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ANNUAL REPORT
2024



भाकृअनुप-कृषि प्रौद्योगिकी अनुप्रयोग अनुसंधान संस्थान, क्षेत्र-9
ICAR-Agricultural Technology Application Research Institute, Zone-IX
(Division of Agricultural Extension)
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Preface

I am delighted to present the 2024 annual report of ICAR-ATARI, Jabalpur. This year's report highlights the remarkable achievements of our KVKs in various domains. ICAR-ATARI Jabalpur is responsible for coordinating and monitoring the application of technology and frontline extension programmes of KVKs in Zone-IX, which includes the states of Madhya Pradesh and Chhattisgarh. Currently, there are 82 sanctioned KVKs in this zone, with 54 located in Madhya Pradesh and 28 in Chhattisgarh.



Our KVKs have assessed a record number of technologies this year, including several new and improved technologies. During 2024, KVKs assessed 880 technologies through 8756 OFTs. Through our demonstration programmes, 867 FLD was conducted, total 5999 farmers was benefitted under frontline demonstrations and successfully showcased new technologies to farmers helping them adopt modern practices that enhance productivity and sustainability. In terms of training, our KVKs have conducted numerous workshops and capacity-building sessions, equipping farmers with the knowledge and skills needed to implement advanced agricultural techniques. KVKs undertook 5884 training programmes covering more than 1.90 lakh participants including that include 1.60 lakh farmers and farm women, 18086 rural youth and 6133 extension functionaries. Our KVKs also produced over 14334.51q of seed and 36.83 lakh planting material. These initiatives have not only improved farm productivity but also contributed to the socio-economic development of the farming communities. Skilling under ARYA project resulted in training of 2083 rural youth and establishing 354 enterprise units. The Farmer FIRST centers covered 553.21 ha area, 6234 animals and 6016 farm families benefitted under the six modules.

Nutri-SMART Village (NSV) initiative to address malnutrition through nutrition-sensitive agriculture currently in 42 NSVs in Madhya Pradesh and 15 NSVs in Chhattisgarh demonstrated collaborative efforts in capacity-building and awareness programmes to improve nutrition literacy and the availability of nutrient-rich foods. Additionally, the Outscaling of the Natural Farming Project is underway to promote an agroecology-based diversified farming system that integrates crops, trees and livestock enhancing functional biodiversity. New initiatives such as Agri-Drone technology demonstrations and the Kisan Sarathi programme are also being implemented in the zone. Oilseed Model Village and Model Pulse Village programme was initiated and implemented by the KVKs to bring self-sufficiency in oilseeds and pulses.

The achievements of this year underscore the critical role of KVKs in transforming agriculture in Madhya Pradesh and Chhattisgarh. We remain committed to our mission of advancing agricultural practices and supporting our farmers through continuous innovation, collaboration and dedication. We extend our heartfelt appreciation to the Vice-Chancellors and Directors of Extension of SAUs in our zone, as well as the Directors of ICAR institutes for their collaboration with us for their invaluable technological support to the KVKs. We are profoundly grateful to Dr. Mangi Lal Jat, Secretary DARE and Director General of ICAR and Dr. Rajbeer Singh, DDG (AE), for their unwavering support, guidance and encouragement. I commend all the Senior Scientists, Heads, and staff of the KVKs in the Zone for their efforts and thank my colleagues at ATARI for their hard work in compiling the Annual Report. We remain committed to collaborating with farmers and other stakeholders to strengthen our efforts in nutrition sensitive agriculture, profitable agriculture and sustainable livelihood for all.

Date: 17 July 2025

A handwritten signature in blue ink, appearing to read 'S.R.K. Singh', with a long horizontal line extending to the right.

(S.R.K. Singh)
Director

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सारांश

भा.कृ.अनु.प.—कृषि प्रौद्योगिकी अनुप्रयोग अनुसंधान संस्थान, क्षेत्र-9 के अन्तर्गत 81 कृषि विज्ञान केन्द्र, मध्यप्रदेश एवं छत्तीसगढ़ राज्यों में स्थित है ।

प्रक्षेत्र परीक्षण के द्वारा तकनीक आंकलन

विभिन्न कृषि विज्ञान केन्द्रों द्वारा 880 प्रक्षेत्र आंकलन, 8756 परीक्षण के द्वारा आयोजित किये गये। मध्यप्रदेश द्वारा 658 एवं छत्तीसगढ़ द्वारा 222 प्रक्षेत्र परीक्षणों का आयोजन किया गया। कुल प्रक्षेत्र परीक्षण 880 में से 660 प्रक्षेत्र परीक्षण फसल पर व शेष 220 अन्य उद्यमों पर रहा।

अग्रिम पंक्ति प्रदर्शन

प्रगति वर्ष के दौरान, कुल 867 अग्रिम पंक्ति प्रदर्शन विभिन्न फसलों (दलहन, तिलहन, धन धान्य फसलें, सब्जी फसल, मोटे अनाज) पर आयोजित हुए। कुल प्रदर्शन में 2021.07 हे. क्षेत्र 5999 किसानों के प्रक्षेत्र पर आयोजित हुए। मुख्य आय सृजन वाले उद्यम पर भी अग्रिम पंक्ति प्रदर्शन आयोजित किये गये। जिसमें क्षेत्रफल की दृष्टि से 310.2 हे., 396 इकाईयाँ एवं 1410 लाभार्थियों की संख्या रही।

प्रशिक्षण एवम् क्षमता संवहन

कुल आयोजित 5884 प्रशिक्षण में 190934 लाभार्थी (कृषक, महिलायें, ग्रामीण युवक, प्रसार कर्मी) ने भाग लिया। भारतीय कृषि अनुसंधान परिषद् के विभिन्न संस्थाओं सहयोग से मिलकर कृषि तकनीक अनुप्रयोग अनुसंधान संस्थान, जबलपुर द्वारा आयोजित 204 क्षमता संवहन कार्यक्रम से मध्यप्रदेश एवं छत्तीसगढ़ के कृषि विज्ञान केन्द्रों के विषय वस्तु विशेषज्ञ लाभान्वित हुए।

प्रसार गतिविधियाँ

वर्ष 2024 में कुल 65564 प्रसार गतिविधियों (प्रक्षेत्र दिवस, किसान मेला, कृषक सलाहकारी सेवाएं, प्रदर्शनी, फिल्म शो आदि) के माध्यम से विभिन्न तकनीक का प्रसार कर 3899612 किसान एवं प्रसार कर्मी लाभान्वित हुए।

बीजोत्पादन, रोपण सामग्री, जैव उत्पाद एवं पशु उपयोगी सामग्री का उत्पादन

कृषि विज्ञान केन्द्रों द्वारा 14334.51 क्विंटल बीज, 36.83 लाख रोपण सामग्री (धन-धान्य फसलें, दलहन, तिलहन, सब्जी, औषधीय पौधे, फलदार पौधे) का

उत्पादन किया गया। कृषि विज्ञान केन्द्रों द्वारा 5539.41 क्विंटल जैव उत्पाद एवं 264377 पशु उपयोगी सामग्री का भी उत्पादन किया गया।

मृदा, जल एवं पौधों का परीक्षण

क्षेत्र के कृषि विज्ञान केन्द्रों ने 47500 मृदा एवं 10 जल नमूनों का परीक्षण कर 54484 किसान एवं 1088 गांव लाभान्वित हुए।

वैज्ञानिक सलाहकार समिति की बैठक

वर्ष 2024 में कुल 108 वैज्ञानिक सलाहकार समिति की बैठकों का आयोजन किया गया। इनमें से म.प्र. के 43 कृषि विज्ञान केन्द्रों द्वारा वर्ष में एक बार व 8 कृषि विज्ञान केन्द्रों द्वारा वर्ष में दो बार उक्त बैठक आयोजित की गई। छत्तीसगढ़ के 27 कृषि विज्ञान केन्द्रों द्वारा वर्ष में एक बार उक्त बैठक आयोजित की गई।

एटिक वार्षिक प्रगति प्रतिवेदन

अटारी जबलपुर के अधीन 4 एटिक संस्थान हैं। वर्ष में 10016 कृषकों ने एटिक में भ्रमण किये, तकनीकी सूचनाओं से 2603 कृषक लाभान्वित हुए। प्रकाशन के अन्तर्गत 32823 प्रकाशित प्रतियां विक्रय कर कुल 18.61 लाख रुपये अर्जित हुए।

पुरस्कार एवं सम्मान

आईसीएआर-अटारी, जबलपुर की प्रधान वैज्ञानिक डॉ. शालिनी चक्रवर्ती को आईसीएआर सेंट्रल जोन स्पोर्ट्स टूर्नामेंट में सर्वश्रेष्ठ महिला एथलीट का पुरस्कार मिला। आईसीएआर-अटारी, जबलपुर के निदेशक डॉ. एस. आर.के. सिंह को 28-30 जनवरी, 2024 के दौरान "अगली पीढ़ी की कृषि-जैविक और प्राकृतिक खेती के तरीके: विस्तार रणनीतियाँ और दृष्टिकोण" पर राष्ट्रीय सम्मेलन के सफल आयोजन के लिए उत्कृष्टता पुरस्कार मिला। आईसीएआर-अटारी, जबलपुर के वैज्ञानिक डॉ. हरीश एम.एन. और डॉ. ए. ए. राउत को उपरोक्त सम्मेलन में उनके शोध कार्य के लिए सर्वश्रेष्ठ पेपर प्रस्तुति का पुरस्कार मिला।

कृषि विज्ञान केन्द्रों में आगन्तुको का आगमन

वर्ष 2024 में जोन-9 के कृषि विज्ञान केन्द्रों में 227232 आगन्तुको का आगमन हुआ, जिसमें कुल 205174 किसान, 20515 अधिकारीगण एवं 1543 गणमान्य व्यक्ति शामिल हैं।

Executive Summary

ICAR-Agricultural Technology Application Research Institute, Zone-IX has 81 KVKs located in two Indian states viz., Madhya Pradesh and Chhattisgarh.

Technology Assessment through On-Farm Testing

During 2024 year, 880 technologies were assessed in the Zone through 8756 On-Farm Trials. The highest number of technologies were assessed in the state of Madhya Pradesh (658) followed by Chhattisgarh (222). Out of total 880 technologies assessed, 660 were on crops and remaining 220 technologies on enterprises.

Frontline Demonstrations

During 2024 year, 867 FLDs were conducted on crops (oilseeds, pulses, cereals, vegetables crops, cash crops, agro-forestry, millets, etc.) covering the total area 2021.70 ha. benefiting 5999 farmers. FLDs were also conducted on important income generating enterprises, covering the 396 units and 310.2 ha area among 1410 beneficiaries.

Training and Capacity Building

During the year there was a significant increase in the number of training and

Soil, Water and Plant Analysis

During year 2024, 47500 soil samples and 10 water samples were analyzed by KVKs of the Zone touching 54484 farmers of 1088 villages.

Technological backstopping

Technological backstopping were carried out through production of 122879 copies of technical literature, newsletters etc. of which 115136 were distributed among the farmers, in Panchayats as well as Line department officials.

Scientific Advisory Committee Meeting

In the Zone, total 108 Scientific Advisory Committee (SACs) meetings were conducted by KVKs. In MP, 43 KVK organized SAC meeting once, eight KVKs organized meeting twice times during the reporting period. In Chhattisgarh, 27 KVKs organized SAC meeting twice during the reporting period and one KVK once.

ATIC Progress

In the Zone-IX, four ATICs are operational under ATARI, Jabalpur. In these ATICs there were 10,016 footfalls during the year 2024.

participants. In 5884 courses organized, 190934 participants (farmers and farm women, rural youth, extension personnel) and those sponsored from different agencies were benefitted. ICAR-ATARI, Jabalpur also organized 204 capacity building programmes in collaboration with ICAR institutes for technical upscaling of Subject Matter Specialists in the Zone.

Extension Activities

A total of 65564 extension activities were organized in the form of field days, Farmers fair, Farm advisory services, Exhibition, Film show etc. for promoting the technologies in the region which benefited 3899612 farmers and extension personnel in the ICAR-ATARI, Zone-IX.

Seed, Planting Materials, Bio-Products and Livestock Material Production

KVKs of the Zone produced total 14334.51q of seed and 36.83 lakhs of planting material of different crops (cereals, pulses, oilseeds and vegetables), medicinal plants, fruits, etc. and distributed among farmers. Besides, these KVKs of the Zone also produced 5539.41q bio-products and 264377 livestock products at their farms.

Technological information was provided to 2603 farmers. A total 32823 publications (print & electronic media) were sold and generated revenue of Rs. 18.61 lakh.

Awards and Recognitions

Dr. Shalini Chakraborty, Principal Scientist, ICAR-ATARI, Jabalpur received Best female Athlete award in ICAR Central Zone Sports Tournament. Dr. S. R.K. Singh, Director, ICAR-ATARI, Jabalpur received Excellence Award for successful organization of National Conference on Next Generation Agriculture-Organic and Natural Farming Pathways: Extension Strategies and Approaches during 28-30, January 2024. Dr. Harish M.N. and Dr. A.A. Raut, Scientist, ICAR-ATARI, Jabalpur got "Best Paper Presentation Award" for their research work in the above conference.

Footfalls in KVKs

In the KVKs of Zone-IX, there was 227232 footfalls (205174 farmers, 20515 officials and 1543 dignitaries/VIPs) during 2024.

1. Introduction

ICAR-Agricultural Technology Application Research Institute (ATARI) was originally established as the Zonal Coordinating Unit in the premises of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh by ICAR on September 11, 1979, upgraded to Zonal Project Directorate (ZPD), Zone-VII in March 2009 and was renamed to ATARI, Zone-IX in the year 2015. The Institute coordinates, monitors and evaluates the mandated activities of 82 KVKs spread across two States - Madhya Pradesh and Chhattisgarh.

Major activities of ATARI

- Formulation, implementation, monitoring and evaluation of programmes organized by Krishi Vigyan Kendras
- Coordination among project related work of various agencies such as State Agricultural Universities (SAUs), ICAR Institutes, Voluntary agencies and Development departments
- Serve as feedback point for research and extension systems
- Maintain liaison with research and extension institutions
- Coordinate agri-based schemes for successful implementation and better convergence with State/Central Government departments

KVKs in ATARI, Jabalpur

The Institute monitors the activities of 81 KVKs in the two states namely Madhya Pradesh and Chhattisgarh.

Table 1.1: KVKs across the two states in Zone IX

State	No. of Districts	No. of Districts with KVKs	No. of KVKs					Total
			SAU	VU	CU	NGO	ICAR	
Chhattisgarh	33	26	27	01	0	0	0	28
Madhya Pradesh	55	49	44	0	01	07	01	52
Total	88	75	71	01	01	07	01	81

SAU - State Agricultural University; VU- Veterinary University, CU- Central University, NGO - Non-Governmental Organization; ICAR - Indian Council of Agricultural Research

Krishi Vigyan Kendra

Realizing the role and importance of improved technology in agriculture development for increasing food and nutritional security, Indian Council of Agricultural Research made an institutional innovation in the form of KVK. It was also envisaged that technology assessed by the KVK will be used as a source for the line departments and act as catalysts to fasten the technology transfer system for better delivery to the farming community. For proper functioning, major emphasis was given to the strengthening of physical infrastructure and

human resource development in the KVKs. The name of the host institution managing the KVKs is given in Table 1.2.

Table 1.2: Institutional set-up of KVKs under ATARI, Zone IX.

Host Institution	No. of KVKs
A. Madhya Pradesh	53
Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur	22
Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior	22
Indira Gandhi National Tribal University, Amarkantak	1
ICAR-Central Institute of Agricultural Engineering, Bhopal	1
Deen Dayal Research Institute, Chitrakoot, Satna	1
Kasturba Gandhi National Memorial Trust, Indore	1
Lokmata Devi Ahilyabai Holkar Social National Mission, Burhanpur	1
Kalukheda Shikhcha Samiti, Jaora, Ratlam	1
Deen Dayal Krishi Vikas Awam Anusandhan Samiti (DKVAAS) Bhopal	1
Bhausahab Bhuskute Smriti Lok Nyas Sansthan, Bankhedi, Narmadapuram	1
Centre for Rural Development and Environment, Sehore	1
B. Chhattisgarh	28
Indira Gandhi Krishi Vishwa Vidyalaya, Raipur	27
Dau Shri Vasudev Chandrakar Kamdhenu Vishwavidyalaya, Durg	1

Mandates of KVK

Technology assessment and demonstration for its application and capacity development.

Activities of KVK

- On-farm testing to identify the location-specific technologies in various farming systems.
- Frontline demonstrations to establish production potential of newly released technologies in farmer's fields and provide feedback.
- Training of farmers and farm women to update their knowledge and skills in modern agricultural technologies and training of extension personnel to orient them in the frontier areas of technology development.
- Work as knowledge and resource center of agricultural technologies for supporting initiatives of public, private and voluntary sectors for improving the agricultural economy of the district.
- Create awareness about frontier technologies through various extension activities like Farmer fairs, Field days, Strategic campaigns, Ex-trainees meet.
- Seed and planting materials production for making available to the farmers.

Staff Position

The current staff position in KVKs of Zone-IX is given in Table 1.3. Out of the total posts, 61.59 per cent are filled while the remaining 38.41 per cent are lying vacant. The percentage of vacant posts is comparatively higher in case of technical and administrative categories.

Table 1.3. Staff position in KVKs under ATARI, Jabalpur

State	No. of KVKs	Senior Sci. & Head (1)		SMS (6)		PA (3)		Admn. (6)		Total (16)	
		Sanc	Filled	Sanc	Filled	Sanc	Filled	Sanc	Filled	Sanc	Filled
Madhya Pradesh	54	54	39	324	194	162	113	324	161	864	507
Chhattisgarh	28	28	13	168	132	84	63	168	93	448	301
Total	82	82	52	492	326	246	176	492	254	1312	808

*KVK Vidisha in M.P. are in the process of reopening

Budgetary Provision

The detail of the budgetary provision of KVKs under Zone-IX, Jabalpur is given in Table 1.4.

Table 1.4: Budgetary provision of KVKs and ICAR-ATARI, Zone IX (Rs. in lakh)

S. No.	KVKs & ATARI	Rs. in Lakh		
		Budget Estimate	Revised Estimate	Total Release/ Expenditure
1	Madhya Pradesh KVKs	7218.72	7333.53	7333.54
2	Chhattisgarh KVKs	3398.31	3513.25	3513.24
3	ATARI, Zone IX	349.04	307.77	307.77
Total		10966.07	11154.55	11154.55

Agro-climatic Zones (ACZ) in Zone-IX, Jabalpur

There are 88 districts in two states of Madhya Pradesh and Chhattisgarh under the jurisdiction of Zone-IX, Jabalpur, out of which 80 KVKs covered these districts. The coverage of KVKs under different agro-climatic zones is given in Table 1.5.

Table 1.5: Agro-climatic Zones in ATARI, Jabalpur

State	Agroclimatic Zones (ACZ)	KVKs	No. of KVKs
MP	Chhattisgarh Plains	Balaghat	01
	North Hills of Chhattisgarh	Anuppur, Dindori, Mandla, Shahdol, Umaria	05
	Bundelkhand Region	Chattarpur, Datia, Tikamgarh	03
	Gird Zone	Ashoknagar, Bhind (Lahar), Guna, Gwalior, Morena, Shivpuri, Sheopur	07
	Kymore Plateau and Satpura Hills	Jabalpur, Katni, Panna, Rewa, Satna, Sidhi, Singarauli, Seoni	08
	Jhabua Hills	Alirajpur, Jhabua	02

State	Agroclimatic Zones (ACZ)	KVKs	No. of KVKs
	Malwa Plateau	Agar Malwa, Dhar, Dhar-II, Dewas, Indore, Neemach, Mandsaur, Ratlam, Rajgarh, Shajapur, Ujjain	11
	Nimar Valley	Badwani, Burhanpur, Khandwa, Khargone	04
	Satpura Plateau	Betul, Chhindwara, Chhindwara-II	03
	Vindhya Plateau	Bhopal, Damoh, Raisen, Sehore**, Sagar, Sagar-II, Vidisha**	07
	Central Narmada Valley	Narsinghpur, Narmadapuram, Harda	03
Total	11 ACZs		54
CG	Chhattisgarh Plains	Bilaspur, Bemetra, Balod, Baloda Bazar (Bhatapara), Dhamtari, Durg, Durg-II, Gariyaband, Janjgir-Champa, Korba, Kanker, Kabirdham, Mahasamund, Mungeli, Raipur, Raigarh, Rajnandgaon	17
	North Hills of Chhattisgarh	Ambikapur (Surguja I), Balrampur, Jashpur, Korea, Surguja (II) (Mainpat)	05
	Bastar Plateau	Bastar, Bijapur, Dantewada, Narayanpur, Sukma	06
Total	3 ACZs		28

**In process of reopening

Thrust Areas of the KVKs under Zone-IX, Jabalpur

Nine broad thrust areas identified for the KVKs under ATARI-IX are:

- Sustainable production system through location-specific assessment and demonstrations of technology.
- Resource conservation through rainwater harvesting, in-situ soil moisture and water conservation including sustainable farm mechanization.
- Development and promotion of crop/enterprise diversification and alternate land-use system.
- Integrated pest and disease management for cost reduction and eco-friendly environment through supporting practices.
- Promotion of rural entrepreneurship through livestock, goatery, poultry, fishery, mushroom, lac, bee-keeping etc. also through processing, value addition and marketing for additional income generation.
- Empowerment of farm women and rural youth through income generating activities and drudgery reduction.
- Alternate sustainable livelihood support system in rural areas for marginal and small farmers, landless laborers and farm women to check migration.
- Promoting climate resilient agriculture for sustaining rainfed farming.
- Promotion of Nutrition Sensitive Agriculture through Nutri-Smart Villages.

2. Technology Assessment through On-Farm Testing

The claimed superiority of location-specific technologies were tested by KVKs through On-Farm Testing's (OFTs) and the numbers of technologies tested as well as trials are given in below mentioned tables. Overall, 880 technologies/technical practices were tested in the zone through 8756 different trials (Table 2.1) of which 660 were on crops, 220 on different enterprises like livestock, fishery, mushroom, different aspects of women empowerment like drudgery reduction, income generation, etc. The highest number of technologies/technical practices were tested in the state of Madhya Pradesh (658) followed by Chhattisgarh (222) as the number of KVKs are also in the same order.

Table 2.1: State-wise technology/technical practices/techniques assessed during 2024

State	No. of technology/technical practices/techniques assessed	No. of trials
Chhattisgarh	213	1072
Chhattisgarh (Extension & ICT)	9	262
Total	222	1334
Madhya Pradesh	600	4205
Madhya Pradesh (Extension & ICT)	58	3217
Total	658	7422
Grand Total	880	8756

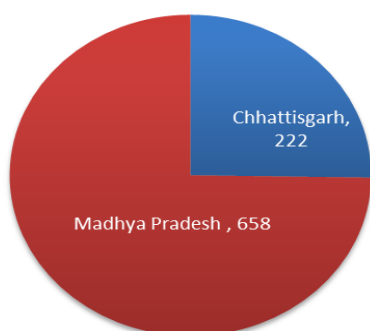


Fig.1: No. of technology/ technical practices/ techniques assessed by KVK's

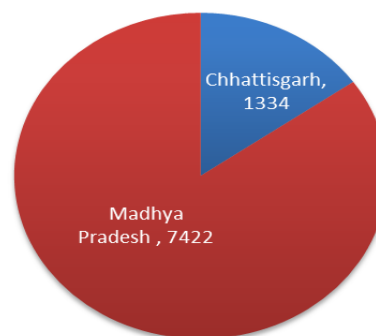


Fig.2: No. of trials conducted by KVK's

Table 2.2: Category-wise OFTs conducted on crops

Crop Category	Number of technologies/ technical practices/ techniques assessed			Number of trials		
	CG	MP	Total	CG	MP	Total
Cash crops	1	8	9	5	61	66
Cereals	66	134	200	348	930	1278
Fiber crops	1	4	5	7	31	38
Flower crops	2	4	6	12	30	42
Fodder crops	-	2	2	-	20	20
Fruits	3	16	19	11	105	116
Medicinal crops	-	2	2	-	10	10
Millets	12	22	34	68	153	221
Oilseeds	12	107	119	66	786	852

Crop Category	Number of technologies/ technical practices/ techniques assessed			Number of trials		
	CG	MP	Total	CG	MP	Total
Pulses	15	80	95	87	512	599
Spices	5	59	64	20	395	415
Vegetables	33	72	105	156	480	636
Grand Total	150	510	660	780	3513	4293

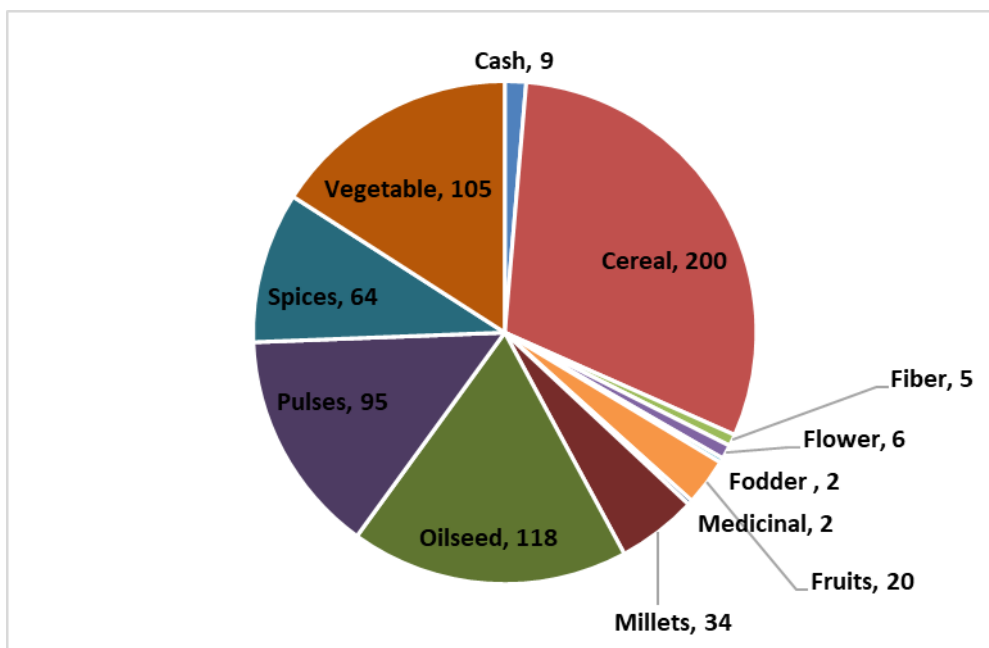


Fig.3: Number of technologies assessed on crop categories

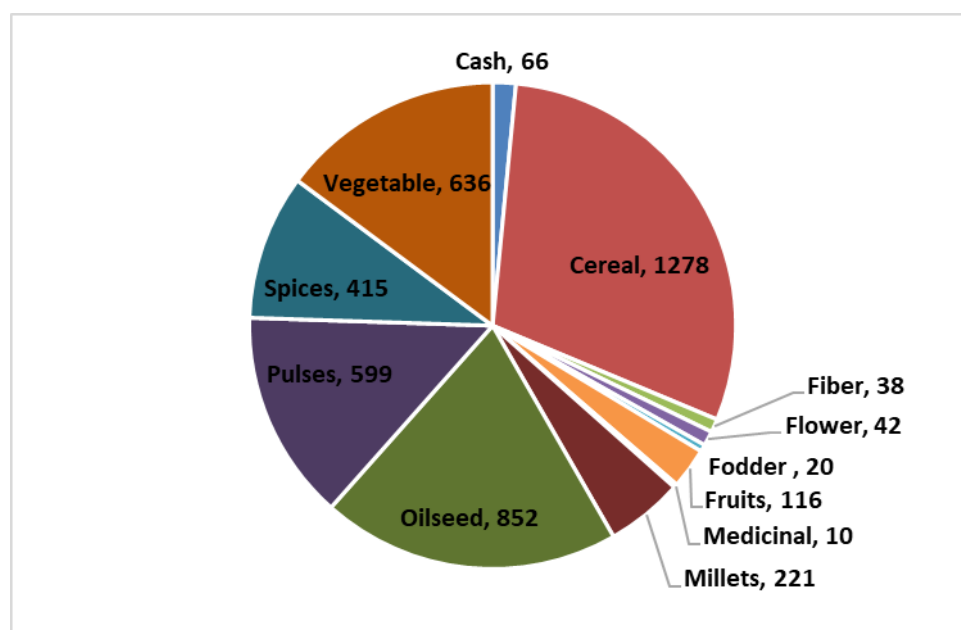


Fig.4: Category wise OFTs conducted on crops

Table 2.3: Thematic area wise OFTs conducted on crops

Thematic Area	Number of technologies/ technical practices/ techniques assessed			No. of trials		
	CG	MP	Total	CG	MP	Total
Biological Control	2	10	12	12	54	66
Crop Diversification	-	10	10	-	55	55
Cropping System	2	11	13	7	70	77
Disease Management	11	22	33	49	150	199
Farm Machineries	2	-	2	14	-	14
Indigenous Technical Knowledge	1	6	7	5	25	30
Integrated Crop Management	7	23	30	34	152	186
Integrated Disease Management	5	23	28	26	172	198
Integrated Farming System	-	2	2	-	10	10
Integrated Nutrient Management	10	24	34	58	172	230
Integrated Pest Management	19	77	96	99	555	654
Natural Farming	26	53	79	147	373	520
Nursery Management	-	1	1	-	5	5
Nutrient Management	7	41	48	35	285	320
Organic Farming	-	1	1	-	12	12
Precision Agriculture	3	11	14	16	97	113
Protected Cultivation	3	2	5	13	15	28
Resource Conservation Technology	-	8	8	-	65	65
Soil Health Management	5	10	15	30	67	97
Storage Technique		2	2	-	20	20
Varietal Evaluation	33	149	182	161	986	1147
Weed Management	14	24	38	74	173	247
Grand Total	150	510	660	780	3513	4293

