



INTERNATIONAL YEAR OF
MILLETS
2023



KRISHI VIGYAN KENDRA, THOUBAL

DEPARTMENT OF AGRICULTURE, GOVERNMENT OF MANIPUR

Issue V

NEWSLETTER / **འཕྲུལ་འཇུག་པོ་**

Jan. 2022- Dec. 2022

Promotion of millet by KVK, Thoubal on the International Year of Millets, 2023

Millet are highly varied group of small-seeded grasses, widely grown around the world as cereals crops or grains for fodder and human food and with the escalating importance of millet in respect to high nutritive value and Climate resilient crop. As an impact of climate change, it is very much difficult to carry out agricultural activities in the absence of a viable market, farmers are reluctant to grow millets despite its multiple health benefits. Keeping all these in view a millet cafeteria was established at KVK, Thoubal Farm during Kharif 2022 with 5 varieties of three major millets viz:- Sorghum var. CSV-27, Pearl millet Var. PC 701 and Finger millet var. VL 376, VL 379 and VL 380 to create awareness about health and nutritional benefits of millet with the theme "Harnessing the untapped potential of millets for food security, nutrition and sustainable Agriculture". The performance of the millets in respect of adaptability and yield were satisfactory. Harvested millet grains were processed and produced different value added products such as Sorghum sweet balls, Finger millet sweet balls, Puffed rice ball with Sorghum, Cookies and Ladus from Sorghum, Pearlmillet and Finger millet were also prepared and displayed in different exhibitions organized by Dept. of Agriculture; Skill Mela at Kakching & Thoubal Organized by Districts Administration and CAU, Imphal to promote its cultivation and value added products and make aware their nutritive value to the common peoples.



The Cost Benefit ratio of some of the millet products per Kg :

Sl. No.	Product recovery/Kg	Cost (Rs)	Gross (Rs)	Net (Rs)	B:C Ratio
1	Ragi Cookies 140 pieces of 20 gm	705 (including labeling & Packaging)	1400	695	1:9
2	Puff Sorghum Sweet balls	375	700	325	1:8

Message From the Desk of Director

I am very elated to know that Krishi Vigyan Kendra Thoubal is bringing out its 5th issue of Newsletter. I am confident that the readers will find the complete information on mandatory activities and other significant events carried out during the reporting period from January 2022 to December 2022. I hope that KVK Thoubal with its presence in the district will



be able to converge with all departments and stakeholders to move ahead and address the emerging challenges faced by the farming community of the district. I extend my earnest wish to thrive in deliberating various improved technologies for a regenerative friendly environment and a sustainable livelihood for the farmers.

Lastly, I congratulate Sr. Scientist & Head, KVK Thoubal and all the Staff for their hard work and collective efforts in bringing out this newsletter.

(N. Gojendro)

Director Agriculture Manipur

Message from the Sr. Scientist & Head

I am very delighted to put forth the 5th issue of Krishi Vigyan Kendra Thoubal's newsletter. The present issue highlights all the mandated activities achieved through OFTs, FLDs, Trainings to Farmers, Rural Youths, Farm women, Extension functionaries and Various farming organizations and the achievements made by this centre during the reporting period w.e.f. Jan. 2022 to Dec. 2022.



I convey my sincere gratitude to ICAR-ATARI Zone VII, Barapani, Meghalaya for all the encouragement, guidance and supports in achieving all the approved Action Plans which were taken up to realize the need of the farming community and made them diversified in their Agricultural farming system. I acknowledged the work and collaborative effort of the editorial team, line departments and other organisations specially the farming community of the district in bring out this issue a success one.

Lastly, I would like to extend my sincere gratefulness to the host Institution for their cooperation and support.

