



AL-HAKURA

Documenting Indigenous Palestinian
Agricultural Knowledge and Practices

Palestinian Hydrology Group (PHG)
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Palestinian Hydrology Group

AL-HAKURA: Documenting Indigenous Palestinian Agricultural Knowledge and Practices

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Contents

Introduction	5
Section I: The Concept of Al-Hakura.....	7
Section II: Indigenous Agricultural Knowledge and Practices	9
Section III: Environmental, Social, and Economic Impact	15
Section IV: Success Stories from Local Communities.....	19
Section V: Challenges and Opportunities.....	24
Section VI: Recommendations.....	28
References	31

Introduction

“Al-Hakura” is one of the most significant traditional agricultural practices in Palestine, deeply rooted in the local culture. It is based on knowledge passed downthrough generations within traditional agricultural systems, preserving ecosystems and promoting biodiversity. Al-Hakura refers to a small agricultural plot, typically located near a home or within a field, where a variety of crops such as vegetables, fruits, medicinal herbs, and even domestic animals are cultivated. These gardens are usually just a few hundred square meters in size, representing a sustainable agricultural model that fosters self-sufficiency and contributes to food security by providing fresh, healthy produce.

Often enclosed by a protective fence made from locally sourced materials, such as cactus or olive trees, or crafted from tree by-products like olive branches, reeds, or pieces of hessian bags, Al-Hakura demonstrates a deep connection to the environment. This practice is not just an agricultural activity; it is an integral part of Palestinian and Arab heritage, symbolizing cultural identity and resilience in the face of external challenges, including occupation.

The scope of Al-Hakura extends beyond food production. It incorporates principles of soil conservation, natural waste recycling, and the efficient use of environmental resources. These gardens also strengthen community bonds through family gatherings and knowledge exchange, promoting a culture of agricultural learning among community members.

As environmental and climatic challenges intensify, Al-Hakura has become an increasingly vital tool for achieving environmental and food sustainability. The practice minimizes the use of chemicals, improves soil quality, and supports biodiversity. By embracing methods such as crop diversity and organic fertilization, Al-Hakura reduces the negative environmental impacts associated with industrial agriculture and helps sustain natural resources for future generations.

Moreover, Al-Hakura embodies both ecological and social diversity. The wide variety of crops cultivated in these gardens helps create a balanced ecosystem, reducing the need for pesticides and synthetic fertilizers while enhancing the resilience of agricultural systems against pests and drought. This diversity also enables farmers to meet various dietary needs, reducing dependency on external markets and fostering self-sufficiency.

The practice contributes to environmental justice by reducing carbon footprints, preserving biodiversity, and promoting the sustainable management of natural resources. From a climate justice perspective, Al-Hakura builds resilience against climate change and encourages the adoption of sustainable agricultural practices that support adaptation to its impacts. Socially, it enhances food security, empowers marginalized groups, and reinforces values of solidarity and social welfare, strengthening community cohesion while prioritizing both people and the environment.

This documentation aims to highlight the significance of Al-Hakura as a practical tool for environmental sustainability, biodiversity conservation, and social justice. It encourages the community to actively engage in revitalizing and preserving this rich agricultural heritage to address contemporary environmental challenges. The objective of this document is to raise awareness about the importance of Al-Hakura as a sustainable, indigenous agricultural system, focusing on the following key areas:

1. Community Awareness of the Importance of Al-Hakura:
 - ♦ Al-Hakura serves as a sustainable agricultural model that balances environmental conservation with self-sufficiency, ensuring food security for both families and communities.
 - ♦ Through detailed documentation, the community learns about the benefits of Al-Hakura as agricultural spaces that seamlessly integrate plant and animal farming, promoting resource conservation and reducing dependency on external inputs.
2. Enhancing Understanding of the Impact of Al-Hakura on the Environment and Climate:
 - ♦ Al-Hakura helps mitigate climate change by adopting chemical-free practices, such as avoiding pesticides and synthetic fertilizers.

- ♦ The documentation emphasizes the importance of eco-friendly techniques, such as water conservation through rainwater harvesting and no-till farming, while highlighting Al-Hakura's role in reducing carbon emissions and preserving natural resources.
3. Encouraging Community Participation in Reviving Al-Hakura:
 - ♦ By showcasing success stories from local communities that have successfully implemented Al-Hakura as a sustainable food source, the documentation encourages others to join environmental agricultural initiatives.
 - ♦ Community participation strengthens local food security and economic independence, especially in the face of environmental and economic challenges.
 4. Supporting Al-Hakura as a Source of Food Security:
 - ♦ Al-Hakura plays a crucial role in ensuring food security by providing sustainable agricultural production that meets family needs and reduces dependence on external markets.
 - ♦ The documentation highlights Al-Hakura's contribution to producing healthy, chemical-free food, thereby improving the health of vulnerable groups such as children and the elderly.
 5. Achieving Environmental Justice through Al-Hakura:
 - ♦ Al-Hakura empowers resource-limited communities to adopt sustainable agricultural practices that boost local food production.
 - ♦ This agricultural model helps bridge the environmental and economic gap between rural and urban areas, fostering a balance between human needs and nature.
 6. Integrating Al-Hakura into Institutional Policies and Programs:
 - ♦ The documentation urges governmental and non-governmental institutions to adopt Al-Hakura as an effective tool for promoting sustainable agriculture.
 - ♦ It urges relevant entities, including the Ministry of Agriculture, the Environmental Quality Authority, and the Ministry of Higher Education and Scientific Research, to integrate Al-Hakura into their strategies and programs, thereby ensuring sustainable environmental and social benefits.



Section I: The Concept of Al-Hakura

Definition of Al-Hakura in Language and Dictionaries:

In his book *Maqayis al-Lugha*, Ibn Faris explains that the root of “hikr” (حكر), which consists of the letters ha, kaf, and ra, signifies confinement. “Hakura” refers to the practice of hoarding food in anticipation of a rise in its price. It is derived from the term “hakar,” meaning collected water, suggesting that something is hoarded due to its scarcity.