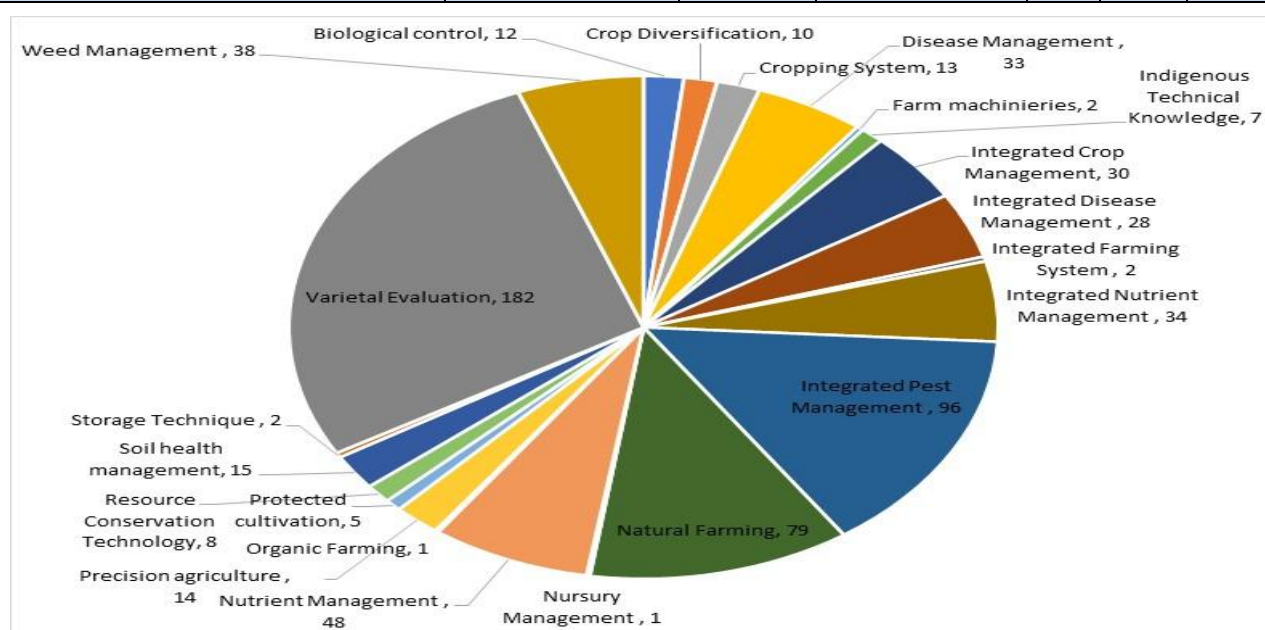


Fig.5: Thematic area-wise technology/ technical practices/ techniques assessed on crops

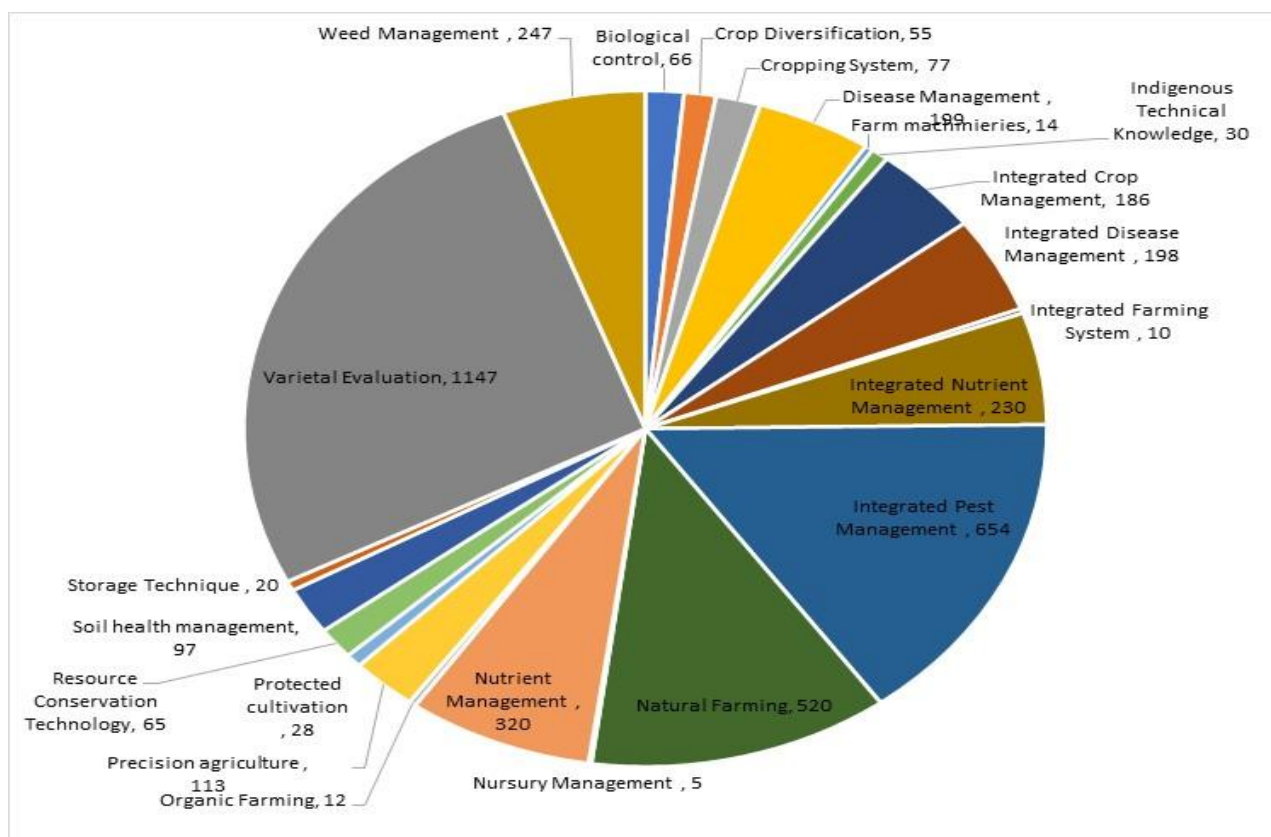


Fig.6: Thematic area-wise OFTs conducted on crops

Table 2.4: Thematic area-wise number of technologies/ technical practices/ techniques assessed on enterprises and ICT

Thematic Area	No. of technology/ technical practices/ techniques assessed			No. of trials		
	CG	MP	Total	CG	MP	Total
Farm Mechanization	22	11	33	103	74	177
Post Harvest Technology	8	1	9	34	10	44
Resource Conservation Technology	4	12	16	20	87	107
Water Management	-	5	5	-	27	27
Evaluation of Breeds	-	1	1	-	4	4
Feed and Fodder Management	-	8	8	-	65	65
Poultry production and Management	4	1	5	19	10	29
Production and Management	2	4	6	11	40	51
Animal Disease Management	2	9	11	10	69	79
Animal Nutrition Management	-	12	12	-	105	105
Composite Fish Farming	-	1	1	-	5	5
Fish Nutrition	1	-	1	3	-	3
Fish Production & Management	11	-	11	49	-	49
Fish Seed Production	3	-	3	15	-	15
Fish-cum-Duck Farming	1	-	1	5	-	5

Thematic Area	No. of technology/ technical practices/ techniques assessed			No. of trials		
	CG	MP	Total	CG	MP	Total
Integrated Farming System	-	1	1	-	5	5
Mushroom Cultivation	1	1	2	7	10	17
Vermicomposting	1	1	2	5	10	15
Drudgery reduction	-	10	10	-	81	81
Small Scale Income Generation	3	12	15	11	90	101
Extension and ICT	9	58	67	262	3217	3479
Grand Total	72	148	220	554	3909	4463

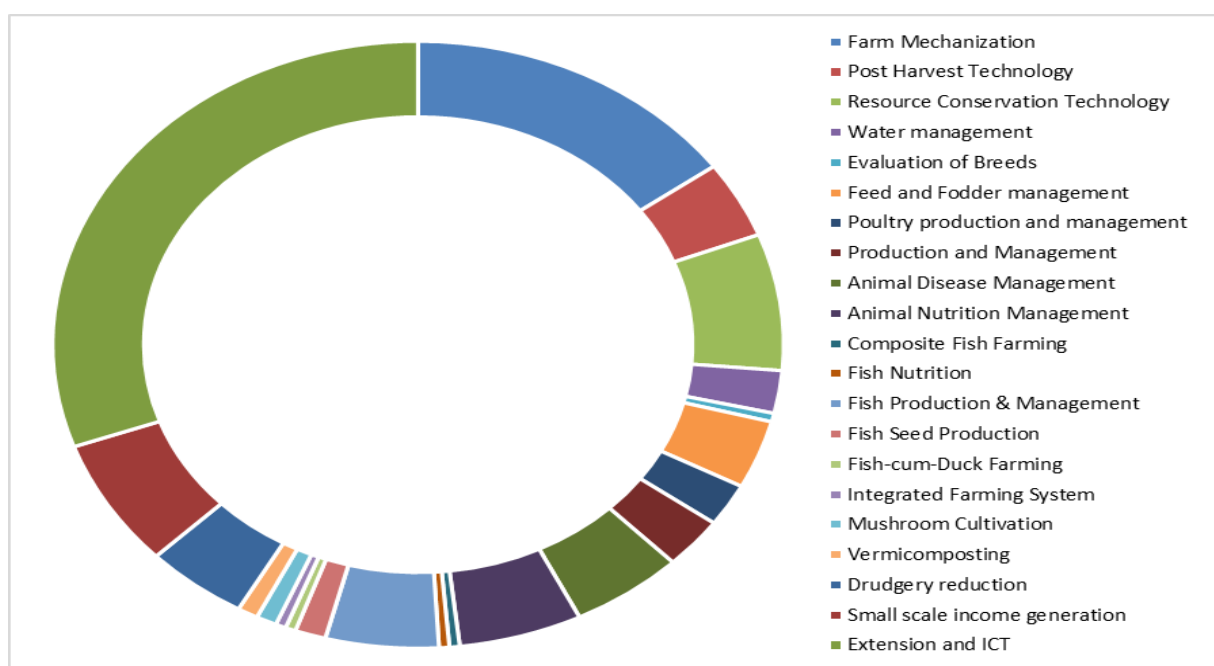


Fig.7: Thematic area-wise OFTs conducted on enterprises and ICT

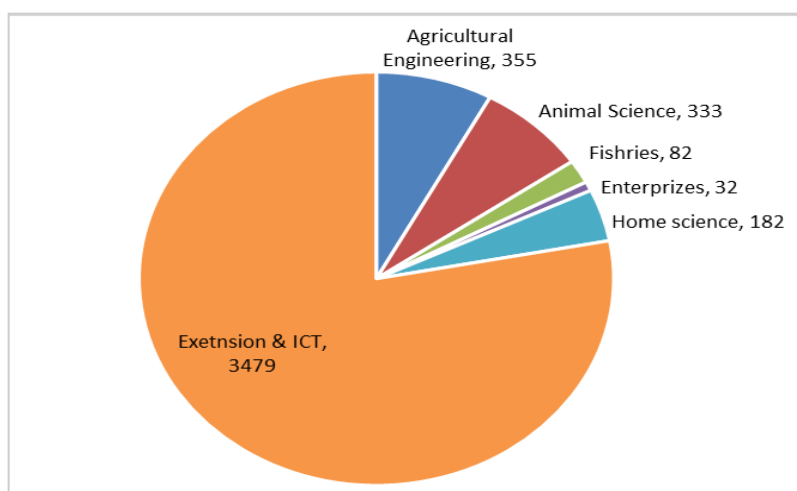


Fig.8: Discipline-wise OFTs conducted on enterprises and ICT

Technologies/ technical practices/ techniques assessed for Major Crops/Enterprises

Varietal Evaluation

Varietal Assessment of Wheat

Problem Identified- Low yield due to use of old wheat variety.

Technology Assessed- Assessment of improved wheat variety HI-1544.

The use of old variety (Lok-1) with low yield potential is one of the major factors responsible for the low productivity of wheat in the farmer's field.

Keeping this in view KVK Manawar, Mandsaur Agar Malwa and Tikamgarh conducted on-farm trials to assess the performance of high yielding wheat variety HI-1544. The results revealed that HI-1544 recorded 19.04% higher yield and additional net income of Rs. 18665/ha over Lok-1.

Table 2.5: Performance of HI-1544 variety of Wheat

Details	No. of trials	Yield (q/ha)	Net Returns (Rs/ha)	B: C Ratio
Farmers practice Wheat var. Lok-1 (T ₁)	27	41.18	70984	2.99
HYV Wheat (HI-1544) (T ₂)		49.02	89649	3.40



Wheat variety (Lok-1)



Wheat HYV (HI-1544)

Plant Protection

Integrated Pest Management in Paddy

Management of Panicle Mite in Paddy

Problem Identified: Low yield due to attack of panicle mite leading to partially filled grains which results in grain discoloration.

Technology Assessed: Assessment of different acaricide in combination with fungicide for management of panicle mite in Paddy.

The panicle mite (*Steneotarsonemus spinki*) is the most important and destructive mite (pest) attacking rice crop and is also a vector of pathogenic fungi like *Fusarium moniliforme*, *Helminthosporium oryzae*. In recent years, the panicle mite has become a significant problem in rice-growing areas. The farmers do not have awareness about proper and timely management aspects of the panicle mite. Looking at the problem, KVKs of Bastar, Dhamtari, Raipur, Durg II, Janjgir-Champa, from Chhattisgarh and Balaghat from Madhya Pradesh conducted 30 trials for assessment of panicle mite management in Paddy. Results showed that, the use of Spiromesifen 22.9% SC @ 1 ml/lit + Propiconazole 25% EC @ 1 ml/lit (T3) resulted 25.5% more yield than the farmers practice and 10.30% than T2 respectively. The net returns was also increased by Rs. 89895 and Rs. 113210 in assessed technology T2 and T3, respectively over farmers practice i.e. Rs. 75685 (No use of insecticide). The B:C ratio is also high in T3 (3.47), and T2 (3.15) against the T1 (2.81).

Table 2.6: Performance of insecticides for the management of panicle mite in Paddy

Detail of Technology	No. of trials	Yield (q/ha)	Net Returns (Rs/ha)	B: C Ratio
No use of any acaricide for rice panicle mite (T ₁)	30	42.69	75685	2.81
Spraying of Diafenthiuron 50% WP @ 1.5g/lit + Propiconazole 25 EC @ 1ml/lit (T ₂)		48.56	89895	3.15
Spraying of Spiromesifen 22.9% SC @ 1 ml/+ Propiconazole 25% EC @ 1 ml/lit (T ₃)		53.59	113210	3.47



Management of panicle mite in Paddy

Integrated Disease Management in Paddy

Blast Disease Management in Paddy

Problem identified: Low yield due to infection of leaf and panicle area which reduces the grain filling and causes yield reduction.

Technology Assessed: Performance of different fungicides for the management of blast disease in Paddy.

Paddy blast caused by *Magnaporthe oryzae* is the most important disease of paddy. The disease can affect plants at all growth stages. Leaf and neck infections are more severe and may cause heavy damage to the crop. Looking at the problem, five KVKs Raipur, Mungeli, Janjgir-Champa from Chhattisgarh and two KVKs Sheopur and Ashoknagar from Madhya Pradesh conducted 29 trials for the assessment of different chemicals for management of blast disease in paddy.

The results indicated 14.54% and 5.04% disease severity in (T2) Azoxystrobin 18.2 % + Difenconazole 11.4% SC @1 ml/lit water at 30-45 DAS and (T3) Propineb 54% + Tricyclazole 15% WP @ 2 g/lit of water, respectively over seed treatment with Carbendazim + Mancozeb @ 2g/kg (T1). The net returns gained was Rs. 99123 and Rs. 107813/ha in assessed technology T2 and T3, respectively over farmers practice (T1) i.e. Rs. 89308/ha with B: C ratio of 3.42, 3.37, and 3.16 in T3, T2 and T1 respectively.

Table 2.7: Performance of different chemicals for the management of blast disease in paddy

Detail of Technology	No. of trials	Yield (q/ha)	Disease severity (%)	Net Returns (Rs/ha)	B: C Ratio
Seed treatment with Carbendazim + Mancozeb @ 2g/kg seed (T ₁)	29	44	21.81	89308	3.16
Azoxystrobin 18.2 % + Difenconazole 11.4% SC @1 ml/lit of water at 30-45 DAS (T ₂)		47.49	14.54	99123	3.37
Spray of Propineb 54% + Tricyclazole 15% WP @ 2 g/lit of water (T ₃)		52.03	5.04	107813	3.42



Blast disease management in paddy

Nutrient Management in Wheat

Problem identified: Imbalanced use of fertilizers
Technology Assessed: Assessment of nano urea as foliar application in wheat

Among the cereals, wheat is an important crop of *Rabi* season grown across the zone in low and midlands. Imbalanced application of fertilizers is the major reason for the declining yield of wheat. Looking at the above problem, KVKs of Bhatapara, Burhanpur, Sheopur and Bhind conducted 28 trials to assess the balanced application of NPK @ 120:60:40 Kg/ha, based on STV through inorganic fertilizers (T₂) and basal application of NPK @ 60:60:40 kg/ha and two foliar application of nano urea @ 4 ml/liter at tillering and Ear emergence stage (T₃). The results showed that the wheat yield was 8.63 and 9.65 per cent higher in T₂ and T₃, respectively over farmers practice. Similarly, number of effective tillers/m² increased by 14.33 percent (T₂) and 22.12 percent (T₃) over farmer’s practice. The net returns and B: C ratio were recorded to be Rs. 64907/ha and 3.30; Rs. 65912/ha and 3.32 in T₂ and T₃, respectively over farmers practice (Rs. 59288/ha and 3.17).

Table 2.8: Response of nano urea as foliar application for Nitrogen management in Wheat

Details	No. of trials	Yield (q/ha)	No. of effective tillers/m ²	Net Returns (Rs/ha)	B: C Ratio
Farmers practice, NPK @ 80:60:0 kg/ha (T ₁)	28	38.35	321	59288	3.17
Application of RDF (NPK) @ 120:60:40 kg/ha (T ₂)		41.66	367	64907	3.30
Basal application of NPK @ 60:60:40 kg/ha and two sprays of nano urea (4 ml/lit water) at tillering and ear emergence stage (T ₃)		42.05	392	65912	3.32



Application of nano urea in wheat



Performance of nano urea in wheat

Assessment of Natural Farming in Wheat

Problem identified: High cultivation cost and declining soil fertility
Technology Assessed: Assessment of Natural farming (Beejamrit @ 50 ml/kg seed, Ghanjeevamrit at sowing @ 500 kg/ha, Jeevamrit @ 500 l/ha at sowing, 15, 30, 45 DAS and Bramhastra @ 25 l/ha, at 20 and 40 DAS) in wheat.

Wheat is an important *Rabi* cereal that is used as a staple food by most of the population, grown across the zone in low and midlands. Indiscriminate application of inorganic fertilizers and no use of organic or natural sources are the major reasons for the high cultivation cost in wheat. Looking at the above problem, Dewas, Khargone, Ujjain, Manawar and Jhabua KVKs of Zone conducted 49 trials to assess the performance of nutrient management components in natural farming i.e., seed treatment with beejamrit @ 50 ml/kg seed, application of ghanjeevamrit at sowing @ 500 kg/ha, jeevamrit @ 500 l/ha at sowing, 15, 30, 45 DAS and bramhastra @ 25 l/ha, at 20 and 40 DAS (T₂). The yield of wheat was observed to be 5.8 percent lower in T₂ compared to T₁, though due to high market rate the net income received was Rs. 77229/ha in T₂, which was Rs. 10772 higher than that of T₁ (Rs. 66457/ha). The incremental B: C ratio was recorded to be 3.95 in T₂ over farmers practice (3.21). Based on the above findings it may be concluded that the technology assessed in T₂ is eco-friendly as it maintains the crop yield with higher net returns while maintaining soil health and fertility.

Table 2.9: Response of natural farming in wheat

Details	No. of trials	Yield (q/ha)	Net Returns (Rs/ha)	B: C Ratio
Farmers practice, NPK @ 80:30:0 kg/ha through inorganic sources (T ₁)	49	43.77	66457	3.21
Seed treatment with beejamrit @ 50 ml/kg seed, application of ghanjeevamrit at sowing @ 500 kg/ha, jeevamrit @ 500 l/ha at sowing, 15, 30, 45 DAS and bramhastra @ 25 l/ha, at 20 and 40 DAS (T ₂)		41.23	77229	3.95



Nutrient management in wheat through natural farming

Horticulture

Varietal Assessment of Tomato

Problem identified: Low yield due to use of low yielding old varieties.
Technology Assessed: Assessment of improved and high yielding tomato hybrids/varieties viz. Arka Rakshak and Arka Samrat .

Around the world, tomato is a significant vegetable crop. Every household uses it extensively throughout the year. Farmers employ low-yielding cultivars (S-22) and are ignorant of scientific producing technology, resulting in low yield. In order to evaluate the performance of the improved and high-yielding tomato hybrids/varieties, such as Arka Rakshak, Arka Samrat. A total of 15 on-farm trials were carried out by KVKs of Chhattisgarh and Madhya Pradesh, specifically Dhamtari from Chhattisgarh; Bhind and Raisen from Madhya Pradesh. The results showed that the yield of improved varieties/ hybrids namely Arka Rakshak and Arka Samrat increased by 32.15 and 28.62 per cent, respectively, as compared to local varieties i.e. S-22. The tomato hybrids Arka Rakshak and Arka Samrat, yielded net returns of Rs. 199600 and 223750 per ha, respectively, compared to farmers practices (Rs. 131333 per ha). Both of hybrids showed higher B:C ratio i.e. 3.24 (Arka Rakshak) and 3.15 (Arka smarat) against 2.66 (S-22) farmer practice. The findings suggested that the primary cause of increased tomato yield was use of hybrids with improved package of practices.

Table 2.11: Performance of high yielding hybrids/varieties of tomato

Details	No. of trials	Yield (q/ha)	Cost of Cultivation (Rs/ha)	Net Returns (Rs/ha)	B: C Ratio
Farmers practice Var. S-22 (T ₁)	15	255	81500	131333	2.66
Hyb. Arka Rakshak (T ₂)		337	88650	199600	3.24
Hyb. Arka Samrat (T ₃)		328	104250	223750	3.15



Arka Rakshak (Tomato hybrid)



Arka Samrat (Tomato variety)

Varietal Assessment of Okra

Problem identified: Low yield due to use of low yielding and disease susceptible old varieties.

Technology Assessed: Improved high yielding, YVMV and OLECV resistant okra varieties viz. Kashi Chaman, Kashi Kranti, and Kashi Lalima.

Okra (*Abelmoschus esculentus L.*) is a popular vegetable crop with high nutritional value that is also widely available and inexpensive. The adoption of old cultivars (Parbhani Kranti) with poor yield potential and high susceptibility to YVMV and OLECV results in low productivity. Keeping this in view, 5 KVKs (Gwalior, Panna, Satna and Sagar in Madhya Pradesh and Korba in Chhattisgarh) undertook 47 on-farm trials to evaluate the performance of high yielding improved varieties developed by ICAR-IIVR, Varanasi including the bio-fortified variety Kashi Lalima.

The results revealed that all three varieties namely Kashi Chaman, Kashi Kranti, and Kashi Lalima produced 4.21, 0.94, and 13.46 per cent higher yield than local variety (Parbhani Kranti). The economic analysis revealed that the net returns of okra varieties Kashi Chaman, Kashi Kranti, and Kashi Lalima was Rs. 213760, 212142, and 161548/ha with the B: C ratio of 4.15, 4.14, and 4.54, respectively, over the local variety (Rs. 158853; 3.26).

Table 2.11: Performance of HYV varieties of Okra

Details	No. of trials	Yield (q/ha)	Cost of Cultivation (Rs/ha)	Net Return (Rs/ha)	B:C Ratio
Farmers practice Var. P. Kranti (T ₁)	51	109.58	67600	158853	3.26
HYV Kashi Chaman (T ₂)		114.12	60405	213760	4.15
HYV Kashi Kranti (T ₃)		113.39	60400	212142	4.14
HYV Kashi Lalima (T ₄)		124.31	50241	161548	4.54



Okra var. Parbhani Kranti



Okra var. Kashi Chaman

Varietal Assessment of Onion in *Kharif* and *Rabi* Season

Problem identified: Low yield due to use of old varieties and lack of improved package of practices.

Technology Assessed: Assessment of high-yielding variety of onion with improved package of practices in both *Kharif* and *Rabi* season.

In India, onion is the most extensively produced bulb vegetable crop. Farmers continue to use old cultivars such as N-53, Nasik Red, Poona Red, etc., along with improper crop management, resulting in low yield and profit.

In *Kharif* season of 2024, a total of 29 on-farm trials have been conducted to assess the performance of high-yielding varieties like Bhima super, Bhima Dark Red, and NHRDF-4 with recommended production technology. Three KVKs (Tikamgarh, Khargone, Sagar-II) from Madhya Pradesh and 2 KVKs (Raipur and Raigarh) from Chhattisgarh conducted these trials. Result shows that the varieties Bhima super, Bhima Dark Red, and NHRDF-4 had 29.78, 47.87 and 44.78 per cent higher yield respectively over local variety (N-53). Net returns were higher by Rs. 44961, Rs. 94350 and Rs. 66623 per ha over farmer's practice (T₁) with B: C ratio 3.20, 3.48 and 3.57 under Bhima super respectively.

Similarly, in *Rabi* season 20 On-Farm trials have been conducted to assess the performance of high-yielding varieties like NHRDF-2, Bhima Red and Bhama Shakti with improved production technology. 4 KVKs (Dewas, Raisen, Dindori and Sidhi) of Madhya Pradesh conducted these trials. The varieties namely, NHRDF-2, Bhima red and Bhima Shakti yielded 75.40, 22.61 and 4.64 per cent higher than the farmer's practice. The economics revealed that the net income was increased by (NHRDF-2) Rs. 88986, (Bhima Red) Rs. 55082 and (Bhima Shakti) Rs. 40636/ha with B: C ratio 3.95, 3.52 and 3.49, respectively against local variety Nashik Red. It can be concluded that higher yield of onion was obtained from use of HYVs with improved package of practices.

