HALF YEARLY

ISSUE: 2

August – December 2023

KVK NEWSLETTER

Farm Science Centre

Lawngtlai District

ON FARM TRIALS

1) On Farm Trial on Performance of Sunflower under Lawngtlai District:

Sunflower is very important oilseed crop in India and in the world. It is generally cultivated during summer season in different part of India but in the case of Mizoram which is situated in hill areas it is not possible due to scarcity of water. A trial was conducted to assess the performance of improved sunflower (COH 3) during kharif and Rabi season in 2023. The overall performance of both the season was good. The comparison between both the season was as shown below –

	Crop duration (days)	Head diameter (cm)	100 seed wt. (g)	Plant height (cm)	Productivity (kh/ha)
KHARIF	92	15.7	4.9	150.2	856.2
RABI	91	18	5.2	160	2410

It is very clear from the table given above that the performance of sunflower during rabi season was better than during kharif season. This assessment proved that our farmers can cultivate sunflower successfully in hilly areas during kharif

Season by depending on rain water only. The productivity was less during kharif season but

the great burden of irrigation during Rabi season can be avoided. From the assessment result it can be concluded that there is great opportunity for the hill farmers of Lawngtlai district and all over Mizoram to produce more sunflower seed during Rabi as well as during kharif season in Mizoram for more self-sufficiency in oilseed

2) On Farm Trial on Performance of Improved variety of Rice under Lawngtlai District

Rice is very important staple food crop of Mizoram and there are different types of varieties for different region. A trial on RCM 13 variety of Rice was conducted to find out its suitability for lawngtlai district.

In Mizoram the demand for stickyness in rice, palatable and high productivity of rice variety is very high. It is a short duration variety suitable for early summer and pre-kharif crop.

It is cultivated during kharif season under lowland condition in 2023. The comparison result of some parameters are given below in the table –

From the table we can see that the performance of RCM 13 was very satisfactory comparing to other rice variety. It is also a short duration crop and second crop can follow in a year. From the assessment result we can concluded that RCM 13 variety of Rice is very suitable to Lawngtlai district and it can be popularize in larger area within the district and all over Mizoram. The best quality of Rice which can be popularize should have such quality which is palatable and easy to process and having high productivity as well as well adaptable to our region. RCM 13 variety of Rice is having all the necessary quality that can be accepted by our farmers and it can also be very important crop for increasing cropping intensity due to its short duration.

Name of Variety	productivity (q/ha)	effective tillers/plant	Spikelets/ panicle	plant height (cm)	duration (days)
RCM 13	61.8	19.1	296.4	123	104
Matupi (local)	40.26	12.3	125.8	120.6	130

3) On-Farm Trial on Interaction Effect of Designer Micro Nutrient on the Growth and Yield of Ginger var. *Thinglaidum*

Interaction effect of designer micro nutrient on the growth and yield of ginger var. *Thinglaidum* was evaluated during Kharif season in KVK Lawngtlai District's demonstration plot and farmer's field which showed a good result in quality attributes. The rhizome weight, rhizome spread, number of tiller/ plant and yield were evaluated and found to be superior to farmers' practice

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4) OFT on Optimizing Crossbred Pig Performance through Area Specific Mineral Mixture Supplementation in Lawngtlai District

To mitigate the common challenges in pig farming in Lawngtlai district, KVK Lawngtlai conducted an on-farm trial by supplementing Speromix, an area-specific mineral mixture designed specifically for Mizoram, tailored to meet the nutritional needs of all the age group of pigs in this region. It was observed in this trial that the supplementation of Speromix to growing Pigs improved the growth performance, reduced mortality, accelerate sexual maturity which is beneficial for breeding purposes and overall productivity. It also improved the overall health status and ultimately boosts the economic outcomes for local farmers engaged in pig farming in the district.