Ibn Manzur, in *Lisan al-Arab*, defines “hikr” (الحكر) as referring to a small amount of collected water, which can also apply to small quantities of food and milk. This definition highlights the concept of collection or storage.

Based on these definitions, “Al-Hakura” refers to the small quantities of vegetables and agricultural products gathered for household consumption, intended for local use rather than trade or export.

Definition of Al-Hakura and Its Importance in Sustainable Agriculture:

Al-Hakura is a traditional agricultural practice deeply rooted in local Palestinian and broader Arab communities. It plays a key role in enhancing food security and environmental sustainability, serving as a model of self-sufficiency based on the sustainable use of local natural resources.

♦ Importance in Sustainable Agriculture:

- ♦ **Soil Health and Preservation:** Al-Hakura incorporates practices such as organic fertilization and no-till farming, which help maintain soil structure and enhance fertility.
- ♦ **Resource Depletion Reduction:** by sustainably using rainwater and organic materials, Al-Hakura minimizes reliance on non-renewable resources.
- ♦ **Biodiversity:** By cultivating a variety of crops in a small area, Al-Hakura supports local biodiversity, reduces pest outbreaks, and helps maintain ecosystem balance.
- ♦ **Climate Change Adaptability:** Al-Hakura is an effective approach to climate challenges, using strategies like rainwater harvesting and efficient water resource management.
- ♦ **Achieving Food Security:** By focusing on self-sufficiency, Al-Hakura ensures access to healthy and safe food for households, therefore supporting local food security.

♦ Explanation of Al-Hakura as a Traditional Agricultural Tool:

- ♦ **A Deeply Rooted Tool in Heritage:** Al-Hakura is an integral part of Palestinian agricultural heritage, particularly in rural areas. It has been practiced for centuries as a means to sustainably meet household food needs. Families utilize the land around their homes to grow various crops, ensuring food diversity and security.

♦ Characteristics as an Agricultural Tool:

- ♦ **Flexibility of Use:** Al-Hakura can be adapted to both small and medium spaces, making it suitable for rural and urban environments.
- ♦ **Agricultural Integration:** By combining plant cultivation with animal husbandry, it creates a balanced and sustainable agricultural system.



Section II: Indigenous Agricultural Knowledge and Practices

- ♦ **Self-Sufficiency:** Al-Hakura empowers families to sustainably produce their own healthy food, reducing their dependence on external markets.
- ♦ **Environmental Awareness:** Al-Hakura promotes environmental stewardship by encouraging the preservation of natural resources for future generations.
- ♦ **Cultural and Social Impact:** Al-Hakura goes beyond its role as an agricultural tool; it serves as a cultural and social symbol. It fosters a deep connection to the land and strengthens family and community ties through collaborative work in agricultural production. Al-Hakura exemplifies cooperative family work aimed at food self-sufficiency, reinforcing family bonds and promoting social cohesion. While men and children contribute to tasks such as fieldwork, women play a central role in managing the Al-Hakura, overseeing everything from planning to execution. This highlights the crucial role of women in enhancing food security and contributing to the economic and social sustainability of both the family and community.

Summary:

Al-Hakura embodies a sustainable agricultural model that blends traditional practices with environmental and social sustainability goals. It is an effective tool for achieving food security, promoting agricultural diversity, and preserving natural resources for future generations. While similar to other traditional agricultural methods, Al-Hakura places a stronger emphasis on self-sufficiency, environmental resilience, and social equality, making it a unique and valuable model that warrants further attention and development.

Documentation of Indigenous Practices in Al-Hakura

Documenting indigenous agricultural practices in Al-Hakura is a crucial step in preserving agricultural heritage, enhancing environmental sustainability, and ensuring the continuity of traditional knowledge for future generations. Below is a detailed explanation of the indigenous practices used in managing Al-Hakura:

Documentation of Local Plant Varieties, Planting Schedules, and Crop Rotations

♦ Traditional and Local Plant Varieties:

- ♦ **Vegetables:** Including tomatoes, cucumbers, peppers, eggplants, okra, cauliflower, cabbage, lettuce, onions, and garlic.
- ♦ **Fruit trees and fruits:** Including figs, olives, grapes, pomegranates, mulberry trees, citrus fruits, watermelons, and melons.
- ♦ **Medicinal and aromatic herbs:** Including thyme, sage, mint, parsley, and coriander.
- ♦ **Legumes:** Including broad beans, kidney beans, lentils, and chickpeas.
- ♦ **Field crops:** Including barley and wheat, in some larger gardens.

It is important to note that most of the seeds used for cultivating the backyard garden (if not all) are produced within the garden itself.

Indigenous seeds are a vital component in achieving sustainable agriculture and community development, particularly in the Palestinian context, where they are closely linked to agricultural heritage and national identity. These seeds represent a rich reservoir of agricultural biodiversity, with varieties that are well-adapted to local environmental conditions such as soil and climate. As a result, they are more resistant to diseases and pests and less dependent on chemical pesticides and fertilisers.

In Palestine, indigenous seeds play a fundamental role in promoting food sovereignty, empowering farmers with complete control over their food production, free from the dominance of large corporations that market genetically modified seeds and industrial inputs. These seeds also support ecological agriculture due to their natural diversity, which helps maintain environmental balance and reduces negative impacts on the environment.

In addition to enhancing sustainable agricultural production, indigenous seeds contribute to the empowerment of local communities to achieve independent economic and social development. They help ensure resource sustainability, lower production costs, and provide healthy, nutritious food. In the Palestinian context, these seeds are viewed as tools of resistance and a means of preserving the land, embodying values of agricultural heritage and the ability to confront environmental and political challenges.

Documentation of Some Traditional Tools and Equipment Used in Farming and Their Local Names

Farming, as part of traditional agriculture, has historically utilised simple yet effective tools and equipment, manually crafted to suit the local environment and the needs of agricultural work. These tools have been essential to Palestinian farmers' lives and have played a significant role in maintaining agricultural production at a low cost.

