

PROCEEDINGS OF THE 20thSCIENTIFIC ADVISORY COMMITTEE MEETING

KRISHI VIGYAN KENDRA, BOUDH

The 20thScientific Advisory Committee (SAC) both online and offline meeting of KVK, Boudh was held on Dt. 16.12.2023 at 10.30 AM in KVK training hall under the Chairmanship of Dr. P. J. Mishra, Dean Extension Education, OUAT, Bhubaneswar & Dr. S.K. Mondal, Principal Scientist, ATARI,Kolkata, Prof. Amaresh Khuntia, JDE (Distance Education), OUAT, Dr. Gobinda Acharya, Director, CHES (ICAR-IIHR), Bhubaneswar, Dr. Sanjukta Mohapatra, ADR, RRTTS Chiplima , Dr. Debasis Mishra, Sr. Scientist & Head, KVK, Angul, Sj. Nilambar Kilaka, DDF Bolangir and other SAC members participated in the SAC meeting. Members present in the meeting are annexed herewith. Sj. Tapan Kumar Das, Senior Scientist & Head, KVK, Boudh made a brief welcome to the SAC members and requested the Chairman to conduct the meeting.

After a brief introductory remark, the Chairman asked the Sr. Scientist & Head to start the proceedings as per the agenda.

Agenda-1Approval of the proceedings of last SAC meeting

The Sr. Scientist & Head briefly presented the proceedings of the last SAC meeting. The Chairman taking the consent of the members approved the proceedings.

Agenda-2Presentation of Action taken report on last SAC recommendation of the 19th SAC meeting.

The Sr. Scientist & Head presented the following action taken report on the recommendations of last SAC meeting.

Sl No.	Recommendations	Action Taken
1.	Area to be increase from 1 ha to more in case of FLD programme.	Area has been taken from 1 ha to 2 ha under all FLD programme during the year of 2023-24.
2.	OFT or FLD programme on Green gram (like IDM, INM etc.) to be taken.	One no. of FLD programme proposed to be conducted on “Demonstration on YMV management in greengram” during the Rabi 2023-24.
3.	More no. of training programme on Organic farming & Natural farming should be included.	Four Nos. of awareness cum training programme with 120 Nos. of participants have been conducted in Kultakhali, Gandhigram, Kantuani & Laxmanpur village in Kharif season. Lecture also delivered on “Natural Farming” by KVK Scientist under VBSY

		Programme at the GP level on daily basis.
4.	Organic farming group should be formed and marketing strategy for saleing of the organic produce need to be facilitated.	Two Nos. of farmers group have been formed with 20 Nos. of participants of villages Kultakhali and Gudapada.and the group also set up a vermicompost unit at their farm level and started marketing of their produce at the local level.
5.	Rice fallow lands need to be covered with Pulse crop.	Two nos. of awareness cum training programme for promotion of pulse cultivation have been conducted in Krushnapali and Kultakhali villages of Boudh block with 60 nos.of participants. Time to time technical support provided to Dept of agriculture, ICARDA under Pulse crop demonstration programme.
6.	Acid soil management practices to be included.	Three nos. of training cum awareness programme have been conducted in Krushnapali, Dhalpur and Sakusinga villages of Harbhanga block with 75 nos. of participants. Recommendation for application of basic Lime and use of green manuaring with Dhanicha crop and organic manure practices have been given to the farmers in different training and awareness programme.
7.	Capacity building programme on cotton crop to be included at Kantamal Block.	Three nos. of capacity building training programme have been conducted in convergence mode with dept. of Agriculture at village Jogindrapur, Badagochha villages of Kantamal Block of Boudh district with 150 nos. of participants. 1 no. of FLD programme on “Demonstration on Sucking Pest Management in Cotton” has conducted in Nendan village of Boudh block.
8.	Suggestion to carry out different activities such as backyard poultry rearing, demonstration on vegetable seedling production and Vermicompost production for doubling of farmer income in the district.	2000 nos. of chicks have been distributed in convergence mode with Matrushakti FPO of Gidhamal, Nuapali and Kodibahal villages of Kantamal block with 100 nos. of participants. Demonstration on vegetable seedling production proposed to be conduct under SCSP programm and skill training programme on Organic cultivator to be conduct during Rabi 2023-24 by KVK.
9.	Activities under veterinary,	One no. of Farmers fair cum exhibition named

