

**Proceedings of the Online Annual Action Plan Workshop of KVKs, 2020
organized by ICAR-ATARI, Zone-VII, Umiam, Meghalaya
(June 23-24, 2020)**

The Annual Action Plan 2020 for KVKs under ATARI Zone VII, Barapani was held during 23rd to 24th June, 2020 via ICT platform (Zoom Meeting App). The programme was inaugurated with welcome address by Director, ICAR-ATARI Dr. B.C. Deka followed by self-introduction and brief remarks by the experts. After the inauguration, the programme proceeded with the Technical Sessions presented by individual Sr. Scientists & Heads of KVKs.

The first session was chaired by Dr. H.C. Bhattacharyya, Ex-DEE, AAU, Jorhat. Panel Experts included Dr. B.C. Deka, Director, ICAR-ATARI, Zone VII, Dr. R.K. Saha, DEE, CAU Imphal and Dr. A.K. Singha, Principal Scientist, ICAR-ATARI, Zone VII. The second session was chaired by Dr. A.K. Gogoi, Ex- Director, ATARI, Umiam. Panel Experts included Dr. H.C. Bhattacharyya, Ex- DEE, AAU, Jorhat, Dr. R.K. Saha, DEE, CAU, Imphal, Dr. N. Kalita, Director of Research (Vety), AAU Khanapara, Dr. B. C. Deka, Director, ATARI, Umiam.

Followings are the Action Points/ recommendations to be taken up by KVKs as per approved guidelines-

Sl. No.	Recommendations
1.	<p>KVK Thoubal</p> <ul style="list-style-type: none"> • Compare the economics between Rice- Lentil and Rice-Chickpea in OFT on “Performance evaluation on rice based cropping system (rice-chickpea)” • Regarding the potato Local Cultivar <i>Aber Chaibi</i> used for OFT on management of frost bites & viral diseases of potato, it was suggested to change the Local Cultivar with improved Var. which is less/not resistant to frost bites. • While writing Killer-707 for OFT on sucking insects in cabbage & lettuce, it was suggested not to use any brand name but refer to organic plant extract only. • For FLD on Popularization of emamectin benzoate in Fruit borer and Aphid management, it was suggested to compare between using insecticides and Yellow Sticky Traps • For both FLDs on participatory seed production of RC Maniphou 13 and CAU R1 (tampha0), it was suggested to change the title to seed production Technology • It was also suggested not to use varieties having release year more than 8 years old of seed production programmes • SMS(Fisheries) was advised to consult Dr. R. K. Saha, DEE,CAU for all the OFTs and FLDs before starting the trials and demonstration • For FLD on Popularization of Assam Mix, it was suggested to include the parameter ‘Body weight per month for infant from 6 to 12 months’ • It was suggested by the panel experts to include parameter ‘Production Economics’ for the FLDs • For FLD on Adoption effect of Soil Health Card prepared and distributed by KVK Thoubal, it was suggested to change the title as ‘Extend of Utilization of SHG’ instead of ‘Adoption Effect’
2.	KVK Churachandpur

	<ul style="list-style-type: none"> For OFT on tomato , it was suggested to include a local check since ArkaAlok is an old variety and also add a parameter ‘Incidence of late blight tomato’ Pea variety Azad P4 should be replaced with a new variety under FLD For OFT on Management of aphids in broad bean, it was advised to include use of Yellow Sticky Traps Pest management of cole crops should be under Integrated management For OFT on Evaluation of new germplasm for backyard poultry production(Kadaknath), it was suggested to compare backyard poultry Vanaraja as local check Inclusion of planting /seed material for cereals, pulses and oilseeds to be in the slide.
3.	KVK Ukhrul <ul style="list-style-type: none"> For OFT, title should be changed to “Varietal performance of rapeseed & mustard for higher cropping intensity” For OFT on “Production Technology of French bean for higher income”,it was suggested to include IIHR bean For OFT on ‘Supplementation of bypass protein/fats for improving performance in dairy cattle’, it was suggested to include calf health as a parameter For OFT on ‘Introduction of Nile Tilapia under polyculture source of technology’, Dr. RatanSaha, DEE, CAU should be consulted. FLD title should be changed to ‘Enterprise development of fish fingerling production from spawn’
4.	KVK Imphal West <ul style="list-style-type: none"> For OFT on “Performance of lime application on productivity of maize” It was suggested to mention 500kg lime for furrow liming or 25% of actual requirement For OFT on “Performance of Rajmah variety VL Rajma -125”, it was suggested to try any new variety also if available For OFT on “Evaluation of commercial Button Mushroom Production”, it was suggested to compare with Oyster mushroom For OFT on “Assessment of Kadaknath breed as an alternate source of meat”, it was suggested to compare with backyard poultry Vanaraja For OFT on “Performance of different mulching system in king chilli”, it was suggested to exclude plastic mulching as one of the treatments.
5.	KVK Chandel <ul style="list-style-type: none"> For OFT on “Impact Analysis of CLFD on Oilseeds” duration of impact analysis should be 3 or 4 years Soybean variety(VL-soya-63) should be replaced with a new variety
6.	KVK Tamenglong <ul style="list-style-type: none"> For OFT on “Semi-intensive seasoning of Black Bengal goat”, “open grazing” should be mentioned in farmer’s Practice(T2) Soil quality/related data to be recorded in OFT/FLD AAUJorhat developed technology to be followed for organic nutrient management in orange FLD Disease/pest incidence percentage to be recorded/reported under OFT Plant Protection Soil moisture , temperature, humidity, rainfall and equivalent yield to be recorded in cropping system under OFT OFT on “Performance of rapeseed mustard varieties PM-27 and NRC HB101” to be taken up
7.	KVK Bishnupur <ul style="list-style-type: none"> Vermicompost to be used instead of FYM under OFT Title of the OFT of potato to be changed as varietal performance Dr. R.K. Saha, DEE, CAU Imphal intervened to show the original technology about the depth

