



KVK BULLETIN

(2012-17)



KRISHI VIGYAN KENDRA, ANGUL

ORISSA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

BHUBANESWAR

KVK BULLETIN

(2012-17)

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Angul**

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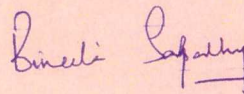
MESSAGE

Agriculture sector needs technological intervention to face challenges. Though we can say that agriculture has become self sufficient but at the other facet facing challenges like shrinking labour availability, continued imbalanced use of fertilizer, climate vulnerabilities, over exploitation of ground water resources, degrading soil fertility, lack of value addition, most irregular marketing channel & lastly the inhibition in the mind of youth to stay away from farming.

Krishi Vigyan Kendra is a powerful tool to "Transfer Agriculture". KVK, Angul has attempted and proved to serve as a continuum of agricultural interventions & innovations in all faces of agriculture & allied activities with its effective diffusion to the ultimate users of technology i.e. our farmers.

The publication has tried to bring out the achievements of our KVK from 2012-2017 in a very brief & lucid manner. I congratulate the editor & my team of scientists in giving their valuable suggestions.

I, personally, owe a lot to Angul district.



Senior Scientist & Head
KVK, Angul

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Odisha is an agrarian state with Agriculture and Animal Husbandry sector contributing 21.11% to Net State Domestic Product (NSDP) and providing employment directly or indirectly to 70% of total work force. The share of Gross State Domestic Product (GSDP) from Agriculture and Animal Husbandry is 19.51%. Evidently, Agriculture plays a critical role in the economy of the state and livelihood of majority of its population.

Orissa University of Agriculture and Technology, Bhubaneswar is functioning with the mission to bring quantitative change in life of the farmers through human resource development, technological advancement and dissemination of technologies related to agriculture and allied sciences. The agricultural research and education needs to change rapidly to keep pace with the liberalization and globalization taking place across the globe.

The Directorate of Extension Education is the nodal agency of the University to develop transfer of technology models and to provide feedback to the research system for finding solution to the farmer's problems. It operates in the principle of teaching by doing and learning and enabling farmers to acquire up-to-date skills to enhance production in farming sector. The Directorate of Extension Education not only refines technologies and disseminates knowledge to farming community through a network of KVKs in various agro-climatic zones; but also provides feed back to the research system for finding solution to the farmer's problems. Transfer of knowledge is carried out through 31 Krishi Vigyan Kendras (KVK) situated in different districts of the state, University Extension Block Programme (UEBP), Information and Communication wing, Distance Education, Video Project, Agricultural Technology Information Centre (ATIC) and Orissa Gender Resources Centre (OGRC) in the main campus.

DISTRICT PROFILE AT A GLANCE

The district is located between 20° 31'N & 21° 40'N latitude & 84° 15'E & 85° 23'E longitude and situated under mid central tableland zone of Orissa which is generally flat with undulating hilly areas. The altitude is between 564 and 1,187 metres. The mean annual rainfall of the district is 1401.9 mm (IMD, Pune) against the state average of 1451.2 mm. The humidity of the air is generally high (82%), especially during the



South West monsoon and post monsoon months. The climate of the district is slightly dry and hot. Situated at the heart of Orissa, the district of Angul is an integral part of the State towards its rich culture, tradition and socio-economic development. The district has a total area of 6,232 sq. km. with a population of 11,39,341 as per the 2001 Census (males: 586,903, females: 552,438) and a population density of 179 per sq. km. There are 1,922 villages in the district, out of which 1,635 are inhabited and 287 are uninhabited. The total rural population of the district is 980,954 and the total urban population is 158,387. Angul is the 11th largest district among 30 districts of Orissa. It is bounded by Dhenkanal and Cuttack districts in the east, Debagarh, Kendujhar and Sundargarh in the north, Sambalpur and Sonepur in the west and Boudh and Nayagarh in the south. Angul is abundant in natural resources, which ultimately helps it to contribute the maximum amount of revenues to the State government. Although a new district, it is strategically the most advanced, owing to its vast coal mines that earn large revenues for the State. As per the climate and soil type, the district has been categorized into five agro ecological situations. It is privileged both by agriculture and industry. A large proportion of the population of Angul district depends on agriculture as their primary source of livelihood as well as building up economic stability.

THRUST AREAS OF THE DISTRICT

- Integrated crop management(ICM) in Paddy, oilseed and pulse crops
- Varietal substitution in field and vegetable crops
- Micro – irrigation system in fruits and vegetables
- Farm mechanization in oilseed and pulse crops
- Crop diversification
- Integrated disease and pest management in all crops
- Post harvest management of vegetables, oilseeds, pulses and fruits
- Entrepreneurship development through skill development
- Soil fertility management
- Income generating activities of farm women
- Scientific management of fish, goat , cattle and poultry

ABOUT KRISHI VIGYAN KENDRA (KVK)

Krishi Vigyan Kendra is a Govt. of India ICAR organization implemented at the district level for enhancing the production, productivity and livelihood through scientific and innovative extension approaches.

KrishiVigyan Kendra, Angul was established on 25th March, 1995 under CRRI, Cuttack with the financial assistance of Indian Council of Agricultural & Research, New Delhi for overall development of Agriculture & allied sector in Angul district. It was transferred to the administrative control of Orissa University of Agriculture & Technology, Bhubaneswar with effect from 3rd August 2001. The present campus is located at Panchamahala, three kms away from Angul Town beside NH-55 towards Sambalpur.

