

Proceedings of Zonal Review Workshop on National Innovation on Climate Resilient Agriculture (NICRA) Project & Action Plan 2017-18

('Technology Demonstration Component' of KVKs' Under ICAR-ATARI, Zone- VI and Zone VII (Zone III Old)

Venue: College of Veterinary Sciences, AAU Jorhat, Khanapara Assam

Date: June 10-11, 2017

Two days Meeting on Zonal Review Workshop of National Innovation on Climate Resilient Agriculture (NICRA) Project under ICAR ATARI, Zone-VI and VII was organized at College of Veterinary Sciences, AAU Jorhat, Khanapara Assam during June 10-11, 2017 under the chairmanship of Dr. Randhir Singh ,ADG,(AE),ICAR, New Delhi in the presence of Dr. Bidyut. C. Deka, Director, ICAR-ATARI, Zone-VII, Umiam and Dr. A.K. Tripathi ICAR-ATARI, Zone-VI Kahikuchi , Guwahati.

The Workshop was started with the inaugural programme on July10th, 2017 under the chairmanship of Dr. Randhir Singh, ADG (AE), ICAR, New Delhi. While interacting with the participants, he stressed on the importance of documentation and publication of KVK achievements which is of utmost importance in disseminating the technology and creating awareness and interest to farmers. During the workshop, the progress report of NICRA Project 2016-17 was discussed in detail and the action plan for 2017-18 was finalised. While delivering the welcome address, Dr. Bidyut C. Deka, Director, ICAR-ATARI, Umiam highlighted the salient achievements of NICRA KVKs of ICAR-ATARI Umiam during 2016-17. Dr. A.K. Tripathi, Director, ICAR-ATARI, Guwahati also urged the Participants to work on a system mode in the NICRA villages. Dr. J.V.N.S. Prasad, Co-P.I., NICRA TD component, CRIDA Hyderabad highlighted on the importance of analysing the project during last past five years with regard to innovations in climate resilient technology and taking necessary actions and policies for the next three years and making the technologies available to the farmers. Dr. H. C. Bhattacharyya, Director of Extension Education, AAU, Jorhat encouraged the KVK's to upscale the technology found successful during the past five years and for horizontal expansion of the technology. Dr. Randhir Singh, ADG (AE), ICAR, New Delhi, in his chairman's address elucidated on the KVK's role in expanding the technology demonstrated under the NICRA project. He also emphasized on the importance of interacting with policy makers to better regulate the implementation of programs and restrict localisation to a particular area. The other dignitaries present in the inaugural programme were Dr. P. Hazarika, Additional Director of Extension Education, AAU, Khanapara and Dr. R. Bordoloi, Pr. Scientist (AE), ICAR-ATARI, Umiam . Few publication on success stories of NICRA and a short CD film of KVK Khowai was released by the dignitaries.

During the two days workshop, the achievements as well as annual action plan of the KVKs were thoroughly examined by the panellists and necessary guidance were given to the Sr. Scientists and Heads of the KVKs for further improvement in the next phase of the NICRA Project.

The meeting after two days deliberation recommended the followings for implementation with immediate effect.

General recommendations to all KVKs:

1. Doubling farmer's income should be advocated by reducing costs , increasing productivity and value addition.
2. Documentation with proper compilation and publications should be emphasized as it will help to show the impacts in multi locations.
3. Water harvesting structures should be taken up under convergence mode involving State department, RKVY, NREGA or other similar schemes of various line departments.
4. The activities in Villages adjacent to NICRA should be initiated for horizontal spread.
5. KVKs namely Dibrugarh, Dhubri, West siang, Imphal east, Serchipp, Ri-bhoi, Phek, Dimapur, East Sikkim, Khowai and Sonitpur are asked to prepare a short (10 mins) Video film on successful interventions of technologies .Dr. R.K.singh , Sr. Scientist and Head , KVK Phek Nagaland shall

prepare a draft guidelines on videography and circulate to all the KVKs. The video film should be ready by 31st March 2018.

