



ORGANIC FARMING - solution for sustainable agricultural development

Organic farming stands as a beacon of sustainable agriculture, emphasizing natural processes and environmental stewardship. Organic farming methods have existed for a long time, before the appearance of inorganic farming methods. However, in the process of production development, the appearance of inorganic farming methods brings many immediate benefits such as: increasing productivity, reducing the labor of caring for crops and livestock... But in the long run, inorganic farming methods destroy the environment and production efficiency decreases due to polluted production environment, polluted agricultural products have a negative impact on human health... Therefore, organic farming methods have returned with the application of scientific and technological advances and mechanization in production, bringing high efficiency, providing safe products. This is a sustainable farming solution to protect human health, protect the environment and improve agricultural production efficiency.

1. DEVELOPMENT OF ORGANIC AGRICULTURE

The organic agriculture sector is currently the fastest growing food sector. Growth rates in organic food sales have been in the range of 20-25 percent per year for over a decade. Globally, certified organic agriculture occupies less than 1 percent of



Organic farming methods bring safe products

lands and 1-2 percent of food sales. In some cases, the growth may reflect the entry of land long farmed organically into a certification programme rather than an actual switch in farming systems.

The recognition of the role of organic agriculture in achieving environmental objectives, including sustainable use of land set aside, led to the adoption of agri-environmental measures to encourage organic agriculture. Consumers concerned with food quality, as well as the protection of the environment, were the first to stimulate demand. New market opportunities have developed as part of a business strategy to address consumer concerns, particularly in the European Union and the United States. Major food companies see the processing, handling, stocking, and promoting of organic foods as part of a positive public image. Retailers of all sizes now aggressively promote and market organic food, with major food retailing chains now accounting for a major share of the retail markets for fresh as well as processed foods.

Consumers are increasingly sceptical on the safety of conventional foods and the soundness of industrial agriculture. The use of growth regulators stimulated interest in organic food. The crisis over dioxin-contaminated food and livestock diseases further increased demand for organic food. Consumer surveys in almost every country show a segment that demands an alternative to genetically modified foods. Governments have responded to these concerns by setting targets for the expansion of organic production. Thus, the concern of consumers and governments with the quality and safety of food has become the major driving force in the development of organic agriculture in industrialized countries. These concerns have also opened possible markets for developing country exporters, enabling them



to enhance foreign exchange earnings and diversify their exports. Price premiums of between 10-50 percent over prices for non-organic products, as well as more secure markets for organic commodities, can help counter-balance the loss of preferential trade arrangements, falling food prices and withdrawal of government support to agricultural inputs and other services. Major northern markets offer good prospects for suppliers of organic products not domestically produced. These include coffee, tea, cocoa, spices, sugar cane, tropical fruits and beverages, as well as fresh produce in the off-season. Increasingly, governments in developing countries are creating conditions in support of organic exports.

Non-certified organic agriculture is of particular importance for meeting local food requirements while providing protection and sustainable use of natural resources. Organic management makes it possible to save on production costs (especially important when cash is needed to purchase synthetic inputs) and to promote economic and/or food self-reliance. In market marginalized and resource-poor areas where farmers have no access to modern inputs and technologies, organic agriculture can also raise the productivity of traditional systems by optimizing the use of local resources.

2. CHALLENGES FACED BY ORGANIC FARMERS

Organic farming abstains from synthetic herbicides, making weed management a significant challenge. However, employing techniques such as mulching, cover cropping, and regular manual weeding proves effective in suppressing weeds.

Organic farming discourages the use of chemical pesticides, necessitating alternative pest management strategies. These include natural predators, insect-repelling companion plants, and the use of organic pest control methods like neem oil. The biggest harm of using chemical fertilizers and pesticides in agriculture is pollution of soil, water resources, air environment... Chemicals from fertilizers and pesticides seep into the soil, causing the soil to become hard, depleted of nutrients, leading to slow plant growth. Over time, toxic chemicals from inorganic fertilizers and pesticides seep into water sources, polluting rivers and lakes and affecting aquatic ecosystems. Chemical pesticides kill pests and also kill beneficial organisms such as beneficial insects, birds and other animals. The use of chemical fertilizers and pesticides in agriculture can lead to greenhouse gas emissions...

Maintaining optimal soil health without the use of synthetic fertilizers is paramount in organic farming.

