Natural Farming

NITI Aayog

COMPENDIUM OF SUCCESS STORIES OF NATURAL FARMING

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सत्यमेव जयते
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Publishing Agency: NITI Aayog

Year of Publication: 2022

ISBN: 978-81-953811-4-2

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Message

Agriculture is pivotal to the concept of *Aatmanirbhar Bharat*. The food security that we enjoy today, needs to be supported by sustainable and viable measures for forthcoming generations. This can be achieved by leveraging the strengths of our agricultural sector, like knowledge of traditional practices, maximal use of indigenous inputs, diversity of cropping systems, preservation of our soil and the environment. It is in this context, the concept of agro-ecological approaches such as natural farming gain importance in the agriculture ecosystem.

The principles of natural farming are rooted in the concepts defined by "*Vrikshayurveda*"- the ancient Indian science of plant life. This practice is based on locally available resources and livestock which allow it to be practiced among all sections of farmers -small & marginal farmers to large scale farmers. This also results in the reduction of input costs making it economically viable. The inclusivity and affordability ensure employment and help in negating gender bias in the sector. The practice is also environmentally sound and resilient to climate change making it an ideal way forward. On account of all these positive features natural farming is presently being practiced by more than 2.5 million farmers and fruit growers in the country. NITI Aayog has been constantly working for the promotion and propagation of natural farming amongst the farmers' especially amongst small and marginal cultivators. We have also initiated research studies for empirical validation of these practices.

It is of paramount importance to document and publicize the best practices as well as success stories of emerging systems to generate awareness, promote adoption, and instill confidence amongst the farming community and all relevant stakeholders. It is on this premise that this compendium has been prepared in both English and Hindi and will be widely disseminated.

(Rajiv Kumar)

Place : New Delhi
Date : 18th April, 2022

स्वच्छ भारत
एक कदम स्वच्छता की ओर

नरेन्द्र सिंह तोमर
NARENDRA SINGH TOMAR

सत्यमेव जयते

कृषि एवं किसान कल्याण मंत्री
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KRISHI BHAWAN, NEW DELHI

संदेश

मुझे यह जानकर बहुत प्रसन्नता हो रही है कि नीति आयोग देश में किसानों द्वारा अपनाई गई प्राकृतिक खेती की सर्वोत्तम प्रथाओं का दस्तावेजीकरण कर रहा है। मुझे पूरी उम्मीद है कि 'प्राकृतिक खेती की सफलता की कहानियों के सार-संग्रह' नाम से द्विभाषा में यह प्रकाशन हमारे किसान समुदाय के बीच जागरूकता पैदा करने में मदद करेगा, साथ ही उन्हें प्राकृतिक खेती को अपनाने के लिए प्रेरित भी करेगा।

प्रधानमंत्री श्री नरेंद्र मोदी जी के कुशल नेतृत्व में भारत सरकार देश के किसान भाइयों-बहनों के कल्याण के लिए पूरी तरह से समर्पित हैएवं इसके लिए विभिन्न कल्याणकारी योजनाओं के माध्यम से सतत प्रयास जारी है| देश में कृषि योग्य भूमि की क्षमतावर्धन तथा उत्पादन लागत में कमी के साथ-साथ किसानों की आय बढ़ाने के उद्देश्य के साथ परंपरागत कृषि विकास योजना के उप मिशन के तहत भारतीय प्राकृतिक कृषि पद्धति (बीपीकेपी) योजना की शुरूआत की गई है। प्रधानमंत्री जी द्वारा दिसंबर-2021 में आणंद (गुजरात) में प्राकृतिक खेती के प्रति जागरूकता के लिए एक वृहद राष्ट्रीय सम्मेलन के माध्यम से मिशन रूप में लांचिंग की गई है, जिसके बाद से प्राकृतिक खेती को लेकर देश के विभिन्न हिस्सों में जोर-शोर से कार्यक्रम आयोजित किए जा रहे हैं। इनके माध्यम से किसानों व उपभोक्ताओं में माहौल बना है।

देश में घटते भू-जल स्तर को देखते हुए प्राकृतिक संसाधनों का कुशल प्रबंधन व संरक्षण अत्यधिक महत्वपूर्ण है। मौजूदा कृषि पद्धतियों को इन परिवर्तनों के अनुकूल होने के लिए संशोधित करना होगा और अपनी मिट्टी के बिगड़ते हुए पोषक तत्व अनुपात को बेहतर बनाने पर भी जोर दिया जाना एक महती आवश्यकता है। जिन राज्यों में बीपीकेपी को अपनाया जा चुका हैं, वहां पर ऐसे प्रमाण मिले हैं कि प्राकृतिक कृषि पद्धतियों ने न्यूनतम पर्यावरणीय प्रभाव के साथ किसानों की आमदनी बढ़ाने में मदद की है, अतः प्राकृतिक खेती को व्यापक रूप से अपनाने से भारत द्वारा सतत विकास के लक्ष्यों की प्राप्ति में भी महत्वपूर्ण सहयोग मिलेगा।जलवायु परिवर्तन की चुनौतियां भी हमारे समक्ष है, इसे गंभीरता से ध्यान में रखते हुए सरकार भारतीय कृषि क्षेत्र की प्रगति को लेकर प्राण-प्रण से काम कर रही है, मुख्य रूप से छोटे व मझौले किसानों का जीवन स्तर ऊंचा उठाने परसरकार का फोकस हैं।

नीति आयोग को, आजादी के अमृत महोत्सव के उपलक्ष में 'प्राकृतिक खेती की सफलता की कहानियों के सार-संग्रह' के आगामी प्रकाशन की सफलता को लेकर बहुत-बहुत शुभकामनाएं।

(नरेंद्र सिंह तोमर)

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परशोत्तम रूपाला
PARSHOTTAM RUPALA

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

मंत्री
मत्स्यपालन, पशुपालन एवं डेयरी
भारत सरकार
MINISTER
FISHERIES, ANIMAL HUSBANDRY & DAIRYING
GOVERNMENT OF INDIA

D.O. No. 834 MIN(FAH&D)/2021-22

12 APR 2022

MESSAGE

Agriculture is the bedrock of socio-economic development in the country. The livestock sector is an integral part of Indian agriculture contributing to 25.6% of total agriculture GDP and plays an important role in the development of rural households.

It is a testament to India's agricultural community that we have emerged self-reliant and self-sufficient in food production. Now, it is important to carry forward this achievement in a sustainable and environment-friendly way. In this endeavor, we must capitalize on the rich traditions and practices of Indian agriculture to rejuvenate and enrich the Indian soil, its produce, and its producers.

It is in this light that Natural Farming rooted in traditional Indian practices emerges as an important solution in the days ahead. Natural farming is a livestock-based farming system and promotes sustainable agriculture by ensuring soil health, minimal environmental impact and affordability in agricultural costs. These practices have been effectively and successfully implemented by our fellow farmers across the country and hence, need to be highlighted. The adoption of these cattle-based practices by the wider farming community can help in reducing the problem of abandonment of unproductive cattle being faced by our country.

I am delighted to see such efforts being documented in a structured manner for the benefit of the farmers' community. I appreciate the efforts of NITI Aayog in bringing out this 'Compendium of Success Stories of Natural Farming' that will highlight the achievements of our farmers. I sincerely hope that it will serve as a reference and inspiration to the farming community and aid the adoption of natural farming techniques across the country.

(Parshottam Rupala)
Minister of Fisheries, Animal Husbandry and Dairying

Place: New Delhi
Date:

प्रो. रमेश चन्द
सदस्य
Prof. Ramesh Chand
MEMBER

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Message

India has made significant strides in achieving food security through the Green Revolution era led policies. The focus of such policy efforts was to increase production and productivity of major crops. However, now, the growth of food production is outpacing increase in demand, necessitating a shift towards surplus management. At the same time, agriculture has a strong reciprocal relationship with the environment and allied natural resources. The prevailing method of production is highly resource intensive, leading to serious concerns around degradation of soil health and depletion of water tables.

A balance needs to be struck between growth and sustainability. With the impact of climate change, only likely to become more intensive, agriculture is particularly vulnerable. Any stress in this sector is likely to impact the economy as a whole, as about 45% of India's labour force still works in agriculture. Therefore, not only is our food security at stake, but also our hard-fought gains in reduction of poverty.

Given these factors, the development agenda in agriculture needs to evolve from a focus on output growth to include aspects such as sustainability, input use efficiency, safe & nutritious food, efficient supply chains and farmer incomes. It is in this context that sustainable models of agriculture are being examined across India. Natural farming is being promoted in India through the *Bharatiya Prakritik Krishi Paddhati* (BPKP) scheme as a sub-mission under the *Paramparagat Krishi Vikas Yojana* (PKVY).

NITI Aayog has been taking the lead in documentation of natural farming in India. This compendium is a result of these efforts. I hope this compendium will help in identifying best practices in natural farming and popularizing sustainable models of agriculture.

(Ramesh Chand)

Place: New Delhi
Date: 18th April, 2022

अमिताभ कांत
Amitabh Kant
मुख्य कार्यकारी अधिकारी
Chief Executive Officer

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Foreword

India is an agrarian economy and ranks second in the world in terms of agricultural production. The national average landholding size in India as per the Agriculture Census of 2015-16 is 1.08 hectares, indicating a predominance of small and marginal farmers. With a view to improve the condition of small and marginal farmers and to double the income of farmers by 2022, Government has realigned its interventions from a production-centric approach to farmers' income-centric initiatives.

The present-day agricultural activities rely on costly inputs like chemical fertilizers and quality seeds for improving yield; however, this comes at the cost of economic viability and environmental degradation in the long run. The need of the hour is the adoption of sustainable practices based on agro ecology. UNEP defines Agro ecology as a set of agricultural practices which focuses on changing social relations, empowering farmers, adding value locally and privileging short value chains. It helps farming to be resilient to climatic changes and also to conserve natural resources and biodiversity. This makes natural farming, agro ecology based integrated farming method, reliant on inputs from the local farm and livestock, appropriate as a comprehensive and inclusive way forward.

Natural farming practices can also help India to achieve Sustainable Development Goals. Primarily as a farming practice, it would contribute to mitigation of hunger and ensure food security in a sustainable manner. The inclusive nature of natural farming and its economic viability even for the small and marginal farming community would result in better employment opportunities at rural sites. This opportunity and inclusivity would benefit the women farmers in rural areas. Most notably natural farming would help conserve soil, stop desertification, reverse land degradation and prevent biodiversity loss.

'Compendium of Success Stories of Natural Farming' is being published by NITI Aayog to highlight the real-life experiences of practitioners of natural farming in a structured manner. The stakeholders in the field of agriculture can use this book as guidance as well as an inspiration. NITI Aayog has also brought out an informative website on natural farming which can also be utilized by the interested farmers to further advance their knowledge of this agro ecology initiative. I hope this initiative would help us to move towards a sustainable, eco-friendly and economically viable agricultural ecosystem.

(Amitabh Kant)

स्वच्छ भारत
एक कदम स्वच्छता की ओर

ACKNOWLEDGEMENT

Agro ecological practices such as natural farming offer less resource-intensive farming solutions and help reducing the dependency on chemical inputs. This sustainable agricultural practice is gaining momentum in India considering its potential for improving farmers' income while contributing to protection of environment. NITI Aayog has been taking the lead in promoting natural farming since 2018 through various initiatives.

A need was felt to document success stories of farmers practicing natural farming across India for creating awareness and confidence among stakeholders about this practice. With this purpose, we have prepared a template and reached out to State Governments, Krishi Vigyan Kendras (KVK) and Agricultural Universities for sharing success stories of farmers following natural farming.

We extend our sincere gratitude to the farmers for providing information and photographs for this compendium. We are immensely grateful to the State Governments, Krishi Vigyan Kendras (KVK) and Agricultural Universities who have coordinated with farmers across the country and provided the success stories.

We are obliged to Dr Rajiv Kumar, Hon'ble Vice Chairman NITI Aayog for his valuable guidance and direction throughout the preparation of this compendium. We are also grateful to Dr Ramesh Chand, Member & Shri Amitabh Kant, CEO, NITI Aayog for their support in realization of this compendium. We thankfully acknowledge Miss Saloni Sachdev, Young Professional, Communication Vertical, NITI Aayog for language editing of this compendium.

Dr. Neelam Patel

Senior Adviser

NITI Aayog

LIST OF ABBREVIATIONS

PKVY	Paramparagat Krishi Vikas Yojana
FAO	Food & Agriculture Organisation
SDG	Sustainable Development Goals
BPKP	Bharatiya Prakritik Krishi Paddhati
KVK	Krishi Vigyan Kendra
FYM	Farm Yard Manure
SHG	Self Help Group
FFS	Farmer Field School
ICRP	Internal Community Resource Person
APCNF	Andhra Pradesh Community Managed Natural Farming
DAS	Days After Sowing
CF	Conventional Farming
NF	Natural Farming
PMDS	Pre-Monsoon Dry Sowing
NPM	Non-Pesticide Management
IFM	Integrated Farming System
SRI	System of Rice Intensification
SPNF	Subash Palekar Natural Farming
ATMA	Agricultural Technology Management Agency
ICT	Information and Communication Technology
FPO	Farmer Producer Organizations
FPC	Farmers Producing Company
APMC	Agricultural Produce Market Committee
OFAI	Organic Farming Association of India
SWI	System of Wheat Intensification

CONTENTS

INTRODUCTION

Agriculture remains as one of the major sectors of the Indian economy. It contributes about 18% to the country's Gross Domestic Product (GDP) which is much higher than the world's average of 3.5%[1]. Agriculture is also the largest source of employment in India, as 43 % of the Indian labour force[2] is engaged in agriculture & allied sectors. Nearly 85% of Indian farmers are small and marginal[3] owing less than 2 hectares of land. India is the largest producer of milk, jute and pulses and the second-largest producer of rice, wheat, sugarcane, cotton, groundnuts, fruits and vegetables[4]. Keeping in view the population of our country, agriculture practices of the present day should be able to provide food and nutritional security to the nation while addressing the issues related to sustainable agriculture, preservation of natural resources and climate change.

In India, the longstanding policies on agriculture were formulated in the mid-1960s and 1970s with a focus on ensuring food security. The Green Revolution in India helped achieve increased production and productivity along with grain self-sufficiency. We have successfully achieved complete food security. This is indeed laudable. However, such production was resource intensive, cereal centric and regionally biased. This led to sustainability issues in the form of deforestation, land degradation, loss of biodiversity, increase in greenhouse gas emissions and increasing strain on water resources of the country. The cost of agricultural inputs also sky-rocketed, resulting in advance terms of trade for the farmers.

The unchecked extraction of natural resources, combined with rising input costs sent many farmers into a debt trap. During an address to the United Nations Convention to Combat Desertification Conference in 2019, the Hon'ble Prime Minister himself urged farmers to reduce

1 World Development Indicators, World Bank.

2 Periodic Labour Force Survey, Ministry of Statistics & Programme Implementation

3 Agriculture Census 2015-16, Ministry of Agriculture & Farmers' Welfare

4 http://www.fao.org/india/fao-in-india/india-at-a-glance/

the use of chemical fertilizers and pesticides, and also remarked on the use of Zero Budget Natural Farming (ZBNF) for soil conservation.

MAJOR CHALLENGES OF CONVENTIONAL AGRICULTURE

(i) Climate Change

Agriculture is climate-dependent and very much susceptible to disturbances in climatic elements such as temperature, precipitation and sunlight. As per the Intergovernmental Panel on Climate Change (IPCC) report 2021, human-induced climate change is already affecting many weather and climatic extremes in every region across the globe, and climate change is only likely to exacerbate these extremes. An increase in the frequency and intensity of hot weather, marine heat waves, heavy precipitation, agriculture and ecological droughts in some regions along with a proportion of intense tropical cyclones are just some of the issues we might have to increasingly deal with in the future.

Reduction in yield, crop failure, depleting groundwater levels are also aftermaths of climate change negatively affecting the agricultural economy.[5] The IPCC Report also brings out that climate change exacerbates the land degradation processes including increased rainfall intensity, flooding, heat stress, dry spells, drought frequency and severity, etc. Methods like diversification of cropping, seed priming and increased water retention through less tillage, etc. when used individually or in combination are likely to improve crop yield and adaptability under changing climatic conditions. The Report also observes that the above adaptations can be achieved through incremental changes to existing agriculture systems or through systemic changes that integrate new aspects into the current system.

(ii) Use of chemical inputs

Input intensive agriculture was, no doubt, helpful in the transformation of India into a food self-sufficient economy. However, over time, the marginal utility of such methods has been declining. For instance, issues like pesticide residue in food output, depletion of groundwater, emission of greenhouse gases, build-up of pesticides resistance, deterioration of water quality and extensive water stress, erosion of genetic diversity and increased production costs are some major concerns around chemical agriculture. A comprehensive assessment of all nitrous oxide sources and sinks, in a study involving 48 researchers across 14 countries has found that current levels of nitrous oxide emissions are not compatible with the Paris Agreement. Chemical based agriculture has been the dominant driver globally.

(iii) Soil health

The Indian Institute of Soil Sciences (IISS) in its Vision 2030 document brought out that despite significant growth in agriculture during the last four decades, most of the key soil-based production systems were showing signs of fatigue[6]. The soil organic carbon content of Indian soils has declined from 2.5% in 1947 to 0.4 % which is well below than acceptable limit of 1- 1.5%. Deficiency of NPK, secondary nutrients (Sulphur, Calcium and Magnesium)

5 https: //www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf

6 Vision 2030, Indian Institute of Soil Science (Indian Council of Agricultural Research), Bhopal

and micronutrients (Boron, Zinc, Copper and Iron etc.) in soils of most parts of the country is a limiting factor in increasing food productivity[7]. Many agriculture practices like increased tillage intensity, inappropriate timing of tillage, aerobic-anaerobic cycles of soil moisture status in intensive cereal-based cropping systems cause physical degradation of soil. Also, the use of agrochemicals for plant protection and weed management leads to the accumulation of toxic compounds in soil[8]. Depletion of soil organic carbon has led to degradation of physical, chemical as well as biological properties of soil. Further, the indiscriminate use of agrochemicals has adversely affected soil biodiversity, composition and biochemical processes[9]. The average annual soil loss in India is about 16 tonnes per hectare or about 5 billion tonnes annually[10]. Faulty agriculture practices like faulty ploughing and lack of mulching contributes to soil erosion resulting in loss of nutrients and/or organic matter.

(iv) Water scarcity

As per the latest statistics, 49 % of the net sown area in India is irrigated.[11] Nearly 60 per cent of India's irrigated area is fed by groundwater[12]. As a result, 89% of India's groundwater extraction is for irrigation purposes[13]. The Central Groundwater Board has categorized 16.2 % of the total assessment units in India as 'Over-exploited' and an additional 14% as either at 'critical' or 'semi-critical' stage.[14] The situation is starker in the areas where Green Revolution policies are most pervasive. In Haryana for instance, out of 141 assessment units, nearly 69% of all units are either over-exploited or critical. The stage of groundwater extraction stands at 135%. In Punjab, 82% of the 150 assessment units are either over-exploited or critical. The stage of groundwater extraction stands at 164%.

To reduce the consumption of water and maximize agricultural productivity in the country, the government is trying to introduce different innovations like the PMKSY (*Pradhan Mantri Krishi Sinchayi Yojana*) and the *Paramparagat Krishi Vikas Yojana* (PKVY).

It is evident that the high-input, resource-intensive conventional agriculture practices cannot continue to deliver sustainable food and agricultural production. Hence, there is a pressing need for cost-effective and environment-friendly alternatives to be explored in agriculture and be incorporated into national policies to ensure sustainability.

NATURAL FARMING: A WAY FORWARD

India has a rich heritage of traditional farming practices which are environment friendly and less resource intensive. These ancient practices are systematically documented by Surapala in the

7 Guidelines on The National Project on Management of Soil Health and Fertility, Department of Agriculture & Cooperation, Ministry of Agriculture and Farmers welfare

8 Shahane AA and Shivay YS (2021) Soil Health and Its Improvement Through Novel Agronomic and Innovative.

9 Meena, R.S et al. Impact of Agrochemicals on Soil Microbiota and Management: A Review. Land 2020, 9, 34. https://doi.org/10.3390/land9020034

10 Jitender Saroha.Soil Erosion: Causes, Extent and Management in India; IJCRT 2017; 5(4) https://ijcrt.org/papers/IJCRT1704172.pdf

11 Department of Agriculture and Farmer's welfare,https://agricoop.nic.in/

12 Economic survey 2021-22

13 https://pib.gov.in/PressReleasePage.aspx?PRID=1602634

14 Ground Water Year book India 2019-20, Central Ground Water Board, Ministry of Jal Shakti, Govt. of India.

Sanskrit treatise namely *Vrikshayurveda*. The methods of plant health management, classification of plants physiology, plant diseases and disease management including pest control, etc. are systematically explained in this book. However, due to the various factors including colonization, these practices were not prominent or in the front lines of Indian agriculture for a long period. The roots of natural farming practices currently practiced in India can be traced back to this ancient treatise.

Agroecological practices are an alternative to conventional high-input agriculture, resulting in better yields without compromising the needs of the future generation and avoiding inter-generational conflict. These have been also advocated by the Food & Agriculture Organisation (FAO) of the United Nations. Various countries have adopted such practices on a large scale to achieve the SDGs and simultaneously address issues of food security and climate change (FAO, 2016; UNDP, 2015). Sustainable agriculture practices involve mixed cropping, increase the diversity of crops produced and raise the diversity of insects, other animals & plants in and around the fields and promote microbial diversity and intensity in the soil. Further, sustainable agriculture practices increase the organic matter content of the topsoil, raising its ability to retain and store rainwater.

NATURAL FARMING IN INDIA

Natural farming is a way of chemical free farming based on livestock and locally available resources. It is founded on farm-made resources prepared by the farmer himself. During the mid-1990s, Padma Shri Subhash Palekar took considerable efforts to popularize ancient Indian practices of cow centric agriculture which involves the application of natural inputs made using cow dung, cow urine, jaggery, pulse flour combined with mulching practices and symbiotic intercropping. He has organized a very large number of workshops and training camps all over the country.

The Government of India is promoting natural farming as *Bharatiya Prakritik Krishi Paddhati* (BPKP) under the centrally sponsored scheme- *Paramparagat Krishi Vikas Yojana* (PKVY). BPKP is a diversified farming system which integrates crops, trees and livestock, allowing optimum use of functional biodiversity, with the promise to enhance the farmer's income while delivering many other benefits, such as restoration of soil fertility as well as environmental health.

BPKP has many indigenous forms in India, with the most widely spread form being practiced in Andhra Pradesh. Currently, the BPKP is adopted by almost 8 states in the country, including Andhra Pradesh, Chhattisgarh, Kerala, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh and Tamil Nadu. Andhra Pradesh and Himachal Pradesh have also formed state level dedicated agencies *Rythu Sadhikara Samstha* (RySS) and *Prakritik Kheti Khusal Kisan* respectively, with an objective to enhance farmers' welfare and conserve the environment. However, farmers of different states are also practicing this farming practice on a large scale on their own.

Benefits of Natural Farming

Challenges like depletion of natural resources, farmers' distress and health problems arising from pesticide & fertilizer residue in food, water or atmosphere can be addressed through the adoption of natural farming. Replacing chemical inputs with natural inputs provide a better root system and the ability to interact with beneficial soil microorganisms; contributing to soil, crop and seed health, good product quality, better yield levels and yield stability.

Practicing intercropping ensures regular income for farmers as they can harvest different types of produce at regular intervals. The mixed cropping system also enables better nutritional value of soil, which boosts productivity levels. Recent studies have observed that farmers cultivating rice, using chemical inputs, spent INR 5,961 per acre on an average, while a farmer using natural farming techniques incurred only INR 846 per acre as costs of natural inputs[15].

Mulching techniques used in natural farming improve the water retention capacity of soil, reduce crop irrigation requirements and control the concentration of groundwater contaminants. Preliminary studies from Andhra Pradesh have brought out that adoption of natural farming methods can lead to a considerable reduction in water consumption which would also help in reducing the burden of electricity subsidy.

Chemical inputs used in conventional agriculture adversely affect the health of both farmers as well as consumers and have a negative impact on water resources because of leaching. Also, farmers practicing natural farming have observed health benefits through the avoidance of chemical inputs.

India is the world's highest livestock owner with the sector having a growth rate of 4.6% per annum as per the 20th Livestock census. However, sustainability of this sector remains a major concern, which can be tackled by the integration of livestock into agroecological practices like natural farming.

Furthermore, we may see a reduction in the fiscal burden of subsidies on the Central & State governments. For instance, Rs.79,530 crores is the budgeted fertiliser subsidy for 2021-22 in the Union Budget. With 14 crores (140 million) hectares of approximate Net Sown Area (NSA), 1% reduction (~14 lakh ha) in the NSA using chemical fertilisers can lead to fertiliser savings of Rs. 794 crores every year, for the Central Government. Similarly, electricity subsidies can also be reduced through a reduction in water consumption. It is important to remember that close to 2/3 of India's irrigated area is groundwater fed, primarily through the use of tube-wells, running on electricity, which is highly subsidised, or sometimes even free, for the farmers.

COMPENDIUM OF SUCCESS STORIES OF NATURAL FARMING

As a part of its efforts for promoting natural farming, NITI Aayog has realized the need for creating evidence of these practices as well as validation of these practices. It has already initiated the necessary steps for undertaking research activities. This compendium is an effort in this direction to collect and document the best practices adopted by farmers across various states in India. These success stories have been collected through official channels like Krishi Vigyan Kendras (KVK) across India. It is observed that farmers have often developed their own techniques and methods for implementing the principles of natural farming along with the application of Farm Yard Manure (FYM), vermicompost, etc. They have practiced multi-cropping and cultivated cereals, pulses, vegetables, fruits, medicinal plants and flowers following the principles of natural farming.

15 Can Zero Budget Natural Farming Save Input Costs and Fertiliser Subsidies? Evidence from Andhra Pradesh- Niti Gupta, Saurabh Tripathi, and Hem H. Dhol

Crops cultivated through natural farming

Sl. No	States	No. of farmers	Crops
1	Andhra Pradesh	21	Vegetables, Citrus, Red gram, Paddy, Black rice, Maize, Ragi, Ground nut
2	Bihar	3	Wheat, Paddy, Rapeseed, Potato
3	Gujarat	13	Banana, Falsa, Papaya, Groundnut, Mixed Vegetables, Mixed Fruits Paddy,Wheat, Coconut & Groundnut, Chilli, Beetroot
4	Haryana	7	Wheat, Rice, Sugarcane,Lemon, Banana, Pomegranate, Apple, Vegetables, Root crops, Marigold, Chick pea
5	Himachal Pradesh	14	Apple with Cereals & Vegetables, Vegetables, Turmeric, Maize, Apple & Pea, Sugarcane, Sunflower, Urad
6	Kerala	5	Exotic vegetables, Rice, Turmeric, Orchid, Tubers
7	Madhya Pradesh	3	Mango, Coriander, Mustard, Gram, Wheat, Green gram, Black gram, Turmeric, Fruits and Vegetables
8	Maharashtra	8	Sugarcane, Soyabean, Paddy, Ground nut, Wheat, Onion, Vegetables, BT Cotton, Sorghum
9	Odisha	4	Indigenous Aromatic Paddy, Black rice, Red rice, Vegetables, Red gram, Green gram, Finger millet
10	Punjab	5	Rice, Wheat, Pear, Vegetables, Flowers
11	Rajasthan	11	Cluster bean, Mung bean, Wheat, Chickpea, Mustard, Kinnow, Fenugreek, Maize, Henna, Sesame
12	Uttar Pradesh	14	Paddy, Scented Rice, Wheat, Sugarcane, Papaya & Ground Nut, Mango, Aonla, Mosambi, Brahmi, Moringa, Wheat+Pea+ Gram+ Sun flower, Mustard+ Pea, Millets, Mint + Green gram
13	Uttarakhand	2	Wheat
Total		**110**	

A majority of the farmers have stated that by adopting natural farming methods, their cost of cultivation has been considerably reduced alongwith an improvement in the quality and quantity of produce. This has also yielded higher prices from this naturally produced output. They have also highlighted noticeable improvements in the health of farmers as well as of the consumers through the cultivation and consumption of natural chemical free products. The objective of this compendium of best practices is to spread the awareness about the benefits and actual practices of natural farming so that this can be replicated on large scale aross the country. With this objective, sincere efforts have been made to include contact details of the concerned farmer so that he or she may be contacted for getting detailed information regarding the practices followed by them.

