

Krishi Vigyan Kendra - Vyara

ALWAYS CROWDED BY FARMERS, OFFICIALS, AND NEEDY CLIENTLES





Success stories

- **KVK for Reaching the Unreached**
- **Velda – IPM Village**
- **Replacement of the Pigeon pea variety through FLD**
- **Replacement of drilled paddy through Soybean crop**
- **Integrated Nutrient Management, a wind fall to get higher production of vegetables in Tribal area of South Gujarat**
- **Role of KVK in upliftment of Tribal dominated areas of South Gujarat through export oriented Okra cultivation**
- **The Role of KVK in shifting the life of normal tribal farmer to an innovated hitech farmer**
- **Impact of Kitchen Gardening Demonstration in Tribal farm women**
- **Collision of linkages with Tribal Co-operatives for effective TOT in tribal belt**
- **The IPM Block – Nizar**
- **Increasing area and productivity of Paddy in tribal belt of South Gujarat**

- **Money-making Animal Husbandry by Thud Guidance of KVK Tapi in Tribal dominated village**
- **System of Rice Intensification – Success Story of farmer**
- **Self Sufficiency in Paddy Seed through Seed village Programme**
- **Boost production of Paddy from a New Variety NAUR-1 – Success Story**
- **Yellow sticky trap – An important tool for okra pest management – Success story**
- **Entrepreneurship development of tribal women Self Help Group through preparation of Masala**
- **Unbeaten seed producer of Seed Village programme of KVK, Tapi**
- **Adoption of processing and preservation technology by tribal farm women for domestic utilization**
- **Role of Krishi Vigyan Kendra, Tapi in implementing High-valued Horticultural crops and raising the socioeconomic status of Bahurupa Village in Gujarat**

- **'NAUROJI' fruit fly trap – A tool for ecofriendly fruit fly management in watermelon and muskmelon in Bahurupa village-Success story**
- **Integrated Pest Management (IPM) in Okra**
- **Bottle gourd brings shining in life of Ashwinbhai**
- **IPM technology in Okra and its dissemination in tribal belt of adopted villages of Tapi district.**
- **Higher income through Crop diversification**
- **Higher income through High value Crops**

1 -“KVK for Reaching the Unreached”



Previous income **Rs. 25000/-** as a whole., After adoption of Vegetables-
Rs. 40,000-50,000/- as a whole., Adopted Drip in **9 acres** of land, 2 Acres of
papaya cultivation along wit **Drip, Raised bed and Mulching**, Net Profit
Rs. 200000/-, Raised the Standard of Living.

23 Farmers have adopted the same in the region.

Mr. Alpeshbhai is now become a **Master trainer for Papaya cultivation.**



2- “Velda – IPM Village”



Decreased **5 Sprays** of Agrochemicals.

Decreased in cost B/H Agrochemicals to the tune of **Rs.5000/- (Ha.)**

Effective and efficient control of pests (**Ecofriendly**), Increase use of **Neem Based products** for pest control. Effective control of **Mealy Bugs** through **IPM**. Increased in Net profit- **Rs.25000/ha.**



3- Replacement of the Pigeon pea variety through FLD



Vaishali yields **33-68%** higher than Local one.

Higher net profit- **30-78%**.

Sold as a **Green vegetables** as well as **grain** production.

Highest Net profit:- **Rs. 50,000/ha** (5 Farmers)

Three Tools;- TRG, FLD & OFT

SMILING FACES..



4- Replacement of drilled paddy through Soybean crop



Replacement of drilled paddy by Soybean in **5 Villages**.

Increased Net Profit to the Tune of **Rs. 20,000/-**

Increased in income to the tune of **58%**.

Increased soil Health, Productivity and Fertility.

Decreased cost after **IPM** and **INM** to the tune of **30%**.

Spread Soybean in **Whole Block** instead of **Drilled Paddy**.

Sickle cell Anemia

Soybean Products, HS TRG..



5 - Integrated Nutrient Management, a wind fall to get higher production of vegetables in Tribal area of South Gujarat

Crop	No. of fruits Harvested
Okra	40 % more
Brinjal - Rabi	56 % more
- Kharif	78 % more
Papdi	54 % more

Soil Property & Nutrient content of the soil improved.



INM in Brinjal, Village : Gatadi



Field Day on Brinjal
Technology : INM in Brinjal

6 - Role of KVK in upliftment of Tribal dominated areas of South Gujarat through export oriented Okra cultivation

Year & Month	Dolvan	Surat	Price Rs /Kg
2008-09 Nov	2286 qt.		15
Nov- Dec	--	--	27.50
March End	--	--	7.5 to 10
2009-10	1225.5	1206.5	--
Oct	--	--	20
Nov	--	--	27.50 to 30
Dec - Jan	--	--	45 to 60

Okra traders from Mumbai & Delhi came to farmers' home & Gave higher rate as they aware about grading & IPM, INM technologies given by KVK which improved fruit quality.

Rs.250/20kg To 1250/20Kg

50-60 Tn per Day



Unique efforts KVK

42 crores okra exported



7 - The Role of KVK in shifting the life of normal tribal farmer to an innovated hitech farmer

Mr. Bhanudasbhai Sahitravbhai Gamit, Bhitkhurd

Obtained higher yield of **Paddy, Tur, Gram and onion.**

- **Total income of Rs. 3.5 Lakhs from total 9 acres of land.**
- **The total cost of cultivation was Rs. 69000/-.**
- **The net profits was Rs. 2.81 Lakhs.**
- **This led him higher income and also raised his standard of living with better social status.**
- **Previously he had to borrow money from others for his social expenses.**
- **At present he is in a position to lend money to others.**
- **Cultivation of good quality agriculture product attracted the merchants towards Bhitkhurd village. He started to sell paddy after milling paddy after thorough processing and get more prices than others.**

Innovator for rehabilitated **Ginger, Onion, Cow farm, Gobar gas, Green House, O. farming**

8 - Impact of Kitchen Gardening Demonstration in Tribal farm women

- **Demonstrations on Kitchen Gardening have misrepresented the eye site of the tribal farm women among health and hygienic safety measures.**
- **The tribal farm women can not have enough money to purchase costly vegetables for their family.**
- **The sickle cell anemia and other disease are great constraints.**
- **The main reason behind this is malnutrition, imbalanced ration and illiteracy .**
- **The said FLDs has paved the way of healthier, long, prosperous and biodegradable life of the tribal farm women.**
- **50-100-400**



FLD Training on Kitchen Gardening & Distribution of Seed / Seedlings of Vegetables



Name of Enterprise	No. of Demo	Area	Crop yield (Kg)										Total Production	Average rate (Rs/kg)	Gross return (Rs.)	
			Okra	Tomato	Brinjal	Cabbage	Cauliflower	Chillies	Bittermel	Bottle gourd	Ridge gourd	Palak			Before FLD	After FLD
Kitchen Garden	50	1 Guntha / farm women	13.3	11.4	18.86	2.8	3.04	5.06	3.56	6.5	5.26	1.58	71.1	13	Not doing kitchen garden	924.3, along with domestic consumption

S. No	Technical Feed Back of Kitchen Garden:
1	Before Demonstration farm women were not growing vegetable crops in their backyard but after demonstration they are growing different vegetable crops through kitchen gardening in scientific way.
2	Farm women get continuous supply of fresh vegetables at low cost which gives daily nutritious diet.
3.	Farm women are utilized maximum backyard space and waste water.