	Fishery, and allied sector (suggestions from DLREI meeting) to be included in the KVK activities.	“Masthya O Pranisampad Mela 2023” has been conducted in convergence mode with the Dept. of Fishery and Animal husbandry at the district level with 2000 nos. of participants.
10.	Awareness cum training programme on Animal Health in convergence mode to be included in KVK activities.	Two nos. of Awareness cum training programme proposed to be conduct in convergence mode with the Dept. of Animal husbandry during Rabi 2023-24 under SCSP programme. Time to time Sending of KMAS, message on animal health to the registered farmers under Kishan Sarathi portal.
11.	Trials/Training/Awareness programme on Millet crops to be included.	Two nos. of Awareness cum training programme have been conducted with 25 nos. of rural youth at KVK campus and 1 no. of FLD programme on “Demonstration on Ragi thresher cum pearerl” has conducted in Kelakata village of Harbhanaga block. Two nos. of Field day and Crop cutting programme have been conducted in convergence mode with Dept. of Agriculture and Odisha Millet Mission in Saleising and Tutumsing village of Boudh block with 140 nos. of participants.
12.	Trials/Training programme on floriculture (such as Tuberose & Marigold) or some improved variety to be included in KVK activities.	One No of FLD Programme on “Demonstration on Marigold var. Bidhan Marigold-2” has taken during Rabi season at Mursundi and Baghiapada village of Boudh block and 2 nos. of training cum awareness programme have been conducted in the same villages with 60 nos. of women SHG members.
13.	Trials on new vegetables like Sponge gourd, Ivy gourd, and leafy vegetables at KVK, Crop cafeteria.	Different types of leafy vegetables like spinach, Coriander leaves, Amaranthus, Methi, spring onion, cabbage, mint have been demonstrated at KVK, Crop Cafeteria and Nutritional garden. Red cabbage var. Red jewel and Capsicum var. Ayesha have been demonstrated in KVK crop cafeteria.
14.	Awareness programme on Kharif onion production need to be taken of in KVK activities.	Three Nos. of awareness cum training programme with 90 Nos. of participants have been conducted in Alania, Rampur village of Boudh block.

15.	Training programme on value addition to be included.	Three nos. of Awareness cum training programme on value addition of Millet crops and Oyster mushroom have been conducted in Sarsara, Tetelenga villages of Boudh block and Manamunda village of Kantamal block with 90 nos. of women SHG member. Three nos. of millet recipe contest have been conducted to increase awareness among the rural women.
16.	Training programme on watershed management to be conducted.	Two nos. of awareness cum training programme with 100 nos. of participants have been conducted in Lundaberuni , Lundrujhor village under the theme of “ Jal Shakti Abhiyaan” programme.
17.	Suggestion to introduce Kalinga brown, Pallishree chicks in the district through SCSP and FLD Programme.	2000 nos. Kalinga brown and Pallishree chicks proposed to be distribute in the district under FLD programme of SCSP scheme during Rabi 2023-24.
18.	Capacity building training to SHGs on mushroom Production & Bee Keeping farming.	Two nos. of skill training programmes have been conducted with 60 Nos. of WSHGs members of village: Amthapada, Baghiapada & Manamunda villages on mushroom production and Bee keeping farming for their capacity building.
19.	More emphasized to be given for crop diversification under Oilseed and Pulses crop.	Oilseed and Pulses crop proposed to be taken during rabi 2023-24 under CFLD programme. Training and awareness programme proposed to be conduct with convergence mode with Dept. Of Agriculture.

Agenda-3 Achievements made during: Rabi 2022-23

The Senior Scientist and Head presented the overall achievements made by the KVK during the period Rabi 2022-23 and Kharif -2023 and the Action Plan for Rabi 2023-24 and year 2024-25.