Table 2.12: Performance of Onion under Integrated Crop Management

Details	No. of trials	Yield (q/ha)	Cost of Cultivation (Rs/ha)	Net Return (Rs/ha)	B: C Ratio
Kharif Season					
Farmer practice Var. N-53, (T ₁)	29	172.67	78358	149377	2.91
HYV Bhima Super (T ₂)		224.44	81833	194338	3.20
HYV Bhima Dark Red (T ₃)		257.00	102293	243727	3.48
HYV NHRDF-4 (T ₄)		250.00	84000	216000	3.57
Rabi Season					
Farmer practice Var. Nashik Red (T ₁)	20	179.43	64741	134323	3.04
NHRDF-2 (T ₂)		314.72	75675	223309	3.95
Bhima Red (T ₃)		220.00	75200	189405	3.52
Bhama Shakti (T ₄)		187.76	70265	174959	3.49



Onion Var. NHRDF Red-4



Onion Var. Bhima Dark Red

Assessment of Natural Farming in Vegetable crops

Problem identified: High cultivation cost and low factor productivity of vegetables due to use of chemical fertilizers.

Technology Assessed: Natural farming (Seed treatment with Beejaamrit @ 20 ml/kg seed, Application of Ghanjivaamrit @ 250 kg/ha pre sowing, Jivamrit @ 500 lit/ha 4 times at 20 days interval).

Vegetables serve a significant role in the human diet. Vegetable cultivation is mostly influenced by non-adoption of recommended package of practices, particularly imbalanced use of inorganic fertilizers and pesticides, which results in decreased vegetable production and quality, as well as soil fertility. Because of the inconsistent application of inorganic fertilizers, the status of soil-beneficial microorganisms has steadily dropped, reducing nutrient mineralization and resulting in poor plant nutrition.

Looking at the above problem, 6 KVKs; Ashoknagar, Dindori, Shivpuri, Indore and Tikamgarh of Madhya Pradesh and Bhatapara of Chhattisgarh conducted 35 OFTs to assess the performance under natural farming i.e. seed treatment with beejamrit @ 20 ml/kg seed, application of ghanjivamrit @ 250 kg/ha pre sowing, jivamrit @ 500 lit/ha 4 times at 20 days interval (T2) in different vegetable crops viz. Tomato, Okra, Vegetable pea, Pumpkin and Capsicum against conventional farming practices (T1).

The results revealed that the cultivation cost under natural farming was lowered by Rs. 7526, 10400, 2830, 14230, and 34000/ha in comparison to conventional farming (T1) in tomato, okra, vegetable pea, pumpkin, and capsicum. Tomato, okra, vegetable pea, and capsicum yields rose slightly in T2, by 8.69, 9.09, and 2.77 per cent, respectively, but pumpkin and capsicum yields decreased by 2.86 and 14.66 per cent as to T1. Due to higher product prices, net income from tomato, okra, vegetable pea, and capsicum crops was Rs. 31583, 22100, 11190, 2830, and 77100 per ha more than conventional farming respectively. The incremental B:C ratio was calculated in tomato (3.7, 2.75), okra (3.0, 2.6), vegetable pea (4.1, 3.7), pumpkin (1.7, 1.5), and capsicum (4.3, 4.1) in natural farming and conventional farming (Check) respectively. Based on the findings presented above, it is possible to infer that the technique evaluated in T2 is environmentally benign because it maintains crop output while also improving soil health and fertility.

Table 2.13: Response of natural farming in vegetable crops against conventional farming (Check)

Vegetable crops	No. of trials	Cost saving (Rs/ha)	Yield (q/ha)		Net Returns (Rs/ha)		B: C Ratio	
			Check	Demo	Check	Demo	Check	Demo
Tomato	15	7526	363.4	395.0	247870	279453	2.75	3.7
Okra	5	10400	286.0	312.0	79200	101300	2.6	3.0
Vegetable pea	5	2830	72.0	74.0	105050	116240	3.7	4.1
Pumpkin	5	14230	236.0	217.0	50000	52830	1.5	1.7
Capsicum	5	34000	302.8	257.6	574700	651800	4.1	4.3



Preparation of natural farming inputs



Tomato field under natural farming practices

Varietal Evaluation of Coriander

Problem identified: Low yield due to the use of local variety.

Technology Assessed: Assessment of high-yielding varieties of coriander.

Coriander is a major spice crop recognized for its distinct flavor and taste; both leaves and seeds are versatile spices used in a variety of culinary applications, including garnishing and flavoring curries, soups, and stews. However, farmers are still using local cultivars resulting in lower yield. A total of 38 OFTs were conducted by KVKs in Madhya Pradesh (Neemuch, Burhanpur, Sheopur, Ratlam, Rajgarh, and Damoh) to evaluate the different varieties which include ACr-2, Gujrat Dhaniya-1, and ACr-1. These varieties significantly boosted yield by 32.57, 35.74, and 22.89 per cent compared to the farmers practice. Economics is also greater by Rs. 27478, 27500, and 23139 as compared to farmers practice, with B: C ratio of 3.8, 3.0, and 3.9 from ACr-2, Gujarat Dhaniya-1, and ACr-1, respectively. This suggests that using high-yielding cultivars ACr-1 and ACr-2 with an enhanced package of practices boosts both yield and net profitability for farmers.

Table 2.14: Performance of Coriander crop

Details	No. of trials	Yield (q/ha)	Cost of Cultivation (Rs/ha)	Net Returns (Rs/ha)	B: C Ratio
Farmers Practice Local var. (T ₁)	38	11.05	24675	45000	3.0
ACr-2 (T ₂)		14.65	27185	72478	3.8
Gujrat Dhaniya 1 (T ₃)		15.00	25000	72500	3.0
ACr -1 (T ₄)		13.58	23578	68139	3.9



ACr-1 (coriander variety)



ACr-2 (coriander variety)

Crop Diversification with Spice crop Nigella

Problem identified: Low income due to rice-wheat cropping system

Technology Assessed: Assessment of spice crop Nigella (Kalonji) under crop diversification

Crop diversification is the addition of new crops or cropping system to existing agricultural production system, taking into account the significant benefits for small-scale farmers, such as reduced risk, increased income, improved soil health, improved food security, and environmental benefits. Spice crop Kalonji, also known as nigella or black cumin, is more valuable than cereal crops. Keeping this in mind, Rajgarh and Shajapur KVKs of Madhya Pradesh performed 15 crop diversification trial using the spice crop Kalonji. The results showed that the yield of Kalonji (T₂) was 9.95 q/ha compared to Wheat (T₁) (46.77 q/ha). Kalonji has a larger economic value and yielded net return Rs. 136425 than wheat Rs. 71933 with a B: C ratio of 6.08.

Table 2.15: Performance of spice crop Kalonji rather than wheat

Details	No. of trials	Yield (q/ha)	Cost of Cultivation (Rs/ha)	Net Return (Rs/ha)	B: C Ratio
Farmes Practice Wheat var. Lok 1 (T ₁)	15	45.77	39750	71933	2.98
Nigella var. Azad Kalonji (T ₂)		9.95	26925	136425	6.08



Crop diversification through Kalonji

Agricultural Engineering

Resource Conservation Technology

Raised bed method of sowing

Problem identified: Flat bed sowing of Kharif crops at times lead to water stagnation resulting in crop failure. Similarly, flat bed sowing of certain Kharif crops results in low yield due to poor water management practices.

Technology Assessed: Raised bed method of sowing of Soybean and Brinjal.

There is always a chance of failure of Kharif crops grown on flat fields during situations of stagnation of rainwater for long periods. This condition won't arise if the crops are grown at higher field levels with the provision of drains for drainage of excess rainwater. The raised beds along with furrows are supposed to provide a better environment for crop growth during Rabi season also.

In view of this 15 trials were conducted by KVK Shivpuri and Shahdol sowing soybean and brinjal crops on raised bed. There was an incremental increase in crop yield by 3.5 q/ha in soybean and by 99.2 q/ha in brinjal under raised bed planting. In both crops, the B:C ratio was better in T₁ raised bed planting over the flat bed planting (farmers practice). Overall, the raised bed planting performed better than the farmers practice.

Table 2.16: Raised bed method of sowing

Details	No. of trials	Crop	Yield (q/ha)	Net Return (Rs/ha)	B:C Ratio
Farmers practice, Flat bed sowing (T ₁)	15	Soybean	12.7	32628	2.11
		Brinjal	214.0	99620	2.97
Raised bed sowing (T ₂)		Soybean	16.2	54250	3.17
		Brinjal	313.2	161840	3.82



Raised bed sowing of Brinjal



Raised bed sowing of Brinjal

Line Sowing through Seed cum Fertilizer Drill

Problem identified: Low nutrient and water use efficiency, difficulty in interculture operations, lower yield in broadcast method of sowing.

Technology Assessed: Line sowing of wheat and linseed through seed cum fertilizer drill.

Over the years farm mechanization in India has attained newer heights. However, at times, situations do arise when it becomes necessary to go back to the basics. It is a well known fact that line sowing with its associated benefits has outperformed the broadcasting method of sowing. Still one may find areas where the broadcasting method of sowing is the prevalent norm. Hence it becomes necessary to conduct trials on line sowing through seed cum fertilizer drill for the betterment of agriculture in the area.

KVK Balrampur and Shahdol conducted 10 trials on line sowing of wheat and linseed. There was incremental increase in yield by 12.7 q/ha in wheat and 2.9 q/ha in linseed under line sowing through seed cum fertilizer drill. An increase in yield resulted in higher net returns and higher benefit-cost ratio. Overall, the line sowing through seed cum fertilizer drill outperformed the broadcasting method of sowing.

Table 2.17: Line sowing through seed cum fertilizer drill

Details	No. of trials	Crop	Yield (q/ha)	Net Returns (Rs/ha)	B: C Ratio
Farmers practice, broadcasting method (T ₁)	10	Wheat	15.5	4938	1.18
		Linseed	9.5	22250	2.09
Wheat		28.2	24040	1.67	
Linseed		12.4	32000	2.34	
Line sowing through seed cum fertilizer drill (T ₂)					



Line sowing of Wheat



Line sowing of Linseed

Animal Nutrition Management

Assessment of Chelated Mineral Mixture Supplementation in Dairy Animals

Problem diagnosed: Low milk production due to deficiency of mineral nutrients in cattle after calving

Technology assessed: Assessment of use of chelated mineral mixture supplementation in dairy animals

Chelated mineral mixture is a combination of organic molecules that are bound to a metal ion, typically a mineral such as zinc, copper, manganese, and iron. This chelation process enhances the mineral’s bioavailability and absorption in the body compared to inorganic mineral forms. As a result, chelated mineral mixture is more readily utilized by animals, leading to improved overall production and reproduction performance.

Two KVKs - Ratlam and Raisen, conducted 20 trials to assess the effect of chelated mineral mixture supplementation in dairy animals for sustaining milk production. In recommended practice, 100 gm mineral mixture per animal per day after calving upto 90 days in addition to the feed offered in farmers' practice. The result revealed that there is an increase in average milk yield and net return by 18.25% and 22.98%, respectively; indicating that supplementing existing feed with chelated mineral mixture supplementation regularly at appropriate amounts is beneficial in improving the production of an animal.

Table 2.18: Assessment of use of chelated mineral mixture supplementation in dairy animals

Details	No. of Trials	Avg. Milk Yield (Lit/day)	Avg. Net Returns (Rs.) in three months	B: C ratio
Farmers practice, Feeding only dry Fodder (T1)	20	6.85	11160	2.04
Mineral mixture supplementation @ 100 gm per animal per day after calving up to 90 days (T2)		8.1	13725	2.18



Feeding of chelated mineral mixture supplementation in dairy animals

Fish Seed Production

Problem Identified: Lack of standard seed and no use of seasonal ponds for fish seed rearing, low survival rate at nursery stage and non-availability of quality seed.

Technology Assessed: Rearing of fish seed at small seasonal pond.

The production of high-quality fish seed is crucial for the growth of aquaculture production and the survival rates of fingerling in ponds. Fish seed rearing is essential to meet the growing demands of the fish farmer and ensure sustainable fisheries. KVK Dhamtari, Korba, Kondagaon and Mungeli conducted 29 trials on the assessment of fish seed rearing at small seasonal ponds. The average survival rate of 55.22% was achieved in the seasonal pond. The findings showed that net return and B: C ratio was 170741 and 3.06 respectively

Table 2.19: Performance of Fish Seed Production of Small Seasonal Pond

Details	No. of Trials	Survival rate (%)	Cost of cultivation (Rs.)	Net returns (Rs.)	B: C ratio
No Use of seasonal pond for fish seed rearing (T1)	29	-	-	-	-
Stocking of fish seed catla, rohu, mrigal (50 Lakhs/ha.), application of mustard oil cake+ rice bran(1:1) and application of lime 200-250 kg/ha (T2)		55.22	76358	170741	3.06



Rearing of fish seed in seasonal ponds

Fish Production through Biofloc technique

Problem Identified: Semi intensive culture of fish, getting low production, requires large water bodies and manpower and cost of fish production high and low fish production.

Technology Assessed: Assessment of Pangasius fish production through biofloc technique.

Biofloc technology (BFT) is an innovative approach to fish farming that involves cultivating microorganisms to improve water quality and provide supplementary nutrition to fish, this technology offers multiple benefits to fish farmers including enhanced water quality reduced costs, improved sustainability and increased production. These advantages make it an attractive option for modern aquaculture practices. KVK Korba, Raipur and Bemetra conducted 11 trials on the assessment of fish production through the biofloc technique maximum yield of 77.87 q/ha was recorded by KVK Raipur in biofloc fish culture in the tank, while average yield was 44.09 q/ha against Farmer's practice (T₁) i.e. 38.87 q/ha. Net return increased by Rs. 83917 and B:C ratio was 2.38 against Farmer's practice (T₁) i.e. 1.61.

Table 2.20: Performance of fish production through biofloc technique

Details	No. of trials	Yield (q/ha)	Cost of cultivation (Rs/ha)	Net return (Rs/ha)	B: C ratio
Fish culture in farmer pond (T ₁)		38.87	191871	58161	1.61
Pangasius Fish Seed (100g) @ 25Nos./M3 High-Value Fish Species Inoculum – 150 L water + 3 Kg Pond Soil + 1.5 gm Ammonium Phosphate/ Urea + 30 gm Carbon Source i.e. Jaggery/Flour etc. + Mixing + Continuous Aeration for 24 – 48 hrs + Transferred to Biofloc Tank. C:N Ratio – 10:1, Floc Volume:25-35 ml/L Feeding – 1-2 % body weight of fish.(T ₂)	11	44.09	169255	142078	2.38



Fish production through biofloc technique

Home Science

Nutritional Security

Bio-fortified variety of wheat for nutritional security

Problem Identified: Malnutrition among the farm families due to low nutrient diet
Technology Assessed: Bio-fortified wheat variety Pusa Tejas assessed for Nutritional Security

Malnutrition has emerged as a major health problem. It affects growth and development, and reduces the work efficiency in humans, besides having huge economic and societal implications. Among various avenues, crop bio-fortification has emerged as the most sustainable and cost-effective approach to address malnutrition. Providing nutritional security through the use of biofortified varieties. Children, adolescents and women's health can be significantly improved by biofortified crops.

In Madhya Pradesh, KVK Shajapur, Morena and Guna conducted 25 On-Farm Trials using bio-fortified varieties of wheat Pusa Tejas to improve nutritional status in farm families. Biofortified variety Pusa Tejas has more protein (11.95 gm/100gm), Iron (41.1ppm) and zinc (42.8 ppm).

Table 2.21: Performance of Bio-fortified wheat variety Pusa Tejas for nutritional security

Detail of Technology	No. of trials	Nutrient		
		Protein (gm/100gm)	Iron (ppm)	Zinc (ppm)
Lok-1 (T1)	25	9.3	30	31
Pusa Tejas (HI-8759) (T2)		11.95	41.1	42.8



Production of Bio-fortified variety Pusa Tejas of Wheat

Drudgery Reduction of Farm Women

Problem Identified: Heavy drudgery during manual seed decortication (by bare hand) in Mahua
Technology Assessed: Farm women using manually operated Mahua seed decorticator

Mahua seed decortication with bare hands is a very tedious process causes discomfort, pain in fingers hand, wrist, shoulders results in low efficiency. KVK Mandla, Seoni and Annuppur of Madhya Pradesh conducted 20 trials on Mahua decorticator for farm women to address the

problem of drudgery in agricultural operations. As a result of using Mahua Decorticator, 84.37 percent work efficiency was increased and 19.27 percent of drudgery was reduced. Thus, Mahua seed decorticator (manually operated) reduces drudgery and pain in various parts of body.

Table 2.22: Performance of Mahua seed decorticator for farm women

Detail of Technology	No. of trials	Output (Kg/hr)	Cardiac cost (beat/kg)	WHR beat/min	% reduction in drudgery	% increase in efficiency
Manual decortication by hands (T1)	20	4.31	40	122.54		-
Use of Mahua seed decorticator (T2)		8.06	20	110.5	19.27	84.37



Seed decortication of Mahua

Income generation

Income Generation by Processing and Value Addition of Turmeric

Problem Identified: Lack of knowledge of processing and value addition of turmeric, results less income

Technology Assessed: Assessment of processing and value-addition of turmeric for financial and nutritional security

Turmeric is traditionally cultivated by small and marginal farmers across various regions of the country, particularly in rainfed and tribal areas. Known as a golden spice, turmeric holds immense nutritional and medicinal value. It is rich in curcumin, a powerful antioxidant and anti-inflammatory compound. Turmeric also contains essential oils, vitamins like B6 and C, and minerals such as iron, potassium, and manganese.

A majority of farm women hold marginal or small holdings and earn very little income. To enhance the income level of farm women, technology of processing and value addition of turmeric was assessed. In regard to this problem, KVK Raigarh from Chhattisgarh conducted 2 on farm trials on value added product of turmeric i.e. turmeric pickle.

Results indicated that, farm women obtained an average net return of Rs. 30750 per quintal

from value addition of turmeric with cost of input Rs. 14750.

Table 2.23: Promotion and Value Addition of Turmeric for Income Generation

Detail of Technology	No. of trials	Average Cost of input (Rs./q)	Average Gross Return (Rs./q)	Average Net Return (Rs./q)	B:C Ratio
Marketing of unprocessed turmeric (T ₁)	2	2700	4100	1400	1.52
Value added Product Turmeric pickle (T ₂)		14750	45500	30750	3.08



Production of value added product (turmeric pickle)

3. Frontline Demonstrations

Frontline demonstrations (FLD) were conducted to demonstrate the superiority of frontier and location specific proven technologies of agriculture and allied sectors among the farming community and extension functionaries for up-scaling in the larger area as well as for generating the production data along with the feedback. During the year 2024, under ICAR-ATARI, Zone-IX, total 867 FLDs were conducted on cereals, pulses, oilseeds, enterprises and other crops, covering an area of 2021.70 ha and benefitting 5999 farmers, by subject matter specialists of KVK who provides technological inputs to organize the demonstrations.

Table 3.1 : Summary of FLDs (State-wise) conducted by KVKs during 2024

State	Category	No. of Technology Demonstrated (crops/ enterprises)	Area (ha)	Beneficiaries
Madhya Pradesh	Cereals	77	218.5	598
	Oilseeds	84	368.7	808
	Pulses	47	146.3	389
	Enterprises (ha/Units)	247	71.2	666
	Others	121	294	1121
Total		576	1098.7	3582
Chhattisgarh	Cereals	44	207.6	497
	Oilseeds	19	249.8	502
	Pulses	27	112	261
	Enterprises (ha/Units)	149	239	744
	Others	52	114.6	413
Total		291	923	2417
Total	Cereals	121	426.1	1095
	Oilseeds	103	618.5	1310
	Pulses	74	258.3	650
	Enterprises (ha/Units)	396	310.2	1410
	Others	173	408.6	1534
Grand Total		867	2021.7	5999

Table 3.2: Summary of FLDs (Crop-wise) conducted by KVKs of Zone-IX during 2024

Category	No. of Technology Demonstrated (Crop/Enterprises)	Area (ha)	Beneficiaries (No.)
Cereals	121	426.1	1095
Pulses	74	258.3	650
Oilseeds	103	618.5	1310
Cash crops	2		10
Millets	24	92.4	264
Fiber crops	5	18.4	41
Fruit crops	7	16.4	39
Flower crops	5	5	29

Category	No. of Technology Demonstrated (Crop/Enterprises)	Area (ha)	Beneficiaries (No.)
Fodder crops	4	4.8	20
Spices	12	27.5	114
Tuber crops	4	8.4	25
Vegetables	97	202.6	904
Agro forestry	2	1	6
NTFP	3	4.1	25
Others	8	28	57
Total	471	1711.4	4589
Enterprises (ha/Unit)			
Agriculture Engineering	61	243.6	545
Animals	38	-	470
Fisheries	17	66.6	115
Women Empowerment	280	-	280
Total	396	310.2	1410
Grand total	867	2021.6	5999

Table 3.3: Summary of FLDs (Crop-wise) conducted by KVKs in Madhya Pradesh

Category	No. of Technology Demonstrated (Crop/Enterprises)	Area (ha)	Beneficiaries (No.)
Cereals	77	218.5	598
Pulses	47	146.3	389
Oilseeds	84	368.7	808
Millets	19	68.8	206
Fiber crops	5	18.4	41
Flower crops	2	1.5	15
Fodder crops	4	4.8	20
Fruit crops	5	14	30
Spices	9	16.9	80
Tuber crops	1	1	5
Vegetables	72	159.6	698
Agroforestry	2	1	6
NTFP	1	4	10
Other	1	4	10
Total	329	1027.5	2916
Enterprises(ha/Units)			
Agriculture Engineering	20	69.6	140
Animals	27	-	320
Fisheries	2	1.6	8
Women Empowerment	198	-	198
Total	247	71.2	666
Grand total	576	1098.7	3582

Table 3.4: Summary of FLDs (Crop-wise) conducted by KVKs in Chhattisgarh

Category	No. of Technology Demonstrated (Crop/Enterprises)	Area (ha)	Beneficiaries (No.)
Cereals	44	207.6	497
Pulses	27	112	261
Oilseeds	19	249.8	502
Cash crops	2		10
Millets	5	23.6	58
Flower crops	3	3.5	14
Fruit crops	2	2.4	9
Spices	3	10.6	34
Tuber crops	3	7.4	20
Vegetables	25	43	206
NTFP	2	0.1	15
Other	7	24	47
Total	142	684	1673
Enterprises(ha/Units)			
Agriculture Engineering	41	174	405
Animals	11	—	150
Fisheries	15	65	107
Women Empowerment	82	—	82
Total	149	239	744
Grand total	291	923	2417

Table 3.5: Summary of FLDs under Integrated Crop Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Maize	1	2	10	48.50	42.30	14.66	61617	75412
Paddy	5	23.8	57	47.53	40.22	18.45	48977	62942
Wheat	4	20	50	41.15	34.70	20.56	48253	66256
Pulses								
Blackgram	1	5	13	6.20	5.13	20.86	23130	29080
Chickpea	7	26.8	66	15.79	13.43	17.38	41300	57734
Oilseeds								
Linseeds	1	2	5	13.85	9.60	44.27	30500	49194
Mustard	7	68.8	182	556.8	491.3	16.98	43502	60148
Sesame	3	18.8	48	6.75	4.34	55.73	20968	28238
Soybean	6	20.2	50	15.34	11.83	9.34	35401	51354
Sunflower	1	6	13	14.43	12.76	13.09	57408	67622
Millets								
Finger Millet	1	5	12	10.20	5.20	96.15	9439	21082
Kodo Millet	4	12.8	32	11.45	7.92	43.65	46030	62098
Fruit crops								
Watermelon	1	1	5	282.3	161	74.8	279750	636050
Flower crops								
Marigold	3	2.00	20	80.73	42.07	79.31	110692	232768
Spices								
Coriander	2	5.80	22	8.83	6.35	42.22	57098	69835
Tuber crops								

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Colocasia	1	0.40	3	146.0	92.0	58.70	15160	23560
Vegetables								
Brinjal	1	1.00	5	412.3	314.6	31.06	248800	333100
Chilli	1	1.00	5	140	78.00	79.49	128610	273177
Cowpea	1	1.00	5	118.4	88.70	33.48	93250	129400
Moringa	1	0.16	12	150	100	50.00	125000	212000
Okra	1	1.00	5	105.8	80.40	31.59	70750	106000
Onion	2	2.00	15	308.7	290.8	15.20	290554	310701
Pea	2	2.00	10	83.87	55.52	51.08	117800	191495
Potato	1	13.00	130	282	235	20.00	129900	172500
Seasonal Vegetables	2	1.05	10	72.71	46.79	52.06	135750	51000
Sponge Gourd	1	1.00	5	253.8	188.3	34.78	218650	302500
Tomato	3	11.00	34	421.6	341.8	23.7	221383	318113
Total	64	254.01	824	-	-	-	-	-

**RP-Recommended practice, **FP-Farmers' practice*

Table 3.6: Summary of FLDs on Integrated Disease Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Paddy	7	20.4	53	44.3	37.9	17.0	44950	56641
Wheat	2	6	15	25.4	22.2	14.1	40407	56993
Pulses								
Blackgram	2	8	20	7	5.4	27.8	21047	30679
Chickpea	7	20.5	57	16.1	12.8	25.4	37361	57719
Fieldpea	1	2	10	19.4	17.9	8.8	46012	51498
Chickpea	1	0.40	10	14	13	7.7	52860	55000
Greengram	1	4.8	12	9	7.8	15.4	47400	56000
Lentil	1	2	5	12.4	9.7	27.8	36380	53860
Pigeonpea	2	7	17	14.1	10.4	35.5	39427	61248
Oilseeds								
Groundnut	2	4	10	19.6	16.4	19.9	49800	65016
Mustard	1	2.5	13	16.4	13.0	26.1	53705	69602
Sesame	2	8	15	5.8	3.7	55.4	17725	33114
Soybean	5	15	37	15.7	12.8	22.5	38830	56070
Fruit crops								
Guava	1	4	10	281	242	16.1	268905	325252
Vegetables								
Chilli	2	6.4	22	38.5	37.1	3.6	207841	277111
Onion	3	5	15	297	230	29.3	160113	230647
Tomato	1	1	5	247.6	183.1	35.2	286950	413970
Spices								
Coriander	3	9.3	30	17.6	14.8	18.7	54845	92203
Fennel	1	4	10	10.3	8.2	25.4	129000	169600
Ginger	1	2	10	131.5	107	22.9	190708	247733
Tuber crops								
Colocasia	1	1	5	178	142	25.4	229200	294800
Total	47	133.3	381	-	-	-	-	-

**RP-Recommended practice, **FP-Farmers' practice*

Table 3.7: Summary of FLDs on Integrated Nutrient Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Maize	6	23.6	44	49.1	40.6	21.02	64551	80848
Paddy	13	47.8	128	44.4	37.9	17.14	54776	67276
Sorghum	1	4	10	32.6	26.4	23.68	46263	58282
Wheat	16	50.8	129	53.1	46.1	15.15	59095	72864
Pulses								
Blackgram	2	8.8	22	8	6	32.61	27288	39390
Chickpea	7	27.8	59	16.2	13.2	22.97	56767	73585
Lathyrus	4	19.2	48	5.9	4.0	47.24	24865	32572
Pigeonpea	1	5	13	10.3	8.2	25.73	40110	54323
Oilseeds								
Castor	1	4	10	23.9	20.2	18.69	85835	103229
Groundnut	1	4.8	12	28	24	16.67	83412	83412
Mustard	8	33	82	13.4	11.2	19.07	49274	61306
Sesame	2	8	20	5.9	4.2	39.29	19439	32348
Soybean	7	26	65	16.0	12.5	27.82	34742	49270
Millets								
Finger millet	1	4.8	12	10.4	7.5	38.93	13175	23001
Pearl millet	2	6.8	22	18.6	13.5	37.11	16114	38760
Fiber crops								
Cotton	2	8.8	17	19.9	16.9	17.83	73571	93227
Fruit crops								
Mango	1	-	5	70	55	27.27	123000	168000
Vegetables								
Brinjal	2	5	20	217.8	203.0	7.11	160069	210348
Chilli	1	1	5	13.9	9.0	53.88	4553	12305
Bottle gourd	1	4.8	12	208	173	20.17	127167	158333
Garlic	2	4	15	124	105	17.97	329618	398436
Onion	4	9.4	29	270	221	22.13	222562	267898
Potato	2	3	15	225	190	18.36	249466	299742
Tomato	2	5	15	287	242	18.52	110940	165989
Total	89	317.4	809	-	-	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.8: Summary of FLDs on Integrated Pest Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Maize	9	27.3	77	49.93	41.15	21.35	61280	75315
Paddy	17	60.2	162	42.16	36.98	14.00	74907	108990
Wheat	3	8	22	48.01	41.74	15.03	75153	89170
Pulses								
Chickpea	10	32.2	67	15.05	12.33	22.12	39734	60208
Gram	1	0.4	10	14.50	13.50	7.41	43000	59875
Oilseeds								
Mustard	6	16	45	15.22	12.40	22.73	44158	58201
Soybean	7	21.5	61	12.22	10.17	20.12	30029	40372
Millets								