Farm women Reaction :

1.	Kitchen gardening makes available fresh, cheap and chemical free vegetables over a long period of time which improve our daily diet.
2.	Income is generated by selling extra vegetables grown in kitchen garden after family consumption.
3.	We are utilized our spare time through kitchen gardening. i.e. kitchen gardening is the profit making leisure time activity.



9 - Collision of linkages with Tribal Co-operatives for effective TOT in tribal belt

Large Network:- Farmers of 84 villages

Guidance by KVK:- In agriculture and animal husbandry related Problems.

Adoption & Implementation:- The recent innovations in the above field of immediately implemented by KVK scientist among these villages and farmers are very eager to adopt such technologies with full interest and confidence.

Achievement:- The traditional methods of farming, prejudices, religious belief, mindset of tribal farming communities have been changed to scientific technology.

Linkage with Hangati Mahila Trust was an ideal example of unique piece of work done by this KVK.



BEST CONVERGENCE



10 - The IPM Block - Nizar



Cotton Day inauguration



Field Day on Cotton



Off Campus training at Velda



Off Campus training at Khodda

IPM Advantages:-

- Reduces the cost of plant protection
- Reduces the pesticide use
- Prevents/delays development of pesticide resistance
- Reduces residues in soil, water, food &
- prevention of environment imbalance.

Majority respondents gained medium level of the overall knowledge and adopted cultural, mechanical and biological practices for pest control.

Total income:- Increased by 64.6 % Cost of cultivation Decreased by 38.6 %.

Increase in knowledge level of the farmers regarding cotton IPM is due to the proper guidance given by KVK scientists, Demonstrations and constant follow up by KVK missionary.



GREAT ACHIEVEMENT IN GOLDEN ERA OF ORGANIC FARMING

11 - Increasing area and productivity of Paddy in tribal belt of South Gujarat

Conventional varieties

- ❖ Av. Yield 3000 Kg/ha.
- ❖ Av. Market price Rs. 5-7 /Kg.
- ❖ Total cost of cultivation Rs.9170/ha.
- ❖ Av. Income Rs. 21000 / ha.
- ❖ Net profit Rs. 11838 / ha

High yielding varieties

- ❖ Av. Yield 4500 Kg/ha.
- ❖ Av. Market price Rs. 6-8 /Kg.
- ❖ Total cost of cultivation Rs.8120/ha.
- ❖ Av. Income Rs.36000/ ha.
- ❖ Net profit Rs. 27880 / ha

- ◆ Successfully introduced HYVs of paddy such as IR-28,GR-3, GR-4, GR- 5, GR-7, GR-11,GR-12,GR-13,NAUR-1, Gurjari and Jaya in this area.
- ◆ Av. Yield of Paddy per unit area is almost doubled.
- ◆ More than 1200 farmers of 45 villages Benefited.
- ◆ Reduction in cost of cultivation and seed rate for transplanting.
- ◆ More than 55 farmers have started multiplication of seeds in their own farm under the supervision and guidance of KVK scientist.

SEED VILLAGE PROGRAMME



March ahead towards self sufficiency in paddy seed

12 - Money-making Animal Husbandry by Thud Guidance of KVK Tapi in Tribal dominated village.

Intensive Efforts made by KVK Tapi.

Krishi Vigyan Kendra, Navsari Agricultural University instituted at Vyara ,Di-Tapi in the State of Gujarat is playing a major role in rural farmer upliftment in case of Para agriculture /allied sectors like animal husbandry with the expert guide of subject mater specialist of respective field. The main aim is to get higher profit from livestock through dairying.

Materials and methods

The glimpses regarding efforts made by KVK for the Vanskui Village in relation to animal husbandry were given in nut shell.

Trainings conducted for Animal Husbandry.

Sr. no.	Type of the training	Topic of the Training	Thematic area	No. of beneficiaries	Type of the participants
1	On campus	4	Dairy, Feeding & Animal Health Management	119	RY/PF/FW
2	Off campus	3		115	RY/PF/FW
	Total	7		234	

Telephonic information to farmers

Details	Beneficiaries
Information about different problems and remedies regarding Animal Science related problems to the Villagers	Total 68 telephonic messages to the Villagers were from KVK Scientists

Multifarious activities regarding Animal Husbandry



On campus



Off campus Training - Vanskui



Urea Treatment



Field Visit



Diagnostic Visit

Front line Demonstration and On Farm Testing

Sr.No	Thematic area	Title	Objective	Impact/ follow-up
On Farm Testing (OFT) (5 in Numbers)	Management of Milch Animal (Milk Production)	“Low milk production of Cow”.	To refine the feeding practices and to test the effect of urea treated fodder and mineral mixture feeding.	Farmers had adopted the technologies with refinement
Front line Demonstration (FLD) (15 in Numbers)	Nutrition management	Urea treatment to paddy straw	To demonstrate the practice of mineral mixture feeding and urea treatment to paddy straw	Livestock owners were encouraged through demonstration to perform the technologies at their own houses. They have started to make the same by themselves.
		Mineral Mixture feeding		

Apart from these, many extension activities like Krishi Mahotsav, FLDs and OFTs follow-up, night meetings, exposures, exhibitions seminars, shibirs, monitoring and evaluation were also conducted.

Results : *We are able to implement Scientific Breeding, Feeding and Management Practices in Tribal*

Previously, Farmers were keeping nondescript cattle and buffalos for milk production purpose. They were encouraged to keep the animal having good genetic potentialities and economically sustainable animals like cross bred cows with proven records. The benefits of keeping Cross bred HF(Holstein-Friesian) cows in terms of higher milk yield were made understood to the animal owners. The farmers purchased HF cows with the financial aid from Sumul Dairy. It was resulted in better milk yield from the animals. Benefit Cost Ratio was increased from 1:1.17 to 1: 1.31 in case of urea treatment while the same was increased from 1: 1.15 to 1:1.28 in case of mineral mixture feeding FLDs. Benefit of the cross breeding genetic vigour of Holstein Friesian (HF) cow could be available to farmers.

