

# Other Agri-enterprises

## Apiary: A viable alternate source of income

**Name** : Sri Ranjit Kumar Singh  
**Address** : Village – Karma Bhagwan, District- Aurangabad, Bihar

After completion of schooling from district Aurangabad, Sri Ranjit Kumar Singh was very eager to do something for his family. He came in contact with KVK Aurangabad in 2008 and adopted livestock, backyard poultry farming besides his usual cultivation of rice and wheat, livestock rearing, fish culture and bee keeping. Out of which he chose apiary as the best suited farming in his limited area of land followed by crop cultivation and livestock keeping. Finally, with the help of a series of district level training programmes on bee keeping organized by the KVK Aurangabad and District Horticulture Officer of Aurangabad, he started keeping honey bee in 20 boxes which was extended to 400 boxes within the very short period of time. He formed farmers' group through which honey were being marketed throughout the district. With the establishment of his own entrepreneurship he also started helping other farmers to develop bee keeping business in the area. His earning comes around 5.5 lakh per year alone from bee keeping besides from growing crops (Rs. 50000) and livestock rearing (Rs. 21000). At present, he becomes an idle for the young generations in surrounding and outskirt areas of the district.



### Details result obtained due to the Adoption flower cultivation:

<i>Enterprise</i>	<i>No. of boxes</i>	<i>Cost of production (Rs.)</i>	<i>Return (Rs.)</i>	<i>Net income (Rs.)</i>
Bee keeping	400	100000	550000	450000

## Marvellous experiences with strawberry cultivation

**Name** : Sri Brajkishore Mehta  
**Address** : Vill.-Chilkhigaha, Block-Kutumba, District- Aurangabad, Bihar

Sri Brajkishore Mehta is a dynamic and progressive farmer of village Chilkhigaha which is situated 10 km away from Aurangabad. Before 2010, he used his sole land for crop production but that was not at all remunerative. After that, he came in contact with the Scientists of KVK Aurangabad for getting technical knowhow and skills to improve fruit and vegetable productivity. For producing off-season solanaceous vegetables, he adopted various new technologies like use of growth regulators, raising of cucurbits seedlings in poly bag, training, pruning and rationing in vegetables. That helped him to get the early fruiting and fetched the good price in the local market. Presently, with the help of Bihar State Department he started producing off-season cucumber under poly house. As a result, Mr. Mehta got a substantial amount of net income from his cultivated land. During the year 2012-13, he started to cultivate strawberry under plastic film. With only two varieties Chandler and Ofra sapling which was collected from Haryana and planted in the first week of September and got fruiting from first week of January to last week of February 2013. He also started multiplication of his existing germplasm in 0.5 acre land. From the same land, he earned around 4 lakhs and many saplings were already for multiplication and selling. Now, Sri Mehta is a very happy strawberry producing farmer in the area. He appreciated the contribution and guidance of KVK Scientists for achieving his goal through adopting latest technologies in agriculture. Several farmers not only from in surrounding areas but different districts are usually coming to see his plot and crop too for following such practices and collecting the saplings. At present, he has become a lead farmer in the district in terms of strawberry production.



## Agri-mechanization: The way to solve labour crisis

**Name** : Sri Ramanand Choudhary  
**Address** : Village- Mahamadpur, Post- Bhagalpura, Block- Tarapur,  
District- Munger, Bihar

Sri Ramanand Choudhary, a retired teacher, survived with four hectares of cultivated land. After retirement, he was thinking to utilize his land properly for crop production. He discussed his views in details with the Scientists of KVK Munger to prepare a road map for his farm land and decided to purchase a combine harvester to serve farmers in his area and also to earn money as an entrepreneur. He consulted District Agriculture Officer (DAO) of Munger for getting subsidy and loan from Bank. Ultimately, he purchased the same with the help of DAO and Bank. As paddy and wheat were the major crop in the area and there was severe labourer scarcity during harvesting season, due to the availability of combine harvester in the area the harvesting operation has become easier for the adjoining farmers. The whole operation took less time with minimum loss of crops and was also economical. At present, he has developed the capability to harvest 1200 ha crops in one year. He earned money as per details below.