Below is a documentation of some of the tools and equipment used in farming along with their local names:

Tool Used	Description	Local Names	Purpose
A. Plow (Hand Plow)	Tool used to loosen and prepare soil for planting.	“Al-Mihrath” in mountainous areas, “Al-Mashaq” in plains.	Made of wood or metal, often pulled by animals like donkeys or mules.
B. Rake (Al-Marja)	Wooden or metal tool used to smooth soil after plowing.	“Al-Marja” or “Agricultural Rake.”	Levels the soil before planting seeds.
C. Axe (Al-Qizmah)	Tool with a sharp metal head and wooden handle.	“Al-Qizmah” or “Al-Fas.”	Used to dig the soil and remove weeds.
A. Winnowing Fork	Wooden tool resembling a fork, used to separate grains from straw.	“Al-Mathra” or “Al-Midra.”	Helps clean crops like wheat and barley.
B. Pitchfork	Metal tool with tines used to lift straw or manure.	“Al-Shaoub.”	Used to transport straw or organic manure to fields.
C. Sickle	Metal tool with a curved blade, used for harvesting crops.	“Al-Minjl” or “Al-Shareem.”	Cuts grass or harvests wheat and barley.
A. Basket (Qaffah)	Basket made of palm fronds or natural fibers.	“Al-Qaffah” or “Al-Qaffah.”	Used to collect crops such as fruits and vegetables.
B. Threshing Circle (Jarn)	Circular area made of clay or stone used for separating grains from straw.	“Al-Jarn.”	Used for threshing grains with animals or manual effort.
C. Rope (Kariyah)	Ropes made from natural fibers like hemp or wool.	“Al-Kariyah.”	Used to tie bundles of straw or wood.

Al-Hakura and Crop Rotation:

- ◆ **Al-Hakura follows a crop rotation system, where crops are alternated on the same land over specific periods. This assists in:**
 - ◆ Renewing soil fertility.
 - ◆ Reducing the build-up of pests and diseases.
 - ◆ Improving crop yield.
- ◆ The agricultural year in Al-Hakura is divided according to the planting seasons:
 - ◆ Winter Planting (from November to February): including wheat, legumes, and leafy vegetables.
 - ◆ Summer Planting (from March to August): including tomatoes, cucumbers, eggplants, and peppers.
- ◆ **Crop Rotation Schedule and the Crops that Can be Grown Throughout the Year in Al-Hakura:**

Crop rotation is considered one of the fundamentals of sustainable agriculture, as it organises the cultivation of crops throughout the year according to the seasons, aiming to maintain soil fertility and reduce the spread of pests and diseases. In Al-Hakura, crop rotation can be implemented as follows:

Season	Crop Type	Examples	Purpose
Winter	Leafy Vegetables	Spinach, Jaws mellow, Parsley, Coriander, Arugula.	Provide vitamin-rich crops and enrich the soil.
	Winter Vegetables	Onions, Garlic, Potatoes, Cabbage, Cauliflower, Radishes.	Improve soil fertility using root crops.
	Legumes	Fava Beans, Peas, Lentils.	Fix nitrogen in the soil and reduce reliance on fertilizers.

Season	Crop Type	Examples	Purpose
Spring	Transitional Vegetables	Lettuce, Dill, Celery, Fennel.	Prepare the garden for the summer season.
	Aromatic Herbs	Mint, Sage, Chamomile, Basil.	Stimulate biodiversity and provide medicinal products.
Summer	Summer Vegetables	Tomatoes, Cucumbers, Squash, Eggplants, Zucchini, Okra.	Increase productivity and meet high market demand for these crops.
	Tropical Fruits	Watermelon, Cantaloupe.	Provide fresh fruits and enhance efficient water usage.
Autumn	Root Vegetables	Carrots, Beets, Sweet Potatoes.	Improve soil aeration and drainage.
	Winter Preparation Crops	Garlic, Onions (planting seedlings for winter harvest).	Start preparing the garden for the winter crop cycle.

Notes on applying crop rotation in Al-Hakura:

- ◆ **Space Planning:** Dividing Al-Hakura into sections designated for different crops based on their soil and water requirements.
- ◆ **Crop Rotation:** Planting crops from different plant families each season to maintain ecological balance and reduce the spread of diseases.
- ◆ **Intercropping:** Growing aromatic herbs, such as mint and sage, among vegetables to reduce pests and enhance biodiversity.

Documentation of Traditional Practices Related to Soil Quality, Fertilisation, Pest Management, and the Conservation of Natural Water Sources.

Soil Quality:

- ◆ **Al-Hakura relies on traditional techniques to improve soil, such as:**
 - ◆ Covering the soil with crop residues, such as a straw, to prevent erosion, reduce evaporation, and limit weed growth.
 - ◆ Planting nitrogen-fixing plants, such as legumes, to naturally enhance soil fertility.

Natural Fertilisation:

- ◆ Organic fertiliser (compost), made from food scraps and plant and animal waste is used to nourish the soil.
- ◆ Animal manure is used directly as a nutrient-rich fertiliser essential for plants growth.
- ◆ Ash or, the residue from ovens, contains all the nutrients that plants require, such as potassium, phosphorus, and iron, along with all the necessary trace elements needed for the growth of plants, trees, and vegetables.

Natural Pest Control:

Al-Hakura relies on natural pest control instead of chemical pesticides, through:

- ◆ **Using pest-repelling plants:** Growing plants like basil and garlic that act as natural deterrents to insect pests, as well as aromatic plants like mint and sage planted alongside crops to encourage natural pest predators.
- ◆ **Plant integration:** Growing complementary crops that enhance resistance to pests. For example, planting celery with cabbage helps reduce the presence of pests that target cabbage.