13 - System of Rice Intensification – Success Story of farmer

- (1) Rangajibhai J. Gamit
- (2) At & Po. Amalgundi, Ta. Songadh, Dist. Tapi
- (3) SRI Technology

He was used 2 kg seeds in paddy nursery. Planting management is important factor for increase production. He was used 12 days old paddy seedling and planting at 25x25 cm. spacing. One plant per one hills. For weed control used paddy weeder at 10-15 days interval after transplanting. Three to four time used of paddy weeder for more air circulation in root zone area. In fertilizer management he was apply only 50% of recommended dose (120-30-0 NPK kg/ha). For limitation of water availability he was keep moist in paddy field. but after panical initiation 1-3 cm. water was applied & before harvest completely water was drain out. 50% water was saved in this method of sowing. Production point of view he get 55-60 tillers per hills and average production was 9580 kg/ha. In SRI method he get net profit of Rs. 58550 / ha. So in limited irrigation facility farmers get double income.

Benefit of innovation to the farmer & Society :

Paddy cultivation by SRI method Rangajibhai J. Gamit got net return of Rupees 58550 /ha & 45% water saving. Due to this surround Amalgundi village at least 106 farmers had adopted this technology.



14 - Self Sufficiency in Paddy Seed through Seed village Programme

1.	Seed Distribution by KVK (Paddy-var.NAUR-1)	:	350 kg
2.	Area under seed village Programme	:	35 acre under Hangati Mahila Trust villages
3.	10 ton Produced seed purchased with 100% increasing rate by Hangati Mahila Trust, Mandal (Rs. 20/Kg Seed) → probably will sell with 10-15% higher rate.		
4.	Next season under this programme 400 ha area covered with NAUR-1 and reducing the area under hybrid rice		



Giant Success, produced 10. tons good quality paddy seed at farmer's field and sold in surrounding tribal villages.

15 - Boost production of Paddy from a New Variety NAUR-1 – Success Story



Thematic Area : Integrated Crop Management
New Variety of Paddy NAUR-1
Mr. Jagubhai Panjibhai Gamit
At & Post- Ghodchit, Ta- Songadh, Dist- Tapi. .

Profile

Age	: 51 years
Education	:
Land Holding	: 10 acres
Farming Experience	: 12 years
Crops Grown	: Paddy, Sugarcane, Vegetables and Pulses
Livestock	: Buffalo & Cow

Adoption & Promotion of Technology :

Seed Rate: 6 kg
Age of Seedlings: 21 days old
Spacing: 15x20 cm spacing(Used two plant per one hill).
Paddy weeder Used at 10-15 days interval after transplanting. two to four times use of paddy weeder for more air circulation in root zone area.
Application of Fertilizer management :120-30-0 NPK kg/ha.

Production point of view he got 30-35 tillers per hills and average production was 6500 kg/ha. In new variety he got net profit of Rs. 45,000 / ha. So in limited irrigation facility farmers got double income.

Benefit of innovation to the farmer & Society :

Paddy cultivation by new variety NAUR-1 Jagubhai P. Gamit could get net return of Rupee 45,000/ha. Due to this success among another village around Ghodchit village at least 160 farmers had adopted this variety.



Farmers with smiling face

16 - Yellow sticky trap – An important tool for okra pest management – Success story

Table-1: Comparison of economics of Yellow Sticky Trap demonstration plot and control plot in Okra crop.

Particulars	Yellow Sticky Trap Demonstration Plot	Control Plot (No Trap)
Number of spray	5	11
Cost of Plant Protection (Rs/ha)	5500	8500
Average Yield (Qt/ha)	156.11	104.03
Gross income (Rs/ha)	195137	130037
Net profit (Rs/ha)	1,40250	70807

Table-2: Adoption of Sticky Trap Technology

Characteristics	Number	Percentage
Overall knowledge level		
Low	10	10.00
Medium	75	75.00
High	15	15.00
Total	100	100.00

Conclusion

Yellow Sticky Trap is such a technology which reduces the cost of plant protection and increase the yield. It also helps in reducing the pesticide use and thus, prevents/delays development of pesticide resistance, reduces residues in soil, water, food and definite role in the prevention of environment imbalance. Majority of the respondents gained medium level of the overall knowledge. Number of spraying reduced from 11 to 6. **The adoption of Yellow Sticky Trap in okra, the total income of the farmers has been increased by 50.3 % and the cost of cultivation decreased to the tune of 32.6% (Table-1). The knowledge level of the farmers regarding IPM in Okra has increased (Table-2). This may be due to the proper guidance given by KVK scientists, Demonstrations and constant follow up by KVK missionary.**



DIGNITARIES VISITED OKRA FIELD



FLD ON YELLOW STICKY TRAP



**METHOD DEMONSTRATION
ON STICKY TRAP**



OKRA FIELD WITH STICKY TRAP

17- Entrepreneurship development of tribal women Self Help Group through preparation of Masala



President of SHG
Mrs. Radhaben Dattubhai Chaudhari



Shivshakti Self Help Group
Village : Kalakava, Ta. Vyara



Secretary of SHG
Mrs. Nutanben Pravinbhai Chaudhari

Total member of SHG : 10

Total saving : Rs 75,920/-

Month & Year of Vocational
Training : 1-2, February' 2011





Bank loan for income generating activities

₹ 50,000/- Bank loan + ₹ 10,000/-
Internal lending through SHG



Materials/ equipments purchased for Masala preparation

- ❖ Chakki – Grinder for Turmeric powder (capacity:5 kg per 1 hour)
- ❖ Pulverizer for grinding masala (capacity:15 to 20 kg per hour),
- ❖ Mixer machine, Weighing balance, Sealing machine, Sieve, raw materials for masala preparation, plastic bags etc.

Income generation of SHG through Masala products

₹ 14,000/- to ₹ 16,000/- per month
and ₹ 1,50,000/- income during season (Jan. to March)



Marketing arrangement

Use of local market/
social contact/ SHG/
sakhi mandal
members/ various Agri
fair, tribal fair etc.



18 - Unbeaten seed producer of Seed Village programme of KVK, Tapi

Introduction / Background :

Name of Farmer	:	Sharadbhai Shankarbhai Patel
Village	:	Piplod, Block – Nizar, Dist. Tapi
Age	:	64 years
Total Land	:	70 acre
Source of irrigation	:	3 tube well, 1 khet talavadi, 1 deep open well
Traditionally grown crop by him	:	Jower (Nizar-goti), Deshi Cotton, Bt. Cotton

He was the introducer of Bt. Cotton in Gujarat State

He earned rupees of 50.00 lakh by selling of Bt. Cotton seeds within 2-3 initial years

Crop : Wheat



Crop : Wheat



Crop : Wheat



Crop : Gram



Intervention made by KVK :

- Mr. Sharadbhai 1st visited to KVK in 2009
- KVK team gave information about “Seed Village Programme”
- PC and Agronomy SMS made cropping scheme for the seed village programme
- Proper and timely guidance by KVK team
- In rabi 2009-10, he has taken a seed production programme for Gram – variety – PKV-2 and Wheat – variety – GW-496 each in 30 acres
- Shri Ghanshyambhai Patel, village – Bahurupa – colleague of Mr. Sharadbhai also cultivated Gram and Wheat in 10 acres
- Seed production programme was visited frequently by KVK scientists (PC and SMS (Agronomy and Plant Protection)) and given valuable suggestion.



