

Details of the success stories

Some of the documented salient success stories of progressive farmers for the district through KVK intervention in their farming activities having wide spread adoption by the fellow farmers are :-

1. Success story on “*Sugarcane Cultivation*” –*Kh. Lokendro Singh*

Introduction/ Back ground/Existing problems/Status

Sugarcane is under cultivation in large extent under rain-fed conditions at foothills of Laipham Lotnung range of Thoubal district. But these are highly susceptible to smut disease. Early shoot borer and smut are the major problem in sugarcane crop impeding cane production and juice quality.

Early shoot borer causes heavy yield losses as it affects the plant stand per unit area. It also leads to canes of different age, which will be poor in juice quality with less cane weight. Crop yield fall by 70% in case of heavy infestation. Losses due to smut damage have been reported and range from 25-40% in plant crops and even upto 70% in rations.



KVK Intervention

The above problems after being surveyed by the KVK was solved by spraying Chlorpyrifos 20% @ 2.5ml + Propiconazole 25% @ 1ml/litre water (being compatible). And it was applied two times at 30 days interval 1st spray was 40 days after planting. Kshetrimayum Lokendro Singh S/o ksh. Chaoba Singh took up the demonstration where he followed all the instructions from KVK in farm area of 0.25 ha at Kakching Laipham Lotnung, Kakching Makha Leikai.



Outcome

The cane yield due to the technology has been activated up to 53.3 tonnes/ha giving a net return of Rs. 1,40,000 and B:C of 2.06:1. While selling the fresh canes for fresh juice

production; While the non treated fields of farmers practice ,the yield was only 47 tonnes/ha giving a net profit of Rs.1,20,000 with B:C of 1.92:1.

Impact

The farmers around the field were very happy seeing the result of the demonstration and have adopted the technology on large scale.

2. Success story on “Integrated Farming System” –Smt. Wairokpam Ongbi Bimola Devi

Introduction

Smt. Wairokpam Ongbi Bimola Devi, aged about 58 years old is a well-educated progressive and successful women farmer from Laiphrakpam Village, Thoubal District, Manipur. The village is famous for the production of vegetable crops throughout the year in the district. Every household has a vegetable farm producing vegetable crops for household consumption and sold to the market fetching good price and earning income throughout the year. In spite of hard work and endeavours, her farming activities were not very scientific in the beginning due to lack of knowledge resulting in low yield of the crops as well as other animal enterprises taken up to her disappointment, but she still was very hard working and did not stop.



KVK Intervention

During a training programme in the village conducted by KVK, Thoubal, the prospects of Smt. Bimola’s farming system was discovered. She was found to take up almost all the activities that



could contribute to a successful integrated farming system. She had the components of livestock such as local cows, pigs, poultry, vegetable garden, rice fields etc. Observing the components as mentioned above, KVK, Thoubal took the interest of training her on various aspects with the resources of KVK. She was availed with a poly house from SASMIRA, Vermi-compost Unit from Horticulture, FLD on rice seed production programme .Her rice fields after the harvest of rice were utilized for growing rabi pulses such as lentil, field pea and mustard in a cropping system mode using all the available inputs from her own farm.

Output and Outcome

From the various ventures she has been able to utilize her polyhouse with the cultivation of a very high value crop of King Chilli from which she earns a good amount. Besides these she gets a premium amount from rice seed production compared to grain production. She also earns from her piggery unit .She is able to maintain her family and other expenses for the education of her children, social expenses and she leads a very respectable family life and has earned social status too.

Recognition/ awards to farmers

Smt. Wairokpm Ongbi Bimola Devi has received many awards such as best farmer award 2017 given by SAMETI, Manipur. She was also awarded with Best Woman farmer award by KVK, Thoubal in 2017. The highest award received by her is DDK best women farmer award during the year 2019-20 with a cash reward of Rs. 2,00,000 (Rupees Two Lakh)

Impact

By seeing the success of her activities, the neighbouring farmers of her locality have taken up activities of farming in accordance with her footsteps. Bimola Devi also formed a successful Woman farmer Club lead by her.



3. Success story on “Zero tillage cultivation of rapessed – mustard var. NRCHB – 101” – Shri. Ph. Thoiba Singh

Introduction

Shri. Ph. Thoiba Singh is a progressive farmer having a wide knowledge about agriculture and its allied disciplines. He is doing integrated farming in his farm as well as crop rotation after rice using mustard, lentil field pea and chick pea. He is a retired army person having visited and seen many agriculture fields during his service period of Punjab, Haryana, UP. To solve the problems of crops and livestock enterprise to increase production, he has been in frequent touch with KVK, Thoubal and ICAR centre since last five years.



KVK Intervention

Cluster front line demonstration was conducted during Rabi season in the year 2018. Supply of seed, plant protection chemicals and technology about zero tillage method cultivation under cluster front line demonstration under NMOOP time to time inspection of field.

Shri. Ph. Thoiba Singh of Hijam Khunou village of Thoubal district was very much interested in mustard cultivation and agreed to grow mustard under zero tillage with variety NRCHB-101. The mustard seeds were sown 4 days after harvesting paddy. The seed rate was 15kg/ha with fertilizer dose of 40:20:20 kg NPK/ha.

Outcome

The yield of the mustard was 10.2 quintals/ha with the Benefit cost ratio of 2.21:1 whereas before the intervention the yield was 7.6 quintals/ha with Benefit cost ratio of 1.61:1

Impact

Seeing the performance of NRHCB – 101 under zero tillage condition in the field of Shri Thoiba Singh, other farmers in his village approached the KVK, Thoubal to give seeds of NRHCB – 101 for planting in the next season.

4. Success story on“*Organic Farming- A Sustainable way of earning Income*” –Smt. Ibechaobi Leima

Smt. Ibechaobi Leima, aged about 45 years from Umathel, Thoubal District, has been doing organic farming since 2015 under Integrated farming system mode with the components; cattle, piggery, E.M. Composting, fishery, bamboo plantation around her farm boundary, Black rice during Kharif season, pumpkin, watermelon, Ground potato, Cucumber, King Chilli & Tomato in her 1.50 ha land. The farm produces were sold to the market as organic produce fetching good price earning an annual income of more than Rs. 2,00,000/- though the production was a bit low in comparison to chemical agriculture. The crops and livestock residues were utilized to produce organic manures and compost along with Effective Microorganism to enhance production period and quality. These organic manures were used for manuring the crops instead of using chemical fertilizers and other chemical pesticides. The produced black-rice grain was used to produced several by-products through food processing and value addition, such as black rice puri, laddoo, noodles, rasgulas, poha, suji etc. The knowledge of organic farming and food processing was brought about by the line departments such as horticulture, agriculture, animal husbandry, NGOs, ICAR, CAU and KVK Thoubal. Under her leadership she established a Farmers’ Club through KVK Thoubal under NABARD so as to uplift the farmers of her village.



Recognition/ awards to farmers

Smt. Ibechaobi Leima got the East zone, India Women Farmer award in the year 2018 by the Mahindra Samradhi India for her contribution in the field of Integrated farming system and value addition of black rice. Also she was awarded as Best Women Farmer in the year 2017 by KVK Thoubal.



5 . Participatory Rice Seed Production in Thoubal District

Situation Analysis:

Thoubal district is known as the rice bowl of Manipur but when the rice fields and rice growers were surveyed, there were many problems facing the farmers. The problems may be listed as lack of knowledge of proper package of practices, ignorance of quality seed, lack of knowledge of seed rate etc. Among these problems the major problem identified turned out to be non-availability of quality seed. Most of the farmers used farm saved seeds which were contaminated with more than about 20% off types resulting into low yield & seed replacement rate was also very low only 4-5%.

Technology Implementation and support:

Through different training programmes on various aspects of rice seed production right from selection of variety, seed source, classes of seed, site selection, seed treatment, raising of nursery, seedling age, spacing of transplanted rice for seed production, roguing, insect pest & disease management, isolation, harvesting and post harvest management, labelling etc, many farmers were made thoroughly aware.