- ◆ **Encouraging natural predators:** Such as predatory insects that naturally eliminate agricultural pests without the need for chemical intervention. Below are some commonly known local names for these natural predators and their role in maintaining ecological balance in the fields and Al-Hakura:
 - ◆ **Ladybugs (also known as Ladybird beetles or Ladybirds):** Agricultural role - They are considered some of the best predatory insects, as they feed on aphids that attack plants, helping reduce the need for chemical pesticides.
 - ◆ **Aphid lions (lacewings):** Agricultural role - They feed on aphids, whiteflies, and larvae that harm plants, making them useful for pest management in open fields and greenhouses.
 - ◆ **Predatory spiders:** Agricultural role - They feed on harmful insects such as whiteflies and soil insects, helping to naturally control the spread of agricultural pests.
 - ◆ **Parasitic wasps (such as Red Wasps or Field Wasps):** Agricultural role - They effectively kill the larvae of harmful insects and help reduce the populations of these pests.
- ◆ **Natural traps:** Such as colour traps with adhesive and containers filled with water and soap to attract harmful insects.

Conserving Natural Water Resources:

- ◆ **Rainwater Harvesting:** Ponds or tanks, such as wells, are used to collect rainwater for later use in irrigation.
- ◆ **Manual Irrigation:** A simple technique that helps reduces water wastage.
- ◆ **Water Consumption Rationalisation:** By using rainwater, reliance on groundwater is diminished, contributing to the preservation of water resources for future generations.
- ◆ **Water Reuse:** Used water from the garden or greywater from homes can be treated and reused for plant irrigation.
- ◆ **Diverse Farming Practices such as Terracing or Contour Lines:** These help effectively direct water to the plants.

Encouraging Local Circular Economy:

In the context of the garden, the circular economy is embraced through:

- ◆ **Producing Diverse Local Food:** The garden contributes to household self-sufficiency, reducing reliance on distant food imports that require significant energy for transport.
- ◆ **Enhancing Community Exchange Relations:** The garden allows families and neighbours to share surplus crops, strengthening community ties and increasing mutual local support.

Integration of Plant and Animal Agriculture:

Al-Hakura allows for the integration of plant and animal agriculture within a small area, boosting agricultural production and maintaining environmental balance.

The benefits of this integration include:

- ◆ **A diverse range of plant products, in addition to animal products such as eggs and milk.**
- ◆ **Provision of natural fertiliser:** animals provide organic manure for the plants, improving soil fertility and reduces the need for external inputs.
- ◆ **Reduction of waste:** animal waste is used as fertiliser, reducing waste and improving the efficiency of resource use.

Recording the Uses of Plants for Food, Medical, and Cultural Purposes:

Food Uses:

- ◆ The crops grown in Al-Hakura provide essential food for families:
 - ◆ Vegetables and fruits for daily consumption.
 - ◆ Grains and legumes as primary sources of energy and protein.

Cultural Uses:

- ◆ Al-Hakura is connected to local customs and traditions:
 - ◆ Olive trees are planted as a symbol of resilience and belonging.
 - ◆ Aromatic plants like basil are planted at entrances to bring blessings.

Crop Diversity: Benefits of Growing Different Types of Crops

- ◆ **Improving Soil Quality:** Crop diversity helps maintain a balance of nutrients in the soil.
- ◆ **Reducing Pests and Diseases:** Growing a variety of crops decreases the concentration of pests on a single type.
- ◆ **Enhancing Productivity:** Cropping diversity allows for optimal use of space and agricultural seasons.
- ◆ **Reducing Agricultural Risks:** If one crop fails, other crops remain to help secure food supplies.

No-Till Farming: How to Maintain Soil Structure

Concept:

No-till farming is a method that avoids tilling the soil, thus preserving its natural structure.

Benefits:

- ◆ **Reducing Soil Erosion:** Protects the surface from erosion factors.
- ◆ **Preserving Microorganisms:** Supports living organisms that play a crucial role in enhancing soil fertility.
- ◆ **Decreasing Energy Consumption:** Reduces the need for heavy equipment.
- ◆ **Maintaining Soil Moisture.**

How to implement in your Hakura:

- ◆ Planting crops directly after harvesting previous crops without tilling.
- ◆ Growing multiple varieties in the same spot or hole, where the ages of the varieties differ, allowing for better water utilisation and maximising small spaces with a diverse array of crops.
- ◆ Covering the soil with plant residues to protect it from sunlight, evaporation, and to limit the growth of weeds.

Using Organic Fertilisers: The importance of natural fertilisation

Concept:

The garden uses organic fertiliser made from household food waste, crop residues, and animal manure, which enhances soil health and improves crop productivity.

Benefits:

- ◆ **Increased Soil Fertility:** Organic fertiliser provides essential nutrients for plant growth, such as phosphorus and potassium, which promote healthy plant development.
- ◆ **Improved Soil Structure:** Organic fertilisation enhances the soil's water retention capacity, reduces erosion issues, maintains soil aeration, and supports the growth of beneficial soil organisms.
- ◆ **Reduced Dependence on Chemical Fertilisers:** Organic fertilisation reduces the need for synthetic fertilisers, minimizing environmental impacts and preserving groundwater quality from chemical pollution.
- ◆ **Economic and Sustainable:** Organic fertiliser can be easily produced using local resources.

Application Methods:

- ◆ Prepare homemade compost using plant waste and food scraps.
- ◆ Use animal manure mixed with soil in the garden.
- ◆ Apply organic fertiliser periodically to crops to ensure consistent nourishment.

Conclusion:

Documenting these traditional practices in the garden highlights their importance as an integrated and sustainable agricultural system. By recording plant varieties, traditional techniques, and their various uses, this valuable agricultural heritage can be preserved and strengthened to achieve food security, biodiversity, and environmental sustainability for future generations.



