



CSA-INDIAN EXPERIENCE

Climate Smart Farmer of Anand District of Gujarat-India

Generations after generations, farmers of Charotar representing the twin districts of Anand and Kheda have made this NRI-rich belt of Central Gujarat famous as the “golden leaf” of Gujarat, India. But day by day the demand of this crop is decreasing so whole area has shifted for other crops. Primarily an agricultural district with tobacco and paddy as the predominant crops, the other major crops cultivated are wheat, banana and vegetables. About 30.12 % of land holdings are with small and marginal farmers and the average size of the holdings is 0.96 Ha.

I am Devesh patel. I did my bachelor in Computer Application. Our traditional Occupation (trade) is Agriculture. My father did hard work for agriculture but not get profit. After my graduation initially I started Job in a Company but later continue my traditional trade. I used my education and knowledge with my father’s traditional knowledge and started bio organic farming in my land- village Boriavi. (Taluka - District - Anand, Gujarat, India). Entire 3.44 hactre of land is used for organic farming. We have also established a small dairy farm and an infrastructure for processing our products namely Potato, Ginger, Turmeric Chilli, Maize (Pop Corn) and Wheat.

Over view of our farm management practices

- Mix crop with green manure in ginger.
- Purple yam include desi guvar cluster bean for green manure.
- Mulching.
- Planting jute, elephant food yam in moth.
- Bean, potato farming mix crop in maize.
- 2 crops in a year in some part of the land and 1 crop in a year is some other part of the land.
- Our own seed variety of traditional ginger and turmeric.
- We have started now applying protection of plant variety of farmer’s authority, India.
- For potato, every four years we change the seed variety, now we buy seed from CPRI, Modipuram, Meerut.
- For Guvar, Wheat, Maize, Yam, Elephant food yam, practice adopted is traditional reuse of plantation.
- We are producing our own seeds for the following crops. Ginger, Turmeric, Potato, Wheat, Yam and Elephant foot yam.
- We store & conserve seeds for ginger, turmeric, yam, elephantfoot yam, wheat and guvar in our own farm warehouse in jute bags. Wheat, Potato seeds we store and conserve in cold storage.
- We share, as per demand, our organic and local seeds with number of other farmers.

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As regards to soil fertility we use our own FYM scientific compost, Jivaamrut, vermin compost, green manure, Bio char Bio dynamic.

We get sea weeds blue coaster line and bio fertilizer from Anand Agriculture University.

- In ginger and yam crop we apply green manure & cluster bean (guvar), while turmeric farming in jute, elephant yam is mug legume.
- We conduct early-stage weeding and leave on land for green manure, also leave post harvested crop leave and pun in land and dishherow application for mixing.
- We use dairy farm cow dung for vermin composting.
- We allow decomposition of gliriadia tree leaves for natural nitrogen production, moonflower plant for natural phosphorus production and calotropis for natural potash production.

Our Farm Management Practices at a Glance

1	New Package of Practices / management strategies	Use of innovative self-invented technology for value addition which has helped in great way.
2	Conserving of Resources / Sharing inputs	We are conserving our land resource by organic farming, we are avoiding pesticides fertilizer, we are collecting rain water of magha nakshatra and use it in drip irrigation which helps for batter production and also saves water.
3	Breaking technology transfer barriers.	We are using natural resources like sun light for drying ginger and turmeric instead of using steam machines, so by this way use of sun light has helped us to transfer technology barrier.
4	Insect and pest management	We are applying different kind of organic methods to fight with insects and pest. We use cow urine, neem oil, "jivamrut", butter milk. We use calotropis gigantean for pest management.
5	Integrated water management practices	We use drip irrigation, and rain water of magha nakshatra
6	Indigenous technical knowledge	We are using cow urine for seed treatment which helps in protecting crop, helps in fast germination and healthy crop.
7	Bring about radical change in management which contributing in record production from land, water and animal	We use mulching, drip irrigation, land preparation and exposing land for sun light, using organic farming techniques.
8	Organic manure application	We use mulching, land preparation, exposing land for sun light, using cow urine and cow dung, use of "jivamrut", use of neem came and castor cake, use of vermi compost, trichoderma, azotobacter, phosphates bacteria, use of butter milk and jaggery for bacteria multiplication and use of earth warms.



Compassion of Farm Technology followed earlier and now for both the crops viz. Ginger and Turmeric

Operation	Earlier	New Technology
Seed treatment	None	Seed treatment with Trichoderma + Paecilomyces as per recommendations of Anand Agricultural University.
1 st Irrigation (before sowing)	Flooding with bore well water	Water during Magha Nakshatra (based on Indian Astrology) is stored and applied during 1 st irrigation. Sowing is done during June end for Ginger and by mid May for Turmeric when the Max. Temperatures are very high (around 44° C plus in Gujarat).
Fertilizer	N:P:K as recommended for the crop by State Dept. of Agriculture	Soil Analyses for various components, N: P: K supplementing with FYM, organic cakes, bio fertilizer, vermin compost and green manuring as per recommendations of Anand Agricultural University.
Irrigation	Flooding	Drip Irrigation
Integrated Bio Nutrient Management	NIL	Mixture of [Cow urine +Cow dung +cow butter milk+ jaggery+ Gram flour (Besan) +soil from the base of banyan, papal and neem trees] is applied to the soil before sowing and once in a month for the crop period
Pest Control	Chemical Pesticides	Exclusively through application of mixture of [neem oil + cow urine+ butter milk], sticky traps, buffer crops,
Interculturing & weeding	More manpower	Less manpower as less weeds due to drip
Harvesting	As per market prices. Crop maturity was not reached	At crop maturity and processing of the produce through mechanization.
Product sale	Green harvest went straight to the market	Marketing done through chain system, retail outlets and through Internet through own web site www.satvaorganic.com and Face book page satva organic



Details of Crop productivity based on last one year data

Sr. No.	Crop	Area of Cultivation hectare	Production Quintal	Cost of Production per hectare Rs. Approx	Sales value Realization per Rs. Approx	Net Profit Approx
1	Ginger	1.6	240	180000	625000	445000
2	Turmeric	1.54	400	130000	500000	370000
3	Potato	1.00	360	75000	400000	375000
4	Wheat	0.30	5	3000	20000	17000

If, I have not gone for Organic Farming and like most of the youth for employment, I could have earned only a few rupees and maintain my family. Because I adopted Organic Farming after association with NCCSD, I am able to live peaceful life with special status besides I helped lot many farmers in promoting Organic Farming and value addition practices.

Now I participate and guide farmers during NCCSD Training and Krishi Mahotsav every year. First I Learnt in NCCSD training and now I guide and train farmers in my farm school which is provided by Agriculture Technology Management Agency (ATMA). Our indigenous dry ginger and turmeric powders are highly respected and famous in market.

Our farm serves the purpose of a demonstration farm for all visitors.



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