



KRISHI VIGYAN KENDRA, THOUBAL

ICAR-ATARI, Zone-VII, Umiam, Meghalaya-793103
Host : Department of Agriculture, Manipur

Newsletter


Vol. VI Issue I

January 2023 - April, 2024

Message from the Desk of Director

I am beyond thrilled to learn that the KVK, Thoubal is releasing its Newsletter Vol. VI Issue I. I passes utmost assurance that the readers will encounter comprehensive documentation pertaining to the obligatory undertakings and other momentous occurrences transpiring throughout the reporting period. With its current presence in the District, it is in line with expectations that KVK, Thoubal will be capable of convening all relevant Departments and stakeholders in order to collectively tackle the emergent challenges that the District's farming community is encountering.

In conclusion, I would like to extend my sincere appreciation to the Sr. Scientist and Head of KVK Thoubal, as well as the entire staff, for the diligent labour and collaborative endeavors in the publication of this Newsletter.


N. Gojendro
Director, Agriculture Manipur

Message from the Sr. Scientist & Head

I am immensely gratified to present the Newsletter published by KVK, Thoubal. During the reporting period of Jan., 2023 to March 2024, the institution accomplished all mandated activities through OFTs, FLDs, training for farmers, rural youths, farm women, extension functionaries, and various farming organisations, as well as other accomplishment.

I would like to extend my heartfelt application to ICAR-ATARI Zone VII, Barapani, Meghalaya for their unwavering encouragement, guidance and support throughout the successful implementation of all the intention of addressing the requirements of the farming community and achieving agricultural diversification.

I extended my gratitude to the editorial team, line Departments, and other organizations, in particular the farming community of the District, for their collective endeavors and successful publication of this issue. In conclusion, I wish to express my profound appreciation to the host institution for their invaluable collaboration and assistance.


Dr. S. Zeshmarani
Sr. Scientist & Head, KVK, Thoubal

AWARDS & RECOGNITION



S. Robinson Singh, Progressive farmer of KVK, Thoubal got 2nd Position in Poster session during 1st Fish Farmers Sc. Congress & 23rd National Fish farmers' Day celebrating during July 10-11, 2023 at CoF, CU, Imphal, Lembucherra,



Certificate of Commendation presented to KVK, Thoubal on 15th Aug., Independence Day in recognition of the Exemplary Service provided by KVK in imparting Skill Development trg. to inmates of the Relief Camps opened under the aegis of Dist. Administration, Thoubal due to the Violence occurred on 3rd May, 2023 in Manipur.



District Millionaire Farmer of India Award 2023 during 6 to 9th December at IARI, PUSA New Delhi (Shri. Ak. Deben Singh-Innovative Farmer)

MANDATE OF KVK :

- * The mandate of KVK is Technology Assessment and Demonstration for its Application and Capacity Development.
- * Conducting on farm testing for identifying technologies in terms location specific sustainable land use system.
- * Organising FLDs on various crop to generate the production data and feedback information.
- * Organising training to update the extension personal with emerging advances in Agricultural research on regular basis.
- * Organising short and long term training course in Agriculture and Allied activities.
- * Farmers and Rural Youth with emphasis on learning by doing for higher production on farm and generating self employment.

HIGHLIGHT OF KVK ACTIVITIES:

Programme	Nos.	Nos. of Beneficiaries
On Farm Testing (OFT)	12	60
Front Line Demonstrations (FLDs)	12	107
Training Programme	77	1322
Scientist visit to Farmers' Field	54	347
Farmers' to visit KVK	2182	2182
Radio Talk	4	-
TV Talk	8	-
Resource Person	21	785
News Coverage	11	-
Celebration of Important Days	9	368

ON FARM TESTING (OFT)