Crop : Gram



Result :

Table:-1 Highlights of Mr. Sharadbhai Patel in seed production

Crop	variety	Season	Area under seed production	Production seed (Q.) in the year			Productivity	Total income (in Rs. lakh)	Extra income from seeds as compare to grain selling
				2009-10	2010-11	2011-12			
Gram	PKV-2	Rabi	30 acre	250	255	270	8.5 q/acre	46.50	<i>20% extra income from seeds</i>
Wheat	GW-496	Rabi	30 acre	450	480	460	15.3 q./acre	25.02	
Soyabean	GS-2	Kharif	30 acre	255	260	255	8.5 q./acre	38.5	
Guar-gum (Cluster-bean)		Kharif	23 acre	145	140	143	6.3 q./acre	64.20	
Total	3 varieties		113	1100	1135	1128		174.22	

Impact :

- The area covered under the seed production programme in Piplod and surrounding villages in Rabi-2013-14 is around 800 acre of gram cv. PKV-2, 750 acres under Wheat cv. GW-496 and Guvar gum 38 acre (Kharif-2012-13).
- The credit goes to KVK, Tapi and seed village scheme to increase the awareness regarding quality seed and economics of seed production programme to the farmers and they are able to get net higher profit from seed production.

Horizontal and Vertical Spread :

- By this programme in majority of farmers of Piplod and nearby villages are self sufficient for seeds of such crops and provide the good quality of seed to other farmers in the vicinity. Those farmers who are affiliated in seeds village programme acquire 20% higher income as seed selling as compared with commercial crop production by selling in market.
- Due to hard work, live contact, constant follow up, motivation and well communication of Scientists of Krishi Vigyan Kendra Vyara with farmers area under seed production of gram PKV-2, Wheat GW-496, guar gum and Soyabean GS-2 is increasing significantly day by day in Tapi district.

Implication :

- Seed Production programme has shifted his status from normal farmer to high tech seed producer and also raised his standard of living in society
- Looking to the success of Mr. Sharadbhai Patel many other young farmers from Nizar block has also started seed production and frequently visiting KVK, Tapi for seed production programme next year
- Our honourable Vice Chancellor and Director of Research visited those farmers personally and admired them by providing shawl, certificate and memento at their doorstep.

19 - Adoption of processing and preservation technology by tribal farm women for domestic utilization

- **To give knowledge about processing and preservation technology and to motivate the tribal farm women towards adoption of scientific preservation technology, KVK has decided to conduct training programmes for farm women on processing and preservation in adopted villages of Tapi district.**
- **We have conducted training on fruits and vegetable preservation during the year 2010 to 2012 in Vanskui, Kapura, Degama and Badbhunja villages of Tapi district.**
- **Total 110 tribal farm women have actively participated in these training programmes.**
- **The detail training incorporating method demonstration was conducted for 2 days.**

Technology

- **Processing and preservation of Tomato ketchup and Papaya jam.**

Sponsored training – ATMA Project



Village : Degama



Village : Bhadbhunja

Impact :

Adoption of processing and preservation technology by tribal farm women for domestic utilization: n=110

Sr. No.	Practices	Adoption by tribal farm women	
		No.	Percentage
1	Sorting and Grading of fruits & vegetables	64	58
2	Washing/cleaning of fruits & vegetables	64	58
3	Processing:		
(a)	Juice extraction & filtration	64	58
(b)	Cooking:		
	(i) Tomato ketchup: juice is reduced to about 1/3 of its original volume	61	55
	(ii) Papaya jam: The quantity of jam prepared is about 2 times the wt of sugar used.	42	38
	(iii) Use of citric acid in jam	42	38

Impact :

Adoption of processing and preservation technology by tribal farm women for domestic utilization: n=110

Sr. No.	Practices	Adoption by tribal farm women	
		No.	Percentage
4	Use of preservatives such as vinegar, sodium benzoate	37	34
5	Sterilization of glass bottles	48	44
6	Bottling of products	55	50
7	Storage of products	48	44



Economic gain :

Economic gain by preparing Tomato ketchup and Papaya jam for domestic consumption

Food Product	Adoption by tribal FW		Quantity per year (Kg.)	*Cost of self prepared (Rs.)	**Market Price (Rs.)	Economic gain (Rs.)
	No.	%				
Tomato ketchup	61	55	101	4545/-	12726/-	8181/-
Papaya jam	42	38	44	2420/-	8800/-	6380/-
Total			145	6965/-	21526/-	14561/-

*Homemade cost:

Tomato ketchup:Rs.45/kg

Papaya jam:Rs.55/kg

**Market Price:

Tomato ketchup:Rs.126/kg(Maggi)

Mix fruit jam:Rs.200/kg(KISSAN)



Economic gain :

- They have saved of **Rs.81/kg** for tomato ketchup and **Rs.145/kg** for papaya jam than market price by adopting this technology.
- The cost of Tomato ketchup and papaya jam in market is **3 times more** than the cost of homemade product. After adopting preservation technology, their daily food habits have enjoyed with the taste of different varieties.
- This attempt has also mitigated some health and hygienic constraints, such as malnutrition and deficiency syndromes



Feedback of tribal farm women :

- Homemade product is cheaper than market.
- Quality of product is better.
- Product can be prepared as per taste required.
- Product can be used during off season of fruits & vegetables.
- Store in sterilized bottle helps to increase the shelf life of product.

Horizontal spread:

Looking to the adoption of processing and preservation technology by tribal farm women the tribal farm women from surrounding villages have shown their interest and ready to participate in the training of such kind for their social upliftment and want to keep their contacts with KVK for any kind of awareness.

Hence, KVK, NAU, Vyara has organized total 6(six) training programmes on fruits & vegetable preservation with collaboration of ATMA during the year 2012 & 2013. In these trainings, total 231 tribal farm women of different villages have actively participated.

20 - Role of Krishi Vigyan Kendra, Tapi in implementing High-valued Horticultural crops and raising the socioeconomic status of Bahurupa Village in Gujarat

- The village Bahurupa is situated in Nizer block of Tapi district, adjacent to Maharashtra state.
- It is located 32 km away from block place, 120 km from district place and also from Krishi Vigyan Kendra, Vyara.
- The total population of the village is around 1700 with 980 male and 720 female. Major segment of the village is under irrigation through tube wells. Papaya cultivation was initiated by this KVK before five years. At present total 400 acres of papaya cultivation in this village only. Total 4000 acres of papaya cultivation in the Nizer block.