	<p>of water for nursery pond to him in person</p> <ul style="list-style-type: none"> • The original technology about the composite fish culture with Mola (mukanga) under FLD to be checked • To conduct a joint visit with ICAR, CAU, scientists to Anabas breeder for quality assurance of fingerlings • To change the title as seed production of technology of kharif rice under FLD • To include yellow plate sticker as one of the treatment in aphid management under FLD
8.	<p>KVK Imphal East</p> <ul style="list-style-type: none"> • To confirm whether TRCP-9 field pea variety is notified or not. Further, whether TRCT-1-1-5-1 toria variety is notified or not. • To use yellow sticky trap instead of spraying chemical in managing aphids in vegetables.
9.	<p>KVK Jaintia Hills</p> <ul style="list-style-type: none"> • Weather parameters should be included under observation in the OFT on Varietal performance of finger millet (Var. Mandua-352) • Title of the OFT “ Analysis of Livelihood of farmers post Covid -19 in West Jaintia Hills” should be change to “Analysis of Livelihood of farmers during pandemic Covid -19 in West Jaintia Hills” • FLD on “Value Chain Analysis of Ginger and Turmeric in West Jaintia Hills” should be shifted to OFT
10.	<p>KVK South Garo Hills</p> <ul style="list-style-type: none"> • In OFT on Management of aphids in cabbage should be written clearly with number of treatments (Technology Options). • In OFT on management of leaf curl virus, bacterial wilt and early blight disease of tomato, three (3) varieties of Tomato should be taken namely Arka Rakshak, Arka Abhed and Arka Samarat.
11.	<p>KVK Ribhoi</p> <ul style="list-style-type: none"> • FLD on “Popularization of storage technique of planting material for effective management of Rhizome rot of ginger should be dropped”.
12.	<p>KVK East Khasi Hills</p> <ul style="list-style-type: none"> • Level of income should be corrected to change in income under Parameters of assessment for the OFT on “Comparative assessment on the resource allocation and consumption pattern of beneficiaries under PM Kisan Scheme”
13.	<p>KVK West Khasi Hills</p> <ul style="list-style-type: none"> • Source of Technology should be verify for the OFT on “Integrated Disease management in pea”
14.	<p>KVK West Garo Hills</p> <ul style="list-style-type: none"> • Azolla percentage should be 20% instead of 22% under treatment for the OFT on “low cost feeding management for pigs” • Azolla for poultry toxicity of azolla should be tested.
15.	<p>KVK Kolasib</p> <ul style="list-style-type: none"> • Sowing of cucumber should be done in a month of September instead of October and Compare with normal season cultivation in OFT on “off season cultivation of cucumber under poly-house” • Separate plot for each treatment to be maintained in OFT on “organic management of insect pests in Mustard” • Comparative study with Varanaraja following the parameters is to be observed in OFT on “Kadaknath poultry under intensive system of rearing”
16.	<p>KVK Champhai</p> <ul style="list-style-type: none"> • Moderation of micro climate under climate change condition, temperature variation, soil

