## PROCEEDINGS OF THE SCIENTIFIC ADVISORY COMMITTEE MEETING KVK, RAYAGADA

The 16th Scientific Advisory Committee Meeting of KVK, Rayagada was held on Dt.15.01.2021 at 10.30 AM in the KVK premises under the Chairmanship of Dr. P. K. Agrawal, Hon'ble Vice-chancellor, OUAT, Bhubaneswar. Dr. L. M. Garnayak, Dean, Directorate of Extension Education, OUAT, Bhubaneswar and Dr. S. Mandal, Scientist, ICAR- ATARI, Kolkata attended the meeting virtually. Dr. M. Madhu, Head, ICAR-IISWC, Sunabeda, Koraput attended the meeting. The members present in the meeting were annexed herewith. Mr. Binod Kumar Jena, Senior Scientist and Head, KVK Rayagada made a brief introduction and Smt. Swarnasarika Behera, Farm Manager welcomed the dignitaries and members and requested them to inaugurate the meeting by lighting the holy lamp.

After a brief introductory remark about mandates of KVK and importance of SAC meeting, the Chairman requested the Senior Scientist and Head to start the proceedings as per agenda.

**Agenda-1: Approval of the proceedings of the last SAC meeting**

The Senior Scientist and Head stated that the proceedings of last SAC meeting were communicated to all the SAC members. He also presented the proceedings in brief. The Chairman taking the consent of the members approved the proceedings.

**Agenda-2: Action taken on the proceedings of last SAC meeting**

| Sl. No. | Recommendation of last year SAC meeting | Action Taken |
|---|---|---|
| 1. | Formation of WhatsApp groups involving innovative farmers, line department officers for sending latest agriculture related information and to conduct more number of trainings, exposure visits of farmers. | Four WhatsApp groups has been created involving 600 innovative farmers, farm women and line department officers to share latest agriculture related information/ messages to farmers regularly. |
| 2. | Mushroom spawn should be produced by KVK and emphasis should be given on resource based Integrated Farming System and change of adopted villages. | Both Oyster and paddy straw mushroom spawn bottle 4068 nos. has been produced and being supplied to farmers and farm women. There is a pond based Integrated Farming System in KVK instructional farm and with integration with Watershed Development Mission, Rayagada farm pond based IFS activities will be taken up. |
| 3. | Assessment of medium duration high yielding rice variety and demonstration in aromatic rice varieties. | Assessment of medium duration high yielding rice variety Pratibha has been conducted during kharif 2020, beneficiary no. -7, area- 1.4 ha, villages: Gothalpadar, Pradhaniguda and Podosing. TO-1 var. Naveen yield is 41.1q/ha |

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|---|---|---|
| | | TO2 var. Pratibha yield- 46.4 q/ha in comparison to farmers variety yield-36.3 q/ha. Demonstration on aromatic rice variety var. Nua Acharmati has been conducted during kharif 2020 beneficiary no. -10, area- 2.0 ha, villages: Podosing and Gothalpadar, farmer variety MTU 1001 yield – 48.2 q/ha and aromatic rice var. Nua Acharmati yield- 35.7 q/ha |
| 4. | Demonstration on apiary management, micro-irrigation in inter cropping of pineapple in mango orchard and safe fruit harvesting in mango and guava. | Demonstration on apiary management is being conducted in village Pradhaniguda, Podosing, Ghanantri and B. Gumariguda of 5 nos. of beneficiary. Training on micro-irrigation has been conducted. Demonstration on micro-irrigation in inter cropping of pineapple in mango orchard will be conducted during kharif 2021. Demonstration on fruit harvester will be conducted. |
| 5. | Demonstration on brooding management in chicks and to conduct of R-E meeting at district headquarters. | Demonstration on brooding management in chicks will be conducted and beneficiary of tribal people have been selected. R-E meeting is being conducted through online in virtual mode due to COVID-19 situation. |
| 6. | Demonstration on green manuring of *Dhaincha* in rice in rain-fed medium land. | Training on green manuring of Dhaincha in rice has been conducted at KVK campus involved 25 nos. of farmers and farm women from different villages of the district and demonstration will be carried out in next year. |
| 7. | Training on fingerling production throughout the year at village level. | Training on fingerling production 2 nos. has been conducted with the help of Fishery Dept. at KVK campus and village Bhaleri. |
| 8. | Demonstration on hybrid maize var. Kalinga Raj (OMH- 14-27) and use of improved machine for dehusking of maize. | Due to non-availability of hybrid maize var. Kalinga Raj (OMH- 14-27) in OUAT the demonstration has not been conducted. |
| 9. | Demonstration of Ragi thresher cum pearler. | Demonstration of Ragi thresher cum pearler has been conducted in village Bhalerikudia and Pradhaniguda to 10 nos. of beneficiary. The capacity of the machine is 75.7 kg/hr. with 92% threshing efficiency whereas in manual threshing is 7.0 kg/hr. |
| 10. | Cultivation of high yielding new | Assessment of Oyster mushroom species Blue |