Intervention :

- In the **year 2009** KVK, Vyara has **adopted the village Bahurupa** for its intensive activities of Transfer of Technologies related to agriculture for increasing agricultural production thereby raise the socioeconomic status of farmers.
- During PRA, interacting with farmers, it was found that **up to 2007; main crops of this village were cotton, pigeonpea, sorghum in *kharif* and wheat, gram, sugarcane, maize and sorghum in *Rabi*.**
- Dr. Chauhan and KVK scientist has been frequently visited to Bahurupa and interacting with interested farmers and **provide guidance regarding cultivation practices of short duration vegetable and also fruit crops.**
- KVK team also carried out different training programme regarding cropping system, scientific cultivation, technologies regarding plant protection etc. **As a result, farmers of Bahurupa have been changed the cropping pattern and introduced new crops viz., banana and papaya during 2009.**

- As per the communication with KVK scientist, new technologies *viz.*, **drip irrigation, mulching with plastic paper, fertigation** were also adopted by farmer of Bahurupa. Ultimately, during next 4-5 years maximum area was covered under banana and papaya and farmers got maximum return.
- Unfortunately, due to **viral disease problem in papaya** and also due to long duration period of these crops, farmers have been continued in search of short duration crop.
- Instantly, **KVK scientist suggested** farmer about cultivation of **watermelon** as this is short duration crop.
- **From 2010 onwards they have been continuously cultivated watermelon in summer season and also got maximum return. Right now, they also have been cultivated muskmelon in summer.**

Table 1: Status of economics of crops traditionally grown by farmers of Bahurupa

Sr. No	Crop Particular	Sorghum	Maize	Cotton	Sugarcane	Wheat
1	Total production (Q/acre)	12.00	20.00	8.00	400.00	15.00
2	Total cost of production (Rs./acre)	5000	5000	10000	16000	5000
3	Gross income (Rs./acre)	20000	25000	38000	56000	26000
4	Net income (Rs./acre)	15000	20000	28000	40000	21000



Table 2: Status of change in cropping pattern of Bahurupa village

Sr. No.	Before 2009 (Before KVK intervention)			After 2009 (After KVK intervention)		
	Crops	season	Area (acre)	Crops	season	Area (acre)
1	Cotton	<i>Kharif</i>	175	Cotton	<i>Kharif</i>	120
2	Pigeonpea	<i>Kharif</i>	120	Pigeonpea	<i>Kharif</i>	70
3	Gram	<i>Rabi</i>	120	Gram	<i>Kharif</i>	80
4	Soybean	<i>Kharif</i>	20	Papaya	<i>Kharif</i>	150
5	Sugarcane	<i>Rabi</i>	450	Banana	<i>Kharif</i>	125
6	Sorghum	<i>Rabi</i>	65	Turmeric	<i>Kharif</i>	4
7	Maize	<i>Rabi</i>	40	Onion	<i>Kharif</i>	60
8				Sorghum	<i>Rabi</i>	50
9				Maize	<i>Rabi</i>	
10				Sugarcane	<i>Rabi</i>	800
11				Watermelon	<i>Summer</i>	125
12				Muskmelon	<i>Summer</i>	



Farmers with tetty fruit represent their quality



Group of farmers – Bahurupa village



Crop - Shakkartetty



Farmers with banana loom

Table 3: Status of economics of papaya crop grown by innovative farmers of Bahurupa

Sr. No	Name of farmer	Area (Acre)	Production (t/acre)	Gross return (Rs./acre)	Gross Cost (Rs./acre)	Net return (Rs./acre)
1	Ghanshyambhai Sakharambhai Patel	30	35	245000	65000	180000
2	Omprakashbhai Sakharambhai Patel	3	38	250000	63000	187000
3	Deepakbhai Tumbabhai Patel	20	30	225000	60500	164500
4	Ravindrabhai Mangeshbhai Patel	5	30	225000	60500	164500

Horizontal and Vertical spread

- By visualizing the success of innovative farmers of Bahurupa, other farmers of adjoining villages are also attracted towards them and ready to adopt the technologies for growing of papaya, banana, watermelon, and muskmelon crops. Due to hard work, live contact, constant follow up, motivation and well communication with Scientist of Krishi Vigyan Kendra, area under growing of papaya, banana, watermelon and muskmelon increases day by day with adoption of new technologies viz., drip irrigation, mulching with plastic paper and fertigation etc.



Implication :

Table 4: Present status of cropping pattern and economics of different crops grown by farmers of Bahurupa

Sr. No	Crop	Season	Area (Acre)	Yield (per acre)	Cost of production (Rs./acre)	Gross return (Rs./acre)	Net return (Rs./acre)
1	Cotton	<i>Kharif</i>	120	10 Q	13000	45000	32000
2	Pigeonpea	<i>Kharif</i>	60	6 Q	9000	30000	21000
3	Gram	<i>Kharif</i>	80	6 Q	8000	24000	16000
4	Papaya	<i>Kharif</i>	150	30 t	45000	180000	135000
5	Banana	<i>Kharif</i>	125	30 t	60000	240000	180000
6	Turmeric	<i>Kharif</i>	4	12 t	25000	84000	59000
7	Onion	<i>Kharif</i>	60	15 t	40000	120000	80000
8	Sorghum	<i>Rabi</i>	50	12 Q	7000	24000	17000
9	Maize	<i>Rabi</i>		22 Q	7000	33000	26000
10	Sugarcane	<i>Rabi</i>	800	50 t	25000	90000	65000
11	Watermelon	<i>Summer</i>	125	20 t	35000	120000	85000
12	Muskmelon	<i>Summer</i>		15 t	35000	180000	145000

Q-Quintal, t-tonnes

Our honourable **Vice Chancellor and Director of Research** visited those farmers personally and congratulated them by providing shawl, certificate and momentum at their doorstep. This case is enthusiastic to young dynamic farmer of Tapi district and also farmers of Gujarat state. This area is known for cent per cent adoption of drip irrigation, plastic mulching, Fertigation, herbigation, value addition, exporting of horticultural crops and higher net profit among farmers of Gujarat state. The socio economic status of this region is changed drastically. Farmers from Gujarat and also from other neighboring states are coming to visit this area for adopting high recurring Horticultural crops successfully in their region.

