

Government Initiative and Policy Support in Promotion of Natural Farming

“Integrating Natural Farming into National Agricultural Strategies”

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ABSTRACT

Natural Farming is recognized as sustainable and eco-friendly farming to protect environment. It is the best farming practices or alternative conventional method to overcome the use of Synthetic fertilizers. This abstract examine the Government initiative and policy support in promotion of Natural farming considered as it enhance biodiversity, environmental sustainability factors like- Climate, Temperature, Soil, Air, Water and improve over all farming community health. Besides Government approaches viz- New schemes and policies, entrepreneurial startups, value-addition startups, FPOs, SHGs like initiative to create awareness and skill development programs in between youths. Extension strategies play a vital role for dissemination of new innovation, technology and ideas with the help of utilized multimedia like – Mobile applications, Digital platforms, Television, Newspaper, Radio, Bulletins, etc. And another medium of circulate innovation or ideas is – conduct training program, organize demonstrations awareness trails and Front line demonstrations program.

For global concerns Indian government has opted natural and organic farming practices in G20 summit. Natural farming is a traditional indigenous farming practice since ancient era. In modern context it is necessary to create awareness to re-adopt natural farming due to this conduct training, workshop, group discussion, individual meeting etc for behavioral changes in farmers community. For these concerns Indian government has formulated “PM Kisan Samman Nidhi program” (2019) for financial assistance to economically weaker section of farmer community. “National Mission on Natural Farming” 2023, to scale up “Bhartiya Prakritik Krishi Paddati” (BPKP), main theme to conduct trainings with the help of KVKs, Agricultural Universities, NGOs, MANAGE, NCONF etc, due to behavioral changes in between growers to shift from chemical based inputs to indigenous Cattle based raw produce and residue of crops, it also promote traditional indigenous practices of crops cultivation in remote areas. Farmers have freedom to avoid externally purchased inputs around the year and they itself to produce biomass mulching to grow Sasbania, Dhecha, Lobia etc, to cover soil for protecting moisture conservation due to this also curtail weeds germination. To develop entrepreneurial skill of entrepreneur or growers get trained to establish startup efforts for develop manufacturing unit for preparation of Jeewamrit, Beejamrit, Ghanjeevamrit, Dashparni arka, (these products are prepared by raw produce of cow-dung, Urine formulation which is rich in nutrient content and good carrier for enhancing soil fertility) and biofertilizers.

In natural farming millets crops play a crucial role because it is less or no fertilizer consuming crops, generally millets are grown in naturally conditions in hilly areas. Promotion of cultivating millets India as well as world celebrated 2023 as “Millets years”. Create awareness in millets agricultural institutions engaged in extension activities between farmers community, ICAR institutions, KVKs, NGOs conduct massive awareness creation program in broad scale in remote areas.

Keywords : Biodiversity, Eco-friendly, Extension strategies, Government schemes, Biofertilizer.

INTRODUCTION

India is the richest and surplus produce country in historical era, to see the fame of India lots of foreigners like- scholars, artisans, historians, ambassadors etc. come in India for seeing

prosperity, sovereignty, cultural and ethical integrity. Natural farming is eco-friendly in context of environmental factors. In present scenario developed and developing countries like – India major focus on natural farming. “Natural Farming is

the farming of growing crops without using any chemical fertilizer in this place used only natural raw produce of plant debris or animal produce". Natural farming is the unique model of modern agriculture for growing crops in "Zero Budget Natural Farming", these crops should be free from any chemical contamination, when discuss about vegetable production – vegetables are directly consumed by human being, if farmer utilize naturally available manures resources, ultimately farmer could suppress cost of cultivation where as vegetables are high fertilizers consuming crops as compare to cereals. Natural farming is depend on indigenous breed of cattle- raw produce, this waste material is used for making nutrient rich solution like – Jeewamrit, Beejamrit, Ghanjiwamrit, Dashparni Arka etc. Crops plant requires nutrients in three major categories i.e. Primary nutrient-Nitrogen (N), Phosphorus (P), Potash (K). Nitrogen is important for plant cell division, building proteins and carbohydrates etc. Phosphorus acts as root formation, plant maturity and seed formation. Potassium play important role in enzymatic activity, disease resistant and fruit formation etc. Secondary nutrients – Ca, Mg, S, and plants used fewer amounts but it is required for nut formation, vitamin development and amino acid formation and chlorophyll production in leaves. Micro nutrients are – Iron(Fe), Manganese(Mn), Boron(B), Chlorine(Cl), Zinc (Zn), Copper(Co). These 6 nutrients are require in less amount for plant growth and development, but its deficiency create major problem in plants like Boron deficiency cause empty pollen grains and reduce number of flower plants. Zinc deficiency cause chlorosis of leaves etc.