Uptake, Spread & benefits:

At first KVK, Thoubal took up participatory Rice seed production of a few rice varieties namely CAUR-1, RC Maniphou-7, RC Maniphou-12, RC Maniphou-13 with some selected farmers from different villages. They were trained through trainings as well as method demonstration on various steps of seed production. The crops thus raised were very successful. The seeds produced were purchased from the producers at a premium price higher than that of grains produced by other fellow farmers. On an average there was a benefit of at

least 15-20% higher income than the grain producers. Being aware of the better benefit of producing seed, neighbouring farmers have volunteered to undertake rice seed production. Thus KVK, Thoubal is able to produce on an average 100 mt of quality rice seed each year benefitting both the seed growers as well as the farmers availing with quality seeds for their rice cultivation getting both mental as well as financial satisfaction.



6. Success story on “Integrated Farming System” - Shamjetsabam Premchand Singh

Manipur IFS model having the components of Piggery, poultry and Agriculture (Paddy vegetable cropping sequence) is being established on the farm of Shri Shamjetsabam Premchand Singh, hailing from Nongpok Lourebam village of Thoubal District, Manipur in an area of 0.875 ha area. Paddy followed by winter vegetables is grown in the farm for self consumption only in an area of 0.125 ha. The net income from poultry (boiler: 1500 birds/ batch) from 0.50 ha area is Rs. 4.35 lakh/ annum while the annual net income from piggery unit of 0.25 ha area is Rs. 2.85 lakhs. The average annual revenue generated from this model is Rs. 7.20 lakhs/ annum and it has been successfully replicated in 10 other locations in Thoubal district alone and started replicating in districts of the state.



7 . Success Story of Sapam Ranjana Devi

Profile of the Farmer



Name: **SMT. SAPAM RANJANA DEVI**

W/O: **S. Hemanata Singh**

Address: **Kakching wairi Chabal**

Age: **39 Years** Mobile: **8730802929**

Education: **Graduate**

Occupation: **Housewife**

About the enterprise

Processing and post-harvest technologies are becoming one of the important income generating enterprises for the farm women especially in rural areas. Smt S. Ranjana devi is one such progressive entrepreneur who become a role model in changing a lifestyle by producing black rice cake at her own home. She obtained the necessary raw material i.e. black rice which were readily available in her locality but sometimes she used to procure it from other district also. She started her enterprise by producing only black rice cake but later different items of black rice including biscuits were also able to make and supply to the buyer.



KVK intervention

KVK imparted various training programmes on processing, post-harvest management techniques, value addition of fruits, vegetables and cereals including black rice from time to time. One such training programme was held on 9th and 10th April 2019 at Kakching Lamkhai on the topic “**Value addition of Black Rice**”. In the said training programme about 20 farmers were participate from the village itself. From this training programme she was motivated by the technology



demonstrated by the KVK and she conducted a trail by procuring an OTG Oven of 52 lit. Capacity, thus she started her journey on the production of black rice items.

Economic analysis

The below table shows the cost-benefit of black rice cake from 1 kg of black rice.

Components	Cost (Rs.)
Black rice flour 1 kg	70.00
100 g sugar	5.00
Egg (3 nos.)	18.00
Baking powder (5g)	4.00
100 ml refine oil	12.00
Packaging and labelling (@rs.4 per piece of 50g cake for 4 dozen)	192.00
Total Cost	301.00
Gross return	480.00
Net Return	179.00
B:C Ratio	1.60

Marketing

At first the marketing channel of her product were not good enough. She used to sell her product with very low price only to her locality but after the getting of fssai registration from the concern authority, Smt. Ranjan Devi started selling of her products even to other districts. Now she used to sell 5 dozens of black rice cake per day.



Benefits, outcome and impact

She had earned a good income from both black rice cake and biscuit. From 1 kg of black rice, she could make 4 Dozens of black rice cake. On an average she uses 5 kg of black rice which produced about 20 dozens of cake.



Horizontal spread within the social system

This technology is being spread to other farmers of the district

8 . Success story of Mr. Yambem Megha Singh ‘Crop based Integrated Farming System’

Farmer Profile



Name: Yambem Megha Singh
Age: 44 years
Address: Nongpok Lourembam, Thoubal District, Manipur, Pin: 795148
Education Level: IX Standard
Mobile No.: +91-6009859631
Size of Land Holding: 0.75 ha (leased) and 0.12 ha (owned)
Aadhar no.: 4381 1451 9260

Introduction

Mr. Yambem Megha Singh, a farmer of 44 years old from Nongpok Lourembam, Thoubal district, Manipur is a progressive farmer earning an income of rupees 1.5 lakh per year through various agriculture and allied activities. Although Mr. Singh is a tenant farmer by born, because of his continuous effort and hard work as well as KVK intervention made him a successful farmer.

Status before Intervention

He was a mere farmer without much earning from his agricultural activities due to lack of knowledge and guidance. He made his income by cultivating rice only in one season and left his land fallow. The income from his rice farming couldn't met his family requirement.

How farmer approach KVK

Suddenly, during the year 2016, an NGO under Tata Company name Resource Upliftment Centre for Interest (RUCHI) Awang Sekamai, came to his village for the construction a check dam near his field. The NGO team advised him to approach KVK and other Department to start his farming throughout the year, since there is continuous supply of water from the constructed dam, thereafter he approached KVK Thoubal.



KVK intervention

Seeing his enthusiasm in farming, the KVK invited him in one Farmers Club launching programme at Kakching. From the programme, he came to know how the KVK functions for the benefit of the farmer. The KVK intervene him various agricultural activities by giving inputs such as rice seed, vegetable seeds, poultry birds etc. The KVK ,Thoubal exposed him in various training and entrepreneurship programmes conducted by various KVK, ICAR, CAU

including line departments to acquire his knowledge in agriculture and allied activities. Seeing his success, the KVK Thoubal through NABARD, form a Farmers Club name Lourembam Loumee Chaokhat Lup in 2018 under his leadership with an aim to follow his footpath by the rural youths in the field of agriculture and allied activities. NABARD provided low cost tools (Drum seeder for wet sowing of rice, roller maker for SRI, Conoweeder for weeding of rice and motorize for reaping rice) for rice cultivation to his farmers club. He was also given a KCC loan of Rs. 50,000 for vegetable farming.



Outcome

From his 0.75 ha of rice field and 0.12 ha of homestead kitchen garden area, he earned a gross annual income of Rupees 3.5 Lakh from farming activities (rice seed production, vegetable farming, poultry chicks production and mushroom cultivation) with a net profit of Rupees 2 lakh. His earning made him an easily in maintaining livelihood including his children education.

9. Profile of the Farmer- “Value Addition”



Name: Mayanglambam Pakpi Devi	
W/O: M. Romendro	
Address: Kakching Makhaleikai	
Age: 50 years	Mobile: 7005103563
Education: Graduate	
Occupation: Housewife	

About the enterprise

The fresh amla was used to produce several by-products such as amla candy, pickles, dry salted amla etc. The local growers came to deliver the fresh fruits at her farm. About 30000 to 40000 kg of fresh amla are being processed and value added during the peak season. The main income is generated from osmotic dehydration amla candy.

KVK intervention

Method demonstration on application of blanching as a pre-treatment before osmotic dehydration to prevent discoloration and off flavour development and microbial was conducted. As osmotic dehydration has been recognised as a good pre-treatment prior to regular drying she opted to produce osmotic dehydration fruit slices/candy instead of normal drying.



KVK personnel attended her farm from time to time and gave suggestion about the technology to improve the quality of the product.

Economic analysis

The below table shows the cost-benefit of the enterprise.