ANDHRA PRADESH

SHRI ACHIRTHI NARAYANAMURTHY

Village : P Kotha Gudem
Mandal : Nathavaram
District : Visakhapatnam
Contact No : 9963859901
Education : Intermediate

Practices adopted

- Adopted natural farming in an area of 0.5 acres, and gradually brought the entire 2 acres of land under natural farming within two years.
- Owns a pair of cow and buffaloes.
- Practised System of Rice Intensification (SRI) method of paddy and raised desi varieties in 0.4 acres for seed generation.
- Adopted all natural farming techniques like beejamrit, ghanajivamrit, dravajivamrit, PMDS (achhadana), usage of growth promoters (egg amino acid, sapthdanyakura kashaya and botanical extracts), and kashayas for pest management.
- Master farmers or best practising farmers, called Community Resource Persons (CRPs) take the technology to each farmer, and provide continuous support to the farmers through regular field visits, farmer field schools, and training videos.
- Farmers' experiences are discussed regularly in the women' SHG meetings.
- The farmer can contact the village level CRP whenever they have a problem. If the village level CRP is not able to solve the problem, it is escalated to a Senior CRP who is responsible for 5 villages.
- The harvesting along with crop cutting experiment is done in the presence of APCNF field staff, farmers, and officials of the agriculture department.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (MTU1121)	Paddy (MTU1121)
Cost of cultivation (₹)	42550	55650
Production (q)	68.32	52.27
Gross return (₹)	125470	108050
Net return (₹)	82920	52400
B C ratio	1.94	0.94

Benefits and achievements

- Increased number of earthworms in the field.
- Soil became spongy with increased water holding capacity.
- Motivated farmers in the neighbourhood to reduce the usage of chemicals.
- Improved health of family members.
- Became a champion farmer in the village.

Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. ANUGULA VENKATA SUGUNAMMA

Village : Nagamangalam

Mandal : Palamaner

District : Chittoor

Contact no : 9550166197

Education : Intermediate

Practices adopted

- Adopted natural farming in 2018, after attending a meeting at the Mandal level delivered by a community resource person explaining the practices and benefits of natural farming.
- Owns 18 acres of land consisting of 15 acres of mango orchard, 2 acres of groundnut and 1 acre of paddy. Cultivated Dhanista variety of paddy under natural farming.
- Followed all the natural farming practices like beejamrit, ghanajivamrit, dravajivamrit, kashayams etc.
- Applied 400 kg of ghanajivamrit per acre to the soil, followed by 3 tons of farmyard manure. Dravajivamrit was sprayed in every 15 days. Seed treatment was done with beejamrit.
- Navadhanya was sown in 9 acres of land and later this was incorporated into the soil.
- Demonstrated natural farming practices to other farmers in the village. After one season, many farmers were inspired by her and started practicing natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (Dhanista)	Paddy (RNR-15048)
Cost of cultivation (₹)	25950 (including PMDS cost)	32450
Production (q)	27.4	24
Gross return (₹)	68500	45600
Net return (₹)	42550	13150
BC ratio	1.6	0.4

Benefits and achievements

- Decreased cost of cultivation.
- Resulted in chemical-free food.
- Reduced incidence of pests and diseases.

- Increased soil fertility by increase in the number of earthworms.
- Resulted in soil conservation and rejuvenation.
- Paddy crop withstood the lodging effect during cyclone. During Nivar cyclone, crops were resilient to floods, however, on the other hand, there was a lot of damage observed in the fields following chemical farming.
- Earned higher profit than farmers following chemical farming, by selling paddy after processing into rice.

Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. BELLANA SRIDEVI

Village : Chipurupalli
Mandal : Chipurupalli
District : Vizianagaram
Contact No. : 9912693789
Education : Degree

Practices adopted

- Cultivated 9 varieties of desi paddy in rabi season.
- Used navadhanya as a green manure before paddy cultivation.
- Adopted farm mechanization for weed management.
- Prepared natural inputs like dravajivamrit, ghanaivamrit, & kashayas.
- Imparted training to input dealers through a Diploma in Agricultural Extension Services for Input Dealers (DAESI) programme to promote usage of natural inputs.
- Participated in Farmer Field School (FFS) Trainings of the Agriculture department.
- Imparted training on Andhra Pradesh Community Managed Natural Farming (APCNF).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (RGL-2537)	Paddy (RGL-2537)
Cost of cultivation (₹)	32500	34000
Production (q)	67.12	66.56
Gross return (₹)	140952	139776
Net return (₹)	108452	105776
BC ratio	3.3	3.1

Benefits and achievements

- Reduced cost of cultivation.
- Managed incidence of pests and diseases.
- Motivated farmers to come forward and practice integrated Pre-Monsoon Dry Sowing (PMDS) along with APCNF Methods.
- Resulted in chemical-free healthy food.
- Awarded the Uthama Mahila Raithu by Agricultural Research Station (ARS).




Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI R. BHASKAR REDDY

Village : N. Gundlapalli
Mandal : Beluguppa
District : Anantapur
Contact No : 9346000811
Education : Intermediate

Practices adopted

- Started natural farming in 2018.
- In the total farm of 15.00 acres, 5 acres of land was cultivated under natural farming. Of this, 3.50 acres were planted with groundnut as intercrop of redgram, field bean, cowpea and castor. On 0.50 acres, groundnut was the main crop, while onion, sorghum, lentils, field bean and castor were intercropped. Tomatoes and vegetables are grown on 0.50 acres, while fodder crops such as peas and lentils are grown on 0.50 acres under Pre-Monsoon Dry Sowing (PMDS).
- Adopted methods like ghanajivamrit, dravajivamrit, various botanical extracts (neem extract, sour buttermilk, agniastra, kashaya), mulching, sowing and multi-cropping.
- Used ghanajivamrit 400 kgs per acre and sprayed jivamrit every 15 days till the completion of the harvest.
- Used crop residues as fodder for livestock which increased milk production and the percentage of butter in milk.
- Educated fellow farmers about inputs used in natural farming with the help of SHGs and motivated them by sharing success stories in Rythu Bharosa Kendras.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (2 ha)			Conventional Farming (2 ha)		
Crop	Groundnut, Red Gram, Field Bean, Castor, Cowpea, Onion, Green Gram, Black Gram, Vegetables			Groundnut, Red Gram		
Cost of cultivation (₹)	96500			125000		
Production (q)	Ground nut	Other crops	Total	Groundnut	Red gram	Total
	8	24.5	32.5	22	4	26
Gross return (₹)	221000			145000		
Net return (₹)	124500			20000		
BC ratio	1.29			0.16		

Benefits and achievements

- Increased income through agriculture along with allied activities.
- Reduced the incidence of pests and diseases by spraying dravajivamrit.
- Multi-cropping increased the number of beneficial insects and sparrows in the field.
- Increased soil fertility and number of earthworms in the soil.
- Crop withstood drought conditions.
- Cattle grazing of crop residues increased milk production.
- Reduced investment cost and obtained regular income with multi-cropping.
- Improved family health.


Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI CHANDU SATTIBABU

Village : Ammapalem

Mandal : Pedavegi

District : West Godavari

Contact No : 9676647112

Education : 10th

Email : chandusattibabu@gmail.com

Practices adopted

- Adopted natural farming since the past 4 years.
- Practiced Pre-Monsoon Dry Sowing (PMDS) which included broadcasting of 18 types of seeds (navadanya) prior to kharif crop i.e paddy. Later, as a rabi crop broadcasted navadanya seeds in between the rows of maize resulted in breaking maize monoculture.
- Organized exposure visits.
- Interacted with the farmers who are practicing integrated maize cultivation.
- Created publicity through print and electronic media and through farmer field schools.
- Held demonstrations with PICO (mini projector for video dissemination) showcasing success stories of farmers and best practices.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Maize	Maize
Cost of cultivation (₹)	23650	29,450
Production (q)	48.0	37.0
Gross return (₹)	88800	68450
Return from intercrops / Navadanya	3000	-
Net return (₹)	68150	39000
BC ratio	3.7	2.3

Benefits and achievements

- Introduction of navadanya (PMDS) within the crop acted as buffer zone without loss of nutrients and maintained soil health.
- Maintained crop biodiversity resulting in modification of microclimate which increases beneficial insects and improves soil microbial ecology.

- Reduced the cost spent on fertilizers and pesticides, as navadanya supplies nutrients through its root exudates.
- Reduced infestation of pests, as navadanya enriches beneficial insects which controls infestation and also acts as live mulch which creates carbon footprint.
- Observed increase in cob weight and more grain filling in maize.
- Utilized fodder after crop sowing.
- Increased root mass.
- Saved on labour cost.
- Secured higher yield and returns.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI S DILEEPKUMAR

Village : Pedhakonduru
Mandal : Duggirala
District : Guntur
Contact No : 8919057279
Education : Degree

Practices adopted

- Adopted natural farming in 2018 and since 2019, changed the cropping pattern of the field from fallow, paddy and maize to PMDS, paddy and maize.
- Before main crops, adopted PMDS with 18 different types of seeds (jowar, maize, sunhemp, pillipesara, daincha, mustard, horsegram, cowpea, blackgram, greengram, bajra, cucumber, ridge gourd, fenugreek, sorrel leaves, amaranthus, chukkakura).
- Utilised leafy vegetables and creepers, and the remaining crops were incorporated into the soil to increase soil fertility.
- Sowed paddy (variety BPT-5204) in the method of broadcasting and followed all natural farming protocols. Used dravanas, botanical extracts, yellow plates and pheromone trap to control insects and pests.
- Sowed colocasia, cluster beans, redgram, drumstick and mango on bunds of paddy for family consumption. Sowed marigold on bunds to trap pests.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (BPT 5204)	Paddy (BPT 5204)
Cost of cultivation (₹) (Including PMDS)	16990	26300
Production (q)	32.55	24.0
Gross return (₹)	52042	35200
Net return (₹)	35052	8900
BC ratio	2	0.33

Benefits and achievements

- Reduced cost of cultivation
- Increased yield of the main crop through the practice of PMDS before the main crop.
- Increased earthworm count and soil fertility.
- Increased irrigation interval as a result of increase in water holding capacity.

- By practicing PMDS, main crop became resistant to pest, disease, and drought conditions.
- Increased number of beneficial insects.
- Encouraged a number of farmers to adopt natural farming.
- Resulted in chemical-free produce.



Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. GAMMELI LAKSHMI

Village : Ithaguppa

Mandal : Paderu

District : Vishakapatnam

Contact No : 7382505046

Practices adopted

- Adopted poly-cropping by following the row method (20 crops).
- Practiced seed treatment with beejamrit.
- Maintained nursery bed for raising saplings which were transplanted at 20 days age in a row method.
- Wooden plank drawn over young crops of ragi, in a single direction. This practice increased the number of tillers.
- Planted red gram, maize, and marigold as border crops.
- Applied 400 kg of ghanajivamrit in two split doses: as basal dose and after transplantation.
- Sprayed 1,200 litres of dravajivamrit in three intervals and poured the same at the base of each plant with a tumbler.
- Weeding was done manually and with the help of cycle weeder.
- Pheromone traps and yellow /white sticky plates were used.
- Controlled pests through single time spraying of neemastra and brahmastra.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Ragi with intercropping of Foxtail millet, Little millet, Rajma, Cluster beans, Okra, Maize, Chillies, Basthar beans, Pumpkin, Marigold	Ragi mono crop broadcasting method
Cost of cultivation (₹)	9500	10750
Production (q)	14.23 (Ragi-12.87 Inter crops-1.36)	6
Gross return (₹)	50743	19,800
Net return (₹)	41243	9050
BC ratio	4.3	0.8

Benefits and achievements

- Poly-cropping system with high crop diversity (20+ crops), has created good agro ecosystem. No severe pest and disease incidence was noticed.
- Family consumption of leafy vegetables and vegetables has increased, compared to previous years.
- The produce from poly-cropping provided sufficient millets and pulses for the entire family and received monetary benefit by selling excess ragi.
- Motivated other natural farming farmers in the village and neighboring villages. Her field became a good platform for extension of poly-cropping models in the Paderu division.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI GEDDA APPALANAIDU

Mandal : Gajapathinagaram

District : Vizianagaram

Contact No. : 9182442172

Education : 6th Class

Practices adopted

- Adopted all natural farming protocols viz. beejamrit, ghanajivamrit, dravajivamrit, Pre-Monsoon Dry Sowing (PMDS), usage of growth promoters (egg amino acid, sapthdanyakura kashyam and botanical extracts) and kashayas for pest management.
- PMDS involves broadcasting of 18 to 20 types of crops (called navadanya) comprising cereals, pulses, legumes, green manure crops, oilseeds, leafy vegetables, spices and condiments sown as a relay crop in the summer, so that the field is covered with a variety of crops in hot summer.
- After 45-60 days of sowing, the PMDS crop is grazed by the cattle and the residue is incorporated into the soil before paddy transplantation.
- The community cadre, who are master farmers, motivated Gedda to adopt natural farming. He started with seed treatment and used botanical extracts for control of pest in the first year. By 2nd year as the conviction increased, he started with all protocols under natural farming.
- Applied ghanajivamrit to soil @ 400 kg/acre.
- Applied dravajivamrit to soil@ 200 litres /acre at 15 days interval.
- Adopted all non-negotiable practices like seed treatment, clipping of leaf tips, yellow sticky plates, pheromone traps, bird perches etc.
- Applied botanical extracts for controlling pest and applied growth promoters to increase the yield.
- Master farmers called Community Resource Persons (CRPs) took the technology to each farmer and provided continuous support to farmers.
- The CRP conducted regular field visits and conducted Farmers' Field School (FFS) regularly at the farmer's field.
- Farmers' experiences are discussed regularly at the women SHG meetings.
- The farmer can contact the village level CRP whenever they have a problem. If the village level CRP is not able to solve the problem, it is escalated to a senior CRP who is responsible for 5 villages.
- Crop harvesting along with the crop cutting experiment is done in the presence of Andhra Pradesh Community managed Natural Farming (APCNF) staff. The local village elders and officials of the agriculture dept participate in the Field Day.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (MTU-1121)	Paddy (MTU-1121)
Cost of cultivation (₹)	41250	52500
Production (q)	74.35	65.48
Gross return (₹)	137547	121138
Net return (₹)	96297	68638
BC ratio	2.3	1.3

Benefits and achievements

- Reduced cost of cultivation through adoption of natural farming methods.
- Improved soil health, increased water holding capacity, increased microbial population and diversity and enhanced soil organic carbon, through the practice of PMDS.
- Reduced incidence of pests and diseases with the usage of botanical extracts.
- Increased the number of beneficial insects like honeybees and dragon flies in the field, through cultivation of multiple crops.
- Increased soil fertility and crop productivity through the introduction of earthworms in the soil.
- Encouraged a number of farmers to adopt natural farming.





Source: *Andhra Pradesh Community Managed Natural Farming*

SMT HANUMANTHU MUTHYALAMMA

Village : Kosaravanivalasa

Mandal : Parvathipuram

District : Vizianagaram

Contact No. : 7382430735

Practices adopted

- Adopted natural farming in 2018 over an area of 2.5 acres.
- Practiced Pre-monsoon Dry Sowing (PMDS), involving 18 different cover crops followed by paddy crop (Kharif) and pulses (Rabi), which resulted in achhadana i.e. 365 days green cover.
- Adopted all natural farming techniques including beejamrit, ghanajivamrit, dravajivamrit, PMDS (achhadana), usage of growth promoters (egg amino acid, sapthdanyakura kashaya and botanical extracts), and kashayas for pest management.
- Applied ghanajivamrit to the soil @ 400kg/acre.
- Applied dravajivamrit 200litres/acre @ 15 days interval.
- Followed all non-negotiable techniques like seed treatment, clipping of leaf tips, yellow sticky plates, pheromone traps, bird perches etc
- Applied botanical extracts for controlling pest and applied growth promoters to increase the yield.
- Community cadre motivated the farmer to practice natural farming. The farmer started practicing natural farming and experienced the benefits of natural farming within two years.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (MTU-1064)	Paddy (MTU-1064)
Cost of cultivation (₹)	43750	46750
Production (q)	57.70	55.55
Gross return (₹)	106745	102767
Net return (₹)	62995	56017
BC ratio	1.44	1.2

Benefits and achievements

- Reduced cost of cultivation by adopting natural farming methods.
- Improved soil health and productivity of main crops by adopting PMDS (achhadana) in hot summer.
- Fetched additional income from PMDS fodder, used as cattle feed.
- Reduced incidence of pests and diseases, through usage of botanical extracts.
- Increased the number of beneficial insects like honeybees and dragon flies in the field, through cultivation of multiple crops.
- Increased count of earthworms in the soil.






Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI KANTIPUDI SURYANARAYANA

Village : Teeparru

Mandal : Peravali

District : West Godavari

Contact No : 9704231219

Education : 10th

Practices adopted

- Adopted natural farming in 2020 across 2 acres of land.
- Adopted PMDS during the major period window of April to June and sowed PMDS seeds 3-4 days before harvest of the Rabi paddy catching the residual moisture in the soil. Broadcasted 18 types of seeds comprises of cereals, pulses, legume green manure crops, oilseeds, leafy vegetables, spices, and condiments.
- During peak summers, harvested and raised Rs. 1,500-2,000 from green leafy vegetables. After harvesting vegetables and leafy vegetables, the remaining green biomass was trampled into the soil before taking up of first main crop i. e. Kharif paddy.
- For Kharif paddy, he followed all APCNF protocols like application of ghanajivamrit to soil @ 400kg/acre, application of dravajivamrit to soil @ 200 litres/acre every 10 days and also followed all non-negotiables i.e. seed treatment, clipping of leaf tips, yellow sticky plates, pheromone traps, bird perches, etc.
- Applied botanical extracts for pest control and applied growth promoters to increase the yield.
- Adopted Rabi Dry Sowing (RDS) during the window of November to December and sowed RDS seeds 3-4 days before the harvest of Kharif paddy. Broadcasted 13 types of seeds comprising cereals, pulses, and leafy vegetables.
- After 30 days he allowed his cattle to graze, and remaining crops were incorporated into the soil.
- Followed all APCNF protocols for Rabi paddy also.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (MTU 1121)	Paddy (MTU 1121)
Cost of cultivation (₹)	16000	21500
Production (q)	28.5	26.25
Gross return (₹)	53200	49000
Net return (₹)	37200	27500
BC ratio	2.3	1.2

Benefits and achievements:

- Soil moisture content increased due to PMDS which ultimately resulted in increase of water holding capacity of the soil.
- Increased soil health through improvement in soil organic matter, soil microbial ecology, soil biomass and soil microbiome.
- Increased milk production with higher fat content by feeding cattle with the PMDS fodder.
- Earned additional income from PMDS.
- Resulted in decreased expenditure with a low cost of cultivation and high BC ratio.
- Controlled weeds effectively. Very dense growth of PMDS biomass suppressed the weed growth and eventually the seed count of problematic weeds like Echinochloa, Cyperus rotundus, etc. reduced.
- Maintained crop rotation.
- Drastic reduction in irrigation requirement.



Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI KILLO DHARMARAO

Village : Rangasila

Mandal : Hukumpeta

District : Visakhapatnam

Contact No : 9493653968

Practices adopted

- Adopted natural farming in 2017. Total land owned is 8.9 acres, out of which paddy is grown in 2.80 acres, little millet in 2 acres, guliragi in 1 acre, silver oak in1 acre, vegetable in 1 acre and established poultry integrated model in 1 acre.
- Regularly prepared and applied ghanajivamrit and dravajivamrit for guliragi, vegetables and paddy fields.
- Applied 200 Kgs of ghanajivamrit at the time of transplantation.
- Applied 200 litres of dravajivamrit for 3 times @15days intervals.
- Yellow sticky plates were arranged in the field.
- Undergone training to use bullocks for intercultural operations to reduce labourcost on weeding.
- Millet Mixie is being used for processing of little millets for household consumption. Earlier he used to use wooden grinder for processing of little millet.
- For the last 3 years, little millet cultivation in Rangasila increased from 1 acre to 7 acres.
- Integrated livestock and fisheries to agriculture. Established a farm pond of size 15 m x 15 m for fish culture and cultivated vegetables on bunds.
- A custom hiring centre is being managed by his family and renting out weeders, solar pallaki (mobile energy) and ragi thresher to other farmers.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Ragi	Ragi
Method of sowing	Guliragi	Transplantation method
Cost of cultivation (₹)	750 (only jaggery and pulse flour price)	750 (He just done sowing and left the field without any practices)
Production (q)	14.5	3.75
Gross return (₹)	36250	9375
Net return (₹)	35500	8625
BC ratio	47.3	11.5

Benefits and achievements

- Saved labour cost by land preparation and ploughing through work-sharing.
- No pest incidents were observed.
- Model plot for other farmers to observe the growth of guliragi crop.
- In 2017, guliragi was grown by only two farmers in the village but now about 150 farmers adopted this method of cultivation.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI KOTHAPALLI SHIVA RAMAYYA

Village : T. Kothapalli

Mandal : Mydukur

District : Kadapa

Contact No : 9848558193

Education : Degree

Practices adopted

- Adopted natural farming in 2016.
- Cultivated farm area of 10 acres. Out of this, adopted a 5-layer model in 0.30 cents and citrus orchard is established in 7.70 acres. In the remaining 2 acres, cultivated paddy (desi variety – Mysore Mallika) in 1.5 acres through drum-seeders and in 0.5 acres through SRT method.
- Cultivated chilli, tomato, marigold, brinjal, leafy vegetables like coriander, fenugreek as intercrops in citrus orchard in kharif season, with the support of natural farming staff in the village.
- Before the main crop, practiced PMDS with 28 types of seeds (black gram, green gram, mustard, cowpea, jowar, maize, horse gram, bajra, creepers, tubers, vegetables and leafy vegetables) without any expenditure as he used own seeds and inputs.
- Sprayed 1,200 litres of dravajivamrit in 3 intervals.
- Fetched income from green gram, black gram, sorrel, fenugreek, radish and remaining crops incorporated into the soil.
- Applied 800 kgs of ghanajivamrit in 2 split doses i.e., basal dose and at panicle initiation stage.
- Used yellow and white sticky plates, pheromone traps, bird perches against different types of pests.
- Sprayed neemastra, dashaparni and sour butter milk for pests and disease control.
- Used egg amino acid at 45 DAS and panchagavya at 60 DAS as growth promoters.
- In Rabi season, broadcasted sesame across the field and adopted PMDS for grazing livestock, in summers.
- Supplied vegetables to Maidikuru Rythu Bazar and directly to the merchants.
- Conducted method demonstrations on input preparations used in natural farming for other farmers, with the help of natural farming staff in his field.
- Created awareness on natural farming through SHG meetings, Pico disseminations, field visits and comparative study through FFS.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (Mysore Mallika)	Paddy (Mysore Mallika)
Cost of cultivation (₹)	21875	28925
Production (q)	20	21
Gross return (₹)	60000	50325
Net return (₹) (Including PMDS)	41425	21400
BC ratio	1.8	0.7

Benefits and achievements

- Reduced cost of cultivation.
- Increased income through farming by adopting poly cropping.
- Reduced incidence of pests and diseases by adopting PMDS.
- Increased the number of beneficial insects like honeybees in the field through cultivation of multiple crops.
- Increased water holding capacity of the soil.
- Resulted in chemical free produce.
- Motivated fellow farmers to adopt natural farming.
- Felicitated by the District Collector as the Best Farmer in 2018 for adopting poly-cropping.




Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI MAAGANTI CHANDRAIAH

Village : N. Gollapalem

Mandal : Machilipatnam

District : Krishna

Contact No : 9581182197

Education : 7th Class

Practices adopted

- Owns 2 acres of cultivable land with 3 buffaloes, 3 sheep and 6 poultry.
- In 2017, attended a meeting at Grama panchayat about natural farming methods and since then started practicing natural farming without any chemical fertilizers and pesticides.
- Adopted Pre-Monsoon Dry Sowing (PMDS). In this, 18 types of crop seeds comprising cereals, millets, oil seeds, pulses, vegetables, and leafy vegetables are broadcasted in the month of April. PMDS biomass was used as green fodder and incorporated to soil after 45-60 days to enhance soil microbial biomass.
- Harvested leafy vegetables viz. indian sorrel, amaranthus etc. in 45 days and all the raised crops were used as fodder for his cattle and for the neighboring farmers.
- Cultivated main crop paddy (BPT-5204) in June through Saguna Rice Technique (SRT) which ensures aeration and sunlight for every plant.
- Used beejamrit in the quantity 5 l/acre for seed treatment and 10 l/ acre for seedlings dip at the time of sowing/ transplantation to resist seed and soil borne diseases.
- Used ghanajivamrit Type –I: 400kg/ acre @200kg/acre each at 20 DAT, 40DAT at 20 days interval.
- Used dravajivamrit as soil application in the quantity 1000 l/ acre @200 l each starting from 35DAT, 50 DAT, 65 DAT, 80 DAT, 95 DAT.
- Used azolla 8 kgs/acre at 20 DAT.
- Managed weed manually.
- Followed non-negotiables like clipping of leaf tips, border/bund/ peripheral crop, yellow, white sticky traps, pheromone traps and bird perches.
- Used panchagavya in the proportion 5 l/acre in 100 litres of water at the tillering stage.
- Used neemastra (2 times, 200 litre/ application, @20DAT & 40DAT) and sour butter milk (1 time, 8 litres in 150 litres of water, @30DAT) for pest management.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (BPT- 5204)	Paddy (BPT- 5204)
Cost of cultivation (₹) (Including PMDS)	19670	25670
Production (q)	43.4	40.3
Gross return (₹) (Including PMDS)	81200	72666
Net return (₹)	61530	46996
BC ratio	3.1	1.8

Benefits and achievements

- Reduced cost of cultivation.
- Increased soil fertility by adoption of natural farming.
- Increased resistance to pest and diseases.
- Increased count of earthworms and beneficiary insects.
- Reduced incidence of blights and mildews.
- Crop withstood cyclones and floods.
- Consumed chemical-free food.



Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI MANNETI GANGI REDDY

Village : Chennamarajupalli
Mandal : Pendlimarri
District : Kadapa
Contact No : 9502147401
Education : Intermediate

Practices adopted

- Adopted zero/minimum tillage.
- Prepared and used natural farming inputs like jivamrit, kashayas etc.
- Adopted 5 layer model in 1 acre land.
  1st layer: Berry jamun (Planted but not fruiting)
  2nd layer: Pomegranate, Custard apple (Planted but not fruiting)
  3rd layer: Drumstick
  4th layer: Vegetables like Chillies, Tomato, Okra, Cluster bean
  5th layer: Leafy vegetables like Gogu, Radish
  Border crop: Sesbania
- Adopted Pre-Monsoon Dry Sowing (PMDS)
- Developed desi seed bank and introduced desi seeds to farmers.
- Mentored in natural farming & input preparation.
- Established Non-Pest Management (NPM) shop.
- Organized workshops regularly and running a field school on his farming methods.
- Worked through Self Help Groups
- Used ICT mechanisms for demonstrations (WhatsApp Groups, Videos Display).
- Participated in exhibitions and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Drumstick, Chillies, Tomato, Lady finger, Cluster bean, Gogu, Radish, Sesbania	Lady finger, Sesbania, Cluster bean, Guava, Jasmine
Cost of cultivation (₹)	68300	70000
Production (q)	68.45	21.7
Gross return (₹)	166400	90000
Net return (₹)	98100	20000
BC ratio	1.4	0.28

Benefits and achievements

- Reduced input cost and labour cost.
- Earned higher yields.
- Chemical free products.
- Maintained Non-Pesticide Management (NPM) input shop since 2006.
- Developed master trainers at village level for natural farming.
- Benefitted farmers through workshops, field school and trainings every year.
- Doubled farmers' income by adding PMDS in farming methods.
- Awarded with Rashtra Uttama Raithu Award by Chief Minister of Andhra Pradesh in 2010.

Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. MUPPALA NIRAMALAMMA

Village : Arimenupadu

Mandal : Ozili

District : SPSR Nellore

Contact No. : 8978853723

Education : 9th

Practices adopted

- Cultivated intercrops in citrus field.
- Adopted seed treatment and seedling root dipping in beejamrit.
- Prepared inputs like jivamrit and other plant based kashayas.
- Conducted mass preparation of ghanajivamrit in village.
- Used live mulch and dead mulch around the root zone.
- Used light and pheromone traps.
- Adopted Navadhanya/ Pre Monsoon Dry Sowing (PMDS) method with 18 seed types.
- Prepared PMDS seed kits and distributed to fellow farmers.
- Conducted rallies and mass campaigns in village about natural farming every year.
- Assisted in establishing kitchen gardens in the village.
- Participated in district and state level natural farming trainings.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Citrus	Citrus
Cost of cultivation (₹)	18900	35100
Production (q)	48	45
Gross return (₹)	99100	76250
Net return (₹)	80200	41150
BC ratio	4.24	1.17

Benefits and achievements:

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good fruit quality, size, and increased shelf life.

- Increased net income by cultivating vegetables as intercrops.
- Consumed and sold chemical free food to the community.
- Improved soil health with high earthworm count.

Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. Y. PADMAVATHAMMA

Village : Loddipalli
Mandal : Orvakal
District : Kurnool
Contact No : 9177199878
Education : 10th

Practices adopted

- Adopted natural farming since 2016.
- Cultivated farm area of 10.50 acres. Out of this, mango orchard is established in 5.00 acres and in the remaining 5.50 acres, multiple crops like maize, jowar, vegetables, red gram, fodder crops etc. are cultivated through Pre-Monsoon Dry Sowing (PMDS) method.
- Planted various fodder varieties viz. CO–4, Super Napier, Darwad Napier, BAIF as intercrops in mango orchard with technical support from Krishi Vigyan Kendra, Banaganapalle. The fodder is used for dairy animals.
- Supplied fodder stems to the farmers in parts of Kurnool district and also to the farmers of Telangana.
- Established Non-Pesticide Management (NPM) shop in the year 2018 to promote natural farming in the village, by supplying necessary inputs like ghanajivamrit, dravajivamrit, and various kashayas.
- Conducted demonstrations on input preparations used in natural farming for other farmers, with the help of I.B. team.
- Created awareness on natural farming through WhatsApp.
- Organized Farmer Field Schools (FFS) along with Department of Agriculture.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Red Gram	Red Gram
Cost of cultivation (₹)	16000	21000
Production (q)	4.0	2.5
Gross return (₹)	60000	45000
Net return (₹)	44000	24000
BC ratio	2.75	1.1

Benefits and achievements

- Reduced incidence of pests and diseases by spraying botanical extracts.
- Increased the number of beneficial insects like honeybees in the field through cultivation of multiple crops.
- Increased soil fertility and earthworms in the soil.
- Made crops resistant to drought conditions.
- Reduced cost of cultivation.
- Resulted in chemical free produce.
- Increased income through farming along with allied activity.
- Encouraged several farmers to adopt natural farming.
- Received orders from Tier 1 cities.
- Received best woman farmer award from Department of Agriculture in 2018.
- Received best woman farmers award from KRIBCO and Krishi Vigyan Kendra in 2019.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI B. RAMAKOTESWARA RAO

Village : Gramanapalle

Mandal : Kalasapadu

District : Kadapa

Contact No. : 7799230278

Education : 10th

Email : Ramram68229@gmail.com

Practices adopted

- Cultivated 1.10 acres land converted into zero tillage with permanent furrows and bed method with 22 types of vegetables.
- Prepared and used inputs for natural farming.
- Marketed products in the Mandal by showcasing his farming ways at village level meetings, gramasabhas, etc.
- Participated at all the village level meetings and spoke about farming practices, new models, and methods.
- Conducted Self Help Group (SHG) meetings and demonstrated natural farming videos using a Pico projector.
- Demonstrated live preparations of kashayams with farmers.
- Adopted FFS (Farmer Field School).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Vegetables	Vegetables
Cost of cultivation (₹)	14500	21800
Production (q)	32	29
Gross return (₹)	51800	47500
Net return (₹)	37300	25700
BC ratio	2.56	1.17

Benefits and achievements

- Avoided chemical inputs.
- Produced seeds on his own.
- Reduced cost of cultivation.

- Encouraged more than 150 farmers to shift to natural farming.
- Resulted in field being covered with green cover for 365 days a year.
- Received best farmer award in 2018 at the Mandal level.
- Selected as ICRP (Internal Community Resource Person) in Andhra Pradesh Community Managed Natural Farming (APCNF) project.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI SAYAM RAGHUNATH

Village : Bangarumetta

Mandal : Butchayyapeta

District : Visakhapatnam

Contact No. : 9705650295,9398303947

Education : B.A

Email : sayamraghu2@gmail.com

Practices adopted

- Established Integrated Farming System (IFM) in 1 ha with 20 cows, 4 sheep, poultry, paddy, sugarcane, and mango orchard with inter crops, nutri-garden of 5 cents and 40 cents of fish paddy.
- Developed desi paddy varieties for natural farming and cultivated Navara- red rice through natural farming.
- Planted boarder crops around mango orchard with japhra and coconut plants for continuous income throughout the year.
- Adopted System of Rice Intensification (SRI) Paddy technology and Drum seeder technology.
- 2 x 4, 2 x 8 methods of sugarcane plantation with green gram and vegetables as intercrops.
- Planted nutri-gardens for household needs.
- Prepared and used natural farming inputs like beejamrit, ghanajivamrit, dravajivamrit, and botanical extracts like agniastra, bhramastra, majjiga kashaya, neemastra etc.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (Navara-Red Rice)	Paddy (RGL-2537)
Cost of cultivation (Rs.)	18000	22000
Production (q)	32	28
Gross return (Rs.)	57350	48205
Net return (Rs.)	39350	26205
BC ratio	2.1	1.1

Benefits and achievements

- Reduced input cost and cost of cultivation.

- Saved labour cost.
- Higher yields.
- Healthy food.
- Reduced monthly costs of vegetables by establishment of nutri garden.
- Increased income throughout the year from intercrops, border crops and poultry.
- Awarded with Sri Malla Jaganadham Memorial Award as Best Farmer in sugar cane in 20-21.
- Awarded as Best Sugarcane seed developer and distributed for the season 2016-17 at Vishakhapatnam District level.
- Awarded by Krishi Kalyan Karyashala in 2018 by Department of Agriculture Buchiyyapeta Mandal, Vishakhapatnam District, A.P.
- Won prize for high cow milk production to Visakha dairy unit continuously for 5 years.




Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI B SRINIVAS RAO

Village : Konithwada

Mandal : Veeravasaram

District : West Godavari

Contact No : 7036503397

Education : Intermediate

Email : bheesettisrinivasaraosrinivasa@gmail.com

Practices adopted

- Practiced three paddy-based cropping systems viz. Pre-monsoon Dry Sowing (PMDS) involving 18 different cover crops, Kharif paddy and Rabi paddy.
- PMDS, a natural farming innovation, involves broadcasting of 18-20 crop seeds (called navadanya) sown as relay crops in the summer, so that the field is covered with a variety of crops.
- Natural farming combined with PMDS in the summer resulted in 365 days of green cover of soil- Achhadana.
- After 45-60 days of sowing, the PMDS crop was grazed by the cattle. The remainder crop residue was incorporated into the soil, making the field ready for paddy transplantation.
- Adopted all natural farming protocols, like beejamrit, ghanajivamrit, dravajivamrit, PMDS (achhadana), growth promoters (egg amino acid, sapthdanyakura kashya and botanical extracts), and kashayas for pest management.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (MTU 7029)	Paddy (MTU 7029)
Cost of cultivation (₹)	45000	55000
Production (q)	60.0	52.5
Gross return (₹)	116760	102165
Net Return (₹)	71760	47165
BC ratio	1.6	0.85

Benefits and achievements

- Increased net income through the adoption of natural farming practices.
- Improved soil organic matter, soil health and water holding capacity by practicing PMDS. Productivity of the main kharif and rabi crop also increased.

- Earned additional income by using PMDS fodder as cattle feed.
- Increased the diversity of soil flora and fauna.
- Observed fewer incidences of pest and diseases.
- Decreased incidence of weed.
- Ensured food sustainability.
- Resulted in chemical-free and nutritious food for consumption.
- Observed development of humus.
- Observed increase in fat content of milk along with 0.5 litre increase in milk per animal every day by feeding cattle with PMDS Fodder.

Source: *Andhra Pradesh Community Managed Natural Farming*

SHRI K. VENKATARAMANA

Village : Dudukurru

Mandal : Devarapalli

District : West Godavari

Contact No. : 9505044036

Education : 4th Standard

Practices adopted

- Shifted from conventional farming to natural farming after 30 years, in 2016. In the 2nd year, experienced benefits of natural farming and started growing all the crops using natural farming techniques.
- Cultivated hybrid varieties of paddy in an area of 4.0 acres.
- Practising 3 windows of cropping in paddy: Pre-monsoon Dry Sowing (PMDS) involving 18 different cover crops; paddy crop (Kharif); and pulses (Rabi).
- Pre-monsoon dry sowing (PMDS), a natural farming innovation involves broadcasting of 18 to 20 varieties of crop seeds comprising cereals, pulses, legume green manure crops, oilseeds, leafy vegetables, spices, and condiments sown as a relay crop in the summer so that the field is covered with green carpet of different crop diversity in hot summer.
- Adopted all natural farming techniques like beejamrit, ghanajivamrit, dravajivamrit, PMDS (achhadana), usage of growth promoters (egg amino acid, sapthdanyakura kashaya and botanical extracts), and kashayas for pest management.
- After 45-60 days of sowing, the PMDS crop was grazed by cattle and the residue was incorporated into the soil before paddy transplantation.
- Applied ghanajivamrit to the soil @ 400kg/acre and applied dravajivamrit @ 200 litres/acre at 15 days interval.
- Followed all non-negotiable techniques like seed treatment, clipping of leaf tips, yellow sticky plates, pheromone traps and bird perches, etc.
- Applied botanical extracts for controlling pests and used growth promoters to increase the yield.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (MTU1061)	(Paddy MTU1061)
Cost of cultivation (₹)	39500	54000
Production (q)	65.62	60
Gross return (₹)	127696	116760
Net return (₹)	88196	62760
BC ratio	2.2	1.1

Benefits and achievements

- PMDS (achhadana) resulted in green cover throughout the year.
- PMDS fodder used as cattle feed, fetched additional income.
- Low pest and diseases incidence.
- Paddy tolerant to abiotic stress even while excessive rains and flooding.
- Increased net income.
- Presence of earthworms in farms attracted some of the rare species of birds, improving the farm's eco-system.
- Observed increase in groundwater level.
- Increased organic carbon, making the soil spongy, which increased Water Holding Capacity (WHC).



Source: *Andhra Pradesh Community Managed Natural Farming*

SMT. T. YAMINI

Village	:	Innugunta
Manda	:	Ozili
District	:	Nellore
Contact No	:	7674061118
Education	:	Intermediate

Practices adopted

- Started practicing natural farming in 2016 after getting exposure to natural farming through demo plot in the village by community resource person.
- Started natural farming in 50 cents and later on extended to 2 acre after observing the positive results in yield and soil health.
- Practicing Pre-Monsoon Dry Sowing (PMDS) since 2019 wherein 9-18 types of seed are broadcasted before harvesting and after 45 to 60 days, it is incorporated to enrich the soil.
- Got income from leafy vegetables from PMDS crop, maize and marigold grown as border crops.
- Applied ghanajivamrit type-1 @150 kg and type-2 @150 kg in last plough.
- Treated seeds with 5 litre beejamrit and broadcasted.
- Uprooted 21 days old seedlings and dipped the same in 30 litres of beejamrit. Later, leaf tips were clipped and transplanted in the main field. For every 2 meters, alleyways are formed with 30 cm width.
- After 15 DAT, applied 5 kg azolla to 1 acre of land.
- After 30 DAT, erected yellow plates @ 10/acre and pheromone traps @7/acre.
- Applied dravajivamrit in soil @200 lit/acre at 20 DAT and later every 15 days for 4 times.
- Sprayed neemastra 100 lit/acre at 25 DAT.
- Sprayed egg amino acid at flowering stage @ 0.5lit/acre.
- Promoted 365 days kitchen garden in the village.
- Motivated women farmers to adopt natural farming through SHG meetings.
- Conducted pico presentations weekly thrice to create awareness about natural farming.
- Supplied kitchen garden seed kits, yellow plates and other necessary inputs like ghanajivamrit, dravajivamrit and various kashayas at Rythu Bharosa Kendras (RBK) to promote natural farming in the village.
- Conducted mass campaigns and mass input preparation in the village.

- Created awareness on natural farming through social media platforms like telegram by sharing input and kashayam preparation videos.
- Organized Farmer Field Schools (FFS) to show the difference between natural farming and chemical farming with the help of Village Agricultural Assistant (VAA).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (RNR-15048)	Paddy (RNR-15048)
Cost of cultivation (₹) (Including PMDS)	26500	30000
Production (q)	26.4	24.8
Gross return (₹) (Including PMDS)	61232	52824
Net return (₹)	34732	22824
BC ratio	1.3	0.76

Benefits and achievements

- Reduced incidence of pests and diseases by spraying botanical extracts.
- Soil is enriched and more porous.
- Improved soil fertility through an increase in earthworms.
- Reduced cost of cultivation.
- Resulted in chemical-free produce.
- Increased income through farming along with allied activity.
- Encouraged several farmers to adopt natural farming.

Source: *Andhra Pradesh Community Managed Natural Farming*

BIHAR

SMT. BABITA DEVI

Village : Barsona
Mandal : Tankupa
District : Gaya
Contact No. : 9631653287
Education : Matriculation

Practices adopted

- Cultivated paddy, wheat, rapeseed and vegetables by adopting SRI method in natural farming
- Treated seeds through Sribeejamrit.
- Used various types of natural inputs like Srijivamrit, Srighanjivamrit, Sripranamrit, Srigajramrit etc.
- Used various types of natural pesticides like Srineemastra, Sriagneyastra, Sribrahamastra, Sridasparniark, Srilohastra etc.
- Used various types of natural fungicides like Srimatthastra, Srisothastra etc.
- Used various types of natural plant growth regulator like Sriamrit, Srimungamrit, Sriuplamrit etc.
- Used various types of natural methods of insect-pest controller like Pheromone traps, Stickyplates, birdpirchers, bonefire, insect trap.
- Cultivated mixed crops and used border crops for managing insects.
- Used live mulch and dead mulch around the root zone.
- Assisted others in establishing kitchen gardens in the village.
- Participated in district level natural farming trainings.

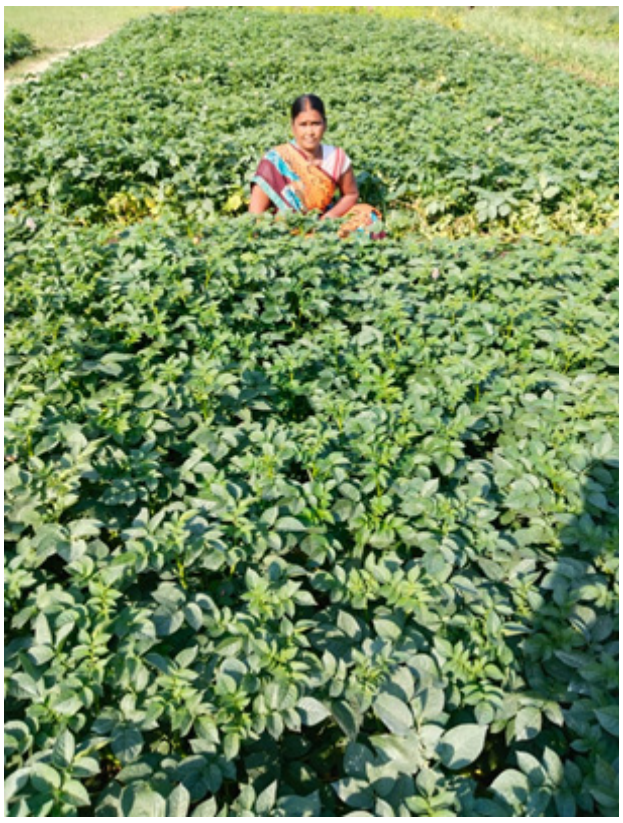
Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.2 ha)	Conventional Farming (0.2 ha)
Crop 1	Paddy (Damini)	Paddy (Damini)
Cost of cultivation (Rs.)	4000	5800
Production (q)	12.50	6.0
Gross return (Rs.)	21250	10200
Net return (Rs.)	17250	4400
Parameters	Natural Farming (0.08 ha)	Conventional Farming (0.08 ha)
Crop 2	Wheat (HD2967)	Wheat (HD2967)
Cost of cultivation (Rs.)	1500	2190

Parameters	Natural Farming (0.2 ha)	Conventional Farming (0.2 ha)
Production (q)	2.5	1.5
Gross return (Rs.)	5000	3000
Net return (Rs.)	3500	810

Benefits and achievements

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good fruit quality, size and increased shelf life.
- Consumed and sold chemical free food to the community.
- Improved soil health with high earthworm count.



Source: *PRAN NGO, Gaya, Bihar*

SMT. BINDU DEVI

Village : Pathalghata
Mandal : Manpur
District : Gaya
Contact No. : 9939354964
Education : Illiterate

Practices adopted

- Practiced SRI method in natural farming and cultivated paddy, wheat, rapeseed, green gram and vegetables.
- Used Sribeejamrit for seed treatment.
- Used various types of natural inputs like Srijivamrit, Srighanjivamrit, Shripranamrit, Shrigajramrit etc.
- Used various types of natural pesticides like Shrineemastra, Sriagneyastra, Sribrahamastra, Sridasparniark, Srilohastra etc.
- Used various types of natural fungicides like Srimatthastra, Srisothastra etc.
- Used various types of natural plant growth regulator like Sriamrit, Srimungamrit, Sriuplamrit etc.
- Used various types of natural methods of insect-pest controller like Pheromone traps, Stickyplates, birdpirchers, bonefire, insect trap.
- Cultivated mixed crops and used border crops for managing insects.
- Saved water by performing drip irrigation.
- Used live mulch and dead mulch.
- Assisted others in establishing kitchen gardens in the village.
- Participated in district and state level natural farming trainings.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.60 ha)	Conventional Farming (0.60 ha)
Crop 1	Rapeseed(RP09 Local variety)	Rapeseed (Improved Variety)
Cost of cultivation (Rs.)	1000	1100
Production (q)	2.5	0.40
Gross return (Rs.)	25000	4000
Net return (Rs.)	24000	2900

Parameters	Natural Farming (0.08 ha)	Conventional Farming (0.08 ha)
Crop 2	Wheat (HD 2967)	Wheat (HD 2967)
Cost of cultivation (Rs.)	1500	2190
Production (q)	2.5	1.5
Gross return (Rs.)	5000	3000
Net return (Rs.)	3500	810
Parameters	**Natural Farming (0.4 ha)**	**Conventional Farming (0.4 ha)**
Crop 3	Potato (Pokhraj)	Potato (Pokhraj)
Cost of cultivation (Rs.)	3200	5500
Production (q)	12	7
Gross return (Rs.)	18000	10500
Net return (Rs.)	14800	5000

Benefits and achievements:

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good fruit quality, size and increased shelf life.
- Increased net income with the use of natural fertilizers and insecticides.
- Consumed and sold chemical-free food to the community.
- Improved soil health with high earthworm count.

Source: *PRAN NGO, Gaya, Bihar*

SMT. MADHURI DEVI

Village : Barsona
Mandal : Tankupa
District : Gaya
Contact No. : 9771533421
Education : Matriculation

Practices adopted

- Cultivated paddy, wheat, rapeseed, vegetables and green gram by following SRI method in natural farming.
- Used beejamrit for seed treatment.
- Used various types of natural fertilizers like Srijivamrit, Srighanjivamrit, Sripranamrit, Srigajramrit etc.
- Used various types of natural pesticides like Srineemastra, Sriagneyastra, Sribrahamastra, Sridasparniark, Srilohastra etc.
- Used various types of natural fungicides like Srimatthastra, Srisothastra etc.
- Used various types of natural plant growth regulator like Sriamrit, Srimungamrit, Sriuplamrit etc.
- Used various types of natural methods of insect-pest controller like Pheromone traps, Stickyplates, birdpirchers, bonefire, insect trap.
- Cultivated mixed crops and used border crops for managing insects.
- Practiced vertical farming called Machan, for better yield and protection from Blue Bull.
- Used live mulch and dead mulch around the root zone.
- Conducted training on natural farming for local farmers and famers from other states, including Odisha.
- Assisted others in establishing kitchen gardens in the village.
- Participated in district and state level natural farming trainings.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.06 ha)	Conventional Farming (0.06 ha)
Crop 1	Rapeseed RP09 (Local variety)	Rapeseed Improved Variety
Cost of cultivation (Rs.)	1000	1100
Production (q)	2.5	0.40
Gross return (Rs.)	25000	4000

Parameters	Natural Farming (0.06 ha)	Conventional Farming (0.06 ha)
Net return (Rs.)	24000	2900
Parameters	Natural Farming (0.08 ha)	Conventional Farming (0.08 ha)
Crop 2	Wheat (HD2967)	Wheat (HD2967)
Cost of cultivation (Rs.)	1500	2190
Production (q)	2.5	1.5
Gross return (Rs.)	5000	3000
Net return (Rs.)	3500	810

Benefits and achievements:

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good fruit quality, size and increased shelf life.
- Increased net income with the use of natural fertilizers and insecticides.
- Consumed and sold chemical-free food to the community.
- Improved soil health with high earthworm count.

Source: *PRAN NGO, Gaya, Bihar*

GUJARAT

SHRI CHAUHAN VANRAJSINH DILIPSINH

Village : Bavaliya

District : Vadodara

Contact No : 9586339266

Education : HSC

Email : vanrajsinhc077@gmail.com

Practices adopted

- Implemented farm mechanization methods (drip, sprinkler, power tiller and tractors).
- Prepared and used jivamrit, ghanajivamrit, beejamrit etc.
- Processed, graded, packed, and sold cereals directly to customers as value added products.
- Organized farmer-scientist interaction at Shri Goras Cow-School Farm, Bayaliya.
- Guided other farmers through the Subhash Palekar training program.
- Participated at ATMA Krishi-mela, Exhibition and Innovative Farmer meet.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)		Conventional Farming (1 ha)	
Crop	Paddy (Desi BRK)	Wheat (Bansi)	Paddy (Gujarat 17)	Wheat (496)
Cost of cultivation (₹)	60000	30000	60000	55000
Production (q)	45	40	45	40
Gross return (₹)	200000	150000	100000	80000
Net return (₹)	140000	120000	40000	25000
BC ratio	2.33	4	0.66	0.45

Benefits and achievements:

- Used natural inputs for soil nutrition, fertility and pests management.
- Reduced cultivation cost and doubled farmer's income.
- Obtained higher yield in grain and straw.
- Enhanced soil fertility.
- Designated as the master trainer for natural farming at the village level.
- 12,000 farmers have visited "Shri Goras Cow-School Cow Breeding Center".

- Awarded Best ATMA farmers Award at the District Level, Progressive farming VNM environment excellence award and Best Pastoralist Award.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI CHAUHAN VIKRAMSINH JESANGHBHAI

Village : Bavaliya
Taluka : Shinor
District : Vadodara
Education : H. S. C.
Contact No : 7984593170

Practices adopted

- Cultivated vegetables through natural farming.
- Prepared and used inputs like jivamrit, ghanjivamrit, beejamrit and plant protection measures like neemastra, brahmastra, agniastra and dashparni extracts.
- Participated in ATMA Krishi-mela, Exhibition and Innovative Farmer meet programme as well as other activities of ATMA for dissemination of practices.
- Encouraged other farmers to adopt natural farming.
- Home delivered seasonal vegetables twice in a week, by adopting the Family-Farmer concept.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Small gourd (Tissue F-2)	Small gourd (Tissue F-2)
Cost of cultivation (₹)	36000	42000
Production (q)	218	174
Gross return (₹)	269884	139200
Net return (₹)	233884	97200
BC ratio	6.5	2.13

Benefits and achievements

- Improved financial status considerably in 3-4 years.
- Reduced cost of cultivation.
- Obtained higher yield.
- Enhanced soil fertility.
- Designated as the master trainer at the village level for natural farming and trained more than 300 farmers.
- Honored by Hon'ble Governor, Gujarat.
- Awarded with Progressive farming VNM Environment Excellence award.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI DEVSHIBHAI MERAMANBHAI SOLANKI

Village : Bolas
Taluka : Veraval
District : Girsomnath
Contact No. : 9723491145
Education : HSC

Practices adopted

- Practiced natural farming in coconut and groundnut.
- Used natural products available on farm for the cultivation of crops.
- Applied self-made jivamrit, beejamrit, dasparni ark etc.
- Deployed self-developed marketing and direct selling methods.
- Maintained quality and purity of farm produce.
- Trained farmers to create awareness about natural farming.
- Delivered lectures on natural farming.
- Worked in association with ATMA & Department of Horticulture.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming		Conventional Farming	
Crop	Coconut (GG20) (1 ha)	Groundnut (TD & DT) (1 ha)	Coconut (GG20) (1 ha)	Groundnut (TD & DT) (1ha)
Cost of cultivation (₹)	84000	52000	110000	71500
Production (q)	25230 No	28	21400 No	27
Gross return (₹)	334000	186000	300000	155000
Net return (₹)	250000	134000	190000	83500
BC ratio	2.97	2.57	1.72	1.16

Benefits and achievements

- Earned higher return with reduced cultivation cost.
- Increased income through value addition.
- Reduced use of water.
- Resulted in clean water by the use of jivamrit.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI DIXIT B. PATEL

Village : Sangrampura

Taluka : Khedbrahma

District : Sabarkantha

Contact : 9426513642

Education : BE (Electronics)

Email : smearing@gmail.com

Practices adopted

- Cultivated bananas, pulses (inter-crop) and more than 25 vegetables by following natural farming methods.
- Used farm waste for mulching.
- Sorted, graded, and sold produce directly to the end user.
- Implemented 'family farmer concept' and trained farmers to disseminate the same.
- Developed master trainers at the village level for adoption of natural farming.
- Organized 5 workshops on natural farming with total participation of 14,900 farmers since 2016.
- Organized virtual workshops every Thursday which included an hour of interaction with farmers who adopted naural farming practices in Gujarat.
- Participated in ATMA Amrut Ahar Mahotsav, Farm Fresh Festival, Exhibition and Innovative farmers meeting/programme and other activities.
- Used platforms like Google meet, WhatsApp, YouTube, Facebook etc. for dissemination of information in an efficient manner.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Banana (G-9)	Banana (G-9)
Cost of cultivation (₹)	40000	175000
Production (q)	100	70
Gross return (₹)	400000	380000
Net return (₹)	360000	205000
BC ratio	9	1.17

Benefits and achievements

- Reduced input cost.
- Enhanced taste of fruits and vegetables.
- Improved immunity through consumption of natural food.
- Improved soil health.
- Designated as the state coordinator of natural farming and member of the advisory committee of natural farming.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI JADEJA SHAKTISINH VANARAJSINH

Village : Khokhari

Taluka : Padadhari

District : Rajkot

Contact No : 97257 42304

Education : M.A. B.Ed. Ph.D. (Cont.)

