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Organic Farming in India

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I. INTRODUCTION

Organic farming for human welfare without harming the environment and follows the rule of health, ecology, fairness and take care for all including soil. The trendy concept of organic farming combines the tradition, innovation and science. history belong that the movement for organic way of life recognized in 1905, it could gain ground after realizing the ill effects of contemporary agriculture. In 1905, the British botanist Sir Albert Howard, often cited beacause the father of contemporary organic agriculture, documented traditional Indian farming practices, and came to take them as superior to traditional farming. During 1940, In Japan, Fukuoka a microbiologist working in science and plant pathology, quit job as a pursuit scientist, returned to his family's farm, and devoted the following 30 years to develop a radical no-till organic method for growing grain. Many other practices like Rishi krishi,Natueco farming, homa farming, panchagavya krishi and bio dynamic farming are associated with organic agriculture.. The result indicates organic farming can decrease energy consumption by 30.7 % per unit of land by remove the energy need to manufacture synthetic fertilizers and pesticides and by using internal farming inputs, thus reducing fuel used for transport. India can emerge as global leader due to the presence of large number of organic producers (almost 7 lakh producers) and they needs to be supported with technical knowledge and inputs besides marketing gap between availability of organic source of nutrients and requirement and lack of pest and disease management idea. Most of the organic farmer have expressed that lack of support price for organically grown crops and sell infrastructure as the major constraint in promotion of organic cultivation.

Although, good result on research in organic farming has been done, the new emerging areas of human health benefits, understanding the economics with environmental marketing, climate friendly farming and carbon farming with modern organic farming system models needs to be addressed in future. The certification systems of farmer group, participatory guarantee system, know your farm and know your food should be promoted in large scale.

In Asia, land below organic management reach 3.6 million hectares for 2009 up from slightly below 3million hectares reported for 2008 and under 2 million hectares for 2007. A rate of near to 6 per cent comes on top of a 17 per cent growth from 2007 to 2008. It maintains an rising trend albeit a slower pace of conversion. The main sponsor of the expansion of cultivated acreage in India. With the spread awareness about the safety and quality of foods in long term sustainability of the system and accumulated evidences of equally productive, the organic farming has appear as an alternative system of farming which not only addresses the quality and sustainability concerns, but also ensures a profitable maintain. dig area under certified organic farming has grown almost 17 fold in last one decade .(42,000 ha in 2003-04 to 7.23 lakh ha in 2013-14).

The Government of India has implemented the National Programme for Organic Production (NPOP) in the year 2001. The national programme involves the accreditation programme for certification agencies, norms for organic production, promotion of organic farming etc. States- Uttaranchal, Karnataka, Madhya Pradesh, Maharashtra, Gujarat, Rajasthan, Tamil Nadu, Kerala, Nagaland, Mizoram, Sikkim have been promoting organic farming.

Organic produces are rapidly preferred by developed countries and major urban centres in India. large demand for Indian organic products especially tea leaf, coffee, jute etc. exists in the international market. A limited class of consumers is also emerging in the national domestic market who requires quality food. The global trade during 2013-14 was 60 billion (Rs. 3,60,000 crores) and may touch 100 billion within the next five years. Trade in India may reached Rs. 5000-6000 crore, which is near about 1% of the global trade. The International Competence Centre for Organic Agriculture estimated that the domestic market for organic products in the year 2011-12 was Rs. 300 crore and grow to Rs. 600 crore in 2012 to 2013 i.e. a growth rate of full.

Organic agricultural export in market is one of the major operators of organic agriculture in India. India exports mostly 31 organic products. It is appriximate that more than 85% of total organic production, excluding wild herbs from Uttar Pradesh and Madhya Pradesh, is exported. India is best known as an exporter of organic tea and also has great export potential for many other products. Other organic products for which India has a niche market are spices and fruits. There is also good response for organic rice, vegetable, coffee, cashew, oil seed, wheat and pulses. the fruit crops bananas, mangos and oranges are the most preferred organic products.

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II. MINIMUM REQUIREMENTS FOR ORGANIC FARMING

In organic farming system, certain minimum requirements are to be met to fulfil its objectives. Then only the farm is certified as organic.