(Dr. S. Zeshmarani)

Sr. Scientist & Head, KVK Thoubal

On Farm Testing (OFTs)

Sl. No.	Title of OFT	BC Ratio/ Remark
1	Weed management in kharif Blackgram Var. PU-31	1:55 (Reduces weed population & cost of weeding)
2	Zinc Management in low land Pre-kharif rice	1:22 (reduces Zinc deficiency symptom)
3	Performance of kharif Cauliflower Var. DC 31 (1st Year)	1:88 (Off season type and short duration)
4	Performance evaluation of Cucumber Var. DC-83	4:10 (Suitable for sowing in spring-summer & Kharif season)
5	Organic management of painted bug, aphid and sawfly in mustard	2:06 (eco friendly, leads to increase in pollination by bees)
6	Management of stem rot disease in rice	1:27 (reduces use of chemical fertilizer)
7	Performance of biofortified Lentil Var. IPL 220	2:4 (Zn & Fe help in alleviating malnutrition)
8	Performance of Hybrid Maize Var. DMRH- 1308	2:21 (Yield is higher than landraces)
9	Seed production of walking cat fish (Clarias magur) using BRICS method	2:64 (Breeding can be done without sacrificing brooders)
10	Seed production of Climbing perch (Anabas testudineus)	2:30 (Availability of more quality seed)
11	Assessment on preparation of guava cheese	2:10 (Lost minimized during peak season)
12	Introduction to year round Nutri rich crops in NARI village	2:9 (Nutrient requirement obtained)

Front Line Demonstrations (FLDs)

Sl. No	Title of FLD	BC ratio/Remarks
1	Improved cultivation of Field pea Var. HFP-715	1.94 (Increase LER & equivalent yield)
2	Intercropping of maize with soybean	2.35 (Can be popularize as disease resistant)
3	Popularization of Tomato Var. Arka Rashak	4.34 (Farmer preferred this var. Bushy type, resistant to yellow Mosaic virus (YMMV) Suitable in both summer & rabi season.)
4	Popularization of French bean Var. Arka Arjun	2.11 (Farmer preferred this triple disease resistant (leaf curl, bacterial wilt & early blight) var.
5	Popularization of Mustard Var. NRCHB-101 under Zero Tillage Condition	2.03 (Bold seeded with high oil content suitable for rice fallow zero tillage condition)
6	Seed production of Rice Var. RC Maniphou-12	2.5 (Short duration pre-kharif rice with soft cooking quality suitable for district.)
7	Popularization of Voliam Flexi in mgmt. of Stem borers & Plant hoppers in rice	1.12 (Combination of two different modes of action protects from sucking and chewing pests, effective resistance management.)
8	Popularization of Oyster mushroom Var. Elm (Hypsizygous ulmarius)	3.8 (Improved method of cultivation shortens the cropping period, more numbers of cropping cycles/year increased productivity with diminishing cost of cultivation.)
9	Popularization of paddy cum fish culture	1.58 (Reduce cost of cultivation, integration has enhanced the productivity as well as the income)
10	Popularization of grow out monoculture of fresh water climbing perch	3.23 (Fetched higher income during the short period of time.)
11	Popularisation of water melon rind candy	2.5 (Generate income from waste to wealth.)
12	Osmotic dehydration of pineapple	2.7 (Minimize storage losses during peak season)



Performance of Hybrid Maize Var. DMRH-1308



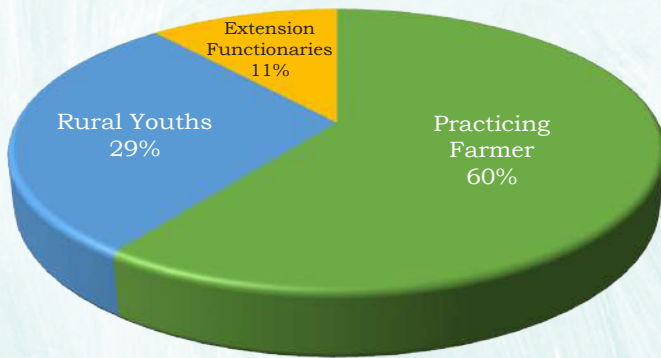
Weed mgmt. of Blackgram



Performance of kharif Cauliflower Var. DC 31



TRAINING PROGRAMME



A total number of 80 training programs comprising of 48 numbers on practicing farmers, 23 on rural youths and 9 on extension functionaries benefiting a total of 1322 beneficiaries.