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Little Millet	1	2	5	7.60	4.75	60.00	12055	20650
Fiber crops								
Cotton	2	5.6	14	15.04	13.51	11.37	53081	61950
Cash crops								
Lac	2	-	10	73.0	38.5	90.91	16890	44290
Vegetables								
Bean	1	2	5	105	94	11.70	142000	157000
Brinjal	1	1	5	216	165	30.91	94000	147900
Cauliflower	1	0.025	5	152.9	116.8	30.85	92512	126395
Chilli	1	5	12	211.8	153.1	38.34	68685	157930
Garlic	2	3	10	96.70	85.56	13.00	151227	181452
Okra	2	8.8	22	140.5	119.1	17.93	115859	145523
Onion	3	8.8	27	248.7	207.9	19.59	125367	167705
Potato	1	2	10	320	285	12.28	196950	238300
Tomato	1	2	5	341.8	192.3	77.74	1630	3885
Total	71	205.8	574	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.9: Summary of FLDs on Integrated Weed Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Maize	2	8.00	20	40.03	32.13	24.59	27763	38863
Paddy	3	13.80	27	43.31	35.91	20.59	64404	82545
Wheat	3	12.00	31	41.56	33.69	23.36	45995	63780
Millets								
Pearl millet	2	4.00	15	11.55	9.50	21.53	16690	25384
Oilseeds								
Groundnut	1	5.00	12	21.5	14.5	48.28	20000	34000
Mustard	1	5.20	12	18.00	8.10	122.2	28995	77100
Niger	1	4.00	10	5.80	3.10	87.10	15515	33307
Sesame	3	10.00	25	5.55	3.75	47.78	18161	33897
Soybean	7	30.00	57	14.98	12.20	22.78	31417	44037
Pulses								
Blackgram	2	6.80	22	4.75	3.30	43.63	18029	31038
Fruit crops								
Water Melon	1	4.00	5	45.35	37.25	21.74	49494	67271
Spices								
Coriander	1	2.00	10	13	10	30.00	35000	53000
Vegetables								
Garlic	2	6.00	17	119	99.3	19.78	501240	595625
Okra	3	2.40	15	139	113	23.30	160927	205417
Onion	6	15.40	59	284.5	232.0	22.62	246543	295966
Total	38	128.6	337	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.10: Summary of FLDs on Varietal evaluation

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Paddy	4	17	29	34.6	27.5	25.81	45079	66737
Wheat	10	27.4	88	47.0	38.5	22.07	56780	76913
Barley	1	4.8	12	30.4	23.9	27.20	15215	25578
Maize	2	4	15	34.4	28.2	21.99	36825	48289
Pulses								
Blackgram	1	5	5	12.7	11.5	10.43	60000	75800
Chickpea	7	17	54	17.1	13.2	29.55	44613	63112
Greengram	1	2	5	13.9	10.8	28.70	59310	78184
Lentil	1	2	5	12.4	10.0	24.00	25000	55000
Pigeon pea	3	27	55	13.2	10.1	30.20	51313	70420
Oilseeds								
Groundnut	2	80	200	21.5	14.5	48.28	41633	79934
Linseeds	2	4	15	12.4	8.5	45.88	27148	47333
Mustard	4	15	38	10.7	8.0	33.75	24773	31373
Sesame	2	6	15	5.7	4.4	29.55	15928	26522
Soybean	11	38.5	88	15.1	11.9	26.89	31211	46126
Millets								
Finger Millet	1	5	12	9.2	5.7	61.40	10110	20280
Kodo Millet	6	25	79	9.9	7.4	34.45	16810	25398
Little Millet	3	19	50	12.7	8.6	47.98	14411	27547
Pearl millet	1	2	5	25.7	20.3	26.73	24176	33466
Vegetables								
Beans	1	5	12	265	225	17.78	182350	239950
Bitter gourd	1	1	5	210.5	184.7	13.97	79290	95229
Brinjal	2	6	17	217.9	177.7	22.62	121860	164630
Chilli	1	2	10	195	165	18.18	255000	315000
Coriander	2	2	15	9.1	6.8	33.58	80650	120250
Cowpea	1	0.40	5	179	132	35.61	88000	146500
Cucumber	1	1	10	100	89.2	12.11	120990	181880
Drumstick	1	6	6	150	60	150	70000	245000
Fenugreek	1	5	12	12.3	11.2	9.46	51365	57555
Garlic	1	1	5	89.5	74.8	19.65	272500	342340
Okra	1	0.05	10	103.3	73.3	40.94	91060	152560
Onion	5	13	52	226.6	171	32.48	80438	213092
Pea	2	1.5	15	52.3	43.1	21.37	103000	122600
Seasonal Vegetables	1	0.06	20	660	575	14.78	-	-
Tomato	5	4.2	39	281.7	201.0	40.13	128002	213550
NTFP								
Mahua	1	-	10	7	6	16.67	8160	15764

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Other								
Mushroom	1	-	10	0.70	-	-	11180	-
Spices								
Coriander	1	1	7	20.5	16.3	25.77	15950	103150
Turmeric	2	3	20	269.9	198.1	36.25	171871	247166
Tuber crops								
Colocasia	1	5	12	92	79	16.46	193000	249750
Elephant Foot Yam	1	2	5	348	276	26.09	404000	582000
Flower crops								
Marigold	1	1	4	16.9	11.0	53.18	30960	63320
Fodder crops								
Napier Grass	1	2	5	615	361	70.36	76900	145850
Total	97	362.9	1066	-	-	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.11: Summary of FLDs on Resource Conservation Technology

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Paddy	1	4.8	5	27.90	20.56	35.70	50040	74800
Wheat	1	2	5	42.5	35.0	21.43	48475	76085
Pulses								
Lathyrus	1	4.8	10	7.84	5.12	53.13	8210	15145
Oilseeds								
Linseed	1	2	5	20.85	16.12	29.34	75225	102107
Millets								
Little Millet	1	4	10	8.66	5.52	56.88	12580	25551
Flower crops								
Marigold	1	2	5	168	102	64.71	190000	370000
NTFP								
Mahua	2	4.1	15	2.97	2.46	20.93	19748	34211
Vegetables								
Brinjal	1	2	10	218	181	20.44	121000	152000
Chilli	1	4	10	44.8	34.1	31.42	35671	59171
Seasonal Vegetables	1	2	10	165	120	37.50	75000	115000
Total	11	29.70	85	-	-	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.12: Summary of FLDs on Soil Fertility Management

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Wheat	1	4.8	12	26	22	18.18	36288	42525
Maize	1	4.0	10	58.89	47.86	23.05	51820	71530
Pulses								
Chickpea	2	3.6	9	14.5	12.7	14.17	44843	52955
Oilseeds								
Mustard	1	1.2	3	5.85	4.16	40.63	6278	12925
Millets								
Pearl millet	1	2.0	10	27.5	23.5	17.02	50087	57600
Vegetables								
Cauliflower	1	2.0	10	259	229	13.10	157476	174355
Seasonal Vegetables	1	2.0	10	300	250	34.00	25000	30000
Total	8	19.6	64	-	-	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.13: Summary of FLDs on Integrated Farming System

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Paddy	2	8.80	20	30.05	28.00	7.32	89361	127365
Barley	1	4.00	10	28.8	21.2	35.85	17910	29780
Maize	1	2.00	5	60.92	54.80	11.17	86193	97896
Pulses								
Chickpea	1	5.00	24	13.2	12.8	3.12	34488	44122
Vegetables								
Seasonal Vegetables	1	0.75	5	17.0	14.6	16.44	82705	49705
Fiber crops								
Cotton	1	4	10	76	60	26.67	142832	397260
Agro forestry								
Moringa + Wheat	1	0.8	4	115	39	194.87	64750	274700
Moringa + Marigold	1	0.2	2	109.6	30.0	265.3	44173	223508
Other								
Mushroom	2	7	22	269.3	254.3	5.90	81925	52746
Total	11	32.55	102	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.14: Summary of FLDs on Natural Farming and Organic Farming

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Wheat	2	9.8	32	35.85	28.1	27.58	44367	60302
Oilseeds								
Groundnut	1	2	5	20.1	16.2	24.07	42200	58900
Soybean	1	4	10	12.65	9.63	23.87	29484	24310
Pulses								
Black gram	2	4	10	7.4	6.8	8.82	21670	27010
Chickpea	1	4	10	15.9	11.8	34.75	57287	40034
Fieldpea	1	2	5	14.9	12.1	23.14	45900	39100
Vegetables								
Brinjal	1	2	5	228	210	8.57	145000	163000
Onion	1	1	10	263.2	211.1	24.68	172544	185868
Tomato	2	2.4	15	284	277	2.34	83735	178000
Total	12	31.2	102	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.15: Summary of FLDs on Feed and Fodder Production

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Maize Grass	1	0.4	5	860	550	56.36	45100	106100
Napier Grass	2	4.4	15	1360	685	98.54	121500	197600
Total	3	4.8	20	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.16: Summary of FLDs on Crop Diversification

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Cereals								
Paddy	1	5	12	36.24	29.64	22.27	6500	12300
Barley	1	2	5	38.2	29.6	29.05	19860	34570
Pulses								
Black gram	1	2.8	7	10.63	8.70	22.18	40365	53919
Chickpea	1	0.40	5	19	14	35.71	45600	73960
Lentil	1	2	5	13.2	9.8	34.69	38165	56710
Oilseeds								
Groundnut	1	40	54	10.5	6.25	68.00	24370	393223
Mustard	2	25	38	7.37	4.91	50.10	45380	59590
Soybean	1	40	50	9.5	6.75	40.74	9021	20474

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Fruit crops								
Guava	1	2	5	11.34	8	34.52	23000	22000
Mango	1	2	5	15.97	12	33.08	41000	39000
Pear	1	2	4	10.53	7	50.43	51873	81054
Spices								
Turmeric	1	0.40	5	96	66	45.45	56400	117100
Other								
Mushroom	3	21	25	43.83	38.33	14.35	7230	14998
Total	16	144.6	220	-	-	-	-	-

*RP-Recommended practice,**FP-Farmers' practices

Table 3.17: Summary of FLDs on Group Approach

Crops	No. of Technology Demonstrated	Area (ha)	No. of farmers	Yield (q/ha)		% Change	Net Returns (Rs/ha)	
				RP	FP		FP	RP
Oilseeds								
Niger, Linseed, Mustard	1	48	5	9.01	6.79	32.69	21136	28122
Total	1	48	5	9.01	6.79	32.69	21136	28122

*RP-Recommended practice,**FP-Farmers' practices

Table 3.18: Summary of FLDs on Farm mechanization

Category	Name of the Implement	Crops	No. of FLDs	Area (ha)	No. of farmers
Sowing and planting tools and machineries	Broad Bed Furrow	Chickpea	1	5	13
		Soybean	3	8	22
	Manually operated transplanter	Tomato	1	4	5
	Line Sowing	Paddy	2	6.8	18
	Seed cum-Fertilizer Drill	Chickpea	2	6.8	17
		Finger millet	1	2.6	13
		Kodo	1	10	22
		Linseed	2	7.4	25
		Mustard	3	11.4	26
		Niger	1	4.8	12
		Paddy	6	30.4	56
		Ragi	1	10	22
		Soybean	1	5	5
		Wheat	5	19	40
	Multi Crop Planter	Chickpea	3	7.8	23
Field pea		1	1	7	
Garlic planter		1	5	5	

Category	Name of the Implement	Crops	No. of FLDs	Area (ha)	No. of farmers
		Maize	2	7	17
		Paddy	3	9	23
		Potato	1	5	5
Intercultural operation tools and machineries	Cono weeder	Paddy	1	2	5
	Disc Harrow	Paddy	1	4	10
	Agri. Drone	Paddy	1	4	10
		Wheat	1	5	12
	Hand wheel hoe	Maize	1	4	10
	Mulcher	Crop Residue	1	2	5
	Tractor operated boom sprayer	Soybean	1	2.6	13
Irrigation management tools and machineries	Venturi	Tomato	1	4	10
	Solar pump	Wheat	1	4	10
Harvesting tools and machineries	Plastic mulching	Chilly	1	5	5
	Combine Harvester	Paddy	1	4	10
	Tractor Operated Axial Flow Thresher	Paddy	1	6	6
Post harvest processing tools and machineries	Vertical Conveyor Reaper	Paddy	2	7	18
	Power operated maize dehusker cum Sheller	Maize	1	5	5
	Baler machine	Paddy	1	4	10
	Mahua seed decorticator	Mahua	1	-	10
	Paddle operated mahua stamen	Mahua	1	10	10
	Power operated grain cleaner	Paddy	1	0	5
	Tractor Operated Baler	Paddy	1	5	5
Total			61	243.6	545

RP-Recommended practice,FP-Farmers' practices*

Table 3.19: Summary of FLDs on Livestock and Poultry Production

Category	No. of FLD	No. of farmers	No. of Animals
Dairy and Cattle			
Buffalo	8	76	55
Cattle	10	137	230
Cross bread cattle	1	10	10
Poultry			
Backyard Poultry	2	55	100
Cockrail chicken	1	10	250
Hen	1	10	200
Kadaknath	5	50	60
Quail	1	10	10

Category	No. of FLD	No. of farmers	No. of Animals
Sheep and Goat			
Goat	9	112	157
Total	38	470	1072

RP-Recommended practice,FP-Farmers' practices*

Table 3.20: Summary of FLDs on Fisheries

Thematic area	No. of FLD	Area (ha)	No. of farmers	Result (q/ha)		
				RP	FP	% change
Composite Fish Farming	7	25.6	44	35.4	25.6	38.26
Fingerling Production	2	2	8	-	-	-
Fish Production and Management	6	29	48	25.1	17.8	41.38
Fish-cum-Duck Farming	2	10	15	33.1	22.2	49.50
Total	17	66.6	115	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.21: Summary of FLDs on Drudgery reduction under Women Empowerment

Name of Technology demonstrated	No. of FLD	No. of farm women	Output (m ² /kg/hr)		Drudgery Reduction (%)
			FP	RP	
Vegetable Plucker	14	14	59.7	69.25	70
Cycle Wheel Hand Hoe	10	10	52.2	263.4	81
Gruber Weeder	5	5	38.2	56.6	18.4
Grand Total	29	29	-	-	-

RP-Recommended practice,FP-Farmers' practices*

Table 3.22: Summary of FLDs on Income Generation under Women Empowerment

Name of Technology Demonstrated	No. of FLD	No. of farm women	Production per unit (Kg/no/lit)	Cost of input (Rs./unit)	Gross income (Rs.)	Net Return (Rs.)
Drumstick Leaves Powder	10	10	5.445	650	3539	2889
Kadaknath and Narmada Nidhi Raring	10	10	1.87	4960	16890	11930
Backyard Poultry	12	12	860	1709	9244	7535
Ginger Candy	20	20	7	3532	13181	9649
Ginger Gatagat	10	10	5	1500	14000	12500
Ginger Powder	10	10	5	1000	2500	1500
Improved Nursery Management	10	10	3800	225	8799	8574
Kusumi Lac	8	8	24.82	3550	12410	8860
Rangini Lac	15	15	6.12	620	2142	1522
Marigold Production	20	20	106.18	47830	173190	125360
Mushroom Production	45	45	39.77	3712	10849	7137
Safe Bags	15	15	96.15	200	7692	7492

Name of Technology Demonstrated	No. of FLD	No. of farm women	Production per unit (Kg/no/lit)	Cost of input (Rs./unit)	Gross income (Rs.)	Net Return (Rs.)
Vermi Compost	44	44	9.48	4033	22987	18953
Oyster Mushroom Pickle Making	12	12	8.73	1231	2415	1184
Grand Total	241	241	-	-	-	-

RP-Recommended practice,FP-Farmers' practices*



Mustard crop in Farmers Practice



Mustard crop under Recommended Practice



Direct Seeded Rice crop



Integrated Disease Management in Soybean crop



Baler Machine in rice crop



Soil test based Nutrient Management in Maize

4. TRAINING AND CAPACITY BUILDING

Training has been considered as a key component for updating the knowledge and imparting the new skills to the participants. There was great emphasis on organizing training both for the farmers as well as for the trainers. During the year 2024, total 5884 training courses were organized benefitting 190934 participants (including farmers and farm women, rural youth, extension personnel) (Table 4.1).

4.1: Training organized by KVKs

Table 4.1: Summary of training programmes conducted during 2024

Training	No. of Courses			No. of Participants		
	CG	MP	Total	CG	MP	Total
Farmers & Farm Women	1889	3093	4982	68882	91593	160475
Extension Personnel	87	117	204	2793	3340	6133
Rural Youth	290	222	512	10404	7682	18086
Sponsored	31	51	82	1559	1354	2913
Vocational	49	55	104	1553	1774	3327
Total	2346	3538	5884	85191	105743	190934

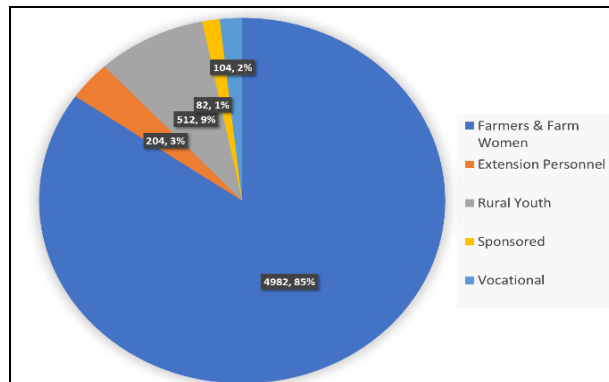


Fig: 4.1 Training Courses Organised (No. and percent)

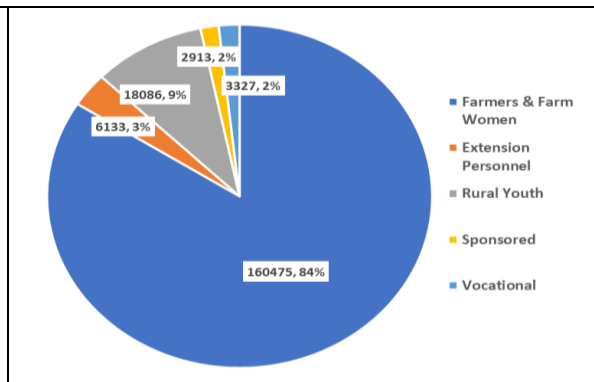


Fig: 4.2 Participants benefitted (No. and percent)

Table 4.2: Training program organised by the KVKs for farmers and farm women

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Agricultural Engineering	56	496	149	95	37	310	348	901	534	1435
Agro Forestry	217	2744	767	858	294	1546	727	5148	1788	6936
Capacity Building and Group Dynamics	1365	17084	4449	4394	1882	13129	5198	34607	11529	46136
Crop Production	94	1089	475	253	101	521	109	1863	685	2548
Fisheries	496	2065	5124	568	1978	713	2875	3346	9977	13323
Home Science/Women Empowerment	196	2378	979	592	366	1505	786	4475	2131	6606
Horticulture (Fruits)	40	381	216	101	60	335	221	817	497	1314

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Horticulture (Ornamental Plants)	416	4556	1854	1151	724	3177	1352	8884	3930	12814
Horticulture (Vegetable Crops)	33	485	288	195	126	267	355	947	769	1716
Horticulture (Medicinal and Aromatic Plants)	16	200	137	16	39	73	87	289	263	552
Horticulture (Plantation crops)	60	757	210	208	82	354	188	1319	480	1799
Horticulture (Spices)	22	257	97	144	58	70	39	471	194	665
Horticulture (Tuber crops)	227	2759	833	609	201	1510	916	4878	1950	6828
Livestock Production and Management	625	8593	2046	2192	692	3612	1254	14397	3992	18389
Plant Protection	641	8226	2545	2495	964	6589	3124	17310	6633	23943
On-Farm input production	314	3856	1471	1084	637	1958	1226	6898	3334	10232
Soil Health and Fertility Management	164	1719	1272	486	571	524	667	2729	2510	5239
Total	4982	57645	22912	15441	8812	36193	19472	109279	51196	160475

Table 4.3: Training program organised by the KVKs for Rural Youth

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Bee keeping	9	110	34	33	13	33	6	176	53	229
Commercial fruit production	13	121	43	32	4	122	46	275	93	368
Composite fish culture	6	149	26	9	2	107	18	265	46	311
Fry and fingerling rearing	2	51	13	6	0	13	3	70	16	86
Mushroom Production	93	540	747	100	231	163	366	803	1344	2147
Nursery management of horticulture crops	37	475	175	179	89	230	98	884	362	1246
Planting material production	7	105	56	21	23	65	44	191	123	314
Post harvest technology	13	105	130	37	50	139	75	281	255	536
Poultry farming	26	325	96	130	67	291	124	746	287	1033
Production of organic inputs	53	663	563	134	118	438	411	1235	1092	2327
Protected cultivation of vegetable crops	12	161	77	67	49	176	76	404	202	606
Quail farming	9	149	101	22	24	50	52	221	177	398
Repair and maintenance of farm machinery and implements	12	144	27	34	17	128	43	306	87	393
Seed production	41	591	248	169	86	284	155	1044	489	1533
Sericulture	1	16	3	0	0	5	2	21	5	26
Sheep and goat rearing	17	199	115	73	12	84	121	356	248	604
Small scale processing	14	67	104	28	20	88	63	183	187	370
Tailoring and Stitching	1	0	0	0	0	0	12	0	12	12
Training and pruning of orchards	13	116	33	71	22	193	57	380	112	492
Vermi culture	44	707	319	145	83	352	195	1204	597	1801
Integrated Farming System	16	244	164	80	68	149	110	473	342	815
Processing & value addition	32	225	238	101	95	291	253	617	586	1203
Dairy farming	9	204	44	38	5	43	10	285	59	344
Others	32	323	139	51	48	108	223	482	410	892
Total	512	5790	3495	1560	1126	3552	2563	10902	7184	18086

Table 4.4: Training programmes organized by the KVKs for Extension Personnel

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Agroforestry	1	15	0	0	0	0	0	15	0	15
Capacity building for ICT application	3	42	12	9	1	3	2	54	15	69
Care and maintenance of farm machinery and implements	9	133	42	36	21	33	26	202	89	291
Gender mainstreaming through SHGs	1	8	5	2	1	2	1	12	7	19
Group dynamics and farmers organization	1	9	7	2	0	4	1	15	8	23
Household food security	5	38	23	19	15	2	25	59	63	122
Information networking among farmers	2	31	30	3	2	4	3	38	35	73
Integrated Farming System	3	25	3	2	1	27	24	54	28	82
Integrated Nutrient Management	24	324	73	80	25	113	40	517	138	655
Integrated Pest Management	34	402	96	135	49	234	91	771	236	1007
Livestock	1	5	5	2	5	0	1	7	11	18
Livestock feed and fodder production	7	125	13	48	6	2	62	175	81	256
Low cost and nutrient efficient diet designing	4	42	27	3	5	11	2	56	34	90
Management in farm animals	1	10	5	2	2	2	1	14	8	22
Natural farming	4	100	1	6	1	13	0	119	2	121
Production and use of organic inputs	19	258	96	91	43	115	70	464	209	673
Field crops	33	379	146	127	48	191	121	697	315	1012
Protected cultivation technology	13	127	49	49	26	78	32	254	107	361
Rejuvenation of old orchards	16	248	69	49	14	78	31	375	114	489
Women and child care	17	11	435	3	38	2	49	16	522	538
Others	6	108	30	21	1	25	12	154	43	197
Total	204	2440	1167	689	304	939	594	4068	2065	6133

Table 4.5: Sponsored Training programmes organized by the KVKs

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Agricultural extension	17	81	52	30	12	6	8	117	72	189
Crop production and management	37	606	221	294	128	112	125	1012	474	1486
Farm machinery	8	199	91	78	23	44	15	321	129	450
Home Science	4	32	81	6	4	1	7	39	92	131
Livestock and fisheries	1	36	6	41	10	0	0	77	16	93
Natural Farming	6	100	48	8	58	4	17	112	123	235
Post harvest technology and value addition	9	42	194	26	23	12	32	80	249	329
Total	82	1096	693	483	258	179	204	1758	1155	2913

Table 4.6: Vocational Training programmes organized by the KVKs

Major Theme	No. of Courses	General & Other		SC		ST		Total		Grand Total
		M	F	M	F	M	F	M	F	
Agricultural extension	7	49	32	16	11	39	33	104	76	180
Crop production and management	38	454	185	108	31	247	235	809	451	1260
Income generation activities	46	284	295	100	116	289	273	673	684	1357
Livestock and fisheries	6	81	76	61	33	19	16	161	125	286
Post harvest technology and value addition	7	63	94	9	52	16	10	88	156	244
Total	104	931	682	294	243	610	567	1835	1492	3327

4.2 Capacity Building Programmes

4.2.1: Capacity Building programmes by DES and different universities

Table 4.7: Capacity building activities organized in identified area for KVK Staff by the Directorate of Extension Services 2024

Training Title	Date	Venue	No. of Participants KVKs	Collaborating Institute
Directorate of Extension Services, JNKVV, Madhya Pradesh				
Knowledge, Empowerment and Technical backstopping of KVK Scientist cum review of KVKs	January 23-24, 2024	JNKVV, Jabalpur	52	JNKVV, Jabalpur
Knowledge, Empowerment and Technical backstopping of KVK Scientist cum review of KVKs	March 13-14, 2024	JNKVV, Jabalpur	58	JNKVV, Jabalpur
Financial Review of KVKs	May 14, 2024	JNKVV, Jabalpur	45	JNKVV, Jabalpur
Knowledge, Empowerment and Technical backstopping of KVK Scientist cum review of KVKs activities	October 22-23, 2024	JNKVV, Jabalpur	43	JNKVV, Jabalpur
Finalization Action Plan and review the progress of Seed Hub programme under JNKVV KVKs	November 21, 2024	JNKVV, Jabalpur	24	JNKVV, Jabalpur
Annual Action Plan Workshop 2025	December 18-19, 2024	JNKVV, Jabalpur	52	JNKVV, Jabalpur
Total			274	
Directorate of Extension Services, Gwalior, Madhya Pradesh				
Enhancing soft skills and managerial proficiency for organizational success	February 21-23, 2024	RVSKVV, Gwalior	30	EEI, Anand
Behavioural skills for scientista and extension professionals	February 26-28, 2024	RVSKVV, Gwalior	30	EEI, Anand
Enhancing soft skills and managerial proficiency for organizational success	September 25-27, 2024	RVSKVV Gwalior	30	EEI, Anand
Behavioural skills for scientista and extension professionals	September 30-Oct.02, 2024	RVSKVV, Gwalior	30	EEI, Anand
Total			120	
Directorate of Extension Services, Raipur, Chhattisgarh				
Production Technology of Kharif Crops	August 13, 2024	DES, IGKV, Raipur (C.G.)	60	DES IGKV, Raipur (CG) and ICAR ATARI Jabalpur (MP)
Total			60	
Grand Total			454	