A. Conversion

The time between the start of Modern organic management and certification is called conversion period. The farmers should have a conversion plan prepared if the entire field is not converted into organic at a time. In that case, it is necessary to maintain organic and non- organic fields separately. In the long run the entire farm including livestock should be converted into organic. The conversion period is decide on the past use of the land and ecological situation. Generally, the conversion period is two years for annual crops and three years for perennial crops. However, the conversion period can be relaxed based on the verification by certification agency if the requirements are fully met. During conversion, steps should be taken to maintain bio-diversity etc.

B. Manurial Policy

Soil fertility should be maintained by raising green manure crops, leguminous crops etc. The rest of plants after harvest should be incorporated into the soil as long as possible. Decompose materials of microbe, plant or animal origin shall be applied as manures. Use of harmful fertilize is not permitted. The mineral based materials like rock phosphate, gypsum, lime, etc. only applied in limited quantities when there is absolute necessity.

The following products are permitted for use in manuring/soil conditioning in organic fields:-

1) Farm yard manure, slurry, green manures, crop residues, straw and other mulches from own farm
2) Saw dust, wood shaving from untreated wood
3) Calcium chloride, lime stone, gypsum and chalk
4) Magnesium rock
5) Sodium chloride
6) Bacterial preparations (Bio-fertilisers), eg. azospirillum, rhizobium
7) Bio-dynamic preparations
8) Plant preparation and extracts

The given products shall be used when they are absolutely needful and taking into consideration of factors like contaminations, depletion of natural resources, nutritional imbalances, etc.
Identified nutrient management for packaging for various cropping systems through network. Time of application of panchagavya for various crops .

III. LITERATURE SURVEY

Organic fertilizers can be produced from a number of sources such as crop residues, manure and municipal waste, among others .Different sources of organic fertilizer such as sewage sludge, slaughterhouse waste and municipal solid waste. may also be processed into organic fertilizer. According to organic farming improves soil quality, secures the future of the farm and offers environmental protection. The farmer added that more soil nutrients result in less soil erosion and an increase in soil biodiversity. In addition, there is an increase in soil fertility in organic farming with minimum tillage, organic fertilizers, proper crop rotation and cover crops, green manure, etc. The key indicate for assessing soil quality is organic matter content as it directly affected soil properties (porosity, water infiltration, bulk density and water holding capacity).Organic manure also provides essential micronutrients such as Sulphur, Magnesium, and Copper, magnese and iron, etc. . In essence, erosion and loss of soil organic matter can lead to an increase in bulk density. Any soil nutrient deficiency can lead the significant decline in crop yields, particularly in modern organic farming .

A. Crop Rotation

Crop rotation is the back bone of organic farming practices. To keep the soil healthy and to allow the natural microbial systems working, crop rotation is must. Crop rotation is the succession of different crops cultivated on same land. Follow 3-4 years rotation plan. All high nutrient demanding crops should precede and follow legume dominated crop combination. Rotation of host and non host crops helps in controlling soil borne diseases and pest. It helps in controlling weeds. It is better for improve production and fertility of soil.

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Crop rotations help to improve soil structure through different types of root system bean should be used frequently in rotation with cereal and vegetable crops. Green manure in crops should also find any place in planning for rotations. While returning towards organic it is essential that the basic requirements of the system and the area are proper understood and long term strategies are noticed first. In mostly the part of the country poor soil health due to loss of organic matter and soil microbial load is a major problem. Reduce water availability and increasing temperature is further adding to the problems. Too much depend on market for supply of inputs and energy has made the organic agriculture a cost intensive high input enterprise with diminishing returns. We need to address all these concerns and develop a system which is not only productive and low cost but also resource conserving and sustainable for centuries to come. To start with, following parameters need to be addressed in first stage.