Sl. No.	Title of OFT	BC Ratio
1.	Assessment of bio-fortified Pearl millet Var. ABV-04 (1 st Yr.)	1.93
2.	Performance assessment of rice varieties Var. RC Maniphou 15 & RC Maniphou 16 (1 st Yr.)	1.46 & 1.38
3.	Management of purple blotch in onion (1 st Yr.)	2.57
4.	Management of stem rot disease in rice (2 nd Yr.)	1.27
5.	Performances of Garden Pea Var Kashi Ageti	4.1
6.	Performance evaluation of Cucumber Var DC-83	3.27
7.	Periphyton based Fish Farming	2.5
8.	Performance assessment of monoculture of air breathing fish (Local Climbing perch - <i>Anabas testudineus</i>) with Scientific mgmt. practices (1 st Yr.)	2.6
9.	Assessment on Preparation of Pomelo jam (1 st Yr.)	2.0
10.	Assessment of Multi Millet Cookies.	2.4
11.	Weed management in kharif Blackgram Var. PU-31 (2 nd Yr.)	1.86
12.	Rice based cropping system of rice followed by rapeseed Rice var. RC Maniphou-15, Rapeseed var. TS-38 (2 nd Yr.)	1.51

FRONT LINE DEMONSTRATION (FLD)

Sl. No.	Title of FLD	BC Ratio
1.	Popularization of Biofortified Lentil Var. IPL-2020 (Biofortified with Zn & Fe) (1 st Yr.)	2.65
2.	Seed production of Pre Kharif Rice Var. RC Maniphou-12 (2 nd Yr.)	2.20
3.	Popularization of Tomato Var. Arka Rashak (2 nd Yr.)	4.2
4.	Popularization of French Bean Var. Arka Arjun (2 nd Yr.)	2.15
5.	Integrated Management of Blast disease in Rice Var. CAUR-1 (2 nd Yr.)	1.49
6.	Popularization of Organic management of Painted bug, aphid & sawfly in Mustard Var. NRCHB-101 without affecting bee's population (1 st Yr.)	2.16
7.	Inter Cropping of Maize (HQPM-5) with soybean (VL Soya 63) (1 st Yr.)	2.47
8.	Scientific cultivation of hybrid maize var. HQPM-5 (2 nd Yr.)	2.10
9.	Popularization of seed production of walking catfish (<i>Clarias magur</i>) using BRICS (1 st Yr.)	3.94
10.	Popularization of seed production of Climbing perch (<i>Anabas testudineus</i>) (1 st Yr.)	2.78
11.	Popularization of guava cheese (2 nd Yr.)	2.30
12.	Osmotic Dehydration of Pineapple (2 nd Yr.)	2.70



Management of purple blotch in Onion



Assessment of bio-fortified Pearl Millet Var. ABV-04.



Popularization of Bio-fortified Lentil Var. IPL-220 (Biofortified with Zn & Fe)



Popularization of French Bean Var. Arka Arjun



Periphyton based Fish Farming



Assessment of Multi Millet Cookies



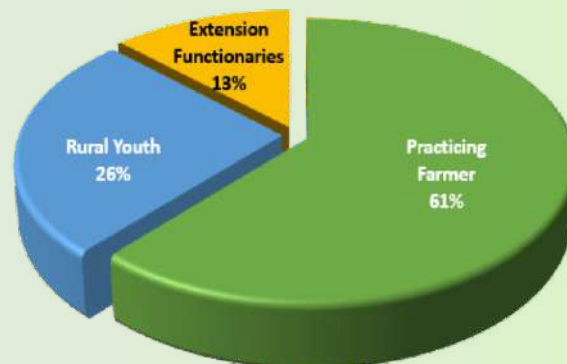
Popularization of Organic management of Painted Bug aphid and sawfly in mustard without affecting bee population



Seed production of walking catfish (*Clarias magur*)

HIGHLIGHTS OF TRAINING PROGRAMME

* 77 Nos of Training Programmes encompassing diverse disciplines and intended target groups viz., Rural Youth, Practicing Farmers, Extension Personnel were conducted during the reporting period.