<i>Year</i>	<i>Working days</i>	<i>Operational cost /day (Rs.)</i>	<i>Total income/day (Rs.)</i>	<i>Net income/day(Rs.)</i>	<i>Total net income/day (Rs.)</i>
2012-13	90	9000	20000	11000	99000
2013-14	92	10000	21000	11000	1012000
2014-15	95	11000	22000	11000	1045000

\* Hiring charge for harvester-Rs 2500/ha and operating hours- 9 hour per day

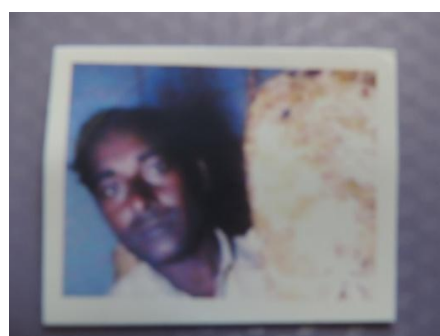
\*\*The cost of combine harvester was repaid within two years of purchase. It gives four persons employment also.

Thus, Sri Ramanand Choudhary has become a lead & innovative farmer and also an eye opener for other large farmers in the area who is sharing his technical knowledge in terms of agriculture, machinery & cattle rearing.

## **Mushroom cultivation an important tool for rural employment**

**Name** : Sri Ghanshyam Prasad  
**Address** : Village- Uksi, Block- Chewara, District- Sheikhpura, Bihar

After completing of Matriculation Mr Ghanshyam Prasad was struggling hard to settle his family. During the month of July 2012, he came in the contact with KVK Sheikhpura Scientists in search of employment opportunities in agriculture. After several discussions and technical guidance of KVK experts and ATMA, he was motivated to start mushroom cultivation. He started his entrepreneurship with 10 kg Oyster mushroom spawn which was purchased from BAU Sabour. It was inoculated in 100 bags hanging in a thatched roof of 150 square foot during November 2012. He successfully grew 60 kg mushroom in his first attempt and sold 40 kg as fresh @ Rs. 150/ kg. Balance 20 kg of the produced mushroom was converted in to Pickles which was further sold out. In the first attempt he realized the net profit of Rs. 4500 and got confidence of production and marketing.



In the second attempt, he produced 150 kg of fresh mushroom and got the net profit of Rs. 10,000. After third round during 2012-13, he earned a total earning of Rs. 30,000. Further, he produced mushroom throughout the year and assured the spawn availability for the nearbyfarmers. In addition, he convertedmushroom waste along with buffalo dung and other agricultural wastes into vermi-compost by which his crop on the 5 ha land yielded higher. Getting inspiration from that, he was also interested to acquire agricultural knowledge for other agriculture related enterprises. With his zeal now Mr.Ghanshyam has become not only a role model among unemployed rural youth of his villagebut also a recognized farmer by ATMA. He strongly admits the role of KVK Sheikhpura for behind his success.

## **Mushroom production for income generation**

**Name** : Sri Abhay Anand

**Address** : Village-Baghori, P.O.-Ghorlash, District- Deoghar, Jharkhand

Sri Abhay Anand is a Matric passed school dropout who came in contact with Krishi Vigyan Kendra Deoghar during the year 2013. He took several trainings from KVK Deoghar Kendra for starting mushroom cultivation. Ultimately, he started his business and within one year, he was able to produce mushroom from 800 bags. He is supplying mushroom in the Big Bazaar at Deoghar town and is earning around Rs. 8000/- per month from his enterprise. Definitely, he has become a source of inspiration for other poor rural youths in the area.



## Improving livelihood through oyster mushroom production

**Name** : Mr. Shishu Chandra Pal and Mr. Lipton Biswas

**Address** : Village- Dakhin Aliganj, Post- Islampur, District- Uttar Dinajpur,  
West Bengal

Mr. Shishu Chandra Pal and Mr. Lipton Biswas are budding entrepreneurs. Both had taken rural youth training on mushroom cultivation from Krishi Vigyan Kendra Uttar Dinajpur and primarily started oyster mushroom cultivation at household level with KVK inputs and technical support. Gradually, they got interest in commercial cultivation of oyster mushroom and started small scale units in the area with 200 m sq. each. The Scientists from KVK helped to link them with marketing of their produce. Small growers like Mr. Shishu Pal and Mr. Shishu Chandra Pal



Mr. Lipton were linked with large growers at local level for selling mushroom and to earn a definite income throughout the year. Now, both had set up their own unit in the same village and collectively selling their produce to the large producers group in addition to sale in the local markets from where they were getting better price. Now, they are planning to expand their business and even eager to try new varieties of mushroom production. Presently, on an average 100-110 kg of mushroom is being produced every day at their farm and they sale the produce @Rs. 40/- per kg with a net profit of Rs.48,000/- to 52,000/- per month. They are the eye opener for many young unemployed youths in the district.