4.2.2: Capacity building activities organized by ATARI in collaboration with ICAR Institutes in identified areas for KVK staff during January to December, 2024

ICAR-ATARI, Jabalpur organized 29 capacity building programmes in participatory mode for KVK scientists and programme assistants working in the KVKs for farming community. ATARI organized Action Plan Workshops for finalization of the action plan of the KVKs for 2024. This is very important activity as it gives direction to each KVK to move further for planned change through scheduled work plan. Review workshop of ICAR flagship programmes like ARYA and Seed hub was organized to discuss the previous progress as well as future action plan to the concerned KVKs. Table 4.8 represents capacity building activities organized by ATARI in collaboration with ICAR Institutes in identified areas for KVK staff during January to December, 2024

Table 4.8: Capacity building activities organized by ATARI

S. No	Date	Title	Venue	Participants
1.	15/02/2024	Review workshop of ARYA KVKs	ATARI, Jabalpur	13
2.	15/02/2024	Natural Farming Project review workshop	ATARI, Jabalpur	45
3.	21/02/2024	Interphase on cotton seed production	ATARI, Jabalpur	4
4.	06/03/2024	Planning workshop on Oilseed Model Village (OMV)	ATARI, Jabalpur	24
5.	09/04/2024	Inception Workshop on impact of Nutritional Interventions on Production and Consumption Diversity: A Step Towards Achieving SDGs	ATARI, Jabalpur	38
6.	24/04/2024	Orientation workshop on KVK for APR and DFI revisiting	ATARI, Jabalpur	103
7.	06/05/2024	Orientation workshop Oilseed Model Village Project implementation with all ATARIs and nodal officers of OMV project of ATARIs	ATARI, Jabalpur	28
8.	06/05/2024	Workshop on compilation of success stories of progressive farmers	ATARI, Jabalpur	101
9.	29/05/2024	Interaction with 21 KVKs of ATARI zone-IX, Jabalpur for Special Project Oilseed Model Villages (OMVs) 2024-25	ATARI, Jabalpur	37
10.	6 to 7 /06/2024	Training cum workshop of Agricultural Engineering experts of KVKs	CIAE, Bhopal	30
11.	13 to 14 /06/2024	Training cum workshop of Home Science experts of KVKs	CIAE, Bhopal	43
12.	17/06/2024	Training of CFLD and OMVs implementation	ATARI, Jabalpur	89
13.	19 to 21 /06/2024	Training-cum-Workshop for Extension Experts on Methodological Initiatives for Accelerating Technology Application by KVK	KVK Bilaspur, IGKV	37
14.	28-30 /06/2024	31 st Zonal Workshop of KVKs	IGKV, Raipur	316
15.	01 to 02 /07/2024	Training-cum-Workshop of Animal Science Experts from KVKs organized	Dau Shri Vasudev Chandrakar Kamdhenu University, Durg	29
16.	23 to 24/07/2024	Training cum workshop of horticultural experts of KVKs	ICAR-IIVR, Varanasi	40
17.	25 to	Training cum workshop of horticultural	ICAR-CISH,	

S. No	Date	Title	Venue	Participants
	26/07/2024	experts of KVKs	Lucknow	
18.	01 to 02 /08/2024	Training cum workshop on Agronomy	CISH-IISR, Indore	43
19.	07 to 08/08/2024	Training cum workshop of Plant Protection experts of KVKs	KVK, Morena	43
20.	21 to 23/08/2024	Review workshop of CFLD and flagship programme on Oilseed and pulses	KVK, Narmadapuram	86
21.	06/09/2024	Workshop on 45 th Foundation Day Programme	ATARI, Jabalpur	68
22.	06/09/2024	Baseline Survey in Newly established Nutri-SMART Village	ATARI, Jabalpur	28
23.	11/09/2024	Brainstorming session on future prospects in extension on occasion of 45 th Foundation Day of ATARI Jabalpur	ATARI, Jabalpur	60
24.	07/10/2024	Heartfulness Event for KVK scientists for healthy life style	ATARI, Jabalpur	92
25.	07/10/2024	NICRA project review workshop	KVK Bhopal	35
26.	5/11/2024	Capacity building skilling youth under VB 100 days action plan	ATARI, Jabalpur	90
27.	12-13/12/2024	Annual Action Plan 2025 of RVSKVV KVKs	RVSKVV, Gwalior	38
28.	18-19/12/2024	Annual Action Plan 2025 of JNKVV, Jabalpur KVKs	JNKVV Jabalpur	36
29.	25-26/12/2024	Annual Action Plan 2025 of IGKV Raipur KVKs	IGKV Raipur	43

Glimpse of Events





Table 4.9: KVK Visit/Workshop/Training/Symposium attended by the ATARI Staff/Scientist

S. No.	Particulars	No. of Programmes
1	Trainings	20
2	Workshops	12
3	Conferences	1
4	Seminars/Webinars	9
5	KVK Visits	15
Total		57

Table 4.10: Capacity building activities for ATARI Staff

S.No.	Name of Employee	Designation	Discipline/ Section	Name of training programme attended	Duration (days)	Organizing Institute
1.	Dr. Harish M.N.	Scientist	Agronomy	Professional Attachment training	3 Months	ICAR-NBAIR, Bengaluru
				New Advancements in Agricultural Sciences: From the Green Revolution to Viksit Bharat 2047	21 Days	Agri Meet Foundation Bharat in Collaboration with ICAR-DCR Puttur Karnataka, SKLTSHU Telangana, MGVVV Durg Chattisgarh and ICAR NIBSM Raipur
				Training cum Exposure Visit on Natural Farming for the Master Trainers	6 Days	MANAGE at EEI, Anand
				landscape diagnostic survey on Evidence generation for	3 Days	CSISA at DES, IGKV (C.G.)

S.No.	Name of Employee	Designation	Discipline/ Section	Name of training programme attended	Duration (days)	Organizing Institute
				pulse crop using digital survey tool		
2.	Dr. Shalini Chakraborty	Principal Scientist	Food Science & Nutrition	Agriculture Extension Innovation Management	5 Days	ICAR-NAARM, Hyderabad

Table 4.11: HRD fund Allocation and Utilization

Particulars	Budget RE (Rs in lakhs) allocated	Actual expenditure (Rs in lakhs)	Utilization (%)
ATARI	13.50	12.86	95.25
Total	13.50	12.86	95.25

Table 4.12: Footfall in KVKs of Zone IX

State	No. of KVKs	No. of Footfalls			
		Farmers	Officials	VIPs	Total
Chhattisgarh	26	96957	5686	721	103364
Madhya Pradesh	50	108217	14829	822	123868
Zone-IX	76	205174	20515	1543	227232



Glimpse of the activities organized by the KVKs

5. Extension Activities

Transfer of technology holds the key to rapid development and transformation of rural society. Krishi Vigyan Kendras, having districts as their jurisdiction, are playing crucial role in showing of technology and thereby enhancing productivity and income of the farming community. The various extension activities include demonstration for farmers group and exhibition reaching large number of farmers. To reach to wider masses, different means of information dissemination from traditional ones like poster, exhibition to new ICT tools like mobile messaging and social media are used. Broadly, extension activities conducted by KVKs includes– (i) Advice based like farm advisory services; lectures delivered as resource person; method demonstration, etc. (ii) Animal related like animal health and vaccination camp (iii) Literature based like extension literature and popular article (iv) Media based like production of CD/DVD, film show, newspaper coverage, radio talks and TV talks (v) Meeting based like ex-trainee sammelan, celebration of important days, club meet, farmers' seminar, field day, group meet, gosthi, mela, SHG meeting and workshops (vi) Soil related activities like soil health camp and soil test campaign (vii) Visit based activities like diagnostic visits, exposure visits, farmers visit to KVK and scientists visits to farmers field. In all 65564 activities were conducted, benefitting 3899612 farmers, farm women, rural youth and extension workers (Table 5.1a & b).

Table 5.1a: Extension activities organized by the KVKs of Zone-IX

State	No. of activities organized	Grand Total		
		Male	Female	Total
Madhya Pradesh	54732	1667592	597410	2265002
Chhattisgarh	10832	723950	910660	1634610
Total	65564	2391542	1508070	3899612

Table 5.1b: Category-Wise Participation in Extension Activities organized by the KVKs of Zone-IX

State	General & Others		SC		ST		Extension Officials		
	Male	Female	Male	Female	Male	Female	Male	Female	Total
Madhya Pradesh	846537	217044	230818	66564	572558	215775	17679	98027	2265002
Chhattisgarh	313666	326813	127149	54289	258361	326430	24774	203128	1634610
Total	1160203	543857	357967	120853	830919	542205	42453	301155	3899612

Table 5.2: Details of extension activities organized by the KVKs of Zone-IX

Activity	No. of activities Achieved	Details of participants										
		Others		SC		ST		Extension Officials		Grand Total		
		M	F	M	F	M	F	M	F	M	F	Total
Agri Mobile Clinic	916	1275	690	270	32	255	548	187	633	1987	1903	3890
Awareness Programme	988	24415	13965	9952	5315	9837	5839	1379	667	45583	25786	71369
Advisory Services (includes KMA)	28859	739525	334366	234811	51703	571579	362558	3982	237165	1549897	985792	2535689
Plant/Animal Health Camp	85	1288	1480	309	105	855	1142	532	1372	2984	4099	7083
Diagnostic visits	1605	5121	2163	1406	571	3810	1551	927	1030	11264	5315	16579
Exhibition	343	57051	26953	10357	4410	19029	10853	3531	5204	89968	47420	137388
Ex-trainees Sammelan	72	1525	396	353	90	541	163	117	59	2536	708	3244

Activity	No. of activities Achieved	Details of participants										
		Others		SC		ST		Extension Officials		Grand Total		
		M	F	M	F	M	F	M	F	M	F	Total
Exposure visits	787	4175	1666	1696	1484	2725	1273	765	1592	9361	6015	15376
Extension literature	3426	27492	13420	9773	4274	18205	12131	2663	9541	58133	39366	97499
Farmers visit to KVK	4572	51599	27968	16452	9533	31139	16761	4974	9269	104164	63531	167695
Field Day	1338	7604	3872	1915	732	4145	2866	1095	2184	14759	9654	24413
Farm Science Club	4451	629	206	1837	554	1825	626	92	47	4383	1433	5816
Farmers Seminar/ Workshop	255	5009	2167	1197	1006	2660	1392	705	567	9571	5132	14703
Group Meetings/ Discussion	632	5060	1537	1216	585	2172	1110	440	552	8888	3784	12672
Kisan Ghoshti/ Sammelan	606	12417	4116	3402	1543	4589	2465	1288	906	21696	9030	30726
Kisan Mela	184	57093	20796	13676	6318	26598	9971	7128	4761	104495	41846	146341
Krishi Mahotsav	97	5337	2628	1242	1082	1589	970	362	205	8530	4885	13415
Lectures delivered as resource person	2988	28833	26971	11910	10291	80708	77673	2215	4571	123666	119506	243172
Film Show	6074	9770	5907	2574	1843	4233	2801	1274	6820	17851	17371	35222
Mahila Mandals conveners meetings	102	246	829	228	319	267	783	110	377	851	2308	3159
Method Demonstrations	439	4003	1761	934	411	2192	1304	484	712	7613	4188	11801
Pradhanmantri Fasal Beema Yojana	67	1101	460	622	252	880	428	174	76	2777	1216	3993
Scientist visit to farmers field	2878	12205	3819	3456	857	5822	2733	918	1912	22401	9321	31722
Self Help Group conveners meetings	99	699	877	424	298	603	590	106	67	1832	1832	3664
Soil health Camp	139	2029	734	848	372	1973	1303	175	194	5025	2603	7628
Soil test campaigns	119	2028	812	1023	596	1197	632	157	71	4405	2111	6516
Celebration of important days	820	11793	6738	3302	1784	5171	4641	1796	2876	22062	16039	38101
Special day celebration	329	6007	5763	1528	702	3129	2804	1488	2827	12152	12096	24248
Others	2294	74874	30797	21254	13791	23191	14294	3389	4898	122708	63780	186488
Total	65564	1160203	543857	357967	120853	830919	542205	42453	301155	2391542	1508070	3899612

Table 5.3: Mass Media based activities organized by the KVKs of Zone-IX

Name of media	Number of events/activities		
	Chhattisgarh	Madhya Pradesh	Total
Electronic Media (CD/DVD)	47	48	95
Social media (Whats App, Facebook, Instagram, Twitter (X) etc.)	3018	12129	15147
Internet (Youtube)	87	274	361
Newspaper coverage	908	1602	2510
Radio talks	144	166	310
TV talks	55	105	160
Others (Popular articles, etc.)	711	503	1214
Total	4970	14827	19797



Field day at Paddy field



Krishak Sanghoshthi



Celebration of Poshan Month

6. Seed, Planting Material, Bio-products and Livestock Material Production

Empirical evidences shows that, non-availability of the quality seeds in adequate amount happened to be the main constraint to the farmers for enhancing the productivity. Therefore, it was taken as challenge and appropriate steps were taken at the KVKs for helping the farmers in this regard. With continuous efforts, a considerable progress has been made and there is progress in seed quantity along with planting material as shown in the following tables. The KVKs of Zone-IX produced 14334.51 q of seed and 36.83 lakh planting materials of different crops like cereals, pulses, oilseeds, vegetables, medicinal plants, fruits, etc. were provided to the farmers. Besides, KVKs also produced bio-products and livestock products at their farms.

Table 6.1: Seed and planting materials produced by the KVKs of Zone-IX

State	2024	
	Seed (q)	Planting materials (No.)
Madhya Pradesh	9186.01	1626317
Chhattisgarh	5148.50	2056925
Total	14334.51	3683242

Table 6.2: State-wise details of seeds produced by the KVKs

State	Quantity (q)	Approximate value (Rs.)	Provided to farmers (No.)	Villages covered (No.)
Madhya Pradesh	9186.01	49614455	7987	1513
Chhattisgarh	5148.50	20546697	5883	717
Total	14334.51	70161152	13870	2230

Table 6.3: State-wise details of planting material produced by the KVKs

State	Quantity (No.)	Approximate value (Rs.)	Farmers covered (No.)
Madhya Pradesh	1626317	2336883	14764
Chhattisgarh	2056925	4840837	21199
Total	3683242	7177720	35963

Table 6.4: State-wise details of Livestock strains and fingerlings produced by the KVKs

State	Quantity (No./lit/kg)	Approximate value (Rs)	No. of Beneficiaries
Chhattisgarh	252691	3627118	1299
Madhya Pradesh	11686	2956838	364
Total	264377	6583956	1663

6.1: Seed Production by KVKs

Table 6.1.a: Status of Seed production (q) in Zone-IX

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
Cereals	Paddy	5401.70	11200167	2941
	Wheat	2710.98	10763003	1594
	Barley	49.12	148338	-
	Maize	69.28	137200	-

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
Millets	Finger millet	52.57	192895	126
	Kodo	34.64	353040	160
	Little millet	6.10	34770	305
Pulses	Blackgram	56.91	447375	209
	Chickpea	1843.67	14120180	604
	Fieldpea	31.81	274710	66
	Greengram	349.18	4058133	177
	Lathyrus	26.15	199765	10
	Lentil	41.10	539800	73
	Pigeonpea	55.36	566035	19
Oilseeds	Groundnut	60.00	792000	89
	Linseed	132.46	424452	156
	Niger	27.00	311534	58
	Rapeseed & Mustard	81.09	466281	784
	Safflower	10.37	85283	245
	Sesame	2.50	12859	57
	Soybean	2459.34	21058436	1397
Fruits	Papaya	0.05	3050	42
Vegetables	Amaranths	0.02	2150	81
	Bitter gourd	0.03	8751	206
	Brinjal	1.02	306980	1109
	Colocasia	33.40	103800	5
	Cowpea	1.60	9600	80
	Drumstick	0.15	450	1
	Garlic	10.00	106000	12
	Okra	2.40	132735	343
	Onion	7.09	22000	34
	Potato	124.00	329400	1
	Pumpkin	0.01	742	60
	Radish	0.95	55865	590
	Ridge gourd	1.05	315000	800
	Spinach	0.78	12122	160
	Spngue gourd	0.01	1150	88
Tomato	0.24	58462	572	
Chilli	0.02	6260	101	
Flower crops	Marigold	0.38	17004	18
Spices	Ajwain	2.00	100000	-
	Coriander	237.57	1081480	317
	Fenugreek	2.19	32045	80
	Ginger	8.00	80000	4
	Turmeric	394.49	1118900	23
Green Manure	Sunhemp	3.00	34500	-
Others	Mushroom spawn	2.73	36450	73
Total		14334.51	70161152	13870

Table 6.1.b: Status of seed production (q) in Madhya Pradesh

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
Cereals	Paddy	2045.80	2398063	1028

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
	Wheat	2474.48	10225505	1478
	Barley	49.12	148338	-
	Maize	27.28	53200	-
Millets	Kodo	29.64	338040	160
	Little millet	6.10	34770	305
Pulses	Blackgram	38.01	382193	207
	Chickpea	1682.27	13221080	456
	Fieldpea	0.20	2820	25
	Greengram	128.57	1521969	155
	Lentil	41.10	539800	73
	Pigeonpea	27.97	316805	12
Oilseeds	Groundnut	60.00	792000	89
	Linseed	46.16	159563	107
	Niger	3.75	55925	58
	Rapeseed & Mustard	28.73	108113	767
	Sesame	2.50	12859	57
	Soybean	2132.54	18748636	1104
Fruits	Papaya	0.05	3050	42
Vegetables	Amaranths	0.02	2150	81
	Bitter gourd	0.03	8751	206
	Brinjal	0.02	6980	109
	Drumstick	0.15	450	1
	Garlic	10.00	106000	12
	Okra	0.90	42735	143
	Onion	7.09	22000	34
	Pumpkin	0.01	742	60
	Radish	0.05	1865	90
	Spinach	0.30	6502	160
	Spngue gourd	0.01	1150	88
	Tomato	0.03	16462	447
	Chilli	0.02	6260	101
Flower crops	Marigold	0.05	9004	8
Spices	Coriander	192.39	233580	209
	Fenugreek	1.95	27245	79
	Turmeric	147.49	41400	13
Others	Mushroom spawn	1.23	18450	23
Total		9186.01	49614455	7987

Table 6.1.c: Status of Seed production (q) in Chhattisgarh

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
Cereals	Paddy	3355.90	8802104	1913
	Wheat	236.50	537498	116
	Maize	42.00	84000	-
Millets	Finger millet	52.57	192895	126
	Kodo	5.00	15000	-
Pulses	Blackgram	18.90	65182	2
	Chickpea	161.40	899100	148
	Fieldpea	31.61	271890	41
	Greengram	220.61	2536164	22

Crop Category	Crop	Quantity (q)	Value (Rs.)	Provided to no. of farmers
	Lathyrus	26.15	199765	10
	Pigeonpea	27.39	249230	7
Oilseeds	Linseed	86.30	264889	49
	Niger	23.25	255609	-
	Rapeseed & Mustard	52.36	358168	17
	Safflower	10.37	85283	245
	Soybean	326.80	2309800	293
	Vegetables	Brinjal	1.00	300000
Colocasia		33.40	103800	5
Cowpea		1.60	9600	80
Okra		1.50	90000	200
Potato		124.00	329400	1
Radish		0.90	54000	500
Ridge gourd		1.05	315000	800
Spinach		0.48	5620	-
Tomato		0.21	42000	125
Flower crops	Marigold	0.33	8000	10
Spices	Ajwain	2.00	100000	-
	Coriander	45.18	847900	108
	Fenugreek	0.24	4800	1
	Ginger	8.00	80000	4
	Turmeric	247.00	1077500	10
Green Manure	Sunhemp	3.00	34500	-
Others	Mushroom spawn	1.50	18000	50
Total		5148.50	20546697	5883

6.2: Planting Material

Table 6.2.a: Status of planting material production (no) in Zone-IX

Crop Category	Crop	Quantity (No.)	Value (Rs.)
Forest Species	Arjun	36	1800
	Bamboo	6012	162360
	Gamhar	47	1410
	Karanj	606	6430
	Mahua	73	1825
	Neem	1589	17670
	Peepal	25	500
	Semialata	1875	20000
	Silver Oak	96	4800
	Sisam	203	7745
	Umar	25	500
Fodder crops	Napier	720645	190035
Fruits	Almond	41	3330
	Aonla	8081	76375
	Bael	119	5390
	Chiku	100	5550
	Chirojee	18	540
	Citrus	8650	257582
	Custardapple	2641	41230
	Dragon fruit	126	7800
	Guava	26611	874053

Crop Category	Crop	Quantity (No.)	Value (Rs.)
	Hanuman fal	37	1850
	Jack fruit	3196	75550
	Jamun	2225	31540
	Karonda	31993	849670
	Lime	2600	66000
	Litchi	1250	55000
	Mandarin	53	3180
	Mango	20838	1008576
	Mulberry	100	1500
	Orange	69	4140
	Papaya	7723	170165
	Passion fruit	97	4850
	Pineapple	500	5000
	Pomegranate	2038	77416
	Strawberry	15600	158400
	Sweet lime	1079	64740
	Tamarind	731	5930
	Woodapple	216	2320
	Medicinal and Aromatic	Aloevera	250
Ashawgandha		12000	60000
Lemon grass		3100	77500
Tulsi		18	360
Flower crops	Casia	21	630
	Gulmohar	85	2550
	Kachnar	100	2000
	Gurhal	40	1200
	Bela	67	1675
	Bougainvillea	18	450
	Chameli	55	1375
	Champa	24	1020
	Chandni	249	4725
	Parijat	145	4350
	Gaillardia	337	337
	Hemelia	65	3250
	Hibiscus	236	5900
	Madhu malti	58	1450
	Marigold	21464	51285
	Rose	512	14675
	Sawani	8	200
	Tikoma	82	2460
	Calendula	31	31
Ornamental plants	Areca palm	66	7260
	Ashok	196	4520
	Beetal leaf	37	925
	Bottle palm	5	550
	Coleous	230	6900
	Croton	73	2190
	Duranta	1758	10950
	Jaitropha	16	800
	Kund	3	75
	Manda	30	1500
	Manokamni	12	300

Crop Category	Crop	Quantity (No.)	Value (Rs.)
	Morpankhi	105	6005
	Others	2542	35840
Plantation crops	Karanj	200	2000
	Neem	400	10000
	Sindoor	500	10000
Spices seedling	Turmeric	200050	200500
	Curry leaf	103	3205
	Ginger	99200	99200
Vegetable Seedling	Chilli	563193	471653
	Bottle gourd	5303	6515
	Brinjal	485428	452411
	Broccoli	37100	38600
	Cabbage	74836	82360
	Capsicum	59000	59000
	Cauliflower	109043	124325
	Drumstick	32391	203397
	Ivy gourd	2000	2000
	Knol-khol	2400	1440
	Onion	414250	166600
	Pointed gourd	5000	5000
	Pumpkin	5000	5000
	Sponge gourd	16214	24321
	Tomato	658779	618853
	Others	850	850
Total		3683242	7177720

6.3: Production of Livestock materials

Table 6.3.a: Status of Livestock Production in KVKs under Zone-IX during 2024

Category	Name of Animal/Bird/Aquatics	Breed	Quantity	Value (Rs.)	Distributed to no. of farmers	No. of villages covered
Dairy animals	Breeding bull	Gir	2	15000	0	0
	Buffaloes	Murrah	5	558250	20	4
	Calves	Gir	23	0	0	0
	Calves	Sahiwal	16	150000	0	0
	Cow	HF	4	93240	16	3
	Cow	Gir	9856	966119	95	26
	Cow	Sahiwal	94	625925	42	2
	Goats	Barbari	16	8910	2	2
	Goats	Black Bengal	33	73500	0	0
	Goats	Buck	8	0	0	0
	Goats	Indigenous	6	0	0	0
	Goats	Jamunapari	10	50000	2	1
	Goats	Osmanabadi	18	168491	8	8
	Goats	Sirohi	47	163700	16	6
Fisheries	Indian carp	Rohu	152200	125000	155	5
	Indian carp	Tilapia	680	68000	0	0
	Indian carp	Katla	30063	16950	21	11

Category	Name of Animal/Bird/ Aquatics	Breed	Quantity	Value (Rs.)	Distributed to no. of farmers	No. of villages covered
Poultry	Ducks	Duck	585	27000	51	1
	Ducks	Khaki cambel	522	30860	11	11
	Ducks	White pecking	30	15000	0	0
	Japanese quail	Japanese quail	42666	735253	276	41
	Poultry	Adult bird	237	154050	91	0
	Poultry	Bundelkhandi	44	440	0	0
	Poultry	Chicks	3500	315000	42	0
	Poultry	Colour bird	150	40500	3	1
	Poultry	Kadakhnath	22984	2046018	772	56
	Poultry	Narmada Nidhi	478	21750	25	4
	Poultry	Sonali	100	25000	15	4
		Grand Total	264377	6493956	1663	187

6.4: Production of Bio-products

Table 6.4.a: Production of bio-agents, pesticides, fertilizers by KVKs under Zone-IX

Category	Name of the Product	Quantity (Kg)	Qty (in No.)	Total Value (Rs.)	Provided to no. of farmers	No. of villages covered
Bio agent	Earthworm	984	1630	283987.5	15252	106
	<i>Trichogramma chilonis</i>	3000	1800	108000	200	90
Bio Fertilizers	<i>Acetobactor</i>	24	0	0	0	0
	<i>Azatobactor</i>	1544	84	126807	17836	136
	<i>Azolla</i>	10961.5	740	276525	1990	174
	<i>Azospirillum</i>	40	0	10000	40	20
	Beejamrut	1740	0	11600	82	27
	BGA	1090	50	26450	1295	113
	Bio Fertisole	53	53	17013	20	9
	Compost	23230	3700	850433	149	48
	Cow dung (dry)	5160	0	0	0	0
	Cow dung (wet)	30600	2	230200	90	90
	Ghanjeevamrut	1890	0	12500	23	8
	Jeevamrut	1128	0	14800	48	12
	NADEP	35830	44	182305	1430	25
	Panchagavya	75	0	5000	22	16
	Poultry manure	3500	0	17500	1	0
	PSB	3162	173	225566	1923	317
	<i>Rhizobium</i>	1816	262	68038	34183	378
	Sanjeevani khad	1000	75	6075	15000	32
	VAM	11	1	2200	6	1
	Vermicompost	409616	3855	3624979	12728	3442
ZSB	1	1	294	1	1	
<i>Pseudomonas fluorescens</i>	6400	2575	859600	4581	315	

Category	Name of the Product	Quantity (Kg)	Qty (in No.)	Total Value (Rs.)	Provided to no. of farmers	No. of villages covered
Bio Fungicides	<i>Beauveria bassiana (Balsamo) Vuillemin</i>	84.8	0	59360	50	15
	<i>Metarrhizium anisopliae (Metchnikoff)</i>	700.4	0	11280	601	80
	<i>Trichoderma harzianum</i>	79	0	0	0	0
	<i>Trichoderma viridae</i>	5604	150	459296	2854	97
Bio Pesticides	Agniastra	500	42	12850	60	13
	Brahmastra	540	0	11600	58	13
	Neem oil	10	0	2000	10	5
	Neem powder	300	0	2000	300	41
	Neem Seed Kernel Extract	165	34	3684	11051	52
	Neemastra	605	0	14200	71	13
	NPV	0	160	160	32000	72
Bio-Food	Honey	23	0	6900	15	0
Others	Mushroom spawn	1398	920	331120	993	88
	Waste decomposer	1076	34	23478	54	4
Grand Total		553941	16385	7897800.5	155017	5853



Soybean seed production



Coriander seed production



Planting material of Mango



Planting material of Guava

7. Soil, Water and Plant Analysis

Soil and water testing is an important activity of KVK for improving the soil fertility and sustainability of agricultural production in the region. Keeping the facts in view, KVKs are testing soil and water of the samples received directly from farmers or through departments.