Practices adopted

- Cultivated vegetables by adopting natural farming.
- Used jivamrit, ghanajivamrit and beejamrit for crop production.
- Adopted Aachhadan (mulching) process and prepared various natural inputs to control pests and diseases viz., neemastra, agniastra, brahmastra, saptdhankur ark etc.
- Provided trainings on natural farming to nearby farmers.
- Participated in seminars and trainings.
- Linked with various farmers practicing natural farming for marketing of produce

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)		Conventional Farming (1 ha)	
Crop	Chili (Ojas Kashmiri & Deshi)		Chili (Ojas Kashmiri & Deshi)	
Cost of cultivation (₹)	35000		46000	
Production (q)	Seeds	Pod	Seeds	Pod
	5	30	4	27
Gross return (₹)	350000		200000	
Net return (₹)	315000		154000	
BC ratio	9.0		3.34	

Benefits and achievements

- Increased profit through reduction in cost of cultivation and higher yields.
- Assigned as the master trainer of natural farming at the village level.
- Trained about 500 farmers in natural farming.
- Received 'Best ATMA Farmer Award' at District level.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI MANOJBHAI PURUSHOTAMBHAI SOLANKI

Village : Madhapar

Taluka : Bhuj

District : Kutch

Contact no. : 9825428100, 9879928100

Email : ramkrushnatrust@gmail.com

Practices adopted

- Adopted natural farming in 2001, for an area of 100 acres.
- Owns a gaushala with 425 Kankrej cows and 2 bullocks.
- Cultivated various crops like vegetables (chili, eggplant, tomato, cabbage, cucumber, cauliflower, spinach, radish, fenugreek, coriander, desi Carrot and little gourd), cereals (wheat, sorghum, maize and millets), oil seeds (mustard, groundnut, castor) and fodder crops (rajka bajra, jowar, rajko, jinjvo, super napier).
- Made various inputs like super compost fertilizer, prom fertilizer, soil fertilizer, cow horn fertilizer, cow dung fertilizer, cow samrudhi fertilizer, solid fertilizers such as gas slurry, micronutrients, microzyme, humic acid etc. and various insecticides such as brahmastra, neemastra, nimplus, antiseptic etc and used on the field.
- Established a nursery of various medicinal plants and distributed seedlings to people for free.
- Established a plant to make compost and a laboratory for soil and water test.
- Worked on cultivation, storage and preservation of desi seeds and established a seed bank for the promotion of desi seeds.
- Sold products from home and also opened a shop.
- Worked under the ATMA scheme and K.V.K for training of natural farming.
- Provided training to farmers every month at their own farm at Kukma. Till date, 76 residential training programmes have been organized, in which 2,763 farmers have been trained on natural farming.
- Made a film called Jagya Tyar thi Savar (“જાગ્યા ત્યારથી સવાર”) for the promotion of Organic farming.
- Made various products like pot, flower pots, clocks , dias, etc. from cow dung.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural farming			Conventional farming		
Crop	Wheat (1 ha)	Rajka Bajri (1 ha)	Napier (1 ha)	Wheat (1 ha)	Rajka Bajri (1 ha)	Napier (1 ha)
Variety	GV 9	Judda	Super Napier	GV 9	Judda	Super Napier
Cost of cultivation (₹)	69641	56240	326654	110230	85763	546983
Production (q)	45.44	714.32	18.25	44.46	395	18.5
Gross return (₹)	221300	178600	964782	189080	148963	910106
Net return (₹)	151659	122360	638128	78850	63200	363123
BC ratio	2.17	2.17	1.95	0.71	0.73	0.66

Benefits and achievements

- Reduced cost of cultivation.
- Quality and quantity of all crops increased.
- Earned maximum profit by adopting mix-cropping practice.
- Increased soil fertility & productivity.
- Member of Governing body and General Board Member of Indian Council of Agriculture Research (ICAR).
- Designated as the president, Akshay Krushi Pariwar.
- Designated as the managing Trustee of Shri RamKrushna Trust, Madhapar.
- So far 28,000 people have visited his organization.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI NARVANSING K GOHIL

Village : Shevdivadar
Taluka : Jesar
District : Bhavnagar
Contact No : 9316639313
Education : 8th pass

Practices adopted

- Implemented natural farming in 2017 and practiced all five principles of natural farming i.e., jivamrit, beejamrit, aachhadan, whapasa and plant protection arks.
- Designed a mix cropping system with more than 20 vegetables in a farm.
- Used farm waste for mulching.
- Delivered lectures on natural farming.
- Deployed social media for marketing.
- Collaborated with ATMA and participated in its activities.

Comparison between Natural Farming and Conventional Farming

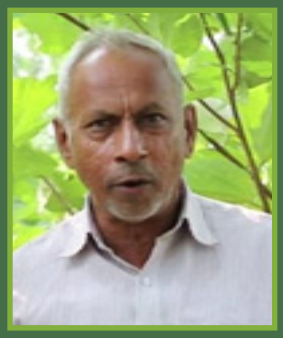
Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Banana (G-9)	Banana (G-9)
Cost of cultivation (₹)	166000	300000
Production (q)	563	460
Gross return (₹)	1126000	764307
Net return (₹)	960000	464307
BC ratio	5.78	1.54

Benefits and achievements:

- Reduced cost of cultivation.
- Improved price for produce.
- Chemical residue free farm produce.
- Enhanced community's health and welfare.
- Reduced greenhouse effect.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI RAMESHBHAI DAHYABHAI PRAJAPATI



Village : Vanch
Taluka : Daskroi
District : Ahmadabad
Contact no. : 9924623692
Education : 10th Std

Practices adopted

- Cultivated falsa by natural farming.
- Used inputs made from cow dung, cow urine, buttermilk, etc.
- Managed pests and nutrition value by use of jivamritin irrigation.
- Earned higher revenue by deploying direct marketing techniques.
- Trained farmers in cultivation methods under natural farming.
- Disseminated information to fellow farmers through social media platforms like WhatsApp, Google Meet etc.
- Participated in exhibitions, krishimela and other programs.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Falsa (Deshi)	Falsa (Deshi)
Cost of cultivation (₹)	30800	43500
Production (q)	14.6	14
Gross return (₹)	141400	125000
Net return (₹)	110600	81500
BC ratio	3.57	2.87

Benefits and achievements

- Reduced cost of cultivation through natural farming.
- Resulted in higher yield without pesticide residue.
- Earned better rates for produce as compared to traditional market/APMC.
- Paved way to a good market through diversified crop farming.
- Improved soil condition.
- Designated as a member of Farmer Interest Group (FIG) of ATMA, Ahmedabad.
- Awarded with District ATMA award for innovative agricultural practices in falsa.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI RATADIYA MACHCHHABHAI V.

Village : Nanivavdi

Taluka : Kalavad

District : Jamnagar

Contact No. : 8160752101

Email : machabhairatadiya@gmail.com

Practices adopted

- Implemented natural farming in ground nut, wheat, and other crops.
- Practiced farm mechanization (drip & sprinkler irrigation, seed drill, harvester, and reaper) in wheat production.
- Followed animal husbandry practices with 2 Gir cows and 2 bullocks.
- Provided training to farmers as master trainer of natural farming.
- Developed desi seed bank of field and vegetable crops.
- Deployed direct marketing techniques for value addition of produce.
- Organized meeting on natural farming every month at taluka level and participated in natural farming trainings & workshops.
- Linked with ATMA project, Jamnagar
- Used social media platforms like WhatsApp, YouTube, Facebook etc. for dissemination of information.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Groundnut (GG-20)	Groundnut (GG-20)
Cost of cultivation	35520	50000
Production (q)	43.0	35.0
Gross return (₹)	126850	120000
Net return (₹)	91330	70000
BC ratio	2.57	1.4

Benefits and achievements

- Enhanced groundnut quality.
- Doubled farmer's income by reduction in cultivation cost and improved produce.
- Increased soil productivity.
- Designated as the master trainer of natural farming.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI RATHAVA CHHELIYABHAI AAPSINGBHAI

Village : Kashipura

Taluka : Godhra

District : Panchmahal

Education : 7th

Contact No : 9327052127 / 9537188573

Practices adopted

- Practiced natural farming by adopting a stray desi cow.
- Cultivated paddy through natural farming.
- Used jivamrit, ghanajivamrit and beejamrit for crop production.
- Used various natural inputs viz., neemastra, agniastra, brahmastra and saptdhanyankur ark, etc.to control pests and diseases.
- Provided trainings on natural farming to neighboring farmers.
- Participated in seminars and trainings.
- Collaborated with other farmers practicing natural farming for marketing products.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Mahisagar)	Paddy (GR-13)
Cost of cultivation (₹)	17000	22000
Production (q)	40	36
Gross return (₹)	70000	63000
Net return (₹)	53000	41000
BC ratio	3.11	1.86

Benefits and achievements

- Increased profit through reduction in cost of cultivation.
- Assigned as the master trainer of natural farming at the Village and Taluka level.
- Trained more than 100 farmers in natural farming.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI SHETHIYA RATILAL VITHTHALDAS

Village : Gunatitpur

Taluka : Bhachau

District : Kutch

Contact no. : 9909219303

Email : ratilal124@gmail.com

Practices adopted

- Adopted natural farming in 2008.
- Cultivated horticulture crops, vegetables and other crops.
- Rears 40 gir cows and 2 bullocks.
- Adopted a five layer (Panchstariya) cropping pattern.
- Prepared and used natural inputs such as jivamrit, ghanjivamrit, brahmastra, sapta dhanyakur ark, neemastra and dasparni ark etc.
- Established 5 automatic jivamrit tanks with a capacity of 5000 liter each and adopted mechanization for application of jivamrit with irrigation water.
- Adopted drip & sprinkler irrigation, seed drill, harvester and reaper etc. for wheat.
- Practiced bio mass mulching.
- Developed a desi seed bank of field and vegetable crops.
- Marketed the produce directly through value addition.
- Participated in exhibitions, Amrut Aahar Mahotsav and other forums.
- Organized monthly workshop on natural farming at his farm.
- Linked with ATMA project, Kutch and got support from ATMA at every stage.
- Used social media platforms like whatsapp, YouTube, Face book for dissemination of information and marketing of his produce.

Comparison between Natural Farming and Conventional Farming

I. Natural Farming

Crop	Pomegranate (Sinduri)	Mango (Kesar)	Groundnut (GUJ 7)	Papaya (Taiwan)	Guava (Taiwan Pink)
Cost of cultivation (₹)	125000	250000	50000	375000	250000
Production (q)	145	100	22.6	825.5	163
Gross return (₹)	422000	660000	188000	869000	602000
Net return (₹)	297000	410000	138000	494000	352000
BC ratio	3.38	2.64	3.76	2.32	2.41

II. Conventional Farming

Crop	Pomegranate (Sinduri)	Mango (Kesar)	Groundnut (GUJ 7)	Papaya (Taiwan)	Guava (Taiwan Pink)
Cost of cultivation (₹)	250000	350000	100000	500000	325000
Production (q)	108.8	90.7	18	816	136
Gross return (₹)	324000	600000	150000	810000	525000
Net return (₹)	74000	250000	50000	310000	200000
BC ratio	1.30	1.71	1.50	1.62	1.62

Benefits and achievements

- 100% germination and protection from soil borne diseases as a result of seed treatment by beejamrit.
- Increased production and fetched higher profit by adopting natural farming.
- Consulted by many farmers.
- Saved labour cost and time through mechanization.
- Earned maximum profit by practicing mix cropping.
- Increased nutritional value resulted in easy marketing and high demand.
- Developed a market of 500+ regular customers of natural and organic certified products, for an offering of 200+ products.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI THAKKAR HARESHBHAI MORARAJI BHAI

Village : Vavdi

Taluka : Bhuj

District : Kutch

Contact no. : 9825553331

Email : ramkrushnatrust@gmail.com

Practices adopted

- Adopted natural farming for a wide variety of fruits (strawberry, mango (Kesar, Hafush, Rajapuri), dragon fruit, banana, papaya, pomegranate, date palm (Deshi, Barahi), guava, muskmelon, watermelon, sweet potato, sweet lime, malta, fig, lemon, etc) .and vegetables (chilli, shimla mirch, capsicum, cabbage, brinjal, khira cucumber,sponge gourd, bottle gourd, bitter gourd, beetroot, broccoli, beans, zucchini, tomato, cherry tomato, lettuce, spinach, onion, drumstick etc.).
- Owns a modern gaushala with 32 desi Kankraj cows and 1 bull (Nandi).
- Used inputs like chhasamrit, panchgavya, saptdhanyakur ark, jivamrit, organic potassium, organic phosphorus and organic nitrogen.
- Used banana flowers for calcium, cactus for fungicide and lime for folic acid.
- Used drip irrigation system in vegetables and fruits, with the help of automation. Applied jivamrit with 80,000 liter of water at once to irrigate crops through filtered automation system.
- Used seed drills, harvester and reaper etc.
- Done value addition and direct marketing of produce at their home.
- Used social media platforms like WhatsApp, You tube, Face book for dissemination of information and marketing.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural farming			Conventional farming		
Crop	Strawbery (1 ha)	Mango (1 ha)	Dragon fruit (1 ha)	Strawberry (1 ha)	Mango (1 ha)	Dragon fruit (1 ha)
Variety	Winter down	Kesar	Red	Winter down	Kesar	Red
Cost of cultivation (₹)	2250000	100000	311250	2650000	162500	371250
Production (q)	350	175	125	125	150	100
Gross return (₹)	6000000	625000	2250000	3750000	500000	1721250
Net return (₹)	3750000	525000	1938750	1100000	337500	1350000
BC ratio	2.66	6.25	7.23	1.41	3.07	4.64

Benefits and achievements

- Cultivated different types of crops like banana, papaya, mango, watermelon, sugar cane through contract farming in 4000 acres of land, of about 135 farmers.
- Doubled income, with reduced cost of cultivation and value addition.
- Improved soil fertility & productivity.
- Fetched a higher price for his products.
- Inspired other farmers to cultivate in the Net House.
- The farm has been visited by delegation from Israel, Uzbekistan, and UAE

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

SHRI UMESHGIRI SHAILESHGIRI GOSWAMI

Village : Narsanda
Taluka : Nadiad
District : Kheda
Contact No. : 9909078344
Education : B.Com.

Practices adopted

- Cultivated tuber crop (beetroot) through natural farming.
- Used jivamrit, beejamrit and ghanajivamrit for crop production and neemastra and agniastra for pest control.
- Implemented drip irrigation systems where the crop was sown on a raised bed.
- Cleaned and graded farm produce for better market price.
- Established "GIRI" farm and organized trainings on natural farming for other farmers.
- Participated as recourse person in exhibitions and trainings organized by ATMA.
- Disseminated information through social media platforms like WhatsApp.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Beetroot (Namdev Umaji (Private))	Beetroot (Namdev Umaji (Private))
Cost of cultivation (₹)	65000	105000
Production (q)	29.0	24.0
Gross return (₹)	295000	245000
Net return (₹)	230000	140000
BC ratio	3.54	1.33

Benefits and achievements:

- Reduced the cost of cultivation significantly.
- Earned higher income through beetroot cultivation.
- Observed high quality production.
- Developed indigenous beetroot seeds.
- Benefitted 300+ farmers through trainings and workshops.
- Awarded best ATMA farmer award at the district level.

Source: *ATMA Directorate & SAMETI, Gandhinagar, Gujarat*

HARYANA

SHRI ACHARYA DEV VRAT, HON'BLE GOVERNOR GUJARAT

City : Near Kurukshetra University III Gate

Road : Dhand Rd, Haryana 136119

District : Kurushetra

Contact No : 91-8689001228, 01744-238048, 238648

Education : Matriculation (10th Class)

Email : gurukul_kkr@yahoo.com , kurukshetragurukul@gmail.com

Practices adopted

- Gurukul Kurukshetra under the guidance of Governor Gujarat Acharya Dev Vrat is practicing natural farming on a land of 72 ha, for the last 8 years.
- Initially, the practice of chemical farming was shifted to organic farming, for a part of the Gurukul farm. In organic farming, the cost of cultivation increased and the yield reduced. Hence, a pertinent decision was taken to adopt natural farming in an area of 72 ha.
- The main crops under natural farming are rice, wheat, sugarcane, potato along with other vegetables as well as various fodder and fruit crops.
- Sugarcane is taken as a sole crop as well as an intercrop with cucurbits, mustard, onion, and some other crops.
- Major practices being adopted are–green manuring of dhaincha (Sesbania spp) and green gram (moong) before rice planting, mulching wherever possible, reduced/ minimum tillage, residue incorporation / retension and intercrop.
- Each practice is modulated for easing the creation of a favourable environment for the multiplication of microbes and earthworms in the soil.
- Green manuring of daincha /green gram is done for immediate release of nutrients for the establishment and growth of rice, as well as for providing a food source for multiplication of microbes.
- Residues are incorporated and retained for faster multiplication of microbes and earthworms. Besides improving soil microbial status, they also help in Carbon Sequestration, which in turn, contribute in minimising greenhouse effect of gases.
- Mulching helps in water saving, effective control of weeds, reduced exposure of soil from heat waves and direct sunlight which otherwise dissipate soil organic carbon and provides favourable environment for multiplication of earthworms during extreme weather conditions.
- Reduced/minimum tillage is an important factor in natural farming, as excessive tillage and increased temperature (above 350 C) dissipate more than 45% of soil organic carbon.

- The main formulations being used are jeevamrit, ghanjaavamrit, neemastra, brahmastra, agnistra, dasparniark and khatti Lassi (sour butter milk).
- Jeevamrit is applied with irrigation water but also sprayed as and when required for boosting the growth of the crop.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)		Conventional Farming (1 ha)	
Crop	Paddy (Non-scented)	Wheat (Bansi)	Paddy (Non-scented)	Wheat (HD-2967)
Cost of cultivation (₹)	29412	26255	42802	33835
Production (q)	72.50	31.25	65.25	47.50
Gross return (₹)	126875	125000	10937	82412
Net return (₹)	97463	98745	66135	48577
BC ratio	4.31	4.76	2.54	2.44

Benefits and achievements

- Improved soil health in terms of chemical, physical and biological status of soil.
- The soil samples analyzed at CCSHAU Hisar were found to be rich in organic carbon (OC). OC stood at 30% in 2017, and more than 90% soil samples were rich in organic carbon after adopting natural farming for 2 years. Similar results were recorded when the soil samples were analyzed at other institutes like PAU, Ludhiana and CSSRI, Karnal in 2019 and 2020.
- The availability of macro and micronutrients also increased with the adoption of natural farming practices.
- Increase in organic carbon was more pronounced in rice-based systems, in comparison with other cropping systems probably due to multiphase activity of microbes in rice. In the rice crop, microbial activity proceeds under aerobic, submerged and semi-submerged conditions i.e. aerobes, anaerobes and facultative anaerobes work simultaneously in rice micro environment to facilitate carbon sequestration and fix atmospheric nitrogen.
- Organic carbon in some of the fields was recorded to be more than 1.25 per cent.
- Phosphorus availability increased by 89%, 32% and 179% in the soil samples collected in May 2018, October 2018 and May 2019 respectively, over that recorded in soil samples collected in May 2017.
- Likewise, mean available Potassium increased by 7%, 17% and 66% during the respective period of collection of soil samples over that observed in May 2017.
- The extent of increase in micronutrients was 32%, 27%, 31% and 114% in Zinc, Iron, Copper and Manganese, respectively during a period of one year from May 2017 to May 2018.

- Input cost and cost of cultivation was reduced.
- Use of chemical inputs was reduced to zero.
- Chemical free food was produced.
- Besides the increase in the population of earthworms, microbial population increased manifold at Gurukul farm.
- On an average, irrespective of the cropping system, the total bacterial count in the soil of Gurukul farm was 528 times more than that recorded in the soil of farmers' field.
- Number of colony farming units per gram soil in Gurukul fields were 161 crore as compared to 30.5 lakh in the soil from farmers' fields.
- There was significant increase in the population of microbes with the addition of Gur (Jaggary) and besan (pulse flour) in jeevamrit.
- At the Gurukul farm, the average yield level of non- scented rice varieties generally ranges between 70-80q/ha.
- Average productivity of bansi variety of wheat is 25-35 q/ha. The grain of this variety fetches more than Rs. 4,000 per quintal with a consistent demand from the consumers.
- The sugarcane yield has crossed 1,300q/ha with an average productivity of 850-1,100 q/ha.
- Mean productivity of potato remained in the range of 250-350 q/ha.

Source: *Krishi Vigyan Kendra, CCSHAU, Kurukshetra, Haryana*

SHRI ASHOK KUMAR

Village : Lokra

Tehsil : Pataudi

District : Gurugram

Contact No : 9813891213

Practices adopted

- Used natural farming inputs like jivamrit and bio pesticides like neem-baan for controlling pests.
- Prepared and applied vermi-compost to increase the soil's organic matter. Used a waste decomposer for composting of farm waste.
- Prepared vegetable and papaya nursery using a low cost protected structure.
- Adopted micro-irrigation system in papaya field.
- Practiced intercropping of vegetables in between castor rows.
- Used trichodermaharzianum and jeevamrit for minimization of diseases and insects.
- Disseminated information through group discussions, electronic media as well as through participation in scientific forums and exhibitions.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural farming				Conventional farming			
Crop	Castor	Bottle gourd (Pusa Naveen)	Wheat (Black wheat)	Broccoli	Castor	Bottle gourd (Pusa Naveen)	Wheat	Broccoli
Area (ha)	1	0.5	0.5	0.5	1	0.5	0.5	0.4
Cost of cultivation (₹)	71500	36750	16800	72000	61894	38700	12250	73500
Production (q)	33.5	120	21.6	72	29	110	15.25	58.9
Gross return (₹)	216500	180000	75800	230400	187418	165000	33357	188480
Net return (₹)	145000	143250	59000	158400	125524	126300	21107	114980
BC ratio	2.02	3.89	3.51	2.2	1.9	3.26	1.7	1.56

Benefits and achievements

- Reduced cost of cultivation.
- Earned higher income through diversification of crops.

- Saved labor and time.
- Improved soil health, wherein the soil's organic carbon content increased from 0.35% to 0.70%.




Source: *Krishi Vigyan Kendra (IARI) Shikohpur, Gurugram, Haryana*

SHRI JAGAT RAM

Village : Nasirpur

Tehsil : Karnal

District : Karnal

Contact No. : 07027385200

Email : subham1994.sc74@gmail.com

Education : 8th

Practices adopted

- Considered as a progressive farmer in natural farming & organic products.
- Cultivated about 125 fruits, vegetables and other crops.
- Prepared and used various natural farming inputs like beejamrit, jivamrit and neem oil.
- Used paddy straw residue for mulching crops to prevent loss of moisture and weed infestation.
- Prepared organic manure by decomposing crop residue of previous crops.
- Adopted drip irrigation method.
- Used trap crops like tobacco for pest and disease management.
- Developed a desi seed bank of fruit and vegetables crops.
- Organized training programme on organic/ natural farming every Sunday.
- Linked with Participatory Guarantee System for India and NABARD for marketing of organic produce.
- Used ICT tools for marketing (WhatsApp Group and social media).
- Participated in fairs, exhibitions and forums to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1ha)
Crop	Mixed fruits and vegetables	
Cost of cultivation (₹)	96000	136000
Production (q)	76	80
Gross return (₹)	240000	164000
Net return (₹)	144000	28000
BC ratio	1.5	0.2

Benefits and achievements

- Reduced input cost.
- Resulted in higher yield of fruit and vegetables.
- Improved soil health.
- Increased demand of products.
- Established his store (Raghukul Naturals) in Karnal city for marketing organic products.
- Trained about 10,000 farmers in natural farming.

Source: *Krishi Vigyan Kendra, ICAR-NDRI, Karnal, Haryana-132001*

SHRI PHOOL KUMAR

Village : Bhaini mato

Tehsill : Maham

District : Rohtak

Contact No. : 94682-45297

Education : Matriculation (10th Class)

Email : phoolmato@gmail.com

Practices adopted

- Followed a multilayer farming system: lemon, banana, shehjan, pomegranate and apple.
- Reared two cows of Haryana cow breed and established a biogas plant.
- Practiced bio-mulching.
- Mentored in natural farming & bio input preparation.
- Established a group of farmers for natural farming in Rohtak district.
- Developed a seed bank of field and vegetable crops.
- Established solar water pump along with sprinkler irrigation.
- Organized kisan gosthi and farm visits regularly.
- Linked with KVK, Rohtak and Subhash Palekar Natural Farming group.
- Used ICT tools (WhatsApp Group) for marketing of organic produce.
- Participated in krishi melas and exhibitions.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.25 ha)	Conventional Farming (1.25 ha)
Crop	Lemon, Banana, Shehjan, Pomegranate, Apple Vegetable crops like Onion, Turmeric, Cucurbits and Root crops	
Cost of cultivation (₹)	350000	85000
Production (q)	48	38
Gross return (₹)	750000	190000
Net return (₹)	400000	105000
BC ratio	1.14*	1.2

*BC ratio is less under natural farming because initial cost of establishing orchard is higher and some of the fruit plants are yet to start bearing.

Benefits and achievements

- Increased income through natural/organic farming.
- Benefitted about 250 farmers every year through trainings and also by providing seeds of different crops.
- Awarded by Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar during Krishi Melas (Rabi) 18-19th September 2017 for being a progressive farmer.
- Awarded by the Department of Agriculture and Farmers Welfare, Govt. of Haryana for participation at the 4th Agriculture Leadership Summit -2019 held from 15th–17th February in Gannaur, Sonipat, Haryana.
- Received the Chaudhry Chhotu Ram Gaurav award during the 75th death anniversary of Sir Chhotu Ram (Kisan Leader) on 9th January 2020 at village Bohar, Rohtak, Haryana.

Source: *Krishi Vigyan Kendra, Rohtak-124001*

SHRI RAJ KUMAR ARYA

Village : Mehra

Block : Ladwa

District : Kurukshetra

Contact No. : 9416570414, 9416914051

Education : B. Com

Email : rajkumarbangarh99@gmail.com

Practices adopted

- Adopted natural farming since last 12 years.
- Cultivated wheat, paddy, sugarcane, green gram, black gram, bajra and vegetables under natural farming.
- Pioneered in natural farming through crop engineering (altering wheels/blades according to crop requirement) and orientation of C3 (paddy & wheat) and C4 (corn, sorghum and sugarcane) plants. Both the types of plants are used judiciously to get optimum production from natural farming. It made inter culture operations easy, cheaper and improved soil condition.
- Used desi cow based and plant-based products like beejamrit, jivamrit, neemastra and brahmastra for crop health and plant protection.
- Practiced green manuring of dhaincha/sesbania, sun hemp, cow pea, green gram, black gram and sunflower.
- Practiced water conservation technologies including mulching of crop residue, bed sowing and ridge sowing.
- Carried out weed management through mulches. Besides this, certain changes like altering wheels, adjustment to work at 12" width hoeing etc. have been done in machinery & tools of weed management. This greatly reduced the labour requirement by 80% resulting in reduction of cultivation cost.
- Practiced in-situ crop residue management with zero burning.
- Executed a direct marketing system of organic produce like wheat, rice, vegetables, gur/jaggery, khand, shakkar etc.
- Used digital media tools like WhatsApp and YouTube for dissemination of information.
- Created awareness by participating in kisan melas, kisan club meetings organized by KVK Kurukshetra and Department of Agriculture and Farmers Welfare, Kurukshetra.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Sugarcane (CJ-85)	Sugarcane (CO-238)
Cost of Cultivation (₹)	150200	155000
Production (q)	825	758
Gross return (₹)	622900	272950
Net return (₹)	472700	117950
BC ratio	3.1	0.76

Note: *Return over variable cost excluding rental value of land*

Benefits and achievements

- Reduced dependence on inputs.
- Obtained yield comparable to conventional farming.
- Improved health of consumers by providing pesticide- free produce to the customers.
- Ensured efficient and economical use of natural resources.
- Reckoned that natural farming is a step towards climate resilient agriculture.
- Provided guidance in natural farming to farmers of other states.
- Awarded by ICAR-IIWBR, Karnal for significant contribution in natural farming.
- Honored for excellent work in Organic Farming by Department of Agriculture and Famers Welfare and Department of Horticulture, Haryana during State level Golden Jubliee farmers meet on February 3, 2017.
- Received certificate of appreciation from Chaudhary Charan Singh Haryana Agricultural University (CCS HAU), Hisar for significant contribution in natural farming during Kisan Mela – 2018.
- Awarded with 'Certificate of achievement in Organic Farming' during 3rd Agri Leadership Summit-2018 held from 24-26 March 2018.
- Honored with the certificate of recognition in natural farming by (National Institute of Technical Teachers Training & Research) NITTR, Chandigarh during 28-29 November 2019.
- Awarded by CCS HAU KVK Kurukshetra on 06.06.2016 and 11.03.2019.