**Agenda- 3: Achievements of KVK**

The Senior Scientist and Head presented the achievements of KVK for kharif 2019, Rabi 2019-20 and Kharif, 2020.

Front Line Demonstrations of 13 nos. (including FLD oilseeds, pulses and TSP) & On Farm Testing of 9 nos. in 2019-20 and Front Line Demonstrations of 8 nos. (including FLD oilseeds, pulses and TSP) & On Farm Testing of 7 nos. in kharif 2020 have been successfully conducted in the farmers field. Cluster Frontline demonstrations on groundnut, mustard have been conducted under Cluster Frontline Demonstration on oilseed programme.

**Achievements of 2019-20**

i. Assessment of medium duration rice variety 'Hasanta' for BPH tolerance gave yield of 56.5 q/ha with net income of Rs. 28550.00 per ha and variety 'Pratikshya' gave yield of 49.3 q/ha with net income of Rs. 19340.00 as compared to 47.6 q/ha in farmers' variety Pooja with net income of Rs. 12400.00 per ha in farmers variety.

ii. Assessment of drought tolerant paddy variety 'Swarna Shreya' in rainfed upland gave yield 42.7 q/ha with net income of Rs. 14800.00 & paddy variety Sahabhagi dhan gave yield 38.1 q/ha with net income of Rs. 9952.00 as compared to yield 37.2 q/h and net income Rs.8318.00 in farmers' variety Khandagiri.

iii. Assessment of Arhar varieties in rain-fed uplands var. IPA- 203 gave yield of 14.8 q/ha with net income of Rs. 49040.00 & arhar var. PRG- 176 gave yield of 13.7 q/ha with net income of Rs. 42660.00 as compared to 10.1 q/ha in farmers' practice of local varity Bada kandula with net income Rs. 27180.00.

iv. Assessment of INM in maize in rain-fed uplands for kharif season with application of soil test dose of N:P:K:B:Zn + Lime 0.1 LR + FYM @ 5 t/ ha (Boron 1kg/Ha and ZnSO4 – 25Kg/Ha) gave yield of 54.5 q/ha with net income of Rs. 44120.00 as compared to 38.2 q/ha with net income of Rs. 21700.00 in farmers' practice of application of chemical fertilizers @ 70:50:50 kg:: $N:P_2O_5:K_2O$/ha.

v. Assessment of IPM for pod borer in pigeon pea for kharif season by using Azadirachtin 0.15% @ 1.5 l/ha at 50% flowering followed by Flubendiamide 48SC @ 200ml/ha (2ml/5 litre water) and Bt @ 1kg/ha (2g/litre) at 15 days intervals gave yield of 15.75 q/ha as compared to 11.5 q/ha in farmers' practice of spraying of Profenophos 50EC @ 2ml/litre. The net income from arhar was Rs. 56860.00.

vi. Assessment of Fall Armyworm Management in maize by application of 0.15% active ingredient of Azadirachtin/ 1500 ppm @ 3.0 ml/ lt of water, with release 20,000 *Trichogramma* parasite at 4-5 days interval in a week, application of *Beauveria bassiana* @400gm/acre, Chloropyriphus 50% EC + Cypermethrin 5% EC@400ml/acre during evening hour in maize gave yield of 53.6 q/ha as compared to 41.3 q/ha in farmers' practice. The net income from maize was Rs. 41736.00.