Section III: Environmental, Social, and Economic Impact

The Environmental, Social, and Economic Impact of Al-Hakura

Al-Hakura plays a pivotal role in promoting environmental, social, and economic sustainability, making it an important agricultural model for balancing human needs with environmental concerns. This section explores the environmental benefits, cultural and economic impacts of Al-Hakura, its role in adapting to climate change, and a comparison of its costs and financial effects with traditional farming.

Environmental Benefits of Al-Hakura

- ◆ **Biodiversity Conservation:**
 - ◆ **Crop Diversity:** Al-Hakura enhances biodiversity by cultivating a variety of crops, including vegetables, fruits, medicinal herbs, and wild plants. This plant diversity provides a habitat for numerous organisms, such as beneficial insects that assist in pollination and pest control.
 - ◆ **Protection of Local Varieties:** Al-Hakura promotes the cultivation of traditional plant varieties that have adapted to the local environment, helping protect these species from extinction.
- ◆ **Reducing Carbon Emissions:**
 - ◆ **Minimising Transport Needs:** Products are consumed locally or on-site, significantly reducing emissions associated with transporting crops over long distances.
 - ◆ **Relying on Natural Resources:** The use of organic fertiliser and rainwater harvesting reduces dependence on chemical fertilisers and industrial pesticides, which contribute to higher carbon emissions.
 - ◆ **Planting Trees and Crops:** Plants grown in backyard gardens absorb carbon dioxide from the atmosphere, helping mitigate greenhouse gas emissions.
- ◆ **Reducing the Depletion of Natural Resources:**
 - ◆ **Recycling Resources:** Backyard gardens rely on reusing organic waste as fertiliser, minimising resource wastage.
 - ◆ **Effective Water Management:** Harvesting rainwater and employing manual and drip irrigation methods contribute to reduced water consumption.

The Cultural and Economic Role of Home Gardens

- ◆ **Enhancing Family Food Security:**
 - ◆ **Self-sufficiency:** Home gardens meet the family's needs for vegetables, fruits, and medicinal herbs, reducing reliance on markets and ensuring access to healthy and safe food.
 - ◆ **Reducing Food Costs:** Home gardens help lower food expenses, easing the economic burden on low-income families.
- ◆ **Increasing community resilience:**
 - ◆ **Empowering Women:** In many communities, women play a key role in managing home gardens, contributing to their economic and social empowerment.

- ♦ **Strengthening Community Cooperation:** Community gardens foster social relationships and cooperation among families, increasing community resilience in times of crisis.

♦ Cultural role:

- ♦ **Preserving Agricultural Heritage:** Home gardens reflect local agricultural heritage and maintain traditional techniques passed down through generations.
- ♦ **The Cultural Value of Plants:** Home gardens grow plants with food, medicinal, and cultural uses, reinforcing connections to local identity.

♦ Adaptation to Climate Change

The home garden (Al-Hakura) plays a significant role in mitigating climate change and protecting the environment through its positive effects on the ecosystem and climate. Below is a detailed explanation of how Al-Hakura contributes to improving the environment and adapting to climate change:

Adaptation to Climate Change

Al-Hakura relies on sustainable agricultural techniques that help address the adverse effects of climate change. These techniques include:

♦ Rainwater Collection and Harvesting:

Al-Hakura enhances water resource efficiency by collecting and storing rainwater through simple systems. This stored water is later used for irrigation, reducing reliance on groundwater or other irrigation sources. These practices ensure the long-term sustainability of water resources amidst climatic challenges.

♦ Adaptation to Dry Soils:

By employing techniques like no-till farming and organic fertilization, Al-Hakura improves the soil's moisture retention and reduces water evaporation, especially in areas affected by drought and climate change.

♦ Shaded Farming and Crop Integration:

Planting a variety of integrated crops, such as tall trees alongside shorter plants, offers shade to the lower crops, reducing water evaporation and strengthening the garden's resilience against climate change.

Reducing Carbon Emissions

One of the key environmental benefits of Al-Hakura is its role in reducing carbon emissions, this is achieved by relying on natural agricultural practices and avoiding the use of high-emission chemical inputs. Here is a detailed explanation of how Al-Hakura contributes to carbon emissions reduction:

♦ Minimizing the Use of Agricultural Machinery:

Al-Hakura is typically prepared and cultivated without relying on heavy machinery that uses fossil fuels, thereby reducing carbon emissions from fuel combustion.

♦ Reducing Transportation Needs:

Al-Hakura emphasises local production near consumers, reducing the need for long-distance transportation of crops, a major source of carbon emissions in industrial agriculture.

♦ On-Site Natural Fertilizer Production:

Rather than depending on chemically produced fertilizers, which require manufacturing and transportation, Al-Hakura utilizes organic compost produced on-site using plant residues and animal manure, thus reducing its carbon footprint.

Soil Conservation and Biodiversity Enhancement

Al-Hakura is essential for improving soil health and preserving biodiversity through several practices, such as:

- ♦ **Crop Diversity:** growing a variety of crops in Al-Hakura increases biodiversity and helps prevent soil degradation. This diversity not only enhances ecosystem health but also strengthens plants' resistance to pests.
- ♦ **No-Till Farming:** Although not all farmers adopt no-till methods, promoting this practice is crucial. It helps maintain the natural structure of the soil, fostering the presence of microorganisms vital for soil health. These organisms decompose organic matter, naturally nourishing plants, enhancing soil fertility and reducing erosion.
- ♦ **Organic Fertilization:** The use of organic compost improves soil structure and increases its organic matter content, enabling it to retain moisture and nutrients for longer periods. This reduces reliance on chemical fertilizers and supports sustainable soil management.

Natural Pest Control

Al-Hakura provides an integrated environment for natural pest control, eliminating the need for chemical pesticides through the following methods:

♦ Pest-Repellent plants:

Certain plants containing aromatic oils, such as basil and garlic, are grown alongside other crops. These plants act as natural repellents, reducing the need for industrial pesticides.

♦ Biodiversity and Crop Integration:

Growing a variety of plants together confuses pests and limits their spread, as they struggle to target a single crop type among diverse vegetation.

