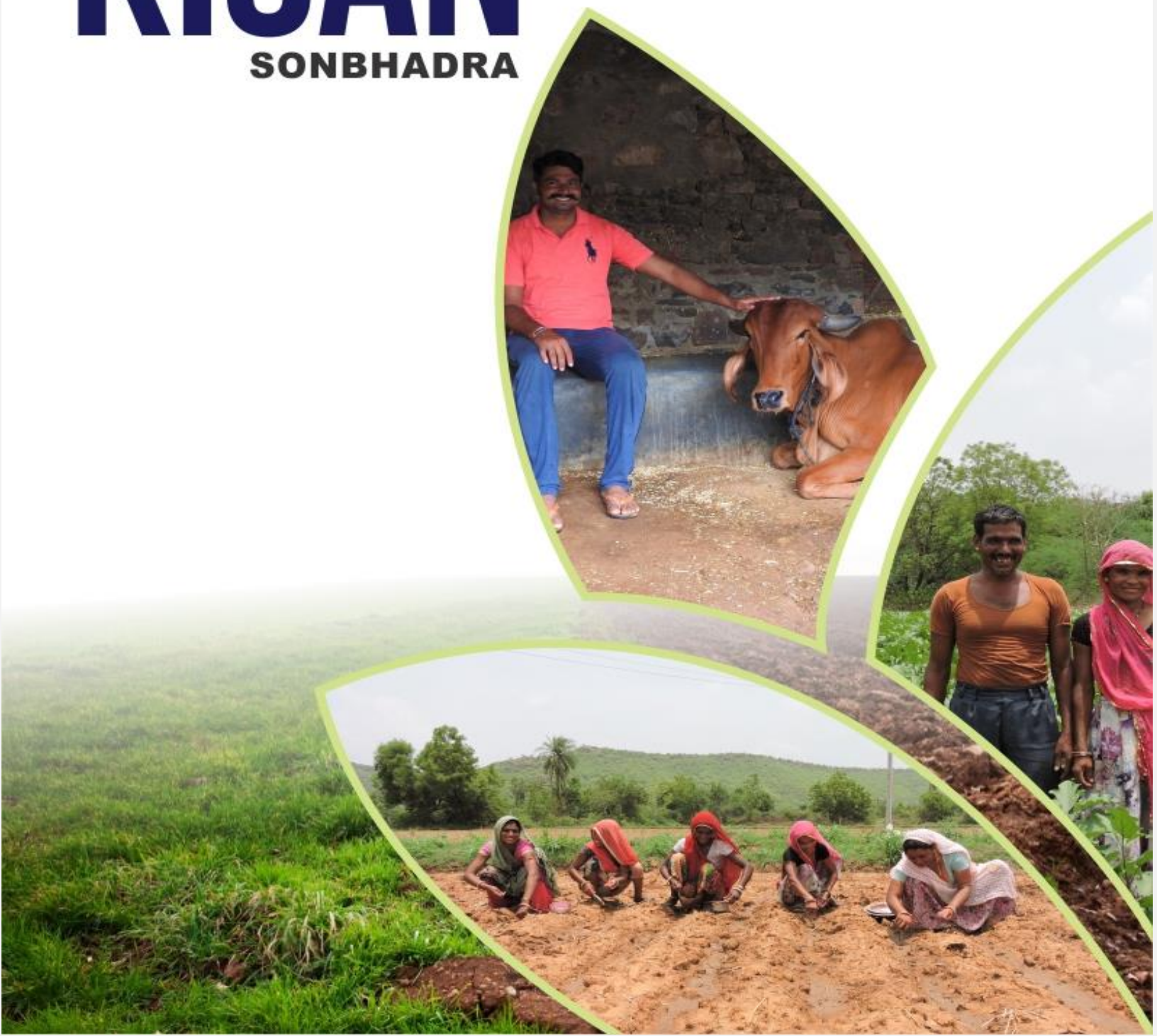
ANNUAL REPORT

JEETEGA KISAN

SONBHADRA









Submitted To

DCM SHRIRAM

Growing with trust

Submitted By

ISAP

Enterprise4Impact

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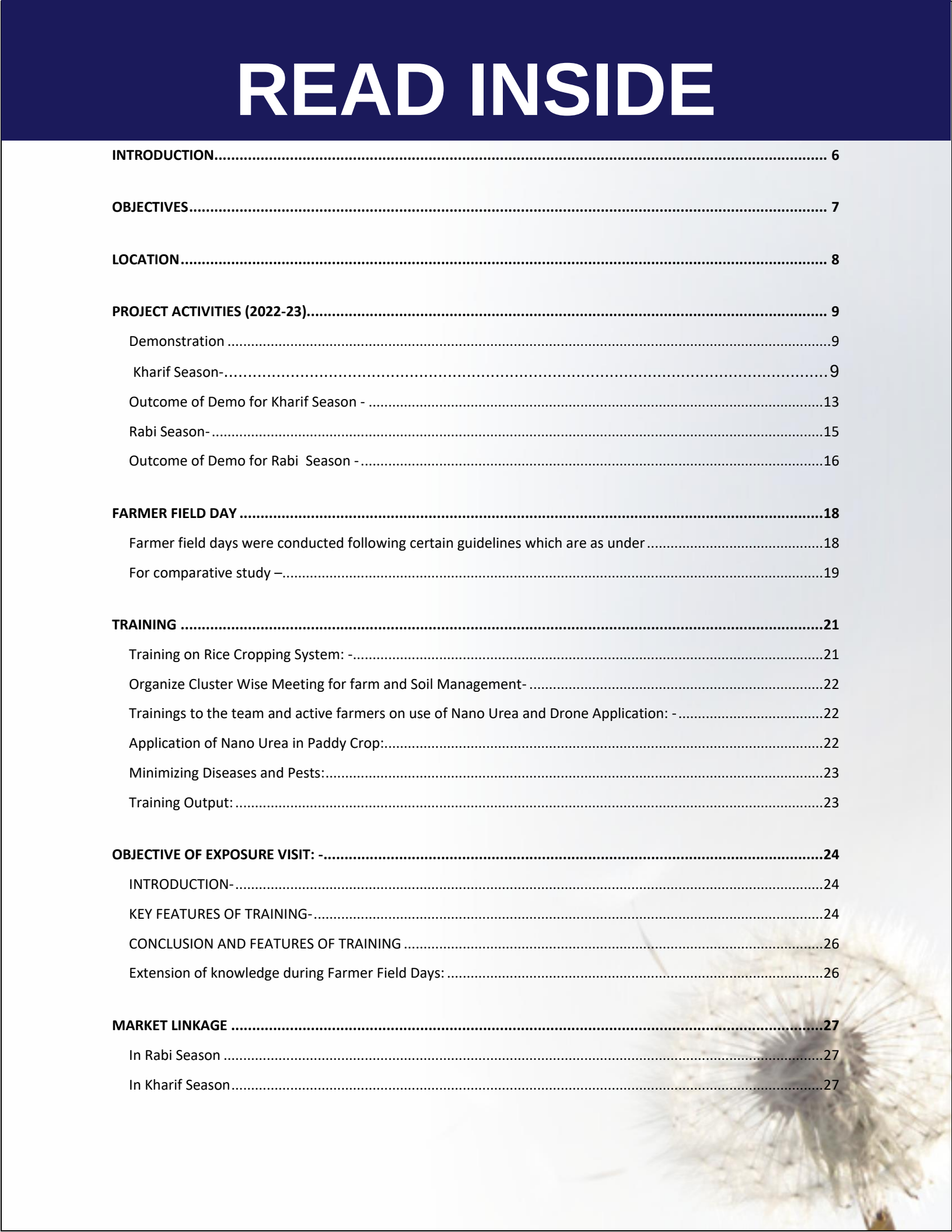