Source: *Krishi Vigyan Kenndra, Kurukshetra*

SHRI SATISH KUMAR

Village : Mankrola

Tehsil : Gurugram

District : Gurugram

Contact No. : 9873449296

Practices adopted

- Used natural farming inputs like jivamrit and bio pesticides like neem-baan for controlling pests.
- Prepared and applied vermi-compost to increase the soil organic matter. Used vermiwash through drip irrigation and also practiced in-situ green manuring.
- Practiced rainwater harvesting (25 Lakh sq. lit. capacity) and judiciously used water for irrigation.
- Adopted Integrated Farming System (IFS) which also includes poly house for high value vegetables, high-tech nurseries, vermi-compost units, dairy (6 buffaloes & 4 cows), biogas, walk in tunnels for vegetables and intercropping of vegetables in Kinnow orchard.
- Reduced the cost by 90% by using mixture of 30% coco peat and 70% vermi-compost of self-owned unit, instead of using mixture of coco peat, vermiculite & perlite.
- Produced vegetable seedlings in soil less media (coco-peat, vermiculite and perlite).
- Used ICT mechanisms for ease in coordination (WhatsApp & Facebook).
- Participated in scientific forums and exhibitions.

Comparison between Natural Farming and Conventional Farming

(i) Natural Farming

Crop	Area (ha)	Production (q)	Cost of cultivation (₹)	Gross return (₹)	Net return (₹)	BC ratio
Mustard (RH-0749)	1.0	28.75	45750	143750	98000	3.14
Wheat (HD-2967)	1.0	56.12	61250	152609	91359	2.49
Watermelon (Sugar baby)	0.50	102.5	30000	225000	195000	7.50
Bottle gourd (Pusa Naveen)	0.16	32.65	15000	67000	52000	4.46

(ii) Conventional Farming

Crop	Area (ha)	Production (q)	Cost of cultivation (₹)	Gross return (₹)	Net income (₹)	BC ratio
Mustard (RH-0749)	1.0	22.0	38500	110000	71500	2.85
Wheat (HD-2967)	0.80	46.0	53000	124200	71200	2.34
Watermelon (Sugar baby)	0.40	88.0	32500	193170	160670	6.0
Bottle gourd (Pusa Naveen)	0.50	105.0	37500	157500	120000	4.2

Benefits and achievements

- Resulted in diversification of crops.
- Reduced cost of cultivation.
- Increased production and income from different components.
- Improved soil health.
- Benefitted more than 2000 farmers by adopting the IFS farming model.
- Awarded with Krishi Ratna Award in 2018-19.
- Awarded with IARI Innovative Farmer Award-2017.

Source: *Krishi Vigyan Kendra (IARI) Shikohpur, Gurugram, Haryana*

SHRI SHALANDER KUMAR

Village : Uplana

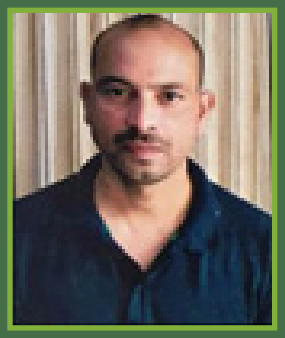
Tehsil : Assandh

District : Karnal

Contact No. : 09896003809

Education : B.Sc.

Email : kingsorganic9999@gmail.com



Practices adopted

- Cultivated improved variety of chickpea (HC-5).
- Used multi-crop planter for sowing.
- Adopted farm mechanization in paddy crop residue management.
- Used organic manures (cow dung, cow urine) and bio pesticides.
- Practiced green manuring (dhaincha and moong) for the improvement of soil fertility.
- Prepared and used natural inputs such as beejamrit, jivamrit, agniastra and neem oil.
- Brought about value addition in chickpeas by processing it and marketing it as chickpea dal and other such products.
- Trained many farmers and encouraged them to adopt natural farming.
- Linked with Participatory Guarantee System for India (PGS India) for marketing of organic produce.
- Used ICT tools for marketing (WhatsApp Group and other social media platforms).
- Participated in fairs, exhibitions, and forums to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Chickpea	Chickpea
Cost of cultivation (₹)	10332	22540
Production (q)	15.50	13
Gross return (₹)	79050	66300
Net return (₹)	68718	43760
BC ratio	6.65	1.94

Benefits and achievements

- Reduced input cost leading to considerably low cost of cultivation.
- Increased yield and demand of products.
- Improved soil health.

Source: *Krishi Vigyan Kendra, ICAR-NDRI, Karnal, Haryana-132001*

HIMACHAL PRADESH

SHRI AJAY RATTAN

Village : Niyun

Block : Ghumarwin

District : Bilaspur

Contact No. : 9816739041

Practices adopted

- Adopted cost effective and climate resilient natural farming practices.
- Followed mulching and intercropping.
- Used inputs like jivamrit, ghanjivamrit, dashparni ark, saptadhayankur ark etc., made by using local resources.
- Cultivated leguminous crops, grown as intercrops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for efficient coordination (WhatsApp Group).
- Participated in exhibitions and other functions to create awareness regarding natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (2 ha)			Conventional Farming (2 ha)		
	Rabi	Kharif	Annual	Rabi	Kharif	Annual
Crops	Pea, Wheat, Gram, Garlic, Onion	Maize, Sugarcane and other vegetables, Sunflower	Rabi + Kharif	Wheat, Gram, Onion, Garlic	Maize, Pea, Capsicum	Rabi + Kharif
Cost of cultivation (Including marketing costs) (₹)	23000	19000	42000	45000	40000	85000
Production (q)	95	125	220	55	60	115
Gross return (₹)	171000	275000	446000	99000	108000	207000
Net return (₹)	148000	256000	404000	54000	68000	122000
BC ratio	6.4	13.4	9.6	1.2	1.7	1.4

Benefits and achievements

- Reduced cost of cultivation.
- Increased yields.

- Better income.
- Mentored in natural farming & input preparation.
- Trained 1500 farmers and guided 250 farmers to adopt natural farming.
- Awarded with 'Krishi Ananya' by Hon'ble Governor of Himachal Pradesh.
- Received the 'Best Farmer' award by CSKHPKV Palampur.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI ANUBHAV BANSAL

Village : Dattowal

Block : Nalagarh

District : Solan

Contact No. : 9418093007

Practices adopted

- Adopted natural farming and followed mulching and intercropping.
- Prepared and used various decoctions (jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.) made by using local resources.
- Grew leguminous crops for nitrogen fixation in the orchard.
- Organised workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for better coordination (WhatsApp Group).
- Participated in exhibitions and seminars to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.2 ha)	Conventional Farming (1.2 ha)
Crops	Turmeric intercropped with Pulses, Wheat, Tomato, French Bean, Garlic	Turmeric
Cost of cultivation (including marketing costs) (₹)	36000	37000
Production (q)	44.2	42.5
Gross return (₹)	360000	306000
Net return (Rs)	324000	269000
BC ratio	10.00	8.27

Benefits and achievements

- Reduced cultivation cost.
- Increased yield and income.
- Created personal brand by the name “Pura Farms”.
- Mentored in natural farming, input preparation and marketing of natural produce.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI ARJUN SINGH

Village : Prada
Block : Nahan
District : Sirmour
Contact No : 98052-74263
Education : MA (Sociology), Diploma in Ayurveda Pharmacy

Practices adopted

- Adopted natural farming in 2018.
- Cultivated garlic with spinach, radish, and other seasonal vegetables on a farm area of 0.96 ha.
- Established a Sansadhan Bhandar with the Government's assistance to promote natural farming in the village and to supply necessary inputs like ghanajivamrit, jivamrit, saptdhanyankur ark, and various concoctions to other farmers.
- Conducted demonstrations on input preparations used in natural farming for other farmers in association with ATMA officials.
- Created awareness on natural farming through WhatsApp and Facebook.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.96 ha)	Conventional Farming (0.96 ha)
Crops	Garlic (Spinach and Radish)	Garlic
Cost of cultivation (Including marketing cost) (₹)	70000	121000
Production (q)	89	85
Gross return (₹)	445000	425000
Net return (₹)	375000	304000
BC ratio	5.4	2.5

Benefits and achievements

- Reduced incidence of pests and diseases by spraying various concoctions.
- Increased the number of beneficial insects in the field through cultivation of multiple crops.
- Observed increase in the number of earthworms in the soil.
- Increased soil fertility.
- Made crops resistant to drought conditions.

- Reduced cost of cultivation.
- Resulted in chemical-free produce.
- Increased income through natural farming along with allied activities.
- Encouraged more than 200 farmers to adopt natural farming.
- Created FPO by the name “Aapka Family Farmer” along with other farmers of the Panchayat.
- Received Award of Honour from Agriculture Department and an appreciation certificate from District Administration in 2021.
- Designated member of DFAC.

Source: *State Project Implementing Unit, PK3Y HP*

SHRI DIWAN CHAND

Village : Naraish

Block : Kullu

District : Kullu

Contact No. : 889497160

Practices adopted

- Practiced natural farming methods.
- Prepared and used various decoctions like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.
- Practiced mulching and intercropping.
- Organized workshops on natural farming at village and panchayat level.
- Used ICT mechanism for efficient coordination (WhatsApp Group).
- Participated in exhibitions and events to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.16 ha)	Conventional Farming (0.16 ha)
Crops	Apple, Pea, Tomato, Kidney bean, Maize, Cucumber, Pomegranate	Apple, Pea, Pomegranate, Tomato
Cost of cultivation (including marketing costs) (₹)	86500	202500
Production (q)	55	50
Gross return (₹)	825000	750000
Net return (₹)	738500	547500
BC ratio	8.5	2.7

Benefits and achievements

- Reduced cost of cultivation.
- Obtained higher yields and earned better income.
- Increased shelf life of pomegranate fruit.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan,Shimla-05*

SHRI GAGAN PAL

Village : Sayar Dobha

Block : Bilaspur Sadar

District : Bilaspur

Contact No. : 8219733214

Practices adopted

- Practiced natural farming.
- Adopted mulching and intercropping.
- Prepared and used various inputs like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark made by using local resources.
- Organized workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for efficient coordination (WhatsApp Group).
- Participated in exhibitions and events to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.64 ha)	Conventional Farming (0.64 ha)
Crops	Maize, Moong, Urad, Yam, Tomato, Capsicum, Ginger, Wheat, Soybean, Ridge Gourd, Bottle Gourd, Garlic	Maize, Wheat, Ginger, Capsicum, Urad
Cost of cultivation (Including marketing costs) (₹)	54000	72000
Production (q)	82	77
Gross return (₹)	205000	192500
Net return (₹)	151000	120500
BC ratio	2.8	1.67

Benefits and achievements

- Reduced cost of cultivation.
- Obtained higher yields.
- Increased shelf life of vegetables.
- Earned higher income.
- Avoidance of chemical farming resulted in improvement in health.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla*

SHRI KALZANG LADDE

Village : Chicham

Block : Kaza

District : Lahaul & Spiti

Contact No. : 9459758656

Practices adopted

- Cultivated vegetables through natural farming.
- Adopted mulching and intercropping.
- Prepared and used various natural farming inputs like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.
- Grew leguminous crops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Collaborated through ICT mechanism (WhatsApp Group).
- Participated in exhibitions and other events to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.2 ha)	Conventional Farming (1.2 ha)
Crops	Potato, Barley, Black Pea, Cauliflower, Radish, Tomato	Potato, Barley, Black Pea, Cauliflower, Radish, Tomato
Cost of cultivation (Including marketing costs) (₹)	40000	52000
Production (q)	120	107
Gross return (₹)	300000	267500
Net return (₹)	260000	215500
BC ratio	6.5	4.14

Benefits and achievements

- Reduced cost of cultivation.
- Higher yields.
- Increased shelf life of vegetables.
- Increased income.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit, Krishi Bhawan, Shimla*

SHRI MAYA RAM

Village : Syanj

Block : Gohar

District : Mandi

Contact No : 9882289848

Practices adopted

- Implemented cost effective, climate resilient natural farming practices.
- Practiced mulching and intercropping.
- Prepared and used natural farming inputs like jivamrit, ghanajivamrit, dashparni ark and saptdhayankur ark.
- Arranged leguminous crops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Implemented ICT mechanism for effective coordination (WhatsApp Group).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.56 ha)			Conventional Farming (0.56 ha)		
	Rabi	Kharif	Annual	Rabi	Kharif	Annual
Crops	Pea (Cabbage, Mustard, Garlic, Gram)	French Beans (Pea, Cauliflower Maize, Kidney Beans, Ginger)	Rabi + Kharif	Pea, Cabbage, Garlic	Cauliflower, French Beans, Ginger	Rabi + Kharif
Cost of cultivation (Including marketing costs) (₹)	20000	28000	48000	26250	48125	74375
Production (q)	65	70	135	52.5	65.6	118.1
Gross return (₹)	227500	210000	437500	183750	196875	380625
Net return (₹)	207500	182000	389500	157500	148750	306250
BC Ratio	10.37	6.5	8.1	6	3.09	4.11

Benefits and achievements

- Reduced cultivation cost.
- Resulted in high yields of food grain, cereal, and fruit through effective application of jivamrit and ghanajivamrit, which improved soil-health.

- Added to profit through nutrient-rich soil.
- Increased income.
- Mentored about 25 farmers in natural farming.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI MOTI LAL

Village : Mudgram

Block : Keylong

District : Lahaul & Spiti

Contact No. : 9418464234

Practices adopted

- Implemented the cost effective and climate resilient natural farming methods.
- Followed mulching and intercropping to enhance income.
- Used various natural inputs like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.
- Organized workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for efficient coordination (WhatsApp Group).
- Participated in exhibitions and forums to create awareness.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.32 ha)	Conventional Farming (0.32 ha)
Crops	Pea, Potato, Kidney Bean, Cauliflower, Kuth	Pea, Cauliflower, Potato, Barley
Cost of cultivation (including marketing costs) (₹)	8000	13500
Production (q)	42	35
Gross return (₹)	210000	175000
Net return (₹)	202000	161500
BC ratio	25.25	11.96

Benefits and achievements

- Reduced disease incidence in pea, cauliflower, cabbage, and apple.
- Reduced input cost.
- Obtained significantly higher yield and earned higher income.
- Increased shelf life of vegetables and fruits.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI PURAN DEV THAKUR

Village : Soda Dhyadi
Block : Pachhad
District : Sirmour
Contact No : 98165-83756
Education : Plus two

Practices adopted

- Adopted natural farming since 2018.
- Cultivated tomato, bean, okra, colocasia and cucumber in 0.8 ha land.
- Established a Sansadhan Bhandar with the government's assistance to promote natural farming in the village and supply necessary inputs like ghanajivamrit, jivamrit, saptdhanyankur ark, and various concoctions to other farmers.
- Conducted demonstrations on input preparations used in natural farming for other farmers in association with ATMA officials.
- Created awareness on natural farming through WhatsApp and Facebook.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.8 ha)	Conventional Farming (0.8 ha)
Crops	Tomato (Bean, Okra, Colocasia, Cucumber)	Tomato
Cost of cultivation (₹)	74000	111000
Production (q)	265	258
Gross return (₹)	477000	464400
Net return (₹)	403000	353400
BC ratio	5.4	3.2

Benefits and achievements

- Reduced incidence of pests and diseases by spraying various concoctions.
- Increased the number of beneficial insects in the field through cultivation of multiple crops.
- Increased soil fertility and earthworms in the soil.
- Made crops resistant to drought conditions.
- Reduced cost of cultivation.
- Resulted in chemical-free produce.

- Increased income through farming along with allied activity.
- Encouraged young farmers to adopt natural farming.

Source: *State Project Implementing Unit, PK3Y HP*

SHRI ROOP CHAND RAHI

Village : Dhwara

Block : Seraj

District : Mandi

Contact No. : 8219235492

Practices adopted

- Developed a successful natural farming model for agriculture and horticulture.
- Practiced mulching and intercropping.
- Prepared and used various decoctions (jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.) made by using local resource.
- Grew leguminous crops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for effective coordination (WhatsApp Group).
- Participated in exhibitions and seminar to create awareness about natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.96 ha)	Conventional Farming (0.96 ha)
Crops	Apple, cereal, vegetable	Apple, cereal, vegetable
Cost of cultivation (Including marketing costs) (₹)	285000	345000
Production (q)	180	150
Gross return (₹)	1080000	900000
Net return (₹)	795000	555000
BC ratio	2.79	1.6

Benefits and achievements

- Reduced cost of cultivation.
- Increased production of apples from 450 boxes (20 kilograms in one box) to 650 boxes by shifting from chemical farming to natural farming.
- Improved fruit quality.
- Enhanced revenue and income.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI SHAILENDER SHARMA

Village : Dyarag Bukhar

Block : Solan

District : Solan

Contact No. : 7018502988

Practices adopted

- Developed a successful natural farming model for vegetable production under protected cultivation.
- Followed mulching and intercropping.
- Prepared and used various natural farming inputs like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.
- Cultivated leguminous crops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Used ICT mechanism for effective coordination (WhatsApp Group).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crops	Capsicum, Tomato, Cucurbits, Kidney Beans	Capsicum, Tomato
Cost of cultivation (Including marketing costs) (₹)	20700	55000
Production (q)	115	105
Gross return (₹)	402500	367500
Net return (₹)	381800	312500
BC ratio	18.44	5.68

Benefits and achievements

- Reduced cultivation cost.
- Higher yields.
- Increased shelf life of vegetables.
- Enhanced income.
- Resulted in better health through avoidance of chemical pesticides.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI J. C. SHARMA

Village : Koti
Block : Theog
District : Shimla
State : Himachal Pradesh
Contact No. : 701850298

Practices adopted

- Adopted natural farming for high-density plantation of apples.
- Followed mulching and intercropping.
- Prepared and used various natural inputs like jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.
- Used khatti lassi (sour buttermilk) and jivamrit to check fungal infection in the orchard.
- Grew leguminous crops in orchard alleys for nitrogen fixation.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.48 ha)	Conventional Farming (0.48 ha)
Crops	Apple intercropped with Pea	Apple
Cost of cultivation (Including marketing cost (₹)	60500	102000
Production (q)	62	48
Gross return (₹)	679800	547200
Net return (₹)	619300	445200
BC ratio	10.23	5.36

Benefits and achievements

- Reduced cost of cultivation.
- Higher yields.
- Increased shelf life and quality of apple.
- Better income.
- Designated as the key strategist of Himachal Pradesh Horticulture Development Project (HPHDP) funded by World Bank.
- Served as Horticulture Secretary of Himachal Pradesh, where he introduced new interventions in the sector.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

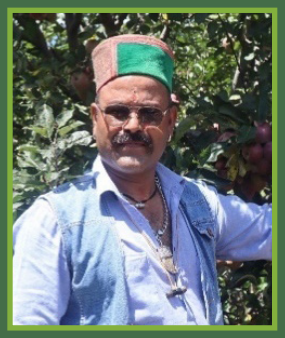
SHRI SUBHASH SHADRU

Village : Shaktinagar

Block : Rohru

District : Shimla

Contact No. : 7018194064



Practices adopted

- Developed a successful natural farming model for fruit production.
- Carried out mulching and intercropping to enhance income.
- Prepared and used various decoctions (jivamrit, ghanjivamrit, dashparni ark, saptdhayankur ark etc.) made from local resources.
- Arranged leguminous crops in orchard alleys for nitrogen fixation.
- Organized workshops on natural farming at the village and panchayat level.
- Coordinated through ICT mechanisms for effective functioning (WhatsApp Group).
- Participated in exhibitions and other events related to natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.64 ha)	Conventional Farming (0.64 ha)
Crops	Apple, cereals, vegetables	Apple, cereals, vegetables
Cost of cultivation (Including marketing costs) (₹)	216500	300000
Production (q)	144	110
Gross return (₹)	864000	660000
Net return (₹)	647500	360000
BC ratio	2.99	1.2

Benefits and achievements

- Reduced cost of cultivation and enhanced income.
- Substantial increase in production over last three years.
- Apples grown through natural farming largely sustained the stress of extreme weather.
- Benefited about 1200 farmers through trainings and workshops.

Source: *Prakritik Kheti Khushhal Kisan Yojna, State Project Implementing Unit Krishi Bhawan, Shimla-05*

SHRI VIJAY SINGH

Village : Shoran
Block : Kullu
District : Kullu
Contact No : 98576-72945
Education : Bachelor of Arts

Practices adopted

- Adopted natural farming by watching videos on YouTube.
- Attended training and adopted natural farming at a large scale in 2019.
- Cultivated apples, cereals, vegetables, and seasonal crops on a farm area of 1.5 ha.
- Established a Sansadhan Bhandar with the government's assistance to promote natural farming in the village and to supply necessary inputs like ghanajivamrit, jivamrit, saptdhanyankur ark, and various concoctions.
- Conducted demonstrations on input preparations used in natural farming for other farmers in association with ATMA officials.
- Created awareness on natural farming through WhatsApp and workshops.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.5 ha)	Conventional Farming (1.5 ha)
Crops	Apple (Cereal, Vegetable)	Apple
Cost of cultivation (₹)	480000	570000
Production (q)	336	330
Gross return (₹)	1680000	1650000
Net return (₹)	1200000	1080000
BC ratio	2.4	1.9

Benefits and achievements

- Reduced incidence of pests and diseases by spraying various concoctions.
- Increased the number of beneficial insects like honeybees in the field through the cultivation of multiple crops.
- Increased soil fertility by introducing earthworms in the soil.
- Made crops resistant to drought conditions.
- Reduced cost of cultivation.

- Identified local plants for various natural farming concoctions and shared the information with farmers and district officials.
- Increased income through farming along with allied activity.
- Encouraged fellow farmers to adopt natural farming.
- Received certificate of appreciation from Hon'ble Agriculture Minister, HP during Krishi Mela in 2019.

Source: *State Project Implementing Unit, PK3Y HP*

KERALA

SHRI OMANA KUMARAN

Village : Thiruvalla

Mandal : Pulikezhu

District : Pathanamthitta

Contact No. : 09446388261

Education : D. Civil

Email : gvannaturalfarm@gmail.com

Practices adopted

- Cultivated indigenous paddy varieties like rakthashali, kunjukunju, kannukulampan, njavara (medicinal rice) under natural farming. Natural farming inputs like ghanajivamrit, dravajivamrit and fresh leaves were used in paddy with average yield of 27 quintals/ acre. Neemastra was used for pests and diseases control.
- Used dashaparni kashaya in vegetables, tuber crops, ginger, and banana for pest control.
- Used drum seeder for sowing paddy and cono weeder for weed control.
- Maintained indigenous paddy (60 varieties), bananas (14 varieties), tuber crops (15 varieties) and ginger-b variety.
- Maintained desi-cow breeds Vechoor and Kasaragod.
- Conducted trainings on natural farming in Kerala along with other states and trained around 600 farmers per annum.
- Helped other farmers, practicing natural farming, to sell their produce.
- Assigned as a master farmer of Govardhan Prakrithi Krishi Pracharak Sang.
- Maintained social media presence on WhatsApp, Facebook, and YouTube for promotion of natural farming.
- Participated at exhibitions and melas on natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Jyothy)	Paddy (Jyothy)
Cost of cultivation (₹)	125000	120000
Production (q)	67.5	65
Gross return (₹)	168750	162500
Net return (₹)	43750	42500
BC ratio	0.35	0.35

Benefits and achievements

- Conducted on-farm input production.
- Used self-produced seeds.
- Marketed natural produce at a better price and quality.
- Received the Rotary International Best Organic Farmer Award.
- Received the Best Organic Farmer Award of Thiruvallakrishi bhavan.
- Received the Cherukolpuzha Hindu mada Maha Mangalam Organic Farmer Award.

Source: *ICAR-Krishi Vigyan Kendra CARD, Kolabhagom, Pathanamthitta*

SMT. PREETHA KUMARI JAYAKUMAR

Village : Eraviperoor

Mandal : Koipram

District : Pathanamthitta

Contact No : 09495537648

Education : M. Com, PGDCA

Email : preethajp@yahoo.com

Practices adopted

- Adopted Natural Farming.
- Maintained 10 desi-cows and 5 bulls.
- Maintained indigenous vegetables, ginger and tuber crops.
- Practiced rain shelter cultivation.
- Practiced minisett cultivation in elephant foot yam.
- Produced bio inputs.
- Cultivated azolla/duck weed as fish feed.
- Reared kadaknath, naked neck, fayoumi variety poultry bird.
- Reared indigenous ducks- Chara, Chemballi.
- Conduced training on natural farming.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in exhibitions and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.12 ha)	Conventional Farming (0.12 ha)
Crop	Turmeric	Turmeric
Cost of cultivation (₹)	51750	53700
Production (q)	4.8 (dry turmeric)	5.1 (dry turmeric)
Gross return (₹)	96000	75600
Net return (₹)	44250	21900
BC ratio	0.85	0.41

Benefits and achievements

- Reduced cost of cultivation.
- Reduced input cost.

- Saved labour cost and time.
- Benefitted about 2500 farmers every year through training and workshops.
- Participated in Doordarshan Mahila Kisan Award 2019.
- Received Krishi Bhavan Best Women Farmer Award.
- Received Kerala Livestock Development Board Best Women Farmer Award 2020.

Source: *ICAR-Krishi Vigyan Kendra CARD, Kolabhagom, Pathanamthitta*

SHRI SABU V. U.

Village : Ambalavayal

Mandal : Sulthan Bathery

District : Wayanad

Contact No : 8111881101

Education : MBA (Health Care Management)

Practices adopted

- Adopted natural farming since 2018.
- Cultivated a farm area of 15 cents, out of which 5 cents is used for an Orchid Garden, about 3 cents for conserving wild orchids, and the remaining area for establishing a kitchen garden.
- Wild orchids are collected from natural habitat from mountain regions through transect by retaining the mother plant at the source area. The plantlets are taken care in the orchidarium and after its growth and multiplication, taken back to natural habitat as a means of conservation.
- Used Natural farming techniques for conservation of wild orchids.
  - Gliricidia extracts and glyrecedia mulches used for root establishment.
  - Supernatant solution of cow dung sprayed for facilitating vegetative growth, which act as a bio-fungicide.
  - Neem oil garlic emulsion is prepared and applied to ward of pests from orchids.
  - Puthina extract is diluted and sprayed to ward of ants and snails that frequently affect orchid growth.
- Conducted training on conservation of wild orchids and commercial cultivation of orchids for the youth as well as the farmers.
- Acted as a resource person to KVK for training of orchid cultivation.
- Conducted demonstrations on input preparations used in natural farming for other farmers, with the help of KVK team.
- Created awareness about natural farming, through WhatsApp.
- Owner of Eunoia Orchid Garden. He has a collection of 150 varieties of orchids including Dendrobium, Phalaenopsis, Vanda, Mukkara, Tolumina, Oncidium, Cattelya etc. Apart from these, more than 40 varieties of wild orchids (native orchids) have been collected and sheltered under a wild crown. The farm is provided with music system, solar light system and misty water irrigation facilities to attract tourists.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.02 ha)	Conventional Farming (0.02 ha)
Crop	Commercial Orchid	Commercial Orchid
Cost of cultivation (₹)	450000	500000
Production (q)	5100 plants	5000 plants
Gross return (₹)	850000	800000
Net return (₹)	450000	300000
BC ratio	1.89	1.6

*Natural farming is mainly for conserving wild orchids. These practices are effective for commercial orchid cultivation as well.

Benefits and achievements

- Conserved and protected wild orchids which are almost extinct.
- Reduced incidence of pests and diseases by spraying botanical extracts.
- Increased the number of beneficial insects like honeybees in the field through cultivation of multiple crops.
- Reduced cost of cultivation.
- Resulted in chemical free produce.
- Increased additional income through farming along with allied activity.
- Encouraged several farmers to adopt natural farming.
- Received an award for innovative and natural farming techniques to conserve wild orchid from VHSE, Ambalavayal, Department of Education in 2021.