Key Features of KVK

- Only district level research and extension unit
- Team of multidisciplinary scientists
- Wide network with all agriculture and allied departments
- Strong functional link with farmer's organizations
- Works based on micro-farming situation

Mandates of KVK

Assessment, refinement and demonstration of proven technologies/ products

Activities of KVK:

- On Farm Testing (OFT) to identify location specific technologies in various farming systems.
- Front Line Demonstration (FLD) to establish production potentials on the farmer's field.
- Trainings for farmers, farm women and rural youth on agriculture and allied disciplines to update their knowledge and skills in modern agricultural technologies and training of extension personnel to orient them in frontier areas of technology development.
- Work as resource and knowledge centre of agriculture technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.
- Create awareness about frontier technologies through large number of extension activities like farmers' fair, field day, strategic campaign, Ex-trainees meet, publication and distribution of literature etc.
- Production & distribution of quality seed/planting materials to farmers.

INFRASTRUCTURE AND FACILITIES AVAILABLE AT KVK

Administrative building

The Krishi Vigyan Kendra has very well developed administrative building having fully fledged sitting arrangement for scientists, technical and ministerial staff and a well furnished training hall with 50 farmers sitting facility.



Staff Quarters & Farmers Hostel

The Krishi Vigyan Kendra has a farmer's hostel that can accommodate more than 100 farmers at a time. The hostel rooms are well furnished too. The facilities are also available to outside farmers who visit us during study tours on nominal charges. The hostel has one AC room for VIP/ Dignatory and three rooms for officials with a dining hall. There are three staff quarters available.



Instructional Farm

The Krishi Vigyan Kendra possesses 15.6 hac. of land out of which 0.8 ha is under roads and buildings, Nursery & Orchard in 4 ha., paddy and field crops in 3 ha. and 2 ha. remains waste land. The main purpose of the farm is to demonstrate the latest agricultural practices with newly released varieties. It also acts as a tool to do applied research on agricultural technologies & undertake trials before their transfer to land and seed multiplication for farmers use. It is also followed by producing mother plants of horticulture crops such as Mango, Guava, Pomegranate etc that are mainly grown in the district. Similarly, agro-nomical crops grown are Paddy, and Fodder in Kharif and Coriander and Green fodder in Rabi. The farm has two pump houses for



ROADS & BUILDINGS	0.8 ha.
DEMO UNIT	0.4 ha.
ORCHARD (EXISTING)	2.0 ha.
ORCHARD (PROPOSED)	2.0 ha.
CROP CAFETERIA	1.0 ha.
PADDY LAND & OTHER FIELD CROPS	3.0 ha.
POND	0.8 ha.
FOREST PLANTATION	2.0 ha.
DRAINAGE LINE	1.6 ha.
WASTE LAND	2.0 ha.
TOTAL	15.6 ha.

irrigation. The farm also has several farm implements museum and improved farm implements are available for demonstration purpose. KVK is actively involved in transfer of latest technologies to the farmer's field emerging out of the research laboratories and getting feedback for further linkages. The KVK invites foot fall of farmers with the single aim of facilitating farmers to help them. The basic facilities available at KVK institutional farm are detailed below:

▪ **Poly house for raising seedling and sapling of fruits and vegetables :**

One poly house for nursery raising for planting materials has been developed with financial help from RKVY. This nursery is producing nearly 2.5 lac seedling / saplings every year.



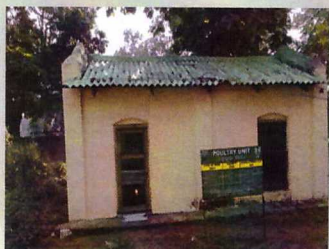
▪ **Mushroom spawn laboratory :** A well equipped mushroom spawn laboratory was established with financial support of RKVY. This unit is producing 300 bottles of spawn/ month and is the spawn hub for mushroom entrepreneurs.



▪ **Soil testing laboratory :** A well equipped laboratory for soil sample analyses was established with financial support of ICAR. Every soil sample is analyzed for eight parameters such as pH, Electric Conductivity, Organic carbon, available Nitrogen, available Phosphorus & available Potassium, Exchangeable Sodium, Calcium & Magnesium content at reasonable rates. A mini soil testing kit (Mrida Parikshyak) developed by IISS, Bhopal is also in use.



▪ **Poultry unit :** A small poultry brooding cum rearing unit is present in the campus. The unit is having capacity of 150 birds per batch. Here, birds are being reared for 28 day covering all vaccination procedure and farmers are backed up with 28 day old chicks, along with technology to promote backyard poultry farming.



▪ **Apiary unit :** This unit consists of bee boxes equipped with rearing cum honey production chambers. This unit aids in demonstration purpose to entrepreneurs in different training programmes.



- **Medicinal garden for primary health ailments** : Medicinal & aromatic herbs that are raised in the medicinal garden & utilized for medicinal purposes. These herbs present in the demo unit cover around 15 exotic varieties of plants.

There is also a proposal to create a herbal and aromatic garden at KVK farm.



- **Progeny orchard of mango, pomegranate and guava** : This KVK has mother orchards of Guava, Mango, Aonla and Pomegranate with different varieties (150 plants of each crop) for propagation of quality planting material of fruit plant to distribute the farmers.



- **Ornamental fish rearing unit** : This unit comprises four circular cement tanks for breeding and rearing of ornamental fish varieties (Live bearers) such as molly, guppy, platy, sword tail and gold fish (Egg Layers). All these variety of fishes are reared for supply to farmers for generating additional income and entrepreneurship.



- **Breeding unit of cat fish (*Pangasius sutchi*)** : One permanent structure is established for breeding and rearing of cat fish which aims at popularization of this fish in for locality more income.



- **Godown for storage of farm output** : For storage seeds of different crops and other produces this structure is present.