6. Farmers maybe made aware about the crop insurance scheme.

7. The sign boards or hoardings must indicate the name of project and crop name including the name of the variety.

9. Precise resource mapping should be followed corresponding to the area with the help of GPRS according to the area under vulnerability.

10. Crop calendar should be followed which should also include high value crop for that particular season of the year.

11. Activities on Fodder production ,Silage making may be taken up in flood affected areas.

12. Burning of paddy straw must be discouraged and instead mulching with paddy straw may be encouraged.

13. Exposure visit of farmers to be organised to the other NICRA villages for cross learning of the farmers.

14. The activities under KVK Tirap and West Kameng may be discontinued immediately in view of their poor performances in last 2 years

Actions to be taken by the NICRA KVKs have been summarized below

Sl. No	KVK	Climate Vulnerability	Remark
1	Tirap Arunachal Pradesh	Water stress / Moisture stress	➤ Performance not satisfactory
3	West Siang Arunachal Pradesh	Water stress	➤ Introduce paddy- Toria /paddy-Pea /Paddy Potato cropping sequence in Terrace. ➤ Presentation should be more NICRA specific ➤ Indicate tillage operation
4	Cachar Assam	Flood	➤ Submission of reports must be done timely ➤ Divide the village in Low , Up and Mid land area ➤ Black gram variety : PU 19 can be utilized. ➤ Highlight the increase in moisture and organic carbon due to Dhaincha instead of yield only. ➤ Introduction of new variety of Rajmah TR-1 after seed treatment ➤ Replace Toria variety TS-36 with TS 37 or TS 67 ➤ Sesame must not be grown in lowland.
5	Dhubri Assam	Moisture stress	➤ Post flood treatment as Toria 67 should be followed. ➤ High yielding variety of Pea (High temperature tolerant variety developed by IIHR , Bangalore). ➤ Introduction of Bee keeping in the Toria and rapeseed field. ➤ Follow suggested components of IFS. ➤ Silage production may be undertaken.
6	Dibrugarh Assam	Flood	➤ Preparation of precise resource mapping ➤ Monitor rainfall for more number of years ➤ In Early Ahu rice, Harvest before May 15 instead of 20 June. ➤ Replacement of Rice var Panindra and Panchanan with suitable varieties.
7	Sonitpur Assam	Flood / Moisture stress	➤ Distribution of rainfall , occurrence of flood drought and resource mapping should be defined. ➤ Divide the whole area into up, low and mid land. Also mention

			rain-fed or irrigated.
8	Karbianglong Assam	Drought	<ul style="list-style-type: none"> ➤ Sugarcane in upland Bunding to be followed. ➤ Use of Pig var. Rani instead of Hampshire ➤ Maize based cropping system should be followed in upland areas.
9	Imphal East Manipur	Drought/water stress	<ul style="list-style-type: none"> ➤ Use of paddy straw for mulching instead of mushroom production only. ➤ IIHR technology for controlling Virus occurrence of King chilli may be tried ➤ Increase area for IFS to 10 ha for the year 2017-18 and by 2020 the area should be 25 ha.
10	Senapati Manipur	water stress	<ul style="list-style-type: none"> ➤ Use of bore well for domestic purpose need not to be mentioned under NICRA ➤ DSR to be done in line sowing . ➤ Choose single animal instead of many and upscale the production ➤ No of SRI farmers should be increased ➤ Bee keeping to be taken along with Mustard
11	Ukhrul Manipur	Frost Soil Erosion	<ul style="list-style-type: none"> ➤ Indicate total rainfall distribution including normal distribution ➤ Replace M27 of Rapeseed mustard var with TS 37, or TS 67 or TS 38. ➤ Follow Line transplanting ➤ Echo Bunding to be followed to reduce soil erosion. ➤ SRI to be followed by Horticultural crops.
12	Jaintia Hills Meghalaya	Moisture stress	<ul style="list-style-type: none"> ➤ Use of Row markers to follow Zero tillage farming ➤ Early sowing of rabi crops ➤ Ginger to be followed by High yielding variety of Pea (High temperature tolerant variety developed by IIHR , Bangalore) ➤ Follow relay cropping. ➤ Maize based cropping system may be tried.
13	Ri-Bhoi Meghalaya	Water stress	<ul style="list-style-type: none"> ➤ Oyster mushroom cultivation may be tried in hanging rope with 3-4 beds in each row. ➤ Ginger-Pea to be followed with the use of Jalkund. ➤ Follow maize – rabi or paddy- rabi cropping system. ➤ Follow artificial Insemination in pigs.
14	West Garo Hills Meghalaya	Water stress	<ul style="list-style-type: none"> ➤ Larger area need to be covered. ➤ Silt filters to be used.
15	Lunglei Mizoram	Water stress	<ul style="list-style-type: none"> ➤ Include more no. of farmers ➤ Include high value crop ➤ Initiate Zero tillage Rice cultivation by 2nd harvesting of rainfed water ➤ Rice var. CAU- R1 to be utilized. ➤ Promote Poultry var Vanaraja and Duck var. Khaki Campbell. ➤ Scientific Honey bee hive to be set.
16	Serchipp Mizoram	Water stress	<ul style="list-style-type: none"> ➤ Rice to be followed by Toria TS 67 ➤ Maize based cropping system to be followed. ➤ Continue raised based for maize and field pea with better variety suitable for the condition.
17	Dimapur Nagaland	Drought/water stress	<ul style="list-style-type: none"> ➤ Toria variety TS – 67 to be used. ➤ Permanent Check dam to be made in NICRA Village.