	moisture monitoring, bio-dynamics of canopy management, weight test soil quality index etc. should be included with GPS data and these should be done as a separate work in consultation with experts and research papers to be published by Mamit, Champhai, Kolasib.
17.	KVK Serchhip <ul style="list-style-type: none"> • In OFT title evaluation should be deleted. • In OFT-7: “Assessment of primary packaging for preservation of fresh vegetables”, Traditional packaging method should be find out and its technology assessed should be compared • In OFT-10: “ Yield assessments of rape seed (TORIA) with bee keeping”, Technology to be assessed with farmers practice at least Miles (30kms) to get better result • In FLD: The title to be changed into intercropping of maize with cowpea • In FLD 05: “Popularization of Drip irrigation+ plastic mulch”, Parameters on Water use efficiency and residual soil moisture, GPS should be included, calculate quantity of water saved with traditional irrigation practiced. • In FLD 06: “Popularization of low cost bamboo frame poly house technology”, Include temperature variables (temperature, humidity) and soil temperature parameters inside and outside poly house. • Soil& water sample analysis target should increase to 500 nos.
18.	KVK Lunglei <ul style="list-style-type: none"> • Wild species of packaging material to be promoted on OFT under effective use of commercially packaging material for preserved fruit and vegetables • Topography and location base FLD on cleaning for animal shed using GPS • Number of beneficiaries to be increase under FLD on cleaning for animal shed • Soil Nutrient status parameters should be included on potato tikka nutrient deficiency. • Horticulture SMS should consult with Champhai KVK to find out the opportunity on Agro forestry discipline
19.	KVK Mamit <ul style="list-style-type: none"> • Try to find out the storage viability period of Zorin bean • FLD:Net return Value should be calculated on tomato • OFT: Bamboo- Include GPS location where bamboo plantation is taken up and find out local species • FLD: Betel vine supporting should be perennial tree species. • In consultation with Director (R&E) we can change breed of goat if we do not get the proposed breed on Annual action plan • In IFS model, include Papaya Variety Swapna and compare with Red lady • Soil& water sample target should be increased. • On seed production oil seed & pulses should be included and taken up by Farm Manager
20.	KVK Siaha <ul style="list-style-type: none"> • OFT title 1 and 2 Varietal evaluation should be change to varietal performance • OFT1: Bio additives should be used in bamboo fermentation and compare traditional and scientific packaging. • FLD 2: Measurement of humidity parameters after storing in bundle for Hay making should be added. • Promotion of eco- tourism in Siaha District • Find out the farmer satisfactory technology and evaluate the programme
21.	KVK Lawngtlai <ul style="list-style-type: none"> • Check Variety of musk melon. • Change title to varietal performance for tomato & muskmelon
22.	KVK Dimapur

	<ul style="list-style-type: none"> • In OFT of Home Science it is recommended to take raw papaya and chow as control. • It is recommended to increase the seed production under cereals.
23.	KVK Zunheboto <ul style="list-style-type: none"> • VL 63 may be replaced with a new variety. • Instead of Evaluation it may be written as performance on Maize-beans cropping system for rainfed condition under organic management system. • In Kiwi another parameter may be added as under partially shade area. • In Okra one more parameter may be added as straw mulching. • In OFT Animal Science, Hampshire crossbreed should be 75%. • In OFT Home Science, parameters like drudgery reduction may be added. • In OFT Agril. Extension, the title may be changed to Role of performance. • In FLD Agronomy, variety HQPM-1 should be replaced by HQPM-5. • In FLD Plant Protection for ginger rhizome rot, Bio For may be included for ginger. • In FLD Plant Protection leaf folder management, Pheromone traps may be included.
24.	KVK Mon <ul style="list-style-type: none"> • Both OFT under Soil Conservation Technology to be corrected according to the discipline. • FLD under GPB, Title should be Popularization of seed production in soybean (JS 335). • FLD under Soil Conservation, to incorporate proven/tested technology for popularization of French bean according to subject matter.
25.	KVK Phek <ul style="list-style-type: none"> • OFT in Modified SRI: To remove seed rate and include seedling age. • OFT in Maize: Beans inter-cropping system under organic Management system: Problems diagnosed instead of minimum use of organic, use Non use of organic. • OFT in Organic Management in Cabbage: Problems diagnosed instead of minimum use of organic, non use of organic. • OFT in Organic Management in Turmeric: Problems diagnosed instead of minimum use of organic, non use of organic.
26.	KVK Peren <ul style="list-style-type: none"> • Parameter Mortality rate to be replaced by Survivability rate in OFT on Feeding Trial of Pigs. • To change the title of OFT on Application of beneficial microbes in Lowland Rice to Bio-fertilizer • Seed production to be added in FLD on Production technology of maize RCM 76. • Title of FLD on Production technology of Toria to replace by Popularization of Toria TS 67 for late sown paddy- toria cropping system.
27.	KVK Kohima <ul style="list-style-type: none"> • Hands on training on Fruits and Spices should be conducted. • Modified Cono-weeder technology for SRI may be taken up. • The recommended dose of lime application @2000kg/ha may be rectified
28.	KVK Kiphire <ul style="list-style-type: none"> • In FLD on Pea, only variety Aman has to be taken
29.	KVK Tuensang <ul style="list-style-type: none"> • In Agronomy OFT, Wheat needs to be replaced by rabi millet under Jhum fallow. • In Agronomy OFT on Utera cropping of Mustard in maize based cropping system in jhum, Mustard variety Pusa Mustard-28 needs to be replaced by variety NRCHB-101. • In Genetics and Plant Breeding FLD on Popularization of groundnut, Variety TG37A should be replaced by a new variety.
30.	KVK Mokokchung <ul style="list-style-type: none"> • In OFT Agronomy, Soyabean variety VL Soya-63 should be replaced by Soya-77.