- **Azolla multiplication unit** : Azolla demonstration unit comprises of cemented ring structures that yields a good quality and quantity of azolla which is being utilized in the crop cafeteria, orchard, paddy field as compost as well as used as poultry feed.



▪ **Vermi-compost production unit** : A vermi-compost unit established with financial support of RKVY. These demonstrate the conversion of farm waste into enriched compost. The annual capacity of the unit is 16 qtl.



▪ **Mushroom production unit** : This KVK is having its own mushroom production unit that produces approximately one quintal of paddy straw mushroom during June- October from 100 beds and two quintals of oyster mushroom during November-February from 100 bags.



▪ **Crop cafeteria of seasonal vegetables** : In this unit different oilseeds, pulses and vegetables are being produced.

▪ **Value addition lab for post harvest skill demonstration** : This unit acts as storage cum demonstration room for different value added products like jam, jelly, tomato sause, pickle, mushroom powder etc.



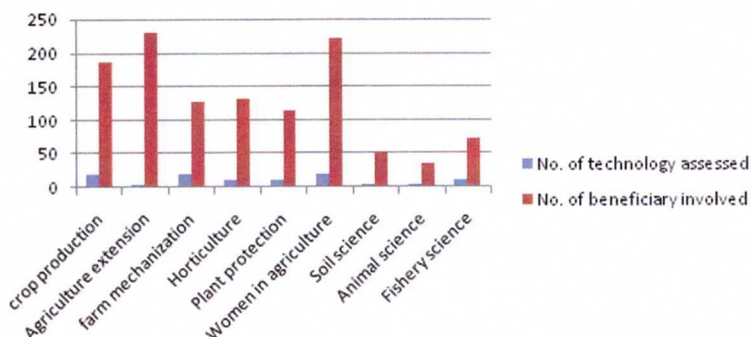
ACTIVITIES OF KVK

On farm testing (OFT)

KVK has organized several on-farm research activities for assessing and refining technologies suitable to a given micro-farming situation.

Taking into consideration the agro ecological situation and meterological information of the local area, its land status, soil character, socioeconomic conditions of the farmers and identified prioritized problems of the area, KVK has conducted a good number of on farm testing programmes on farmers field to assess certain technology in specific location. This KVK has conducted 106 on farm trials covering 1170 beneficiaries involving improved technologies on weed management, nutrient management, integrated pest and disease management, varietal evaluation, microirrigation system, drudgery reduction, nutritional management of goats and cows, varietal evaluation of duck & poultry breed, composite pisciculture, organic farming, value addition, market led approaches, income generation and farm mechanization.

Chart - I : OFT's CONDUCTED DURING 2012-2017



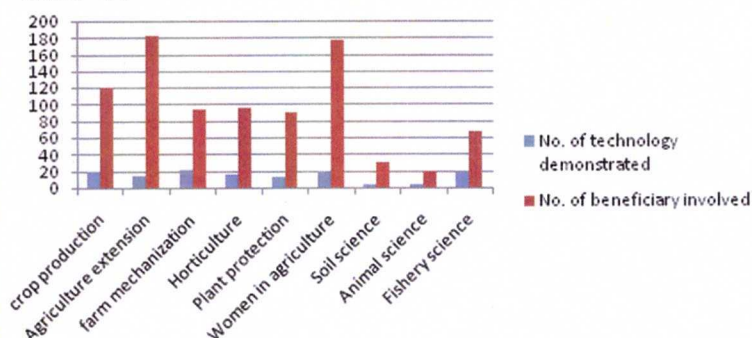
Front line demonstrations

Laying out field demonstrations on farmers' fields is an important tool for technology dissemination based on the philosophy of 'seeing is believing' and 'learning by doing'. Frontline demonstration (FLD) is concept evolved by the ICAR during mid-eighties in which field demonstrations are conducted under the close supervision of the scientists.

Organising Front Line Demonstrations (FLDs) on various crops/ commodities are to generate production data or potentiality of certain technology that are new to a particular area and positive feed back information on the production system.

During the period, 127 number of demonstrations on weed management, nutrient management, integrated pest and disease management, varietal evaluation, microirrigation system, drudgery reduction, backyard poultry (Vanaraja Blackrock Palishree) have been conducted covering 877 beneficiaries in the KVK adopted as well as operational villages of the district.

Chart - II : FLD's CONDUCTED DURING 2012-2017



Training Programmes

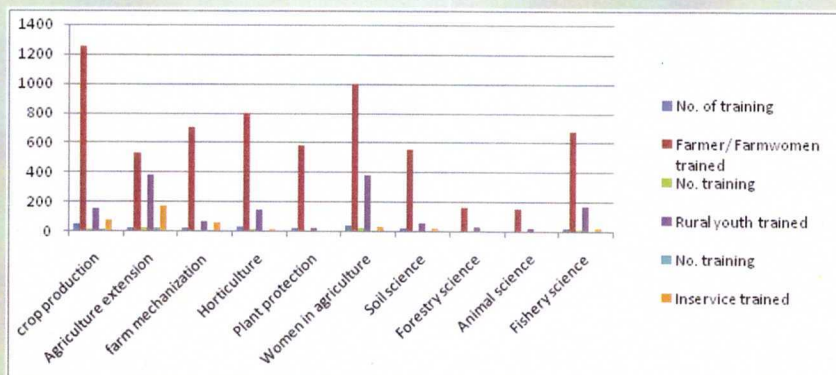
Training is regarded as one of the integral component of the capacity building process as part of any development programmes. Conducting need-based and skill oriented training to farmers and farmwomen is one of major activities of the KVK. Since its inception, the KVK has conducted several training / capacity building programmes on various aspects of improved technologies related to agriculture and allied activities to different clientele including practicing farmers, farmwomen, rural youth and extension functionaries.