Regular application of compost, well-rotted manure, and cover cropping aids in enriching soil fertility and structure. Organic farming emphasizes biodiversity and crop rotation to minimize soil degradation and disease pressure. Planning a diverse crop rotation schedule is essential in this regard.

Connecting organic farmers with consumers who value and support their produce can be challenging. This necessitates robust marketing strategies, partnerships with local markets, and educating consumers on the benefits of organic produce.

3. SOLUTIONS TO OVERCOME CHALLENGES

Organic farming methods apply farming measures such as: using organic fertilizers, crop rotation and intercropping, deep plowing, using biological control measures... This method applies to both crop and livestock farming. In farming, organic farming methods instead of using chemical fertilizers use manure, fertilizers made from plants to provide nutrients for plants and improve soil fertility. Combined with deep plowing helps improve soil structure, making the soil loose, rich in nutrients, easily retaining water and organic matter for the soil, protecting long-term fertility.

Use natural pest control measures such as natural enemies, biological products or herbal pesticides, do not use pesticides made from toxic chemicals. Organic fertilizers and biological control measures do not harm the soil and water sources. In animal husbandry, the organic farming method is not to use foods containing growth stimulants, lean meat additives...

Organic farming helps maintain and enhance biodiversity by minimizing the use of chemical pesticides. The use of biological control measures such as natural enemies or natural pesticides not only helps protect the environment but also maintains ecological balance in agriculture. Rotating and intercropping crops helps prevent soil nutrient depletion and minimizes the development of pests and diseases, increasing biodiversity.

Implementing organic farming methods protects the production environment and ecological environment well, such as: increasing soil porosity and humus, reducing soil and water pollution, protecting biodiversity, reducing greenhouse gas emissions, protecting soil and preventing erosion...

At the same time, the application of crop rotation and intercropping helps create a more diverse environment for beneficial animals and insects, thereby creating natural resistance for crops, thereby minimizing pests. Cover crops, use of organic fertilizers and sustainable farming help maintain



soil porosity and limit erosion, especially in mountainous areas, helping to protect the soil for long-term cultivation.

Propagating and mobilizing farmers to change their farming methods through agricultural extension channels and mass media has a wide influence, thereby accelerating the process of changing farmers' farming methods. By building on local knowledge, organic agriculture approaches revitalize traditional customs and local self-reliance. Employment opportunities and higher returns on labour encourage people to remain in agriculture, reinvigorating rural communities. Strengthened social cohesion and partnerships within the organic community make for better connections with external institutions. Organized groups, such as producer cooperatives, have better access to markets and can negotiate their needs as equal partners in the food supply chain.

Together with the production system, the social environment of those engaged in organic agriculture generally improves: in fact, many organic systems incorporate fair trade principles which improve working conditions. The IFOAM Basic Standards includes a chapter on Social Justice Standards. These refer to and are based upon the conventions of the International Labour Organisation on labour welfare and to the human rights charters of the United Nations.

A growing number of certified organic agriculture commodities produced by small-scale farmers organized in democratic cooperatives meet fair trade requirements: farmers are paid adequately to cover costs of production and a social premium to improve the quality



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of life. Although the organic movement shares a consensus that social requirements are necessary, specific standards are controversial. Standard-setting bodies are sensitive to national sovereignty and the cultural context governing social and economic relations. Such standards might create trade barriers to some developing countries organic exports, but this pressure may trigger social and economic reform in many countries. When farmers widely apply organic farming methods, they create safety in production, protect land and water resources, and create a cleaner and more sustainable agriculture.

Switching to organic farming methods that apply scientific and technical measures in agricultural production is a farming solution that brings many economic benefits, is environmentally friendly and protects human health.

Implementing Integrated Pest Management (IPM) combines various strategies like biological control, cultural practices, and natural enemies of pests. This approach minimizes the impact of pests while preserving the ecological balance. Embracing regenerative practices like no-till farming, agroforestry, and incorporating perennial crops can significantly enhance soil health and long-term sustainability.

Exploring various market channels, including farmers' markets, community-supported agriculture (CSA), and online platforms, can help expand the reach and accessibility of organic produce.

Offering training and workshops to farmers on organic farming techniques, soil health management, and sustainable practices ensures a knowledgeable and empowered farming community.

While organic farming presents its own unique challenges, the benefits far outweigh the hurdles. By adopting innovative techniques, leveraging the power of regenerative agriculture, and fostering strong community connections, organic farmers can not only overcome these challenges but also thrive in their commitment to sustainable and environmentally conscious farming practices ■

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