SPONSORED TRAINING PROGRAMME

Sl. No.	Sponsoring Agency/Org/ Department	Remark
1.	PPVFRA	Protection of Plant varieties & Farmers Right Act.
2.	NCUI-Cooperative Education Field Project, Thoubal	Environment Protect Programme.
3.	National Institute of Plant Health Management, Hyderabad	Safe and judicious use of Glyphosate
4.	Amardhan Speciality Feeds Ltd. Delhi	Fish breeding & Scientific Feeding
5.	NABARD	Financial, Management of FPO, Business Plan Preparation
6.	Directorate of Groundnut Research (ICAR), Jugandha	Cultivation practices of Rabi groundnut var Visistha (TCGS 1694)
7.	UNIVISION, Guwahati	Scientific Piggery Farming
8.	All India Coordinated Research Project on Soybean, College of Agriculture, CAU, Imphal	Soybean Production Protection and Processing Technology.
9.	ICAR -CIFE, Mumbai	Carp Fish breeding & Hatchery operation

- * Nine (9) sponsored training programmes were conducted.
- * Additionally, RPL training for Mushroom growers (entrepreneurs) was conducted with great success along with 40 numbers of participant.



RURAL AGRICULTURAL WORK EXPERIENCE (RAWE) STUDENT

RAWE program for 22 students from South Asian Institute of Rural and Agricultural Management (SAIRAM).



STATUS OF KISAN SARATHI

No. of Farmers registered	No. of Inbound	No. of Villages	Total No. of Advisory/Messages
6382	734	128	854



SEEDS MATERIAL PRODUCED

Item	Crop	Variety	Quantity produced (q)
Cereals	Rice	Akut Phou	1.60
		Gin phou	1.60
		CAUR-1	49.5
		Sana Phou	1
		RC Maniphou-13	4.40
		RC Maniphou-7	7.20
		RC Maniphou-12	3.60
		Pari Phou	4.00
		Chakhao Poreiton	0.40
		Basmati	2.40
		WR-15-6-1	2.00
		Cachar Landraces	0.40
		RC Maniphou-15	12.83
		RC Maniphou-16	11.23
	Wheat	HPW 360	9.0

PLANTING MATERIAL PRODUCED

Item	Crop	Variety	Quantity produced (No.)
Spices	Onion	Bhima shakti	3500
		Bhima Kiran	6800
	Chilli	CH-26	1000
Vegetables	Cabbage	Rare Ball	7500
		Varium Plus	1500
	Cauliflower	NS-101	340
		White treasure	1500
	Broccoli	Green Magic	2000
	Tomato	Arka Rakshak	12100
		Arka Abhed	1500
	Brinjal	Indian Black Star	1200
	Watermelon	Arka-shyama	1500
Muskmelon	Arka Siri	500	
Pumpkin	Arka Suryamukhi	1300	
Trees	Tree Bean	Local	210
Total			39750

BIO-PRODUCTS

Vermicompost	Species <i>E-fotidae</i>	560 kg
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PARTICIPATORY RICE SEED PRODUCTION

To meet the increasing demand for quality rice seed, participatory rice seed production have been continuing with farms and certification cell of Dept. of Agri. producing 111.16 q of rice seed during kharif 2023.



SOIL & WATER ANALYSIS

During the year 2023, 180 Soil and 200 Water samples received from farmers were analysed.

720 nos of Soil Health Cards were issued during the reporting year.



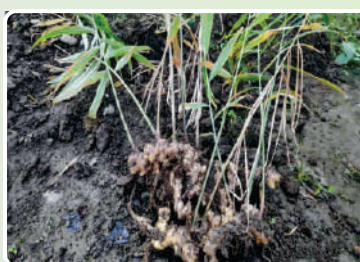
NATURAL FARMING

Total Farm area (Acre) : 24.71

Area of KVK farm covered under Natural Farming (Acre):0.33

Crops demonstrated :