Source: *Krishi Vigyan Kendra, Ambalavayal, Wayanad, Kerala*

SHRI SHAJI N.M

Village : Illathuvayal
Mandal : Mananthavady
District : Wayanad
Contact No : 9747853969
Education : 10th standard

Practices adopted

- Practiced mixed farming in 3 acres with one-acre tubers.
- Cultivated different traditional rice varieties in 9 acres of leased land.
- Conserved around 200 tuber crops including greater yam, lesser yam, elephant foot yam, arrow root, colocasia, sweet potato, cassava and Chinese potato.
- Conserved and grown 40 turmeric varieties and 30 ginger varieties in his farmstead.
- Conserved a few traditional varieties of medicinal value in the verge of extinction.
- Practiced natural farming techniques, zero tillage, mulching, vermicomposting, fermented cowdung cum groundnut slurry for manuring, bio botanicals like tobacco decoction, neem oil emulsions for pest management.
- Conducted demonstrations on input preparations used in natural farming for other farmers, with the help of KVK team.
- Created awareness about natural farming through WhatsApp.
- Participated in exhibitions and fairs for popularizing different tuber varieties.
- Practiced cyclic transfer of seed material wherein 10 kg seed material will be provided to farmers under the condition to give back same in the ensuing year. The seeds will be passed on to next needy.
- Conducted various awareness training programmes for visitors including scholars, school and college students as well as for progressive farmers.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.2 ha)	Conventional Farming (1.2 ha)
Crop	Tubers	Tubers
Cost of cultivation (₹)	280000	300000
Production (q)	240	210
Gross return (₹)	370000	340000
Net return (₹)	90000	40000
BC ratio	1.32	1.13

Benefits and achievements

- Reduced incidence of pests and diseases by spraying botanical extracts.
- Conserved biodiversity – 200 tubers, 40 varieties of turmeric and 30 varieties of ginger.
- Known as the 'Tuber Man of Kerala' for his expertise in tuber crops.
- Popularized natural farming techniques like panchagavya, jivamrit etc.
- Reduced cost of cultivation.
- Benefited about 800 farmers every year by training.
- Awarded with the Indian Biodiversity Award, 2021.
- Awarded with the Plant Genome Savior reward, 2015.
- Awarded with the State Akshayashree award.
- Awarded with the State Kairali People TV Kathir award.
- Awarded with the State Biodiversity Board award.
- Awarded with the Kerala Agricultural University award.
- Designated as coordinator of National Youth Project, Wayanad.

Source: *Krishi Vigyan Kendra, Ambalavayal, Wayanad, Kerala*

SHRI ZAKHARIAS J. SHAN

Village : Aymanam

District : Kottayam

Contact No. : 9947748549

Education : Diploma in Computer Programming and System Management

Practices adopted

- Adopted chemical free farming since 2002 and drip irrigation system since 2007.
- Practiced fertigation with organic sources of nutrients (cow dung (10kg) + cow urine (10 L) + ground nut cake (5kg) + coconut oil cake (10kg) per 200 L of water). Also, practiced fertigation using water from fishpond.
- Applied soil test-based lime and organic manure.
- Recycled organic residue and used rice husk ash as a rich source of organic carbon.
- Used bio inputs like pseudomonas and PGPR mix 1 of Kerala Agricultural University and created awareness about the technology.
- Prepared and used inputs like jivamrit, beejamrit and fermented oil cakes along with pgpr mix 1.
- Adopted farm mechanization in organic paddy cultivation (power tiller, paddy trans planter and cono weeder).
- Used trichocards for controlling lepidopteran pests in paddy.
- Practiced high intensity vegetable and fish culture.
- Cultivated high value crops like watermelon and cucumber along with other vegetables.
- Involved the entire family in farming.
- Participated in group meetings and scientific forums.
- Created awareness through social media platforms and media coverage (both print and electronic).
- Listed as a beneficiary of On-Farm Testing (OFT) and Frontline Demonstration (FLD) of KVK.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.8 ha)	Conventional Farming (0.8 ha)
Crop	Paddy (Uma)	Paddy (Uma)
Cost of cultivation (₹)	40000	55000
Production (q)	52.5	50

Parameters	Natural Farming (0.8 ha)	Conventional Farming (0.8 ha)
Gross return (₹)	147000	140000
Net return (₹)	50000	24020
BC ratio	3.68	2.54

Benefits and achievements

- Reduced cost of production through optimum utilization of land and recycling resources.
- Certified as a PGS green organic farmer.
- Harvested produce without pesticide residue. (Certificate from Pesticide Residue Research Analytical Lab (PRRAL), Kerala Agricultural University (KAU).
- Lessened the incidence of pest and diseases.
- Maintained soil health.
- Provided food security as well as nutritional security to the family.
- Designated as the master trainer at the district level on organic farming, precision farming, rain-shelter structure construction, aquaculture, aquaponics etc.
- Awarded the best farmer award (block level) from the Dept. of Agriculture, Govt. of Kerala.
- Awarded the best organic farmer award (district level) by Sarojini Damodaran Foundation.
- Selected as a finalist of the best organic farmer award (state level) of Dept. of Agriculture, Govt. of Kerala
- Designated as the farmer representative of Scientific Advisory Committee (SAC) of KVK, Kottayam.
- Assigned as the host farmer to Rural Agricultural Work Experience (RAWE) students.
- Recognized as a model farmer of the Dept. of Agriculture, Vegetable and Fruit Promotion Council Keralam (VFPCK) & KVK.
- Recognizedas a model farmer of Integrated Farming System (IFS) (Agriculture + Fisheries + Dairy + Poultry).



Source: *Krishi Vigyan Kendra, Kerala Agricultural University, Kumarakom P. O., Kottayam*

MADHYA PRADESH

SMT. JEETKALA MARAVI

Village : Singpur
Mandal : Niwas
District : Mandla
Contact No. : 9171492317
Education : Std III

Practices adopted

- Cultivated 18 types of vegetables including lemon and papaya in her kitchen garden.
- Treated seeds and performed seedling root dipping in beejamrit.
- Prepared and used natural inputs like jivamrit.
- Participated in district and state level natural farming trainings.
- Conducted and facilitated mass training of other women farmers in the village on seed treatment, root treatment, cow-urine application, jeevamrit preparation, line sowing of paddy, etc
- Conducted rallies and mass campaigns about the use of locally available resources in the village.
- Assisted others in establishing kitchen gardens in the village.
- Presided over the village level institution- Prakriti Sansadhan Prabandhan Samiti Singpur, for more than 5 years.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.1 ha)	Conventional Farming (0.1 ha)
Crop	Vegetables and Papaya (Indigenous variety)	Papaya (Indigenous variety)
Cost of cultivation (Rs.)	258	258
Production (q)	3.90	0.50
Gross return (Rs.)	15785	5745
Net return (Rs.)	15527	5487
BC ratio	60.18	21.26

Benefits and achievements

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good fruit quality, size and increased shelf life.

- Increased net income by cultivating vegetables as intercrops.
- Consumed and sold chemical-free food, especially useful during the covid lockdown when people's access to the local market was barred. In the last year, apart from self-consumption, and gifting the produce to her relatives and neighbors, she sold the vegetables from her kitchen garden.
- Improved soil health, with high earthworm count.

Source: *Directorate of Agriculture, Bhopal MP*

SHRI NARENDRA SINGH RATHORE

Village : Labrawda

Block : Dhar

District : Dhar

Contact No : 7000804988

Education : 5th

Practices adopted

- Adopted natural farming since 2012. The field is registered with State Organic Certification Agency, Bhopal.
- Cultivated moong, urid (black gram) and turmeric during kharif season for value added products by organic farming.
- Prepared and used beejamrit for seed treatment and jivamrit for nutrition management.
- Prepared and used dusparni ark, brahmastra, neemastra and agniastra for controlling pests.
- Used bio fertilizers like rhizobium, phosphate solubilising micro-organism (psb), potassium solubilizing bacteria (ksb), zinc solubilizing biofertiliser (zsb), vermi compost and vermi wash through drip irrigation.
- Reared10 desicows i.e., Gir & Malvi.
- Linked with OFAI (Organic farming Association of India) for processing and supply of organic inputs prepared/ value added products as SG jaivik Krishi farm, Labrawada like, moong dal, urid dal and turmeric powder in satisfactory cost.
- Used ICT mechanism (WhatsApp and face book).
- Participated in exhibitions / workshops and forums regularly.
- Provided regular trainings to other farmers

Comparison of cost of cultivation of Natural Farming (NF) and Conventional Farming (CF)

Crops	Cost of cultivation (ha)		Gross return (ha)		Net return (After value added)		BC ratio	
	NF	CF	NF	CF	NF	CF	NF	CF
Turmeric	136000	112000	625000	420000	489000	308000	4.59	3.75
Black Gram	25500	24200	104000	70000	78500	45800	4.07	2.89
Green Gram	28000	26100	123250	85000	95250	58900	4.40	3.25

NF= Natural farming CF= conventional farming

Dry yield and selling rate of value-added products

Crops	Value added products prepared	Dry yield (kg/ha)		Selling rate (Rs. / kg)	
		NF	CF	NF	CF
Turmeric	Powder	2500	2800	250	150
Black Gram	Dal	650	700	160	100
Green Gram	Dal	725	850	170	100

Benefits and achievements

- Utilized crop residues for mulching.
- Improved soil health.
- Generated employment.
- Generated higher income through value addition of produce.
- Consulted by many famers for natural farming.

Source: *Krishi Vigyan Kendra, Dhar (MP)*

SHRI MAN SINGH GURJAR

Village : Gardha

Tehsil : Bankhedi

District : Hoshangabad

Mobile : 9752324676

Email : gurjarmansinghnatural@gmail.com

Practices adopted

- Adopted natural farming for the last 11 years in 16 acres of land.
- Collected indigenous seeds and cultivated wheat, sugarcane and chickpea.
- Used natural inputs jivamrit, ghanjivamrit, beejamrit, neemastra, dashparni ark etc. prepared from cow dung, milk, buttermilk, and urine of indigenous cow.
- Worked in collaboration with Agriculture University, Pant Nagar, Uttarakhand for scientific evaluation of natural farming in 2016.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)		Conventional Farming (1 ha)
Crop	Sugarcane (CO-8005)	Chickpea (Vishal/Phule G-87207)	Sugarcane (CO-86032)
Cost of cultivation (₹)	75000	30850	125000
Production (q)	1250	20	1000
Gross return (₹)	770000		320000
Net return (₹)	664150		195000
BC ratio	7.27		2.56

(Farmer sold his product after processing to jaggery @ Rs. 60 per kg. Remaining yield of produce was sold as seeds @ 350/q)

Benefits and achievements

- Earned high profits.
- Reduced input cost.
- Honored by Honorable Chief Minister Shri Shivraj Singh Chauhan.
- Honored by Hon'ble Agriculture Minister GaurishankarBisen.
- Honored by Honorable District Magistrate.
- Honored by Hon'ble Agriculture Deputy Director Shri Jeetendra.

- Honored by Hon'ble Governor.
- Honored by Hindu Spiritual Foundation.
- Honored by Gujjar Gaurav Kalyan Parishad Sanstha Indore.
- Honored by Agricultural University Pant Nagar Uttarakhand.




Source: *Krisahi Vigyan Kendra Govindnagar, Hoshangabad (M.P.) – 461990*

MAHARASHTRA

SHRI ABHIJIT M WEKHANDE

Village : Kelavade

Taluk : Bhor

District : Pune

Contact No. : 9890169692

Email : abhijit.wekhande@gmail.com

Education : Computer Engineering

Practices adopted

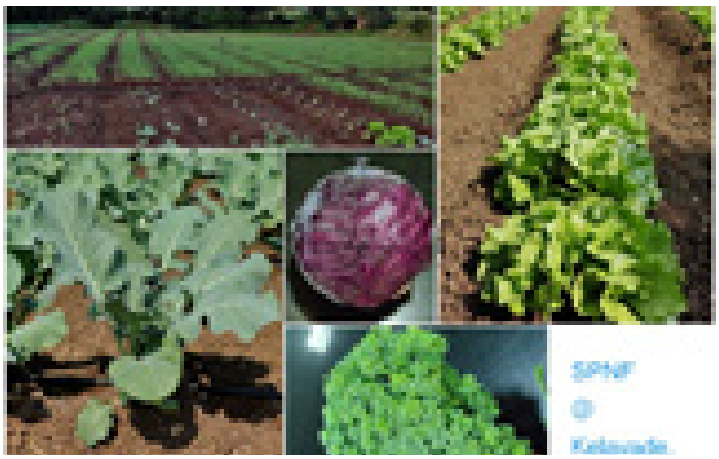
- Followed four pillars of natural farming namely, beejamrit, jivamrit, achhadan, whapasa while farming.
- Cultivated onion, wheat, sorghum, vegetables and exotic vegetables.
- Participated in natural farming workshops.
- Disseminated useful technology systems to fellow farmers.
- Visited housing societies in Pune for marketing and creating awareness about the importance of natural products.
- Involved in WhatsApp Groups.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Groundnut	Groundnut
Cost of cultivation (Rs)	15000	10000
Production (q)	8.0	5.0
Gross return (₹)	40000	25000
Net return (₹)	25000	15000
BC ratio	1.7	1.5

Benefits and achievements

- Reduced production cost.
- Increased the quality of agriculture produce.
- Sold vegetables & exotic vegetables to housing societies at Pune in COVID period.
- Increased agriculture income by 50% as compared to conventional methods.



Source: *Commissionerate of Agriculture, Pune, Maharashtra 411005*

SHRI ADINATH ANNAPPA KINIKAR

Village : Kogil Budruk

Block : Karveer

District : Kolhapur

Contact No. : 9673946519

Education : 7th

Practices adopted

- Adopted natural farming since the last 35 years.
- Cultivated paddy, sugarcane, soybean, groundnut, green gram, sorghum, moong and vegetables under natural farming.
- Pioneered in natural farming through crop diversification. Used vermicompost judiciously to get optimum production from natural farming, thereby improving soil health condition.
- Used desi cow-based and plant-based products like beejamrit, jivamrit, gir-go kripaamrutam bacterial culture, neemastra and brahmastra for crop health and plant protection. Also used yellow sticky traps for control of aphid.
- Practiced green manuring of dhaincha/sesbania, sunhemp, cow pea, green gram, black gram, and sunflower.
- Practiced water conservation techniques including mulching of crop residue, bed sowing and ridge sowing along with drip irrigation. Carried out weed management through mulches.
- Developed a mixed horticulture block of half acre where different fruit crops (mango, sapota, lemon, papaya, guava, custard apple, banana, and drumstick) have been planted along with ginger, brinjal, chilli, cabbage, and other seasonal vegetables.
- Practiced in-situ crop residue management with zero burning.
- Established a vermicomposting unit having the capacity of 12 tons per year.
- Executed a direct marketing system for wheat, rice, vegetables etc. Apart from this he is directly linked with Siddhagiri Natural Farmer Producer Company, Kaneri Math for selling organic vegetables and fruits.
- Used digital media tools like WhatsApp and YouTube for dissemination of information.
- Created awareness by participating at weekly markets and kisan club meetings organized by KVK Kaneri, Kolhapur and Department of Agriculture and Farmers Welfare, Kolhapur.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming			Conventional Farming		
Crop	Sugarcane (CO-86032) (0.8 ha)	Soybean (KDS-726) (0.8 ha)	Paddy (Local) (0.4 ha)	Sugarcane (CO-86032) (0.8 ha)	Soybean (KDS-726) (0.8 ha)	Paddy (Local) (0.4 ha)
Cost of cultivation (₹)	72300	22590	14250	105000	28250	15780
Production (q)	840	20	14	810	18.5	12.5
Gross return (₹)	277200	90000	30800	234900	83250	27500
Net return (₹)	204900	67410	16550	129900	55000	11720
BC ratio	2.83	2.98	1.16	1.23	1.94	0.74

***(Note:** Soybean crop is intercropped with Sugarcane in0.8 ha area. Total area: 1.2 ha)*

Benefits and achievements

- Reduced dependence on inputs from external sources.
- Obtained good yield in comparison with conventional farming.
- Provided chemical-free products to the customers.
- Ensured efficient and economical use of natural resources.
- Provided guidance in natural farming to other farmers in the district.
- Received Chaudhary Charan Singh Progressive farmers' award for the year 2020






***Source:** Krishi Vigyan Kendra, Kaneri, Kolhapur, Maharashtra.*

SHRI APPASAHEB PANDURANG PATIL

Village : Mauje Sangav

Block : Kagal

District : Kolhapur

Contact No. : 9420134602

Education : M.Com

Practices adopted

- Adopted natural farming for the last 18 years in the form of multi-crop farming.
- Cultivated sugarcane, soybean, rice and different seasonal vegetables (brinjal, chilli, cauliflower, cabbage) under natural farming.
- Pioneered in natural farming through crop diversification. Used vermicompost and various homemade inputs judiciously to get optimum production from natural farming.
- Used desi cow based and plant-based products like beejamrit, jivamrit, gir-go kripaamrutam bacterial culture, neemastra and brahmastra for crop health and plant protection. Also used yellow sticky trap for control of aphid.
- Practiced green manuring of dhaincha/sesbania, sunhemp, cow pea, and green gram.
- Practiced water conservation technologies including mulching of crop residue, bed sowing and ridge sowing, along with drip and sprinkler irrigation.
- Carried out weed management through mulches. Developed an ideal integrated model of vegetables for smallholder farmers.
- Practiced in-situ crop residue management with zero burning.
- Marketed produce directly in mandis, FPOs and through home delivery. Directly linked with Siddhagiri Natural Farmer Producer Company, Kaneri Math for selling organic vegetables and fruits.
- Used digital media tools like WhatsApp and YouTube for dissemination of information.
- Created awareness by participating at weekly markets and kisan club meetings organized by KVK Kaneri, Kolhapur and Department of Agriculture and Farmers Welfare, Kolhapur.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming		Conventional Farming	
Crop	Sugarcane (CO-86032) (1 ha)	Soybean (KDS-726) (1 ha)	Sugarcane (CO-86032) (1 ha)	Soybean (KDS-726) (1 ha)
Cost of cultivation (₹)	82500	27500	140000	31666
Production (q)	935	26.25	920	22.55

Parameters	Natural Farming		Conventional Farming	
Gross return (₹)	308550	118525	266800	101475
Net return (₹)	226050	90625	126800	69809
BC ratio	2.74	3.29	0.90	2.20

(Soybean is intercropped in Sugarcane in1 ha area. Total area: 1 ha)

Benefits and achievements

- Reduced the dependence on inputs from external sources.
- Obtained good yield.
- Harvested chemical–free produce.
- Ensured efficient and economical use of natural resources.
- Guided about natural farming to other farmers in the district.
- Honoured with the Vasant Rao Naik Krushi Bhushan awardfor the year 2019 by the Government of Maharashtra.
- Earned a place on the Limca Book of Records 2008 for cultivating the longest snakegourd of 2.49 m (8ft 2 in).
- Received Chaudhary Charan Singh Progressive farmers' award for the year 2020 from Krishi Vigyan Kendra, Kaneri, Kolhapur, Maharashtra.

Source: *Krishi Vigyan Kendra, Kaneri, Kolhapur, Maharashtra*

SHRI BABASAHEB SHANKAR KOOT

Village : Pimpalgaon Khurd

Block : Kagal

District : Kolhapur

Contact No. : 9503697337

Education : 10th

Practices adopted

- Adopted natural farming since the last 30 years.
- Cultivated sugarcane, soybean, lady finger and chilli under natural farming.
- Developed a horticulture-based farm on a 2-acre land, where different fruit crops (mango, guava, custard apple, banana, lemongrass, sapota, coconut, dragon fruit, kadipatta) and under tree crops Sagwan (teak wood) were planted along with lady finger, chilli and other seasonal vegetables.
- Pioneered in natural farming through crop diversification. Used vermicompost and various homemade inputs judiciously to get optimum production from natural farming. It improved soil health condition.
- Used desi cow based and plant-based products like beejamrit, jivamrit, gir-go kripaamrutam bacterial culture, neemastra and brahmastra for crop health and plant protection. Used yellow sticky trap for control of aphid.
- Practiced green manuring of sesbania, sunhemp, cow pea, green gram.
- Practiced water conservation techniques including mulching of crop residue, bed sowing and ridge sowing along with drip irrigation and water harvesting.
- Carried out weed management through mulches.
- Practiced in-situ crop residue management with zero burning.
- Executed a direct marketing system of produce like wheat, sugarcane, vegetables etc.
- Produced liquid jaggery (Kakvi) about 25-30 litres and sold at Rs. 125/litre, thereby earning income of about Rs. 3600 from liquid jaggery.
- Used digital media tools like WhatsApp and YouTube for dissemination of information.
- Created awareness by participating at weekly markets and kisan club meetings organized by KVK Kaneri, Kolhapur and Department of Agriculture and Farmers Welfare, Kolhapur.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming		Conventional Farming	
Crop	Sugarcane (CO-86032) (1.6 ha)	Soybean (KDS-726) (1.6 ha)	Sugarcane (CO-86032) (1.6 ha)	Soybean (KDS-726) (1.6 ha)
Cost of cultivation (₹)	180400	40800	218000	54000
Production (q)	1641.81	42.8	1580	40
Gross return (₹)	541530	192600	458200	180000
Net profit (₹)	361130	151800	240200	126000
BC ratio	2	3.72	1.10	2.33

(Crops: Soybean is intercropped in Sugarcane in1.6 ha area and total area is 1.6 ha)

Benefits and achievements

- Reduced cultivation cost.
- Obtained good yield comparable to conventional farming.
- Provided chemical-free products to the customers.
- Ensured efficient and economical use of natural resources.
- Provided guidance on natural farmingto other farmers in the district.
- Received Chaudhary Charan Singh Progressive farmers' award for the year 2020 from Krishi Vigyan Kendra, Kaneri, Kolhapur, Maharashtra.

Source: *Krishi Vigyan Kendra, Kaneri, Kolhapur, Maharashtra*

SHRI HOLGE VISHWANATH GOVINDRAO

Village : Dapshed

Taluka : Loha

District : Nanded

Contact No. : 9764025209

Education : 12th

Email : dlmortale@gmail.com

Practices adopted

- Adopted natural farming for the last 7 years.
- Applied 400 kg ghanjivamrit per acre before sowing.
- Treated seeds with beejamrit before sowing, which prevents fungal impact and helps in fast seed germination.
- Used jivamrit in the proportion–200 liter per acre (1:10) with water for 15 days after sowing.
- Sprayed agniastra and bramhastra in the ratio 1:30 with water every 15 days and followed multi cropping to control pest attack.
- Used cow dung, urine, plants, natural fertilizers and earthworms for crop protection.
- Practiced group farming.
- Conducted field or farm visit to understand the technique.
- Organized workshops for farmers, which is the best way to train natural farming technique.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming		Conventional Farming	
Crop	Soyabean (0.4 ha)	Turmeric (0.4 ha)	Soyabean (0.4 ha)	Turmeric (0.4 ha)
Cost of cultivation (₹)	4500	42000	17500	65500
Production (q)	7.0	25	5.0	20
Gross return (₹)	45500	150000	32500	120500
Net return (₹)	41000	108000	15000	55000
BC ratio	9.1	2.6	0.9	0.8

Benefits and achievements

- Proved to be an environment friendly technology, as natural farming nourishes soil.
- Reduced cultivation cost.

- Increased crop yield by more than 30%.
- Increased farmer's income, which helped in removing debt burden.
- Improved soil health.
- Resulted in non-toxic environment and toxin free food.
- Increased awareness regarding customer health, thereby increasing the demand for natural farming.

Source: *Commissionerate of Agriculture, Pune, Maharashtra*

SHRI PUNDLIK VISHNU JORI

Village : Kashal

Post : Bhoyare

District : Pune

Contact : 8888149399

Email : taomaval@gmail.com

Education : 7 th Pass

Practices adopted

- Prepared inputs like vermicompost, jivamrit and dashparni ark.
- Used paddy transplanter and cono weeder for paddy cultivation.
- Used Reaper for paddy harvesting.
- Organized trainings and demonstrations by ATMA.
- Used social media for dissemination of information.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Paddy (Indrayani)	Paddy (Indrayani)
Cost of cultivation (Rs)	5500	14000
Production (q)	29	21
Gross return (₹)	74500	55000
Net return (₹)	69000	41000
BC ratio	12.5	2.9

Benefits and achievements

- Reduced cost of cultivation.
- Increased yields for both grain and straw.
- Improved the quality of produce.
- Mentored in organic farming and paddy mechanization.
- Awarded with the best farmer award by ATMA.

Source: *Commissionerate of Agriculture, Pune, Maharashtra*

SHRI SATTAPPA SHRIPATI MALI

Village : Kagal

District : Kolhapur

Contact No : 9404974471

Education : 10th

Email : vitthalmali353@gmail.com

Practices adopted

- Cultivated Sugarcane, Banana, Onion, seasonal vegetables, cereals etc.
- Used both indigenous and hybrid varieties.
- Used beejamrit, jivamrit, mulching and whapasa to bring down cost of production.
- Used pulse crop as intercrops to increase soil fertility.
- Relay cropping according to market demand.
- Used farm mechanization for carrying out cultural operations.
- Installed honeybee hives in farm to increase pollination.
- Promoted the use of natural fertilizers and local seeds.
- Adopted biological method of pest control.
- Participated in different agricultural forums.
- Conducted farmers training at field level.
- Used social media platforms such as WhatsApp group.
- Provided guidance to farmers group through field visits regarding natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Sugarcane	Sugarcane
Cost of cultivation (Rs)	30000	55000
Production (q)	480	450
Gross return (₹)	144000	135000
Net return ((₹)	114000	80000
BC ratio	3.8	1.5

Benefits and achievements:

- Resulted in higher yield of sugarcane 40 ton/acre, onion 7 ton/acre, Turmeric 15 q/acre etc.

- Reduced cost of production.
- Resulted in unique quality of farm products.
- Created a well-established market for bananas.
- Encouraged farmer groups to adopt intercropping patterns.
- Prevented soil degradation and helped in soil conservation

Source: *Commissionerate of Agriculture, Pune, Maharashtra 411005*

SHRI TULSIRAM SITARAM CHATUR

Village : Kutanga

Taluka : Dharani

District : Amravati,

Contact No. : 9673102647

Education : 12th

Email : tulasramchatur327@gmail.com

Practices adopted

- Cultivated sorghum, bansi wheat, onion, and vegetables through natural farming.
- Applied jivamrit, beejamrit and practiced mulching and moisture management successfully.
- Applied neemark and dashparni ark for pests and diseases control.
- Planted trap crops like maize, cowpea, and mustard along with the main crop.
- Conducted awareness campaigns for farmers group.
- Used ICT techniques for marketing (WhatsApp Group).

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Turmeric	Turmeric
Cost of cultivation (Rs)	65000	100000
Production (q)	25	25
Gross return (₹)	375000	375000
Net return (₹)	310000	275000
BC ratio	5.8	3.8

Benefits and achievements:

- Proved to be a reasonable and sustainable method.
- Produced sufficient amount of inputs, with two indigenous cows.
- Increased net income with low investment.
- Resulted in less preparatory tillage.
- Improved physical, chemical and biological characteristics of soil.
- Helped to conserve biodiversity by management of natural resources.
- Satisfied family, friends, and consumers with chemical-free food grains and vegetables.

Source: *Commissionerate of Agriculture, Pune, Maharashtra 411005*

ODISHA

SMT. ASTAMI SINGH

Village : Kisandahi
GP : Baldiha
Block : Shamakhunta
District : Mayurbhanj
Contact no. : 9937459212
Education : BSE

Practices adopted

- Adopted traditional methods in paddy production.
- Cultivated indigenous aromatic paddy (Nua Kalazira).
- Used inputs like jivamrit, beejamrit & handikhata for nutrition management and seed treatment.
- Adopted line transplanting.
- Used power tiller and cono-weeder.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Nua Kalazira)	Paddy (Nua Kalazira)
Cost of cultivation (₹)	16500	19500
Production (q)	25	25
Gross return (₹)	52500	45375
Net return (₹)	36000	25875
BC ratio	2.1	1.32

Benefits and achievements

- Reduced cost of cultivation.
- Earned higher income.
- Obtained higher yields of both grain and straw.
- Saved labour cost and time.
- Improved soil health and family health.

Source: *Directorate of Agriculture & Food Production, Odisha, Bhubaneswar*

SHRI BEBRATA TUDU

Village : Anandapur
GP : Gadigan
Block : Khunta
District : Mayurbhanj
Contact no. : 9668621760
Education : HSE

Practices adopted

- Cultivated indigenous aromatic paddy (Ketakijoha).
- Adopted traditional methods in paddy production.
- Prepared inputs like jivamrit, beejamrit and handikhata.
- Adopted line transplanting.
- Used power tiller and cono-weeder.
- Attended regular training in organic farming.
- Linked with Beer Birsha Farmer Producer Company (FPC) for marketing.
- Participated in exhibitions and forums.