Krishi Vigyan Kendra has organized 254 training programmes for the benefit of farmers where 6377 number of farmers and farmwomens were trained on various aspects of crop production, marketing in agriculture, farm mechanization, soil health management, livestock and fish production and management, plant protection, information management forest plantation with agriculture, women in agriculture.

A total of 1380 rural youth were trained on various agricultural enterprises. Trainings for extension functionaries of Government and Non Government organisations are being conducted on regular basis so that advanced extension methodologies could reach to farmers field. During the last five years 37 numbers of In-service training programmes have been conducted for 375 numbers of extension personnels of line departments.

For unemployed rural youth KVK has organized 49 no. of training programmes on different topics for self employment. Similarly 27 vocational training programmes were being conducted covering various agriculture and allied farming sectors.

CHART : III TRAININGS CODUCTED DURING 2012-2017



Extension Activities

Krishi Vigyan Kendra has conducted various extension activities in isolation & collaboration with line departments for the extensive dissemination of technologies in agriculture and allied fields and to create awareness among the rural community on various issues of agricultural importance. In this context KVK has organized 1307 extension activities covering field day for successful demonstrations, film show during training, method demonstration, farmers seminar for awareness creation, lectures delivered as resource persons to line departments and NGO's, farm Adviosry services, diagnostic field visits to farmers field, exposure visits organized for farmers, organizing farmers federation meetings, SHG convention meet, awareness camp, celebrating important days such as Akhaya Trutiya, Vanamahotsav, Women in agriculture day, World Food Day, International soil day, Technology week, Jay kisan jay kisan jay vigyan week etc. KVK staff regularly participates in Radio talks and television shows / presentations on various topics of agriculture and rural development. The extension activities of the KVK are covered regularly in all the leading newspapers of the district. Besides, KVK has published and made available extension literature on all major aspects of agricultural technology relevant to the needs of farming community to farmers, trainees, visitors and extension personnel. A total of 60 extension literatures in form of leaflets, booklets, newsletters pamphlets & training manuals have also been developed during the period of 2012-17.

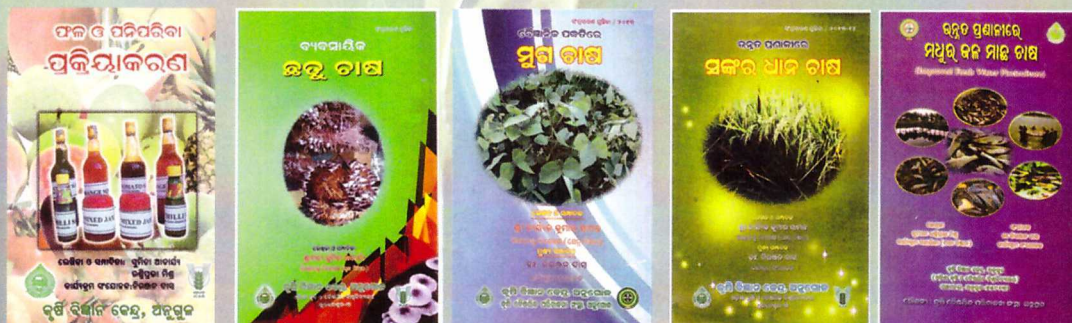
TABLE - I : SHOWING EXTENSION ACTIVITIES (2012-17)

Year	Extension activities (No.)	Literatures developed (No.)	Newsletters published (No.)
2012-13	316	6	4
2013-14	341	10	4
2014-15	191	8	4
2015-16	160	3	4
2016-17	299	13	4

Extention Programmes



Booklets



Leaflets



Training Manual



News Letters



Soil Test

Crop production based on soil test based recommendation (STBR) is of prime importance now-a-days. During the past five years 3442 number of soil samples were analysed and the soil health cards prepared accordingly and distributed to 5949 numbers of farmers for better agricultural production and productivity through need based & recommended application of fertilizers.



Sponsored Training Programmes



During the period of 2012-17 four number of sponsored training programmes were conducted that includes skill oriented training programmes for entrepreneurship development, weather forecasting, fodder production and livestock feeding management and skill training on scientific potato and onion cultivation. Through these programmes a total of 180 beneficiaries were skilled.

Farm Science Club

KVK, Angul under the able guidance and support of NABARD, ATMA, Angul, promoted a district level Farmer Federation in the year 2009. The technical support to the activities of federation is provided by this KVK. This federation is the first of its kind in this state. Monthly



federation is being held on 18th of every month. The time specific and relevant topics are discussed in these meetings under the expertise of KVK scientists and other officials of line department. The meetings are held at KVK training hall since 2005.



Research extension interface



An innovative approach to strengthen research extension linkage at district level was introduced by our Honourable vice-chancellor, OUAT in the year 2016-17. As per the guidelines the meeting holds on 3rd Tuesday of every month at KVK. The meeting is chaired by ADR, RRTTS, Dhenkanal and Deputy Director of Agriculture in an alternative manner, where as the Senior Scientist and Head of KVK acts as the member conveyer of the linkage. Representatives from different line departments, NGO, bank, KVK scientists and two farmer representatives participate in the meeting. Again a session on linkage of bankers with entrepreneurs holds to link some progressive farmers with bank.

