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Back to our Roots: The Modern Renaissance of Natural Farming

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In today's fast-paced and industrialized world, the allure of natural farming has experienced a resurgence, attracting attention and admiration from farmers, environmentalists, and consumers alike. With concerns about the sustainability and health implications of conventional agriculture practices, there has been a collective realization that returning to our roots and embracing natural farming methods may hold the key to a more harmonious and regenerative approach to food production.

The concept of Natural farming, also known as Zero budget farming, draws inspiration from traditional agricultural practices that existed long before the advent of synthetic fertilizers, pesticides, and genetically modified organisms. It centers around the fundamental principle of working in partnership with nature rather than against it. By harnessing the inherent wisdom of natural ecosystems, this approach seeks to create resilient and self-sustaining agricultural systems that not only produce healthy and nutritious food but also restore and protect the environment.

The modern renaissance of natural farming is fueled by a growing awareness of the limitations and detrimental consequences of conventional agriculture. Concerns about soil degradation, loss of biodiversity, water pollution, and the reliance on chemical inputs have sparked a quest for alternative methods that can address these issues and pave the way for a more sustainable and ecologically sound future.

Through practices such as cover cropping, crop rotation, natural farming nurtures the soil, enhances its fertility, and promotes biodiversity. By prioritizing soil health, natural farming systems provide a fertile ground for plants to thrive, resulting in higher yields, improved resilience to pests and diseases, and increased nutrient content in the produce. These methods also completely prohibit the use of synthetic inputs, reducing the environmental impact and potential health risks associated with chemical residues.

Moreover, natural farming recognizes the interconnectedness of all elements within an ecosystem. It encourages the use of diverse crop rotations, intercropping, and agroforestry, creating a balance that supports beneficial insects, pollinators, and wildlife while reducing the reliance on external inputs. By mimicking the intricate relationships found in nature, natural farming systems not only protect and enhance biodiversity but also contribute to climate change mitigation through carbon sequestration and the reduction of greenhouse gas emissions.

The resurgence of natural farming signifies a return to a more holistic and sustainable approach to food production. It recognizes the importance of preserving traditional knowledge, local seed varieties, and cultural practices that have sustained communities for generations. In a world where industrial agriculture has dominated the landscape, this renaissance serves as a reminder of the wisdom embedded in traditional farming methods and the potential they hold for a resilient and regenerative future.

Shifting to Natural farming- Why?

Need for sustainable and environmentally friendly agriculture, improved food safety and nutrition, enhanced soil health and fertility, climate change mitigation, water conservation, resilience, and farmer empowerment. It offers a promising pathway towards a more sustainable and regenerative future in agriculture.

Components of Natural Farming

1. Beejamrit: Beejamrit is an ancient, sustainable agriculture technique. It is used for seeds, seedlings or any planting material. It is effective in protecting young roots from fungus. Beejamrit is a fermented microbial solution, with loads of plant-beneficial microbes, and is applied as seed treatment. It is expected that the beneficial microbes would colonize the roots and leaves of the germinating seeds and help in the healthy growth of the plants.

2. Jeevamrit: Jeevamrit acts as a bio-stimulant by promoting the activity of microorganisms in the soil and also the activity of phyllospheric microorganisms when sprayed on foliage. It acts like a primer for microbial activity, and also increases the population of native earthworms.

3. Mix cropping: Mix cropping is a cropping technique in which two or more plants or crops are grown on the same plot of land or farm at the same time. Plant seeds are mixed before being sown. This technique is used to reduce the risk of total crop failure due to adverse weather conditions or a lack of rainfall.

4. Mulching: Mulching is defined as covering of soil surface using both live crops and straw (dead plant biomass) to conserve moisture, lower soil temperature around plant roots, prevent soil erosion, reduce runoff and reduce weed growth.

5. Whapasa: Whapasa means the mixture of 50% air and 50% water vapour in the cavity between two soil particles. It is the soil's microclimate on which soil organisms and roots depend for most of their moisture and some of their nutrients. It increases water availability, enhances water-use efficiency and builds resilience against drought. The process involves activating earthworms in soil in order to create water vapor conditions.