B. Effective Microorganisms Technology

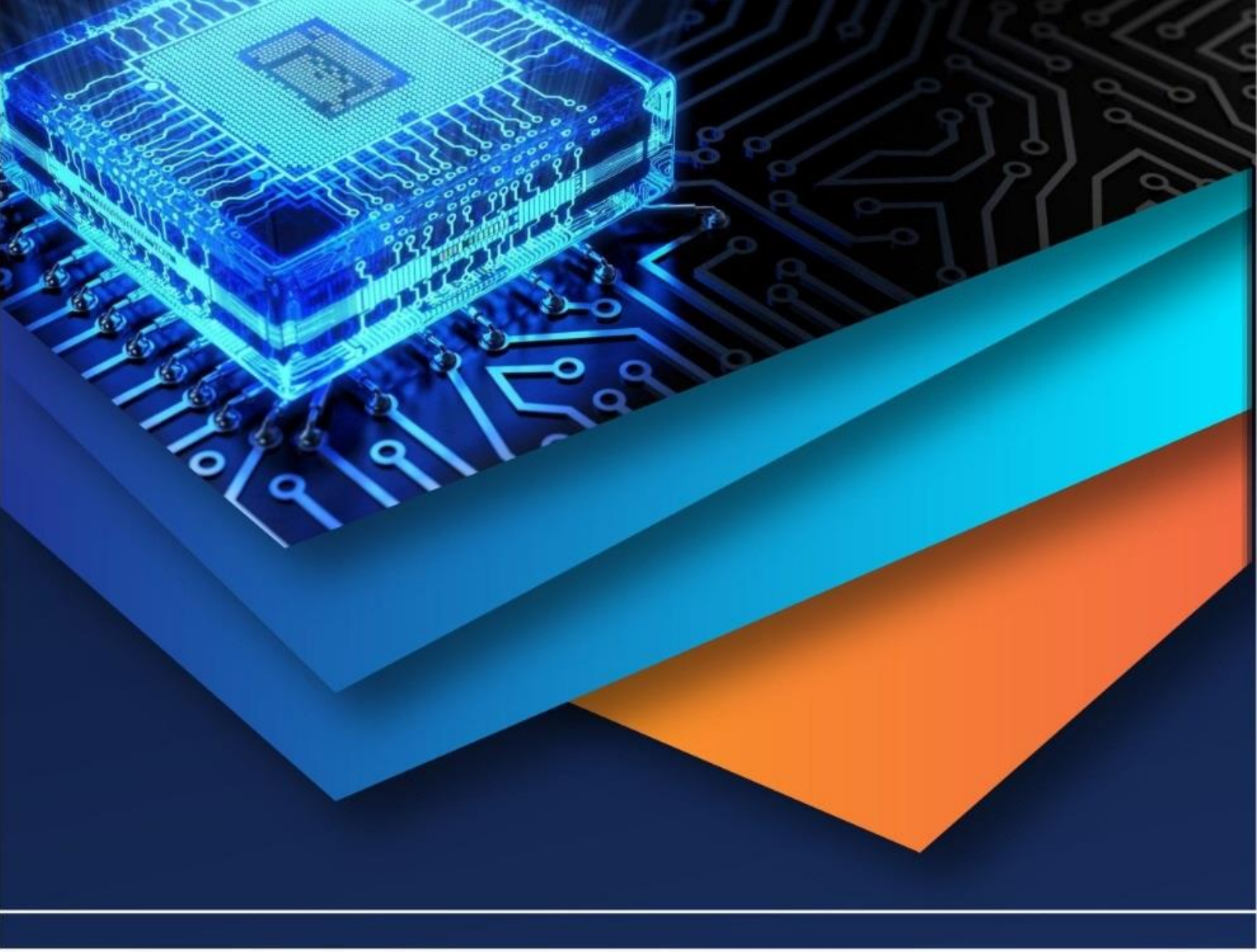
Effective Microorganisms is a consortium culture of different effective microbes commonly occurring in nature. Most important among them are : N2-fixers, P-solubilizers, photosynthetic microorganisms, lactic acid bacteria, yeasts, plant growth promoting rhizobacteria and various fungus. In this consortium, every microorganism has its own beneficial role in nutrient cycling, plant protection and soil health and fertility enrichment. As the villagers were not using any useless fertilizers or pesticides earlier, the chance of reduction in yield due to adoption of organic farming does not arise. due to takeon of improved organic production technology, the yield of rice, maize, French bean, ginger, tomato, carrot and chilly had been enhanced by about 15, 22, 40, 33, 45, 37 and 27 %, respectively over conventional practice. Villagers are currently selling their product in local market and along the highway side as uncertified organic produce with 10 to 15% higher market price as compared to conventional produce.

C. Manar Vanadesa a Farmers Group

Fifty tribal farmers and including 20 women were trained under ICAR-Network Project on Organic cultivation for modern organic Farming methods and techniques in 5 villages of Karamadai block in Coimbatore district of Tamil Nadu. Special lectures on mushroom crop cultivation, apiculture, bio-fertilizer production were given. Inputs such as 10,000 number of Jasmine seedlings, 16 kg vegetable seeds, 200 kg of Azospirillum, Phosphobacteria, VAM and 100 kg of bio-control agents From the trained group, Manar Farmers Group was formed for organic certification and registered at Joint Registrar Office, Coimbatore.

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