♦ Supporting Natural Predators:

By avoiding chemical pesticides, Al-Hakura creates a habitat for beneficial organisms such as predatory insects and birds. These natural predators offer effective pest control, enhancing ecological balance and safeguarding crops.

Supporting the Local Circular Economy

Al-Hakura contributes to strengthening the local circular economy through:

- ♦ **Recycling natural resources:** Al-Hakura system allows for the reuse of agricultural and animal waste as organic fertilizer, reducing dependence on external resources and enhancing the efficiency of local materials.
- ♦ **Achieving Food Self-sufficiency:** Through the production of diverse crops, Al-Hakura supports families and communities in achieving self-sufficiency, reducing reliance on imported products.
- ♦ **Creating Local Employment Opportunities:** The widespread adoption of Al-Hakura in rural communities generates job opportunities for local farmers, thereby bolstering the local economy.

Conclusion

Through these integrated practices, Al-Hakura effectively mitigates the negative impacts of climate change and protects the environment, by preserving soil and water, reducing carbon emissions, and fostering biodiversity that strengthens the ecological system.

Positive Impact:

- ◆ Al-Hakura reduces household vulnerability to climate change by providing stable and sustainable food sources, even in harsh conditions.

Financial Costs of Al-Hakura Compared to Modern Agriculture

Costs in Al-Hakura:

- ◆ **Lower Inputs:**
 - ◆ Al-Hakura relies on local resources such as organic fertilizer and rainwater, reducing input costs compared to traditional agriculture, which requires expensive chemical fertilizers and pesticides.
- ◆ **Simple Tools:**
 - ◆ Al-Hakura utilizes basic agricultural tools instead of heavy machinery, minimizing maintenance and energy expenses.

Financial Returns:

- ◆ **Direct Economic Benefit:**
 - ◆ Producing food for household consumption reduces the need to purchase food from the market.
- ◆ **Opportunity to Sell Surplus:**
 - ◆ Surplus production can be sold in local markets, providing additional income for families.

Comparison with Modern Agriculture

Category	Al-Hakura	Modern Agriculture
Initial Costs	Low (due to reliance on local resources).	High (purchase of seeds, fertilizers, and pesticides).
Water Consumption	Low (use of rainwater harvesting and drip irrigation).	High (reliance on groundwater or industrial irrigation).
Dependence on Chemicals	Very low (organic fertilization and natural pest management).	High (intensive use of pesticides and chemical fertilizers).
Environmental Impact	Positive (improves soil and reduces pollution).	Negative (soil erosion and increased pollution).

Financial Sustainability:

- ◆ Al-Hakura provides a sustainable economic model by utilizing local inputs, reducing families’ vulnerability to market price fluctuations.

Conclusion

Al-Hakura demonstrates a remarkable positive impact on environmental, social, and economic levels. It preserves biodiversity, reduces carbon emissions, and provides families with sustainable food sources at a lower cost compared to traditional agriculture. Additionally, it enhances community resilience to climate change, empowers women, and protects agricultural heritage. This model represents an opportunity to achieve sustainable development on both local and global scales.



Section IV: Success Stories from Local Communities

The Palestinian governorates in the West Bank are characterized by diverse climates, including mountainous, coastal, and desert environments. This climatic diversity supports the cultivation of a wide range of crops, with specific agricultural products being more prominent in each governorate or town. Variations in temperature and climatic conditions across regions allow local agriculture to adapt accordingly. Consequently, farmers in these areas have a strong connection with the crops they grow.

Below is a table highlighting the unique agricultural products for each governorate:

Governorate	Famous Crops
Bethlehem	Battiri eggplants, olives, figs, and local almonds.
Hebron	Okra, local grapes, and guava.
	Field crops such as wheat, barley, and lentils.
	Local olives and high-quality olive oil production.
Nablus	Strawberries, pomegranates, and olives.
	Medicinal and aromatic plants like mint and sage.
Jenin	Wheat, chickpeas, tomatoes, and field vegetables.
	Tobacco (local tobacco cultivation).
Ramallah and Al-Bireh	Local olives and high-quality olive oil production.
	Local almonds, grapes, and figs.
Tulkarm	Citrus fruits such as oranges and lemons, and local thyme.
Qalqilya	Guava, mango, avocado, and citrus fruits.
Tubas	Dates, watermelon, and cantaloupe.
Jericho	Bananas, palm trees (Medjool dates), and early-season vegetables.
Salfit	Olives and high-quality olive oil production.
	Figs and local grapes.
Jerusalem	Barley, wheat, and field vegetables.
Southern Nablus	Local grapes, pomegranates, and figs.

This agricultural diversity reflects the richness and fertility of Palestinian lands, showcasing their capacity to produce a wide variety of crops that are deeply connected to local heritage and culture. This connection underscores the importance of adopting eco-friendly agricultural practices that promote food security and sustainable development.



Inspiring Success Stories from Local Communities

Here are examples of inspiring success stories from local communities that have embraced the Al-Hakura model and successfully implemented it as an effective means to enhance food security, protect the environment, and support economic and social development. These stories showcase how Al-Hakura improves individual and community livelihoods, revives Palestinian agricultural heritage, and advances the principles of comprehensive sustainability.

Al-Hakura as a Model for Eco-Friendly Practices



Samir's Hakura: A Success Story in Sustainable Agriculture

From the town of Zububa in the far west of Jenin Governorate, Palestine

In the Palestinian town of Zububa, farmer Samir Asaad Mustafa Jaradat transformed a small plot of land next to his home into an inspiring model of sustainable agriculture that now meets all his family's food needs. While the idea began in 2019, it flourished significantly during the COVID-19 pandemic.

With the help of his wife and children, Samir cultivated a variety of vegetables, fruits, and medicinal herbs, in addition to raising poultry. This effort not only provided healthy, eco-friendly food but also allowed the family to rely almost entirely on Al-Hakura, achieving food independence.

What Makes Samir's Hakura Unique?