7.1: Soil samples

During the reporting year, KVKs of Madhya Pradesh and Chhattisgarh analyzed 47500 soil samples benefiting 54474 farmers of 1084 villages. The number of soil health cards issued were approximately 33146. The KVK-wise details of soil samples tested are given in Table 7.1

Table 7.1: Summary of soil samples tested by the KVKs of Zone-IX

State	Soil Samples analyzed				
	No. of soil samples analyzed	No. of farmers benefitted	No. of village covered	Amount realized (Rs.)	No. of soil health cards issued
Madhya Pradesh	43797	42766	894	1419530	22413
Chhattisgarh	3703	11708	190	49500	10733
Total	47500	54474	1084	1469030	33146

7.2: Water Samples

KVKs of Madhya Pradesh analyzed 10 water samples benefiting 10 farmers of four villages.

Table 7.2 Summary of water samples tested by the KVKs of Zone-IX

State	Water Samples analyzed			
	No. of water samples analyzed	No. of farmers benefitted	No. of villages covered	Amount realized (Rs.)
Madhya Pradesh	10	10	04	2000
Total	10	10	04	2000

8. Technological Backstopping through Literature and Media

8.1: Newsletter

During the year 2024, total 58 KVKs published four issues of Newsletter with 1,22,879 number of copies and distributed to 1,15,136 farmers.

KVKs have published 192 abstracts and 133 research papers in research journals. Apart from this KVKs also published books, book chapters, booklets, popular articles, leaflets/folders/pamphlets etc.

Table 8.1 State-wise Newsletter published by KVKs

State	No. of KVKs	No. of Issues	No. of copies printed	Number of copies distributed
Madhya Pradesh	37	4	88451	82883
Chhattisgarh	21	4	34428	35183
Total	58	8	122879	115136

8.2: Publications

Under publication category KVKs have published research publications and farm literature on the technologies assessed and demonstrated for the farmers. A total of 1856 literature were published by the KVKs.

Table 8.2 Category-wise literature published and distributed by the KVKs

Particulars	No. of KVKs	Numbers
Abstract	46	192
Research Paper	41	133
Book/Manual	32	48
Book Chapter	26	52
Booklet	23	63
Leaflet/Folder/Pamphlet	65	317
Popular article	54	330
Technical Bulletin	30	93
Technical Report	42	284
Training Manual	12	45
Year Planner	41	44
CD/DVD/VCD	22	255
Others (Success stories)	07	69
Grand Total		1856

9. Flagship Programmes

9.1: Attracting and Retaining Youth in Agriculture (ARYA)

Nodal Scientist: Dr. A.A Raut, Scientist (AE)

ARYA project is operational in 12 KVKs in the state of Madhya Pradesh and Chhattisgarh. Rural youths were trained in different agricultural and allied enterprises under ARYA. During 2024, total 88 trainings were organized in different agricultural and allied enterprises and 2083 youths were trained including 1228 males and 855 females. After training under close monitoring by the KVK experts youth were associated with various agricultural and allied enterprises viz., poultry farming, mushroom cultivation, goatry, vermicompost production, beekeeping and processing and value addition etc. Total 354 new entrepreneurial units were established under different agricultural and allied enterprises.

Table 9.1: Performance of KVKs under ARYA Project

State	KVK	Training programme (No.)	No. of Youth trained			Entrepreneurial units established (No.)		
			Male	Female	Total	Male	Female	Total
MP	Dhar	8	197	3	200	67	3	70
	Gwalior	4	117	46	163	11	3	14
	Jhabua	4	136	64	200	61	8	69
	Morena	4	81	59	140	4	0	4
	Neemuch	6	123	3	126	12	0	12
	Sheopur	4	77	43	120	38	12	50
	Narmadapuram	4	54	46	100	38	39	77
CG	Dantewada	7	69	120	189	0	5	5
	Kanker	8	64	173	237	6	2	8
	Raipur	9	131	143	274	-	-	-
	Surguja	26	107	93	200	15	7	22
Total	12 KVKs	88	1228	855	2083	268	86	354



Training on Mushroom cultivation



Processing of herbal gulal



Goatry production unit



Poultry production unit

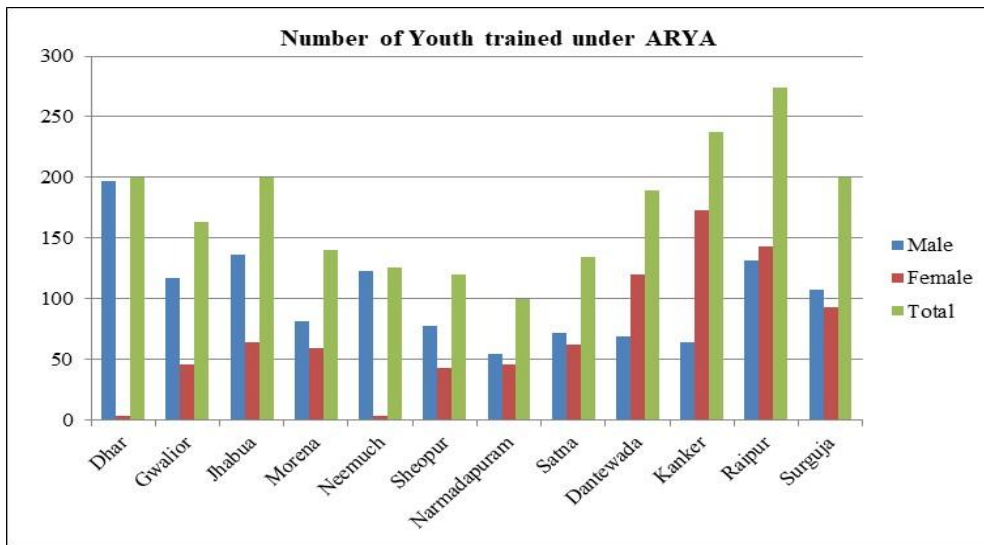


Fig 9.1: Number of youth trained under ARYA

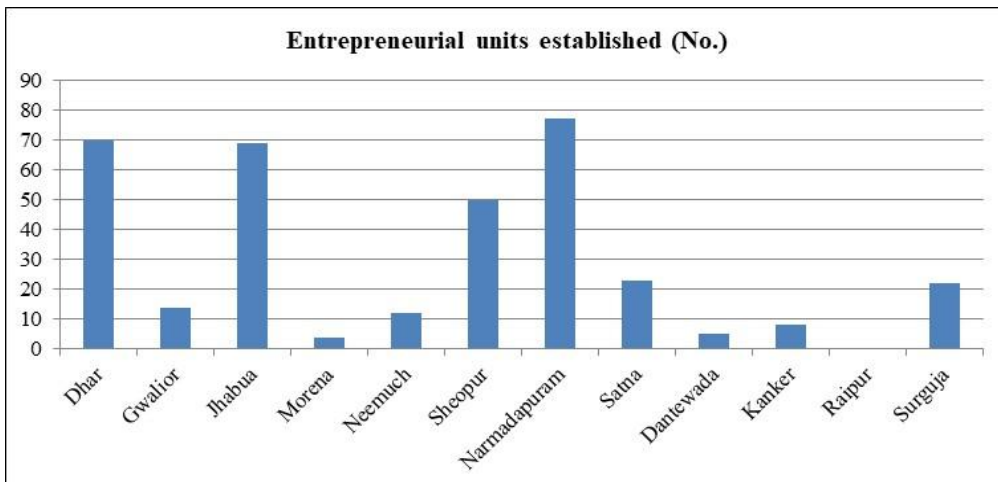


Fig 9.2: KVK-wise entrepreneurial units established under ARYA

9.2: Technology Demonstration Component under National Innovations on Climate Resilient Agriculture (NICRA)

Nodal Scientist: Dr. Harish.M.N., Scientist (Agronomy)

NICRA is operational in 11 KVKs in the states of Madhya Pradesh and Chhattisgarh under ICAR-ATARI, Jabalpur, which monitors the performance of NICRA KVKs namely Chhattarpur, Datia, Jhabua, Morena, Ratlam, Dindori, Bhind (Lahar) and Tikamgarh in Madhya Pradesh; Durg II, Mahasamund and Raigarh in Chhattisgarh.

In 2024, a total of 12793 farmers were benefited from a variety of planned activities, including 4707 farmers who received technology interventions in 1293.53 ha and 6886 farmers who received training (3934 farmers), and 4152 farmers got benefited from extension activities.

Under NRM module, total 1153 farmers were benefited by covering 500 ha area. Demonstrations were focused on in-situ moisture conservation, water harvesting and recycling for supplemental irrigation, water saving irrigation method, conservation tillage, etc.

Under the crop production module, through 631 demonstrations in a 533.1 ha area centered on drought-tolerant varieties, rabi crop planting dates that were advanced to avoid terminal heat stress, and other crops like chickpea, wheat, barley, greengram, pigeonpea, blackgram, and vegetable crops, which benefited 1469 farmers.

In livestock and fisheries module; a total of 1856 animals, 2200 poultry birds and 10000 fingerlings were distributed to 713 farmers. The demonstrations were conducted focusing on preventive vaccination, de-worming of animals, animal health camp and nutrition management.

In institutional interventions module, seed bank, fodder bank and custom hiring centers covered an area of 171.4 ha, 72.15 ha and 222.5 ha which benefited 516, 328 and 528 farmers, respectively.



Diagnostic visit to groundnut field



Seed distribution programme



Visit to NICRA village by ATARI Team



Capacity building programme for farmers



Extension activity performed at NICRA village



Interaction with NICRA farmer

9.3: Farmer FIRST Project (FFP)

Nodal Scientist: Dr. S.R.K. Singh, Director

‘Farmer FIRST’ project is an ICAR initiative to move beyond the production and productivity, to privilege the small holders’ agriculture and complex, diverse and risk prone realities of majority of the farmers through enhancing farmers-scientist interface. The programme is operational in three ICAR institutes and four SAUs which is monitored by ICAR-ATARI, Jabalpur. ICAR-DWR, Jabalpur, ICAR-IISS, Bhopal, ICAR-NIBSM, Raipur and JNKVV, Jabalpur, RVSKVV-ZARS, Morena, NDVSU, Jabalpur, IGKV-SKS College of Agriculture and Research Station, Rajnanadgaon (C.G.) are institutes/SAUs implementing Farmer FIRST programme and module wise different agricultural and allied activities were conducted in 32 villages under this project.

During 2024, total 553.21 ha area under crop and 6,234 animal/poultry were demonstrated was covered and 6016 farm families were benefitted. The module wise progress is as follows:

- Under crop module 186.04 ha was covered and benefitted 765 farm families.
- In horticultural module 120.35 ha area was covered and 1707 farm families were benefitted.
- Under IFS module 90.7 ha area was covered and 93 farm families were benefitted.
- Under NRM module 156.12 ha area was covered and 322 farm families were benefited.
- Under livestock module 44 kg (5,000) fingerlings, 5983 poultry chicks and one hatchery unit were distributed, A total of, 432 farm families were benefitted.
- Under enterprise module, two mushroom units, 106 vermi-compost unit, six bee keeping units, 25 kadaknath units, two layer farming units, four agro-processing units and two bio-flock units were established and benefitted 250 farm families. A total of 102 extension activities and 42 training programmes were organized that benefitted 1766 and 621 farmers, respectively.



Vermi-composting unit



Sowing of chilli under plastic mulch



Poultry farming

9.4 District Agro-Met Units (DAMU)

Incharge: Dr. A.A. Raut, Scientist (AE)

DAMU is a flagship programme of the Government of India, Ministry of Earth Sciences (MoES), providing weather-related services to farmers to aid in day-to-day agricultural decision-making. This scheme is collaboratively undertaken by the India Meteorological Department (IMD) and the Indian Council of Agricultural Research (ICAR). In Zone-IX, DAMU has been established in 10 KVKs in Madhya Pradesh under Gramin Krishi Mausam Sewa. Automated Weather Station (AWS) record weather parameters to generate agro-meteorological information for use in studies on crops, pests and diseases, soil, agroforestry, livestock, horticulture, agricultural physics, soil science, etc. Each District Agro-Met Unit utilizes the relevant output products, including weather data, to generate specific advisories for agricultural management in the respective districts within the identified agro-climatic zones and disseminates the information to the farming community. Training for extension workers and farmers, along with climate awareness programs, were organized to raise awareness about climate parameters and agro-advisories, enabling timely action in changing weather conditions to minimize agricultural losses. A total of 212 programs were organized under the DAMU programme with 14060 participants.

Table 9.2: Activities under DAMU Project.

Details	No. of programme	No. of participants
Awareness Programme	57	3708
Exhibition	18	6100
Field day	48	734
Training	89	3518
Total	212	14060



9.5: Cluster-Based Business Organization (CBBOs)

Incharge: Dr. A.A. Raut, Scientist (AE)

Cluster-Based Business Organizations (CBBOs) are professional entities that help establish and grow Farmer Producer Organizations (FPOs) in India to attain economy of scale towards better price realization. National Cooperative Development Corporation (NCDC) has allotted 117 blocks to ICAR-ATARI KVKs who will work as a CBBO. The roles and responsibilities of CBBOs are baseline survey, cluster finalization, value chain study, formation of groups and FPO, assisting and registration of FPOs and training of BODs on roles, responsibilities and management. In Madhya Pradesh, three KVKs viz., Narmadapuram (Hoshangabad), Chhatarpur, Morena and in Chhattisgarh, two KVKs viz., Bhatapara and Raipur are working this CBBO in ten blocks of these districts.

Table 9.3: FPO registered under Cluster Based Business Organization (CBBOs)

S.No.	Name of State	Name of District	Name of Block	No. of share-holding farmer members	Equity Amount Collected (Rs.)
1	Chhattisgarh	Baloda Bazar	Baloda Bazar	313	231500
2	Chhattisgarh	Baloda Bazar	Palari	303	213000
3	Chhattisgarh	Raipur	Dharsiwa	345	316000
4	Chhattisgarh	Raipur	Tilda	337	308000
5	Madhya Pradesh	Hoshangabad	Siwni Malwa	750	1500000
6	Madhya Pradesh	Hoshangabad	Pipariya	311	1244000
7	Madhya Pradesh	Chhatarpur	Naugaon	305	610000
8	Madhya Pradesh	Chhatarpur	Rajnagar	358	660000
9	Madhya Pradesh	Morena	Jaura	494	600000
10	Madhya Pradesh	Morena	Pahadgarh	540	600000
Total				4056	6282500

9.6: Cluster Frontline Demonstrations (CFLD) on Oilseeds

Nodal Scientist: Dr. Harish M.N., Scientist (Agronomy)

Cluster Frontline Demonstration on Oilseeds under the “National Food Security Mission” was implemented by ICAR-ATARI, Jabalpur in Madhya Pradesh and Chhattisgarh. Under the project major crops were soybean, niger, sesame, mustard, linseed, groundnut and sunflower were demonstrated in Madhya Pradesh and Chhattisgarh states. The programme was implemented by 79 KVKs with major oilseed crops of *kharif*, *rabi* and summer season through 18183 demonstrations covering 7759.6 ha area. It includes 4339.60 ha with 10519 demonstrations in *kharif* during 2024; 3400 ha with 7631 demonstrations in *rabi* during 2023-24 and 20 ha with 33 demonstrations in summer during 2024.

In *kharif* season (2024), soybean, sesame, niger and groundnut were demonstrated under CFLDs. In Madhya Pradesh, 6218 demonstrations were conducted in 2549.6 ha area by 39 KVKs under soybean and yield obtained was 13.67 q/ha, whereas in niger 486

demonstrations were conducted in 200 ha area by 7 KVKs and obtained yield was 4.60 q/ha. Sesame was demonstrated in 240 ha area by 8 KVK through 600 demonstrations and yield obtained was 7.01 q/ha and groundnut was demonstrated in 335 ha with 825 demonstrations by 10 KVKs at farmers' field and obtained yield was 20.74 q/ha. Similarly, in Chhattisgarh, 300 ha area covered through 699 demonstrations in soybean crop by 8 KVKs with obtained yield of 20.79 q/ha. In niger, 260 ha area was covered with 627 demonstrations by 10 KVKs and obtained yield was 3.88 q/ha. Sesame crop was demonstrated in 115 ha area by 4 KVKs through 262 demonstrations and yield obtained was 6.20 q/ha and groundnut crop was demonstrated in 340 ha area in 9 KVKs through 802 demonstrations and yield obtained was 17.30 q/ha.

During rabi season (2023-24), mustard, linseed and sunflower were demonstrated. In Madhya Pradesh, mustard covered 2100 ha area with 5016 demonstrations by 48 KVKs with average yield of 14.88 q/ha and linseed was demonstrated in 380 ha with 939 demonstrations by 17 KVKs with average yield 12.56 q/ha. Similarly, in Chhattisgarh, mustard was demonstrated in 565 ha area with 950 demonstrations by 24 KVKs yield obtained was 9.03 q/ha and linseed covered 295 ha area through 602 demonstrations in 17 KVKs with average yield of 6.66 q/ha. Sunflower was demonstrated in 60 ha area with 124 demonstrations by 5 KVKs and average yield was 9.92 q/ha.

During summer (2024), sesame and sunflower were demonstrated. In Chhattisgarh, sunflower was demonstrated in 10 ha area with 20 demonstrations by 1 KVK and average yield was 7.36 q/ha. Groundnut covered 10 ha area with 13 demonstrations by 1 KVK and average yield obtained was 6.20 q/ha.

Table 9.4: State-wise and Season-wise outcome of CFLD on Oilseeds

State	Crop	No. of KVK	Conducted		Average Yield (q/ha)		Yield increase (%)
			Area (ha)	Demo (No)	Farmer yield	Demo Av. yield	
Madhya Pradesh	Groundnut	10	335	825	16.30	20.74	27.23
	Niger	7	200	486	2.75	4.60	67.27
	Sesame	8	240	600	4.60	7.01	52.39
	Soybean	39	2549.60	6218	10.21	13.67	33.81
Chhattisgarh	Groundnut	9	340	802	11	17.3	57.27
	Niger	10	260	627	2.95	3.88	31.69
	Sesame	4	115	262	4.30	6.20	44.19
	Soybean	8	300	699	14.22	20.79	46.23
Total Kharif (2024)			4339.60	10519	-	-	-
Madhya Pradesh	Linseed	17	380	939	8.84	12.56	42.08
	Mustard	48	2100	5016	11.34	14.88	31.22
Chhattisgarh	Linseed	17	295	602	4.67	6.66	42.61
	Mustard	24	565	950	6.41	9.03	40.87
	Sunflower	5	60	124	7.33	9.92	35.33
Total Rabi (2023-24)			3400	7631	-	-	-
Chhattisgarh	Sesame	1	10	13	4.30	6.20	44.19

State	Crop	No. of KVK	Conducted		Average Yield (q/ha)		Yield increase (%)
			Area (ha)	Demo (No)	Farmer yield	Demo Av. yield	
	Sunflower	1	10	20	5.40	7.36	36.30
Total Summer (2024)			20	33	-	-	-
Grand Total			7759.6	18183	-	-	-



Soybean crop



Groundnut crop



Sunflower crop



Mustard crop

9.7: Cluster Frontline Demonstration (CFLD) on Pulses

Nodal Scientist: Dr. A.A. Raut, Scientist (AE)

Cluster Frontline Demonstration on pulses under the 'National Food Security Mission' was implemented by ICAR-ATARI, Jabalpur in Madhya Pradesh and Chhattisgarh. Under the project major crops were blackgram, pigeonpea and lentil demonstrated in Madhya Pradesh and Chhattisgarh states. The programme was implemented by 46 KVKs with major pulse crops of kharif, rabi and summer season through 4881 demonstrations covering 2014.20 ha area including 850 ha with 2072 demonstrations in kharif 2024. In rabi 986.20 ha area covered with 2384 demonstrations and 178 ha area with 425 demonstrations in summer season, respectively during 2023-24.

During rabi season (2023-24), lentil crop was demonstrated. In Madhya Pradesh, lentil covered 906.20 ha area with 2217 demonstrations by 32 KVKs with average yield of 15.40 q/ha similarly, in Chhattisgarh, lentil was demonstrated in 80 ha area with 167

demonstrations by 6 KVKs yield obtained was 6.90 q/ha. During summer (2023-24), blackgram was demonstrated. In Madhya Pradesh, blackgram covered 148 ha area with 370 demonstrations by 8 KVKs and average yield obtained was 8.02 q/ha. Similarly, in Chhattisgarh, blackgram was demonstrated 30 ha area with 55 demonstrations by 3 KVKs and average yield obtained was 8.41 q/ha.

In kharif season (2024), blackgram and pigeonpea were demonstrated under CFLDs. In Madhya Pradesh, 1822 demonstrations were conducted in 750 ha area by 8 KVKs under blackgram and yield obtained was 7.80 q/ha, whereas in pigeonpea 250 demonstrations were conducted in 100 ha area by 1 KVK and obtained yield was 13.20 q/ha.

Table 9.5 : State-wise & Season-wise outcome of CFLD on Pulses

State	Season	Crop	No of KVK	Conducted		Average Yield (q/ha)		
				Area (ha)	Demo (No.)	Check	Demo (No.)	Yield Increase (%)
MP	Rabi 2023-24	Lentil	32	906.20	2217	7.46	13.00	74.26
CG			06	80	167	4.53	6.90	52.31
Total Rabi 2023-24			38	986.2	2384	-	-	-
MP	Summer 2023-24	Blackgram	08	148	370	5.59	8.02	43.47
CG			03	30	55	6.26	8.41	34.34
Total Summer 2023-24			11	178	425	-	-	-
MP	Kharif 2024	Blackgram	08	750	1822	6.10	7.80	27.86
		Pigeonpea	01	100	250	8.80	13.20	50.00
Total Kharif 2024			09	850	2072	-	-	-
Total Summer 2023-24			11	178	425	-	-	-
Grand Total			49	2014.20	4881	-	-	-



Blackgram (Variety : Pratap Urd – 1)



Blackgram (Variety : Indira Urd 1)



Lentil (Variety : L 4717)



Lentil (Variety : IPL 316)

9.8: Seed Hub for increasing production of Pulses

Incharge: Dr. A.A Raut, Scientist (AE)

Under Seed Hub Project on pulses during kharif, seed production was done by 10 KVKs of Madhya Pradesh and Chhattisgarh under ICAR-ATARI, Jabalpur. Major crop demonstrated under this project in *kharif* season were blackgram, pigeonpea and horsegram. The programme was implemented in 180.06 ha area with 563.72 q seed production.

Table 9.6: Area and production of pulses in Kharif 2024

State	No. of KVKs	Area (ha.)	Production(q)
Madhya Pradesh	04	99.46	157.42
Chhattisgarh	06	80.60	406.30
Total	10	180.06	563.72

On the other hand, during *Rabi* 2023-24, under the project total 14 KVKs involved in seed production programme in Madhya Pradesh and Chhattisgarh. In *Rabi* season 577.55 ha area was demonstrated under seed hub with total seed production of 2098.22 q, covering major crops chickpea, fieldpea and lentil.

Table 9.7: Area and production of pulses in Rabi 2023-24

State	No. of KVKs	Area (ha.)	Production(q)
Madhya Pradesh	08	405.65	852.16
Chhattisgarh	06	171.90	1246.06
Total	14	577.55	2098.22

Whereas, seed production of blackgram and greengram was conducted in summer season 2023-24, covering 135.10 ha area with 784.20 q seed production. Under seed hub, seed godown with processing units were established in KVKs of both the states, Madhya Pradesh and Chhattisgarh.

Table 9.8: Area and production of pulses in summer 2023-24

State	No. of KVKs	Area (ha.)	Production(q)
Madhya Pradesh	05	64.90	364.59
Chhattisgarh	04	70.20	419.61
Total	09	135.10	784.20



Greengram (Variety : Virat)



Seed processing Unit at KVK Kawardha

9.9: Tribal Sub Plan (TSP) on Pulses

Nodal Scientist: Dr. A.A Raut, Scientist (AE)

Tribal development programmes encompass comprehensive approach addressing various aspects of tribal life, scheme aimed for enhancing pulses production for food, nutritional security and livelihoods of tribal community through demonstration and training. Participatory demonstration programme on pulses under TSP pulses was implemented by ICAR-ATARI, Jabalpur in collaboration with IIPR Kanpur. Under ICAR-ATARI, Jabalpur in Madhya Pradesh Anuppur, Mandla, Jhabua, Barwani, Dhar, Shahdol, and Dindori in Chhattisgarh Jashpur, Kanker, Balrampur, Bastar, Bijapur, Dantewada, Naryanpur and Surguja were located in the tribal region.

During *Rabi* 2023-24, under the IIPR TSP total 8 KVKs involved in seed production programme in Madhya Pradesh and Chhattisgarh. In *Rabi* season Total 112 ha area was demonstrated with 280 number of demonstrations covering major crop chickpea.

Table 9.10: Performance of demonstrations under different crops during Rabi 2023-24

State	Crop	No of KVK	Conducted		Average Yield (q/ha)		
			Area (ha)	Demo (No.)	Check (q/ha)	Demo (q/ha)	Yield Increase (%)
MP	Chickpea	05	64	160	10.77	15.13	40.48
CG		03	48	120	4.90	7.02	43.27
Total			112	280			

During summer 2023-24 seasons in Madhya Pradesh blackgram and greengram were demonstrated in 54 ha area with 135 demonstrations similarly in Chhattisgarh 52 ha area was covered under blackgram and greengram with 130 demonstrations.

Table 9.11: Performance of demonstrations under different crops during summer 2024

State	Crop	No of KVK	Conducted		Average Yield (q/ha)		
			Area (ha)	Demo (No.)	Check (q/ha)	Demo (q/ha)	Yield Increase (%)
MP	Blackgram	02	20	50	11.20	6.55	70.99
	Greengram	03	34	85	7.38	5.46	35.16
	SubTotal		54	135			
CG	Blackgram	03	32	80	7.64	4.92	55.28
	Greengram	02	20	50	7.85	4.46	76.01
	SubTotal		52	130			
Total			106	265			



Blackgram
(Variety : Pratap urd 1)



Blackgram
(Variety : Indira Urad 1)



Chickpea
(Variety : CG Chana 2)

9.10: Outscaling of Natural Farming

Nodal Scientist: Dr. Harish M.N., Scientist (Agronomy)

Natural Farming is a chemical-free farming system rooted in Indian tradition enriched with modern understanding of ecology, resource recycling and on-farm resource optimization. It is considered as agro-ecology based diversified farming system which integrates crops, trees and livestock with functional biodiversity. Outscaling of Natural Farming project is operational in 48 KVKs of Madhya Pradesh and Chhattisgarh, among these 16 KVKs are in Chhattisgarh state, while 32 KVKs are in Madhya Pradesh. During 2024, total 548 awareness programmes were organized by KVKs involving 11,856 participants. Furthermore, 283 training programmes were performed involving 13,539 participants for capacity building on natural farming practices, whereas 391 demonstrations were conducted on various crops such as wheat, kodo, pigeonpea, chickpea, greengram, finger millet, maize, mustard, onion and paddy etc. These activities are aimed at giving the impetus to promoting natural farming practices and knowledge dissemination among farmers.

Table 9.12: Activities and participants under Outscaling of Natural Farming

States	No. of KVKs	Awareness Programmes		Training Programmes		No. of demonstrations
		No. of awareness programmes	No. of participants	No. of trainings organized	No. of participants	
Chhattisgarh	16	206	3874	105	3626	84
Madhya Pradesh	32	342	7982	178	9913	307
Total	48	548	11856	283	13539	391



Awareness Programme



Training Programme



Demonstration under Natural Farming



9.11: Drone Technology Demonstration-Sub mission under Agricultural Mechanization

Nodal Scientist: Dr. A.A. Raut, Scientist (AE)

Drone Technology Demonstration is the central sector scheme of Department of Agriculture and Farmers Welfare, Government of India under the Sub Mission on Agricultural Mechanization for implementation of its components. Drone Technology Demonstration was initiated during 2023. Small section of crops at different stages can be easily monitored by Drone. This scheme is operational in five ICAR Institutes viz., CIAE Bhopal, DWR Jabalpur, IISS Bhopal, IISR Indore and NIBSM Raipur; two SAUs namely JNKVV, Jabalpur and IGKV Raipur and ten KVKs under ICAR ATARI Jabalpur in Madhya Pradesh and Chhattisgarh. Under this scheme total 23 drones were purchased. Total 7807 demonstrations were conducted and covered 5315.4 ha area that benefitted 54524 farmers till 2024. Nano urea application, pesticide application, micronutrient application etc., technology demonstrated under the drone technology demonstrations.