Principle behind the Natural Farming :

Indigenous breed of cow	Zero tillage	Indigenous earthworm
Capillary Action	Irrigation management	Direction of plants
Intercropping	Contour and bunds	Micro Environment
Indigenous seeds	Mulching (Live Mulching, Soil Mulching, Plant residue mulching)	

Importance of Natural Farming

- **Soil Health:** Natural farming practices prioritize soil health by improving soil structure, increasing organic matter content, and enhancing nutrient cycling. This leads to improved soil fertility, water retention, and long-term productivity.
- **Biodiversity Conservation:** Natural farming promotes biodiversity by creating habitat diversity, preserving native plant species, and supporting beneficial insects, birds, and microorganisms. This contributes to ecosystem resilience, pollination, and pest control.
- **Environmental Sustainability:** Natural farming reduces reliance on synthetic inputs such as chemical fertilizers and pesticides, minimizing environmental pollution and the negative impacts on water quality, soil degradation, and air pollution. It promotes sustainable land management practices that protect ecosystems and natural resources.
- **Climate Change Mitigation:** Natural farming practices, including organic methods, sequester carbon in the soil, contributing to climate change mitigation. By minimizing greenhouse gas emissions and promoting carbon sequestration, natural farming helps combat climate change.

- **Health and Food Safety:** Natural farming produces food that is free from synthetic chemical residues, genetically modified organisms (GMOs), and antibiotics. It prioritizes the production of safe, nutritious, and chemical-free food, promoting human health and well-being.
- **Economic Viability:** Natural farming can offer economic benefits to farmers by reducing input costs, improving soil health and productivity, and accessing niche markets that value organic and sustainably produced food. It can enhance the economic viability and resilience of farming systems.

Difference between Conventional, Organic and Natural Farming

Aspect	Conventional Farming	Organic Farming	Natural Farming
Use of Chemicals	Uses chemical fertilizers and pesticides extensively	Discourages use (not prohibits) of chemical fertilizers and pesticides, relies on natural methods	Prohibits the use of any chemical or organic fertilizers or pesticides
Use of External Resources	Relies on external sources for manures and fertilizers	Relies on organic manures and fertilizers from external sources	Relies only on locally available and farm-based resources e.g., <i>Bijamrit</i> and <i>Jeevamrit</i>
Soil Preparation	Relies on ploughing, tilling, and mixing of manures	Still requires basic agro practices like ploughing and tilling	No plowing, tilling, or fertilizers used, encourages decomposition of organic matter on soil surface
Weed Control	Uses chemical herbicides or mechanical weeding	Encourages natural methods of weed control, such as mulching	Considers weeds as essential, uses them as living or dead mulch layer
Pest Control	Uses chemical pesticides	Uses natural pest control methods, such as biological control and natural pesticides	Uses natural, farm-made pesticides like <i>Dashparni ark</i> and <i>Neemastra</i>
Cost	Can be expensive due to the cost of external inputs and machinery	Can be expensive due to the cost of organic inputs and labour	Can be done almost in zero. budget, using only locally available and farm-based resources
Sustainability	Has a negative impact on the environment, degrades soil quality and biodiversity	Promotes sustainability, protects soil quality and biodiversity	Promotes sustainability, works with the local biodiversity and ecology

Conclusion

In conclusion, the modern renaissance of natural farming signifies a transformative shift towards sustainable and regenerative agricultural practices. By embracing the components and principles of working in harmony with nature, nurturing soil health, promoting biodiversity, and reducing reliance on synthetic inputs, natural farming offers a path towards a more resilient and ecologically balanced food production system. It addresses the

limitations of conventional agriculture while promoting environmental sustainability, health and safety, and economic viability. With a focus on soil fertility, climate change mitigation, and the preservation of traditional knowledge, natural farming represents a return to our roots and a reimagining of agriculture that holds great promise for a sustainable and prosperous future.

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