After independence in 1947 government of India launch five year plan with the help of Planning Commission, in Forth five year plan adopt "Green revolution", with enforcement of research and innovation agriculture and allied sector with the help of M.S. Swaminathan. In early 1990 GOI open economy in the world platform and adopt the policy of LPG – Liberalization, Privatization and Globalization, at that time food production has 130 Metric Tons, where as in in 2010, India becomes a food surplus country of more than 275 Metric Tons.

This surplus production is based on contribution of chemical fertilizer, in this reasons farmer become greedy to want increase production in day-by-day for applying maximum doses of fertilizers. This overdose of fertilizer creates damage soil physical, chemical, and biological property. Government and ICAR governing bodies realize this is a major challenge to reduce consumption of fertilizers, for this concern Government takes major steps to avoid applying higher doses of fertilizer. On the behalf of Government dissemination of knowledge of natural farming related benefits adopt extension strategies play a vital role to create awareness among farmers with the help of utilizing Agriculture related Mobile apps, KVKs, result and method demonstration techniques in farmers field, Television, Newspaper etc.

Principles of Natural Farming

Growing healthy food crops, development of plants and to get higher production - harness naturally available resources and to reduce cost of cultivation for growing multi-cropping system of vegetables and fruit production. Naturally available resource like – Plant residue, indigenous cattle manure, Urine, Horn etc, is a basic pillar of natural farming and it is depend on ethical principles.

1. Principle of Livestock base : Natural farming is comprehensively depend on indigenous breed of cattle and its raw produce, on which dung have lots (approximately 30 lakh) of micro-organism present due to this rapidly formation of required plant nutrient in natural way. Indigenous cattle dung has been found 6 major nutrients which is play a crucial role for growth and development of plants.
2. Principle of Mulching : Mulching is the process to cover cultivated field for utilizing plants straw, leaves and crop residue, green manuring crops and polythene sheet is called mulching. Major benefit of mulching is to retain moisture resistant property in soil to protect evaporation and conservation of water up to 10 to 20%, and also safe carbon content in soil. With the help of mulching residue material decompose easily through presence of moisture and increased micro-organism activity. Indian earthworms easy to penetrate soil

due to availability of humus content in soil. Major green manuring crops are used for mulching like-Sanai, Dhaincha, Sunhemp, Clusterbeans, Sesbania

3. Principle of Water management : In natural farming light irrigation is applied in crops, because of this only 10% of water is utilized and safe 90% of water. In natural farming crops were shown in ridge and furrow system so irrigation is apply in ridge and furrow only, as per farmer seen plant roots goes in deep for searching in water so light irrigation is applied through maintain moisture availability in soil and plants become strong and luxurious growth.

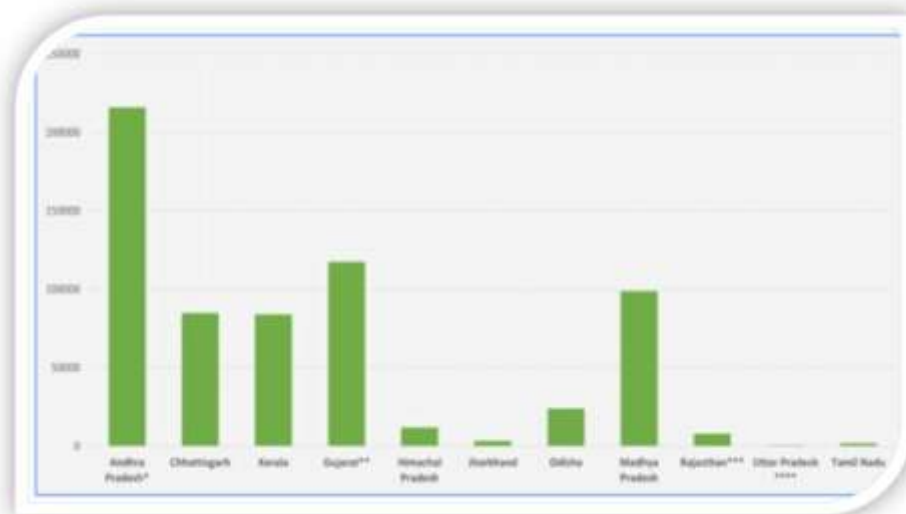
4. Principle of Zero tillage : Natural farming to avoid deep ploughing to reduce loss of moisture in soil and stop adverse effect on soil micro-organism activity under soil. It is believed that in natural farming deep ploughing reduce soil productivity. In summer season sun temperature was goes up to above 36°C at that temperature soil microbial and humus formation activity effected, this is one more factor to avoid deep ploughing in natural farming.

5. Principle of Whapsa : Plant absorb nutrients with the help of root hairs in capillary action in lower surface of soil up to 5 inch, this depth of soil, availability of higher number of micro and major nutrients due to the activity of earthworms and micro-organism. An earthworm was goes up to 5 inch or above due to its movement air in soil and humus ratio increase.