Components	Cost (Rs.)
Fruits (5000 kg @ Rs. 20/kg)	100000.00
Sugar (35 bags @ Rs. 2500/bag)	87500.00
Spices	12500.00
Packaging and labelling	45356.00
Miscellaneous	1500.00
Total Cost	306856.00
Gross return	460280.00

Net Return	153424.00
B:C Ratio	1.50

Marketing

The marketing of candy and pickles were done throughout the state. She used to help many students residing in various parts of the state by making them her distributors which made them earning in their free time. She has been producing her own product under brand name “Madan Food Product” with fssai registration no. 21619015000082.



Benefits, outcome and impact

The venture of M. Pakpi could earn a profit of Rs. 153424 montly from her candy products and pickles items. Moreover she also giving employment opportunities to her rural youths.

Horizontal spread within the social system

This technology is being spread to other farmers of the district as well as other district.

10. Success Story on Crop based Integrated Farming System



Name: Smt. Akoijam Tathotpi Devi	Age: 56 years old
Address: Thoubal Wangmataba, Thoubal District, Manipur.	Pin code: 795138
Education Level: XII Passed	Mobile No.: +91-9612024533
Size of Land Holding: 0.40 ha	Aadhar no.: 5903 0174 3300

INTRODUCTION

Integration of different agricultural and allied enterprises is a common practice for every household in homestead areas as kitchen garden in Manipur and such activity is usually done by womenfolk so as to meet their household consumption and extra earning in addition to normal earning from other specific enterprises such as vegetable farming, Fishery, rice cultivation etc. Such integration system taken up in larger area not only increase the income to manifold but also provide ways to recycle waste material of one component as input for other linked components and helps to reduce the cost of production of the system.

KVK INTERVENTION

Smt. Akoijam Tathotpi Devi is one of the many successful women farmer in Thoubal District, Manipur benefitted by the technology IFS. Her family owns an area of 0.40 ha in their homestead area where her family usually grows rice during Kharif and Vegetable crops during Rabi season using traditional system of cultivation. Most of her family needs came from this activity, however it couldn't sustain their living. During the year 2016-17, Smt. Akoijam Tathotpi was accidentally meet by the KVK scientist in one training programme conducted in her locality. Thereafter, she came to KVK and consulted with KVK scientist to taken up Integrated Farming System. With the advice of KVK, her farm was modified to taken up several components viz., Crops- Vegetable, Fishery, Protected cultivation, Vermicompost, dairy cattle, poultry etc. in an integrated manner.

IMPACT

Smt. Akoijam Tathotpi Devi presently gets an annual income of Rs. 2, 80,000.00 With a net profit of Rs. 1, 60,000.00 from her Integrated Farming System which is an increase of more than 40 per cent from the previous system. IFS not only increased her farm income but it also increased the system productivity, profitability and sustainability.

1. *Productivity*- Production per unit area was increase due to intensification of Agri. and allied sector.

2. *Profitability*- She has got an opportunity to make use of one produce as component/input on the other component which reduce overall cost of production of the system.

3. *Sustainability*- In an IFS, due to least use of chemical inputs, maximum utilization of organic supplements through effective utilization of by-products using dairy cattle waste, crops waste and promotes soil health for crop production.

11. Success Story Thokchom Meipaksana Meitei for Organic Farming



Name: Thokchom Meipaksana Meitei	Age:
Address: Salungpham Mayai leikai, Thoubal District, Manipur -795148	Pin code: 795138
Education Level:	Mobile No.: +91-8837399054
Size of Land Holding:	Aadhar no.:
Email- damalemthokchom25@gmail.com	

1. Type of Enterprise the farmer is doing:

Indigenous Crop production

2. Year of start of enterprise: 2017

3. Names of crops grown: 1. Black rice, 2. Black Ginger, 3. Banana

4. Cropping system followed:

- i. Black rice – Black Ginger
- ii. Banana + Black Ginger

5. Type of Inputs being used in Enterprise:

- i. *Neem Cake and Trichoderma* for Plant health management;
- ii. *Rock phosphate, Farm Yard Manure and Vermicompost* for nutrient management.

6. Production in ha:

- i. Black rice: 38 Q (1 ha)
- ii. Black Ginger: 100 Q (0.25 ha)
- iii. Banana (Local cultivar):15 Mt (0.50 ha)

7. Productivity per ha:

- i. Black rice: 38 Q/ha
- ii. Black Ginger: 400 Q/ha
- iii. Banana (Local cultivar):30Mt/ha

8. How many farmers adopted this model in the village:13 farmers



Photo. 1. Black Ginger field



Photo. 2. Black rice field

12. Success Story of Smt. Thingom Indrasakhi Devi “Culture of genetically improved fish varieties- Jayanti Rohu and Amur carp “

INTRODUCTION:

Smt. Thingom Indrasakhi Devi is a women progressive fish farmer, she owned an area of 1.0 ha of fish pond located in Leiphprakpam MayaiLeikai of Thoubal district Manipur. She has started fish farming in the year 2014. At the beginning of her fish farming journey, traditional fish culture methods like culture of Indian Major Carps, exotic carps and few other minor carps in traditional way under normal fish culture activities was followed.

The earnings from this type of traditional fish culture practices are less compared to culture of high value commercial fish species. As the income and yield from the traditional method was low due to

seedlack of knowledge on scientific fish farming and management. However, her effort in search of suitable technology and management practice to increase her farm income continued. In sought of

seeking knowledge She has contacted KVK Thoubal and has been in touch with KVK by conducting Front Line Demonstration and attending training programmes.

KVK Intervention:

KVK Thoubal took initiative for conducting demonstration on “Growth performance of genetically improved fish varieties - Jayanti Rohu and Amur carp” funded by National Fisheries Development Board, Hyderabad, Govt. of India. A total of 10 beneficiaries were selected. The demonstrations were undertaken in the farmers pond in the villages of Wabagai, Wangjing, Lourembam, Hijam Khunou, Tentha and Leiphprakpam since 2018- 2020.



Distribution of Amur carp & Jayanti Rohu seed



Fig. Sampling of fish



Fig. Harvesting of fish from paddy field

Smt. Thingom Indrasakhi Devi is also one of the beneficiaries who took up the demonstration programme. She has utilized one pond with an area of 1.0 ha for conducting the demonstration programme. Amur carp and Jayanti Rohu seed has been procured from the NFBB network hatcheries through NFDB financial assistance. Overall activities were monitored by the KVK Thoubal and periodical monthly sampling was done in all the demonstration farms regularly and the growth parameters of fish were recorded.

Output and Outcome:

The fish yield due to the incorporation of genetically improved varieties-Jayanti Rohu& Amur has increased up to 4,050 kg/ha. Smt. Thingom Indrasakhi Devi could earn an annual income of Rs. 10,12,500/- from one hectare pond area with a net income of Rs. 5,62,000/- and BC ratio of 2.2.

Impact:

By seeing the fast growth rate of the improved fish varieties of Jayanti rohu and Amur carp compared to the existing local variety, the neighbouring fish farmers has encouraged to adopt the improved varieties in their culture pond and its gaining popular & acceptance in other village too.

13. Success story of Samadram Tatu Singh on “Mushroom Cultivation”



Name: **Samadram Tatu Singh**

S/o : **(L) S. Ito Singh**

Address: **Lourembam Makha Leikai**

Age: **25** Mobile No. **8131088776**

Education: **X pass** Aadhar: **830583178866**

Occupation: **Farmer**

Name of FC: **Lourembam Loumi Chaokhat Lup (FC Under NABARD Sponsored)**

About the enterprise

Mushroom cultivation is a sustainable eco-friendly technology highly suitable for rural areas due to the availability of large amount of cheap agricultural waste as raw material. This technology can also address the unemployment problem of rural population and if done scientifically can be evolved into rural agro-industry.



Shri S. Tatu Singh a progressive entrepreneur who became a role model in his village by producing oyster mushroom as it is most suitable for rural area and can create self-employment. The paddy straw is chopped into small pieces and soaked in fresh water for 2-3hrs. He utilises polythene or (PP) bags (100-150) gauze thick as containers for growing. The cooled and pasteurized straw is filled in polythene bag and simultaneously spawn is broadcasted in the straw. Once again a layer of straw is added followed by spawning. This way the whole bag is filled and spawned layer wise. The bags can be hung in nylon ropes with efficient space utilization.