			<ul style="list-style-type: none"> ➤ Access of water to each household should be taken care of . ➤ Sow lentil on 1st week of July.
18	Mokokchung Nagaland	Drought/water stress	<ul style="list-style-type: none"> ➤ Sowing of Rajmah (Kholar) before 15th of August ➤ Results should also indicate the Paddy production followed by Broccoli instead of only Broccoli production. ➤ 5 Ha cluster area under maize based cropping system to be tried. ➤ Echo system of bunding should be followed to reduce soil erosion.
19	Mon Nagaland	Soil moisture stress	<ul style="list-style-type: none"> ➤ Introduction of Paddy+ Colacasia- Pea Cropping sequence. ➤ Proper resource mapping should be followed ➤ Rainfall pattern of last 10 years to be presented ➤ Log bunding to reduce soil erosion ➤ Expansion of low cost interventions in 5-10 Ha cluster area. ➤ Encourage farmers for IFS with suitable components.
20	Phek Nagaland	Drought/water stress	<ul style="list-style-type: none"> ➤ Horizontal spread of Kiwi fruit crop to replace Jhum cultivation ➤ Horizontal spread of Duck eggs production unit in cluster mode. ➤ Maize based cropping system should be spread horizontally.
21	East Sikkim Sikkim	Hail storm/Dry spell	<ul style="list-style-type: none"> ➤ Joymati rice variety to be promoted. ➤ Segregate villages according to the conditions. ➤ NICRA activities may be initiated in nearby villages.
22	Dhalai Tripura	Flood/ Soil erosion	<ul style="list-style-type: none"> ➤ Better map to be presented. ➤ 10 years rainfall pattern to be presented with response to the corresponding area ➤ Proper resource mapping to be done. ➤ Target triple cropping as the rainfall pattern throughout the year is good. ➤ Exhaustive crops to be removed.
23.	Khowai Tripura	Moisture stress	<ul style="list-style-type: none"> ➤ Installation of raingauge in villages ➤ Use of fruit fly traps or yellow sticky traps. ➤ Identify one best technology and invite personnel from State Govt. sector to attract input under convergence mode. ➤ Go for cluster in an area of 25 ha under Paddy. ➤ Start nano pumps in small ponds ➤ Select 10 best success stories and prepare a coffee table book.