Table 9.13 : Status of activities under Drone Technology Demonstration

State	No. of Kisan Drones Purchased by the PIC	No. of Kisan Drone Demonstration organized	Area Covered under the Kisan Drone Demonstration	Number of farmers participated
Madhya Pradesh	16	5466	4001.4	23496
Chhattisgarh	7	2341	1314	31028
Total	23	7807	5315.4	54524



Pesticide application by Drone



Demonstration of Drone Technology

9.12: Nutrition-Sensitive Agriculture through Nutri-SMART Village

Nodal Scientist: Dr. Shalini Chakraborty, Principal Scientist (AE)

The initiative in this regard was taken by ICAR-ATARI, Jabalpur in Madhya Pradesh and Chhattisgarh through a novel concept of Nutri-SMART village establishment in 2016 by KVKs for promoting Nutrition-Sensitive Agriculture in India. The activities under Nutri-SMART Village intensified by KVKs for evolving new extension methodologies and approaches for long-lasting effect of the efforts in this direction. Nutri- Sensitive Agricultural Resources and Innovations (NARI) programme was implemented by the 35 KVKs in Madhya Pradesh and Chhattisgarh (Zone IX) during the year 2024. Therefore; this programme

resulted into following specific outcomes addressing the ultimate goal of health and well-being of farm women, adolescent girls and children (0-5 year):

- Increased availability, accessibility and utilization of nutritious crops/vegetables/fruits etc. through Nutrition gardens.
- Crop diversification along with cultivation of Bio-fortified varieties will result in improvement of nutritional and health status of farm family in Nutri-SMART Villages.
- Improving dietary diversity by standardizing traditional recipes incorporating locally available food material through value addition.
- To enhance the economic status of farm families through income generation activities.

Activities under NARI Project

Under NARI program, total 97 technologies were assessed and 596 trials were conducted in Madhya Pradesh in nutrition garden, bio-fortified varieties, value addition and food fortification theme for nutritional security of the farm households. Similarly in Chhattisgarh total 39 technologies were assessed and 152 trials were conducted. Children, adolescents and women's health can be significantly improved by biofortified crops. In Madhya Pradesh, KVKs, Agarmalwa, Anuppur, Guna, Morena, Neemuch, Raisen, Ratlam, Seoni, Shajapur, Sidhi, Ujjain, Umaria conducted on farms trials using bio-fortified varieties of wheat such as Pusa Tejas (HI-8759), DB-02, HI-1633, WB-02, HI-1544 and HI-1634 to improve nutritional status in farm families.

Table 9.14: Technology Assessment

State	Thematic area	No. of Districts	No. of Technology	No. of Trials
Madhya Pradesh	Nutrition garden	2	11	22
	Bio-fortified varieties	12	18	114
	Value addition	6	9	71
	Food Fortification	7	59	389
	Total		97	596
Chhattisgarh	Nutrition garden	1	12	20
	Value addition	1	1	1
	Food Fortification	3	26	131
	Total		39	152
	Grand total		136	748

In this programme, total 303 technologies were demonstrated by benefitting 386 farm families in Madhya Pradesh in nutrition garden, bio-fortified varieties, value addition and food fortification theme for nutritional security of the farm households. Similarly in Chhattisgarh total 43 technologies were demonstrated benefitting 442 farm families.

Table 9.15: Technology Demonstration

State	Thematic area	No. of Districts	No. of activity	No. of Farmers/ beneficiaries
Madhya Pradesh	Nutrition garden	15	184	267
	Bio-fortified varieties	4	77	77

State	Thematic area	No. of Districts	No. of activity	No. of Farmers/ beneficiaries
	Value addition	-	-	-
	Fortification	4	42	42
	Total		303	386
Chhattisgarh	Nutrition garden	4	33	50
	Bio-fortified varieties	0	0	0
	Value addition	0	0	0
	Fortification	1	10	10
	Total		43	60
Grand total			346	446

Training programmes were organized for developing skill on nutritional aspects and extension activities organized for creating awareness and education on nutrition related aspects. A total of 277 training programmes were organized that benefitted 6801 beneficiaries and 304 extension activities benefitted 7080 beneficiaries.

Table 9.16: Training and extension activities organized under NARI program

State	No of KVKs	Activities	No of Beneficiaries
Training conducted			
Madhya Pradesh	29	224	5879
Chhattisgarh	6	53	922
Total	35	277	6801
Extension activities			
Madhya Pradesh	26	222	5647
Chhattisgarh	7	82	1433
Total	33	304	7080





Activities under NARI programme

9.13: Kisan Sarathi

Nodal Scientist: Dr. A.A. Raut, Scientist (AE)

“Kisan Sarathi” an Information Communication and Technology (ICT) based interface solution provides seamless, multimedia, multi-ways connectivity to the farmers with the latest agricultural technologies, knowledge base and the pool of large number of the subject matter experts. Major activities undertaken are onboarding of KVK Scientists, farmers, enhancement/customization of system, sensitization and capacity building of the farming community. It provides multi lingual support to farmers (22 languages) in seeking advisory services. In Madhya Pradesh, 53 KVK Heads and 226 KVK experts are engaged in the amalgamation of 38,55,103 farmers while in Chhattisgarh 28 KVK Heads and 90 KVK experts are engaged in the amalgamation of 17,01,325 farmers on the Kisan Sarathi Portal.

Table 9.17: Registered experts and farmers in Kisan Sarathi portal

State	Registered KVK Heads	Registered experts	Registered executives	No. of farmers	Villages
Madhya Pradesh	53	226	18	3855103	37970
Chhattisgarh	28	90	14	1701325	15793
Total	81	316	32	5556428	53763

9.14: Biotech-KISAN Hub

Nodal Scientist: Dr. A. A. Raut, Scientist (AE)

Biotech-KISAN Hub is operational in eight KVKs viz. Damoh, Chhatarpur, Singrauli, Badwani, Guna, Khandwa, Rajgarh, Raisen (For Vidisha district FY 2024) under ICAR-ATARI, Jabalpur in Madhya Pradesh state. Under this project these KVKs provide training to the farmers about the complete improved package of practices of wheat, lentil, chickpea etc. that can help in better crop management in order to enhance production and productivity. Awareness programmes were also organized to aware farmers on latest technologies on agronomical measures to solve their problems in reference to climate change. Apart from this, field day, interaction meets at farmer’s field, facilitation of farmers with critical inputs etc. were organized by these KVKs and demonstrated the best practices in farmers field.



Off Campus Training programme



On Campus Training Programme

9.15: Mera Gaon Mera Gaurav (MGMG)

Nodal Scientist: Dr. Shalini Chakraborty, Principal Scientist (AE)

Mera Gaon Mera Gaurav is operational in 10 institutions including six ICAR institutes and four SAUs under Zone IX. DWR Jabalpur, IISS Bhopal, CIAE Bhopal, IISR Indore, NIBSM Raipur, JNKVV Jabalpur, NDVSU Jabalpur, IGKV Raipur, CGKV Durg and RVSKVV Gwalior are institutes/SAUs working under MGMG programme. Details are below;

ICAR institutes and SAUs activities:

During 2024, total eight groups were formed by involving 39 scientists under ICAR institutes and SAUs. Through training, demonstration, literature distribution, message advisories, general awareness and linkage created with other Departments/Organizations benefited total of 35818 farmers of 29 villages under this programme.

In ICAR- DWR, Jabalpur, two groups involving 15 scientists conducted total 138 demonstrations, trainings and field activities by covering 10 villages. Training, demonstration, interface meetings, literature distribution, general awareness and linkages created with other Departments/ Organizations benefited total 29923 farmers.

JNKVV, Jabalpur conducted total 513 field activities in seven adopted villages by which 33630 farmers were benefited under the programme.

ICAR-NIBSM, Raipur conducted total 36 field activities in 12 adopted villages by which 2188 farmers were benefited under the programme

Table 9.18: Institute-wise progress under Mera Gaon Mera Gaurav

S. No.	Name of Institute	Total Number of Groups/team formed	No. of Scientists Involved	No. of villages covered	No. of field activities conducted	No. of messages/ advisory sent	Farmers benefited (No.)
1	ICAR- Directorate of Weed Research, Jabalpur (MP)	2	15	10	138	135	29923

S. No.	Name of Institute	Total Number of Groups/team formed	No. of Scientists Involved	No. of villages covered	No. of field activities conducted	No. of messages/ advisory sent	Farmers benefited (No.)
2	Jawaharlal Nehru Krishi Vishwa Vidhyalaya, Jabalpur (MP)	6	19	7	513	19	3707
3	ICAR-National Institute of Biotic Stress Management, Raipur (CG)	3	5	12	36	4	2188
Total		11	39	29	687	158	35818



Herbicide application in summer greengram



Demonstration on Mustard



Training programme for farm women



Animal Health Camp

10. New Initiatives

With the changing scenario, new initiatives are required to tackle emerging problems of the farming community with the latest technological solutions vis-à-vis methodological blending for providing the real benefits of the scientific endeavors. KVKs are working hard to enhance the productivity and profitability at farmers' condition through its various activities under the guidance of Division of Agricultural Extension and monitoring system of the ICAR-ATARI with Director Extension of SAUs. As a result, KVK efforts are being recognized and appreciated at various platforms. Some of the important initiatives taken during the period 2024 are being presented here.

10.1: Oilseed Model Village (OMV)

Incharge: Dr. S.R.K. Singh, Director

Oilseed Model Village (Special CFLD on Oilseeds) under the “National Food Security Mission” was implemented by ICAR-ATARI, Jabalpur in Madhya Pradesh and Chhattisgarh. Under the project major crops soybean, sesame, mustard, groundnut and sunflower were demonstrated in Madhya Pradesh and Chhattisgarh states. The programme was implemented by 22 KVKs with major oilseed crops of *kharif*, *rabi* and summer season through 11000 demonstrations covering 4400 ha area. In *kharif* 2024, total 2030 ha with 4455 demonstrations were allotted out of which 2009 ha area with 4131 demonstrations were covered.

In *kharif* season, soybean, sesame, groundnut and sunflower were demonstrated under OMV. In Madhya Pradesh, 1852 demonstrations were conducted in 882 ha area by nine KVKs under soybean and yield obtained was 16.80 q/ha, whereas in sesame 428 demonstrations were demonstrated in 220 ha area by six KVKs and yield obtained was 4.20 q/ha, groundnut was demonstrated in 248 ha with 553 demonstrations by six KVKs and obtained yield was 15.08 q/ha. Similarly, in Chhattisgarh, 271 ha area was covered through 360 demonstrations in soybean crop by three KVKs and obtained yield was 17.17 q/ha, whereas groundnut crop was demonstrated in 298 ha area with 713 demonstrations by seven KVKs and obtained yield was 15.29 q/ha, sesame crop was demonstrated in 80 ha area with 200 demonstrations by two KVKs and yield obtained was 6.61 q/ha and sunflower crop was demonstrated in 10 ha area through 25 demonstrations in one KVK and yield obtained was 7.35 q/ha.

Table 10.1: State-wise outcome of OMV in *Kharif* 2024

State	Crop	No. of KVK	Conducted		Average Yield (q/ha)		Yield increase (%)
			Area (ha)	Demo (No)	Farmer yield	Demo Av. yield	
Madhya Pradesh	Soybean	9	882	1852	12.98	16.8	29.43
	Sesame	6	220	428	3.32	4.2	26.51
	Groundnut	6	248	553	11.24	15.08	34.16
Chhattisgarh	Soybean	3	271	360	12.05	17.17	42.49
	Groundnut	7	298	713	10.47	15.29	46.04
	Sesame	2	80	200	4.31	6.61	53.36
	Sunflower	1	10	25	6	7.35	22.50
Total <i>Kharif</i> (2024)			2009	4131	-	-	-



Soybean crop under OMV



Soybean at harvesting stage



Groundnut field



Sesame field



Training Programme under OMV



Field day organized in groundnut field

10.2: Model Pulse Village

Nodal Scientist: Dr. A. A. Raut, Scientist (AE)

Model Pulse Village (MPV) initiative is operational in four Krishi Vigyan Kendras (KVKs) under ICAR-ATARI, Jabalpur. During 2024, two KVKs in Madhya Pradesh (Narmadapuram and Narsinghpur) and two KVKs in Chhattisgarh (Bhatapara and Kanker) implemented this project. During the Kharif season, a total of 501 demonstrations were conducted in pigeonpea and blackgram covering 220 ha in the state of Madhya Pradesh (Narmadapuram and Narsinghpur) and Chhattisgarh (Bhatapara and Kanker) by the KVKs. During 2024 in Kharif season, under blackgram 238 demonstrations were conducted over 110 ha, achieving an average yield of 7.76 q/ha whereas in pigeonpea, 263 demonstrations were conducted by

covering 110 ha and achieved average yield was 11.48 q/ha. These demonstrations were conducted by KVK Narmadapuram, Narsinghpur, Bhatapara, and Kanker, highlighting the effective adoption of pulse production technologies in the model pulse villages across Madhya Pradesh and Chhattisgarh.

Table 10.2: Outcome of MPV in Kharif 2024

No. of KVK	Season	Crops	No. of Demo	Area (ha)	Average yield (q/ha)		Net returns (Rs/ha)	
					Demo	Local	Demo	Local
4	Kharif	Blackgram	238	110	7.76	4.5	39689	18610
		Pigeonpea	263	110	11.48	8.22	60266	41340
Total			501	220	-	-	-	-



Pigeonpea crop



Blackgram at early stage



Field visit in pigeon pea field



Field day organized in blackgram field

11. Research Projects and Publications

11.1 Research Projects

11.1.1: Impact assessment of technologies disseminated by KVKs through Cluster Frontline Demonstration on Oilseed in India

The project aims to identify yield gap factors, map agro-climatic zones in major oilseed producing states in India and assess the sustainability of oilseed production with a focus on climate-resilient technologies. It evaluates the impact of technological interventions and formulates zone-specific recommendations based on economic efficiency. The work is initiated for analysis of CFLD oilseed data and secondary data on National and State level production, area, yield and productivity of the oilseed crops.

11.1.2 : Impact of Nutritional Interventions on Production and Consumption Diversity: A Step Towards Achieving SDGs

Inception Workshop on Impact of Nutritional Interventions on Production and Consumption Diversity : A Step Towards Achieving SDGs was organized on April 9th, 2024 at NAAS, New Delhi under chairmanship of Hon'ble Secretary DARE & DG, ICAR in collaboration with Division of Agricultural Extension, New Delhi, IFPRI, New Delhi, IASRI, NCAPER and all ATARIs.

Table 11.1: List of Network/ Collaborative Research Projects

S. No.	Title of the Project	Name of PI	Nature of Project	Year of start
1.	Impact assessment of technologies disseminated by KVKs through Cluster Frontline Demonstration on Oilseed in India	Dr.A. A. Raut, PI	ICAR Network National Project	2024-25
2.	Impact of Nutritional Interventions on Production and Consumption Diversity : A Step Towards Achieving SDGs	Dr.S.R.K.Singh, PI	Collaborative project between Division of Agricultural Extension and International Food Policy Research Institute, New Delhi	2024-25

11.2 Publications

i. Research Paper:

Bharti. O.P., Jatav. R.C., Tiwari. S.K., Baraiya. B.R., Chouhan. P. and Singh. S.R.K. (2024). Impacts of Cluster Frontline Demonstrations on Yield and Economic of Green Gram in Madhya Pradesh, India. *Legume Research-An International Journal*. 5250:1-7.

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- Raut. A.A., Yashpal., Legha. R.A. and Dedar. R. (2024). Sustainable Livelihoods for Equine Owners: Insights of Working Equines on Pilgrimage Route in Uttarakhand. *Indian Journal of Veterinary Science and Biotechnology*. 20(3):30-35.
- Raut. A.A., Yashpal., Legha. R. and Dedar. R. (2024). Utilization patterns and livelihood implications of donkeys and mules among equine owners in Northern India. *International Journal of Agriculture Extension and Social Development*. 7(3):134–139.
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ii. Technical Bulletin:

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Thakur A., Pandey S.K. and Singh S.R.K. (2024). Jal Sanraksharan aur Varsha Jal Sanchayanke Vividhayam. KrishiVigyan Kendra, IGNTU, Amarkantak:18.

iii. Extended Summary/Abstracts

Jallaraph. V., Harish. M.N. and Dubey. R. Extension Services in Promoting Organic Farming: A Multifaceted Approach. In: Book of Abstracts. *Next Generation Agriculture- Organic and Natural Farming Pathways: Extension Strategies & Approaches*, 28-30 January, 2024 at ICAR-ATARI Jabalpur, Madhya Pradesh (India):92.

Harish. M.N. Raut. A.A., Dubey. R. and Singh. S.R.K. (2024). Effect of Organic Preparations on Soil Fertility under Natural Farming Practices. In: Book of Abstracts. *Next Generation Agriculture- Organic and Natural Farming Pathways: Extension Strategies & Approaches*, 28-30 January, 2024 at ICAR-ATARI Jabalpur, Madhya Pradesh (India):88.

Raut. A.A., Harish. M.N., Shrivastava. S. and Singh. S.R.K. (2024). Cost Effective Agriculture: Assessing Benefits in Natural Farming Practices. In: Book of Abstracts. *Next Generation Agriculture- Organic and Natural Farming Pathways: Extension Strategies & Approaches*, 28-30 January, 2024 at ICAR-ATARI Jabalpur, Madhya Pradesh (India):91.

Shrivastava. S., Jallaraph. V., Dubey. R. and Harish. M.N. (2024). Natural Farming Practices for Sustainable Agriculture. In: Book of Abstracts. *Next Generation Agriculture- Organic and Natural Farming Pathways: Extension Strategies & Approaches*, 28-30 January, 2024 at ICAR-ATARI Jabalpur, Madhya Pradesh (India):104.

iv. Books and Newsletters

Book of Abstracts. National Conference on *Next Generation Agriculture- Organic and Natural Farming Pathways: Extension Strategies and Approaches*. (2024). Editorial Committee (local). ICAR-ATARI, Jabalpur.

KVK Insights. A newsletter of Madhya Pradesh KVKs. ICAR-Agricultural Technology Application Research Institute (Division of Agricultural Extension), Zone-IX, Jabalpur, Madhya Pradesh. July, 2024:1.

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v. Books chapters

Biswakarma. N., Sharma. K., Chichaghare. A.R., Harish. M.N., Naik. M.R., Ram. A. and Arunachalam. A. (2024). Innovations in Agronomic Management of Field Crops for Higher Productivity and Sustainability. *Research and Technology advancements in Agriculture, ICAR-NAARM Publication:315-342*.

vi. Popular articles

Bisen. A., Jain. V., Singh. S.R.K. and Narayam. H. (2024). Multi-tier cropping system: An alternative practice for small land holdings in tribal area. *Indian Farming*. 74(11):07-09.

Chakraborty. S. (2024). Hari pattedar sabji Nonia: Poshan evam upyog. *ICAR- IIHR. Bagwaani*. 13:86-87.

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Shinogi. K.C., Vishwakrama. A.K., Dattta. S.P., Sahu. A., Bharati. K., Lakaria. B.L., Shirale. A.O., Kamble. A.L., Singh. R.K., Wanjari. R.H., Lal. N., Srivastava. S., Haokip. I.C., Yadav. D.K., Nagar. H.R., Singh. A.B., Patra. A.K. and Singh. S.R.K.(2024). Transforming the rural economy through recycling agricultural waste. *Indian Farming*. 74(11):58-61.

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Singh S.R.K., Raut A., Shrivastava Varsha, Bardhan D, Harish M.N., Mishra A. and Gautam U.S.(2024). *Poshan SMART Gaono Me Sulabh Pousthik Ahar*. Kheti. March:21-24.

Singh. S.R.K., Singh. V.K., Harish. M.N., Raut. A.A. and Chakrawarty. S. (2024). Jalvayu Anukul Krishi Se Satat Utpadan. *Kheti*. 77(9):23-25.

12. Scientific Advisory Committee (SAC) Meetings

Scientific Advisory Committee (SAC) meeting conducted by KVKs to brief about the achievement and action plan and to get advice and feedback on the mandated activities of KVK in planned and systematic manner by the participating members from ICAR institutions (ATARI), line departments and farmers etc. The committee monitors progress and facilitates exchange of views on the specific tasks. The committee reviews periodically and takes further course of action deemed fit for further validation on application by the KVK. Therefore, all KVKs were mandated to conduct the meetings on periodical basis. Total 108 SAC meetings were conducted during 2024 in 80 functional KVKs (Table 12.1)

Table 12.1: Status of SAC conducted by KVKs

Name of KVKs	No. of SACs conducted	Name of KVKs	No. of SACs conducted	Name of KVKs	No. of SACs conducted
IGKV, Raipur		JNKVV, Jabalpur		RVSKVV, Gwalior	
Balrampur	1	Anuppur	1	Agarmalwa	2
Bastar	1	Balaghat	1	Alirajpur	1
Balod	1	Betul	2	Ashoknagar	2
Bemetara	1	Chhatarpur	1	Barwani	2
Bhatapara	1	Chhindwara	2	Bhind	2
Bijapur	1	Chhindwara II	2	Datia	2
Bilaspur	1	Damoh	1	Dewas	2
Dantewada	1	Dindori	1	Dhar I	2
Dhamtari	1	Harda	2	Guna	2
Durg-I	1	Katni	1	Gwalior	2
Durg-II	1	Mandla	1	Jhabua	2
Gariyaband	1	Narsinghpur	2	Khandwa	2
Janjgir-Champa	1	Panna	1	Khargone	2
Jaspur	1	Rewa	1	Manawar	2
Kanker	1	Sagar	1	Mandsaur	2
Kawardha	1	Sagar-II	1	Morena	2
Kondagaon	1	Seoni	2	Neemuch	2
Korba	1	Sidhi	1	Rajgarh	2
Korea	1	Tikamgarh	1	Shajapur	2
Mahasamund	1	Bhopal (ICAR)	1	Sheopur	2
Mainpat	1	Bankhedi (NGO)	2	Shivpuri	2
Mungeli	1	Raisen (NGO)	2	Ujjain	2
Narayanpur	1	Satna (NGO)	1	Burhanpur (NGO)	2
Raigarh	1	-	-	Indore (NGO)	2
Raipur	1	-	-	Ratlam (NGO)	2
Rajnandgaon	1	-	-	-	-
Surguja	1	-	-	-	-
Sukma	1	-	-	-	-
TOTAL	28		31		49
Grand Total		108			

13. Awards and Recognitions

13.1 Techonology developed and registered in ICAR

ICAR-ATARI, Jabalpur has developed two technologies as lead developer and rest five technologies as co-developer. The details of these technologies are as follows:

Table 13.1: Techonology developed and registered in ICAR

S.No.	Technology Code	Details	Description
1.	ICAR-AEXT-ATARIJBP-Product-2024-005	Technology certification for Krishi Vigyan Kendra –Kisan Mobile Advisory (KMA)	Krishi Vigyan Kendra –Kisan Mobile Advisory (KMA) with Lead Developer S.R.K. Singh and associate developer U.S. Gautam, Nalin Khare and Abhay Wankhede
2.	ICAR-AEXT-ATARIJBP-Model-2024-067	Technology certification for Nutri SMART Village Model	Nutri-SMART Village Model developed with Lead Developer S.R.K.Singh and Associate Developers Anupam Mishra, A.A. Raut, Tushar Athare, Shashi Gour
3.	ICAR-AEXT-ATARIJBP-Model-2024-037	Technology certification for Nutrition-Sensitive Agricultural Resources and Innovations (NARI) model	Nutrition-Sensitive Agricultural Resources and Innovations (NARI) model developed with Lead Developer A.K. Singh and associate developer U.S. Gautam, S.R. K. Singh, Anupam Mishra and Randhir Singh
4.	ICAR-AEXT-ATARIJBP-Product-2024-00	Technology certification for Krishak Mahila Upyogi Unnat Krishi Yantra (Mobile App)	Mobile App: <i>Krishak Mahila Upyogi Unnat Krishi Yantra</i> with Dipti Dubey as Lead Developer and Associate Developers S.R.K. Singh, A.A. Raut
5.	ICAR-AEXT-NIBSM -Product-2024-008	Technology certification for Android-based dynamic mobile application on “Kadakhath Info”	Android-based dynamic mobile application on “Kadakhath Info” with lead developer P. Mooventhan and associate developer S.R.K. Singh and others
6.	ICAR-AEXT-NAARM Model-2024-083	Technology certification for Impactful model for Farmer FIRST Programme implementation	Impactful model for Farmer FIRST Programme implementation developed by lead developer A.K. Singh and associate developer U.S. Gautam, V.P. Chahal, R.R. Burman, P. Venkateshan, N. Shivramane, S.R.K. Singh and others
7.	ICAR-AEXT-ATARIJBP -Model-2024-035	Technology certification for Rural Agripreneurship Incubation Centre (AIC) model for youth	Associate Developer in technology development ‘Rural Agripreneurship Incubation Centre (AIC) model for youth’ with lead Developers U.S. Gautam, A.K. Singh, Ranjay K. Singh Rajarshi Roy Burman, V.P. Chahal, Randhir Singh and Associate developer S.R.K. Singh, A.A. Raut and other

ICAR-AEXT-ATARUBP-Product-2024-005



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
S.R.K. Singh
(Lead Developer)

Associate Developers
U.S. Gautam
Nalin Khare
Abhay Wankhede

of
ICAR-ATARI Zone-IX, Jabalpur

has developed the technology
Krishi Vigyan Kendra-Kisan Mobile Advisory (KVK-KMA)

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)

ICAR-AEXT-ATARUBP-Model-2024-067



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
S.R.K. Singh
(Lead Developer)

Associate Developers
Anupam Mishra
A.A. Raut
Tushar Athare
Shashi Gour

of
ICAR-ATARI, Zone-IX, Jabalpur

has developed the technology
Nutri-SMART Village Model

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)

ICAR-AEXT-ATARUBP-Model-2024-037



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
A.K. Singh
(Lead Developer)

Associate Developers
U.S. Gautam
S.R.K. Singh
Anupam Mishra
Randhir Singh

of
**ICAR-ATARI Zone-IX, Jabalpur and
Division of Agricultural Extension, ICAR, New Delhi**

has developed the technology
**Nutrition-Sensitive Agricultural Resource
and Innovations (NARI) Model**

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)

ICAR-AEXT-ATARUBP-Product-2024-006



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
Dipti Dubey
(Lead Developer)

Associate Developers
S.R.K. Singh
A.A. Raut

of
**ICAR-ATARI Zone-IX, Jabalpur and
Department of Women and Child Development
Govt. of Madhya Pradesh**

has developed the technology
Mobile App:
कृषक महिला उपयोगी उन्नत कृषि यंत्र

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)

ICAR-AEXT-NIISM-Product-2024-008



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
P. Mooventhan
(Lead Developer)

Associate Developers
P.K. Ghosh, Anil Dixit, Pankaj Kaushal
G.L. Sharma, P.K. Verma, L.K. Verma, M.A. Khan
Uttam Singh, P. Venkatesan, S.R.K. Singh

of
**ICAR-National Institute of Biotic Stress Management
Baronda, Raipur**

has developed the technology
**Android-based dynamic mobile application on
"Kadakhath Info"**

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)

ICAR-AEXT-NAARM-Model-2024-083



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that
Ashok Kumar Singh
(Lead Developer)

Associate Developers
Udhham Singh Gautam, Ved Parkash Chahal, Rajarshi Roy Burman
P. Venkatesan, N Sivaramane, Ch. Srinivasa Rao, Rajbir Singh, S.K. Singh
S.S. Singh, Y.G. Prasad, M.J. Chandre Gowda, Lalkhan Singh
Anupam Mishra, A.K. Tripathi, B.C. Deka, Venkatasubramanian
Anjani Kumar, J.P. Mishra, Shantanu Kumar Dubey, S.R.K. Singh
S.K. Roy, Shaik N. Meera, K. Govindaswamy, Parvender Sheoran
Amulya Kumar Mohanty, Pradip Kumar Dey, Shiv Kumar, Mukesh Kumar
Mitali Ghosh Ray, Bommu Kalyani, Arvind Kumar, P.P. Rohilla, A.R. Reddy
K.S. Das, Arun Kumar Singha, Pragya Bhadauria
D.V. Kolekar, Rajesh T, Harish M.N., Bagish Kumar

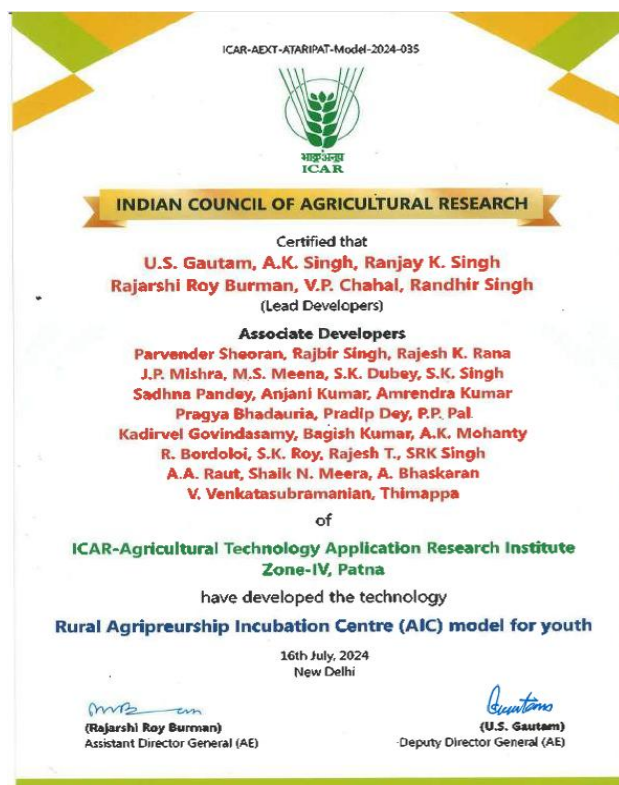
of
**ICAR-National Academy of Agricultural Research Management
(NAARM), Rajendranagar, Hyderabad**

has developed the technology
Impactful model for farmer FIRST programme implementation

16th July, 2024
New Delhi


(Rajarshi Roy Burman)
Assistant Director General (AE)


(U.S. Gautam)
Deputy Director General (AE)



13.2 Awards and recognitions

Dr. Shalini Chakraborty, Pr. Scientist, ICAR-ATARI, Jabalpur was awarded with the **Best Female Athlete Award** in ICAR Central Zone Sports Tournament organized by ICAR-IISS held at Bhopal during March 04-07, 2025.