Cluster demonstration of oilseed and pulses



TABLE - II : SHOWING CLUSTER DEMONSTRATION PROGRAMMES (2015-2017)

Year	Crop	Variety	Area (ha)	Total no. of beneficiary
2015-16	Toria	M-27	20	59
	Groundnut	Kadri-6	44	110
	Sesamum	Amrit	16	45
	Greengram	SML-668	40	138
2016-17 (KHARIF)	Groundnut (K)	Smruti	30	75
	Sesamum (K)	Uma	30	75
	Blackgram (K)	PU-35	20	50
2016-17 (RABI)	Groundnut (R)	Devi	30	75
	Sesamum (R)	Kalika	30	75
	Mustard (R)	Mahyco bold	30	75
	Greengram (R)	TARM-1	30	75
	Greengram (R) (Rice-Fallow)	PUSA-9072	20	40
	Total		340	892

Kisan Mobile Advisories

Krishi Vigyan Kendra is disseminating agriculture information under various thematic areas through kisan mobile advisory services to 12700 no. of registered beneficiaries regularly through farmers portal and reliance foundation. The messages were sent depending on the farmers requirement and advices on crop management, pest and disease management, marketing, agri alert, soil health management, preventive measures of different diseases in domestic animals and different seasonal agricultural and allied sector informations.

TABLE - III : YEARWISE LIST OF KMAs

Year	No. of messages sent	No. of beneficiary		Sponsoring agency (NIC, Farmers Portal, etc.)	Major recommendations
		Farmers	Ext. Pers.		
2012-13	45	1000	-	Pacific technology Pvt. Ltd., Farmers portal	Integrated Nutrient Management, Integrated Pest Management, Soil Health, Agri alert, Market information, Enterprise awareness
2013-14	97	1000	20	Pacific technology Pvt. Ltd., Farmers portal	Integrated Nutrient Management, Integrated Pest Management, Soil Health, Agri alert, Market information, Enterprise awareness
2014-15	250	2258	58	NTIER Solution, Bhubaneswar	Crop management, Pest management, Awareness, Marketing, Enterprise development
2015-16	50	12700	58	Farmers Portal / Reliance Foundation	Crop management, Pest management, Awareness, Marketing, Enterprise development
2016-17	63	12700	58	Farmers Portal / Reliance Foundation	Crop management, Pest management, Awareness, Enterprise development, Fishery, Animal Sc.

Distance Education

This is an unique facility available at KVK and is being carried out in the University through enrollment of farmers in nine different major areas viz. Paddy cultivation, Vegetable cultivation, Fruits cultivation, commercial crop cultivation (cotton, maize, sugarcane and jute), Pisciculture, Dairy husbandry, bee keeping, Poultry rearing and Mushroom cultivation.



LINKAGE WITH LINE DEPARTMENTS

Krishi Vigyan Kendra, provides necessary guidance specially on technological backstopping for the farmers and extension personnel of different line Departments as shown below, NGO's and other institutes which are committed for rural development in general and Agriculture development in particular. Further it provides an opportunity for understanding the ground realities of the developmental activities and its commitment in coordination with the other line Departments for meeting their assigned mandates.

The KVK has established strong functional linkages with several State and Central Government organizations for successful implementation of its activities. Specialists from such organizations are often invited as resource faculty for capacity building of clientele, scientific investigation in respect of performance of technologies, conducting FLDs, OFTs, supply of seed / plant materials and hosting field visits for the trainees. These linkages have proved very crucial for the smooth conduct of KVK activities and implementation of various programmes that require a strong persuasion and mobilization of the clientele. The impact on farmers is highly positive in developing their farms and farming activities.

All the linkages are enlisted below.

TABLE - IV : SHOWING DIFFERENT LINKAGE WITH LINE DEPARTMENT

Name of the Organisation/ Institutions	Nature of Link age
ICAR Research Institutes like NRRI, CIFA, CIWA, IWMI	Technology sharing, promotion of transferable technologies, quality planting material procurement
Regional Research and Technology Transfer Station, Dhenkanal (OUAT)	Preparation of different agricultural and allied strategies for development, technology transfer and input procurement, participation in zonal meeting
State Agril. Deptt., ATMA, NFSM	Organizing training, demonstration and Seed procurement, all technical assistance. Technical guidance, Development of electronic media especially success stories, Financial assistance in Extension Reforms, exhibitions/model preparation, publication
D.R.D.A, Angul	Organizing training for watershed management, rural youth and agro entrepreneurs, construction assistance

State Horticultural Deptt.	Collection of improved seeds and seedlings of vegetables and fruits & preparation of action plan on horticultural aspect. Demonstration of Pest management programmes in Horticulture crops, Mango Hub, grafting assistance
Horticulture Division, NALCO, Angul	Demonstration and awareness programmes, ornamental, landscape designing technical guidance
The Orissa State Cooperative Marketing Federation Ltd., Angul / Input dealers	Purchase of agricultural inputs, establishing linkages with farmers and market. Purchase of fertilizers/seeds/pesticides
State Veterinary Deptt.	Development of Poultry farming in the adopted villages, Chicks procurement, collaborative Health Camps
National Horticultural Research and development Foundation	Mass Demonstration of IPM packages in crops like brinjal and onion, farmers fair and exhibition
National Co-operative Union of India	Imparting training to the personnel of co-operative societies and co-operative banks for agricultural and rural development programmes
Institute of Socio Economic Development/NGO	Empowerment of women in the areas of agriculture and allied sectors Acceleration of activities of SHGs and rural youth clubs, capacity building of NGO functionaries through various interventions
Institute of peoples education	Empowerment of women through introduction of apiary and mushroom enterprise

SEED & PLANTING MATERIAL PRODUCTION

KrishiVigyan Kendra is producing good quality seed and planting materials in the instructional farm for farmers. Good quality seed and planting material production is an important aspect of this institution, so that farmers could be benefited. The year wise production of seeds and planting materials are presented in tabular form.