- a) Guava
- b) Ginger



LECTURE DELIVERED AS RESOURCE PERSON

Sl No	Date	Topic	Name and Designation of Resource person	Venue
1	23/08/2023	Prospects of food processing for women SHG	R.K. Lembisana Devi SMS (Home Sc.)	MSRLM,Loklaobung Imphal
2	24/08/2023	Scientific millet cultivation	Dr. Chuwang Hijam SMS(PBG)	Lourembam,Thoubal
3	26/08/2023	Identifying pests and their control	N. Tomba Singh SMS(Agronomy)	Lourembam,Thoubal
4	25/09/2023	Importance of millet	Dr. Chuwang Hijam	Yurembam,Imphal West
5	05/10/2023	Breeding of climbing perch	Sribidya Waikhom ,SMS (Fisheries)	Porompat, Imphal East
6	25/10/2023	Scientific Fish Farming	Sribidya Waikhom ,SMS (Fisheries)	DC,Complex,Thoubal
7	25/10/2023	Agriculture for rural development	N. Tomba Singh SMS(Agronomy)	DC,Complex,Thoubal
8	31/20/2023	Cultivation Practice of Millet	Dr. Chuwang Hijam SMS(PBG)	Directorate of Environment & Climate Change Porompat,Imphal East
9	11/12/2023	Production and Processing technologies of millet	R.K. Lembisana Devi SMS (Home Sc.)	Khabam,Imphal East
10	11/12/2023	Production and Processing technologies of millet	Dr. Chuwang Hijam SMS (PBG)	Khabam,Imphal East
11	23/12/2023	Importance of bee in crop production	Dr.W.Jiten Singh, Farm Manager	Kshetri Sanglen,Thoubal
12	6/01/2023	Pest Control	L.Boris Singh, SMS(PP)	District Hospital Thoubal
13	6/02/2023	Integrated Fish cum Farming	Sribidya Waikhom, SMS (Fisheries)	Maibam Uchiwa Kakching
14	6/02/2023	Formation and Promotion of FPO	S.Prabin Singh, PA(Agri. Extension)	Maibam Uchiwa Kakching
15	7/02/2024	Animal Husbandry a means for sustainable livelihood	Dr. S.Zeshmarani Sr. Scientist & Head	Kakching Chumnang Leikai
16	7/02/2024	Formation and Functioning of SHGs & FPO	S.Prabin Singh, P A. Agri. Extension	Kakching ChumnangLeikai
17	7/02/2024	Agriculture/Horticulture a means of Sustainable livelihood	Dr. Chuwang Hijam SMS PBG	Kakching Chumnang Leikai
18	23/02/2024	Commercial Animal Rearing	Dr.S.Zeshmarani Sr. Scientist & Head	NCUI, Thoubal
19	23/02/2024	Value Addition of Millets	R.K. Lembisana Devi SMS (Home Sc.)	Department of Agriculture, Sanjenthong
20	23/02/2024	Cultivation of Millets	Dr.Chuwang Hijam SMS PBG	Department of Agriculture, Sanjenthong
21	21/03/2024	Package of practices for cultivation of Safflower	Dr. W. Jiten Singh, Farm Manager	DEE, CAU, Imphal



PUBLICATIONS

- Popular Article

Every Monday on local Newspaper The Hueiyen Lanpao
<http://hueiyenlanpao.com/>

- Training Compendium

- * Prospective Fertilizer dealers on Integrated Nutrient mgmt.
- * Carp Fish breeding & Hatchery operation
- * Recognition of prior learning of mushroom growers (Entrepreneurs)

- Newsletter Vol. V Issue 1



- Leaflet

- * Packaged & Practices of groundnut.
- * Vegetative propagation techniques of fruit crops.
- * Scientific cultivation of finger millets.
- * Pest of rice and its control measures.
- * Management of paddy straw.
- * Breeding and Rearing of climbing perch.
- * Scientific cultivation of groundnut.
- * KVK Mobile App.

- Research Paper

Nanotechnology and its role in plant pathology published in The Pharma innovation Journal 2023, 12/(12) : 37-49.
Longjam Boris Singh, Dr. S. Zeshmarani, Dr. Chuwang Hijam, Mk. Maqbool Qutub, Yanglem Herojit Siingh, S. Prabin and Oinam Washington Singh.

CLUSTER FRONT LINE DEMONSTRATION PROGRAMME (CFLD)

CFLD on Oilseed was conducted at 10 villages of Thoubal & Kakching Dist., during Kharif and Rabi season covering an area of 40 ha (Kharif) and 30 ha (Rabi) with total beneficiaries of 175 under the crop groundnut variety KDG-123, Soybean variety CAU-NS-1 and Mustard variety NRCHB-101.



