

## **Success Stories during 2019-20**

### **Raising of Farm Income through Improved Technologies and Crop Diversification: A Success Story from NICRA Village**

#### **A. Background information of the farmers:**

Udmari, the NICRA village of KVK, Dhubri is a regularly flood affected village of Raniganja Development Block of Bilasipara subdivision in Dhubri District of Assam. Every year flood causes heavy damage to the crops as well as livestock of this village. Although winter rice is the main crop grown by the farmers of this village but it is a chance crop for them. Sometimes they can harvest their crop and sometimes not. Mr. Khitish Nath is a 41 yrs old progressive farmer of Udmari Pt III having 2.93 ha (22 bighas) land of his own. His father Lt.Suresh Ch. Nath was also a farmer and followed conventional method of cultivation due to which he could not earn much profit. Due to the poor economic condition, Khitish could not complete his education beyond class X and he had to engage himself in cultivation with his father.

#### **B. Journey in timeline :**

##### **Starting point:**

After the death of his father (when he was 25 yrs old) he had to take the responsibility of his family with his mother, wife and two sons. Mr. Khitish is an innovative farmer and always tries to do the crop cultivation in scientific way. He thought himself that earning from one source is not sufficient and he joined in a painting class for 6 months at Bilasipara by thinking that it will give him an extra income to his family in addition to agriculture. After completion of the painting class, he started painting work commercially and earned an extra income.

Out of 2.93 ha (22 bighas) land, he cultivated rice in 1.33 ha (10 bighas), toria in 0.26 ha (2 bigha) and vegetables in 0.07 ha (0.5 bigha) land and remaining 1.27 ha (9.5 bighas) land was kept fellow. He cultivated low yielding local varieties of rice like Malsira, Goyasri, Phulpakhari and local toria varieties. By cultivating these varieties he could not earn much profit as these varieties are low yielder and many a times got damaged by flood water which was the major problem for his area.

##### **Turning Points:**

In 2014, he came in contact with KVK, Dhubri through the NICRA project run by KVK, Dhubri which was the turning point for him. He considered it as his most important moment because of which he got the information and knowledge of improved technologies which increased his income many fold.

### End points:

By studying the cultivation history, KVK scientists suggested him a farm plan to him to go ahead. KVK advised him to go for cultivation of HYV of rice like Ranjit, Mashuri and some submergence tolerance new rice varieties like Swarna Sub 1, Bahadur Sub 1 Ranjit Sub 1 and Gitesh instead of cultivating low yielding local varieties of rice. KVK arranged all these varieties through programmes of NICRA and from other reliable sources. He also increased the rice area from 1.33ha to 1.87 ha. By cultivating these varieties he got almost double production and income than ever before as these varieties are well suited for his area.

He was also suggested to go for HYVs of toria like TS-36, TS-38 and TS-67 instead of low yielding local varieties and able to earn more profit as these varieties are well suited to their situation. Although he cultivated toria in 0.27 ha at first, later on with the advice of KVK, he expanded the area up to 0.53 ha under toria cultivation.

Most of the farmers of Dhubri district practiced single crop for commercial cultivation in their land suitable for vegetable cultivation. Kshitish Nath has 0.13 ha (1 bigha) of upland at his home where he used to cultivate single crop i.e. cabbage only in 0.07 ha. But KVK scientists advised him to go for more crops as the land is suitable for vegetable cultivation and accordingly under the guidance of KVK, Dhubri, he adopted the technology on diversification of crops for raising the farm income during the year 2015-16 with the objective to minimize the risk of crop cultivation. .

His area of fallow land was also reduced from 1.27 ha to 0.4 ha. His income before and after intervention was shown below.

### Income from different crops:

Before Intervention ( upto 2014)					After Intervention (after 2014)					Increase in income
Crops grown	Area ( ha)	Av. Yield (q/ha)	Total Yield (qt)	Gross Income (Rs)	Crops Grown	Area (ha)	Av. Yield (q/ha)	Total Yield (qt )	Gross Income (Rs)	
Sali rice	1.33	21.0	28.0	35000.00	Sali rice	1.87	42.0	78.4	98000.00	58000.00
Toria	0.27	7.5	2.0	6000.00	Toria	0.53	10.5	5.6	16800.00	10800.00
Cabbage	0.07	195.0	13.0	13000.00	Kharif & Rabi Vegetables ( 16 nos) (Crop diversification model)	0.133	-	-	75000.00	49000.00
					Vermicompost (2	2 unit	9 qt/	18 q/	21600.00	21600.00

					units)		unit	unit			
Fallow land	1.27 ha				0.4 ha						
<b>Total Income</b>	<b>54000.00</b>				<b>211400.00</b>						<b>144400.00</b>