Comparison between Natural and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Ketakijoha)	Paddy (Ketakijoha)
Cost of cultivation (₹)	15000	19500
Production (q)	24	25
Gross return (₹)	52800	45375
Net return (₹)	37800	25875
BC ratio	2.52	1.32

Benefits and achievements

- Reduced cost of cultivation and increased yields helped in earning higher income.
- Noticed improvement in soil health.
- Gained better health due to the consumption of chemical free produce.

Source: *Directorate of Agriculture & Food Production, Odisha, Bhubaneswar*

SHRI JAYAKRUSHNA DALAI

Village : Kaliapata

P.O : Chandiput

District : Gajapati

Contact No. : 9938889179

Education : 8th

Practices adopted

- Cultivated finger millets.
- Prepared and used natural farming inputs like jivamrit, beejamrit, and handikhata.
- Fed plants through foliar application of handikhata extract.
- Applied organic nutrients based on soil test.
- Applied lime for correcting acidity of soil.
- Practiced line transplanting of finger millets.
- Adopted the System of Millet Intensification (SMI).
- Adopted improved production technologies of millets.
- Practiced Integrated Farming System (IFS) for higher income.
- Created a farmers' group and seed village.
- Participated as an active member of Taptapani Farmers' Producer Company Ltd.
- Disseminated information through trainings, demonstrations, exhibitions, ICT, KMAS (Kisan Mobile Advisory Service) and social media platforms like WhatsApp.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Finger millet	Finger millet
Cost of cultivation (₹)	16500	18000
Production (q)	12	9.0
Gross return (₹)	39540	29655
Net return (₹)	23040	11655
BC ratio	1.4	0.65

Benefits and achievements:

- Reduced cost of cultivation with reduction in input cost.
- Earned higher yields of grain and straw.

- Doubled the income by line transplanting, SMI & IFS system.
- Saved labour cost and time.
- Benefitted about 120 farmers every year through trainings and workshops.

Source: *Krishi Vigyan Kendra, Gajapati, Odisha University of Agriculture & Technology, Bhubaneswar*

SMT. URMILA SINGH

Village : Kisandahi
GP : Baldiha
Block : Shamakhunta
District : Mayurbhanj
Contact No. : 9937459212
Education : BSE

Practices adopted

- Cultivated indigenous aromatic paddy (Nua Chinikamini).
- Adopted traditional methods in paddy production and used inputs like jivamrit, beejamrit and handikhata.
- Adopted line transplanting.
- Used power tiller and cono-weeder.
- Linked with Beer Birsha Farmer Producer Company (FPC) for marketing.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Nua Chinikamini)	Paddy (Nua Chinikamini)
Cost of cultivation (₹)	16500	19500
Production (q)	30	25
Gross return (₹)	60000	45375
Net return (₹)	43500	25875
BC ratio	2.6	1.32

Benefits and achievements:

- Experienced lesser cost of cultivation.
- Obtained higher yields of both grain and straw.
- Earned higher income.
- Experienced improvement in soil health and family health.

Source: *Directorate of Agriculture & Food Production, Odisha, Bhubaneswar*

PUNJAB

SHRI AMARJIT SINGH BHANGU

Village : Chahrke

Tehsil : Bhogpur

District : Jalandhar

Contact No. : 9417131548

Education : Senior Secondary

Practices adopted

- Cultivated wheat, paddy, basmati, sugarcane, turmeric, potato and pulses.
- Adopted different practices like crop rotation, crop residue management in the field without burning. Used animal manure as fertilizer, leguminous crop for green manure and controlled insects and pests through bio methods.
- Treated seeds using beejamrit made by adding 1 litre desi cow urine, 1 kg cow dung, 50 gm lime to 2.5 litre water and by keeping it overnight. Before sowing, seed was soaked in this mixture, which was found to be helpful in growing the crop without any disease and weed incidence.
- Enhanced nutritive values of soil through green manuring (dhaicha, moong, mash, bajra, berseem), biogas slurry and cow dung. Incorporated crop residue to the soil for enhancing soil fertility.
- Mustard cake is broadcasted on the standing crop for getting high yield from the basmati crop.
- Used jivamrit (prepared by adding 10 kg cow dung, 20 litre cow urine, 2 kg molasses, 2 kg gram flour, 200 gm unpolished copper wire and 200 gm iron nail to 200 litre water and leaving it for 7 – 10 days for fermentation) in place of pesticides and insecticides.
- Used Trichogramma cards in paddy, basmati and sugarcane crops for controlling insects.
- Used Trichderma harzianum and alum (2 kg/acre) for control of foot rot diseases in basmati crop.
- Used gudjal amrit (prepared using 60 kg cow dung, 2 kg gram flour, 1 kg bajra flour, 1 kg salt, 250 gram mustard oil, 3 kg jaggery, 2 kg neem leaves, 2 kg aak Leaves, 150 litres of water), neem leaves, akk leaves, congress grass leaves and datura leaves for pest control.
- Used asafoetida (hing) for control of termites in the soil and used lassi (butter milk) spray as fungicide.
- Adopted straw mulching in turmeric and sugarcane crop to control weed germination and to avoid the evaporation of moisture.
- Adopted several practices for managing natural resources through intercropping of sugarcane with turmeric and potato, bed sowing of wheat, incorporation of paddy, wheat and sugarcane straw in the field.

- Trained by Krishi Vigyan Kendra, Jalandhar which has impacted the out turn of his farming and improved the margin of profit.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1.6 ha)	Conventional Farming (1.6 ha)
Crop	Wheat (Bansi)	Wheat (PBW343)
Cost of cultivation (Rs.)	42200	53080
Production (q)	84	76
Gross return (Rs.)	252000	146300
Net return (Rs.)	209800	93220
BC ratio	4.9	1.75

Benefits and achievements

- Obtained higher yields.
- Better quality produce without any residue of pesticides/insecticides.
- Improved soil fertility,
- Reduced cost of cultivation by 65% in basmati, 25% in wheat, 20% in sugarcane and 20% in turmeric as compared to conventional practices.
- Recycled organic waste from other farms.
- Observed increased shelf-life for natural farming produce in comparison with conventional farming produce.
- Received National Award DRR (2011), National award CIPHET (2013), Agricultural State Award (2015), Krishi Ratna Award (2017) and Agricultural State Award (2019) for his contribution in natural farming practices.




Source: *Krishi Vigyan Kendra, Jalandhar*

SHRI AMRITPAL SINGH

Village : Hamza
Mandal : Majitha
District : Amritsar
Contact No. : 9463205464
Education : Plus two

Practices adopted

- Cultivated horticultural crops, particularly tomato, potato and chillies.
- Adopted farm mechanization for horticultural production and used power tillers for intercultural operations.
- Developed polyhouse for nursery production of horticultural crops and adopted plug in tray method for nursery raising of vegetable crops.
- Prepared organic manure.
- Practiced laser land leveling for efficient use of irrigation water.
- Attended trainings from Krishi Vigyan Kendra, Amritsar and State Department of Horticulture, Punjab for nursery productionof vegetable crops.
- Organized workshops for organic farming, every 2 months.
- Used ICT mechanism (WhatsApp Group and Facebook).
- Participated in kisan melas.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Pea, Capsicum, Tomato	Pea, Capsicum, Tomato
Cost of cultivation (₹)	28000	37000
Production (q)	30	24
Gross return (₹)	105379	98750
Net return (₹)	67379	61750
BC ratio	2.4	1.66

Benefits and achievements

- Resulted in input cost reduction and reduction in the cost of cultivation.
- Improved income through horticulture.
- Saved labour cost.

- Observed higher yields of vegetables.
- Consulted by many farmers and benefitted about 2500 farmers every year through trainings and workshops.

Source: *Krishi Vigyan Kendra, Nag kalan, Amritsar*

SHRI RANJIT SINGH

Village : Ballian Manjpur

Mandal : Jandiala

District : Amritsar

Contact No. : 9888961713

Education : Plus two

Practices adopted

- Installed a nethouse for nursery production
- Installed a home processing sag unit and chatty di lassi.
- Installed a biogas plant.
- Prepared organic manures.
- Used reapers for harvesting produce.
- Participated in exhibitions and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Wheat (Lokwan)	Wheat (3086)
Cost of cultivation (₹)	23000	30000
Production (q)	73.75	48.5
Gross return (₹)	109375	89725
Net return (₹)	86375	59725
BC ratio	3.75	1.99

Benefits and achievements

- Reduced cost of cultivation.
- Reduced input cost and saved on labour cost.
- Increased yields.
- Consulted by many farmers.
- Received the best farmer award by Agriculture Department, Amritsar at Kisan Mela in 2016.

Source: *Krishi Vigyan Kendra, Nag kalan, Amritsar*

SHRI SAWINDERPAL SINGH CHHINNA

Village : Fatehgarh Shukarchak

Mandal : Tarsika

District : Amritsar

Contact No. : 9814220423

Education : B. Sc Agriculture

Practices adopted

- Involved in cultivation of field and horticultural crops and also established a pear orchard.
- Practiced floriculture and developed selection of flowers, particularly gladiolus.
- Developed polyhouse for nursery production of vegetable crops.
- Prepared organic manures like jivamrit, khati lassi and neem products.
- Adopted system of polyhouse technology.
- Adopted farm mechanization in paddy and horticultural crops by using power tiller, transplanter and weeder.
- Used ICT mechanism for dissemination of information.
- Participated in exhibition and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Pear	Pear
Cost of cultivation (₹)	102000	120000
Production (q)	154	126
Gross return (₹)	802000	692000
Net return (₹)	700000	572000
BC ratio	6.86	4.76

Benefits and achievements

- Reduced cost of cultivation.
- Benefitted about 2500 farmers every year by trainings and workshops of horticulture.
- Consulted by many farmers for organic farming.
- Awarded with an appreciation letter from Horticulture Department, Amritsar.

Source: *Krishi Vigyan Kendra, Nag kalan, Amritsar*

SHRI SUKHDEV SINGH

Village : Chmari

Mandal : Ajnala

District : Amritsar

Contact No. : 8872007512

Education : B. Sc Agriculture

Practices adopted

- Practiced natural farming for field and vegetable crops.
- Involved in making organic gur.
- Prepared and used inputs like jivamrit.
- Installed a haldi processing plant and jaggery unit.
- Used power tillers, transplanters, conoweeders and reapers.
- Participated in exhibitions and melas.
- Used ICT mechanism (WhatsApp group) for efficinent coordination

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Cost of Cultivation (₹)	62500	70000
Production (Jaggery) (q)	113.75	120.5
Gross return (₹)	796250	662650
Net return (₹)	733750	592650
BC ratio	11.74	8.46

Benefits and achievements

- Reduced cost of cultivation.
- Observed higher yields.
- Consulted by many farmers for organic farming.
- Reduced input cost.
- Saved on labour cost.
- Recognized with the best farmer award by Agriculture Department, Amritsar at Kisan Mela in 2015.

Source: *Krishi Vigyan Kendra, Nag kalan, Amritsar*

RAJASTHAN

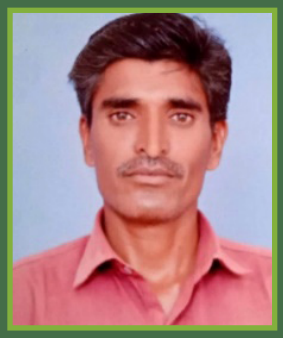
SHRI AMAR SINGH

Village : Dholeria

Tehsil : Rohat

District : Pali

Contact No. : 6376701715



Practices adopted

- Practicing natural farming since his ancestral times for the last 65 years.
- Adopted traditional landraces for cultivation which includes black sesame and kharchia wheat.
- Used his fields for night stay of other animals thereby enriching his soils without any extra expenditure.
- Avoided insecticides, by growing calotropis and desi babul on the farm's boundary, which act as reservoirs for beneficial insects.
- Adopted climate friendly techniques like Agni Hom, which uses smoke to act as an insecticide and fungicide, thereby controlling diseases and pests.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Sesame (Black)	Sesame (White)
Cost of cultivation (₹)	15000	18000
Production (q)	8.5	7.2
Gross return (₹)	59500	46800
Net return (₹)	44500	28800
BC ratio	2.96	1.60

Benefits and achievements

- Zero expenditure on insecticides and fungicides.
- Reduced cultivation cost.
- Harvested healthier and tastier grains, with good luster and aroma.

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Pali*

SHRI DEDA RAM

Village : Gajangarh

Tehsil : Rohat

District : Pali

Mobile No. : 9413077698

Practices adopted

- Adopted natural farming practices in 1980.
- Adopted livestock based organic agri-system.
- Grew chickpea purely on conserved moisture and minimum ploughing.
- Used his own method for controlling insects and pests.
- Grazed crops on the 35th day, which resulted in controlling pod borers and increased branching.
- Planted neem trees on farm boundary which provided soil with manure and acted as a raw material for preparing natural pesticides.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Chickpea	Chickpea
Cost of cultivation (₹)	18200	26500
Production (q)	18	16.6
Gross return (₹)	90000	83000
Net return (₹)	71800	56500
BC ratio	3.94	2.13

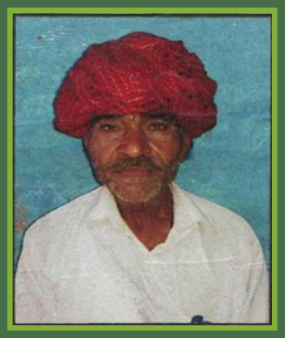
Benefits and achievements

- Resulted in low expenditure on chemicals and other harmful inputs.
- Crops grown through natural farming are hardier and more resistant to insects, pests and diseases.
- The grains produced under natural system fetch a high price, as they are richer in colour, bigger in size and tastier in flavour.

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Pali*

SHRI DEVI LAL GURJAR

Village : Puradevdungri, Dhaturia Kalan
Block : Pirawa
District : Jhalawar
Contact No. : 9929705670
Education : 7th



Practices adopted

- Adopted natural farming since 2013 and cultivated seed spices, linseed, urdbean, mungbean, turmeric, wheat and papaya.
- Used jivamrit, beejamrit, vermiwash, ghanajivamrit, dashparni ark, neemastra, humic acid and goratankada.
- Used beejamrit for seed treatment, dashparni ark for control of pests and ghanajivamrit as nutrient supplement to the soil.
- Used mahua extract for nematode control. Residue of crops was collected and fermented for 15 days. After fifteen days, the fermented product was sprayed for controlling nematode.
- Applied organic mulches using crop residues, resulting in prolonged irrigation period, control over weeds infestation and increased organic carbon in the soil.
- Practiced mixed cropping of turmeric and chilli, which resulted in symbiosis benefits. Both the crops showed very low infestation of pests and diseases. Leaf curl disease in chilli crop was controlled by mixed cropping with turmeric crop.
- Established vemicompost unit (8 nos.), goratan&vanasptikkada unit and FYM pit.
- Provided training to framers at KVK, Jhalawar, using ICT tools (WhatsApp Group).
- Participated in kisanmela, goshti, exposure visits, exhibitions, and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Fenugreek (Local)	Fenugreek (Local)
Cost of cultivation (₹)	26200	35500
Production (q)	19.5 (Rate per 9000/-q.)	19 (Rate per 6000/-q)
Gross return (₹)	175500	114000
Net return (₹)	149300	108500
BC ratio	5.6	3

Benefits and achievements

- Reduced input cost and reduced dependency on external inputs for purchasing round the year chemicals and agri inputs.
- Recorded higher yield of wheat, fenugreek, coriander, linseed, urdbean, moongbean, maize and gram etc. through natural farming in comparison with conventional farming.
- Improved the quality of produce and earned higher price for natural products.
- Improved soil health. Organic carbon content of soil increased from 0.39% to 0.68%. Observed higher population of earthworms and beneficial soil microorganisms in the soil.
- Observed increase in the numbers of birds, beneficial insects, predators and parasites after adopting natural farming.
- Received special award on "Jaivik Kheti" from Government of Rajasthan in the financial year 2017-18 in GRAM programme and 'Organic Expo Award, 2020' by Indore Chapter organized during February 7 to 9, 2020.
- Received appreciation award on organic farming by PNBFTC, Jhalarapatan (Jhalawar); Nagarpalika, Bhawani Mandi and Dharti-Putra award by CRI Pumps & Agriculture Times, Jaipur.
- Received appreciation award on organic farming by KVK, Kota under Jal Shakti Abhiyan.

Source: *Krishi Vigyan Kendra, Jhalawar*

SHRI DHANNA RAM

Village : Nadol

Tehsil : Desuri

District : Pali

Contact No. : 9660857108

Practices adopted

- Adopted natural farming since 2008 and cultivated crops viz. barley, mustard, moong, sesameand vegetables like okra, tomato, chilli.
- Used vermicompost, butter milk, ash and waste decomposer.
- Established a vermicompost unit in 2008 with 4 beds.
- Using a waste decomposer for the last 4 years for his fields. He is also providing the same to neighboring farmers as mother culture free of cost and teaching them how to make as well as use it.
- Used 20-25 days old buttermilk in the ratio 1:5, to protect the plants for all crops and vegetables.
- Used plastic mulch for vegetables like okra, tomato, chilly, etc.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural farming (1 ha)	Conventional farming (1 ha)
Crop	Mustard (Sitara)	Mustard (Bio 902)
Cost of cultivation (Rs.)	38530	41743
Production (q)	16.4	14.1
Gross return (Rs.)	73800	56400
Net return (Rs.)	35270	14657
BC ratio	1.92	1.35

Benefits and achievements

- Saved costs on chemicals and other harmful inputs.
- Used naturally available inputs for the protection and growth of crops.

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Jodhpur Road, Pali-Marwar, Rajasthan*

SHRI HANSRAJ MEENA

Village : Parpati

Block : Aklera

District : Jhalawar

Contact No. : 9950255242

Education : 10th

Practices adopted

- Adopted natural farming since 2015 in wheat, maize, mandarin, coriander, mustard, spices, linseed, urdbean, mungbean, onion and garlic.
- Cultivated sole crops also under natural farming like barley, barseem, mustard, vegetables and urdbean.
- Prepared and used vermi wash, jivamrit, beejamrit and vanaspatik kada.
- Used Trichoderma for seed and soil treatment as well as neem cake for management of pests and diseases.
- Reduced weed intensity by performing dust mulching through hoeing practices in crops.
- Reared 5 desi cows & a goat.
- Participated in farmers trainings, kisanmela, goshti, exposure visits, exhibitions and forums.
- Used ICT tools (WhatsApp Group) for technology dissemination.
- Provided training to farmers & rural youth and benefitted the farmer's community by holding live demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1ha)
Crop	Wheat (Raj.-4079)	Wheat (Raj.-4079)
Cost of cultivation (₹)	30850	36400
Production (q)	42 (Rate per 3450/- qt.)	42.8 (Rate per 1900/- qt.)
Gross return (₹)	144900	81320
Net return (₹)	114050	44920
BC ratio	3.7	1.2

Benefits and achievements

- Reduced cost of cultivation, leading to an increase in net return with sustainable agricultural practices.

- Enhanced soil fertility and improvement in quality of crop produce.
- Improved soil organic matter and beneficial soil microorganisms.
- Utilized crop residue and farm wastage.
- Received a special award on “Jaivik Kheti” from Government of Rajasthan in 2018.

Source: *Krishi Vigyan Kendra, Jhalawar*

SHRI HARIOM CHOUDHARY

Village : Bagawas

Tehsil : Sojat

District : Pali

Contact No. : 9079830871

Practices adopted

- Adopted natural farming practices in 1990 and since then cultivating henna through natural farming.
- Adopted livestock based organic horti-system in which livestock provide regular income besides providing valuable manure for henna fields.
- Controlled pests and insects by using self-made formula.
- Left soil undisturbed with only one hoeing operation with bullocks for controlling weeds.
- Applied gypsum during rains for soil reclamation every year as his soil is saline and alkaline.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Henna	Henna
Cost of cultivation (₹)	46800*	66000
Maintenance cost after 2nd year onward for henna	14500	19900
Production (q)	7.50	8.00
Gross return (₹)	60000	64000
Net return (₹)	45500	44100
BC ratio	4.14	3.21

** Initial establishment cost of henna*

Benefits and achievements

- Henna plants under natural farming system are hardier and more resistant to insects, pests and diseases.
- Henna produced is more intense in colour and oleoresin and fetches more price.

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Pali*

PADMA SHRI HUKUM CHAND PATIDAR

Village : Manpura, Post-Lawasal

Block : Asnawar

District : Jhalawar

Contact No. : 9461951154

Education : 9th

Practices adopted

- Adopted natural farming in 2004, and has been cultivating seed spices (coriander, fenugreek & fennel), turmeric, urdbean, mungbean, wheat, mandarin, and papaya, since then.
- Usednatural farming inputs like jivamrit, beejamrit, vermiwash, ghanajivamrit, neemastra and humic acid.
- Used beejamrit for seed treatment, dashparni ark for control of insect pests and ghanajivamrit as a nutrient supplement to plants.
- Managed weed through hoeing, sand mulching and crop residue mulching.
- Adopted biological sources in cultivation viz. composting, green manuring, bio-fertilizers, self-made bio-pesticides and cow urine spray as source of nitrogen for control of pests and diseases.
- Adopted other techniques like light, yellow sticky, blue sticky & pheromone traps, HaNPV, Trichoderma, tricho cards, micro irrigation techniques, production, and use of botanical pesticides such as neem, dhatura, tobacco, garlic etc.
- Practiced organic seed production.
- Established vermicompost unit (10 nos. of bed), vanasptikkada unit and FYM pit.
- Reared 06 desi cows & improved breed buffalo.
- Participated in kisanmela, goshthi, exposure visits of farmers, exhibitions, and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Coriander (Local)	Coriander (RKD-18)
Cost of cultivation (₹)	18800	28600
Production (q)	16.2 (rate 13000/-q)	17.6 (rate per 8000/-q)
Gross return (₹)	210600	140800
Net return (₹)	191800	112200
BC ratio	10.2	3.9

Benefits and achievements

- Improved soil health. Organic carbon content of soil increased up to 1.0 %.
- Observed higher population of earthworms and beneficial soil microorganisms in the furrow soil.
- Reduced input cost and reduced dependency on external inputs like agri-chemicals and agri-inputs.
- Recorded higher yield of coriander, fenugreek, wheat, urdbean, maize and chickpea, etc.
- Observed improvement in the quality of produce which fetched higher market price.
- After adopting natural farming, the numbers of birds, soil microorganisms, beneficial insects, predators and parasites increased in the area of crop cultivation.
- Formed 'Akshay Jaivik Krishak Sansthan, Manpura' with 120 farmer members in 2008. They are promoting organic farming in 33 villages in districts including Jhalawar, Baran, Barmer, Kota, Bundi and Jaisalmer. In the year 2014, with 185 farmers of various parts of the country organized National level training programme for organic farmers which was sponsored by the Bhartiya Kisan Sangh.
- As a Master trainer, received an amount of Rs. 5.0 Lakh from ICAR, New Delhi for conducting 5 trainings under Pandit Deen Dayal Unnat Krishi Shiksha Yojna in 2016-17 as he trained 250 farmers.
- Awarded with district level best farmer award by ATMA, DOA, Jhalawar during 2011-12.
- Received appreciation award by district collector for contribution in organic farming 15-8-2012).
- Received Patheya Kan Jagrit Gram award (2009-10).
- Featured in Satyamev Jayate programme hosted by Amir Khanon 31 March 2012.
- Awarded with the Padma Shri award by the Government of India in 2019.
- Participated in the Brainstorming Session for progressive farmers of Rajasthan held at ICAR-NASC Complex, New Delhi on 13 July 2019 and Innovative Farmers' Group Meet at ICAR-NASC Complex, New Delhi.
- Proved himself as a prominent entrepreneur by exporting his produce to foreign countries like Sri Lanka and Japan. Representatives of importers from France, Japan, Sri Lanka & Israel have visited his farm.

Source: *Krishi Vigyan Kendra, Jhalawar*

SHRI KANHAIYA LAL

Village : Sadla

Block : Manoharthana

District : Jhalawar

Contact No. : 9928814630

Education : 10th

Practices adopted

- Adopted natural farming since 2012, cultivated maize, wheat, fenugreek, tomato, chili, spices, linseed, gram urdbean, mungbean, onion and garlic.
- Used vermivash, jivamrit, beejamrit, neemastra and vanasptikkada.
- Used Trichoderma, jivamrit and beejamrit for seed & soil treatment.
- Established a vemicompost unit a vanasptikkada unit, a waste decomposer unit, an azolla unit and a FYM pit.
- Applied straw and dust mulch to reduce weed intensity and evaporation.
- Reared 5 desi cows and buffalos.
- Participated in farmer's trainings, kisanmela, kisangoshti, exposure visits, exhibitions and forums.
- Provided training and practical knowledge to large number of farmers and rural youth.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Maize (Local)	Maize (Local)
Cost of cultivation (₹)	23200	29500
Production (q)	36.5 (Rate per 2550/- q.)	37.5 (Rate per 1850/- q.)
Gross return (₹)	93075	69375
Net return (₹)	69875	39875
BC ratio	3.0	1.35

Benefits and achievements

- Reduced the cost of cultivation, earning higher profits with round the year income.
- Improved soil health with the enhancement in quality of crop produce.
- Increased the number of earthworms and beneficial soil microorganisms.

- Utilized agricultural residues and wastage from farm by products efficiently.
- Received special award on "Jaivik Kheti" from Government of Rajasthan in 2018.



Source: *Krishi Vigyan Kendra, Jhalawar*

SHRI MANGI LAL

Village : Aratia

Tehsil : Rohat

District : Pali

Contact No. : 9982142975

Practiced adopted

- Aopted natural farming practices in 2000.
- Practiced minimum tillage and done only one ploughing after rains to conserve soil moisture.
- Ploughed the field by bullocks without the use of any machinery or diesel operated devices.
- Planted plants on farm boundary which provided favorable microclimate besides litter enriching the soil.
- Cultivated pulses to enrich the soil by nitrogen fixation through root nodules.
- Cultivated landrace of chickpea with low moisture requirement.
- Avoided insecticides and sprayed ash from kitchen to control insects, pests and soil borne diseases.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Chickpea	Chickpea
Cost of cultivation (Rs.)	17000	25000
Production (q)	17.5	15.0
Gross return (Rs.)	87500	75000
Net return (Rs.)	70500	50000
BC ratio	4.14	2

Benefits and achievements

- Reduced input cost.
- Harvested more nutritious and tastier produce.
- Proved to be an environmentally friendly practice

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Pali*

SHRI MANOHAR LAL

Village : Sindhiyoki Dhani

Tehsil : Osian

District : Jodhpur

Contact No. : 9784112184

Practices adopted

- Adopted natural farming practices in the year 2016 and is cultivating organic wheat, mustard and vegetables since then.
- Planted pomegranate plants in 2019 over a land size of 2 hectares using organic practices.
- Used jivamrit (content: mixture of 10 l. cow urine, 20 kg cow dung, 2 kg besan, 2 kg soil and 1 kg cake of mustard) in irrigation water.
- Used micronutrients – 2 kg flour (wheat, barley, bajra, maize), pulses (moong, moth, cow pea and chickpea), oilseed (till, mustard, ground nut and castor), turmeric 250gm, rock salt 500 gm, ash of cow dung cake 1 kg and gur 2 kg mixed in a plastic drum with 100 l water + 100 l waste decomposer. After 21 days, this solution was used as spray and through drip irrigation system.
- Used extracts from various coloured stones with 200 l of waste decomposer.
- Prepared poultry manure and goat manure.
- Used Trichoderma.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Wheat (Kharchia)	Wheat (Raj 3077)
Cost of cultivation (₹)	48247	45772
Production (q)	37.7	30.2
Gross return (₹)	75568	51940
Net return (₹)	27321	6168
BC ratio	0.57	0.13

Benefits and achievements

- Saved costs on chemical and other harmful inputs.
- Used naturally available inputs for the protection and growth of crops.