KVK Intervention

Since edible mushroom cultivation can be taken up as an important income generating venture. KVK organised a training programme on “Mushroom



Cultivation” on 22nd July, 2019 at Lourembam Makha Leikai as a component of NARI Scheme. Methods of mushroom production and preservation were demonstrated. Mr. Tatu also participated in the said training programme, later on he decided to take up the venture.

Different methods of spawning, crop management, water management during cropping and post cropping periods is being instructed from time to time. Constant inspection by the KVK team are carried out and any contaminated bag must be either chemically treated or discarded from the room as such bags serve as the source of infection.

Economic Analysis

The below table shows the cost benefit ratio of the enterprise:

Components	Cost (Rs.)
Spawn (600 pkt @ Rs. 60/-)	3600/-
Nylon ropes & polythene	700/-
Labour charge	500/-
Total cost	4800/-
Gross return	19500/-
Net return	14700/-
B:C ratio	1:4



Marketing

Mushroom appear in flushes at 7-10 days intervals. However first two flushes give maximum yield. Total cycle spawn running and cropping covered in 30 – 45 days. Market price of mushroom per kg is Rs. 130/- . The products are sold at local markets. There is no problem for marketing as nutritionally, mushroom are regarded as a very good vegetarian source of high quality protein.

Benefits, outcome and impact

He have earned a good income from mushroom cultivation. From one packet he could harvest almost 2.5 Kg. So on an average he could harvest 150 Kg from 60 packets within 30- 45 days of culture period.

Horizontal spread

This technology is being spread to other farmers of the district.

14. Y. Indira Devi Jackfruit chip production



Name: Y. Indira Devi
W/o : Y. Basu
Address: Lourebam Makha Leikai
Age: 38 Mobile No. : 894926349
Education: Graduate
Aadhaar No. : 797805020590
Name of FC: Lourebam Loumi Chaokhat Lup (FC Under NABARD Sponsored)

About the Enterprise

The value addition for Jackfruit is avoided by many farmers instead it's used as a vegetable because of its aroma. One of the gainful utilisation of jack fruit is production of fried chips.

It was the enterprising spirit of Smt. Y. Indira Devi to take up the venture for further production to produce quality fried jackfruit chips.

KVK Intervention

Demonstration of nutrient rich food is very important towards upliftment of nutritional status. Methods demonstration, OFT, FLD on popularisation of Jackfruit chips is being carried out at Lourebam since last two years (2018-2019 and 2019-2020). Through this intervention members of the SHG have taken up this enterprise as an income generating activities.



Efforts have been made by KVK for standardizing the process product and packaging of their products.

Economic Analysis

The below table shows the cost benefit ratio of the enterprise

Components	Cost (Rs.)
Jack fruit (10 fruits @Rs. 50 per fruit)	500/-
Oil	300/-
Salt, spices and packaging materials	200/-
Labour charge	225/-
Total cost	1225/-
Gross return	3500/-
Net return	2275/-
B:C ratio	2.8



Marketing

The product recovery is 700g chips /1kg of fresh Jackfruit. The product is marketed at the rate of Rs.350/700g in the local areas. Product like this must be brought out for wider dissemination of the technology.█

Benefits, Outcome and Impact

She has earned a good income from the jack fruits chips during the peak season. she also have the encourage other farm women to follow her footstep.



15. S. Romita Devi -Bori production



Name: **S. Romita Devi**
W/o : **S. Gopalmacha Singh**
Address: **Lourebam Makha Leikai**
Age: **37** Mobile No. : **8729865667**
Education: **XII**
Aadhaar No. : **669269064159**

Name of FC: Lourebam Loumi Chaokhat Lup (FC Under NABARD Sponsored)

About Enterprise

Bori is an indigenous food of Manipur. It is made up of black gram, jeera powder, coriander powder and hing. (Asafoetida). Since the production cost is very high for black gram bori, chow chow bori is much cheaper in cost of production. Smt. S. Romita Devi took up this venture for generating income.



KVK Intervention

Since bori production can be taken up as a venture, KVK Thoubal organized method demonstration, OFT on production of chow chow bori. Different steps like grinding product making and drying were demonstrated to SHG of Lourebam Makha leikai.

Mrs. Romita participated on all the training programme conducted by the KVK in order to take up venture successful.

Economic Analysis

The below table shows the cost benefit ratio of the enterprise:

Components	Cost (Rs.)
Black gram (6Kg @ Rs. 80/Kg)	480/-
Chow chow (1.6 Kg)	120/-
spices	20/-
Labour charge	225/-
Total cost	845/-
Gross return	1850/-
Net return	1005/-



B:C ratio	2.1
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Marketing

At first the marketing channel of chow chow bori were not good enough. She used to sell her product with very low price only to her locality. Then gradually she have gained the market and she have stated to produce in large scale.



Benefits, Outcome and Impact

She have earned a good income from the chow chow bori. She could earned Rs. 185/Kg from 1kg paste of blackgram and chowchow . Seeing her success the neighbouring woman have started to follow her footsteps.

16. Success story of Maibam Ningthempishak -Bokashi Piggery system



INTRODUCTION

Ukhongshang- It is a village recognized under the Thoubal Dist. of Manipur. It is 12km away from Thoubal towards east. All the villagers who are residing in this village prefer piggery and paddy cultivation as their main profession. Mr. M. Ningthempishak Singh was also born in this remote rural area. He was the first person to introduce and educate the villagers about the Bokashi System.



Bokashi – Japanese word meaning ‘fermented organic matter’. It uses IMO (Indigenous microorganism) to promote growth and management of healthy pigs.

PROBLEMS-

Before the arrival of the Bokashi System, the villagers use traditional method for rearing pigs and other livestock. People use to face many problems like unwanted sound, foul smell, making the drainage more dirty, thus due to the above reasons it makes an unhealthy environment.

Ningthem’s dream at that time was to bring a change in the poor condition of the village. So, he decided to join hands with KVK, Thoubal and got trained in Bokashi piggery and poultry farming. Seeing the new clean technology and its benefits, he started his own piggery farm and also transfers the technology to the farmers.

OUTCOME-

By introducing the technology into their farm, number of benefits were able to obtained from it like-



- Compost from the piggery can be used for organic farming @ 1kg/sq.mt.
- Compost may also be use as fish feed.
- Prevent flies in pen.
- NO SMELL, NO SOUND, NO TREATMENT.

IMPACT-

After seeing the progress of Ningthem’s farm, the farmers of Ukhongshang village started the new clean technology of Bokashi piggery system. At present, M. Ningthempishak Singh is working as an extension personal in Bokashi piggery technology, spreading his experience to various corner of Manipur.

CONCLUSION-

Using this advantageous technology, the farmers would gain more profit in their earnings, increase soil health leading to organic form and reduces usages of chemical to a minimal level as well as protecting the environment.

17. Success story of Shri Sapam Lukhoi Singh “Innovative method of Vegetable cultivation”



Name: **Shri Sapam Lukhoi Singh**
 F/N: **S. Nilabira**
 Address: Wabagai Thingel Leikai
 Age: **48** Mobile No. : **9856337019**
 Education: **IX**
 Aadhaar No. : 821119677033

Introduction

Shri Sapam Lukhoi Singh of Wabagai Thingel Leikai, Thoubal district. He is full of innovative ideas with a keen interest of adopting any new good technology that comes his way through any source whether it may be through books, media or training programmes. Inheriting the willingness to cultivate the land from his late father who was also a very successful farmer during his



time. He is the pioneer in developing an improved method of cultivation for a very popular local garden pea (*Pisum Sativum*) locally called “Makhyat Mubi” meaning coloured hilum pea. His main practice for this cultivar is wide spacing 1.5 x 1.5 ft, sparse staking and early (September) planting to escape powdery mildew and rust. In this practice, he utilizes the benefits of minimum tillage to minimize cost of cultivation and to check soil erosion, starter dose, utilization of residual nutrients of previous crops, intercropping with cabbage to maximize the profit by fully utilizing the land economically.