TABLE - V : SHOWING SEED & PLANTING MATERIAL PRODUCED DURING 2012-17

Year	Crop	Seed / Planting Materials produced		Revenue generated (Rs)
		Type	Quantity (q/nos)	
2012-13	Paddy(Khandagiri)	Seed	2.4	5,232
	Paddy(Konark)	Seed	5.2	10,712
	Marigold(Bengal orange)	PM	10,000	5,000
	Tomato(UtkalDipti)	PM	24,000	12,000
	Tomato(Chiranjeevi)	PM	10,000	5,000
	Brinjal(UtkalAnushree)	PM	25,000	12,500
	Chilli(Siam Hot)	PM	20,000	10,000
2013-14	Dhaincha	Seed	10	25,000
	Tomato(UtkalDipti, Chiranjeebi, Kafila)	PM	33,480	33,480
	Brinjal(UtkalAnushree, Tarini, S 132)	PM	25,914	25,914
	Chilli(UtkalRagini, Siam Hot)	PM	15,686	15,686
	Cabbage(Summer queen, BC T6)	PM	520	520
	Cauliflower(Kamiya)	PM	200	200
	Onion(Agri Found Light Red)	PM	2,70,000	10,800
	Marigold(PusaNarangi)	PM	15,000	15,000
2014-15	Paddy(Sahabgadhian)	Seed	7.8	20,257
	Paddy(Naveen)	Seed	28.6	69,612
	Tomato(Chiranjibi, Swarnasampad)	PM	18,000	18,000
	Brinjal(TariniHyb)	PM	2,000	2,000

	Onion(Bhima super)	PM	2,50,000	2,50,000
	Chilli(Utkalragini)	PM	15,000	15,000
	Cabbage(Syngenta 1195 Hyb)	PM	500	500
	Cauliflower(Kimiya)	PM	500	500
	Marigold(Ceracola, Pusanarangi)	PM	30,000	30,000
2015-16	Paddy (Mandakini)	Seed	9.8	31,500
	Paddy (Pratikhya)	Seed	20.2	
	Tomato (Bhagyaban, Surakhya, Laxmi, Tokita)	PM	8,000	16,000
	Brinjal (JK Brinjal, Utkal Green, Tarini)	PM	8,370	16,740
	Chilly (Kanchi, VNR, UtkalRagini, Mohini)	PM	17,000	18,800
	Cabbage (Rare ball)	PM	700	1,400
	Cauliflower (Snowball, Dawn)	PM	2,680	5,360
	Papaya (Honeydew)	PM	311	3,110
	Marigorld (Ceracola)	PM	5,400	5,400
2016-17	Paddy (MTU-1001)	Seed	23.20	58,232
	Tomato (Swarakhsa, Laxmi)	PM	2240	4,480
	Brinjal (Arka Nilachal Shyama, Utkal Green, JK 8031, Mahanandi, Charipolia)	PM	22130	17,700
	Chilly (Daiya, Krishna)	PM	2105	4,210
	Cabbage (NHCB-731)	PM	375	750
	Cauliflower (Kimaya)	PM	1340	2,680
	Papaya (Honeydew)	PM	64	1,280
	Marigorld (Ceracola)	PM	7000	8,400
	Onion (Bhima dark red, Bhima Raj)	PM	256250	15,375
	Drumstick	PM	22	330
	Sisu	PM	200	1,200

OTHER TECHNOLOGICAL PRODUCTS

Specific technological products are also produced in the farm viz, vermi-compost, azolla, mushroom, honey, ornamental fish, poultry birds etc. The products were produced with an objective in order to make the farmers to learn about various new technologies and adopt it as entrepreneurship & also quality assurance

TABLE - VI : OTHER TECHNOLOGICAL PRODUCTS

Year	Name of the Product	Qty (In Kg / No.)	Value (Rs.)
2012-13	Paddy straw Mushroom	50	3,000
	Oyster Mushroom	50	2,000
	Vermicompost	1,700	8,500
2013-14	Azolla	13	520
	Vermi compost	1,500	7,500
	Mushroom Spawn	2,400	28,800
	Mushroom	170	9,500
2014-15	Vermi compost	1,200	6,000
	Azolla	30	1,200
	Paddy straw Mushroom	134	9,380
	Oyster Mushroom	110.8	5,540
	Mushroom Spawn	2,600	31,200
	Poultry (RIR, Chhabro, Banaraja)	510	47,722
2015-16	Vermi-compost	16,000	8,000
	Azolla	30	1,200
	Paddy straw mushroom	86	6,020
	Oystre Mushroom	188	9,400
	Mushroom spawn	2,600	31,200
	Ornamental fish (Moly)	170	2,550
2016-17	Vermicompost	740	7,400
	Azolla	38	1,440
	Paddy straw Mushroom	94.625	7,570
	Oyster Mushroom	80.76	4,038
	Mushroom spawn	3,000	42,000
	Honey	10	3,300
	Advanced fingerlings of Pangas & Tilapia	39	14,850
	Colour fish	695	8,050
	Ornamental Fish	1,428	17,136

SOME SALIENT ACHIEVEMENTS (2012-17)

❑ KVK popularized effective control of most of the weeds by pre-emergence application of Bensulfuronmethyl(0.6%)+ Pretilachlor(6%) @ 660g/ha at 3-7 DAT during early stages of transplanted paddy with weed control efficiency of



76.7 % at 60 DAT & higher B:C ratio in comparison to the farmers practices of hand weeding and post-emergence application of Bispyribac sodium .

❑ Pre-emergence application of Atrazine@1.0 kg/ha at 0-3 DAS followed by one mechanical weeding at 20-25 DAS effectively controls most of the weeds with WCE 81.7%, 18.3% higher grain yield & B:C ratio 2.16.



❑ Cultivation of fodder maize and stylo(1:1) intercropping produced 48% higher green fodder, profitability with availability of green fodder throughout the year.



