



Study of Zero Budget Natural Farming in Northern Raigad

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Abstract	
	<p>The Research paper is on the 'Study of Zero Budget Natural Farming (ZBNF) in Northern Raigad'. For this paper, we approached farmers practicing ZBNF to know what exactly ZBNF method is? How is it economically and environmentally friendly? What is the nature of economic profile of farmers practicing ZBNF? We used interview method for the project and after analyzing their answers, we found out that they don't have commercial approach in farming. They are producing for household purpose and they sell the remaining produce to acquaintances. In the absence of well-organized market, they need to sell extra produce to known people. ZBNF is a good concept in agriculture sector which provides healthy and nutritious agricultural products. ZBNF is low-cost farming but it needs minimum 3 to 4 years to set the productivity of land to better results. If government provides subsidy to these farmers, then it will develop commercial approach in the farmers and give good results to the nation. If this method of farming is adopted by all farmers it will reduce many diseases like Cancer, and can help promoting healthy lifestyle.</p>
CC License CC-BY-NC-SA 4.0	Keywords :- Zero Budget Natural Farming (ZBNF), Environmentally Sustainable,

INTRODUCTION :-

ZBNF is a farming method that believes in growing crops in tune with nature. ZBNF guides the farmers towards sustainable farming practices thus helps in retaining soil fertility, to ensure a chemical free agriculture and ensure low cost of production (zero cost) and thereby enhancing the farmers' income. The concept was promoted by an agriculturist, Padmashri Subhash Palekar. He believes in the method of cultivation which creates a natural self sustaining ecosystem within the farm which through its complex food chains and symbiotic relationships lets the crop grow. Later on as the name Zero Budget Natural Farming was extensively used by other technicians as well, he changed the name of his Technique as Subhash Palekar Krushi alias SPK. Subhash Palekar : Father of ZBNF

Subhash Palekar studied the ecosystem of the forests and the natural processes which enable the growth of so many fruits, plants and trees without any intervention of human beings. Then, for six years (1989-1995), he

verified these natural processes on his own farm through 154 research projects that led him to develop a method of natural farming which he called the “Zero Budget Natural Farming”.

INNOVATION AND RATIONALE

The study of economics brings light upon many aspects that are majorly overlooked while taking into account the development in a state or a region. Zero Budget Natural Farming is an such overlooked topic in the agricultural sector despite its major benefits. Zero Budget Natural Farming needs to be further investigated. It is a new farming technique that hasn't gained the support of many farmers. On the subject, there weren't many research efforts either.

We reasoned that if this agricultural technique is as profitable as it promises to be, it ought to be widely used by farmers. So, in order to determine whether this is a good agricultural strategy as it states in previous researches, we conducted a similar research on the subject. The project's goal is to inform the government and farmers of the ZBNF method's findings so they can use it if it appears to be useful.

OBJECTIVES :-

1. To know the methods of ZBNF farming and see how these are environmentally sustainable.
2. To study the economic profile and market mechanism of ZBNF farmers.

RESEARCH METHODOLOGY

Primary Sources :

1. Field visit was given to the farmers practicing SPK methods of farming.
2. Interview method was used to speak with those farmers practicing SPK.

Secondary Sources :-

1. Books, internet, etc. were used to look through to search information on the same topic.

METHODS OF SPK

Almost everything that is to be used in farming is produced naturally & created within the farm. What little cost there is, is eliminated by produce from inter-cropping. They focus on mixing of crops in between like nitrogen fixing plants so that crops will grow with the help of each other. They also plant pollinating agent attracting flowers in between so that pollination between crops will be ensured. They use pesticides of natural ways like Neem & other Acrid plants. This way, all the resources needed are available in the farmland. They do not use tractor as it sow too deep & due to its heaviness soil is presses against land. Instead they use power tiller.

PRINCIPLES OF ZBNF

- No external inputs.
- Local seeds (use of local varieties).
- Cover crops for biomass mulching for creating a suitable climate for maximum beneficial activity.
- Inter-cropping.
- Integration of trees into the farm.
- Integration of native breed of cow for cow dung and cow urine as essential inputs for several practices.
- Water and moisture conservation.

4 Wheels of SPK

1. Bijamrita: Seed Treatment using Cow Dung and Cow Urine.
Removes Toxins and gives disease resistant to the plants.
2. Jiwamrita: Soil Treatment despite the use of fertilizer.
Increases Microorganisms count in the soil.
3. Achchhadan: Soil Protection Create conductive environment for biological processes in the soil.
4. Waaphasa: Soil Enrichment Technique use for tree plantation.