KVK Intervention

Shri Lukhoi Singh has followed the ideas gained from the training programmes, OFTs, FLD conducted by KVK, Thoubal and has moulded himself to a more perfect practitioner of whatever new technology that comes his way. His innovative idea has been tested and standardized by way of OFT taken up by KVK, Thoubal and standardized the spacing to 2 x 2 ft. This technology is being popularized through FLD and television programs

Economics of the his System

Crop	time of Planting	Cost of cultivation	Gross Income	Net profit	Average B:C
Cucumber+ cabbage	March	51000.00	105000.00+180000.00-285000	234000.00	4.5
Bhindi	March	29000.00	54000.00	31000.00	
French bean	April	13800.00	159000.00	145400.00	
Rice	May	4940.00	54000.00	49060.00	
potato+ Pumkin	November	80000.00	240000.00.00	160000.00	
Total		178540.00	795000.00	619460.00	

INNOVATION TECHNOLOGY / PRACTICE

1. Intensive Vegetable Cultivation using multiple, inter & relay Cropping, Crop rotation, minimum tillage
2. Paddy dry broadcasted in standing vegetables under aerobic condition throughout season
3. Weeding rice done during interculture of vegetables



METHODOLOGY USED FOR TRANSFER OF TECHNOLOGY

1. Exposure visits of other districts as well as same village farmers
2. TV Programme
3. Participation in exhibition & Competitions
4. Demonstration conducted with KVK SMSs
5. Success stories published in local Papers



IMPACT

1. Fellow farmers are impressed
2. Innovation adopted by fellow farmers (50 farmers)
3. Reduced seed rate
4. Reduced tillage Operations
5. Reduced costs of Cultivation
6. No effects of drought on rice, while transplanted rice in nearby fields failed

Awards and Recognitions

1. 1st position farm innovation for the special staking method of pea and appropriate spacing -Agri Fair (2011)
2. 1st position vegetable show.
3. Best Innovative farmer for continuous supply of water using rice husk filled in trenches between plots-
4. North East Agri Fair 2013, at Tura, Meghalaya from 19-21 March,2013 graced 2nd position as Innovator farmer.
5. 1st position in vegetable show both in cauliflower and cabbage. In 2016

6. Appreciation from National Innovation Foundation at Rashtrapati Bhawan in 4th March,2017 with State Award, Manipur for the Selection variety of “**Chingjin Thabi**” including cash prize of Rs. 50000/-.
7. 3rd position in Poster presentation,2017 – 4th International Symposium on minor fruits,Medicinal & Aromatic plants

18. Success Story Shri Waikhom Tikendrajit Singh “ Culture of genetically improved fish varieties- Jayanti Rohu and Amur carp”

INTRODUCTION:

Fishery and aquaculture farming plays an important role in the socio-economic life of the people of the state. Fish is one of the essential parts of the daily diets in Manipur. The farmers of Thoubal district are mainly associated with traditional fish culture methods like culture of Indian Major Carps, exotic carps and few other minor carps in traditional way under normal fish culture activities. The earnings from this type of traditional fish culture practices are less compared to culture of high value commercial fish species. As the state is blessed with a good aquatic ecosystem, fish farming has brought revolution in landlocked Manipur. Shri Waikhom Tikendrajit Singh is an enthusiastic progressive fish farmer, He owned an area of 3.6 ha of fish pond located in Wabagai Mayai Leikai of Kakching district Manipur. He has started fish farming in the year 2008. At the beginning of his fish farming

journey he had been culturing in traditional method of farming. As the income and yield from the traditional method was low due to lack of knowledge on scientific fish farming and management. However, his effort in search of suitable technology to increase his farm income

continued. In sought of seeking knowledge he has contacted KVK Thoubal and has been in touch with KVK by conducting Front Line Demonstration and attending training programmes.



Fig. Sampling of Amur carp & Jayanti Rohu



Fig. Harvesting of fish



Fig. Amur carp

KVK INTERVENTION

KVK Thoubal took initiative for conducting demonstration on “Growth performance of genetically improved fish varieties - Jayanti Rohu and Amur carp” funded by National Fisheries Development Board, Hyderabad, Govt. of India. A total of 10 beneficiaries were selected. The demonstrations were undertaken in the farmers pond in the villages of Wabagai, Wangjing, Lourembam, Hijam Khunou, Tentha and Leiphrakpam since 2018- 2020. Shri Waikhom Tikendrajit Singh is one of the beneficiaries who took up the demonstration programme. He has utilized one pond with an area of 1.0 ha for conducting the demonstration programme. Amur carp and Jayanti Rohu seed has been procured from the NFBB network hatcheries through NFDB financial assistance. Overall activities were monitored by the KVK Thoubal and periodical monthly sampling was done in all the demonstration farms regularly and the growth parameters of fish were recorded.

OUTPUT AND OUTCOME:

The fish yield due to the incorporation of genetically improved varieties- Jayanti Rohu & Amur has increased up to 4,250 kg/ha. Shri Waikhom Tikendrajit Singh could earn an annual income of Rs.10,62,500/- from one hectare pond area with a net income of Rs. 5,86,500/- and BC ratio of 2.23.

IMPACT:

In the recent years, his farming practices has undergone a remarkable change, emerging as role model in his village and nearby areas. He has been instrumental in encouraging about dozen more villagers to adopt the improved varieties as the demonstration revealed better growth and survival compared to the local Rohu and common carp.

19. Success Story of Kongsam Manichandra Singhon –“Fish based Integrated aquaculture system”

INTRODUCTION:

Mr. Kongsam Manichandra Singh of Lourebam Aripat is a progressive farmer, having enthusiasm to increase farm business by expanding through integration with different enterprise. The farmer was cultivating only paddy for past many years in his entire paddy field of an area of 0.875 ha. Due to low return from the paddy cultivation he has converted his paddy field into fish pond and has been culturing fish for the past five years. After taking up



the fish farming activity, still there is no encouraging result in terms of productivity and profitability due to poor management, lack of technical Know how. Despite the failure, his effort for searching the suitable technology to increase his farm income didn't stop. During 2020, he met the Scientist from KVK Thoubal and shared his problems. The KVK Scientists understood his problem and assured him of guidance. Since then he has been in constant touch with the KVK Thoubal.

KVK INTERVENTION:

To improve the production and maximize the utilization of natural resources, KVK Thoubal conducted demonstration on fish based integrated farming system comprising Fish+ Duck+ Seasonal Vegetable crops at farmer's field of different village of Thoubal district. Under the demonstration, 3 days training programme



were conducted. During the training programme, the farmers were actively involved in each and every step of the demonstration where they learned the specific management practices of fisheries such as scientific pond preparation, selection of cultivable fish species, dose of application of lime and manuring aspect, fish disease management etc. were taught. Construction of duck house, management of duckling and ducks were also taught during the training programme. Shri Kongsam Manichandra Singh is also one of the beneficiary who took up the demonstration programme.

OUTPUT AND OUTCOME:

This technology fetched a gross return of Rs.6,41,625/- with a gross cost of Rs. 2,82,500 and a net return of Rs.3,95,850 and the BC ratio of the system was 2.61. As this system utilizes water body, water surface, land



and pond silt which helps in increasing production and reducing cost of cultivation also saves the cost involved for fertilization and in addition to fish it provides vegetables, eggs and meat for consumption. The knowledge gained from the demonstration had helped the farmers to raise the productivity of the existing pond. Thus, the IFS model holds the potential for augmenting production, betterment of rural economy/ household nutrition security and employment generation and also helps in improving the socio-economic status of the farming community.