vii. Assessment of 8 row self propelled rice transplanter for mechanized line transplanting of rice in kharif season. There is requirement of 7 MD in transplanting by eight rows self propelled rice transplanter instead of 55 MD/ha. in manual line transplanting of paddy to reduce seed requirement, transplanting cost, time consuming and drudgery.

viii. Assessment of bullock drawn puddler for puddling in paddy. There is requirement of 11 h/ha for puddling by bullock drawn puddler instead of 45 h/ha for conventional method to reduce puddling cost, time consuming and drudgery for sitting arrangement of operator.

ix. Demonstration on aromatic rice variety Nua Acharmati in rain-fed medium land gave yield of 36.7 q/ha and net income of Rs. 28760.00 as compared to farmers' variety Swarna with yield of 50.6 q/ha and net income of Rs. 17840.00.

x. Demonstration on integrated weed management in cotton by application of pendimethalin @ 1.0 kg a.i./ ha as pre-emergence with Quizalofop-p-ethyle @ 50g a.i./ ha and one hand weeding at 45 DAS minimizes weed in cotton and increases cotton yield gave yield of 21.1 q/ha and net income of Rs. 50385.00 as compared to farmers' practice weeding in cotton by bullock drawn ghori with yield of 17.2 q/ha and net income of Rs. 34020.00.

xi. Demonstration on intercropping of cotton with arhar with 8:2 ratio gave yield of 23.5 q/ha (Cotton equivalent yield) and net income of Rs. 65725.00 as compared to farmers' practice cotton as sole crop with yield of 17.8 q/ha and net income of Rs. 37230.00.

xii. Demonstration on high density planting system of cotton in Kharif – 2019 gave yield of 21.3 q/ha and net income of Rs. 58655.00 as compared to farmers' practice with yield of 18.7 q/ha and net income of Rs. 40545.00.

xiii. Demonstration on HYV ragi variety Arjuna gave yield of 24.2 q/ha and net income of Rs. 28100.00 as compared to farmers' practice with yield of 17.5 q/ha and net income of Rs. 12700.00.

xiv. Demonstration of mealy bug management in cotton in kharif 2019 gave yield of 22.5 q/ha and net income of Rs. 74000.00 as compared to farmers' practice with yield of 16.6 q/ha and net income of Rs. 44940.00.

xv. Assessment of triple resistant tomato hybrids Arka Rakshak gave yield of 412.0 q/ha and net income of Rs. 182500.00 and Arka Samrat in rabi 2019-2020 gave yield of 410.5 q/ha and net income of Rs. 179000.00 as compared to farmers' practice var. Laxmi with yield of 308.0 q/ha and net income of Rs. 68000.00.

xvi. Demonstration of YVMV management in okra gave yield of 181.0 q/ha and net income of Rs. 107000.00 as compared to yield of 136.0 q/ha and net income of Rs. 66500.00 in farmers' practice.

xvii. Demonstration of wilt complex management in brinjal gave yield of 284.0 q/ha and net income of Rs. 185200.00 as compared to yield of 207.0 q/ha and net income of Rs. 114700.00 in farmers' practice.

xviii. Demonstration on intercropping of maize and cowpea with 2:2 ratio gave yield of 56.6 q/ha (Maize equivalent yield) and net income of Rs.47616.00 as compared to yield of 45.8 q/ha and net income of Rs. 32608.00 in farmers' practice.

xix. Demonstration on cultivation of marigold variety Ceracole gave yield of 78.0 q/ha and net income of Rs.154000.00 as compared to yield of 65.0 q/ha and net income of Rs. 82500.00 in farmers' practice.

xx. Demonstration on use of octagonal hand maize sheller for seed collection, shelling of maize @29 kg/hr. by octagonal hand maize sheller while a labourer can manually shell by hand @8 kg/hr.

xxi. Demonstration on portable cotton picker, harvesting of seed cotton @25 kg/hr. by cotton picker while a labourer can manually harvest @ 4kg/hr.

xxii. Demonstration of nutritional garden for improving nutritional security of farm family gave yield of 7.75 q/ha and net income of Rs.8625.00 as compared to yield of 1.25 q/ha and net income of Rs. 2000.00 in farmers' practice.