**Economics of Crop Diversification model of Vegetables:**

Income from Previous Cultivation (only Cabbage Cultivation):	Income from new practice of Crop Diversification:
Area Production Gross Income (Rs.) : 13qt x Rs.1000.00/qt : Rs.13000.00 Gross Expenditure (Rs): Rs. 6000.00 B.C.Ratio : 2.17	Area : 0.133 ha Gross Expenditure : Rs.21550.00 Gross Income : Rs. 75000.00 B.C Ratio : 3.48

Kharif vegetables grown by farmers					B.C. Ratio
Sl. No.	Crop	Area (Sq.m)	Expenditure (Rs.)	Income (Rs.)	
1.	Sponge gourd	200	800	3000	3.75
2.	Ridge gourd	200	650	2000	3.08
3.	Cucumber	100	700	2500	3.57
4.	Ash gourd	200	800	3000	3.75
5.	Colocasia	200	1500	7500	5.00
6.	Sugarcane	200	4000	9000	2.25
7.	Bean	50	500	2000	4.00
8.	Pumpkin	150	500	1500	3.00
<b>Sub Total</b>		<b>1300</b>	<b>9450</b>	<b>30500</b>	<b>3.23</b>
Rabi Vegetables grown by farmers					
1.	Cabbage	300	3000	10000	3.33
2.	Cauliflower	200	3000	10000	3.33
3.	Brinjal	300	2000	12000	6.00

4.	Tomato	150	1500	4000	2.67
5.	Chilli	30	300	1000	2.33
6.	Coriander	30	300	1000	2.33
7.	Garlic	30	500	4000	8.00
8.	Potato	300	1500	2500	1.67
<b>Sub Total</b>		<b>1340</b>	<b>12100</b>	<b>44500</b>	<b>3.68</b>
<b>Grand Total</b>		<b>2640</b>	<b>21550</b>	<b>75000</b>	<b>3.48</b>

### Challenges Confronted:

Poor economic condition, no other helping hand in his family and every year the village is affected by flood were the major challenges for him.

### Opportunities Captured: (offered by KVK and support from other organization)

#### Intervention from KVK:

- Provided improved technologies of rice, toria, sugarcane, vermicompost, vegetables , diversified agriculture etc through training and demonstration
- Technical advice as and when needed through field visit, phone call, whatsapp etc.
- Introduced the seed bank for easy availability of HYVs of seed of rice and toria for his own as well as for other farmers of his locality.

#### Support from other organization:

Received sprayer, SRI wheel marker, STW from Deptt. of Agriculture. He got one Gobar gas plant from department forest, Govt of Assam which he installed at his home and he is using the gobar gas for cooking of food

### C. Special strength/ traits/ advantages/technologies/ innovations/ circumstances that could be attributed to his success:

#### Special Strength of Kshitish:

- Hard worker and sincerity in work
- Good time manager
- Innovative and positive thinking
- Good relation with officials and with villagers

#### Technologies which helped him in getting success are:

- Replacement of local varieties with HYVs of rice ( Varieties like Ranjit, Ranjit Sub-1, Swarna Sub 1, Gitesh, Bahadur Sub-1) and toria (TS-36, TS-38, TS-67 )

- Crop diversification concept & Technologies
- Seed bank of rice and toria
- Low cost vermicompost production technology.

**D. Impact of the success in his life (income resource growth etc.):**

- His income increased more than double
- Got popularity in the areas because of his work
- Got recognition from District Administration and KVK as best farmer of the district
- Dr. A.K.Tripathi, Director, ATARI Zone VI after visiting his farm advised KVK to install one Micro irrigation Unit at his farm and MI unit is already being established at his farm by KVK, Dhubri.

**E. Lessons for the fallow farmers/ communities and also for KVK and others:**

- He has become the role model for other fellow farmers of his areas
- KVK can sight the example of Khitish to other farmers for his real success in farming
- KVK organized many exposure visit of farmers and students to his farm for getting the first-hand experience for the farmers