On-Farm Testing

Two numbers of OFTs have been conducted during Rabi- 2022-23 involving 14 nos. of farmers based on problem of farmers field. Some of salient achievements of the OFTs were as follows:

- OFT on “Assessment of weed management in maize ”: treatment 1 was taken with Pre-emergence application of Atrazine 50 % wp @1.5 kg ai/ha recorded 52.65 q/ha yield and Application of Tembotrine 100gm/ha at 20 DAS as post emergence was taken as treatment 2 recorded 58.57 q/ha yield, respectively, as compared to 40.4q/ha yield with Hand weeding at 40 -45 DAS in farmers practice. In case of TO₁ increase in yield was found to be 30.3% & it was 44.2 in case of TO₂ as compared to FP. In TO₁ B:C ratio was 3.12 and 3.59 in case of TO₂ as compared to 2.17 in case of FP.
- OFT on “Assessment of Onion Varieties of Rabi Season ”: treatment 1 was taken with Cultivation of Onion variety NHRDF Red-3 recorded 247 q/ha yield and Cultivation of Onion variety NHRDF Red-4 was taken as treatment 2 recorded 238q/ha yield, respectively, as compared to 204q/ha yield with Cultivation of Agri found light red in farmers practice. In case of TO₁ increase in yield was found to be 17.4 % & it was 14.28 % in case of TO₂ as compared to FP. In TO₁ B:C ratio was 2.8 and 2.7 in case of TO₂ as compared to 2.3 in case of FP.

Front Line Demonstration

KVK conducted 06 nos. of frontline demonstrations during Rabi-2022-23. Salient achievements of FLDs were given below.

Demonstration on Pre and Post Emergence Herbicides in transplanted Rice: where Pre-emergence application of pretilachlor 6% + bensulfuron methyl 0.6 % GR(Ready mix) 600g/ha at 3 DAT fb and post emergence application of Bispyribac Sodium 10 EC 25g/ha at 20 DAT gave yield of 50.9 q/ha as compared to 38.8 q/ha in farmers practice which is 31.1 % change in yield. In RP B:C ratio was 2.5 as compared to 1.5 in case of FP. There was good control of complex weed flora with WCE of 87% encouraged yield enhancement.

Demonstration on application of growth regulator in chilli: where Spraying of Triacontanol @ 1.25ml/liter at 40 , 60 and 80th days of planting reduce flower drop and increased fruit set gave yield of 104.3q/ha as compared to 89.1q/ha in farmers practice which is 16.85 % change in yield. In RP B:C ratio was 2.1 as compared to 1.8 in case of FP.

Demonstration on Micronutrients on growth and yield of cauliflower: where application of combined spray of Boron 50 ppm + Mo 25 PPM thrice at 10 days interval gave yield of 174q/ha as compared to 150q/ha in farmers practice which is 16 % change in yield. In RP B:C ratio was 2.26 as compared to 1.98 in case of FP.

Demonstration on application of growth regulator in Bittergourd : where Foliar application of ethrel @ 200 ppm at 2 to 4 leaf stage & amino acid during flowering stage was taken as RP and yield was increased to 109.5q/ha compared 93.8q/ha to farmer practice which is 17% change in yield. In RP B:C ratio was 2.5 as compared to 2.1 in case of FP.

Demonstration on Management of Onion Thrips: where Need based alternate spray of Methomyl @ 0.8g/l at 30 DAT (with spreader @ 0.5-1%) and Thiomethoxam @ 0.6gm/lit at 10 days interval was taken as RP and yield was increased to 212 q/ha compared to 172 q/ha against farmer practice which is 23.2% change in yield. In RP B:C ratio was 3.26 as compared to 2.64 in case of FP.

Demonstration on Agri-silvi system: where Acacia mangium tress are planted at distance of 2.5 mt x 2.5 mt & inter-cropping of turmeric at a spacing of 50 cm x 50 cm was taken as RP which helps to increase the source of income of farmer yield was increased to 14.2 q/ha compared 9.6 q/ha to farmer practice which is 50% change in yield. In RP B:C ratio was 3.5 as compared to 2.3 in case of FP.

Agenda- 4 Achievements made during: Kharif- 2023

The Senior Scientist and Head presented the overall achievements made by the KVK during Kharif-2023.