	<ul style="list-style-type: none"> • Pusa Mustard under OFT Agronomy should be replaced by variety NRCHB-101. • Demonstration on Toria should follow sequential cropping. • Socio-economic parameters should be defined for FLD under Agriculture Extension. • Follow the protocol of turmeric cultivation as per the e-book to be released by ATARI
31.	KVK Wokha <ul style="list-style-type: none"> • To popularise ITKs under Animal Science OFTs and FLDs. • To increase the no. of female pig under Animal Science FLD programme for establishing breeding unit. • Preparation of questionnaires on Agriculture Extension OFT for impact assessment on vocational training programmes for 5 years has to be done in consultation with Dr. A.K. Singha, PS, ATARI, Umiam. • In Agriculture Extension FLD, management and promotion of FPO has to be linked up with NABARD.
32.	KVK Longleng <ul style="list-style-type: none"> • To take body weight at monthly interval for grower pig and include survivability rate instead of mortality rate under OFT on Feeding management in grower pigs. • To exclude OFT and take up only one FLD for Programme Assistant (Rural Development) • Suggested to take up impact analysis for agricultural extension personnel (Rural Development)
33.	KVK-South Tripura <ul style="list-style-type: none"> • One additional treatment may be added as ‘soil treatment with <i>Trichoderma harzianum</i> in the OFT entitled, ‘Eco-friendly management of wilt disease in King Chilli’. • One additional treatment may be added as ‘Single stocking and double Harvesting’ in the OFT entitled, ‘Comparative assessment on economic profitability of different stocking and harvesting strategies in Carp grow-out system’. • ‘Using selective herbicide to knock down of Dhaincha’ may be added as an additional treatment in the OFT on ‘Assessment trial on kharif paddy cultivation with green manuring (GM) practice for improving soil fertility and higher rice productivity’. • Proper attention to be given while incorporating Azolla in dairy cattle feed so that it doesn’t exceed the recommended level in dairy cattle feed. It is in reference to the FLD entitled ‘Popularization of Azolla feeding in dairy cattle’. • Year should be mentioned along with Source of technology while reporting the FLD programmes under Home Science Discipline.
34.	KVK-Khowai <ul style="list-style-type: none"> • In the OFT titled “Root dipping in SSP-mc Slurry method of P management”, Phosphorus status before and after intervention may be analysed. • In all OFTs under plant protection, control treatment should be renamed as farmers practice. • In the OFT titled “Kokcheng (bamboo basket) work efficiency” must be calculated. • Source of technology of jackfruit chips preparation must be changed as ICAR RC Barapani not ICAR ATARI, Barapani. • In the OFT <i>Low-cost Hydroponic device</i> proper economics must be calculated and the technology must be need based.
35.	KVK-North Tripura <ul style="list-style-type: none"> • In OFT on assessment on performance of tomato varieties. Arka Samrat needs to be included along with Arka Abed and Arka Rakshak to see the superiority. • In OFT in animal science, Kamrupa, Vanaraja need to be evaluated along with Kadaknath breed to evaluate the performance and economic viability and impact. • Recent variety of Wheat needs to evaluate for fodder as well as grain purpose from VPKAS,