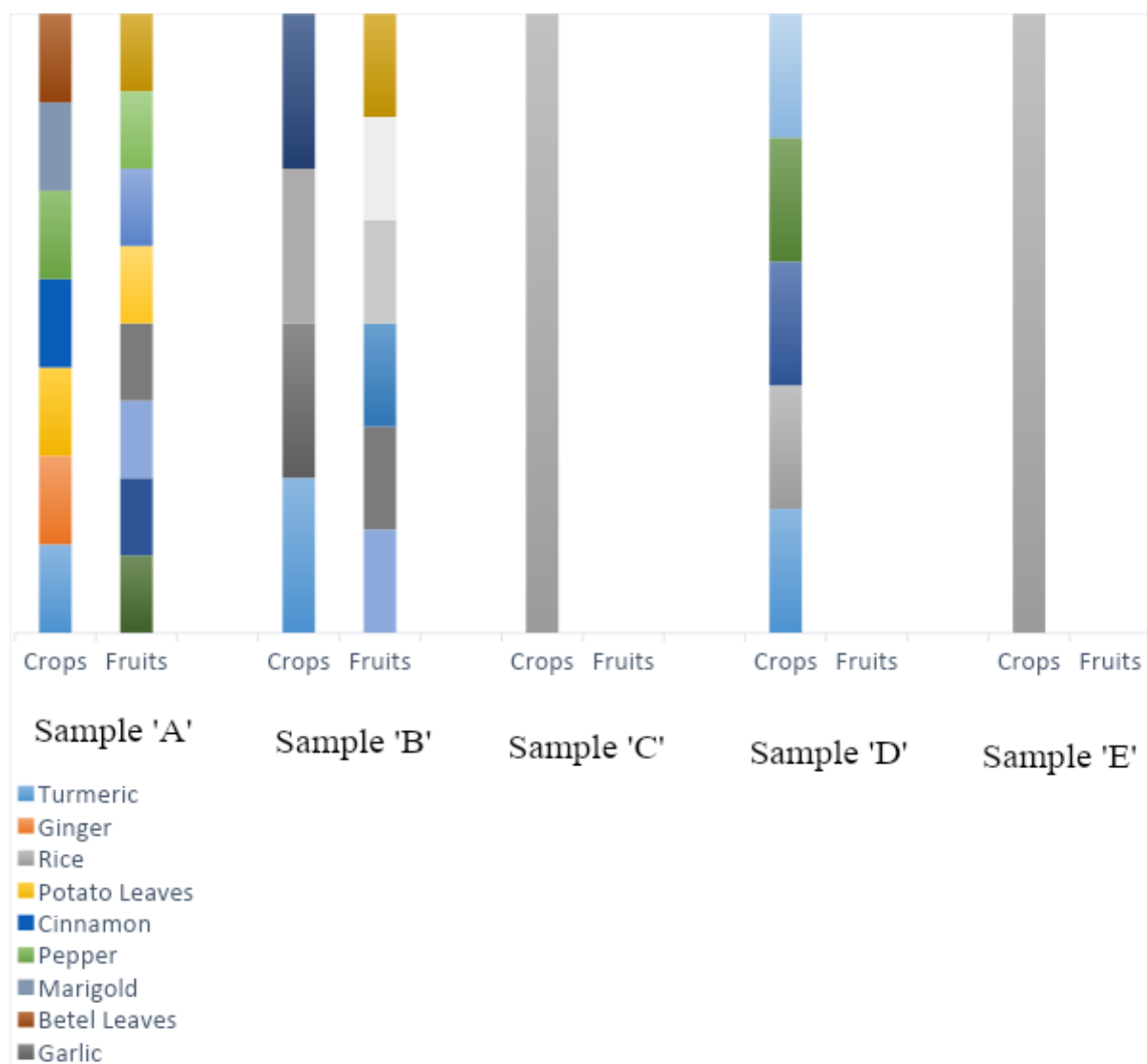
ANALYSIS

We found five farmers practicing SPK methods in Northern Raigad. We interviewed them for this project. All five of the farmers practicing SPK we met for this project were practicing agriculture for household purpose. They grow crops like rice, turmeric, ginger, fruits etc. and sell the leftovers to the acquaintances. Because of

this, they did not keep any account of production cost and yield. The water source of two of them is borewell and another one is depend on rainwater. Three of them have permanent workers at farm and call labour as needed and other two don't have any permanent labour and always calls them as required. One of them practice Agro Tourism as allied activity. One of them is retired and decided to practice agriculture as pastime. Other four have been doing farming on their family land while being employed in their job. Upon asking why practice SPK, they said they were aware of harmful side effects of using chemical fertilisers on human body as well as nature. One of them tried practicing organic farming which was way too much costlier than conventional farming and not possible for farmers. They came to know about SPK from various sources like YouTube, friends and all of them attended workshops of the topic and decided to try it out. Upon trying it out they got better results than before. One farmer pointed out that there is a big demand for natural products but since not many farmers have adopted this, production is comparatively less. They also have much trust in mouth publicity by customers, thinking there is not really a need of marketing.