IMPACT:

By seeing the success of the demonstration many more farmers from the locality have taken up the integrated farming system. As this system utilizes water body, water surface, land and pond silt which helps in increasing production and reducing cost of cultivation also saves the cost involved for fertilization and in addition to fish it provides vegetables, eggs and meat for consumption. Thus the system holds the potential for augmenting production, betterment of rural economy/ household nutrition security and employment generation and also helps in Improving the socio-economic status of the farming community

20 Success story of Ph.Thoiba Singh “Integrated farming System”



Particulars	Details	Particulars	Details
Name	Shri. Ph. Thoiba Singh	Village	NongpokSekmaiHijamKhou
Age	62	Sub-Division/ Block	Thoubal
Gender	Male	District	Thoubaldistrict
Education	IX Passed	State	Manipur
Family type & Size	Joint Family 6 members	Agricultural landholding (ha)	1.5 ha
Main Crop/ Enterprise / Farm Animal	Agriculture , Horticulture and Livestock	Mobile No.	8414981633

1. Situation/Challenges/Problem/Issue:

Mr. Thoiba Singh, after retirement from army started his career in agriculture with rice and vegetable cultivation only without much knowledge of agriculture. The result was not at all satisfactory to him in terms of yield and monetary return. Thereafter to increase yield and monetary return from his endeavour he started cultivation of rice and vegetable scientifically after consultation with KVK and line departments. This resulted increase in yield and monetary return but still it was not to the mark what he expect.

2. Response/ Initiative

To increase his knowledge he started participating in many training and exposure visits conducted by KVK, CAU, ICAR and Line departments in the field of agri. and allied. With the knowledge he acquired and advice from ICAR and KVK scientists he started taking up



diversification of farming with crops (rice,vegetables,pulses, mustard), animals(broiler,duck,pig and cattle) and fish components in his homestead area,0.5ha paddy field and 1.0 ha fish pond scientifically).To make success in his journey the KVK,Thoubal,Central Agricultural University,Imphal and Indian Council of Agricultural Research,Lamphelpat used his land for their trial and demonstration plot to showcase their technology.Rice, pulses and oilseed mustard were grown for seed purpose in a participatory mode with KVK,Thoubal.

3. Results/ Outcomes

Through seed production of rice,pulses(lentil and chickpea) in his 0.5ha area in rotational cropping and mustard variety NRCHB-101 and M-27 in separate leased area of 1ha each,he could earned a gross income of Rs.80,000/-,Rs.44,000/-and Rs.86,000/- respectively with a net profit of Rs.1,14,000/- approximately from crops per year.From his broilerfarm of 500 capacity in 5 rotations per year,80 ducks,2 cattle mainly for manure production to be utilized for crops and 4 pigs in his fish farm earned him a net profit of Rs.1,96,000/- and a net profit of Rs.2,40,000/- from fish fingerling and table fish totalling his net income to Rs.5,50,000/-(Rupees five lakh fifty thousand)only.

4. Evidence/Impact

With the money he earned from his diversified farming and pension he could manage easily his family expenditure and purchase a tractor and one sprinkler set for using in his farming and custom hiring service to earn extra income.Apart from his personal benefit,being a member of farmers club of his village under his leadership,Shri Singh along with his team members motivated the farming



community to attract and retain rural youths in agricultural sector and introduce several technologies in the field of agri. and allied technologies. Some of the technologies are SRI, Drum seeding of rice, Hybrid rice, Integrated crop management (ICM), seed production of pulses and oilseeds, Bokashi piggery, composite fish culture, Integrated Farming System. Not only in his area, their farmers club introduced seed production of pulses in a tribal village called Tayang near Serou, Thoubal District in a participatory mode with KVK, Thoubal under Seed Hub Project of NFSM. To acknowledge his achievement, the KVK, choose their village as Doubling Income village and ICAR, Lamphelpat recognise him progressive farmer.

Lesson Learnt

- ✓ Crop and animal diversification is a sustainable farming practices to meet daily requirement of food and earns income from crops and animals throughout the year.
- ✓ Human capital is fully invested
- ✓ The challenges for taking up the enterprise was overcome through training, demonstration and sharing of views of scientists and farmers using different crops and livestock in the enterprises was a difficult task because of different nature.
- ✓ Though the components are not used in a integrated way, it can be done in an integrated manner.

21. Success story of Kamei Khanguimei On Knowledge system and Homestead Agriculture Management in Tribal Areas (KSHAMTA)

INTRODUCTION:

Vegetable based nutri garden is the cheapest source of nutrition which can play an active role to get functional food In the field of nutrition, technological empowerment is essential for the women who look after the nutritional issues of every family member. They also play a vital role in production and preservation of food at household level .At the same time, they have better access and control over the homestead food production system. Smt Kamei Khanguimei, age 35yrs (Aadhar no 616326897646) of Lilong Chingkham who became a role model in her village by demonstrating nutrition gardening along with backyard poultry farming. Nutri garden being an advance form of kitchen garden in which vegetables are grown along with fruit, spices and as a supplementary source of food and also can generate income by selling the surplus produce from the garden. She utilises an area of 0.06 ha for demonstration of nutri garden in which includes 1) tuber crops like (onion, garlic, carrot, reddish beet root and potato) 2). Pulses (peas ,broad bean French bean). 3) Leafy vegetables (mustard ,palak , lettuce ,amaranthus) 4)other vegetables (cabbage broccoli tomato cauliflower, knoll khol 5) Spice crops (onion, garlic, ginger, turmeric corianderetc) .The backyard poultry farming was also included as an enterprise for income generation as well as for nutritional security



KVK Intervention

Programme under Knowledge System and Homestead Agriculture Management in Tribal Areas (KSHAMTA) was implemented in Lilong Chingkham to 10 nos. of household. The initiative is to grow nutritionally enriching food what we need, mapping the entire food system of village and suggesting what should eat, encouraging them to grow Since nutrition gardening and backyard poultry farming can be taken up as an important income generating venture. KVK organized to distribute seeds, planting materials for nutrition gardening and chicks for backyard poultry farming on 5 December



2020 as a part of the programme. Group discussion for compilation of indigenous knowledge system along with Training programme was also conducted on “” on 18 March, 2021 at Chingkham MakhaLeikai as a component of KSHAMTA. Demonstration on establishment of nutrition gardening in which vegetables are grown along with fruit, spices and other useful plants were demonstrated. Mrs Kamei Khanguimei also participated on the training programme she decided to take up the venture. Different layouts of nutri garden, crop management, water management during cropping and post cropping periods is being instructed from time to time. Constant inspection by the KVK team were carried out so that nutria-garden produce can make a critical contribution to the family diet and provide several other benefits, particularly for women and children.

OUTCOME & OUTPUT:

She has earned and provide nutrition rich vegetables ensuring good health of the family and source of balance diet for women of the reproductive age and young children. Selling surplus produce from nutria-garden and backyard poultry farming can generate source of income round the year.

IMPACT

A diverse range of nutrient rich vegetable crop combining traditional and improved varieties, are harvested depending upon the type of vegetables from her nutri garden she could get 1. 30kgs (garden pea) 2. 40kg (broadbean) 3. 20 kg (French bean) 4. Onion (20kg) 5. Garlic 10kg 6. Carrot (20kg) 7. Raddish (20kg) 8. Beetroot (22kg) 9. Potato (30kg) 10. Leafy vegetables (30 bunch each) 11. Cabbage (200kg) 12. Cauliflower (200kg) 13. Broccoli (100kg) 14. Knol-Khol (50kg). Nutri garden produce can make a critical contribution to the family diet and can also save family expenses. Marketing of surplus vegetables, eggs and chicken she could get a gross income of Rs 26 400 by and Rs 23,000 by selling chicken @Rs 250/kg and Rs 10/egg. This technology is being spread to other farmers of the village.