**Achievements kharif 2020**

xxiii. Assessment of medium duration rice variety Pratibha gave yield of 53.4 q/ha with net income of Rs. 28550.00 per ha and variety 'Pratikshya' gave yield of 49.3 q/ha with net income of Rs. 19340.00 as compared to 47.6 q/ha in farmers' variety Pooja with net income of Rs. 12400.00 per ha in farmers variety.

xxiv. Assessment of INM in maize in rain-fed uplands for kharif season with application of soil test dose of N:P:K:B:Zn + Lime 0.1 LR + FYM @ 5 t/ ha gave yield of 49.4 q/ha with net income of Rs. 29390.00 per ha and application of STBFR of N:P:K + FYM @ 5 t / ha

gave yield of 43.3 q/ha with net income of Rs. 19105.00 as compared to 38.9 q/ha in farmers' practice with net income of Rs. 12965.00 per ha.

xxv. Assessment of IPM for Fall Armyworm in maize by application of 0.15% active ingredient of Azadiractin @ 3.0 ml/ lt of water, with release 20,000 *Trichogramma* parasite at 4-5 days interval in a week, application of *Beauveria bassiana* @400gm/acre, Chloropyriphus 50% EC + Cypermethrin 5% EC@400ml/acre during evening hour gave yield of 48.8 q/ha with net income of Rs. 24275.00 per ha and application of 0.15 % active ingredient of Azadiractin, release of 20,000 *Trichogramma* parasite at 4-5 days interval in a week, application of *Beauveria bassiana* @400gm/acre, Profenophos 50 EC @400ml/acre gave yield of 43.4 q/ha with net income of Rs. 21290.00 per ha as compared to farmers practice of spraying of Profenophos 50 EC@ 2 ml./lt gave yield of 37.2 q/ha and net income Rs. 14260.00

xxvi. Assessment of 8 row self propelled rice transplanter for transplanting of rice. There is requirement of 7 MD in transplanting by eight rows self propelled rice transplanter instead of 55 MD/ha. in manual line transplanting of paddy to reduce seed requirement, transplanting cost, time consuming and drudgery.

xxvii. Assessment of bullock drawn puddler for puddling in rice field. There is requirement of 11 h/ha for puddling by bullock drawn puddler instead of 45 h/ha for conventional method to reduce puddling cost, time consuming and drudgery for sitting arrangement of operator.

xxviii. Demonstration on aromatic rice variety Nua Acharmati in rain-fed medium land gave yield of 35.7 q/ha and net income of Rs.32960.00 as compared to yield of 48.2 q/ha and net income of Rs. 21037.00 in farmers' variety MTU 1001.

xxix. Demonstration on drought tolerant rice variety Swarna Shreya in rain-fed uplands gave yield of 43.7 q/ha and net income of Rs. 16631.00 as compared to yield of 37.8 q/ha and net income of Rs. 5610.00 in farmers'variety Sahabhagi dhan.

xxx. Demonstration on medium duration rice variety Hasanta for BPH tolerance gave yield of 55.8 q/ha and net income of Rs. 35234.00 as compared to yield of 46.1 q/ha and net income of Rs. 17115.00 in farmers 'variety Pratikshya.

xxxi. Demonstration on HYV ragi variety Arjuna gave yield of 20.7 q/ha and net income of Rs. 29806.00 as compared to yield of 14.3 q/ha and net income of Rs. 12118.00 in farmers' variety Bada Mandia.

xxxii. Demonstration on Ragi thresher cum pearler. Threshing and cleaning efficiency of this equipment was 90-93% and 90-92%.

**Agenda – 4: Constraints of the K.V.K.**

The Senior Scientist and Head presented the constraints of the KVK and drawn kind attention of DEE, OUAT, Bhubaneswar and members of the house.