Source: *ICAR-CAZRI Krishi Vigyan Kendra, Jodhpur Road, Pali-Marwar, Rajasthan*

SMT. MEGHA PALIWAL

Village : Kanwada
Block : Jhalrapatan
District : Jhalawar
Contact No. : 9928673644 & 7976283810
Education : Graduate

Practices adopted

- Adopted natural farming since 2016 for wheat, coriander, maize, mustard, linseed, mandarin, papaya, ber, urdbean, mungbean and garlic. Also growing sole crops like barley, fodder crops, barseem, sugarcane and gram.
- Used bio ingredients for seed & soil treatment for control of pests & diseases.
- Used vermivash, vermiculture, jivamrit, beejamrit and neemastra.
- Established a vemicompost unit, a vanasptikkada unit, a fruit kada unit and a FYM pit.
- Used cover crops, crop residue and no external application of inputs.
- Followed principle of circular economy, having 11 desi cows & buffalos by using their byproducts in agriculture.
- Provided training to many farmers for capacity building of women farmers particularly.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Wheat (Raj.-4079)	Wheat (Raj.-4079)
Cost of cultivation (₹)	27350	36400
Production (q)	40 (Rate per 3500/- q)	41 (Rate per 1900/- q.)
Gross return (₹)	140000	77900
Net return (₹)	112650	41500
BC ratio	4.1	1.1

Benefits and achievements

- Reduced cost of cultivation.
- Reduced dependency for purchasing agri inputs from market.
- Increased number of earthworms and soil microorganisms.
- Improved quality of both soil and crop produce.
- Earned higher profits by garnering regular income, sustainably.
- Benefitted the farmer's community at large, by holding demonstrations.

Source: *Krishi Vigyan Kendra, Jhalawar, Rajasthan*

UTTAR PRADESH

SHRI AMIT VERMA

Village : Pasiyapur Janoobi

Post : Ajeet Pur

District : Rampur

Contact No. : 8178669689

Education : B. Tech, MBA –Marketing

Email : rampurkrishak2020@gmail.com

Practices adopted

- Practicing natural farming since 2018 and cultivated black wheat (10 ha), moringa (2 acres), green chilly & capsicum (2 acres), yellow mustard, flaxseed & sesame (5 acres), sugarcane (5 acres), horse gram (1 acre) and turmeric (1 acre) till 2021.
- Promoted other farmers to adopt natural farming.
- Established a FPC and is performing various in-house operations like food processing, packaging, marketing & branding under the 'Rampur Krishak' brand.
- Encouraged fellow farmers to associate with FPC.
- Sold natural products through the FPO only.
- Promoted healthy, natural food through the FPO channel.
- Manufactured healthy, nutritious food supplements using natural farm produce with no preservatives and provided to women and children.
- Distributed 2200 Supplement kits while working towards malnutrition treatment under the Aahar se Upchaar program. The ultimate motive of the 'Aahar se Upchaar program' is to eradicate malnutrition through natural agro-food all across the country.
- Established the goal of making farmers self-dependent and self-resilient. Through the FPO, a market was provided to farmers where they are selling their product directly.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (2 ha)	Conventional Farming (2 ha)
Crop	Sugarcane	Sugarcane
Cost of cultivation (₹)	175000	200000
Production (q)	2500	2500
Gross return (₹)	1250000	875000
Net return (₹)	1100000	787500
BC ratio	6.28	3.93

Benefits and achievements

- Introduced honeybee for honey production as beekeeping farming under natural farming.
- Observed improvement in soil fertility due to increased population of earthworms.
- Crops cultivated through natural farming are more resistant to the insects.
- Chemical-free produce.
- Reduced cost of cultivation.
- Received advance purchase orders for products from various customers.
- Received Special recognition award for Best Emerging FPO 2020-21 by ICAR.
- Received Special recognition award from Department Agriculture UP.
- Citation from the Department of Agriculture, UP.

Source: *Krishi Vigyan Kendra, Rampur*

SHRI AWADHESH PRATAP SINGH

Village : Sakin
Block : Moth
District : Jhansi
Contact No. : 8948197631
Education : Intermediate in Agriculture

Practices adopted

- Adopted natural farming since 2012.
- Cultivated paddy (Pusa Basmati-1) and mentha in kharif season & sugarcane, wheat, gram, pea, lentil & mustard in rabi season.
- Used various natural farming inputs like jivamrit, ghanjivamrit, beejamrit, neemastra, bramhastra and dashparni ark.
- Integrated crops with fruits.
- Created a seed bank for other farmers.
- Used ICT tools for marketing (WhatsApp Group) and participated in various workshops and exhibitions.
- Encouraged fellow farmers by showing his farm demonstration.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Pusa Basmati-1)	Paddy (Pusa-1121)
Cost of cultivation (₹)	25000	35000
Production (q)	50	45
Gross return (₹)	335000	241200
Net return (₹)	297500	206200
BC ratio	11.9	5.9

Benefits and achievements

- Reduced the cost of cultivation considerably because of reduction in input cost and labour cost.
- Increased income.
- Improved the quality of soil and produce.
- Benefitted about 10-15 farmers per month.

- Awarded with Doctorate of farmers award by Chandra Shekhar Azad University of Agriculture & Technology, Kanpur.
- Awarded with Krishi Pandit Award by UP Government.
- Awarded with "Innovative Farmer Award" by ICAR.

Source: *CSA University of Agriculture & Technology, Kanpur*

PADAMSHRI DR. BHARAT BHUSHAN TYAGI

Village : Behta

Mandal : Meerut

District : Bulandshahr

Contact No. : 08755449866

Education : BSc Delhi University

Practices adopted

- Adopted natural farming in the form of Saha Astitva Mulak Avartan Sheel Krashi (SAMAK) farming since 1997.
- Cultivated farm area of 8 acres. Out of this, mango orchard is established in 4 acres and in the remaining 4 acres, multiple crops like sugarcane, turmeric, wheat, paddy, linseed, vegetables, fodder crops, timber plants, lemon grass, aspragus, bambo, mango, guava etc. are cultivated in Complimentary Cropping System for Multi-Layer Production.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Sugarcane, Turmeric, Mustard, Linseed	Sugarcane
Cost of cultivation (₹)	6400	24500
Production (q)	Sugarcane–300 Turmeric–40 Mustard–3 Linseed–3	350
Gross return (₹)	253000	122500
Net return (₹)	246600	98000
BC ratio	38	4

Benefits and achievements

- Increased soil carbon level from 0.4 to 1.2 within 2 -3 years and achieved a balance in pH and EC.
- Improved physical and chemical properties of topsoil and increased the number of beneficial microbes and earthworms.
- Increased soil fertility.
- Increased the number of beneficial insects like honeybees, small birds in the field through cultivation of multiple crops.

- Made crops resistant to drought conditions and climate change.
- Reduced cost of cultivation
- Improved yield and quality of produce.

Source: *Krishi Vigyan Kendra, Bulandshahr*

SHRI HIMANSU GANGWAR

Village : Kuiyan Dheer

Block : Shamsabad

District : Farrukhabad

Contact No. : 9935828092

Education : B. Tech. (Mechanical Eng.)

Practices adopted

- Adopted natural farming based on desi cow since 2010.
- Cultivated sugarcane and grew turmeric, mung bean and urd *bean* as inter crops.
- Prepared natural gud (jaggery) and marketed it in various places.
- Used natural farming inputs like jivamrit & ghanajivamrit as nutrient supplements, dashparni ark for controlling pests & diseases, and beejamrit for seed treatment.
- Applied crop residues as mulch to reduce demand of water and weed intensity.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in workshops, exhibitions and forums.
- Encouraged other farmers about natural farming by showing farm demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Sugarcane (LOK-94184)	Sugarcane (LOK-94184)
Cost of cultivation (₹) *	Cost of cultivation of Sugacane 57500 Processing charge of jaggery - 100000	80000
Production (q)	700	425
Gross return (₹)	595000	195000
Net return (₹)	437500	115000
BC ratio	2.78	1.43

** This include cost cof cultivation of sugarcane and processing charge of jaggery*

Benefits and achievements

- Reduced cultivation cost.
- Reduced labour cost.

- Improved quality of soil and produce.
- Increased the number of earthworms in soil.
- Earned higher profits and generated employment opportunities.
- Benefitted farmers at a large scale.
- Led a natural farming group in Farrukhabad district.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI LAXMI SHANKAR

Village : Purauna

Block : Bighapur

District : Unnao

Contact No. : 9519182059

Education : B. A

Practices adopted

- Adopted natural farming since 2017 in a 4.0 acre farm land.
- Cultivated paddy (scented rice) in kharif season and wheat & mustard in rabi.
- Used natural inputs like jivamrit & ghanjivamrit as nutritional supplements, beejamrit for seed treatment and neemastra, bramhastra & dashparni ark for controlling pests and diseases.
- Created a seed bank suitable for natural farming.
- Processed paddy into rice before selling.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in exhibitions and forums.
- Benefitted other farmers through farm demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Pusa Basmati-1)	Paddy (Sharbati)
Cost of cultivation (₹)	20000	28000
Production (q)	40	42
Gross return (₹)	96000	84000
Net return (₹)	76000	56000
BC ratio	3.8	2

Benefits and achievements

- Reduced cultivation cost.
- Improved quality of soil and agricultural produce.
- Increased the number of earthworms in soil.
- Earned higher income.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI RAJIV LOCHAN SHUKLA

Village : Terha
Block : Bighapur
District : Unnao
Contact No. : 9793915842
Education : 12th

Practices adopted

- Adopted natural farming since 2017 in the entire farm area of 4 acres.
- Cultivate paddy (Shamba Mansoori) in kharif season and wheat and mustard in rabi season.
- Prepared jivamrit and ghanjivamrit and used as nutritional supplements.
- Prepared and applied beejamrit for seed treatment and neemastra, bramhastra and dashparni ark for controlling pests and diseases.
- Processed paddy into rice before selling.
- Used ICT tools for marketing (WhatsApp group).
- Participated in exhibitions, workshops, and forums.
- Convinced other farmers about natural farming by holding demonstrations.

Comparison between Natural and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Shamba Mansoori)	Paddy (Pusa-1121)
Cost of cultivation (₹)	25000	33500
Production (q)	40	38
Gross return (₹)	100000	75544
Net return (₹)	75000	42044
BC ratio	3	1.2

Benefits and achievements

- Reduced cost of cultivation.
- Saved labour cost.
- Earned higher income.
- Improved quality of soil and agricultural produce.
- Increased the number of earthworms in the soil.

- Benefited many farmers by creating awareness about the importance of natural farming.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI RAKESH SINGH YADAV

Village : Bara
Block : Bighapur
District : Unnao
Contact No. : 9451108940
Education : B.A.

Practices adopted

- Adopted cow based natural farming since 2017.
- Followed rice-wheat cropping system and cultivated Shamba Mansoori (rice variety).
- Cultivated maize, pigeon pea, turmeric and arvi in kharif season and wheat, mustard and potato in Rabi season.
- Prepared and used natural farming inputs like jivamrit and ghanjivamrit etc. Used beejamrit for seed treatment and neemastra, bramhastra and dushparni for controlling pests and diseases.
- Used ICT techniques for marketing (WhatsApp Group).
- Sold produce at the block level.
- Led groups of natural farmers in Unnao district.
- Participated in exhibitions and forums.

Comparison between Natural Farming and Conventional Farming

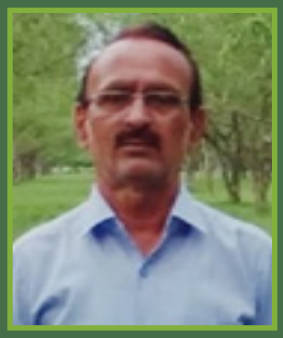
Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Shamba Mansoori)	Paddy (Pusa-1121)
Cost of cultivation (₹)	22500	28000
Production (q)	38	33
Gross return (₹)	75544	56100
Net return (₹)	53044	28100
BC ratio	2.4	1

Benefits and achievements

- Reduced the cost of cultivation, by reducing input cost.
- Improved the quality of soil and increased the number of earthworms in soil.
- Improved the quality of produce.
- Earned higher income.
- Benefitted about 10-15 farmers per month.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI RAM GOPAL SINGH CHANDEL



Village : Barsawan

Block : Unchahar

District : Raebareli

Mandal : Lucknow

Contact no. : 8299865259

Education : MA (Sociology)

Email : kvk.raebareli1984@gmail.com

Practices adopted

- Cultivated field crops (paddy, wheat, mustard, gram etc), horticultural crops (aonla, mango, mosambi, and jack fruit), vegetables (potato, black potato, red cabbage, broccoli, capsicum, and tomato), medicinal & aromatic plants (brahmi, moringa).
- Practiced agro-forestry and planted eucalyptus and teak wood.
- Owned 2 ha farm organically certified through Uttar Pradesh State Organic Certification Institute (UPSOCA), Lucknow.
- Adopted natural farming and used beejamrit, jivamrit and ghanjivamrit for managing nutrients. Used neemastra and brahmastra for controlling pests and diseases.
- Used super-seeder for wheat sowing and practiced line sowing of wheat through a seed drill.
- Practiced direct sowing of paddy through a drum seeder.
- Adopted crop diversification, in which along with cereals and pulses, different vegetables are grown using latest varieties & technology.
- Irrigated crops with drip and sprinkler sets.

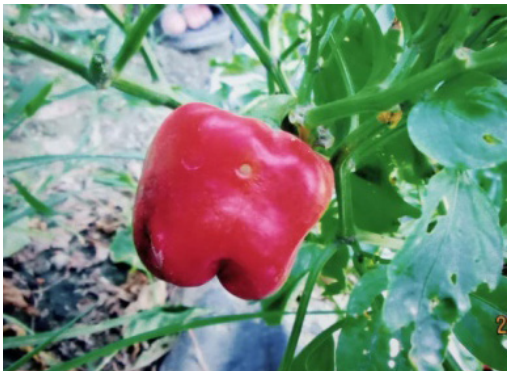
Comparison between Natural farming and Conventional Farming

Parameters	Natural farming				Conventional Farming			
Crop	Mango (0.4ha)	Amla (0.4ha)	Mausambi (0.4ha)	Brahmi (0.4ha)	Mango (0.4ha)	Amla (0.4ha)	Mausambi (0.4ha)	Brahmi (0.4ha)
Cost of cultivation (Rs.)	9000	7500	8400	18000	13500	9600	11200	21000
Production (q)	40	22	12	35 (Dry leaves)	36	19	11	32 (Dry leaves)
Gross return (Rs.)	56000	39600	33600	157500	50400	34200	35000	134400
Net return (Rs.)	47000	32100	25200	139500	36900	24600	29700	113400
BC ratio	5.22	4.28	4.00	7.75	2.73	2.56	2.65	5.4

Benefits and achievements

- Improved soil fertility.
- Increased the productivity of different crops.
- Earned higher profit.
- Enhanced sustainability.
- Benefitted more than 100 farmers in the district Reabareli and provided black wheat seeds to more than 40 farmers.
- Formed FPO (Adarsh Jeevan Farmers Producers Co. Ltd. Barsawan, Unchahar) with 1050 members and disseminated information about various technologies through seminars with the help of KVK Scientists.
- Featured in Krishi Darshan programme of DD Uttar Pradesh in 2018.
- Received Kisan Samman Award at Raebareli on Kisan Samman Diwas.
- Received Best Farmer Award during Virat Kisan mela at Raebareli.
- Honoured by Deputy Vice Chancellor, Rajasthan Agriculture University during Farmers First/Mera Gaon Mera Gaurav Programme.
- Honoured by DDM, NABARD, Raebareli for good effort through formation of FPO.



Source: *Krishi Vigyan Kendra Raebareli*

SHRI SANJEEV KUMAR

Village : Nisurkha

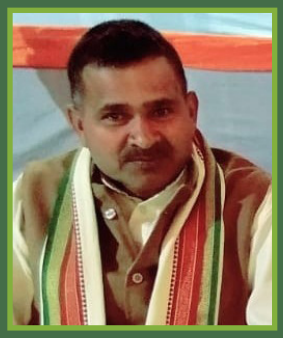
Block : B.B. Nagar

District : Bulandshahr

Contact No. : 9258572443

Education : Intermediate

Email : sanjeevnishurkha@gmail.com



Practices adopted

- Adopted natural farming since the last 10 years on 1.2 ha. land.
- Cultivated wheat, sugarcane, green gram, black gram, ragi, sawan, foxtail millet under natural farming.
- Pioneered in natural farming through alteration of crop geometry (wheat-gram and wheat- seasoned vegetables). Used resources judiciously to get maximum production from natural farming.
- Used desi cow-based and plant-based inputs like beejamrit, jivamrit, neemastra and brahmastra for improving crop health and protecting plants.
- Practiced water conservation techniques including mulching of crop residue, bed sowing, ridge sowing and utilization of farm waste.
- Carried out weed management through mulches.
- Designed 2 types of equipment for intercultural operations in line sown crops and distributed these pieces of equipments to nearly 100 farmers. This greatly reduced the labour requirement and helped in reducing the cultivation cost.
- Practiced in-situ crop residue management with no residue burning.
- Adopted a direct marketing system of organic produce for wheat, vegetables, gram, gur/jaggery, khand, shakkar, sirka and turmic power etc.
- Used digital media tools like WhatsApp and YouTube for dissemination of information.
- Created awareness by participating in kisan melas and kisan club meetings organized by KVK Bulandshahr and State Department of Agriculture.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.5 ha)	Conventional Farming (0.5 ha)
Crop	Sugarcane, Moong, Turmeric	Sugarcane
Cost of cultivation (₹)	48400	68110
Production (q)	Sugarcane -300 Moong – 6.25 Turmeric powder- 6	300
Gross return (₹)	551000	217700
Net return (₹)	502600	149590
BC ratio	10.38	2.19

Benefits and achievements

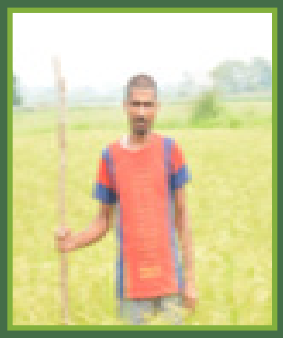
- Reduced dependence on the market for inputs.
- Obtained yield comparable to chemical farming.
- Improved health of consumers by providing pesticide-free produce to the customers.
- Ensured efficient and economical use of natural resources like soil and water.
- Reckoned that natural farming is a step towards climate resilient agriculture.
- Provided guidance in natural farming to farmers of the district, state & other states.
- Awarded by the State Government of U.P. for salient contribution in natural farming.
- Awarded with Urja Ratna Award in 2019 by World Urja foundation, Mumbai for energy conservation equipments.
- Motivated 22 clusters in different villages of the district by encouraging 316 farm families to practice natural farming.
- Worked as a resource person in the field of natural farming in the Indo-Gangantic plain zone covering Haryana, Uttar Pradesh, Rajasthan, and Madhya Pradesh.



Source: *Krishi Vigyan Kendra, Bulandshahr*

SHRI SATISH CHANDRA MISHRA

Village : Hari Kheda
Block : Sisendi
District : Lucknow
Contact No. : 7007294715
Education : LLB



Practices adopted

- Adopted desi cow based natural farming since 2016 in a 3.4 acre land.
- Cultivated paddy (BPT-5204), safed til in kharif season and wheat (bansi) in rabi season.
- Various natural farming inputs like jivamrit, ghanjivamrit, neemastra, bramhastra, dashparni ark are used as nutritional supplements and pest control measures.
- Irrigated farm area by tubewell.
- Linked with marketing groups.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in exhibitions, workshops, and forums.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (BPT-5204)	Paddy (BPT-5204)
Cost of cultivation (₹)	22000	30000
Production (q)	37	42
Gross return (₹)	111000	84000
Net return (₹)	89000	54000
BC ratio	4.0	1.8

Benefits and achievements

- Reduced cost of cultivation.
- Increased income.
- Improved quality of soil and produce.
- Benefitted about 10-15 farmers per month.
- Established a seed bank for other farmers.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI SHARAD PRATAP SINGH

Village : Pali Pahadi
Block : Babeena
District : Jhansi
Contact No. : 8948197631
Education : Intermediate in Agriculture

Practices adopted

- Adopted cow-based natural farming since 2017.
- Integrated crops with vegetables. In a 5.5 acre land, food crops are cultivated in half the area and vegetables in the other half.
- Cultivated scented rice, ground nut, ridge gourd, sponge gourd, chilli, brinjal, green gram and black gram in kharif season and wheat (var- bansi) and vegetables in rabi season.
- Used jivamrit and ghanjivamrit as nutritional supplements.
- Prepared and applied beejamrit for seed treatment and neemastra, bramhastra and dashparni ark for control of pests and diseases.
- Irrigated the entire farm by a single well situated in the middle of the farm.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in various exhibitions and workshops related to natural farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Pusa-1121)	Paddy (Shamba Mansoori)
Cost of cultivation (₹)	26500	34000
Production (q)	48	43
Gross return (₹)	321600	227040
Net return (₹)	295100	193040
BC ratio	11.1	5.67

Benefits and achievements

- Improved the quality of produce.
- Reduced the cost of cultivation.
- Earned higher income.

- Improved soil health.
- Saved labour cost and time.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI SHYAM BIHARI GUPTA

Village : Amba Baye

Block : Badagaon

District : Jhansi

Contact No. : 9889196787

Education : Diploma in Electrical Engineering

Practices adopted

- Adopted natural farming since 2012.
- Cultivated wheat variety–Bansi.
- Used natural farming inputs like jivamrit and ghanjivamrit as nutritional supplements.
- Prepared and applied beejamrit for seed treatment. Neemastra, bramhastra and dashparni ark are used for controlling pests and diseases.
- Prepared value-added products like dhoopbatti, toothpaste, soap, face pack, rubbing oil etc. from cow dung and urine.
- Used ICT tools for marketing (WhatsApp Group).
- Participated in seminars, workshops, and exhibitions at the state and national level.
- Convinced other farmers about natural farming by showing farm demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Wheat (Bansi)	Wheat (Lokmanya)
Cost of cultivation (₹)	30000	38000
Production (q)	40	40
Gross return (₹)	140000	80000
Net return (₹)	110000	42000
BC ratio	3.7	1.1

Benefits and achievements

- Reduced input cost and cultivation cost.
- Saved on time and labour cost.
- Increased income.
- Resulted in quality improvement of soil and produce.
- Reclaimed alkaline soil.

- Increased the number of earthworms in soil.
- Benefitted about 500 farmers every year by organizing trainings and has been consulted by many farmers for natural farming.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI SUDHANSHU GANGWAR

Village : Kuiyan Dheer
Block : Shamsabad
District : Farrukhabad
Contact No. : 9369519355
Education : Graduate

Practices adopted

- Adopted natural farming since 2010 and cultivating papaya with groundnut, turmeric, mung bean and urd bean. Also growing sole crops like lobia, barseem, mung bean and urd bean.
- Reared 20 desi cows which were previously abandoned.
- Used various natural farming inputs like jivamrit & ghanjivamrit as nutrient supplements, dashparni ark for controlling pests & diseases, and beejamrit for seed treatment.
- Applied crop residue as mulch to reduce demand for water and weed intensity.
- Used ICT tools for marketing (WhatsApp Group) and participated in various exhibitions & forums.
- Encouraged fellow farmers by holding demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Papaya (Red Lady Taiwan-786) and Groundnut	Papaya (Desi)
Cost of cultivation (₹)	125000	90000
Production (q)	Papaya–750 Groundnut- 18	600
Gross return (₹)	690000	480000
Net return (₹)	565000	390000
BC ratio	5.5	5.33

Benefits and achievements

- Reduced the cost of cultivation and earned higher profit.
- Improved soil health and quality of produce.
- Increased number of earthworms in the soil.
- Utilized crop residue.

- Benefitted farmers at a large scale and generated employment.
- Received special Award on Jaivik Kheti from the Government of U.P. on 23.12.2020.

Source: *CSA University of Agriculture & Technology, Kanpur*

SHRI SURENDRA SINGH PATEL

Village : DadaiKheda
Block : Bighapur
District : Unnao
Contact No. : 9454181784
Education : B. A

Practices adopted

- Adopted cow based natural farming since 2017.
- Followed rice-wheat cropping system and grown Sharbati variety of paddy.
- Cultivated rice (1121), maize, pigeon pea, turmeric and arvi in kharif season and wheat, mustard and potato in rabi season.
- Prepared jivamrit & ghanjivamrit and used them as nutritional supplements.
- Applied beejamrit for seed treatment and neemastra, bramhastra and dusparni for controlling pests and diseases.
- Irrigated farm area with the help of a tube well.
- Worked with marketing groups.
- Used ICT for marketing (WhatsApp Group).
- Participated in exhibitions and forums.
- Benefitted other farmers through farm demonstrations.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (1 ha)	Conventional Farming (1 ha)
Crop	Paddy (Sharbati)	Paddy (Pusa-1121)
Cost of cultivation (₹)	23000	29000
Production (q)	40	35
Gross return (₹)	100000	69580
Net return (₹)	77000	40580
BC ratio	3.3	1.39

Benefits and achievements

- Reduced cultivation cost significantly.
- Improved soil and agricultural produce.
- Increased income.

- Established a seed bank.
- Advised farmers about natural farming.

Source: *CSA University of Agriculture & Technology, Kanpur*

UTTARAKHAND

SHRI NARENDRA SINGH MEHRA

Village : Devla Malla

Block : Haldwani

District : Nainital

Contact No. : 6396870269 / 9897130131

Education : M.A. Geography and PG Diploma in Tourism

Practices adopted

- Adopted natural farming.
- Prepared and used natural inputs like beejamrit, jivamrit and plant protection arks.
- Initiated wheat and garlic as a co-crop pattern in 2017.
- Practiced direct sowing method of paddy to save labour, water and investment.
- Provided training on natural farming methods to fellow farmers.
- Popularized water conservation techniques in paddy transplantation.
- Developed a new wheat variety (N-09) in July 2021.
- Practiced production of sugarcane seedling through Ring Pit and Trench Method.
- Established an organic jaggery unit.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.4 ha)	Conventional Farming (0.4 ha)
Crop	Wheat (Narendra - 09)	Wheat (PBW - 154)
Cost of cultivation (₹)	11600	17500
Production (q)	24	22
Gross return (₹)	65000	44300
Net return (₹)	53400	26800
BC ratio	5.6	2.53

Benefits and achievements

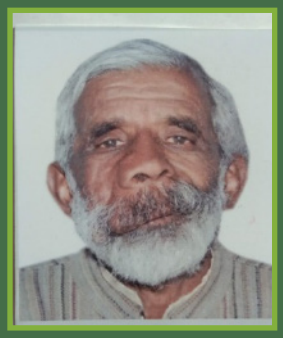
- Recipient of Progressive Farmer Award
- Innovative Farmer's Award
- Farmer's Leadership Award
- Uttarakhand Pride Award

- Uttarakhand Ratan Award
- Uttarakhand Icon Award

Source: *Krishi Vigyan Kendra, Jeolikote, Nainital, Uttarakhand*

SHRI VIJAY JARDHARI

Village : Jardhargaon
Mandal : Chamba
District : Tehri Garhwal
Contact No. : 7300566098
Education : Graduation



Practices adopted

- Conserved indigenous/local seeds through a campaign called Beej Bajao Andolan.
- Adopted seed treatment and seedling root dip techniques through beejamrit.
- Prepared natural inputs like jivamrit and other plant-based kashayas.
- Used live mulch and dead mulch.
- Conserved more than 200 varieties of rajma and 20 varieties of rice-bean.
- Practiced Baranaja, a mixed crop farming practice, for cultivating millets viz. finger millet, barnyard millet, foxtail millet, amaranth, rice bean, taur, black soya bean, rajma, buck wheat, black gram, horse gram, adjuki bean etc.
- Propagated Baranja system of farming.
- Conducted rallies and mass campaigns about natural farming in the village, annually.
- Assisted in establishing kitchen gardens in the village.
- Participated in district and state-level natural farming trainings.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (0.1 ha)	Conventional Farming (0.1 ha)
Crop	Wheat (Mundri - Indigenous)	Wheat (Local)
Cost of cultivation (₹)	2250	3550
Production (q)	195	165
Gross return (₹)	4875	4125
Net return (₹)	2625	575
BC ratio	1.16	0.16

Benefits and achievements

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good quality.

- Increased shelf life.
- Increased net income by cultivating millets and pulses in mixed farming.
- Consumed and sold chemical free food to the community.
- Maintained soil health.
- Designated coordinator of the Beej Bachao Andolan.
- Nominated as Board member of Uttarakhand University of Horticulture and Forestry, Bharsar, Pauri Garhwal.

Source: *Krishi Vigyan Kendra, Ranichauri, Tehri Garhwal, Uttarakhand*

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ISBN: 978-81-953811-4-2

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