On-Farm Testing

Four numbers of OFTs have been conducted during Kharif- 2023 involving 51 farmers based on problem of farmers. Some of salient achievements of the OFTs were as follows:

Assessment of IDM for sheath Blight management in Rice: where treatment 1 was taken with Seed treatment with *Trichoderma viride* @ 10g/ lit water and 2-3 sprayings of *Trichoderma viride* @ 10g/L at 10-15 days interval recorded 43.4 q/ha yield and Seed treatment with *Trichoderma viride* @ 10g/L water and Spraying of the combination fungicide (Azoxystrobin + Difenconazole) @ 1ml/L twice at 15 days

interval starting from initiation of the infection was taken as treatment 2 recorded 47.8q/ha yield, respectively, as compared to 35.5q/ha yield with Low yield and Indiscriminate application of spurious chemicals with improper dose in farmers practice. In case of TO₁ increase in yield was found to be 18.2% & it was 25.7 in case of TO₂ as compared to FP. In TO₁ B:C ratio was 1.7 and 1.8 in case of TO₂ as compared to 1.4 in case of FP.

Assessment of Eco-friendly management of pod borer complex in Pigeonpea: where treatment -1 was taken with application of Azadirachtin 0.15% @ 1.5 L/ ha + Spinosad 45 SC @ 200 ml / ha at 50% flowering and second 15-20 days after 1st spraying recorded 12.6q/ha yield and Seed treatment with *Trichoderma viride* @ 10g/L water and Spraying of the combination fungicide (Azoxystrobin + Difencconazole) @ 1ml/L twice at 15 days interval starting from initiation of the infection was taken as treatment 2 recorded 14.2q/ha yield, respectively, as compared to 8.7 q/ha yield in farmers practice where farmers are not applying any specific pesticide for gram pod borer management. In case of TO₁ increase in yield was found to be 30.95% & it was 38.73% in case of TO₂ as compared to FP. In TO₁ B:C ratio was 3.6 and 3.9 in case of TO₂ as compared to 2.7 in case of FP.

Assessment of Production of Paddy Straw Mushroom From Crumpled Straw: where treatment-1 was taken with production of paddy straw mushroom from crumpled straw (axial flow thresher) recorded 0.88 kg/bed in yield and Mushroom cultivation by using crumpled paddy straw from bullock treading/tractor treading was taken as treatment 2 recorded 0.8 kg/bed in yield. In TO₁ B:C ratio was 2.5 and 2.8 in case of TO₂ as compared to 2.3 in case of FP.

Assessment of the effectiveness of different extension methods to access information on Rice production: where treatment-1 was taken with FP (Farmers getting information from peer groups, input dealers, extension functionaries, mass media, and, KMAAs) + Short Video Lecture+ Focus Group discussion and FP + Using of "Rice Xpert" App was taken as treatment 2. In case of highly understanding of the messages : 40% in TO₁ & 60 % in TO₂ are highly understood the messages of Rice expert App over FP(16.66%), In case of time-based information we get that 93.3% are agree for timely availability of messages in TO₂ where 23% are agree in TO₁ over FP(10%), suitability of technology: 40% are agree for suitability of technology in TO₂ where in TO₁ 26% are agree over FP(16.6%) and increase in Knowledge: 70% agree that they have increased their knowledge after using this app in the case of TO₂

where 50 % in TO1 % & 20% agree in FP, and ease in handling the app: 80% agree for easy to handle this app in TO2 whereas 33.3% agree in TO1 over FP (20%). So, farmers will be benefitted in future by using this App. because according to their feedback it is easy to access, on time availability of message, quality and understanding of messages.

Front Line Demonstration

K.V.K conducted 04 nos. of frontline demonstrations during Kharif-2023. Salient achievements of FLDs were given below-

Demonstration on Management of Fall Army Worm in maize: where Seed treatment with (cyzapyr + thiometoxam) @ 6 ml/ kg seed + Installation of bird perches up to 45 DAS + Foliar application of tetraniliprole @ 200 ml/ ha at 30 days after sowing (DAS) + Whorl application and field placement of Poison baits (10 kg rice bran + 2 kg jaggery+ 2-3 l of water+ 100 g thiodicarb) at 45 DAS' minimized the plant and cob damage % gave yield of 35.4 q/ha as compared to 25.5 q/ha in farmers practice where farmers are applying chloropyriphus+cypermethrin @3ml/lit and application of phorate @ 1kg/acr which is 27.8 % change in yield. In RP B:C ratio was 2.5 as compared to 2.25 in case of FP.