- ♦ **Self-Reliance:** Samir's family no longer purchases vegetables or fruits from the market, relying entirely on Al-Hakura's production.
- ♦ **Eco-Friendly Agriculture:** Samir employs agricultural methods free of chemical fertilizers and pesticides, ensuring healthy and safe food.
- ♦ **Agricultural Diversity:** Al-Hakura features a wide variety of crops that provide a diverse food supply throughout the year.
- ♦ **Sustainability:** Al-Hakura uses rainwater and poultry waste as natural fertilizers, reducing costs and preserving the environment.
- ♦ **Social Impact:** Al-Hakura has become a gathering space for family and friends, strengthening social bonds.

Lessons Learned from Samir's Experience

- ♦ **Home Gardening:** Every family can allocate a small space around their home to grow part of their food needs, reducing dependence on markets.
- ♦ **Eco-Friendly Farming as a Healthy and Sustainable Option:** Safe and clean food can be produced without relying on harmful chemicals.
- ♦ **Family Collaboration:** Cooperation among family members leads to tangible results and an improved quality of life.

Inspiring the Local Community

Samir Asaad Mustafa Jaradat's experience serves as a model in addressing environmental, political, and economic challenges through Al-Hakura concept. His initiative has inspired many families in Zububa to adopt Al-Hakura model as a means of achieving food and economic security while reviving Palestinian agricultural heritage.



Khaldiya Mohammed Saleh Nairat: A Success Story of a Pioneering Woman in Agriculture

From the town of Meithalun in the southern Jenin Governorate, Palestine.

The Experience of Rural Women: The Home Hakura as a Tool for Women's Empowerment

In the village of Meithalun, south of Jenin, Khaldiya Mohammed Saleh Nairat has demonstrated that rural women can achieve significant milestones in agriculture. She started her project by cultivating a small home garden, which gradually evolved into a successful agricultural enterprise, providing her family with a diverse array of high-quality food.

How Did Khaldiya's Success Story Begin?

Khaldiya started by growing a variety of vegetables, fruits, and medicinal herbs in her home garden. She relied on traditional, eco-friendly farming methods, such as using organic fertilizers and agricultural waste to enrich the soil. Additionally, she used local seeds that were well-suited to the area's climate.

Impressive Results

Khaldiya's project achieved remarkable success. In addition to providing healthy, eco-friendly food for her family, she produced a surplus of agricultural products, which she marketed locally. Additionally, she processed part of her harvest into homemade food products, such as jams and dried herbs.

Keys to Khaldiya's Success

- ♦ Self-Reliance: Khaldiya's project relies on available local resources, reducing costs and ensuring sustainability.
- ♦ Eco-Friendly Farming: She adheres to not using chemical fertilizers or pesticides, ensuring food safety.
- ♦ Agricultural Diversity: Khaldiya grows a wide variety of crops, ensuring year-round food availability.
- ♦ Seed Production: She preserves local seeds and produces new ones, ensuring the continuity of her project.

Impact on Women and the Community

Khaldiya's experience has proven that rural women can achieve self-sufficiency and improve their families' income. Her project has not only elevated women's status in the community but also highlighted the importance of home gardening in achieving food security.

Lessons Learned

- ♦ The Role of Rural Women: Rural women can play an active role in agricultural development.
- ♦ Home Gardening: It is an effective means of achieving food security and improving health.
- ♦ Organic Farming: A sustainable and eco-friendly option.

Conclusion

Khaldiya's story serves as an inspiration to many rural women in Palestine and the Arab world, proving that success is achievable even in the face of challenging circumstances. Agriculture can be a powerful means to improve the lives of individuals and communities.



The Experience of Rural Women: Al-Hakura as a Tool for Women's Empowerment

Impact of These Practices on Food Security and the Local Economy

Improving food security:

- ♦ Providing Healthy and Sustainable Food: Al-Hakura has played a crucial role in offering healthy and sustainable food, particularly in communities facing resource shortages or high food costs.
- ♦ Reducing Market Dependence During Crises: Al-Hakura has provided a sustainable food source during times of economic fluctuations or crises, reducing reliance on external markets.

Enhancing the local economy:

- ♦ Job Creation: By selling surplus crops, Al-Hakura has contributed to generating additional income for families.
- ♦ Reducing Costs: Al-Hakura has lowered food-related expenses, increasing household purchasing power.
- ♦ Revitalizing Local Markets: The increased supply of fresh produce from Al-Hakura has bolstered local markets and strengthened the local economy.

Social and cultural impact:

- ♦ Empowering Marginalized Groups: Al-Hakura has empowered marginalized groups, especially women, by enhancing their economic independence.
- ♦ Promoting Sustainable Agricultural Practices: They have helped instill a culture of sustainable farming among younger generations, ensuring the continuity of these practices.

Conclusion

These stories demonstrate that Al-Hakura is not merely an agricultural system, but a powerful tool for achieving sustainable development and strengthening community resilience in the face of economic and environmental challenges. By providing healthy, sustainable food, supporting the local economy, and empowering communities, Al-Hakura has become a replicable and adaptable model that delivers comprehensive benefits across all levels.



Section V: Challenges and Opportunities

Challenges

AI-Hakura (home garden) faces several challenges that affect its sustainability and effectiveness as a means of achieving food security and environmental support. These challenges stem from environmental, economic, social, and political factors, and require solutions and measures to support the continuity and effectiveness of this sustainable agricultural system. The following are some details about the most prominent challenges:

◆ Climate Change and Drought

- ◆ **Climate Change Patterns:** Increasing temperatures and sudden weather fluctuations lead to crop damage and loss, reducing productivity and weakening the sustainability of AI-Hakura.
- ◆ **Water Scarcity:** Drought and lack of rainfall lead to a severe shortage of water resources, making irrigation a major challenge in AI-Hakura, especially in arid and semi-arid environments.
- ◆ **Need for Sustainable Irrigation Systems:** In some areas, AI-Hakura faces difficulties in securing sustainable irrigation technologies, such as rainwater harvesting, due to a lack of infrastructure and financial resources.
- ◆ **Pests, Diseases, and Soil Degradation:** Climate change encourages the emergence of new pests and diseases and contributes to soil degradation, making agricultural production more difficult.