**List of Participants who attended the NICRA Annual Review Meeting 2015-16 (May 6-7, 2016)
at College of Veterinary Science AAU, Khanapara Assam**

Sl No.	State	KVK Name	Name of the Participants	Designation	Contact Number
1.	Arunachal Pradesh	Tirap	Mr. Abhimanyu Chaturvedi	SMS (Horticulture)	9436603932
2.	Arunachal Pradesh	West Siang	Dr. C.S. Raghav	Sr. Scientist and Head	9971290881
3.	Assam	Cachar	Dr.P. Choudhury	Sr. Scientist and Head	9436709040
4.	Assam	Dhubri	Dr.C.K.Deka	Sr. Scientist and Head	9613472814
5.			Dr. B.C. Deka	SMS, Plant Protection.	9435340387

6.	Assam	Dibrugarh	Dr. Hiranya Kumar Bhattacharyya	Sr. Scientist and Head	9435564391
7.	Assam	Sonitpur	Dr P. C. Deka	Head	9435521447
8.			Ms. Arifa Mamta Begum	SMS (Home science)	9678231760
9.	Assam	Karbianglong	Dr S.Maibangsa	Head	9435315868
10	Manipur	Imphal East	Dr.T. Medhabati Devi	Programme Coordinator	9612245620
11			Mr. M.A Sacam	SMS (Fishery)	8414814058
12	Manipur	Senapati	Dr.T Ratan	SMS (PBG)	9615308567
13			Mr. Y kenedy Singh	Ex.SRF	9615711478
14	Manipur	Ukhrul	Dr.Y Ramakrishna	Sr.Scientist and Head	9436158401
15	Meghalaya	Jaintia Hills	Mr.M.J Syngka	Sr.Scientist and Head	9436100293
16			Ms.Banylla Kharbamon	SMS, Horticulture	9862802309
17	Meghalaya	Ri-Bhoi	Dr.Mokidul Islam	Head	9089611347
18	Meghalaya	West Garo Hills	Dr. Sagarika Borah	Programme assistant (Animal science)	9436316425
19	Mizoram	Lunglei	Mr. Senjit Singh Ashem	SMS, Agronomy	8415911355
20	Mizoram	Serchipp	Dr. Animaesh Deka	I/C Sr. Scientist and Head	8014066760
21	Nagaland	Dimapur	Shri Z.James Kikon,	SMS, Soil Science	9612902239
22	Nagaland	Mokokchung	Mr.Samuel Sangtam	SMS, Agronomy	9856580802
23			Mr. Nenbemo	SMS (horticulture)	9436605485
24	Nagaland	Mon	Dr. Ruokuovilie Mezhatu	Sr. Scientist and Head	9436011240
25			Dr. Manoj Singh Sachan	SMS Plant Breeding	9436203373
26	Nagaland	Phek	Dr. R K Singh	Sr. Scientist and Head	9436606353
27	Sikkim	East Sikkim	Dr. Raghavendra Singh	Head	9475582991
28	Tripura	Dhalai	Mr. Debraj barman	Sr. Scientist and Head	9436505821
29	Tripura	West Tripura/ Khowai	Mr. Dipankar Dey	SMS, Soil Science	8256993190
30			Dr. R.Bordoloi	Principal Scientist, AE ATARI, Umiam	9436337276
31			Dr.A.K.Tripathi	Director ICAR-ATARI, Zone-VI Kahikuchi	9436108650
32			Dr. Bidyut C. Deka	Director ICAR-ATARI, Zone-VII Umiam	9436349416
33			Dr. R.Singh	ADG (AE), ICAR	9416015619
34			Dr. H. Bhattacharya	DEE/AAU/ Jorhat	9435194597
35			Dr. JVNS Prasad	Coordinator NICRA (Co-PI) CRIDA Hyderabad	9490301704
36			Dr. P Hazarika	ADEE, AAU, Khanapara	9435049509
37			Dr. Rimiki Suchiang	SRF , ATARI- Zone -VII, Umiam	9862871581
38			Mr. Daegal A Massar	SRF , ATARI- Zone -VII, Umiam	9615613406
39			Ms. Nomi sarmah	ICAR-ATARI, Zone-III Umiam	9089554253