21. 'NAUROJI' fruit fly trap – A tool for eco-friendly fruit fly management in watermelon and muskmelon in Bahurupa village

Table: Comparison of economics of *NAUROJI* trap demonstration plot and control plot

Particulars	Watermelon		Muskmelon	
	<i>NAUROJI</i> trap demonstration plot	Control Plot	<i>NAUROJI</i> trap demonstration plot	Control Plot
Number of spray	One time installation of trap	3	One time installation of trap	3
Per cent damage by fruit fly	05-08%	12-15%	05-08%	12-15%
Gross Cost including Plant Protection (Rs/ha)	125000.00	140000.00	200000.00	225000.00
Average Yield (t/ha)	33.4 t/ha	30.5 t/ha	35.6 t/ha	31.3 t/ha
Increase yield over control	3.74%	-	9.5%	-
Gross income (Rs/ha)	267200.00	244000.00	400800.00	366000.00
Net profit (Rs/ha)	142200.00	104000.00	200800.00	141000.00

'NAUROJI' fruit fly trap – A tool for ecofriendly fruit fly management in watermelon and muskmelon in Bahurupa village-Success story



Method demonstration of installation of NAUROJI fruit fly trap during Off campus training



FLD visit and farmer scientist interaction



General view of the demonstrated field with NAUROJI fruit fly trap (12 traps/ha)

22. Integrated Pest Management (IPM) in Okra

Table: Comparison of economics of IPM demonstration plot and control plot

Particulars	Okra	
	Demonstrated plot	Control Plot
Number of spray	8	15
Total no. of picking	44	38
Average Yield (t/ha)	11.5 tonn/ha	10.2 tonn/ha
Increase in yield over control	12.74%	-
Gross Cost including Plant Protection (Rs/ha)	150000.00	175000.00
Gross income (Rs/ha)	402500.00	357000.00
Net profit (Rs/ha)	252200.00	182000.00

Integrated Pest Management in Okra-Success story



FLD input distribution during on campus training



FLD visit (Farmers scientist interaction)



Method demonstration of Trichocards



Method demonstration of installation of pheromone traps



General view of the demonstrated plot



Separation and destruction of infested fruits by fruit borer



Farmers scientist interaction



Trapped male moths of okra shoot and fruit borer in pheromone traps

23. Bottle gourd brings shining in life of Ashwinbhai

Name of farmer	Ashwinbhai Pravinbhai Patel
Village	Goddha
Block	Valod
Address	At.Po: Buhari, Block: Valod, Dist. Tapi (Gujarat)
Contact details	09409543477
Landholding (in ha.)	4
Irrigated (in ha.)	4
Brief about individual / group	He is educated upto M.Sc. Physics. He has cultivated 16 bigha land. He has grown sugarcane and banana since long time and take excellent production of sugarcane (>80 tonne/acre) as well as Banana (22-25 tonne/acre). In year 2013-14 he was think to try about cultivation of vegetable. He was discussed with KVK scientist for vegetables and decided bottle gourd cultivation in the month of April.

Write up on of success story

- 2400 seedlings prepared in plug tray was grown by him.
- Plating on raised bed with drip irrigation system.
- Spacing 2x1 meter (row to row and plant to plant).
- Application of fertilizer in dig FYM with brigades of urea, DAP and Potash (Tablets) and 10-12 days after planting drenching of Azotobactor, PSB, Potash mobilizer and trichoderma (50 ml each/15 ltr. of water) to each and every plant.
- During vegetative growth application of Urea, Potash and 0-52-34.
- During reproductive stage foliar spray of 0-0-50, 13-0-45 and micronutrients every 15 days interval.
- After 45 days plants become comes under reproduction and harvest alternate day.
- His highest production 1400 kg and minimum 300 kg in a day from 2200 plants.
- During whole crop cycle he was relax about labour for weeding and pesticides spray.
- Whole produced sent to APMC, Surat for fetches good price.
- Only 4-5 spray of pesticides during whole 4.5 month required.
- Memorable guidelines for that cultivation with less cost and higher return.

Factors responsible for success

Individual efforts, innovativeness, quality planting material and technical guidance from KVK, Vyara



<p>Impact of success story on other farmers in locality</p>	<p>Mr. Ashwinbhai is the progressive farmer who change his cropping pattern and take all three cash crop for getting higher return. For updating his knowledge he refers Agrosandesh (Gujarati publication), periodicals, books and also the KVK scientist. Now, he became an progressive farmer and the best guide for farmers of Goddha in bottle gourd cultivation. He also developed good rapports with merchants of Surat market with higher prices. By his efforts total 20 acres of area of the surrounding village came under Bottle gourd cultivation.</p>	
<p>Awards / rewards / appreciation received</p>	<p>He is also awarded by KVK, Tapi, NAU, Navsari and District administration for his successful journey towards Bottle gourd cultivation.</p>	
<p>Impact factors</p>	<p>Before Adoption</p>	<p>After Adoption</p>
<p>Crop / Agricultural Practice</p>	<p>Sugarcane</p>	<p>Bottle gourd</p>
<p>Yield of crop / product</p>	<p>80.00 t/acre</p>	<p>24.00 t/ha</p>
<p>Sale Value</p>	<p>Rs. 2200/-</p>	<p>Rs. 5/kg</p>
<p>Input Cost</p>	<p>Rs. 40,000/-</p>	<p>Rs. 40,000/-</p>
<p>Labour Cost</p>		
<p>Plant protection measures</p>		
<p>Total Income</p>	<p>Rs.1,76,000</p>	<p>Rs.1,20,000/-</p>
<p>Net Saving/ Net Profit</p>	<p>Rs. 1,36,000/-</p>	<p>Rs. 80,000/-</p>
<p>Duration</p>	<p>400 days</p>	<p>150 days</p>

24. IPM technology in Okra and its dissemination in tribal belt of adopted villages of Tapi district.

Introduction

The advent of potent synthetic organic pesticides has provided man with weapons of unprecedented effectiveness for his never ending war against the depredation of various pests. However their massive overuse and frequent misuses has led to problems of 3R's *viz*; Resistance, Resurgence and Residues as well as toxicity hazards to man, plants, domestic animals and wildlife resulting in environmental degradation. In view of growing concern among the public for pesticide contamination there is need to adopt non chemical methods of pest control in different crops.

Crop protection is a complex process which requires an understanding of the interactions between the environment, methods of farming and the predominant systems of cultivation. In the present era of organic farming, exclusive dependence on chemical pesticides is not likely to provide sustained solution to all our pest problems. Therefore, safer and effective alternatives to chemical control are needed as a part of interdisciplinary approach to insect pest management, resulting in emergence of new concept i.e. **Integrated Pesticidal Management (IPM)**. IPM is an ecological approach to pest management using knowledge and skill based practice to prevent insect pests from reaching damaging stages and proportions by making best use of local resource, natural process and community action'. The Okra crop is becoming more and more popular in Tapi district. Okra contributes 54% area of vegetables in Tapi district. Most of the farmers have been grown okra in off season (*rabi*) after harvesting paddy.