Demonstration on stem borer and leaf folder management in Rice: where Nursery treatment with fipronil 0.3G @ 20kg/ha followed by soil application of chlorantraniliprole 0.4 G @ 10 kg/ha at 30 days after transplanting (DAT) and need based application of insecticide based on pest severity reduced pest population gave yield of 42.5 q/ha as compared to 34.5 q/ha in farmers practice where farmers are not given proper nursery treatment and applying (spraying of triazophos + deltamethrin @ 1 l/ ha) which encourage the pest for rapid multiplication, which is 18.8 % change in yield. In RP B:C ratio was 1.7 as compared to 1.22in case of FP.

Demonstration of Ragi thresher cum Pearler: where threshing by Power operated ragi thresher gave output 77.4 kg/hr, threshing Efficiency 89 % as compared to 6.2 kg/hr, threshing efficiency 83 % in farmers practice where farmers are doing manual threshing.

Demonstration of Nutritional garden for ensuring Nutritional Security of farm family: where Trellis structure with PP rope for raising cucurbits, Low cost poly tunnel for raising seedling in small quantity, vermi tank for vermi composting, Growing vegetables round the year covering leafy vegetables, solanaceous vegetables, Roots and Tubers, cucurbits suiting to consumption pattern + Two Papaya plants, One

Lemon, One Drumstick and Two Banana and floriculture in bunds gave 768 Kg/0.02 ha as compared to 490 Kg/0.02 ha in farmers practice where irregular and unsystematic Nutritional Gardening with seasonal vegetables which is 63.8 % change in yield. In RP B:C ratio was 2.07 as compared to 1.75 in case of FP.

Training

KVK imparted training to 1125 farmers & farmwomen through 45 nos. training programmes. 120 nos. of rural youths trained on quality planting material production in vegetable, Bee keeping, Paddy straw & oyster mushroom cultivation, Production of quality planting material under protected condition, entrepreneurship development, value addition of vegetables through 06 Nos. of trainings were conducted during the period and 2 nos. of In-service training programme have been conducted. 60 nos. of farmers and farm women trained on Scientific Mushroom cultivation and Bee Keeping Farming through 2 nos. of Vocational training were conducted during this period.

Other Extension Activities

KVK conducted other extension activities viz. Scientist visit to farmers' fields 78 nos, Farmers visits to KVK 66 nos, 2 Field days, 4 nos. of special Swachhata Campaign, 15 days of Swachhata Pakhwada celebration, 10 nos. of farmers Scientist Interaction Programme, 1 no. of Awareness campaign on Balanced Use of Fertilizer, 13 nos. of Special Day celebration, 4 nos. of Exhibition and 10 Film shows. Scientists of KVK published 7 nos. of popular Articles, 6 nos. of web-telecast programme have been conducted. 38 nos. of messages has been sent to 32508 nos. of farmers regarding ICM, INM, IPM, IDM crop management, weather based crop advisory etc. KVKs celebrated Akshaya trutiya, Women in agriculture day, Mahila Kishan Diwas, World Food Day, Vana Mahotsav week, Poshan Maah and Tree Plantation, Celebration of Technology Day, Parthenium Awareness week, Swachhata Hi Seva , Special Campaign 3.0 , Webinar, etc. during the period.

KVK cultivated Dhanicha C.v local (TL) at its own farm. KVK produced seedling of Brinjal (**JK-8031, Harihar, Shruti-Gold**) 9,600 nos, Onion (**AFDR, NHRDF Red -3, NHRDF Red-4**) 4,05,000 nos., Chilli (**Arka Sanvi**) 11,800 nos., Tomato (Asutosh) 4,520 nos., Cauliflower (**Barkha, Megha**) 6,200 nos., Cabbage (**Blue Diamond**) 5,300 nos. during the year. In case of other material production

Mushroom (Paddy straw & Oyster) is 95 kg, Vermicompost 8 q., Poultry chicks is 3000 in nos. and Honey is 10 kg during the year of 2023-24.