FARMER PRODUCER ORGANISATION (FPO) /FARMERS CLUB/SELF HELP GROUP (SHG)

Sl. No.	Name of the FPO	Area of Operation	Promoted as	Primary Focused Area	Yr. of Registration
1.	Khana Chaoba Farmer Producer Company Ltd. Kakching	Kakching	POPI	Piggery	2021
2.	Loumigi Thouna Farmer Producer Company Ltd., Thoubal	Thoubal	POPI	Agriculture & Allied	2021
3.	Nongpok Ningthou Farmer Producer Company Ltd., Thoubal	Thoubal	POPI	Agriculture & Allied	2021
4.	Kaoren Phaba Farmer Producer Company Ltd. Thoubal	Thoubal	POPI	Fishery	2021
5.	Apunba Loumee Farmer Producer Company Ltd., Thoubal	Thoubal	CBBO	Pineapple	2023

KVK, Thoubal also promoted 8 nos. of Agri-Entrepreneurs, 3 Starts up, 55 Farmers Club, 145 SHGs with 11 nos. of product registered with FSSAI.



VISIT OF IMPORTANT DIGNITARIES

SLNo	Name of Visitor	Date
1	Dr. AK Singha, Principal Scientist, ICAR ATARI Zone-VII	12/01/2023
2	S.P. Lovejoy Anal, (PD-ATMA, Senapati)	13/10/2023
3	Prof. H.S. Shekhar Sharma, Director, SAIRAM Langjing Achauba	13/10/2023
4	Shri N. Gojendro, Director Agriculture, Manipur	1/11/2023
5	Shri N. Shantakumar, AFO, Dept., of Agriculture	1/11/2023
6	Dr. Sandeep Gathak, Head, Animal Science, ICAR NEH, Meghalaya	9/11/2023
7	Dr. Arnab Sen, Head, IVRS-ERSKolkata	9/11/2023
8	Dr. R.K. Labakishor Singh, Deputy Director (Dairy), Central Dairy Plant, Pompat	9/11/2023
9	Dr. Reema Sarungbam, V.O. DVO Thoubal	9/11/2023
10	Dr. H. Lamphei, V.O. Khongjom	9/11/2023
11	Dr. Y. Sovarani Devi, V.O. Heirok Vety Hospital, Thoubal	9/11/2023
12	Dr. R.K. Harshyam Singh, Spl. Piggery	9/11/2023
13	Shri Ahanthem Subhash Singh, DC, Thoubal	5/12/2023
14	Sarangthem Hemanta, CO, 3rd IRB	5/12/2023
15	Shri Lenin Khwairakpam, District Officer (Horti. & Soil Conservation), Thoubal	5/12/2023
16	Shri Irungbam Premjoy Singh, DDM Kakching, NABARD Imphal	5/12/2023
17	Dr. R.K. Mathur, Director, ICAR-IIOR, Hyderabad	6/2/2024



SEED HUB

Seed Hub programme under NFSM, demonstrations for increasing indigenous production of pulses crop viz., Blackgram, Chickpea and Lentil were taken up. Only 35q of Kharif Black gram was produced from target of 50q due to less available of upland cultivable land due to ethnic clashes since May, 2023 and 150q of Rabi Pulses were produced during the reporting year.



Mera Gaon Mera Gaurav (MGMG)

During 2023 under MGMG, 22 villages were covered with 29 visits, 19 nos. of demonstration benefitting 560 farmers.

INTERFACE MEETING OF KVKs OF MANIPUR WITH STATE AGRICULTURE AND ALLIED DEPARTMENTS

Interface Meeting of KVKs of Manipur with State Agriculture and Allied Departments was held on 6th March, 2024 to discuss and identify the feasibility of the successful technology taken up by KVKs of Manipur for large scale adoption through State Agriculture and Allied Departments. The meeting was chaired by Shri L. Geetchandra, Joint Secretary, Agriculture, Manipur along with Dr. I. Meghachandra Singh, Pr. Scientist, I.C.A.R, Imphal Center, Shri H. Balkrishna Singh, Director Fisheries, Manipur, Dr. Ng. Ibotombi Singh, Director Vety. & A.H, Manipur, Shri Todingang Pamei, Additional Director, Dept. of Agriculture, Manipur. The meeting was also attended by officials from line department and nodal officers of different schemes, Dept., of Agriculture & Horticulture, Government of Manipur.



During the interface meeting, based on the Agro-climatic condition and Sustainability of the technologies, out of 21 evaluated farm technologies presented, 11 technologies were recommended & approved for inclusion in the Action plan of line Departments for large scale adoption of the technologies.