Sponsored Training Programs

Sl. No.	Sponsored Agency/ Org/ Department	Remark
1	MSFAC	ENAM and its role in secured marketing of farm products
2	MSFAC	Scope for processing and marketing of essential oils from locally available aromatic plants
3	CAU, Imphal	Importance of micro & secondary nutrients in crops for doubling farmers income
4	National Bureau of plant genetic Resources, New Delhi	Conservation of plant genetic resources and diversity fair
5	College of Food Technology, CAU, Imphal	Processing & Value Addition of Seasonal fruits
6	MOMA, Dept. of Horticulture & Soil Conservation	Organic farming of vegetable crops
7	DST-CCP(HICAB Programme) CAU, Imphal	Climate Adaptive Agricultural Practices for Rainfed Ecosystems
8	ICAR, Central Institute of Post Harvest Engineering & Technology Ludhiana(Punjab) & College of Food Technology CAU Imhal	Awareness for women SHGs/ Entrepreneurs/FPO on Mechanized system for making Hawaizar
9	NERIWLM-Tejpur	Water Conservation & Water Management
10	Bankers Institute of Rural Development, Kolkata	Capacity Building program for ODs, CEOs and POPIs of FPO
11	NABARD	Financial, Management of FPOs, Business Plan Preparation



Cluster Front Line Demonstration Programme (CFLD)



Demonstration on Oilseed crops with Soyabean (16 ha), groundnut (15 ha) and mustard (30 ha) was also taken up with a total of 138 farmer beneficiaries. Farmers was done using the latest varieties and broad bed method of cultivation. Demonstration on oilseed crops with soyabean and groundnut was done with variety JS-335 and 1CGS-76 grown under broad bed method. Mustard variety NRCHB-101 was demonstrated in an area of 30 ha benefiting 75 farmers getting a yield advantage of 19.10% under zero tillage cultivation over local mustard. Overall the programme make aware of the technologies to the district in respect of new varieties and scientific cultivation practices so as to increase their income and livelihood sustainably.

To demonstrate newly released HYV and specific technology in crop production, KVK Thoubal took up CFLD since 2016 on Pulses. During the reporting year, demonstration for the crops; blackgram (20 ha), fieldpea (20ha), lentil (20 ha), Rajmash (10 ha), lathyrus (10ha) and chickpea (10 ha) benefiting 225 nos. of farmers.

RAWE Programme



- Three (3) students from School of Agriculture (SoA), Uttaranchal University, Dehradun;
- Two (2) students from School of Agriculture, Lovely Professional University Punjab;

Publications

Leaflet - 6 nos.

- Scientific Cultivation of Dragon fruit
- Value Added Product from Roselle
- Breeding and seed Production of Walking cat fish
- Scientific Bokashi Piggery
- Scientific cultivation of Lentil
- Processing and Value Addition of Pineapple

Research Paper -

- Farmers' Perception towards Chemical Castration Method in Piglets.* Journal: Journal of Krishi Vigyan
- Use of Social Media in Enhancing Farmer's Satisfaction Level on Agricultural Extension Services: A Case Study of Farmers Club in Thoubal District, Manipur.* Journal: Research Biotica

Popular article - Every Monday on local newspaper Hueiyen Lanpao <http://hueiyenlanpao.com/>

Kisan Sarathi

Kisan Sarathi is an ICT-based solution for supporting agriculture with latest agri-technologies and large number of subject matter experts. So far 5164 nos. of farmers were registered and problems on Agri. and Allied activities being solved through this initiative of the Ministry of Agriculture and Farmers welfare Govt. of India.