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INTRODUCTION

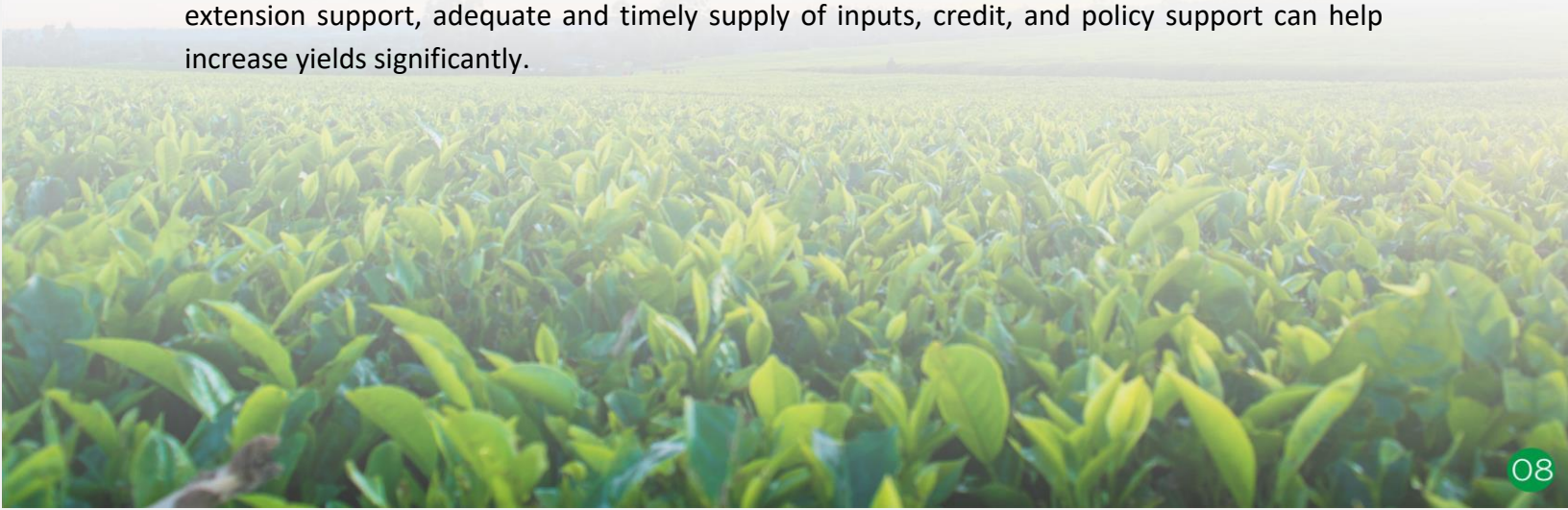
India is one of the largest rice-growing countries in the world, with approximately 44 million hectares under paddy cultivation and an average annual production of 118 million tonnes. However, India's average rice yield is nearly 16% lower than the world average. Rice occupies about 23.3% of the gross cropped area of the country, accounting for 43% of the total food grain production and 46% of the total cereal production.

Rice cultivation in India occurs under four different ecologies, with the maximum area of 25 million hectares under irrigated ecology, resulting in the highest production of 71 million tonnes and productivity of 2.9 tons per hectare. The rainfed eastern zone accounts for the largest area and production, but with the lowest productivity. Eastern Uttar Pradesh accounts for about 52% of the acreage and 51% of rice production in the state.

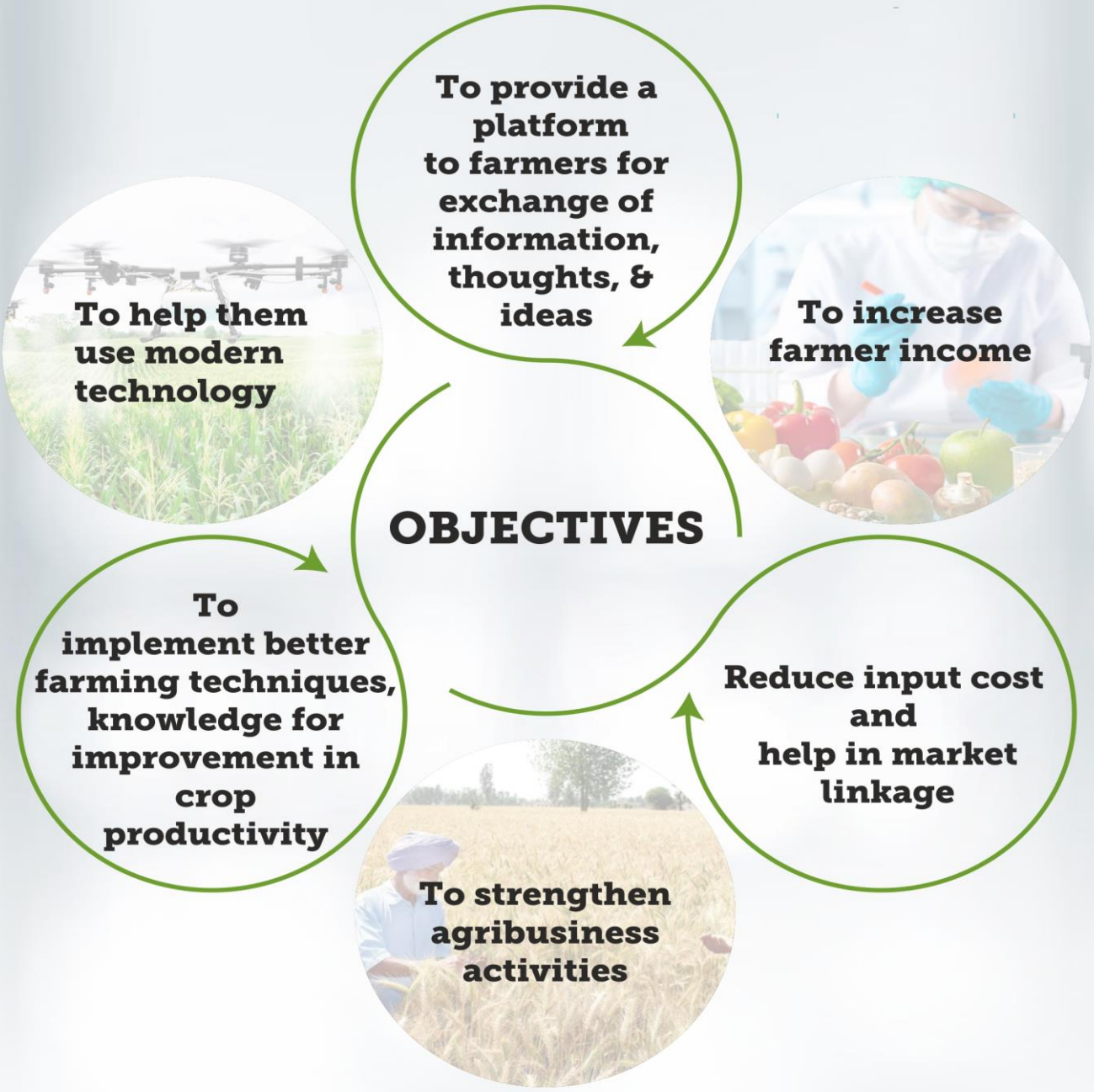
Several studies show that yield differences exist between potential, best practices, and actual yields in different rice-growing areas in various agro-ecologies, with a yield gap of above 50% in the North Eastern Plain Zone (NEPZ) and Eastern Plain Zone (EPZ) and above 40% in Vindhyan Zone. Factors such as lack of proper management, problematic soils, lack of mechanization, and other issues contribute to this status.