FRONTLINE DEMONSTRATION

1) FLD on Performance of Rainbow Rooster under Backyard System of Rearing in Lawngtlai District

KVK Lawngtlai has undertaken a crucial on-farm trial by introducing an improved breed of poultry that excels in both egg and meat production. This trial aims to assess the breed's adaptability to local conditions, its potential to boost poultry farming productivity, and the socio-economic benefits it can bring to small-scale poultry farmers within the district. Rainbow rooster rearing in the backyard system showed good results in terms of body weight gain and egg production. The average annual egg production (nos.) recorded during the trial was 164±1.36. Following the successful OFT, a demonstration was conducted to showcase the results to a broader audience. The demonstration highlighted the practical aspects of rearing Rainbow roosters under a backyard system encouraging wider adoption among local farmers.. Due to high resistance to poultry diseases and their free-range nature, rainbow rooster farming can be carried out with a low investment in backyard system

2) Front line Demonstration on Sequential cropping Maize-Soyabean:

It is growing two or more crops in succession on the same field each year. After the previous crop has been harvested, the subsequent crop is planted. It has many advantages – it can improves soil productivity and fertility, it can decrease pest population, discourage further growth of weeds, reduce soil loss, improves soil ability to retain water,

it can increase the resistance of agricultural planting systems to extreme weather.

In this Frontline Demonstration, Soyabean was cultivated after Maize cultivation and this method not only increase the cropping intensity but also improves the soil productivity and fertility due to Nitrogen fixation of soyabean. Farmers generally cultivated maize crop only in a year which is heavy nutrient feeder that ultimately decrease soil productivity and fertility. Cultivation of soyabean crop as a second crop not only increase cropping intensity and crop production but also increase soil fertility and maintain soil productivity. The demonstration result had shown that due to sequential cropping system of maize and soyabean we can produce maize (25.7q/ha) and soyabean (19.2q/ha.) from the same field in a year. The general farmers in Mizoram usually produce one crop only in a year without an improvement in soil fertility. It is very clear from the demonstration that if sequential cropping system is popularize among the farmers there will be more crop production as well as soil improvement.

3) FLD on popularization of guava cheese preparation

Guava is a seasonal fruit and highly perishable with very short shelf life. Under these conditions guava growers fail to get attractive returns and a lot of produce goes as waste. Value addition is a good alternative for its preservation, as well as utilization of culled/ damaged fruits.

KVK, Lawngtlai district developed shelf stable guava cheese to evaluate the utilization of wasted guava fruit. The prepared guava cheese can be stored for 3 months at room temperature and upto 6 months under refrigeration. It has good texture, colour and taste. The materials are less costly and farmers could easily adopt to increase their income by formation of guava cheese in the glut period.

TRAININGS

Sponsored Training on Food preservation (Pickle making) Jointly organized by Bru Yapri Development Organization (BYDO) in collaboration with KVK, Lawngtlai district.

On 16th October, 2023 twenty numbers of farm women from different places belonging to Bru community were given hands on training in pickle making. The Pickle Making Training Program is designed to equip a group of women with essential skills and knowledge in producing high-quality, flavourful pickles. Participants learnt the art of preserving local

produce and crafting delectable products that resonate with local and global tastes. By nurturing their entrepreneurial spirit, we aim to transform these women into self-enterprise leaders, contributing not only to their families but also to the overall economic growth of their communities

AWARDS & RECOGNITION

First Prize in Horticulture Exhibition-cum-Horti Fair, Lawngtlai 2023

Mrs F. Lalsiamliani, an On-Farm Trial farmer under Horticulture discipline of KVK Lawngtlai was awarded with First prize in Ginger crop displayed during Horticulture Exhibition-cum-Horti fair which was held on 24th November, 2023 at LADC Conference Hall, Lawngtlai, Mizoram.

Report on Swachhta Pakhwada (16th – 31st December, 2023)

The Swachhta Pakhwada launched by Government of India, is a fortnight-long program observed to ensure mass participation of citizens in Swachhta activities and to truly transform Swachh Bharat into a citizen's movement leading to a national movement, which is the most significant cleanliness campaign in India. This drive was formulated to cover all the cities and towns of India to make them clean and it would be the best tribute India could pay to Mahatma Gandhi. This year, Swachh Bharat Pakhwada, 2023 is once again being observed by KVK Lawngtlai District from 16th to 31st December,2023 with zeal and vigor. our KVK has carried out several activities during the Swachhta Pakhwada and it was celebrated with great enthusiasm. The swachhta drive on the lines of our action plan for 2023 was carried out during the Swachhta Pakhwada from 16/12/23 to 31/12/23 are Taking swachhta pledge, cleanliness drive including cleaning of offices, corridors and premises,cleanliness and sanitation drive in the villages, safe disposal of biodegradable and non-biodegradable waste, generation of wealth from waste, press conference on swachh bharat Pakhwada, celebration of kisan divas etc