Agenda 5: Action Plan for Rabi 2023-24

There is a plan of conducting 05 nos. of OFTs and 09 nos. Of FLDs during Rabi -2023-24.

Suggestions from SAC Members:

The following action points were suggested by the SAC members.

- ADR, Chiplima expressed their interest for common advisory meeting and forecast with collaboration of KVK, seed production of kharif onion, area should be increased for onion production than varietal evaluation and suggested to write down the name of old local variety in farmers practice.
- JDE (Distance Education), OUAT suggested to include OFT on fruits and vegetables and increase the activities under Organic farming and Natural farming.
- DD, NHRDF emphasized for nursery production of Kharif Onion before June for successfully Kharif Onion production.
- CDAO emphasized for expansion the area of wheat crop and its varietal evaluation and integrated solution for BPH affected area of Paddy.
- PD, Watershed expressed their interest for a proposal of a model with collaboration of KVK and all line departments for doubling of farmers income.
- SDVO suggested for increasing the number of Animal Health Camp in the district.
- DDM, NABARD suggested for convergence with FPO on value addition, marketing and different type of income generation activities.
- ADH suggested for collaboration of ASCI trainee list with Mushroom subsidy scheme and Training programme on value addition of Mango and vegetables.
- Varietal evaluation of Chilli crops need to be taken in OFT programme as suggested by Sr. Scientist & Head, KVK, Angul.
- Sr. Scientist & Head, KVK, Angul emphasized for using of crumpled paddy straw to increase the biological efficiency and Fogger should be given under SCSP scheme.

- DPC, OMM suggested for crop diversification from paddy to non paddy crop through popularization of millet and introducing new millet recipe for SHG.
- Scientist (Hort), Sonepur emphasized for popularization of floriculture activities through cultivation of Chrysanthemum var. Bidhan Jayanti and tuber rose.
- BAO, Boudh suggested for awareness programme on proper management of sucking pest in Cotton crop and vocational training programme on Bee keeping need to be conduct.
- SHG leaders suggested for training & marketing on Mushroom Production and training on Bee keeping for Rural Industrial Park for women empowerment.

Salient Recommendation of 20th SAC Meeting:

- It is proposed to conduct OFT on Pigeon Peafowl management of pod borer complex during kharif season.
- It is proposed to conduct OFT on greengram for management of pod borer complex during Rabi season.
- It is proposed to conduct OFT on varietal evaluation of Onion and varietal evaluation of Chilli for tolerance to leaf curl virus during Rabi season.
- OFT on Production of Paddy Straw Mushroom from Crumpled Straw & packaging of processed tender jackfruit.
- OFT on effectiveness of various media for dissemination of agricultural information.
- OFT on suitable marketing strategy for better marketing of high value crops.
- FLD on major sucking pest in chilli, management of sucking pest in Cotton, management of powdery mildew disease in greengram, IDM practices for viral diseases management in watermelon.
- It is proposed to conduct FLD on cultivation of Chrysanthemum var. *Bidhan Jayanti* and Okra var. *Kashi Chaman* during Rabi season.
- FLD on nutrient management in pointed gourd and Onion.
- FLD on power operated finger millet thresher for threshing, Oyster mushroom chips for higher income
- FLD on tube rose cultivation for income generation, cultivation of bio-fortified sweet potato var. *Bhu sona* for nutritional security.
- FLD on proper farm planning and record keeping for better marketing.

- FLD on transfer of technology through harnessing human values in agriculture.

It is proposed to conduct 18 nos. of training programme to the farmers and farm women under Plant protection discipline and 17 nos. of training programme under horticulture discipline and 17 Nos. of training programme under home science discipline and 18 Nos. of training programme under agriculture extension discipline during the year 2024-25.

The meeting was ended at 2.00 pm with vote of thanks by Smt. Sasmita Pal, Scientist (Home Science).

Sr. Scientist & Head
KVK, Boudh

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