❑ The HYV upland paddy cv.Sahabghadidhan produced more ear bearing tillers(13/plant) with drought tolerant capacity and higher grain yield(35.5q/ha) in comparison to old variety Khandagiri.



❑ Brinjal fruit and shoot borer in brinjal is being controlled by release of bio agent @ 50,000 egg parasitoid *Trichogramma japonicum* and installation of 20 pheromone trap per hectare, which increased the yield upto 27%.



❑ KVK has undertaken demonstration programme on management of YMV (Yellow Mosaic Virus) in okra by installation of yellow sticky trap @ 50 traps per hectare, which effectively controls the vector, (white fly) and reduces the disease incidence upto 30%.



□ KVK has organized capacity building training programme on “Rearing of honey bee” and motivated farmer for bee keeping. Created awareness among farmers about the scope and importance of bee keeping.



□ Farmers expressed better quality of milk due to supplementation of azolla feed with an 11.11% increase in milk yield. Thirty two farmers adopted azolla feed for increase in milk production.



□ Farm women appreciated Ground nut Stripper due to less drudgery, time and pain in the finger tips and saved Rs.2480/- than manual stripping. 46 ground nut stripper purchased by farm women and also the tool is used by other farmers by sharing basis.



□ Use of Hand operated paddy winnower for cleaning grain after harvesting improves efficiency of farm women up to 187% over traditional practice and the drudgery is minimized to extent of 60%.



□ Raw stone apple RTS with a good taste, nutritive value and better self-life is a profitable enterprise with more profit of Rs.2,400/.



□ Stocking of IMC yearlings @ 3000 no./ha. and harvest at every 3-4 months interval by giving feed (GNOC+Ricebran) at 1:1 ratio for total 10 months culture period has contributed to 58.13 % increase in yield in the year 2013-14 & this technology also spread to 10



❑ Culture of Ornamental fishes @ 130 numbers of live-bearers (one species/ variety) stocked with a male and female ratio of 1:4 has contributed to 100 % increase in yield (17,600 no. fish fingerlings) in the year 2015-16 & by adopting this technique 13 no. new fish entrepreneurs developed in this district.



❑ Use of Slow sinking crumbled feed @ 5 % of total biomass in fingerling production has enhanced the yield to 70% in the year 2013-14 & the technology spread to 8 ha. area.



❑ Better weight gain performance of backyard poultry Var. Palishree compared to Deshi birds made the farmers to adopt the technology and the horizontal spread is remarkable.



❑ Stocking of IMC @5000 no./ha. and Fresh water Prawn @7500 no. / ha. has increased the yield by 53.33% in the year 2015-16.

GLIMPES OF IMPORTANT VISITORS TO KVK, ANGUL

During this five years golden journey of KVK some important person's footprint and valuable suggestions have helped a greater extent for the development of the KVK as well as farmers. During their visit they observed different activities undertaken by the KVK and different demonstration unit in the campus. They interacted with all the staff members about their plan of activity, problems encountered and ways for improvement of KVK. Lastly they also give feedback our visitors sign board as token of memory of KVK.



Visit of Senior Scientist Dr. A.P. Dwibedy & inspection of Poly house



Vice Chancellor, Dean extension & DSW during lunching of voice SMS by Reliance Foundation



Visit of NFSM consultant to cluster demonstration



Inspection of Vermi compost unit by Senior Scientist, Dr. Tushar Athari



Visit of former Dean extension Prof. S.S. Nanda to farmer field



Principal Scientist Dr. Rajib Agrawal, IFGRI, Jhansi visiting newly develop orchard



Principal Scientist IFGRI, Jhansi visiting fodder plot.



Discussion of KVK staff with Dr. Prem Chand (Senior Scientist) ATARI

CONCLUSION

Krishi Vigyan Kendra of Angul district has been expanding its activities to commercialize agriculture and allied enterprises through technological interventions to harvest assured constant and higher income to farm families to have a better standard of living. The change in agriculture and income generating activities is clearly visible due to efforts of this Krishi Vigyan Kendra. Thus, 'Krishi Vigyan Kendra' has become a 'Wheel of socio-economic development' in Angul district & promises to be so in the future.

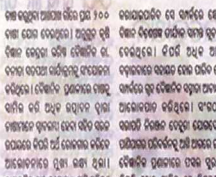
କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ର ପକ୍ଷରୁ ବନ ମହୋତ୍ସବ

କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ର ପକ୍ଷରୁ ସ୍ୱଚ୍ଛତା କାର୍ଯ୍ୟକ୍ରମ