Krishi Vigyan Kendra Lawngtlai, Conducts Natural Farming Poster Camp

"Natural Farming is a chemical-free traditional farming method. It is considered as an agroecology based diversified farming system which integrates crops, trees and livestock with functional biodiversity". The farmers of Lawngtlai District are reluctant towards the use of Chemicals in their farming processes, which rules them as Natural farmer by default. However to raise awareness on the principles, practices and components of Natural Farming, a Poster camp was organized under the project "Out scaling of Natural Farming through KVKs" organized by KVK Lawngtlai District at Chawnhu Village on 15th November 2023 where 41 farmers of the district attended and benefited from this awareness program. A Flyer of the posters were distributed to the farmers where detail information of Natural Farming components and their preparation procedures were written in detail including Jivamrith, Bijamrith, Mulching and Pest management. The poster camp emphasizes on biomass mulching and on-farm biomass recycling, use of on-farm cow dung-urine formulations, maintaining soil aeration and exclusion of all synthetic chemical inputs. Natural Farming improves soil fertility, environmental health as well as helps in the reduction of greenhouse gas emissions and also promises the enhancement of farmer's income

Figure 1-Poster camp on Outscaling of Natural Farming through KVKs organized by KVK Lawngtlai District on 15th Nov 2023 at Chawnhu Village

Figure 2- Poster camp on "Awareness on Natural Farming" at Chawnhu(Dt: 15th Nov 2023)

WORLD SOIL DAY

KVK Lawngtlai imparts training on SHC on the eve of World Soil Day

To raise awareness on the importance of Soil Health and fertility KVK Lawngtlai district organized Training Programme whilst celebrating World Soil Day on 5th December 2023. This training programme focused around the theme "Soil and Water: a source of Life". 23 farmers from Bru Yapri Development Organization who are enthusiastic farmers attended this training programme. This is followed by farmer scientist interaction where the farmers raised several questions regarding their farm and

Figure 3: Practical Demonstration on Soil Sampling procedure by KVK Lawngtlai District on 5th December 2023

Figure 2: Training of farmers on World Soil Day at KVK Lawngtlai District on 5th December 2023

farmers of Lawngtlai district on the eve of celebration of 'World Soil Day' which falls on 5th December of every year. This program was organized to create awareness amongst the farmers about the importance of soil health and its management for sustainable management of soil resources. The farmers are given knowledge to make informed decision about crop planning and nutrient management based on the specific characteristics of their soil.

NICRA

1) Demonstration on Improved Shelters for Reducing Heat Stress in Pig under NICRA

Reducing heat stress in pigs is critical for maintaining their health, welfare, and productivity as Pigs are particularly susceptible to heat stress. Improved shelter design plays a significant role in mitigating heat stress. The demonstration conducted by KVK Lawngtlai under the NICRA project highlights the effectiveness of improved shelter designs in reducing heat stress in pigs. It was observed that improved shelter increased the growth rate and reduced mortality which not only enhance the

economic viability of pig farming but also improve animal welfare. These benefits translate to better economic outcomes and

overall productivity for pig farmers. This initiative also serves as a model for integrating climate-resilient practices into livestock management, offering valuable lessons for broader applications in agriculture

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2) Climate resilient technology demonstration through polymulch cultivation of watermelon

Watermelon cultivation and production was done on Tuiphal zau area using polymulching, for its capacity to suppress weed, conserve soil moisture and maintain soil temperature. An average productivity of 160q/ha for the 10 farmers selected was achieved from a total area of 2.5 ha. The average fruit size was 4.5-5 kg and TSS of 9-10%.

3) Cultivation and harvesting of multiple disease resistant F1 HYV of Tomato (*Arka Abhed*)

A total of 10 farmers were selected cultivated the tomato seeds provided by KVK Lawngtlai. An average productivity of 134 q/ha and BCR 6.83 was achieved and PDI: T - 4.3%, FP- 22.2 % observed.

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