6. Principle of ecological balance : Natural farming create ecological balance between nature and human beings. Recycling process of natural waste material is major factor and it take part in soil formation with the help of disintegration of rocks, decomposition of organic waste, cycle of nutrition, pollination and niches.

Status of natural farming in India

In India natural farming was practiced since a long time ago and it is continued in hilly backward areas or some parts of country. At present context several states have taken steps towards natural farming, prominent among them are.



Andhra Pradesh, Chhattisgarh, Kerala, Gujarat, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh, Rajasthan, Uttar Pradesh, Tamil Nadu, These 11 states status report mention with the help of Graph total covered area by natural farming According to -Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1705191>

More of how more than 10 lakh ha. Area is covered under natural farming in India. Till now 6.5 lakh ha. Area is covered under natural farming according to naturalfarming.dac.gov.in

Role of extension strategies in natural farming

Here Extension means - dissemination of new finding, research, innovation, new knowledge etc. with the help to utilize as a vehicle, which is media like - ICTs application, Social media, Television, Newspaper, Mobile phone, Poster, Wall writing etc. Today this is major sources of information and to exchange ideas. Government launches "National Mission on Natural Farming", in 2023 for promoting natural farming. ICAR is the apex body under his guidance set agenda to aware farmers by the utilization of application such as Kisan Suvidha, Pusa Krishi etc. Another central government institution is NPOP and (NCONF) "National Centre for Organic and Natural Farming", Ghaziabad (U.P.). Recently NCONF, organize 30 days certificate course training program on Organic and Natural farming in Farmers groups with the help of KVKs and Agricultural experts. NCONF, also provide certification services in natural farming based on crop produce. NITI Aayog was also take major step to aware farmers to adopt natural farming, because Natural Farming offers a solution to various problems, such as food insecurity, farmers' distress, and health problems arising due to pesticide and fertilizer residue in food and water, global warming, climate change and natural calamities .
<https://naturalfarming.niti.gov.in>

Benefits of natural farming

1. Conservation of natural vegetation and living organism in soil as well as atmosphere.
2. Re-establishment of endangered and exotic species.
3. Maintain soil fertility and productivity.
4. Maintain crop rotation in natural farming to gain additional income.
5. Skillful utilization of natural resources like- Soil, Light, Air and Water.
6. To promote indigenous breed of cattle.
7. Utilize natural and locally available resources.
8. Improvement of economic condition of farmers.
9. To reduce cost of cultivation of agriculture.

10. If farmers adopt natural farming unanimously create balance in environmental factors.

Strategies for promotion of natural farming

1. With the help of Skill India Program conduct Training and Workshop to create interest among growers, with kinesthetic learning process.
2. Aware growers to adopt natural farming as startup activities and develop to become a entrepreneur.
3. Identification of rainfed areas and selected areas for watershed projects - to aware and demonstrate of benefits of natural farming.
4. Organize awareness creation program of natural farming with the help of- Demonstration, Campaigns, and Exhibition etc.
5. Aware farmers to adopt Farm and Family system approach and promote multi-farming pattern with Agriculture through allied sectors like- Dairying, Forestry, Poultry farming and fisheries etc.
6. Farmer to ensure participate in NCONF organizing training program and learn preparation methods of Jeewamrit, Beejamrit, Ghanjeewamrit and Dashparni arka.
7. Creation of farmers groups, Shelf help groups for the promotion and adoption of natural farming.
8. To Plan exposure visit program with expert group in previously adopted farmers field, KVK, Research center, and demonstrate field units.
9. To ensure farmer did soil testing in his field and recommended dose of nutrients should be applied for utilizing of natural manure.
10. To showcase success stories of farmers those are adopted natural farming and earn maximum profit to sell higher prize because natural based food products demand increased day-by-day in national and international market.

CONCLUSION

In India 70 per cent population was lived in rural areas, agriculture development is associated

with rural farmers development because majority of the population directly engage in agricultural and allied practices, generally farmers become addicted to use fertilizer, immediate stop using fertilizer, for this concern government of India promoting different program in natural farming, and provide subsidy to farmers and sold his produce in affordable prize in market. Central Government bodies participate to enforce adoption of natural farming by the farmers, like- ICAR, NABARD, APEDA, ATMA, NITI Aayog, NOCNF, and State

Agriculture Universities, Research centre etc. The scheme “Paramparagat Krishi Vikas Yojana” (PKVY) was launched in 2015, at that time this scheme major aim to aware farmers to adopt Organic and Natural farming system in agriculture. Agriculture Extension and marketing department organize awareness creation programmes with the help of extension machinery. Naturally produced food items are very healthy for human health as well as create ecological balance in environment.

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