KVK intervention

The entry point visit to the adopted villages was made by Programme Coordinator and team of Subject Matter Specialists. To find out the technological adoption gaps and to identify the thrust areas for the agricultural development, a PRA was made. During PRA survey of adopted villages it was found that, due to lack of knowledge regarding scientific package of practices tribal farmers are assassinating huge budget behind crop production, indiscriminating use of agrochemical and loosing the health of soil, water and environment and also unable to get higher net return due to lack of knowledge regarding value addition and market management. During interaction, it was also found that for management of insect pests of okra, farmers solely depend upon chemical pesticides. They were unknown about the identification of pests of okra, their life cycle, nature of damage etc. For management of insect pests of okra, they have been used health hazardous chemical pesticides injudiciously and indiscriminately. Moreover, it was very interesting to notice that, most of the okra growing farmers have not been consumed okra fruits grown by them. As they all are known about the pesticide load done by themselves on okra for management of insect pests

By considering this, Krishi Vigyan Kendra, Vyara has been made an effort to disseminate IPM technology through various extension activities in different villages of Tapi district. In context to same, Programme Coordinator and Subject Matter Specialist (Plant Protection) arranged training programmes (on/off) to increase awareness about “**Integrated Pest Management**” among farmers. During training programmes emphasized mainly on ‘**Pesticide Residues**’ in different crops and guide farmers about the different component of IPM *viz.*, cultural practices, mechanical and physical practices; use of botanical pesticides, biological agents and lastly use of chemical pesticides.

Subsequently, IPM kit comprising of yellow sticky traps, pheromone traps, ervitlure, Neem based Azadirachtin 1500 ppm and Trichocards were distributed to each selected farmers as FLD inputs (Table 1). The total IPM aids costing Rs.-84000 during both the years, were supplied to them on free of cost. Consequently, method demonstration was also carried out for operation and installation of IPM inputs *viz.*, yellow sticky traps, pheromone traps, trichocards etc. Moreover, other non-pesticidal practices such as collection and destruction of infested shoots and fruits were also carried out through farmers. Constant follow up visits, FLD meeting, FLD visit, field day and other extension activities have been concentrated. The advice about need based pesticide application (based on the ETL level) was also given during field visit/FLD visit. Initially, farmers were hesitating in adopting need based application of single pesticides and other IPM component but with constant encouragement, KVK scientists are successful in building up confidence in them. SMS (Plant Protection) also guide farmers about the identification of insect pests, bioagents, and their life stages. The details of trainings, FLD given, cost of cultivation and economics are given below.

Table 1: Details of FLD given during 2013-14 and 2014-15

Sr. No.	Year	Area	Name of the village	No. of beneficiaries	Inputs supplied
1	2013-14	3 ha	Degama	12	Pheromone Trap, <i>Ervit-lures</i>, Yellow Sticky Traps, Neem kernel based Azadirachtin 0.15%, Pseudomonas
2	2014-15	4 ha	Ucchamala	20	



Method demonstration of Trichocards



Method demonstration of installation of pheromone traps



Field Day on IPM in Okra at Ucchamala



Separation and destruction of infested fruits by fruit borer

Output

During 2013-14 and 2014-15, average yield obtained from demonstrated plot was 125.94 Qt/ha and 120.40 Qt/ha as compared to local check 110.27 Qt/ha and 103.10 Qt/ha, respectively (Table 2). The per cent increase in yield was 14.21% and 16.77% during 2013-14 and 2014-15, respectively. The B:C ratio obtained from demonstrated plot was also found higher (3.53 and 3.29) than local check (2.75 and 2.48) during both the years (Table 2).

Outcome

IPM is an ecofriendly pest management approach which not only reduces the cost of plant protection, but also promises higher yield. IPM also helps in reducing the pesticide use and thus, prevents/delays development of pesticide resistance, reduces residues in soil, water, food and definite role in the prevention of environment imbalance. The major achievement of the demonstrations is that farmers were successful in keeping off the pest incidence below ETL with the advanced guidance provided by KVK scientists.



FLD input distribution during on campus training



FLD visit (Farmers scientist interaction)

Impact

- **Socio-economic:** By adopting IPM technology the average yield of okra was increased by 15.49% (Table 3). Net profit obtained from IPM technology was **Rs. 3,04,595/-** than local check **Rs. 2,30,897/-**.
- **Bio-physical:** Before adoption of IPM technology in okra, most of the okra growing farmers have not been consumed okra fruits grown by them as they fully known about the pesticide load carried out by themselves in okra. In IPM technology number of pesticide spray was decreased up to 46 % and it was helpful in conserving natural enemies. Moreover, in IPM demonstrated plot number of picking was also increased (total 40) than local check (32). By the principle '**Seeing is believing**', other neighboring farmers visited to demonstrated IPM field and made enquiry about the plant protection measures *viz.*, pheromone traps, yellow sticky traps, trichocards etc and also their source. Interesting thing is that, demand for pheromone traps, yellow sticky traps and other botanical pesticides from neighboring farmers have also been increased. The farmers from neighboring villages were also attracted and associated with the KVK for adopting IPM technology. The **Degama** village in Valod Taluka and **Ucchamala** village in Vyara Taluka are now became model for IPM in okra. The surrounding villages are in a cylinder for adopting IPM in okra. This may be due to the proper guidance given by KVK scientists, Demonstrations and constant follow up by KVK missionary.

Table 2: Performance of yield and economics in demonstrated field vis-à-vis local check

Sr.	Year	Demo.Yield Qt/ha			Yield of Local Check Qt/ha	Increase in Yield (%)	Cost of Plant Protection	
		H	L	A			Demo. (Rs./ha)	Local Check (Rs./ha)
1	2	3	4	5	6	7	8	9
1	2013-14	130.45	121.35	125.94	110.27	14.21	8750	12500
2	2014-15	126.30	114.45	120.40	103.10	16.77	8800	12900

Year	Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		B:C Ratio	
	Demo.	Local Check	Demo.	Local Check	Demon.	Local Check	Demon.	Local Check
10	11	12	13	14	15	16	17	18
2013-14	125000	140000	440790	385945	315790	245945	3.53	2.75
2014-15	128000	145000	421400	360850	293400	215850	3.29	2.48

Table 3: Comparison of economics of IPM demonstration plot and control plot in okra (Pooled of 2013-14 and 2014-15)

Sr. No	Particulars	Okra	
		Demonstrated plot	Control Plot
1	Number of spray	8	15
2	Total no. of picking	40	32
3	Average Yield (t/ha)	123.17 Qt/ha	106.68 Qt/ha
4	Increase in yield over control	15.49%	-
5	Gross Cost including Plant Protection (Rs/ha)	126500.00	142500.00
6	Gross return (Rs/ha)	431095.00	373397.00
7	Net profit (Rs/ha)	304595.00	230897.00



Farmers scientist interaction



Trapped male moths of okra shoot and fruit borer in pheromone traps

25. Higher income through Crop diversification :

Name	Nitinbhai Kantibhai Gamit
Father's Name	Kantibhai Dutabhai Gamit
Date of Birth	01/06/1971
Full Address	Village- Tadkua (Kathgad), Tal. Vyara, Dist.- Tapi
Educational Qualification	B.A.