## **Mushroom: A source of poor man's earning**

**Name** : Mr. Hakimul Islam  
**Address** : Village- Diwanjageer, Post Office- AsaruBasti, Daspara,  
District- Uttar Dinajpur, West Bengal

Mr. Hakimul Islam, a young entrepreneur and source of inspiration to many others, established a 500 sq m. mushroom cultivation farm with an average production of 200 kg per day. He started mushroom cultivation in the year 2011 and had been expanded his enterprise day by day. He motivated youths of nearby villages and six of them already started their own farms in their respective villages. Mr. Hakimul Islam came in contact with Scientists of KVK Uttar Dinajpur and developed his capacity through rural youth training programme at KVK. Further, he was sent to Ramkrishan Mission Ashram at Belur Math, Kolkata for exposure visit and training. Uttar Dinajpur KVK arranged one training programme for mushroom spawn production for him and other fellows at Uttar Banga Krishi Viswavidyalaya, Cooch Behar. His produces were readily accepted by the nearby hotels and restaurants of Himalayan and Dooars regions of the district. He established one producer group which is known as Pragati Mushroom Grower Association. At present, Mr. Hakimul and their producer group is producing on an average 500 kg fresh mushroom in a day and marketing it to Siliguri area. He is earning a net profit of 65,000/- to 75,000/- per month from his mushroom business and now has become an idol to other youths of the locality.



## Enhancing family income through small scale vermicompost production

**Name** : Sri BirenSaha

**Address** : Village& P.O.- Raipur, District- Birbhum, West Bengal

Considering the present demand of high quality organic manure like vermicompost and the availability in the market Rathindra KVK Birbhum organised training programme on preparation and use of vermin-compost in the year 2006-07. After completion of training programme, Sri BirenSaha started vermicomposting with two small units each having the size of 2.5 ftx 2.0 ftx 3.0 ft. Initially, he invested Rs. 1000/- for installation this unit. Sri Saha used all his homestead organic wastes for that purpose. After one month, he harvested his first product. For the next production he needs only Rs. 100/- as a cost of cow dung for each unit. Every time he harvested one quintal of vermicompost from each unit. Within one year he produced ten times from both the units. Thus, the total production was 20 quintal in a year. The cost and return in one year is given below.

<i>Total Cost (Rs.)</i>		<i>Total Return (Rs.)</i>	
Installation Cost (One time)	1000	Vermicompost 20 q. @ Rs. 400/ q.	8000
Cost for Worm (One time)	400	Worms 5000 nos @ Rs. 50/100	2500
Total cost for cow dung	2000		
<b>Total</b>	<b>3400</b>	<b>Total</b>	<b>10500</b>
Net return in the initial year: (10500 – 3400) = 7100			

After that, Sri BirenSaha started the same business in medium scale production. Seeing his success many farmers in his locality started to produce vermin-compost in small scale with their homestead organic wastes. Sri Saha is an eye opener of many poor farmers in the district.



## Improving agricultural productivity through water harvesting

**Name** : Shri Vinod Kumar

**Address** : Village- GadiMnajhila, Block- Kawakol, District-Nawada, Bihar

Shri Vinod Kumar excavated a pond measuring the dimension of 2 m x 27 m x 13 m during the year 2013-14 with the help of NICRA project. After complete excavation, the rain water was harvested (stored) in the pond. During 2014-15, the stored water was utilized for transplanting kharif paddy in 01 ha and for supplementary irrigation in the dry spell. The fish culture was also started in the pond. The fruits and forest species are transplanted on the bank of pond. On bunds, pigeon pea was grown and harvested. On the side strips of the pond, vegetables were grown during kharif, rabi and zaid by utilizing stored water from pond as per need. The water was available whole year in the pond due to automatic recharging capability of the pond. The farmer planned to establish dairy unit near the pond to start integrated farming for more income generation. Cost of cultivation of pigeon pea was Rs. 1,350/- (0.2 ha) and gross income is Rs. 8,700/-. Cabbage and cauliflower cultivation contributed the total net income of Rs. 14,850/- (0.2 ha).