Similarly, a study on wheat in the eastern region of Uttar Pradesh resulted in a yield gap ranging from 15.56% to 30.10% with an average gap of 29.93% for wheat in the irrigated region. The yield gaps are mainly caused by socioeconomic factors, credit institutional/policy-related factors, lack of extension services, and lack of improved technology. Different strategies, such as Integrated Crop Management (ICM) practices, timely supply of inputs including credit to farmers, research, and extension collaboration to transfer new technologies, can help minimize yield gaps.

The major constraints of crop production in eastern Uttar Pradesh include small and fragmented land holdings, poor fertility, weed and water management systems, lack of mechanization, and market facilities. Promoting good agronomic practices, research and extension support, adequate and timely supply of inputs, credit, and policy support can help increase yields significantly.

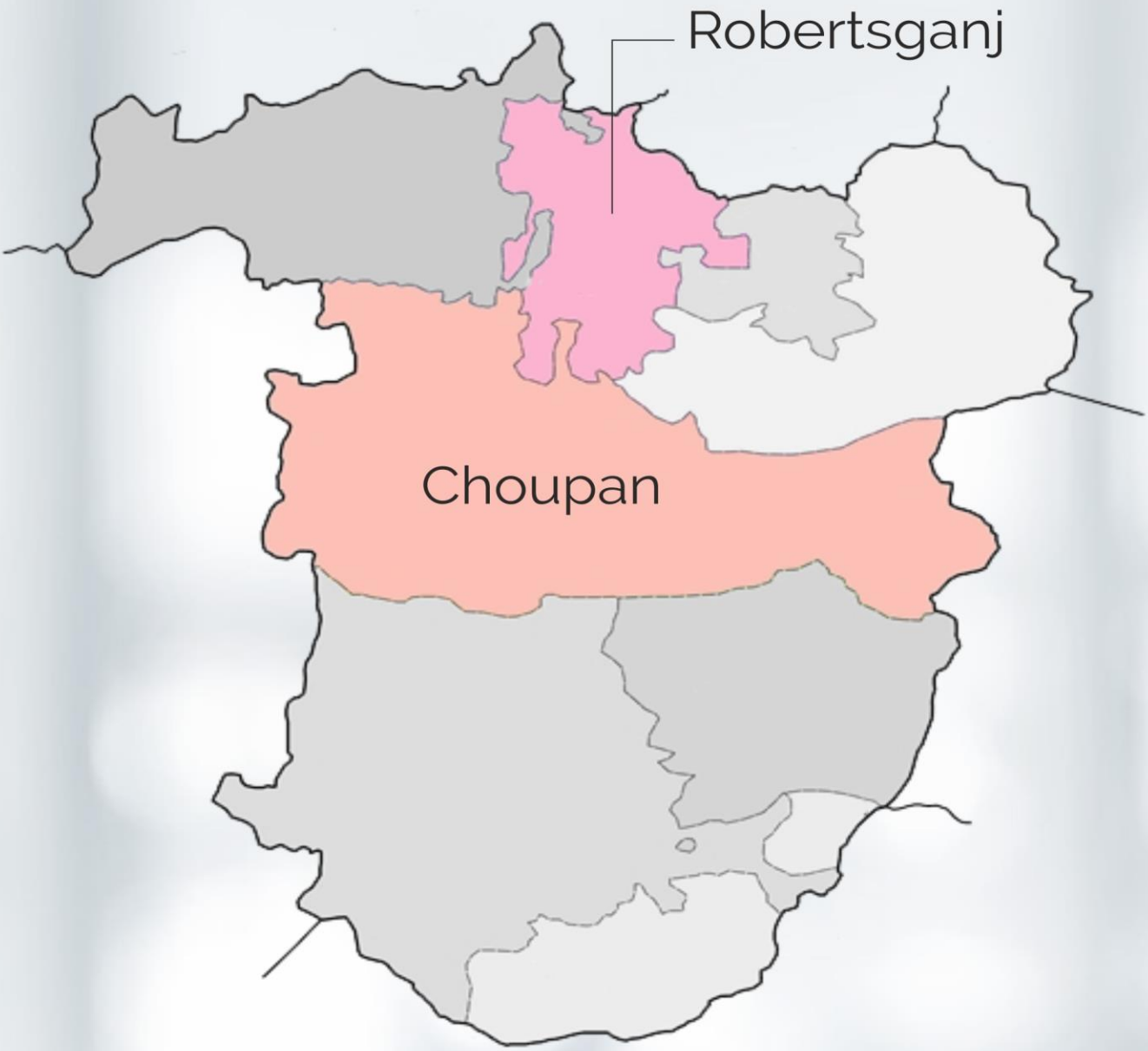


OBJECTIVES


To provide a platform to farmers for exchange of information, thoughts, & ideas
To increase farmer income
Reduce input cost and help in market linkage
To strengthen agribusiness activities
To implement better farming techniques, knowledge for improvement in crop productivity
To help them use modern technology
OBJECTIVES

LOCATION

Robertsganj and Chopan Block of Sonbhadra UP



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PROJECT ACTIVITIES (2022-23)

Demonstration

In order to achieve the desired outcome of the project, four clusters were chosen for field demonstrations of paddy and wheat. Field demonstrations are an effective means of transferring improved technologies to farmers since they tend to believe in what they see. The demonstrations focused on fertilizer application, specifically on its balanced use and timely application. Only interventions in the area of fertilizer application were conducted in the fields.

Kharif Season

Rice plays a major role in the food as well as the livelihood security of the farming community of Sonbhadra district . One of the major constraints of traditional rice farming is low productivity of local varieties.

Under the project, 200 demonstrations (50 farmers from each cluster) were conducted to display better agricultural practices in paddy. The various activities undertaken to support the field demonstrations are as below:

1. Soil testing at demo plots:

The ISAP team conducted soil sampling for 200 demo farmers, with 50 farmers selected from each cluster. The analysis of these samples provided information on nutrient deficiencies and excesses, soluble salts, and other components critical to paddy growers. This allowed the farmers to accurately mix the appropriate amount of fertilizer

in the demonstrated plots, fulfilling the recommended dose of NPK and Zinc Sulphate in the form of DAP, Urea, SSP, Urea, or MoP.

The soil samples were tested in a soil lab located in Ranchi. Based on the soil health card recommendations, the ISAP team provided farmers with fertilizer and other management recommendations. They also organized meetings to educate farmers about the importance of soil testing and the soil health card. The team emphasized the importance of providing hands-on support for crop management and explained how soil testing is crucial for several reasons, including optimizing crop production, protecting the environment from fertilizer contamination, diagnosing plant culture problems, improving nutritional balance, and saving money and energy by applying only the necessary amount of fertilizer based on soil test interpretation of their own plots.

2. Variety selection – Our team also made farmers aware about varietal selection that is one of the earliest and most important decisions for paddy growing farmers in kharif season in Sonbhadra region. With this single decision, a grower establishes profit potential before a seed is even planted. The following is the variety from which a farmer can select

- Drought resistance high yielding variety – Sarju -52
- BPH Pest resistance variety
- Aman variety that is 60-70% resistant to brown plant hopper attack

3. Seed treatment – During informal and formal communication (Meetings, Trainings, one-onone communication) the team speaks to farmers and suggests them to go for seed treatment before buying from seed nursery to avoid the losses from fungal and bacterial seed-borne disease viz. leaf spot, BLBs during reproductive growth to IRRI Training

4. Balanced fertilizer management – All 200 farmers use the interpretative data of soil health card of the specific selected demonstrated plots tested soil to avoid incorrect use of the excessive fertiliser to cut the input cost of demo farmers.

- 2nd dose of Nano Urea top dressing through drone
- Having the linear effect on crop till harvesting and also reduces the pest and disease which is more effective as against granular urea.
- Reduce the cost per acre in comparison to bagged granular urea and also reduce the labour cost.