	Almora.
36.	KVK-West Tripura <ul style="list-style-type: none"> It was recommended for Agril. Extension for OFT entitled “Study the performance of existing marketing channels of lemon” to study those farmers / who are directly selling the lemon in the road side during COVID -19 situation/lockdown. It was recommended to include one more parameter “Adoption rate” for the OFT entitled “Empowering SHGs through secondary agriculture”. It was recommended for the FLD entitled “Impact assessment on FCI procurement from Rice farmers” to study those farmers (who cannot sell their rice to the FCI and why). It was suggested to include one more catch crop if possible, for the FLD entitled “Popularization of vegetable based cropping system (Okra-Cowpea-Tomato)”. It was suggested to produce Mushroom throughout the year if possible, for the FLD entitled “<i>Oyster</i> Mushroom cultivation for income generation of farmwomen”
37.	KVK- Gomati <ul style="list-style-type: none"> Necessary steps to be taken for early completion of administrative building of KVK, in this regards it is suggested that KVK should regularly kept in touch with the concerned PW officials, Amarpur, Gomati District. At least one OFT to be taken up on commercial Crop like-Betel leaf cultivation etc., if feasible. Emphasize also to be given on FLD as there is no SMS in the KVK, till date. Experts’ opinion on fish farming may be sought from KVK- South Tripura, if planned so. Encourage raising of F1- Hybrid Shapna variety as planting materials for Papaya instead of Pusa honey dew variety since it is a very old variety.
38.	KVK-Sepahijala <ul style="list-style-type: none"> It was recommended to compare Maize hybrid VMH-45 with the RCM-76, as it is very popular in North East for the OFT entitled “Assessment of Maize hybrid VMH-45”. Ergonomics parameter (heart beat rate) for drudgery reduction may be taken up for the OFT entitled “Performance evaluation of Modified ConoWeeder”. Larger area is recommended for demonstrating Tractor Drawn Rotavator for the FLD “Popularization of Tractor Drawn Rotavator”. It was recommended to disinfect the pond before stocking for the FLD entitled “Popularization of stunted growth fish fingerling for higher production”.
39.	KVK-Dhalai <ul style="list-style-type: none"> With regards to the problems identified under OFT, the use of pesticides for integrated pest management in potato should be discouraged.
40.	KVK-Unakoti <ul style="list-style-type: none"> Recruitment of staff at the earliest Efforts for conducting OFTs at farmers fields Early completion of PRA exercise for database
41.	KVK-Aizawl <ul style="list-style-type: none"> Problems identification through PRA exercise Priority on recent varieties of crops for OFTs at farmers fields Parameters for OFTs may be specified clearly Increase quantity of seeds and planting materials SHCs may be increased upto 500
42.	KVK-East Garo Hills <ul style="list-style-type: none"> Stress on IFS in KVK and farmers field

	<ul style="list-style-type: none"> • New variety of crops to be used for OFTs • OFT & FLD should include GPS co-ordinates to avoid the same farmers, place etc. • Increase quantity of seeds and planting materials
43.	KVK-Senapati <ul style="list-style-type: none"> • Eco-tourism may be promoted • Proper documentation on how many OFT, FLD , need based training, impact analysis etc. • Increase quantity of seeds and planting materials • SHCs may be increased upto 500 • New variety of crops to be used for OFTs • Proper identification of problems of farmers under different areas

General Recommendations

1. Convert technique in energy balance mode, minimized resources and minimized drudgery, digitalized map developed by Southern India, GPS.
2. Try to collect information with pioneer institute of different project like NICRA.
3. Eco-tourism to be promoted.
4. Collect techniques and technologies component which can be health hazard and compare with new findings.
5. Font size to be large and uniform.
6. New variety of crops to be used for OFTs
7. Using of animations to be minimized in PPT presentation.
8. All training conducted should have a training manual and farmer's data (eg.phone no., adhaar card no.) to be collected. Same farmers should attend training more than 3 times. Farmer's data should be updated every six months to ICAR ATARI.
9. Contact IIFCO for feedback and availability of fertilizers to be included it in OFT & FLD
10. Contact nearest district Common Service Centre Office for update of information
11. List of technology evaluated in FLD & OFT for the last 5 years, best technology identify along with source and years should be compile and submit by Kolasib KVK before 10th July, 2020 for Mizoram State
12. All OFT & FLD should include GPS co-ordinates to avoid the same farmers, place etc.
13. FLD should be conducted at least 2-3 years maximum and hand over to line department, ATARI, University after compiling package of practices.
14. Documentation on how many OFT, FLD , need based training, impact analysis on farmers, short video on success story, farmers innovation for improvement (ITK) should be maintain.
15. Title of OFT & FLD 1st & 2nd years should be reflected clearly.