ଅନୁରୂପ, ୪।୧୧(କ)ସଂ: ଅନୁରୂପ କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ର ତରଫରୁ ସ୍ୱଳ୍ପ ଭାରତ ପଣ୍ୟ ପାନିଚ ହୋଇପାରିବ। କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ର ପକ୍ଷରୁ ସ୍ୱାଧୀନ ଗ୍ରାମସଂସାଧନ ସକ୍ରିୟ ସହଯୋଗରେ କୃଷାସିଂସା, ବୃକ୍ଷାସିଂସା, ଚରୁକୃଷିଆଦି ଓ କୃଷିକେ ଗ୍ରାମରେ ସଫେଇ କରାଯାଇଥିଲା। କୃଷି ବିଜ୍ଞାନ କେନ୍ଦ୍ରର ମୂଳ୍ୟ ୦. ଦିନାମ ଶତପଥୀ କୃଷି ଅବିବେକରୁ କିଲି କିଆଖିର ପ୍ରସ୍ତୁତ କରି ରାଜକାର୍ଯ୍ୟରେ ବ୍ୟବହାର କରାଯାଇ ପାରିବ ସେ ସମ୍ପର୍କରେ ସଚେତନତା ସୃଷ୍ଟି କରିଥିଲେ। ପରିବେଶ ସୁରକ୍ଷା ପାଇଁ ରକ୍ଷାୟନ ସାର ଓ ଓଷଧିର କମ୍ ବ୍ୟବହାର ଉପରେ ଉ. ଶତପଥୀ ଗୁରୁତ୍ୱରୋପ କରିଥିଲେ। ଓଡ଼ିଶା କୃଷି ଓ ବୈଷୟିକ ବିଶ୍ୱବିଦ୍ୟାଳୟ ଭୁବନେଶ୍ୱରରୁ ଆସିଥିବା ୧୫ ଜଣ କୃଷି ଜ୍ଞାନୀ ଏହି କାର୍ଯ୍ୟକ୍ରମରେ ସାମିଲ ହୋଇ ଗାଈର ଘାସ ଫମନ, କୃଷୀସ୍ତ୍ର ପ୍ରସ୍ତୁତି ପଣାଳା ଓ ପରିବେଶ ସୁରକ୍ଷା ରକ୍ଷା ସମ୍ପର୍କରେ କୃଷି ଭାରତରଖାଳୀ ବଢ଼ାଇଥିଲେ।



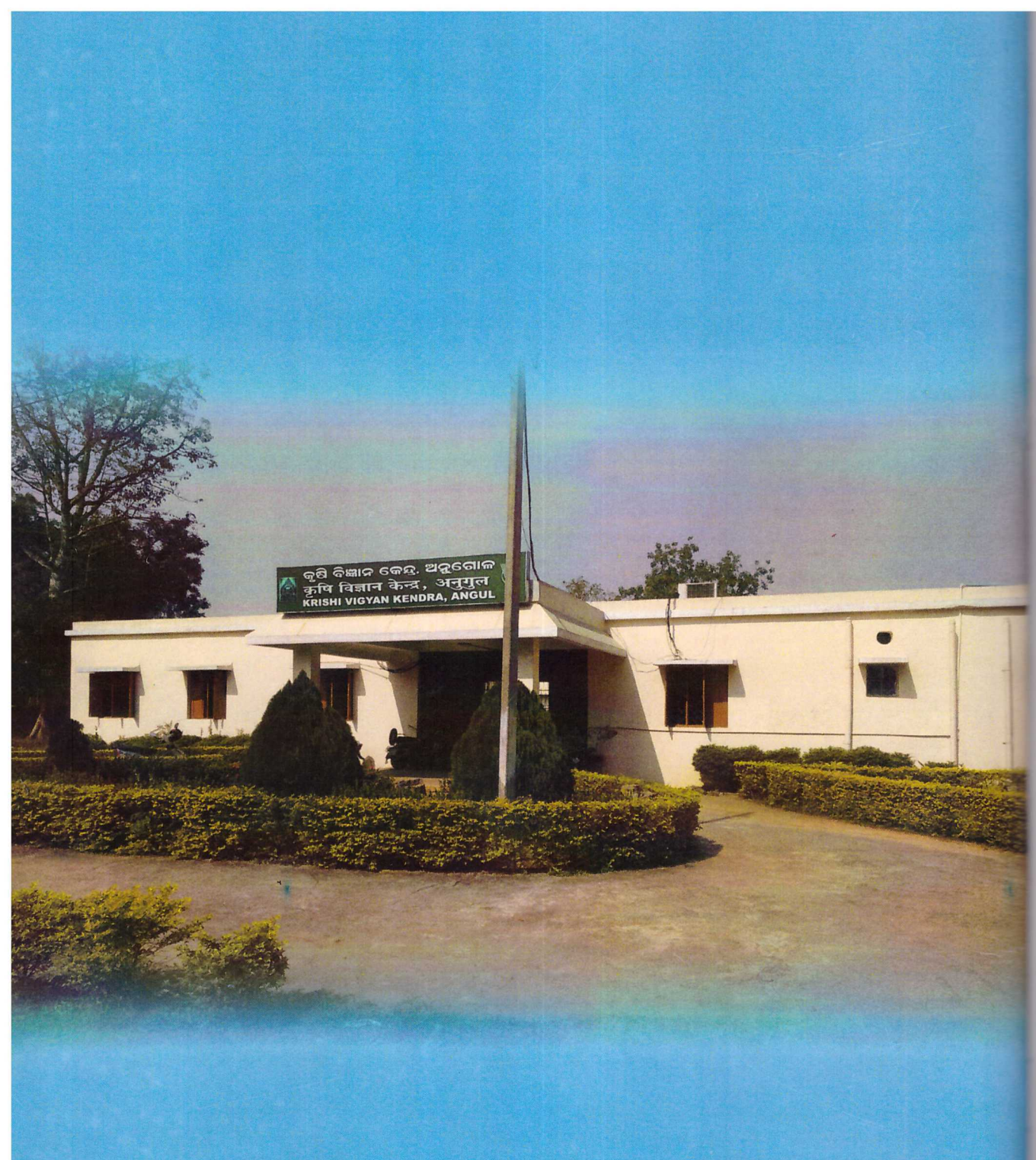
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ବୈଜ୍ଞାନିକ ପରାମର୍ଶଦାତା କମିଟି ବୈଠକ

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ଶୈଳୀକୂଳ ପ୍ରତ୍ୟାଗର୍ଥପାତ୍ରା ଚଳିଥିବା ଶୈଳପଦ୍ମର ଅଧିକାରୀମାନେ 'ପ୍ରଶ୍ନ ଚକ୍ର'ର ଉଦ୍ଘୋଷଣା କରୁଛନ୍ତି



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