5. Create awareness about advanced technology -Farmers traditionally relied on methods that were not enough to meet their requirements. However, with the introduction of new technology such as drone technology, farming practices in Sonbhadra have been revolutionized. Drones have proven to be effective in reducing the excess use of water, pesticides, and herbicides. Additionally, they help to maintain soil fertility, optimize manpower usage, and ultimately increase productivity while improving the quality of produce.

6. Per Drop More Crop Campaign saving water management -

- Nano urea cuts the excess requirement of 2nd irrigation right after the 1st irrigation
- Save excess water required for traditional spraying. By using his technology, 10 litres of water is enough for 1-acre foliar spray.

7. Introduce Integrated Pest Management Model to minimise the cost- Viz

- Make them aware about why they must avoid the use of excess nitrogen which increases population of BPH and leaf folder.
- Alternate wetting and drying for BPH Ÿ Avoid close planting to save from the epidemic area
- FYM as a basal dose: - few farmers used FYM from their own farm
- Weed management, herbicide used with urea (Nano Urea + Nominee Gold) reduce the labour cost.

Outcome of Demo for Kharif Season -

The table is comparing the yield of paddy in demo plots (treated) and non-demo plots (untreated) and showing the difference in yield between them. The table is divided into four clusters, and the yield is measured in average yield (in qt) per cluster per acre.

The "Yield Difference" column shows the difference in yield between the demo and non-demo plots in each cluster. For example, in Cluster 1, the average yield in the demo plot was 25.99 qt/cluster/acre, while the average yield in the non-demo plot was 24.56 qt/cluster/acre, resulting in a yield difference of 1.43 qt/cluster/acre.

Overall, the table shows that there is a higher yield in the demo plots (treated) than the non-demo plots (untreated) in each cluster, with yield differences ranging from 1.06 to 1.43 qt/cluster/acre.

"YIELD" COMPARISON BETWEEN DEMO AND NON-DEMO PLOTS FOR PADDY				
		DEMO PLOT/TREATED PLOT	CONTROLLED/UNTREATED	Yield Difference
	Cluster Name	Avg. Yield (qt)/Cluster/Acre	Avg. Yield/Cluster/Acre	Avg. Yield/Cluster/Acre
	Cluster 1	25.99	24.56	1.43
	Cluster 2	24.6	23.4	1.2
	Cluster 3	23.45	22.36	1.09
	Cluster 4	25.58	24.56	1.06

The table is comparing the cost of cultivation for paddy in demo plots (treated) and non-demo plots (untreated) and showing the difference in cost between them. The table is divided into four clusters, and the cost of cultivation is measured in average cost per cluster per acre.

The "Cost Difference" column shows the difference in cost of cultivation between the demo and non-demo plots in each cluster. For example, in Cluster 1, the average cost of cultivation in the demo plot was 10,356 per cluster per acre, while the average cost of cultivation in the non-demo plot was 12,006 per cluster per acre, resulting in a cost difference of (1,650) per cluster per acre (the negative sign indicates that the cost was lower in the demo plot).

Overall, the table shows that there is a lower cost of cultivation in the demo plots (treated) than the non-demo plots (untreated) in each cluster, with cost differences ranging from (1,758) to (1,628) per cluster per acre. This indicates that the demo plots are more efficient in terms of cost of cultivation than the non-demo plots.

"COST OF CULTIVATION" COMPARISION BETWEEN DEMO AND NON-DEMO PLOT FOR PADDY				
		DEMO PLOT/TREATED PLOT	**CONTROLLED/UNTREATED**	**Cost Difference**
S.N	Cluster Name	Avg cost of cultivation /Cluster/Acre	Avg cost of cultivation /Cluster/Acre	Avg cost of cultivation /Cluster/Acre
1	Cluster 1	10356	12006	(1650)
2	Cluster 2	11466	13228	(1762)
3	Cluster 3	10952	12580	(1628)
4	Cluster 4	11282	13040	(1758)

Rabi Season

Selection of 200 farmers for Demonstration: 200 farmers were selected for wheat demonstration in 1000 sq m area at 50 farmers in each Cluster (50*4).

Variety selection: The team made the farmers aware of varietal selection which is one of the earliest and most important decisions for wheat growers in the Rabi season. With this single decision, a grower can establish more profit potential before a seed is ever planted viz.

- Dwarf and rust resistance varieties can protect the losses against falling of plant and seed and soil-borne diseases.
- During this season high yielding improved new varieties has been suggested and provided at the seed shops by the IAF under Jeetega Kisaan Pariyojna by the Bhartiya Kisaan Ghar at 50% subsidy**.**
-

Seed treatment – During informal and formal communication (Meeting, Training, one-on-one communication) the teams spoke to the farmers and suggested them to go for seed treatment before sowing to avoid the losses from fungal-seed borne diseases, viz., all type of rust. They also said that it would improve the viability and vigor of the seed.

- 5g (75% Mancozeb) fungicide prescribed for the seed treatment of 1 kg wheat seed was provided free of cost.

Balanced fertilizer management – All 200 farmers (50 from each four clusters) were told to use the interpretative specified dose of SSP, MoP, and Urea on the specific selected demonstrated plots to avoid incorrect use or excessive fertilizer. This was done to cut the input cost of demo farmers.

- Efforts were made to improve the nutritional balance of the growing media and to save money and conserve energy by applying only the amount of fertilizer needed.

Outcome of Demo for Rabi Season -

The table is comparing the yield of wheat in demo plots (treated) and non-demo plots (untreated) and shows the difference in yield between them. The table is divided into four clusters, and the yield is measured in average yield (in qt) per cluster per acre.

The "Yield Difference" column shows the difference in yield between the demo and non-demo plots in each cluster. For example, in Cluster 1, the average yield in the demo plot was 19.82 qt/cluster/acre, while the average yield in the non-demo plot was 17.82 qt/cluster/acre, resulting in a yield difference of 2 qt/cluster/acre.

Overall, the table shows that there is a higher yield in the demo plots (treated) than the non-demo plots (untreated) in each cluster, with yield differences ranging from 1.21 to 2 qt/cluster/acre. This indicates that the demo plots are more efficient in terms of yield than the non-demo plots for wheat.

"YIELD" COMPARISON BETWEEN DEMO AND NON-DEMO PLOTS FOR WHEAT				
		DEMO PLOT/TREATED PLOT	CONTROLLED/UNTREATED	Yield Difference
	Cluster Name	Avg. Yield (qt)/Cluster/Acre	Avg. Yield/Cluster/Acre	Avg. Yield/Cluster/Acre
	Cluster 1	19.82	17.82	2
	Cluster 2	20.41	18.85	1.56
	Cluster 3	18.9	17.69	1.21
	Cluster 4	19.86	18.34	1.52

The table is comparing the cost of cultivation for wheat in demo plots (treated) and non-demo plots (untreated) and showing the difference in cost between them. The table is divided into four clusters, and the cost of cultivation is measured in average cost per cluster per acre.

The "Cost Difference" column shows the difference in cost of cultivation between the demo and non-demo plots in each cluster. For example, in Cluster 1, the average cost of cultivation in the demo plot was 6,360 per cluster per acre, while the average cost of cultivation in the non-demo plot was 7,250 per cluster per acre, resulting in a cost difference of (890) per cluster per acre (the negative sign indicates that the cost was lower in the demo plot).

Overall, the table shows that there is a lower cost of cultivation in the demo plots (treated) than the non-demo plots (untreated) in each cluster, with cost differences ranging from (760) to (890) per cluster per acre. This indicates that the demo plots are more efficient in terms of cost of cultivation than the non-demo plots for wheat.