Experience :

Nitinbhai was born in very poor family and his father Kantibhai Dutabhai Gamit was a tractor driver, working at Shyampura Village, Tal. Bardoli, Dist. Surat. Nitinbhai has 5 ha land and cultivated since last 15 years. He also cultivated 3 ha land on lease. He has been change cropping pattern every year in systemic manner. Due to his working style and hard work make him hero in his area. Farmers group of Tapi district and near to Tapi district visited his farm. On his farm, farmers visited for seeing new crops and cropping system. Once any person visited to his farm feel healthy and awe-inspiring and recommend this place to colleagues and friends. Now, his farm looks like as eco-tourism place for Tapi district because of crop diversification *viz.*, Sugarcane, Paddy, Cotton, Gram, Castor, Pigeonpea, black gram; vegetables like vine crops, brinjal, chilli, moringa, cauliflower, broccoli, red cabbage, red reddish, fruit crops *viz.*, mango, sweet orange, pomegranate, litchi; spices *viz.*, zinger and turmeric, forest tree- teak etc (see annexure I). He also decorated his farm with live hedges and ornamental plants.

Present Position :

In new technology 45% area under drip irrigation system and 6.0 ha area irrigated through borewell (3hp and 1hp) with solar power system. Once any person come on his farm feel around nature and peace.

Due to interest of Nitinbhai, different new crops and their scientific production technologies has been spread in surrounding areas. More than 20 ha area around his farm has been covered with vine crops by using bower system, 20-25 farmers growing cauliflower, 10-15 farmers growing castor, more than 20 mango orchards in nearby areas, 5-6 farmers growing moringa, 2-3 farmers establish solar system this year. In APMC market yard, trader also well known to him due to quantity and quality of his product. Farmers group of tapi district and near to tapi district visited his farm.

Outstanding contribution in Field of Agriculture and Award received :

- By changing in cropping system and pattern, his income has been increased and also value in the farming community.
- This year he has been started dairy farm with 5 buffalo under well maintained cattle shed.
- Now his farm became a model of different cropping system and suitable crops in front of farmers for more production.
- His primary aim is to change cropping pattern every year and commences new crops which provide higher return and less input cost and for that he always work hard.
- Hon'ble Director of Research, NAU, Navsari also visited to field of Shri. Nitinbhai and appreciated his efforts toward a progressive farmer of tribal belt of Tapi district.



Solar power system installed for irrigation



Bottle gourd field



Sugarcane field



Cauliflower field



Bittergourd field



Transport of produce to market



Drip irrigation system

Hon'ble Director of Research, NAU, Navsari visited to field of Nitinbhai Gamit



Hon'ble Director of Research, NAU, Navsari visited to field of Nitinbhai Gamit



26. Higher income through High Value crop

Name of farmer	Ashwinbhai Patel
Father's Name	Pravinbhai Patel
Date of Birth	28/03/1982
Full address	Village : Godadha, At.Po: Buhari, Block: Valod, Dist. Tapi (Gujarat)
Contact details	09409543477
Educational Qualification	M.Sc. Physics
Experience	He has 4 ha of land cultivated since last 6 years. He has been grown sugarcane and banana since long time and took excellent production (>80 tonnes of sugarcane /acre as well as 22-25 tonnes of banana/acre). By using technical guidance from KVK, Vyara; Ashwinbhai thought about cultivation of vegetables and flower crops during 2014.



Experience :

By using technical guidance from KVK Vyara, he decided to grow bottle gourd in 0.5 ha area during 2014. For this, 15 days before planting, he booked **2400 seedling** grown in plug trays at KVK, Vyara. He got total **production 24000 kg** from 0.5 ha area. Total **cost of production was Rs. 40,000**. His gross income was Rs. 1, 20,000 and **net income Rs. 80,000, only in 150 days**. He packed all produce in polybags and sent it to APMC market, Surat.

In the month of October, 2014 and in July, 2015; he has purchased **4000 and 7000 plants of rose** cv. Gladiator planted on raised bed (in black soil) with drip irrigation system in open field condition. Within 4 months, plants comes in flowering. He initially harvested 500-2000 flowers/picking at every third day. He got market price Rs. 1 to 5 per flower (average Rs.2.25/flower) (stem size of 25-30cm) in Surat market. In whole season from **January, 2015 to October, 2015; he carried out 75 pickings**. Total **cost of production was Rs. 2,50,000**. He got total **flower production 2.00 lakh** and **gross income Rs. 4.50 lakh**. By this way he got **net profit of Rs. 2,00,000**.

In month of December, 2014 and July, 2015; he has planted marigold (yellow colored) 6000 and 12000 plants as intercrop in rose and mango (1 year old orchard), respectively. Total 15 pickings were carried out by him from 6000 plants planted as intercrop in rose and he got total production of 6500 Kg. Similarly, total 20 pickings were carried out from 12000 plants planted as intercrop in mango orchard of one year old and got total production of 16000 kg. Total **cost of production of marigold (18000 plants) is 1.50 lakh**. Ashwinbhai got market price of Rs. 20-40 per kg (Avg Rs.22/kg). By this way, he got **gross income of Rs. 4,95,000** and **net income of Rs. 3,45,000** only in 5-6 months. He applied bio-fertilizers, organic manures, water soluble fertilizers and bio-pesticides.



Farmers scientist interaction in bottle gourd field



KVK Scientist visited to rose field of Ashwinbhai



Rose plant planted by Ashwinbhai





Marigold planted by Ashwinbhai



Packing of marigold flowers

Present Position :

- This year rose plants in productive phase, marigold planted in 4 acre area (8000 plants) during month of December 2015, and he planned for papaya and moringa plantation.
- Now his field looks like yellow carpet due to Marigold.
- This handsome production from rose cultivation within three month (October to December -2015).
- This year (2016) he has prepare marketing channel in which every day 50 kg marigold (Rs. 30/kg) and 200 rose flowers (Rs. 2/flower) provide to flower merchant at Navsari throughout the year
- He has used drip irrigation and fertigation system with well schedule in rose and marigold.
- Prepare and use organic fertilizers and pesticides in rose and marigold.

Outstanding contribution in Field of Agriculture and Award received :

- Crop diversification and new crops introduces with success is the great achievement in the life of Ashwinbhai. In the present situation where low profit was obtained from sugarcane, Mr. Ashwinbhai opens number of doors for earning much more income from horticultural crops than sugarcane cultivation.
- Due to change in cropping pattern he has to take three cash crops for getting higher return.
- By his efforts total 20 acres of area of the surrounding village came under Bottle gourd and marigold cultivation and 15 farmers of vyara and valod taluka in Tapi district started cultivation of rose.

*Coming together is
Beginning*

*Teaching together is
Process*

*Keeping together is
Progress*

*Working together is
Success*



 **Visit to KVK, Tapi** 