

# Natural Farming a Promising Sustainable Farming for Soil Health- A Case Study

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## Details of the farmer

Name of the farmer Shri. Bharatbhai Nanubhai Patel farm name: Nandanvan Prakrutik krushi Kendra, At. Sanvalla, Faliya- kumbhar faliya, Ta. Mahuva, Di. Surat, Via- satem, Pin code- 396466 Mob. no. 9979909708, 9265654104.

**Area under NF:** 1.05 ha, Field Crops: Mango, Sapota, Ginger, fodder grass, Sugarcane Back yard- fish aquarium, indigenous cow husbandry, Gir cow: 15 cows

## New Initiative in Natural farming

Enhancement of soil health through incorporation of decomposed farm inputs materials;

- Crop rotation, mixed crop, inter crop, cover crop, trap cropping and recycling of crop residues;
- Mulching with farm residue wastes whenever and wherever possible;
- Encouraging proper soil aeration;
- Priority to locally adopted seeds and varieties
- Frequent use of specific catalysts to boost soil fertility, crop vigour and induce immunity in crops

## New Practices Natural in Farming

- *Bijamrita* and *Jeevamrita*
- *Ghanjeevamrith*, *Achadan*, *mixed cropping* etc.
- Use of these *Jeevamrita* is a best model in natural farming agriculture which is becoming popular among farming community. In fact these preparations, obtained by active fermentation of desi cow urine (Indigenous cow) & pulse flour over specific duration. The basic components are cow dung, forest soil and water. For enhancing their affectivity pulse flour are used.

## Results

Improved Soil texture and soften the soil, Cost of cultivation is reduced, Farming income increased, Production of good & quality agriculture products,

Currently; In his area (Village “Sanavalla” and surrounding area) about 300 farmers adopted Natural farming and gain good farm production.

## Technology modified

Indigenous cow products are the basic components are used to improve its efficacy and also minimize the off odour.

Mulching pertains to covering of soil surface, tree basin with a thick layer of locally available biomass. This prevents soil erosion, water loss, suppress weeds, maintain soil temperature fluctuation, and improve organic carbon content of the soil. Mulching modify the micro-climate of rhizosphere soil conducive for plant growth and better activity of soil microbes.

**Table 1: Cost of cultivation- Rs/ ha., Total production-q/ ha., Gross Income- Rs/ ha, Net Income. Rs/ ha**

Year	Production	Cost	Income	Net profit
2015	1000*50	25,000	50,000	25,000
2016	1350*60	17,000	81,000	64,000
2017	1770*65	15,300	1,05,600	90,300
2018	1800*70	13,000	1,26,000	1,13,000
2019	2050*65	13,000	1,33,250	1,20,250
2020	2010*70	13,000	1,40,700	1,27,700

**Table 2: Production quantity of Intercrops**

Year	Turmeric (kg)	Brinjal (Kg)	Fodder grass (Kg)
2015	210	500	1100
2016	300	600	1700
2017	350	600	2000
2018	470	620	2200
2019	550	650	2500



**Fig 1: Activities At Nandanvan Gir Cow Savrdhan Kendra-Sanvalla**

**Improvements:** For good productivity; butter milk and other bio insecticides, bio control use for production and improve quality of product example: Tulshi Ark, Neem Ark, Drumstick ark, Bramastra, Javaran, Udhai (Termite) Niyantaran, Agniashtra, Gauv mutra ark, Sarpghandha ark.

**Horizontal effect:** New innovative farming system in south Gujarat more than 300 farmer's successful trial has been conducted in our area. Recently our prakrutik krushi kendra conducted with five Krushi Kendra Gosthies viz., Tankal, Bodvank, Anaval, Velanpur etc.

New package of practices/ management strategies:

Saving of resources / inputs:

- (i) Recently in Gujarat state position free farming according mandate of Natural farming concepts standard example.
- (ii) Agri astra pungent base ingredients like chilli and garlic 5 kg paste and 10-liter guava mutra boil and make make Ark. quantity: in 15-liter pump 100ml ark.
- (iii) **Use: Agniashtra-** In vegetable crops it minimized pest attack and also basil plants leaf solution 1 pump (15 Lit capacity) to 100 ml results better leaf size and fruit quality.

- (iv) **Javaran-** various fruits juices and gauv mutra mixture: – javaran prepared fruit juices viz., mango, sapota, Guava, papaya 1 kg in 10 liter gau mutra (Cow urine) mixed thoroughly and keep it for fermentation and ready to use after fermentation.
- (v) **Use:** In 15 Liter pump use 100 ml for spray. It attracts honey bees and other pollinators so fruit's setting is good.
- (vi) Cow based farming's is new method of farming it requires dedicated work, natural farming products are preferred by the consumers and fetching good prices for the farmers. farmers are selling their products on their own brand name
- (vii) Soil health and nutrient status improved, microbes developed in soil, indigenous earth worm develop in soil and honey bees and other pollinators activity increased in the farm.
- (viii) Earlier high cost was incurred due to use of chemical pesticides and fertilizers.
- (ix) 7-8 years ago farming was burden due to high cost incurred in chemical, but now use of indigenous cow dung, cow urine, butter milk, jiggery, natural fruit juice use of bio wastes as fertilizer be much helpful for farming.

#### Extent of publicity of his innovations

Advertisement through mass media (Print and TV) Nandanvan Gauvshala Gir cow culture has been widely covered in the area, groups like Gujarat mohuva prakrutik krushi group, Anaval prakrutik group etc. and many Whatsapp group used for advertisement and we received good feedback for our work and information of new innovation has been appreciated lot and many shared new skill activities through mobile. Nandanvan Gir gauv shala "Sanvalla" B. N. Patel named on you tube channel we are posting different farming and husbandry experiments, video documentary film regularly. Our innovative prakrutik krushi method article, newspaper South Gujarat and Divyabhaskar, Gujarat mitra newspaper publisher took note of our activities.

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