No. of Farmers registered	No. of Inbound calls	No. of Villages	Total no. of advisory/ message	Total no. of Beneficiaries
5164	61	96	164	13370



Farmer Producer Companies

- ◆ Signed 4 (four) MoUs with NABARD, Regional Centre Imphal with KVK Thoubal as Producer Organisation Promoting Institute (POPI) for Promotion and Formation of 4 FPOs.
 - Khana Chaoba FPC Ltd., Kakching District
 - Nongpok Ningthou FPC Ltd., Thoubal District
 - Loumigi Thauna FPC Ltd., Thoubal District
 - Kaoren Phaba FPC Ltd., Thoubal District
- ◆ Signed a MoU with Central Agricultural University, Imphal with KVK Thoubal as Cluster Based Business Organisation (CBBO) for Promotion and Formation of 1 FPOs under Central Sector scheme of 10000 FPOs formation.
 - Apunba Loumee FPC Ltd., Thoubal District



Seed Materials produced

Item	Crop	Variety	Quantity produced (q)
Cereals	Rice	Tampha phou	44.5
		Akut phou	1.40
		Sana phou	4.90
		Gin phou	1.40
		RC Maniphou-7	8.05
		RC Maniphou-13	33.60
		Chakhao	1.40
		Pari phou	1.40
		RC Maniphou-12	4.90
		Basmati	1.05
		WR	0.175
		Cachar Landraces	0.1225
	Wheat	HPW 360	1.50

Planting Materials produced

Item	Crop	Variety	Quantity produced (No)	
Fruits	Dragon Fruit	Red Indian	470	
		Papaya	56	
Spices	Onion	Nashik Red	2000	
		Chili	NS 1101	6100
		King chili	Local Cultiver	550
Vegetables	Cabbage	Candid/Rare ball/BC-76	2600	
	Cauliflower	Candid charm/Pusa Ashwini white	6180	
	Broccoli	Green magic	3744	
	Tomato	Arka Rakshak, Arka Abhed	11000	
	Brinjal	Pusa Shyamala	3200	
	Cucumber	Pusa Barkha	2120	
Total			38020	

Livestock Production and Bio-Products

Particular	Breed	No.
A. Livestock Production		
Cattle	Crossbred	7
Geese	Local non-descript	5
Pig	Rani	10
B. Bio products		
Vermicompost	(Species-E-fotidae)	2000 kg

Soil and Water Analysis



- During the year 2022, 189 soil and 200 water samples received from farmers were analysed.
- 782 nos of Soil health cards were issued during the reporting period.

Natural Farming at KVK Thoubal

- Total Farm Area (Acre): 24.71
- Area of KVK farm earmarked/ covered under Natural Farming (Acre): 0.33
- Crops Demonstrated : a) Guava; b) Turmeric
- Crop-wise Yield (q/ha): -
- Remarks : Natural farming under guava field intercrop with turmeric.



Participatory Rice Seed Production

Rice is the major crop of the state for which seed production using HYV released by ICAR, CAU and RRS Wangbal was taken up so as to increase the seed replacement rate of rice by HYV producing 20, 14, 22.8 Mt of RC-Maniphou 12, CAU -R1 and RC Maniphou 13 respectively. The certified seeds were supplied to Dept. of Agriculture, Manipur for large scale use of HYV Seeds of rice.



Celebration of Important Days

Sl. No.	Name of Programm	Duration and Date
1	Pulses Day	10-02-2022
2	International Women Day	08-03-2022
3	Kisan Mela - Kishan Bhagidari-Prathmikta Hamari Campaign	25-30 April,2022
4	World Environment Day	05-06-2022
5	International yoga Day	21-06-2022
6	National Fish Farmers Day	10-07-2022
7	94thICAR Foundation Day	16-07-2022
8	Har Ghar Tiranga Campaign	13-15 Aug, 2022
9	Poshan Abhiyan & Tree plantation programWorld	17-09-2022
10	PM Kisan Samman Sammelan	17-10-2022
11	Gandhi Jayanti	02-10-2022
12	World Soil Day	05-12-2022



Human Resource Development (HRD)/ Cell Activities

HRD program through ICT for dissemination of information to farmers of KVK, Thoubal

Official Email:- kvkthoubal@gmail.com, kvk-thoubal@manipur.gov.in

Awareness for kvk portal- <https://kvk.icar.gov.in/>

KVK, Thoubal website - www.kvkthoubal.org

Used of KVK mobile app

No. of farmers registered approx. 350

JAL SHAKTI ABHIYAN- CATCH THE RAIN

As a part of Jal Shakti Abhiyan campaign two numbers of training programme and one kisan mela were organized under the theme “Importance of Irrigation water as nutrient source” in which 136 numbers of farmers participated the programme.