22 Success Story of Nongthombam Indrakumar Luwang : “Innovative Zero Energy Water Lifting Device”

Farmer Profile:



Particulars	Details	Particulars	Details
Name	Nongthombam Indrakumar Luwang	Village	Wangjing SorokhaibamLeikai
Age	54	Sub-Division/Block	Wangjing
Gender	Male	District	Thoubal
Education	XII Standard	State	Manipur
Family type & Size	Joint family 10 members	Agricultural landholding (ha)	0.5 ha
Main Crop/ Enterprise / Farm Animal	Horticulture and Fisheries	Mobile No.	6009230319

1. Situation/Challenges/Problem/Issue:

As a Fish+ Vegetable farmer, Shri IndrakumarLuwang became so concern about the shifting/delivery of water from one pond to another which is a basic need for fish farming; require frequently, need water pump, labour intensive, require skilled labour/mechanic, need either fuel/electricity which he could not afford to manage by his income.

2. Response/ Initiative

To address his problem, Mr.IndrakumarLuwang aged 54 years,a resident of Wangjing,Thoubal,Manipur, after attending many training programmes on fishery conducted by KrishiVigyan Kendra,Thoubal along with his inborn skill came up with a new scientific device which he called/named ZERO ENERGY /VACUUM PRESSURE water lifting device, works without any fuel or electricity uninterruptedly.

Specification of the device-

- ✚ Water reservoir made of hard plastic/steel (capacity ranges from 20 litres to 200 litres)
- ✚ Two holes one for inlet of water (upper) another one for outlet of water (bottom)

- ✚ Height of reservoir should be higher than the water source/pond, varies depending on the quantity of water to be discharged.
- ✚ The suction tube is an open tube without any suction device
- ✚ Size of the suction tube shall be half of the delivery tube.
- ✚ The whole system should be air tight.

Working Principle-

Step 1: Depending on the output of the device, place the device at a suitable height specified for the purpose.

Step 2: Keeping the device in the right position to the water source as well as fitting all the components viz., suction and delivery pipe.

Step 3: Filled the reservoir with water up to the suction level leaving an air portion at the top of the reservoir and closed the lid tightly.

Step 4: When the outlet is open, water flows automatically to the reservoir through the suction pipe because of vacuum pressure created by the air space at the top which is delivered through the delivery tube continuously.

3. Results/ Outcomes

The device works on the principle of vacuum pressure.

- ✓ Higher the height of the reservoir, higher is the capacity of water delivery.
- ✓ Depending on the size of the reservoir, ratio of the size of suction tube and delivery tube ; the output of the device varies.
- ✓ On an average a device having 60 litre capacity reservoir, 3/4 inches diameter suction tube , 2 inches diameter delivery tube ,keeping the reservoir at a height of 75 cm ; delivers 600 litre water per hour .
- ✓ Though the output is less than the conventional water pumps operated by fuel or electricity, the device works uninterruptedly day and night without energy from fuel/electricity once the device starts working.
- ✓ The cost of a device of reservoir 60 litres capacity is Rs 5000/- (Rupees five thousand) only.

4. Evidence/Impact

The device can be set up by any small and marginal farmers without much cost and scientific knowledge. The device can be used everywhere where there is no transport, communication and electricity, faraway places in the hills, remote areas of the villages. The device can be used uninterruptedly. The device has less wear and tear compared to water pump. The device has reached to the knowledge of many farmers of the district and are demanding for purchase.

Lesson Learnt

The device works efficiently and successfully though it takes more time. Initially, seeing his invention, it was not trust by many farmers and scientists of the region. The challenge was overcome through live demonstration. The device was made and sold to some farmers. Planning to develop a bigger size which can be used for larger areas with less time.

Supporting Quotes and Images

Mr. Indrakumar faced many challenges in developing his invention Zero Energy water lifting device but his will makes him success at last and quotes the proverb “ when there is a will there is a way” when remembering his invention by fellow farmers. He is known as Mini Scientist in his locality.

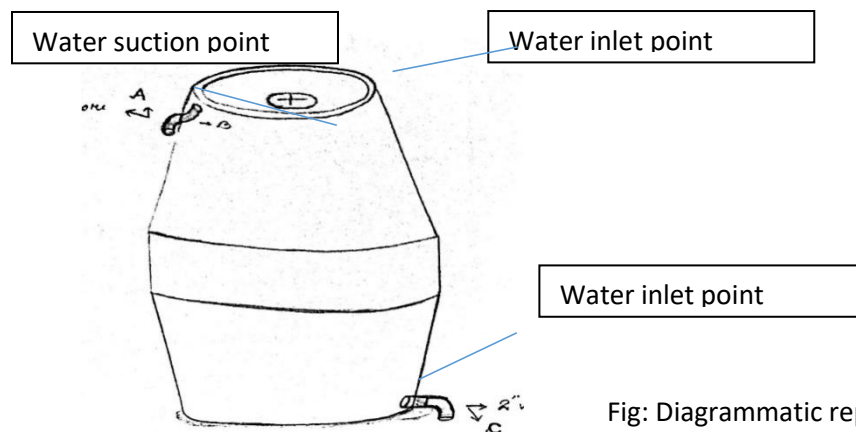


Fig: Diagrammatic representation of Innovation



Fig. Innovative Zero Energy Water Lifting Device

23. Success story on “ *Spring Season Rice Seed Production through SRI at Semi deep water area*” –Shri L. Temba Singh

Introduction

Rice is the staple food and major field crop of Manipur. In spite of the endeavors from the Agricultural Institutes & Department of Agriculture the spring rice/ pre-kharif rice/ first crop is decreasing in Manipur and its contribution to the annual rice production is also decreasing. It is mainly due to less number of suitable short duration variety, lack irrigation facilities, lodging of existing varieties, less availability of seed of some available short duration varieties. In the mean time SRI was introduced in the semi deep water areas and thus cultivation of spring rice is enabled in these areas for the last few years and its seed production through SRI was tested through OFT in these areas with some advantages.

Method / means of dissemination of the technology across the farming community

- Conducting training in farmers field
- Demonstration on nursery raising for SRI
- Method demonstration
- Field day

KVK Intervention

After attending a training programme on rice seed production at Thongjao village, Shri L. Temba Singh of the village was interested and volunteered to take up seed production of rice variety RC Maniphou -12 a short duration variety that could be grown as pre kharif/ spring rice developed by ICAR Manipur centre. He took up the venture through the guidance of KVK on various aspects of seed production right from seed treatment to harvesting bagging and labeling, in the year 2015. It was taken up as an FLD. The yield was very high reaching upto 9 MT/ha. He was very happy. He followed all the instruction given to him for growing the rice under SRI. It was very easy for him to take up roguing operations as the crops are grown singly and in line. He achieved a very high seed multiplication ratio. With only 5 Kg of seed he could get 9 MT of rice seeds. As the seeds were procured by KVK @ Rs 28/kg he earned a good profit.

Output & Outcome

The variety was very suitable under SRI. It being a short duration variety of 110days and with a very good taste for the local people the area under this variety during pre- kharif has increased and has become very popular one in the state. Shri. Temba Singh seeing the wide spread of the variety, took up seed production of the variety and has been able to produce good quantity of quality seed as a means of his enhanced earning and has got mental satisfaction of making available good quality seed to his fellow farmers.

Impact

Social and Economic Impact/Changes of the client system as results of the intervention/Technology by KVK

Table 14.2 Economics of SRI and Conventional methods of paddy cultivation

Name of the Technology	Area (ha)	Nos. of farmers	Yield (q/Ha)	Increase %	Gross cost (Rs/ha)	Gross Income (Rs/ha)	Net Income (Rs/ha)	B:C ratio
SRI on paddy var. RC Maniphou 12	2.5	10	90	157.14	65000	252000	187000	3.87
Conventional method of paddy cultivation	2.5	10	35		75000	98000	23000	1.30

The no. of farmers who practice seed production in these areas has increased helping in increasing the no. of farmers to use good quality seed thereby increasing the area under the variety. Through this practice/ venture the farmers both seed producer as well as the grower of the varieties have been able to get good earning.