Dr. S.R.K. Singh, Director, ICAR-ATARI, Jabalpur bestowed with **Honor of Excellence Award** for successful organization of National Conference on Next Generation Agriculture-Organic and Natural Farming Pathways: Extension Strategies and Approaches during 28-30, January 2024



Dr. Harish M.N. and Dr. A.A. Raut got **Best Paper Presentation Award** for their research work in the National Conference on “Next Generation Agriculture - Organic and Natural Farming Pathways: Extension Strategies and Approaches” held at ICAR-ATARI-Jabalpur during 28-30, January 2024.



Dr. Yogendra Kumar Shukla was honored with the prestigious **Best KVK Scientist Award**. This accolade acknowledges Dr. Shukla’s remarkable contributions in the field of soil science and the effective transfer of technology, significantly benefitting the farming community. His dedication and innovative approaches have played a pivotal role in enhancing agricultural practices and fostering sustainable development among farmers.



Dr. S.K. Singh, Sr. Scientist & Head, KVK, Burhanpur (M.P.) received **Scientist of the year** award in recognition of novelty, valuable contributions and achievement during **Second National Conference and Webinar on Farmer Orientation towards Climate change and upgradation to Sustainability (FOCUS)** held from December 23-24, 2024 organized by Green Agri Professional Society (GAPS), Dhanbad in association with PKVSS, CREA, S&T SIRI, and RUMBUL at Sambodhi Retreat, Govindpur, Dhanbad, Jharkhand.

Shri Ankit Lakhan Singh Gehlot, a progressive farmer from Shahpura village of Indore, was honored with the prestigious **State Millionaire Farmer of India Award 2024**. The award ceremony was hosted by Krishi Jagran and Mahindra & Mahindra Group on December 8, 2024, celebrating his outstanding achievements in Crop production and Dairy.



Dr. Sanjay Singh Rathore, Programme Assistant of KVK Sukma, received the prestigious **Global Young Scientist Award 2024** for his outstanding contribution and recognition in the field of fisheries science. The award ceremony occurred at the 7th International Conference on *Global approaches in Agricultural, Biological, Environment and Life Sciences for Sustainable Future (GABELS 2024)* during June 8-10, 2024. Dr. Rathore's dedication and expertise have significantly impacted the field of agricultural sciences, furthering advancements in sustainable farming practices and environmental stewardship.

Dr. R.K. Singh, Scientist, KVK Khargone, was bestowed with the **Extension Leadership Award** in the National Seminar on *Agricultural Extension cum Alumni Meet (AADEE-BHU)* organized by Banaras Hindu University, Varanasi during November 15-17, 2024. This award recognizes his exceptional leadership, innovative program development, driving positive impact and achieving significant outcomes in the dissemination of agri technologies to the farmers.





Dr. Amit Kumar Sinha, Subject Matter Specialist, KVK Dhamtari was bestowed with the **Best Agri Engineer Award 2024**, during the International conference on *Recent advances in agriculture for Aatmanirbhar Bharat*, organized by Agri Meet Foundation U.P. and CCSHAU Hissar, Haryana from April 19-21, 2024. This accolade acknowledges Dr. Sinha's remarkable contributions in the field of agriculture processing and food engineering. His dedication contributed to improved food security, reduced waste, and the development of value-added products, ultimately impacting both producers and consumers.

Dr. Chanchal Bhargava from Chhindwara district of Madhya Pradesh was honored with the **Young Researcher Award-2024**, for her outstanding contribution and recognition in the field of Plant Breeding and Genetics on the occasion of International Conference on *AgriTech Intelligence and Beyond: Cutting edge innovations in Agriculture and Allied Sciences* organized by SKUAST and Agriculture forum for Technical Education of Farming Society during October 15-17, 2024.



14. Distinguished Visitors

Visit of dignitaries Smt. Sampatiya Uekey, Minister of PHE, Madhya Pradesh Govt., Smt. Radha Singh Minister of State, Gramin Vikash and Panchayati Raj, Govt. of Madhya Pradesh, Shri Dr, Rajesh Mishra, Member of Parliament, Sidhi, Shri Ram Nivas Shah, MLA- Singrauli, Shri Rajendra Meshram, MLA- Deosar at KVK Singrauli (M.P.)



On September 20, 2024 Krishi Vigyan Kendra, Singrauli, Smt. Sampatiya Uekey, Minister of PHE, Madhya Pradesh Govt. and other VVIPs / VIPs laid stone for digging of ponds and development of irrigation facilities in KVK campus. Guests are also planted trees in campus in plantation drive on **Ek Ped Maa ke Nam** and visited different demo units of KVK.

Shri. Shivmangal Singh Tomar Member of Parliament, Morena-Sheopur (M.P.) visited KVK Morena (M.P.)



KVK Morena organized live telecast of 17th installment of PM SAMMAN NIDHI, on this occasion MP of Morena-Sheopur Lok Sabha, Shri. Shivmangal Singh Tomar was the Chief Guest and Dr. Sandeep Singh was the chairman in this programme. More than 100 farmers and farm women were present on the occasion.



Shri. Aidal Singh Kansana, Minister of Farmer Welfare and Agricultural Development, Madhya Pradesh Govt. visited KVK Morena (M.P.)

Minister of Farmer Welfare and Agricultural Development of Madhya Pradesh, Shri. Aidal Singh Kansana was the Chief Guest in farmers awareness programme sponsored by *Sujagrati Samaj Sevi Sanstha* on 7 March, 2024 at KVK, Morena (M.P.)

Visit of Shri. Gajendra Patel, Hon'ble Member of Parliament, at KVK Khargone (M.P.)

Shri Gajendra Patel, Hon'ble MP, Khargone visited KVK during training programme entitled *Janjati Kaushak Vikas Pariyojna* on 15 June, 2024 in which 45 farmers participated under the Skill Development Project of National Skill Development Corporation, India. The farmers were motivated to establish new orchards and also provided technical knowledge on orange and mango crops.





Visit of Assistant Director General ICAR Delhi Dr. R.K. Singh, at KVK Dhar II (M.P.)

Dr. R.K. Singh, Assistant Director General (Agricultural Extension) of Indian Council of Agricultural Research-New Delhi, visited Krishi Vigyan Kendra Manawar (Dhar-II) on 31 December 2024. During the visit Dr. Singh received information about various activities of Krishi Vigyan Kendra from Dr. Dharvendra Singh Senior Scientist and Head. On this occasion, he also discussed with the farmers

and farm women present at the center. During the discussion he received information about various works such as field tests being done by Krishi Vigyan Kendra for farmers. He also inspected the crops grown by the chemical and natural method of wheat and gram in the crop cafeteria. He asked to promote Biofortified varieties of wheat.

Dr. H.K. Singh, Director, ICAR-IISR, Indore visited KVK Agar Malwa (M.P.)

Dr. H.K. Singh, Director, ICAR-IISR, Indore visited crop cafeteria, demonstration units at KVK Agar Malwa and appreciated the work done by KVK.



Visit of Hon'ble Shri. Kirti Vardhan Singh, Union Minister of State for External Affairs & Union Minister of State for Environment, Forest and Climate Change at KVK Satna (M.P.)

Shri. Kirti Vardhan Singh, Hon'ble Union Minister of State for External Affairs & Union Minister of State for Environment, Forest and Climate Change visited KVK Satna on the occasion of the 17th installment of about Rs 20,000 crore under PM-KISAN by Prime Minister Shri Narendra Modi.

Visit of Hon'ble Shri. Dileep Jaiswal Ji, State Minister (Independent charge)-Madhya Pradesh Government at KVK Satna (M.P.)

By Hon'ble Shri. Dileep Jaiswal Ji, State Minister (Independent charge) - Madhya Pradesh, visited KVK Satna and appreciated the activities of KVK and processing value addition unit.



Shri. Narendra Shivaji Patel, Minister of Public Health and Medical Education, Madhya Pradesh Government and Dr. Prabhuram Choudhary, Ex Cabinet Minister, Public Health and Family Welfare (Govt. of Madhya Pradesh), MLA Sanchi Vidhansabha and Shri. Rampal Singh, Former Member of the Lok Sabha visited KVK Raisen (M.P.)

Visited KVK Raisen on the occasion of *Krishi Vigyan Melaavam Pradarshini* organized by the Department of Farmers Welfare and Agriculture Development, Raisen under the ATMA scheme on 5 February, 2024 at Krishi Vigyan Kendra, Raisen. This programme was inaugurated by Chief Guest Shri. Narendra Shivaji Patel, Minister of Public Health and Medical Education, Madhya Pradesh Government. On this occasion, technical information was given to the farmers through the stalls of Farmer Welfare and Agriculture Development Department, Raisen, Krishi Vigyan Kendra, Raisen. Agriculture, Horticulture, Animal Husbandry, Fisheries, Agricultural Engineering departments and private companies like New Holland, Netafem, Kumar Seeds, IFFCO, Daawat Foods, Krishak Utpadan Sangathan, Bank, Shiva Agro etc had demonstrated advanced technology through their stalls in exhibition.



Dr. R.K. Singh, ADG (AE), ICAR, New Delhi visited KVK Indore (M.P.)

Dr. R.K. Singh visited tribal village Raikunda of Mhow block in Indore district. He interacted with the beneficiaries of CFLD and OMV programme and discussed about production technology of the soybean and groundnut crops and also got farmers feedback about the demonstrated technologies.

Dr. Dinkar Prasad Sharma, DES, JNKVV, Jabalpur visited KVK Rewa (M.P.)

Dr. Dinkar Prasad Sharma, reviewed KVK activities, monitored RAWE students and chaired SAC Meeting. On this occasion Dr. Rajesh Singh, Scientist, KVK Rewa, Dean. College of Agriculture, Rewa, Dr. S.K. Tripathi, Dr. Sanjai Singh Scientist, KVK Rewa, Dr. Akhilesh Kumar, Scientist, KVK Rewa were present.



Shri. Mohan Bhagwat (Sar Sangh Chalak, RSS) visited KVK Narmadapuram (Govindnagar) (M.P.)



"Narmadachal Sumangal Samvad" was concluded with the workers of village development and environmental activities of Madhya Bharat province in Bhausaheb Bhuskute Trust, in which 100 selected social workers of Madhya Bharat province were present. In the program, the honorable Sarsangh chalak of the Sangh, Shri. Mohan ji Bhagwat and the outgoing Sarkaryavah Shri. Bhaiya ji Joshi remained present throughout the program and heard the account of the work being done by the organizations working for holistic village development, cow

conservation, water and environment. Sarsangh Chalak Shri Mohan ji Bhagwat, while explaining the Indian definition of development, said that development of humanity is the development of man; only acquiring economic resources and rights is not called development. He said that farming has been going on in our country for thousands of years but the land has not become barren, but today's system has ruined the farming of many countries. Therefore, we all have to understand the importance of our tradition and work for village development and environment by taking along the positive energy of the society.

Dr. S.R.K. Singh, Director, ICAR-ATARI, Zone IX, Jabalpur (M.P.) visited KVK Panna (M.P.)

Dr. S.R.K. Singh, Director, ICAR-ATARI, Zone IX, Jabalpur (M.P.) visited KVK Panna to monitor the mandatory and other assigned activities of KVKs. He visited different demonstration units of the KVK and provided valuable suggestions for their improvement. He also delivered lecture on importance and necessity of natural farming to the trainees during his visit.



Visit of Dr. P.K. Mishra, Hon'ble Vice-Chancellor, JNKVV, Jabalpur (M.P.) Dr. Dharendra Khare, Dean Faculty, JNKVV, Jabalpur (M.P.) at KVK Panna (M.P.)

Dr. P. K. Mishra, Hon'ble Vice Chancellor, JNKVV, Jabalpur along with Dr. Dharendra Khare, Dean Faculty, JNKVV, Jabalpur visited KVK Panna to monitor the mandatory and other assigned activities of KVKs. He visited different demonstration units of the KVK and provided valuable suggestions for their improvement.





Visit of Dr. Shalini Chakravarti, Pr. Scientist, ICAR-ATARI, Jabalpur at KVK Panna

Dr. Shalini Chakravarti, Principal Scientist, ICAR-ATARI, Zone IX, Jabalpur (M.P.) along with Dr. Sanjana Shrivastava (Senior Research Fellow) visited KVK Panna to monitor the progress of Oilseed Model Village Programme. She visited the Itwakhas and Janwar village and interacted with beneficiary farmers of groundnut under

OMV programme and provided concurrent crop advisory for maximization of crop production.

Visit of Dr. Dinkar Prasad Sharma, Director Extension Services, JNKVV, Jabalpur, at KVK, Betul and KVK Chhindwara (M.P.)

KVK-Harda has organized SAC meeting with all align departments of the district to incorporate their suggestions for KVK’s mandatory activities which will be conducted during Kharif 2024 and Rabi 2024-25 at KVK premises. DES, JNKVV visited KVK, Chhindwara and viewed all the demonstration unit run by the KVK’s.



Professor P.K. Mishra, Hon'ble Vice-Chancellor visited KVK Damoh and Chhindwara (M.P.)

Professor P.K. Mishra, Honorable Vice-Chancellor visited KVK Damoh on 5 April, 2024. On this occasion Dr. Dinkar Prasad Sharma, DES, Dr. S.K Pandey, Dean Faculty Horticulture, Dr. Dheerendra Khare, Director Farm, JNKVV Jabalpur were present. Dr. Mishra reviewed the activities of the KVK. Hon'ble Vice-Chancellor, JNKVV visited KVK, Chhindwara on 17 January, 2024 and viewed

all the demonstration unit run by the KVK.

Hon'ble Lakhani Patel, Minister of state for Animal Husbandry & Dairy MP Govt. visited KVK Damoh (M.P.)

Three days training programme on Goat farming was organized at KVK Damoh during August 1-3, 2024 the training programme was inaugurated by Shri Lakhani Patel, Hon'ble Minister of state for Animal Husbandry & Dairy (M.P.).





Dr. R.R.B. Singh, Hon'ble Vice Chancellor DSVSKV Durg and Dr. Sanjay Shakya, DEE visited KVK Anjora, Durg-I (C.G.)

A two-day capacity building programme on “Improved Goat Management to increase Farmers' Income” was organized by the DEE, Dau Shri Vasudev Chandrakar Kamdhenu University at KVK Anjora for Subject Matter Specialists and veterinary officers on 21-22 February, 2024. Chief Guest of the programme was Dr. R.R.B. Singh, Hon'ble

Vice Chancellor DSVSKV Durg and Chairman was Dr. Sanjay Shakya, Director Extension Education. Special guest of the programme was Dr. S.R.K. Singh, Director, ATARI Jabalpur Zone-IX, Dr. R.K. Sonawane, Registrar and Dr. S.P.Singh, Deputy Director Animal Husbandry Durg. More than 40 veterinary officers and Subject matter experts of the KVK have been participated in the programme.

Krishi Vigyan Kendra, Anjora Durg, the programme “Samridh Kisan Utsav” was organized on 7 June, 2024 at Veterinary and Animal Husbandry College, Anjora. The chief guest of the program was Dr. R.R.B. Singh, Hon'ble VC, DSVCKV Durg, the chairman of the program was Dr. Sanjay Shakya, DEE and Dean, Veterinary and Animal Husbandry College, Anjora. The special guests of the program were Mrs. Sangeeta Sahu, Sarpanch Gram Panchayat, Anjora (B), Dr. R.K. Sonavane, Registrar, Kamdhenu University, Mr. Arthur Serrao DGM Communication, Farm Equipment Sector and Mr. Dilip Singh State Head, Mahindra & Mahindra Limited, Mr. Lalit Mohan Bhagat, Deputy Director Agriculture, Durg. About 225 farmers of the district participated in the programme.



Dr. Shakya, Director Extension Education and Shri. Bhagat, DDA, Durg visited KVK Anjora, Durg-I (C.G.)

Live telecast of release of 16th installment of PM KISAN has been broadcasted on 28 February, 2024 at Krishi Vigyan Kendra, Anjora in gracious presence of Dr. Shakya, Director Extension Education and Shri. Bhagat, DDA, Durg. More than 90 farmers of the district had participated in the programme.



Visit of Hon'ble Vice-Chancellor, Dr. Girish Chandel, IGKV, Raipur at KVK Raigarh, Mungeli and Kawardha (C.G.)

Hon'ble Vice-Chancellor, Dr. Girish Chandel, IGKV, Raipur visited KVK Raigarh during workshop organized on Climate Resilient



Agriculture cum seed distribution under NICRA for promotion of climate resilient based agriculture technology for enhance production and productivity of various crops. He visited KVK Mungeli and inaugurated mushroom unit.



On 25 July, 2024 Hon'ble Vice Chancellor Dr. Girish Chandel, and Director Extension Services, Dr. A. K. Verma visited the activities performed by KVK and interacted with the farmers & farm women during their visit. Hon'ble Vice Chancellor inspected the Integrated Farming System model established at KVK like Duck Unit, Farm Pond, Fish cum Duck Unit, Mushroom Production Unit, Dairy Unit, Poultry Unit, Egg Hatching Unit, Vermicompost Unit,

Small Scale Nursery Unit, Mother Orchard, Crop Cafeteria of 36 varieties of paddy, 7 varieties of soybean, 2 varieties of moon and seed hub activities performed at KVK premises. During the visit Hon'ble Vice Chancellor inaugurated Three Demonstration unit at KVK. i.e., Kadaknath Production unit, Soybean Processing unit and Demonstration unit of Natural Farming. KVK organized Farmers Scientist interaction Programme, during programme Hon'ble Vice Chancellor interacted with Farmers and Farm Women and also distributed Certificate to progressive Farmers, STRY trainees and Skill India trainees. During the programme Hon'ble Vice Chancellor appreciated the work of KVK Scientists.



Hon'ble Member of Parliament Raigarh, Shri. Radhe Shyam Rathia Ji visited KVK Raigarh, (C.G.)

Hon'ble Member of Parliament Raigarh, Shri. Radhe Shyam Rathia Ji visited KVK Raigarh, (C.G.) and attended ginger seedling distribution cum training programme organized to improve package and practices for enhanced production and productivity of ginger under MIDH.



Member of Parliament and Director, ICAR-ATARI, Zone IX, Jabalpur (M.P.) visited KVK Kawardha, (C.G.)

On 18 June, 2024 Member of Parliament and Director ICAR-ATARI, Zone IX participated in Pradhan Mantri Kisan Samman Nidhi Programme. Hon'ble Prime Minister Narendra Modi transferred the amount of the 17th installment of Pradhan Mantri Kisan Samman Nidhi directly to the accounts of farmers of the country from Varanasi, Uttar Pradesh. The dignitaries visited KVK farm and inspected

Integrated Farming System unit, Crop Cafeteria and Seed Production Programme of Kharif Crops at KVK Farm Kawardha.



Shri. Santosh Pandey, Hon'ble, MP, Rajnandgaon (C.G.) visited KVK Kawardha, (C.G.)

Prime Minister Narendra Modi on 18 June, 2024 released the amount of the 17th installment of Pradhan Mantri Kisan Samman Nidhi directly to the accounts of farmers of the country from Varanasi, Uttar Pradesh. The PM Samman Nidhi Yojana was telecasted live at the Krishi Vigyan Kendra campus located in village Newari of Kabirdham district, in

which thousands of farmers of the district participated. Under the PM Samman Nidhi Yojana, an amount of 23 crore 46 lakh was credited to the accounts of 115614 farmers of the district. Hon'ble Prime Minister also interacted with the farmers through virtual Mode. While addressing, MP Santosh Pandey congratulated and wished the farmers benefited under the Pradhan Mantri Kisan Samman Nidhi Yojana.

Dr. Trilochan Mohapatra, Chairman, PPVFRA & Ex- Secretary DARE and Director General, ICAR visited Kawardha (C.G)

One Day Awareness Programme on Plant Variety Protection and Rights was organized at auction Hall Chilfi, Kawardha District- Kabirdham (C. G.) on 21 July, 2024 in which Chairman, PPVFRA & Ex-Secretary DARE, Director General, ICAR alongwith Director ICAR-ATARI, Zone IX participated. They also visited KVK Kawardha farm and inspected IFS unit like Poultry unit, Duckery, Dairy and Quail unit and Breeder Seed Production Programme on Urd and Soybean conducted at KVK Farm Kawardha.



15.ATIC Progress Report

Under ICAR-ATARI, Zone-IX, Jabalpur, in the states of Madhya Pradesh and Chhattisgarh four ATICs are operational and serving to the farmers with technology, products and other services for agricultural development in the region.

Table 15.1: Details on ATIC

S. No	Name of the ATIC	Name of the Host Institute	Name of the ATIC Manager
1.	ATIC, Jabalpur	JNKVV, Jabalpur (M.P.)	Dr. Dinkar Prasad Sharma
2.	ATIC, Raipur	IGKV, Raipur	Dr. Jyoti Bhatt
3.	ATIC, CIAE, Bhopal	ICAR-CIAE, Bhopal, M.P.	Dr. V. Bhushana Babu
4.	ATIC, Gwalior	RVSKVV, Gwalior (M.P.)	Dr Yagya Dev Mishra

Table 15.2: Details on Farmers visit

S. No	Purpose of visit	Number of farmers visited
1.	Technology Information	9460
2.	Technology Products	443
3.	Diagnostic Services	40
4.	Others, if any Purchase of Vegetable/Nursery	73
	Total	10016

Table 15.3: Facilities in the ATIC

S. No	Particulars	Number of ATICs
1.	Reception counter	04
2.	Exhibition / technology museum	04
3.	Touch screen Kiosk	02
4.	Cafeteria	02
5.	Sales counter	04
6.	Farmer's feedback register	04
7.	Others (Visitors register, Stock store register, Telephone etc.)	04

15.1: Technology information provided

Table 15.4: Details on technology information

S. No	Information category	Total number of farmers benefitted	Category of information						
			Varieties / hybrids	Pest management	Disease management	Agro-techniques	Soil and water conservation	Post Harvest technology and Value addition	Animal Husbandry and fisheries
1.	Crop & Livestock	950	06	51	29	223	07	97	16
2.	Kisan Call Centre / other Phone calls from farmers	209	04	66	63	28	10	19	21
3.	Letters	9	1	1	1	7	0	1	0

S. No	Information category	Total number of farmers benefitted	Category of information						
			Varieties / hybrids	Pest management	Disease management	Agro-techniques	Soil and water conservation	Post Harvest technology and Value addition	Animal Husbandry and fisheries
	received								
4.	Letters replied	11	3	1	1	2	0	1	0
5.	Training to farmers / technocrats / students	687	131	117	126	401	80	133	79
6.	Video shows	423	2	1	1	320	45	98	1
7.	Others if any (Agribusiness)	314	24	21	35	156	8	69	3
	Total	2603	171	258	256	1137	150	418	120

Table 15.5: Publications (Print & Electronic media)

S. No	Particulars	Numbers sold	Revenue generated in Rs.	Number of farmers benefitted
1	Books & Technical Bulletins	4250	91250	3500
2	Agro produce, kg	21	8100	21
3	DVDs (Videos of CIAE Technologies)	02	2000	20
4	Others if any (Drawing CAD, Krishi Panchang, Krishi Darshika, Telephone Directory, Farm magazine & booklets)	28550	1759750	350
	Total	32823	1861100	3891

Table 15.6: Technology Products provided

S. No	Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefitted
1	Animal Feed	6355	kg	158875	120
2	Bio Agents (Worms)	300	Kg	3000	30
3	Chickpea	150	Kg	90000	39
4	Chickpea flour	670	Kg	46900	400
5	Wheat flour	9600	Kg	240000	1260
6	Pigeon pea dal	600	Kg	45000	380
7	Chilli seedlings	700	Number	-	-
8	Chilli	10	Kg	1000	65
9	Brinjal seedlings	600	Number	1600	75
10	Brinjal	110	Kg	1250	65
11	Cabbage seedlings	450	Number	540	-

S. No	Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefitted
12	Cauliflower seedlings	500	Number	600	-
13	Tomato seedlings	400	Number	480	-
14	Moringa saplings	1000	Number	2000	98
15	Lemon saplings	110	Number	1100	21
16	Marigold seedlings	1400		2600	40
17	Honey	36	Bottles	3600	25
18	Multinutrient Biscuit	123	Packet	7980	152
		6039		606525	2770

Table 15.7: Technology services provided

S. No	Particulars	Number of farmers benefitted
1	Details about the services to line Departments	8531
2	Farmer's visited ATIC	1798
3	Mechanization Planning Advisory	355
4	Plant diagnostics	142
6	Soil Health Cards issued & Farmers' training conducted in KVKs & NGOs	205
8	Kisan Call Centre	84
9	Letters	23
10	Others (Technologies on freshwater aquaculture (hatchery management, grow out culture and post-harvest technology)	11
	Total	11149

16. List of Scientific, Technical and Administrative Staff

Director

Dr. S.R.K. Singh

Scientific

Dr. Shalini Chakraborty, Principal Scientist (Agri. Ext.), ICAR-ATARI, Jabalpur

Dr. A.A. Raut, Scientist (Agri. Ext.), ATARI, Jabalpur

Dr. Harish M.N. (Agronomy), Scientist, ATARI, Jabalpur

PME Cell

Dr. A.A.Raut, Scientist

Technical

Sh. Ashok Kumar Dubey, Driver

Assistant Administrative Officer

Sh. Sunil Kumar Gupta

Finance and Accounts Section

Shri. Bhoopendra Kumar, AF&AO

Shri. Ram Sandesh Gupta, LDC

PPS to Director

Sh. A.K. Bhowal



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