## Mushroom production and processing: Opportunity for income generation

**Name** : Mr. Bikarna Barman

**Address** : Village- Baddungi, P.O.-Teor, P.S.- Hilli, Dist.- DakshinDinajpur,  
West Bengal

Mr. Bikarna Barman, a rural youth and marginal farmer, used to work very hard along with his parents for agricultural production for their livelihood. He was passing through the economic stress while unemployed and searching for an alternative and profitable enterprise. However, the situation started changing when he came in contact with Dakshin Dinajpur KVK during the year 2010-11. Mr. Barman enrolled his name for one week training on Mushroom cultivation. After getting the training, he gained confidence and started mushroom cultivation under the guidance of KVK scientists by taking spawn from KVK. By adopting scientific technologies he tried to increase mushroom production. Side by side, he started processing and sale out of the value added products of mushroom in the form of pickle, biscuit, sauce, pakora etc.



Apart from producing and processing of mushroom, he is now supplying spawn and buying mushroom from the surrounding producers. Recently, he started dry mushroom production. He is also acting as rural youth entrepreneur and master trainer to create much awareness among other. He has registered his product



under small scale industry of West Bengal Govt. vide Registration No. FSS-ACT-2006/22813005001845. Considering his prospect DIC (District Industrial Center) has sanctioned a loan of Rs. 5 lakh to setup a mushroom production and processing unit for up-scaling his enterprise. He has also branded his product in the name of '*Hilli Delhi*' as one of the first ever registered farm producer in this region of West Bengal. Mr. Barman started small scale production business and created his own market. Presently, he is supplying 100- 150 kg fresh mushroom every week and 5 quintal dry mushroom every year to the local market including other districts



e.g. Malda, Uttar Dinajpur and Darjeeling and other states e.g. Assam, Bhutan. His earning has reached the mark of Rs. 2 to 3 lakh in a season through production and selling of his raw mushroom and its various products throughout the district as well as outside the district. Mr. Barman is a member of Farmers' Club, NABARD, Member of "Naopara Teor Samaj Kalyan Samity" (NGO, Dakshin Dinajpur). He has been awarded with "Prosongshoniyo kajer JonyoSikrti Award" by NABARD in the year 2014, "Kriti Krishak Award" by Dakshin Dinajpur KVK in the year 2014 and "Agrani Krishok Samman" from Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar, West Bengal.



After seeing the success of Mr. Bikarna Barman, five farmers in the locality have already started mushroom production and eight rural youth have taken training on mushroom production from Dakshin Dinajpur KVK. They will start mushroom production very shortly.

## Vermicompost: An additional source of income

**Name** :Sk Abdul Hanif  
**Address** :Village-Konnamoni, P.O.-Sarenga, District- Howrah, West Bengal

Sk. Abdul Hanif used to cultivate paddy in 0.5 acre land, and banana and vegetables in 0.36 acre land. In addition, he used to cultivate his upland (10 katha) for the consumption of his family i.e. his wife and seven children. But, it was very difficult to meet out all family needs from his small earnings. Earlier, he used to work in a jute mill which remained closed for two months in a year due to lock out. As his agriculture productivity was also decreasing and cost of cultivation was increasing, he went to meet ADO of his block for advices who told him to construct vermicompost unit in his land. But, due to financial problem, he could not start that.

After that, he participated in many capacity building programmes on vermicomposting and learned about the benefits, uses, composition and preparation of processes. He planned to compost organic wastes i.e. cow dung, green leaves, skin of vegetables, trunks of banana trees, water hyacinths etc. available with him. With the financial help of Ambuja Cement Foundation, Mr.Hanif started vermicomposting at one corner of his upland field using good quality tarpaulin in the pit. The pit was 10 ft long and 3.5 ft width. At a time one ton of vermicompost materials could be produced from his pit. At initial stage, he purchased 2000 number vermin worms at the cost of Rs. 500/- and also constructed a shade over the pit to protect compost from rain and sun.

In 2009, he produced 5 tons of compost and earned a net profit of Rs. 16000/- from that produce. In next year, from 9 tonnes the earning was Rs. 25000/-. Ultimately, his production reached at the level of 15 tonnes/annum. The vermicompost production has become very popular as farmers are routinely used in field of paddy, banana and vegetable cultivations.

<i>Impact factor</i>	<i>Before Adoption</i>	<i>After Adoption</i>
Crop / Agricultural Practice	-	Vermicompost
Yield of crop / product (ton)	-	15
Sale Value (Rs.)	-	50000
Input Cost (Rs.)		1820
Labour Cost (Rs.)		5000
Any Other Cost (Rs.)		180
Net Saving / Net Profit (Rs.)		43000