24. Success story on “Integrated Farming System - A Boon to Poor Rural Household Community”- Smt. Anita Devi

Introduction/Back ground/Existing problems/Status

Due to unemployment problem, Agriculture and allied activities are the primary source of income for the people living in rural areas of Thoubal district. Commercial broiler farming was taken up as an enterprise by almost and every household communities in a very small scale farming system. It is high time for the farmers to take up Integrated Farming System so as to increase their income to many fold and also helps in moving towards organic farming.

KVK Intervention

KVK imparted training on Integrated Farming System and its advantage in different IFS module namely Fish- poultry, Fish-duck, Fish –Dairy, Fish- Goat, Fish- Pig were designed and imparted through training to the farmers and rural youths. One day Smt. Huidrom Anita Devi aged about 32 years, wife of Soibam Shantipur Singh of Tekcham Mayai Leikai happens to attend the one day training programme taken up by the KVK Thoubal under IFS. Smt. Anita Devi owned 1.5ha of land where she takes up fish farming. She is very much motivated by the technology and the advantage of IFS. She conducted a trial on Fish cum Broiler farming in 0.5 ha of Fish pond.

She along with her husband made the shed above the pond and started rearing 150 birds / 0.5 ha pond. She also rear 5000 fingerlings in the ratio of 30% surface feeder, 30% middle finger and 40% bottom feeder. Broiler faces and left over feed were dropped in the fish pond which were used as feed for the fish. KVK personnel attended her farm from time to time and gave suggestion about the technology to improve the farming system. Liming with quick lime was done in the fish pond at 300kg/ ha in four splits to increase Ph/ correction of acidity. She sold the birds at 49 days

Outcome



Smt. Huidrom Anita devi has earned a good income from both fish and broiler bird. She sold the bird at Rs.120/kg and could earn a profit of Rs. 12000 from one batch of broiler and from such 6 batches she could earn about Rs.72,000. From the fish per annum she could earn a profit of 60,000 in a year totaling to Rs. 1,32,000 (Rs. 72,000 + Rs. 60,000) from both fish and broiler. Before the intervention of IFS she could get a profit of Rs. 40,000. An increase of about 20,000 could be achieved from this system. Now she is planning to extend remaining pond to Integrated Farming System.

Impact

By seeing the success of Smt. Huidrom Anita Devi Integrated system, the IFS technology is being spread to other farmers of the district.

25. Success story on “Value Addition of Fruits” –Smt. Mayanglambam Mema Devi during the year 2015 – 2016.

Introduction/Back ground/Existing problems/Status

Fruits are available as seasonal surplus in production areas & large quantities of it were wasted due to the absence of facilities and knowhow for proper storage, transportation, handling, distribution, processing and marketing due to which the produces have to sell at very low price fetching low profitability at Thoubal district of Manipur. Processing & Value addition of fruits & Veg. at farm level will ensure better nutritional availability among the rural people as well as increase income and got more profit and save from wastage also.

Method / means of dissemination of the technology

- Conducting hands on training
- Demonstration

KVK Intervention

During 2014, a training programme which was organized & sponsored by Manipur Small Farmers Agri. Business Consortium(MSFAC), SMS(Home Science), SMS(PP) and Farm Manager of KVK, Thoubal were invited for interaction program at Laipham Lotnung where lots of Mango Orchards are available on the spot. Smt. Mayanglambam Mema



Devi, a resident of Kakching was very interested on production of Value added products of

mango where the raw material was easily available on her farm. On her personal request, KVK, Thoubal conducted training and demonstration on different value added products from fruits & vegetables. During 2015, 2 nos. of hands on training for production & preservation techniques of fruits were given. Since then she started preservation of mango in salt. Now she can preserved 10,000/- tonnes of mango during peak season and started selling value added products such as candy, pickles. Now she produces more than 40 varieties of product from amla, wild apples and mango.

Recognition/awards to farmers

Smt. Mayenglambam Mema Devi was awarded as women farmer of Thoubal district on Mahila Kisan Divas 2018 by KVK, Thoubal.

Output & Outcome

Now her processing unit with nine(9) employees including 1 skill labour on an average sale a maximum sum of Rs.13,000 per day and minimum of Rs. 3000/- per day.

Impact

Now there is no wastage of mango fruits, goose berry, wild apple in her own farm as well as Laipham Lotnung area. Seeing her activity some new entrepreneurs are coming up following her footsteps.



26. Success story on “Rice Seed production of RC Maniphou-13 through SRI” during the year 2015 – 2016

Introduction/ Back ground/Existing problems/Status

Rice is the major crop and staple food of Manipur. The yield of this crop is stagnant for the last few years due to many factors such as yield plateauing of the varieties, old practices of technologies etc. Seed replacement rate of this crop is also very low due to very low production and supply of quality seed. In spite of the efforts from the research institutes and Department of Agriculture the quantity of quality seed produced in the state is very low. Due to the endeavours made by the various Agricultural institutes in the state the number of rice seed growers are increasing in the state and there is a positive hope for increasing the quantity of quality seed in the state.

KVK intervention

Observing the rice yield performance of SRI crops in the district and the seed multiplication ratio under SRI it was thought that Rice seed production under SRI could have many advantages such as use of less quantity of seed it could produce very high quantity of quality seed. In short seed multiplication is increased tremendously. This can also help in increasing the land ratio for seed generation too. Keeping in view the above arguments FLD on rice seed production using SRI methodology was taken up on 10 farmers fields in Thoubal district in the year 2015 with different land holdings. The average yield was 8.5 mts/ha and the farmers unexpectedly earned a very high income from rice cultivation as the produces are sold at premium price @ Rs.28/kg where grains are sold at Rs. 15/kg only.

Output/Outcome

Having seen the profit earned by the fellow farmers the neighbouring farmers have shown keen interest of taking up the activity. The average net income per hectare from this activity has reached upto Rupees one lakh or more. The activity of seed production using SRI methodology has helped in increasing the seed replacement rate of rice in the state.

Impact

Rice seed production using SRI is a promising activity which has helped in increasing the family income of the seed growers and this helped in increasing the yield of rice as availability of quality seed has increased.



27. Success story on “Sprinkler irrigation increases in Zero tillage mustard yield and farmers income” –Shri N. Shyamchandra Singh during the year 2015 – 2016

Introduction/ Back ground/Existing problems/Status

In recent years Zero tillage (without opening the soil at all) mustard has become very popular in Manipur in some pockets. This practice of mustard cultivation completely depends on winter rain in most of the fields and the success is not to the expected level if the rainfall is not on time. Nevertheless the farmers are interested to grow mustard after the harvest of rice. Mustard seeds are



sown either in the standing rice field at the time of harvest or just after the harvest of paddy to utilize the residual moisture and nutrients. Such practices are not very certain for a good harvest all the time. On such conditions to assure irrigation during critical stages such as vegetative flowering and grain filling stages. However during vegetative growth stages the residual soil moisture is sufficient for almost all the mustard growing fields.

KVK Intervention

Under such conditions a front line demonstration was conducted during Rabi season in the year 2016 using sprinkler irrigation. Shri N. Shyamchandra Singh of Sabaltongba village of Thoubal district who is very much interested in mustard cultivation agreed to grow mustard under zero tillage with variety NRCHB-101 using sprinkler irrigation system in an area of 1 hectare. The mustard seeds were sown just after harvesting paddy in the month of November

2016. The seed rate was 12 kg/ha with fertilizer dose of 40:30:15 kg NPK/ha. The crop was satisfactory during the vegetative stage after which sprinkler irrigation was given pre-flowering and flowering stages and thus irrigation was done at grain filling stage.

Outcome

Under such condition the yield of mustard seed was achieved to the tune of 12 quintals/ha whereas without sprinkler irrigation the yield was up to only 8 quintals.

Impact:

Seeing the results of the demonstration neighboring farmers have started to purchase sprinkler nozzles and making their improvised methods of fitting with a 0.5 to 1 HP water pumps have started to irrigate their zero tillage mustard and have started to earn good income.