"COST OF CULTIVATION" COMPARISION BETWEEN DEMO AND NON-DEMO PLOT FOR WHEAT				
		DEMO PLOT/TREATED PLOT	**CONTROLLED/UNTREATED**	**Cost Difference**
S.N	Cluster Name	Avg cost of cultivation /Cluster/Acre	Avg cost of cultivation /Cluster/Acre	Avg cost of cultivation /Cluster/Acre
1	Cluster 1	6360	7250	(890)
2	Cluster 2	6350	7210	(860)
3	Cluster 3	6540	7310	(770)
4	Cluster 4	6180	6940	(760)

FARMER FIELD DAY

FFD provides platform for knowledge building and sharing on agro-ecology where farmers meet, interact and find solutions locally. They learn through hands-on training on various topics like indigenous method of soil, water and nutrient management, seeds varieties, crop cultivation, pest control, pasture and fodder management while conserving biodiversity. Farmer field days were organized to showcase the demonstrated package of practice promoted under the project.

The farmers were briefed about how the demo plots use balanced use of fertilizers and other input material. The major difference observed between both treated and controlled plot is as follows

- The penical length in treated plot was more as compared to control plot.
- In a penical, number of grain are more compared to control plot.
- Number of plants population was more in treated plot.
- The plants in treated plot was more green
- There was more number of tillers in treated plot.

Farmer field days were conducted following certain guidelines which are as under

- The objective of farmer's field days was to use balanced use of fertilizers in the selected plots.
- The difference should be clear in number of tillers, length of ear, greenish of plants, germination percentage etc.
- For preparation – we should have Banner, sun pack sheet (attached with strong bamboo), and ribbon for decoration purpose.
- Before 1-2 days of field days, inform to near village
- If possible then hold farmer's conference and after that create farmer's groups (10-15 farmers in each group)
- Given refreshments after the conference

For comparative study –

- 5 plants selection by farmer in both fields (Control and treated plot)
- Then study on number of tillers, length of ear, greenish of plants, germination percentage etc.
- Discuss about cost benefit
- The farmer whose field is there and on which the exhibition is being held, will also explain about this.
- Will also take feedback from farmers


फसल प्रदर्शन दिवस
उर्वरकों का संतुलित उपयोग


जीतेगा किसान

TRAINING

Training on Rice Cropping System: -

one-day training program cum exposure visit for the farmers adopted by the Jeetega kisaan pariyojna by the ISAP& DCM Shri Ram Foundation was organized at International Rice Research institute Varanasi on 22-06-2022 on Rice Cropping System. In the training program 32 participants including the team of foundation participated in training

Based on the activeness and selection criteria, select one active farmer from each village who will serve as a trainer for their fellow farmers. Provide training to selected farmers: Provide selected farmers with necessary training on balanced use of fertilizers and nutrient management in rice and wheat cropping systems.

Monitor progress: Monitor the progress of selected farmers and provide support as needed to ensure they can deliver knowledge to their neighbors in their own village.

Regular evaluation: Conduct regular evaluations to ensure that the selected farmers are delivering knowledge effectively to their neighbors and making progress towards enhancing their income.

Record keeping: Maintain records of all selected farmers, their training, and progress made towards enhancing their income.

Organize Cluster Wise Meeting for farm and Soil Management-

ISAP team organize meeting to make aware to farmers about the soil testing and Soil Health Card and told them to provide hand to hand support for crop management and also told them how a soil test is important for several reasons.

- To optimize crop production, to protect the environment from contamination by runoff and leaching of excess fertilizers,
- To aid in the diagnosis of plant culture problems,
- To improve the nutritional balance of the growing media and to save money and conserve energy by applying only the amount of fertilizer needed that is only possible after interpretation of soil test of their own plot.

Trainings to the team and active farmers on use of Nano Urea and Drone Application: -

Training Title: Use of Nano Urea and Drone Application in Paddy Crop

Training Objectives:

- To introduce the concept of Nano Urea and its benefits in reducing input costs.
- To explain the application of Nano Urea through drones in Paddy Crop.
- To train farmers on minimizing diseases and pests using Nano Urea.

Training Inputs:

- Briefly introduce the concept of Nano Urea and its benefits over conventional urea
- Explain the basic composition and features of Nano Urea

Application of Nano Urea in Paddy Crop:

- Discuss the importance of Nitrogen in Paddy Crop.
- Explain how Nano Urea helps in fulfilling the balance dose of Nitrogen and reducing input cost
- Discuss the steps involved in applying Nano Urea through drones.
- Share the guidelines for safe and effective application of Nano Urea through drones.
- Highlight the key advantages of using Nano Urea over conventional urea.
-

Minimizing Diseases and Pests:

- Explain how Nano Urea can help in minimizing diseases and pests in Paddy Crop.
- Discuss the common diseases and pests affecting Paddy Crop and their impact on the crop yield.
- Share the best practices and guidelines to be followed to minimize diseases and pests in Paddy Crop.
- Explain how using Nano Urea can minimize the risk of diseases and pests in Paddy Crop.

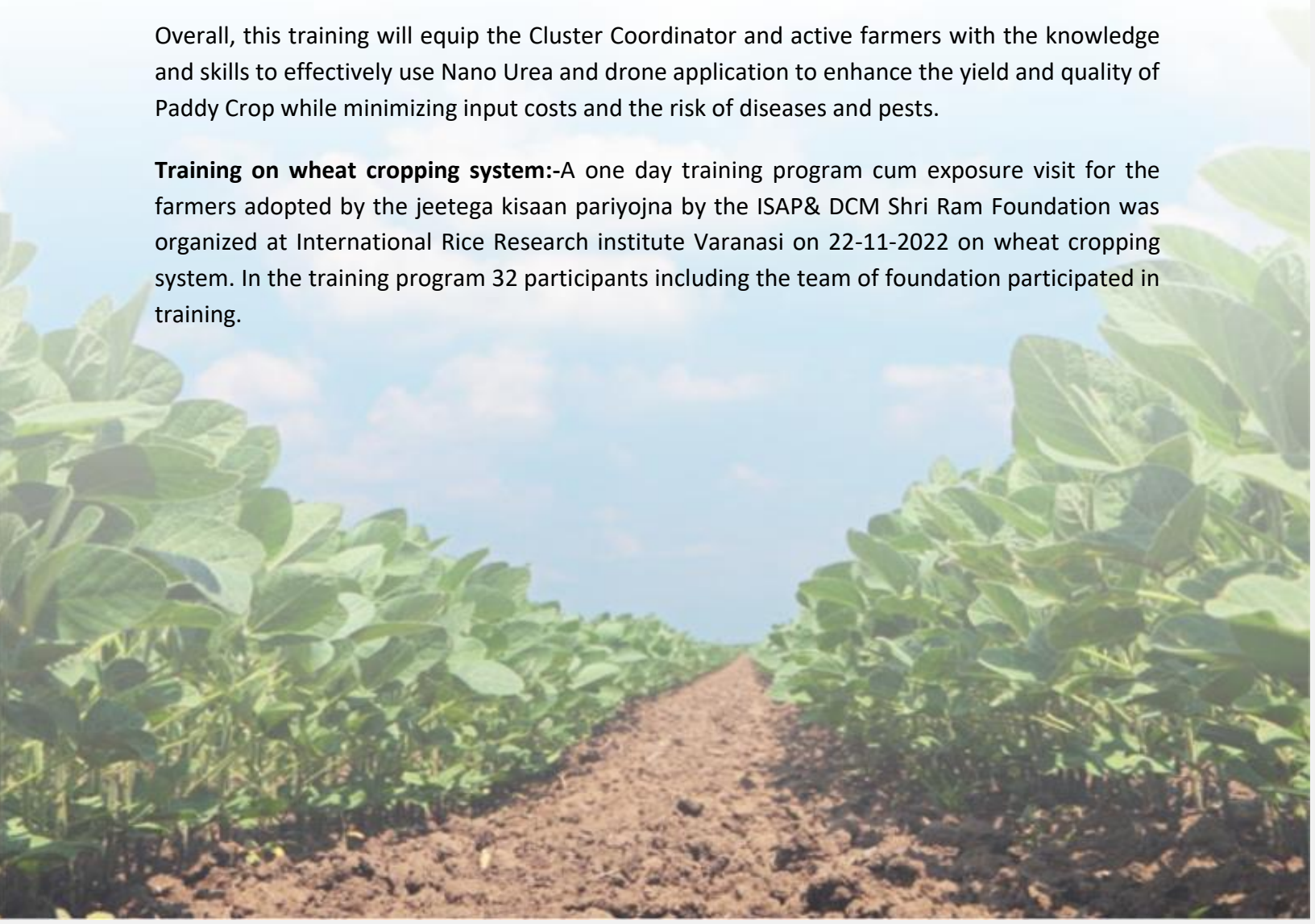
Training Output:

After the training, the participants will be able to:

- Understand the concept of Nano Urea and its benefits over conventional urea.
- Apply Nano Urea effectively through drones in Paddy Crop.
- Minimize diseases and pests in Paddy Crop using Nano Urea.
- Implement best practices and guidelines to improve the yield of Paddy Crop.
- Reduce input costs by using Nano Urea.

Overall, this training will equip the Cluster Coordinator and active farmers with the knowledge and skills to effectively use Nano Urea and drone application to enhance the yield and quality of Paddy Crop while minimizing input costs and the risk of diseases and pests.

Training on wheat cropping system:-A one day training program cum exposure visit for the farmers adopted by the jeetega kisaan pariyojna by the ISAP& DCM Shri Ram Foundation was organized at International Rice Research institute Varanasi on 22-11-2022 on wheat cropping system. In the training program 32 participants including the team of foundation participated in training.



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OBJECTIVE OF EXPOSURE VISIT: -

1. The objective of the orientation was to build the capacities of farmers and inspire them to take up new farming techniques on Rice wheat cropping system, Insect pest management, soil testing and their benefits.

2. Through the trained farmers, it was further envisaged that they would work as catalysts at the local level to impart their knowledge gained from orientation and exposure.

3. Lecture delivered through experience gained by various subject experts and farm managers by demonstrating demos of Modern agriculture.

INTRODUCTION-

Indian Society of agribusiness Professionals and DCM Shri Ram Foundation conducts training within farmers so that they are empowered to adopt sustainable agricultural practices of rice wheat cropping system. For better farming practices over 2 training sessions have been held in 2022 along through our efforts in International Rice Research Institute Varanasi -Uttar Pradesh. This Training session taught the participating farmers about the efficacy of Rice Wheat Crop Manager, Balanced fertilizer, Soil testing, Time management, vermicomposting, and other eco-friendly methods, such as sustainable farming, mulching and recycling of farm waste and other irrigation management technologies during the session.

KEY FEATURES OF TRAINING-

- Subject experts from Agriculture Departments, Research institutes, and agriculture universities scientist took these sessions and deliver the lecture on how to make biopesticides and organic fertilizers such as vermicompost.
- During this one-day training they also Impart training on agricultural practices such as the conventional and Modern cultivation technique that is useful in present agriculture, Rice Wheat crop Manager:-that analyze the Dose and time of NPK in wheat and rice cropping system, Soil Testing:-Reduce the cost of excessive use of fertilizer and also maintain the soil environment, DSR and the SRI method for dry land paddy cultivation to minimize the water requirement, educating them on proper seed storage and crop improvement techniques, among many others at low cost without reducing the Yield.

- Based on extensive modules developed by IRRI through years of experiential learning, the training sessions are specific to each period of the agricultural season. During these sessions Staff members and community resource persons train farmers through practical demonstrations that place a strong emphasis on quality learning.

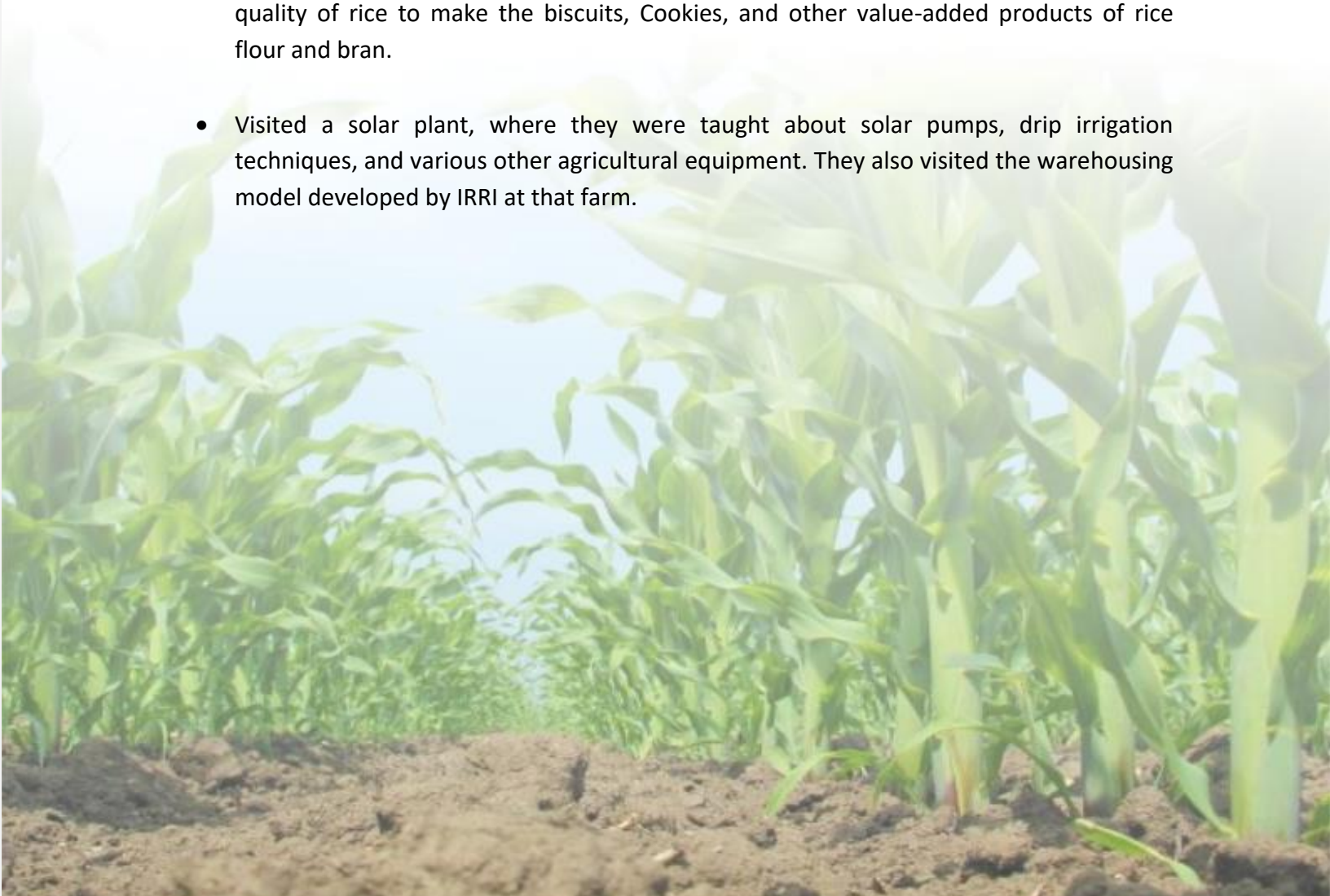
- Exposure visits enable farmers from different villages to interact with and learn from each other, allowing them to view practical examples of successful integration of sustainable practices in farming communities like their own. They are integral to sensitizing the farmer to GREEN's message of sustainable agriculture in Rice and wheat crop cultivation. Farmers had heard of "Per Drop More Crop" from ISAP staff before but we understood the concept only after they took us to new Growing techniques and practices.