1. There is vacant of post of Senior Scientist and Head since long.
2. Shortage of scientific staff especially scientists (Agronomy, Horticulture and Animal Science) causing hindrance in carrying out mandatory activities.
3. The ground water of instructional farm contains heavy iron which is not suitable for drinking.
4. There is no adequate irrigation facility to carry out demonstrations, crop cafeteria and revolving fund activity.
5. Lack of proper drainage channel causing water logging condition during rainy season.
6. Sandy soil in block 'A' needs renovation and leveling.
7. There is need of fund for pond based IFS (Integrated Farming System) and infrastructure development.
9. There is no garage/ shed for parking of vehicles.
10. No godown for storage of seeds/farm produces.
11. There is no staff quarter in KVK.

**Agenda- 5: Salient recommendations**

- Diversification of upland crops
- Promotion of bee keeping
- Ppopularization of battery operated cotton picker for plucking of cotton.
- Pod borer management of pigeon pea.
- Popularization of ragi var. Arjuna.
- Demonstration on tea mosquito bug management in cashew
- Development of IFS model for exposure visit of farmers and farm women.
- Training on intercropping in existing crops
- Demonstration on new species of oyster mushroom which can gives more yield

The meeting ended with vote of thanks by Mr. Binod Kumar Jena, Senior Scientist and Head, KVK, Rayagada followed by visit of demonstration units of the KVK by the SAC members.

Rajib Tudu 07.02.2022

**Sr. Scientist & Head**
**K.V.K, Rayagada**
Senior Scientist and Head
K.V.K, Rayagada

Approved 7/2/22

**Dean Extension Education**
**OUAT, Bhubaneswar**
DEAN
Extension Education,
OUAT, Bhubaneswar.

## *ANNEXURE*

**Participants of 16th Scientific Advisory Committee meeting held on Dt.15.01.2021**

| Sl. No. | Name | Designation | Remarks |
|---|---|---|---|
| 1. | Dr. Pawan Kumar Agrawal | Hon'ble Vice-chancellor, OUAT, Bhubaneswar | Chairman |
| 2. | Dr. Lalit Mohan Garnayak | Dean, Directorate of Extension Education, OUAT, Bhubaneswar | Member |
| 3. | Dr. S. Mandal | Scientist, ICAR- ATARI, Kolkata | Member |
| 4. | Mr. Dushasan Praharaj | CDAO, Rayagada | Member |
| 5. | Dr. M. Madhu | Head, ICAR-IISWC, Sunabeda, Koraput | Member |
| 6. | Mr. Prashanta Kumar Khatua | ADH, Gunupur | Member |
| 7. | Mr. Dhirendra Bihari | LDM, Rayagada | Member |
| 8. | Mr. Digambar Biwal | APD, Watershed, Rayagada | Member |
| 9. | Mr. Sharat Kumar Ghose | ADA, Soil Chemist, Rayagada | Member |
| 10. | Dr. Rama Rao Palo | SDVO, Rayagada | Member |
| 11. | Mr. Pradeep Kumar Bhunia | ACF, Rayagada ForestDivision | Member |
| 12. | Mr. A. A. Sahoo | KVK, Gajapati | Member |
| 13. | Mr. Sujal Kumar Lima | Project Co-ordinator, EFICOR, Gunupur | Invitee |
| 14. | Mr. Kalia Bauri | AFO, Gunupur | Member |
| 15. | Mr. Biswaranjan Dash | Project Manager, ITDA, Gunupur | Member |
| 16. | Rambha Senapati | Supervisor, ICDS, Gunupur | Member |
| 17. | Dr. Sangram Paramguru | SS & Head, K.V.K. Gajapati | Invitee |
| 18. | Mr. D. M. Das | Scientist (Ag. Engg.), K.V.K. Gajapati | Invitee |
| 19. | Mr. Rajendra Kumar Nimalu | Farmer | Member |
| 20. | Mr. Narayan Sabar | Farmer | Member |
| 21. | Smt. Sushila Mohapatra | Farm Women | Member |
| 22. | Smt. Pramila Majhi | Farm Women | Member |
| 23. | Mr. Soumendra Narayan Dash | Farmer | Member |
| 24. | Mr. Sadashiba Majhi | Farmer | Member |