Name of the Farmers	Place	Area of Land	Main Production
Sample 'A'	Mothe Vengaon (Karjat)	2 Acres	Turmeric, Ginger
Sample 'B'	Borthan (Khalapur)	7 Acres	Mango
Sample 'C'	Dhakti Jui (Uran)	3 Acres	Paddy crop
Sample 'D'	Palasdari and Nere (Panvel)	2.5 Acres	
Sample 'E'	Umathe Village (Alibag)	1.2 Acres	Paddy

Crops taken by farmers



Survey of Agricultural Consumers about ZBNF

Knowing ZBNF products are costly than normal products, we surveyed people to see if they are willing to spend more money on natural food instead of having chemically farmed food. We got 91 responses for this survey.

► Those who are aware of ill effects of chemical way of farming.



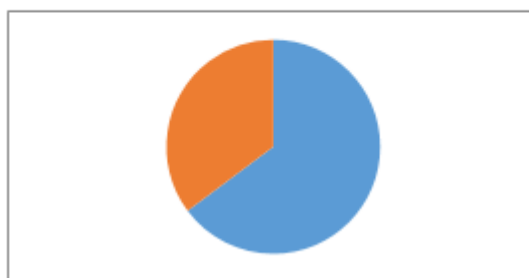
► Those who know about ZBNF



► Those who will prefer ZBNF products over chemically farmed products.



► Those who are ready to buy ZBNF products even at a high price



Income Level wise Analysis

Income Level	Total Responses	Ready to buy at higher price	Won't buy at higher price
Less than 20k	23	12 (52.2%)	11 (47.8%)
20k – 40k	24	11 (45.8%)	13 (54.2%)
40k – 70k	20	13 (65%)	7 (35%)
70k – 1 Lakh	15	15 (100%)	0
More than 1 Lakh	9	8 (88.9%)	1 (11.1%)
Total Responses	91	59 (64.8%)	32 (35.2%)

As seen from the above data, surprisingly nearly half of lower income people are ready to buy ZBNF products even at a high price for a healthy lifestyle. This tells us that they are willing to spend more on healthy and nutritious food instead of having chemical contents from conventionally farmed food. There was also a view that it is better to spend more on food now instead of spending on medical expenses in future. As we can see, almost all of higher earning people are ready to buy ZBNF products at high price.

SUGGESTIONS :-

Their way of doing farming naturally is estimable & it needs to reach to as many farmers as it can so that many farmers can benefit from this amazing technique.

1. Government should advertise about ZBNF in schools, colleges, its programs, agricultural institutes so people can learn about it.
2. Method should be added in the curriculum of agricultural universities.
3. Government should make a provision to spread awareness among farmers by local bodies. Also, they should give incentives like subsidies to farmers so they can adopt this method.
4. Initially farmers should have some patience as it takes 2-3 years to get the land ready for proper ZBNF cultivation with better yields.

5. Government should create a market mechanism of ZBNF farmers so that commercial approach will develop among farmers.

CONCLUSION :-

We can say that Zero Budget Natural Farming is a really great way of practicing agriculture as it believes in nature and makes agriculture naturally self-sustainable.

1. SPK methods involve raising crops without using any fertilizers and pesticides or any other external materials. This model eliminates the cost of fertilizers, pesticides, and seeds.
2. The very concept of creating an ecosystem in the farmland is amazing! Instead of bombarding land with chemicals, they give nature what it originally had & let the nature do the rest. Nature, in its complex process of symbiotic relationships and food chain helps the crop grow easily.
3. Instead of using chemical fertilizers and pesticides which are proven to be fatal now, spreading cancer among humans and making land infertile, using natural ways of farming is a much needed thing today and SPK provides us with the best alternative there is.
4. Since chemical inputs increase salinity of land and make land infertile, the productivity of land decreases resulting in lower yield. As this model does not use chemicals, there is no fear of decreasing productivity and higher yield is ensured. Because of this, it is a sustainable farming.
5. There is no organized market of ZBNF farmers. Though there exists a network between the ZBNF farmers and their acquaintances and they sell their produce among them as per the demand.
6. Though, four of the farmers we met were doing some other work & doing farming as side job. All of them were growing crops for their own consumption. After keeping it aside for them, they sell the remaining produce to people they know. Hence, there is no commercial approach.

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