- IRRI facilitates exposure visits on demo plots of different varieties and also demonstrated Natural Farming, Farm Mechanization, soil testing, farms and lab. Therefore these visits also include various demonstrations that inform farmers of the characteristics and advantages of indigenous and improved variety.

- Farmers are also told to select which varieties presented would be best suited to their needs and agro-climatic zone for Sonbhadra Region, so that we may popularize those varieties within the area.

- They also visited Multi cropping cultivation and Value Addition Lab for testing the quality of rice to make the biscuits, Cookies, and other value-added products of rice flour and bran.

- Visited a solar plant, where they were taught about solar pumps, drip irrigation techniques, and various other agricultural equipment. They also visited the warehousing model developed by IRRI at that farm.



CONCLUSION AND FEATURES OF TRAINING

1. At least once a year, ISAP and DCM Shriram Foundation facilitate training visits for farmers in order to initiate information exchange in Indian Agriculture on Rice and wheat crop management. These visits often instill a sense of purpose and enthusiasm among farmers as they are able to see, firsthand, the results of adopting the practices of balanced fertilizer and other techniques.

2. The events helped bring farmers and organizations on a common platform for better coordination in the future, which will ultimately help in reaping good results. There were healthy debates and discussions over myths about chemical farming, Organic farming and financial benefits. The events also enabled participants to know some of the traditional farming methods, Zero Tillage & the formation of vermi-wash/vermicompost, herbal pesticides/insecticides and treatment of seeds with chemicals and others and soil management, etc. to came down the fungal disease of the season and to reduce the cost of inputs of farmers with a maximum profit

Extension of knowledge during Farmer Field Days:

During the harvesting of paddy crop, the team of the Indian Society of Agribusiness Professionals India Foundation (IAF-Formerly known as ISAP) organized crop cutting and Farmer's Field Days at the village level. The purpose of this was knowledge building and sharing practices of cultivation by creating a platform where farmers of 2-3 neighboring villages meet, interact, and get solutions, locally. Such interactions helped the farmers in reducing the input cost by regulating the amount of fertilizer and still get higher yield. Other practices were also learned through hands-on demonstrations on indigenous methods of farming, soil testing, water, and nutrient management, using varieties of seeds, crop cultivation, pest control, while conserving biodiversity, etc.

MARKET LINKAGE

In Rabi Season

Total procurement of 64.5 mt of wheat from farmers @ Rs 21.5 amounting to Rs 1319892 was done and sent to Adani Wilmar Lmt.

In Kharif Season

The total procurement of 38.5 mt of Paddy from farmers of which 21 mt was sent to Rice Miller @ 21.7 amounting to Rs 464500 and the remaining 17.5 mt was supplied to Karyakendra @21.4. amounting to Rs 357000.

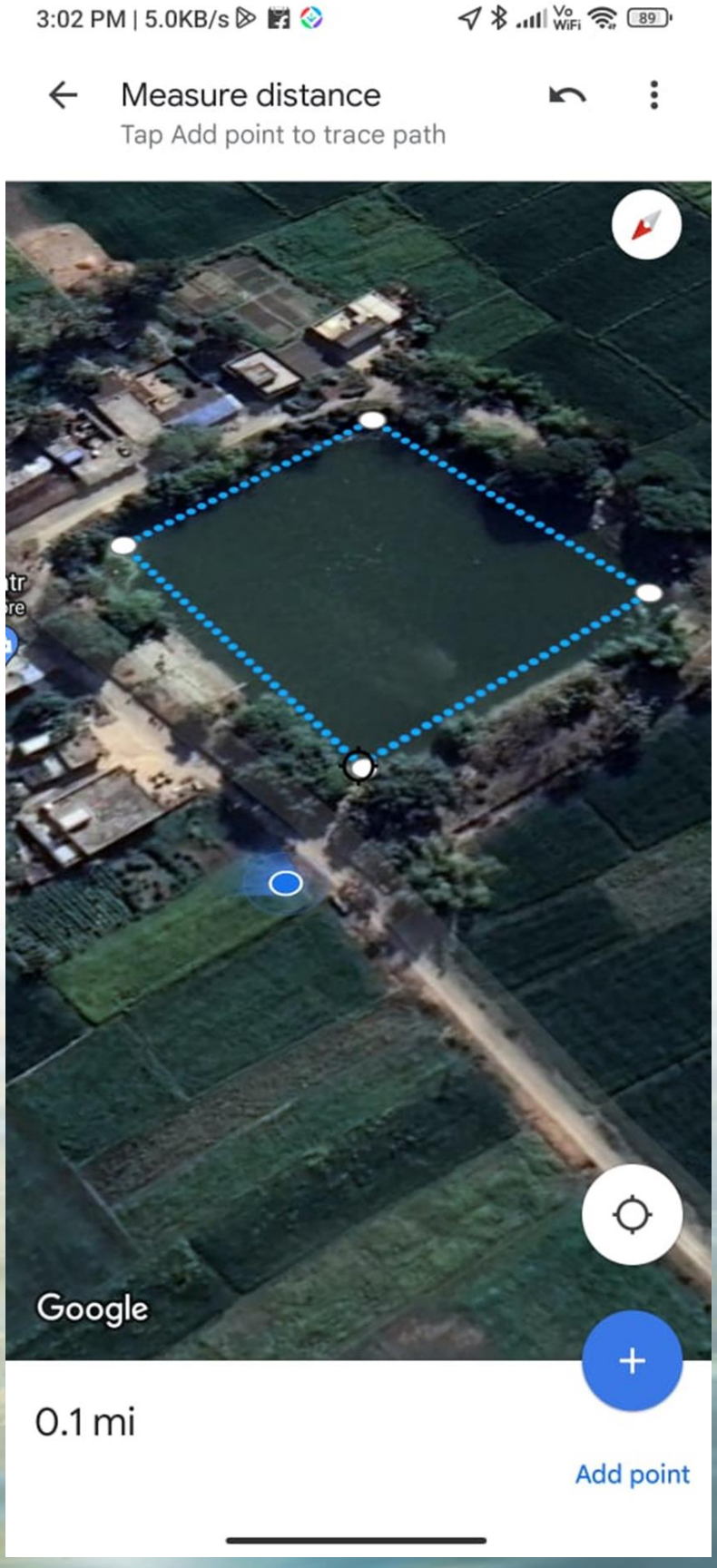
In FY22-23 total Business done is 2141392.

WATER MAPPING

We have been paying particular attention to water conservation and irrigation. Our team has conducted measurements of water levels in borewells and tube wells in every village, and we are working towards implementing initiatives that will help to save water and enhance irrigation facilities in preparation for the upcoming season.