Sl. No.	Technology	Source & Year	BC Ratio/Remark
1.	Zero Tillage mustard cultivation under rice fallow condition	DRMR, Rajasthan, 2009	(2.21) Residual moisture of rice field is used effectively by following improved mustard variety increasing yield of 17.44 % from local variety.
2.	Seed prodn. technology of Rice Varieties	ICAR, NEH Region, Manipur 2012	(1.61) Improving seed replacement rate of rice leading to increase yield of 10-15%.
3.	Cultivation Practice of Tomato var. Arka Rashak	IIHR, Bengaluru, 2013	(4.34) Triple disease resistant variety (bacterial wilt, leaf curl virus and early blight) reduces the cost of disease management.
4.	Cultivation Practice of French Bean var. Arka Arjun	IIHR, Bengaluru, 2016	(2.13) Determinate type, resistant to yellow mosaic virus and suitable for both Rabi & Kharif, increased yield of 11.23% over local.
5.	Seed prodn. of walking cat fish (<i>Clarius magur</i>) using BRICS method	CoF, CAU, Lembucherra 2020	(2.64) Easily adoptable quality seed prodn. without sacrificing male brooders.
6.	Seed prodn. of climbing perch (<i>Anabas testudineus</i>)	ICAR-CIFA, Bhubaneswar 2016	(2.76) Availability of more quality seed helps in conservation of local species.
7.	Preparation of Chow Chow Bori	College of Home Sc., Tura, Meghalaya, 2014	(2.6) Surplus Chow Chow prodn. during peak season can be converted for making bori thereby increased income instead of selling in low cost.
8.	Osmotic dehydration of Pineapple	IIHR, Bangalore, 2017	(2.7) Minimize storage losses during peak season.
9.	Chemical Castration of Piglet	Technology Inventory, ICAR- ATARI Zone - VII, 2008	(2.10) Alternative method to regular surgical castration because of its inexpensive, less time consuming, easy to perform, increase the body weight & feed conversion efficiency post castration.
10.	Provision of guard rails in farrowing pen	ICAR-Umiam, 2008	(2.4) Prevents trespass the piglet by sow thereby reduces the mortality of piglet.
11.	Feeding of Azolla in Dairy Cattle	UAS, Dharward, 2015	(2.7) Increase feed availability, enhance the quality of milk, health and longevity of livestock.



HRD CELL ACTIVITIES

Altogether 6 nos of HRD programmes were attended during the reporting year.



INPUT DISTRIBUTION



EXTENSION ACTIVITIES



Exposure Visit



Mela at Assam Rifle's camp at Lilong



Scientist visit to Farmers Field



Radio Talk



Stall display in Regional Convention on the 'Available Millet in NE Region'



Viksit Bharat Sankalp Yatra



Farmers visit to KVK



TV Talk

OTHER SIGNIFICANT ACHIEVEMENT



Best Oral Presentation ICAR-Agripreneurs Meet cum National Symposium during 4-5th October, 2023 at ICAR research complex for NEH Region, Umiam (for KVK).



2nd Best Presentation Award during National Seminar (Online) on 5 & 6 January 2024 for the oral presentation on the Topic "Study on the impact of bio-pesticides on the population of mustard aphid *Lipaphis erysimi* Org. by Society of Krishi Vigyan."



Received Consolation Prize for Mela Stall display in the Regional convention of NE states of Bharat and it's benefit in Nutrition, MDM, Anganwadis and Take Home Raashan 4 to 5th March 2024 at CAU, Imphal.

Status of Revolving Fund (RF) during 2023-2024

(Rs. in Lakh)

Activities	Opening Balance (as on 1 st April, 2023)	Income during the year	Expenditure during the year	Closing Balance as on 31 st March, 2024
1.	2	3	4	(2+3)
Production of seeds, vegetables value added products, Planting materials, Vermicomposting, Livestock and Fisheries	9.12819	3.81901	6.85438	12.94720

Editorial Committee

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Director Agriculture Manipur

Chief Editor

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Sr. Scientist & Head, KVK Thoubal

Associate Editors

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[February, 2024]