Swachhata Activity

A total of 32 different programs were organised and as many as 1087 beneficiaries participated in various Swachhata Activities during the year 2022.



MGMG

Under this program different activities such as PRA (Participatory Rural appraisal), training programs and awareness were organized. During the year 2022, 22 (twenty-two) different villages were covered and 39 (thirty-nine) visits were made. A total number of 24 demonstrations and 760 participants were benefited.



Seed Hub

Seed production programmes on pulses has been taken up since the inception Pulse seed hub program during the year 2016 for the crops Arhar, moong, Blackgram, Lentil, Chickpea and field pea for producing indigenously locally suitable high yielding varieties in a participatory mode with farmers so as to meet the demand of quality seeds in the region .

This program benefitted the participating farmers as the seeds produced by them was procured by the seed hub centres at reasonable price. This year, KVK Thoubal took up blackgram, lentil, fieldpea and chickpea producing 45, 40, 20 and 50 quintals respectively and will make it avialble to local farmers, CAU, ICAR and fellow KVKs in the region.



Consultancy provided

Agricultural, Horticultural, Fisheries, Home Science and Animal Science related consultancies were provided to farmers and Extensional functionaries of the district through Visit, Walk in and online through Kisan Sarathi (Message and Voice call).



Workshops & Lectured Delivered

Altogether 25 lectures, 2 workshops and 1 winter school were delivered and attended during the reporting year.



VISITS OF IMPORTANT DIGNITARIES

1. Shri Th.Bishwajit Singh Minister of Agriculture, Forest & RD.
2. Dr. Praveen K. Singh Agri. Commissioner Govt. of India, DA&FW, New Delhi visited KVK on 10-11-2022 for monitoring Oil palm.
3. Prof. Ph. Ranjit Sharma Director of Extension Education CAU, Imphal visited the KVK Oilpalm nursery.
4. Shri M. Joy Singh, Commissioner Agriculture visited KVK Thoubal.
5. Dr. Anupam Mishra, VC, CAU Imphal, B.K Srivastava Deputy Commissioner Dept. of Agriculture & Farmers Welfare Krishi Bhawan, New Delhi visited KVK Thoubal and interacted with KVK staff on 19.02.2022.
6. Sarangthem Hemanta Singh, Commandant of 3rd IRB, Khangabok visited KVK Thoubal.



Awards and Recognition

Sl. No.	Detail
1	1st Best Institution Stall Award, in the State Level Krishi Mela-2022 Organised by SAMETI, Manipur
2	3rd Prize in Best Poster Presentation Award in the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture orgd. by CAU, Imphal during 17-19th March 2023.
3	Shri Akoijam Deben, Innovative Farmer Award 2022, Regional Agriculture Fair held at AAU Jorhat. He has shared his knowledge and experience with fellow farmers and motivated them to adopt technology led agriculture for enhance income and sustainable livelihood.
4	Shri Ph. Thoiba Singh, IFS based Progressive farmer, felicitated by Income Tax Department, NER at DC Complex Thoubal district, Manipur.
5	Smt. W. Bimola Devi, IFS based Progressive farmer and a National Awardee, felicitated by Income Tax Department, NER at DC Complex Thoubal district, Manipur.
6	Shri Akoijam Deben Singh, Innovatice Farmer, felicitated by Income Tax Department, NER at DC Complex Thoubal district, Manipur.



Other Extension Activities



Highlight of KVK Mandated Activities

Mandate of KVK: Technology Assessment and Refinement, its Demonstration for wider application and to enhance Capacity Development (TADA-CD)

Particulars	Nos.
On Farm Testings (OFTs)	12
Frontline Demonstrations (FLDs)	108
Trainings	76
Method Demonstration	17
Popular articles	48
Publication	9
Newspaper coverage	6
Sponsored programs	5
Radio Talk	7
Lecture Delivered	20

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