Water bodies

We have done the mapping of water structures in all four clusters. Below find Details Cluster wise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Measure distance
Tap Add point to trace path
Google
0.1 mi
Add point

Cluster 1

S.N	Village	Area of Ponds (Yd)	Status of Ponds
1	Pipri	352	Regular
2	Pipri	328	Regular
3	Jamgaon	352	Regular
4	Hinauti	552	Regular
5	Hona	528	Dry
6	Hona	176	Dry
7	Hinduari	528	Regular
8	Tiyara	352	Regular
9	Meuri Kalan	528	Regular

Cluster 2

S.N	Village	Area of Ponds (Yd)	Status of Ponds
1	Keuti	704	Regular
2	Madar	528	Regular
3	Madar	352	Regular
4	Baghai	352	Regular
5	Pashai Kalan	352	Regular
6	Pashai Kalan	348	Regular
7	Bhabnauli Kalan	325	Regular
8	BhabnauliKalan	322	Regular

Cluster 3

S.N	Village	Area of Ponds (Yd)	Status of Ponds
1	Uchdiah	105	Dry
2	Kanhaura	325	Regular
3	Uchdiah	139	Regular
4	Deori Khurd	248	Regular
5	Deori Khurd	528	Regular
6	Sona	532	Regular
7	Jiwar	54	Regular
8	Oaini Chaubey	352	Regular
9	OainiMishra	343	Regular
10	Naraina	528	Regular and Dry

Cluster - 4

S.N	Village	Area of Ponds (Yd)	Status of Ponds
1	Pakhri	352	Dry
2	Adhalganj	98	Dry
3	Bandhwa	100	Dry
4	Kanach	176	Dry
5	Kandhaura	176	Dry
6	Rediya	142	Dry
7	Bargawan	528	Regular on during Raining season only

Groundwater

We have done the mapping of the groundwater level at the village level of each cluster. In Cluster 1 avenger's water level is 6.28, in Cluster 2 avenger's water level is 6.61, In Cluster 3 avenger's water level is 13.04, and in Cluster 4 avenger's water level is 10.17.

S.N	Cluster Number	Avg water Level (meter)
1	Cluster 1	6.28
2	Cluster 2	6.61
3	Cluster 3	13.04
4	Cluster 4 (Chopan)	10.17

KCC Survey

A survey on KCC Kisaan Credit Cards across all four clusters, which revealed that 70% of farmers had obtained loans or credit from banks. In order to gain a better understanding of the credit and financial situations of farmers, we conducted a district-wide survey, consisting of 400 farmers, with 100 farmers from each cluster. Based on the results of the survey, our team is working towards providing market linkages to farmers, with the goal of ensuring that they receive fair prices for their produce.

S.N	Cluster Number	No. of surveyed Farmers for KCC
1	Cluster 1	100
2	Cluster 2	100
3	Cluster 3	100
4	Cluster 4	100

CHALLENGES

Dependence of Local Buyer - The dependence on local buyers is a challenge for wheat farmers in Sonbhadra, Uttar Pradesh, as they may not have access to other markets or buyers who can offer fair prices for their crops. This can lead to a situation where farmers are forced to sell their wheat at lower prices, which can have a negative impact on their livelihoods and economic well-being.

Market linkage issue - the issue of market linkage can certainly be a challenge for wheat farmers in Sonbhadra, Uttar Pradesh. This is because many farmers in this region may not have easy access to formal markets or may not have the knowledge and resources to connect with buyers beyond their local area.

- **Conventional practices followed -** Conventional agricultural practices typically involve the use of chemical fertilizers, pesticides, and herbicides to enhance crop growth and productivity. While these practices have been effective in increasing crop yields, they have also led to a number of environmental and health issues. One of the biggest challenges in Sonbhadra is to promote sustainable agricultural practices that are both productive and environmentally friendly

- **Institution Arrangements- In the Projected area, there is no such institution that helps to collect farmers in terms of Business and technologies transfer**

- **Water Management-** Water management is a crucial aspect of agriculture as it directly affects crop growth and productivity. In many regions, including Sonbhadra, farmers face challenges in managing water resources effectively, often due to a lack of scientific awareness and knowledge about water conservation techniques.

LEARNING

1. Balance fertilizer and water management at the Right time in the right amounts are crucial for achieving higher Yield.

2. Use of Nano Urea can lead to higher nutrient uptake and lower fertilizer cost.

3. Proper Market Linkage can help farmers get better prices for their crops and help t o rise and increase their income.

4. Farmers education and training are essential for the successful implementation of project

5. Low input cost can be achieved through the use of locally available resources and inorganic farming practices and also help to increase the Yield.

6. Overall jeeteega kisan project has demonstrated the potential for nutrient base mgmt to cut the input cost of farmers and enhance production as well as productivity through the Right use of nutrients after soil testing

OUTCOME OF INTERVENTIONS

Our team working to fill the knowledge gap in agriculture, specifically in wheat and paddy crops. It's also fantastic that you've been able to conduct training programs and demonstrations in the projected areas, resulting in increased productivity for these crops.

It's intriguing to learn that our team increased production by using a balanced amount of fertilisers in the wheat crop and adding neno urea using a drone in the paddy field. It's encouraging to see that you are looking into new, environmentally friendly methods of agriculture.

When using fertilizers, it's crucial to keep in mind their effect on the environment and the long-term health of the soil. Utilizing fertilizers improperly or excessively can cause soil degradation, water pollution, and detrimental effects on biodiversity. As a result, it's essential to apply fertilizers in a balanced way, taking into account the particular nutritional needs of the crops and the soil.

Drones in agriculture are a potential technology that could lessen the negative effects of farming on the environment and increase productivity. However, it's crucial to make sure that using drones is safe, complies with regulations, and that farmers are properly trained to use drones.

Our accomplishments in market linkage are noteworthy. We have successfully supplied to the Adani Group 64.5 MT of wheat, totaling INR 1319892. In addition, we provided 17.5 MT of wheat to Karyakendra and 21 MT of wheat to a Rice Miller during the Kharif Season, resulting in values of INR 464500 and INR 357000, respectively. Our business volume is INR 2141392 in total.

Plan for next year

- Emphasis is on introducing technologies for water conservation and reduced consumption

SHIFTING WATER FOOTPRINT IN CULTIVATION OF PADDY AND WHEAT

Activity 1- Identify opportunities for improvement-ISAP will help to identify the areas where farmers can be retrained or even weaned off from inefficient irrigation methods, water-intensive farming practices, or unsustainable water sources. Introducing drought-resistant varieties of seeds will also contribute to alleviation of the problem. This will make way for the need for and adoption of new more effective and sustainable methods of irrigation of rice and wheat.

Activity 2- Introduction to new technology such as AWD

The technology of Alternate Wetting and Drying is a water management practice to cultivate irrigated lowland rice. It is a method of controlled and intermittent irrigation. A proven 30% reduction in the use of water for irrigation than the usual system of maintaining continuous standing water in the crop field is observed. ISAP will introduce this periodic drying and re-flooding irrigation approach wherein the farmer will allow the fields to dry for a few days before re-irrigation, without stressing the plants. This method reduces water demand for irrigation

Training- Identification of Progressive Farmers and their training

The project will identify at least 1-2 progressive farmers from each village, and they will be trained in such a way that they can further assist their fellow farmers to avail maximum benefits from their crops. There will be 6 parameters for the selection of progressive farmers such as

- Scientific temperament,
- Perseverance and hard work,
- Cosmo-politeness,
- Motivated enough to achieve,
- Entrepreneurial aptitude and
- Work satisfaction

- The progressive farmers will be selected based on the above parameters. For example, Scientific temperament (whether the farmer has actively participated in innovative programs of KVKs and the Agriculture Department in the past); Hard work (Doing more than crop-farming such as dairy, poultry, Goatry, etc.), Cosmo-politeness (based on the judgment of staff and partner organizations), Motivated enough to achieve (Record crop yield, innovations in farming practices or award-winning, increased income consistently, etc). Entrepreneurial aptitude (whether the farmer knows profit loss numbers for his farming and other activities).

MARKET LINKAGE

ISAP will take the necessary steps in the direction of establishing market linkages with the beneficiary farmers of the proposed project. In addition, the ISAP team will also empower the farmers by guiding them to crack deals and negotiate with the stakeholders involved, such as Adani & FarMart, so as to become self-reliant for the future course of functioning. Confidence in their skills to market their products will develop leadership skills in these farmers.

Activity 2 - Facilitate Govt procurement at MSP

ISAP will facilitate the farmers to sell their produce to the government agencies at the predecided MSP. This will give them better bargaining power and eliminate the need and scope for middlemen, thus making sure seamless selling happens at safeguarded prices.

ISAP

Enterprise4Impact

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