◆ Urban Pressures and Urbanization

- ◆ **Erosion of Agricultural Land:** Urban expansion leads to the erosion of agricultural land and a reduction in its availability, limiting opportunities to establish or expand AI-Hakura.
- ◆ **Rising Land Prices:** Urban pressures drive up land prices, making it difficult for individuals or families to allocate space for AI-Hakura or invest in it.
- ◆ **Loss of Skills and Agricultural Culture:** Urbanization leads to shifts in lifestyles and a decline in agricultural skills and knowledge, especially among younger generations who may move away from rural and agricultural life.
- ◆ **Fragmentation of Agricultural Ownership and Land Disputes:** Dividing land among heirs or legal disputes hinders the allocation of large areas for agriculture, threatening the continuity of AI-Hakura.

◆ Economic and Financial Challenges

- ◆ **Lack of Funding and Financial Support:** Many farmers suffer from a lack of sufficient funding to establish and develop AI-Hakura, as most fundings are typically directed toward large commercial agricultural projects.
- ◆ **Lack of Resources to Support Sustainable Technologies:** AI-Hakura requires sustainable technologies, such as drip irrigation systems, water harvesting systems, and organic fertilization, all of which require financial investments that may not be available to all farmers.

Note: The term “AI-Hakura” is a specific term related to a type of home garden in a particular cultural context. For a more general audience, you might consider using terms like “home garden,” “backyard garden,” or “small-scale agriculture.”

◆ Lack of Awareness and Environmental Knowledge

- ◆ **Low Environmental Awareness among Young Generations:** Young generations have decreasing

knowledge of traditional agricultural methods, including AI-Hakura, which reduces their interest in adopting or developing this agricultural practice.

- ◆ **Lack of Training and Awareness:** Implementing AI-Hakura effectively requires training in sustainable agricultural techniques, such as organic fertilization and water harvesting. The lack of training opportunities is a factor hindering farmers’ adoption of this model.
- ◆ **Lack of Community Initiatives:** Some communities lack initiatives that support AI-Hakura practices and raise awareness of the importance of ecological agriculture in achieving food security and environmental conservation.

◆ Environmental Challenges: Soil Degradation and Chemical Pollution

- ◆ **Soil Degradation:** Soils are degraded due to the use of chemical fertilizers and pesticides, making it difficult to achieve sustainable agriculture.
- ◆ **Chemical Pollution:** In some areas, AI-Hakura are affected by the spread of pesticides and chemical fertilizers used in neighbouring fields, leading to soil and water pollution.
- ◆ **Soil Erosion:** In some mountainous areas or areas with poor soil management, soil erosion occurs due to wind or water, reducing soil fertility and making it unsuitable for agriculture.

◆ Political Challenges and Resource Restrictions

- ◆ **Restrictions on Access to Land:** In some areas, especially in lands around settlements and the separation wall, residents find it difficult to access their land or expand their cultivation, limiting their ability to establish AI-Hakura.
- ◆ **Lack of Government Support:** The AI-Hakura system lacks sufficient government support, as governments tend to focus their efforts on supporting industrial and commercial agriculture at the expense of small-scale and sustainable agriculture.
- ◆ **Regulatory Obstacles:** AI-Hakura faces challenges related to administrative procedures and laws, such as obtaining permits to carry out construction work and building in agricultural lands, especially those with high fertility, which may restrict the ability to implement AI-Hakura projects on a large scale.

◆ Lack of Access to Markets for Environmental Products

- ◆ **Low Demand for Organic and Environmental Products:** Although organic products offer environmental and health benefits, limited consumer awareness of their importance may restrict demand.
- ◆ **High Prices of Organic and Environmental Products:** Production costs of organic and environmentally friendly agricultural products are high due to the limited use of agricultural machinery and equipment, drive up their prices and makes them less affordable for low-income consumers.
- ◆ **Lack of Logistic Support:** Farmers who produce within the AI-Hakura system face difficulties in accessing major markets or exporting their products, limiting their income growth and production expansion.

Conclusion

AI-Hakura faces complex challenges that require multiple actions to support its sustainability and effectiveness, such as providing financial and technical support, raising environmental awareness, and enhancing government support to promote AI-Hakura as a sustainable agriculture model.

Opportunities

Opportunities for Developing AI-Hakura and Supporting its Spread as a Sustainable Agricultural Model

With a focus on overcoming challenges and strengthening the role of AI-Hakura in achieving food security, protecting the environment, and supporting the local economy:

◆ Supporting local policies and government initiatives

- ◆ **Sustainable Agricultural Policies:** By adopting laws and regulations that support organic farming and limit the use of chemical pesticides and fertilizers, environment quality can be improved, and the support and development of Al-Hakura can be increased.
- ◆ **Providing Financial Incentives and Tax Exemptions:** Governments can provide financial incentives or tax exemptions to farmers who adopt sustainable agricultural techniques and contribute to the environment improvement.
- ◆ **Supporting Training and Education Programs:** Governments can provide free training programs for farmers on Al-Hakura practices, raising awareness and building knowledge, and facilitating the wide-spread adoption of environmental agricultural projects.
- ◆ **Including Al-Hakura in National Food Security Programs:** By making Al-Hakura part of the food security strategy, local communities can be empowered to achieve sustainable self-sufficiency and reduce reliance on imports.

◆ Promoting Environmental Awareness and Community Training

- ◆ **Launching Awareness Campaigns in Schools and Communities:** Spreading the concept of Al-Hakura among young generations through educational programs can enhance awareness of the importance of ecological agriculture and encourage future generations to practice it.
- ◆ **Workshops and Training Programs:** Training programs can be established targeting farmers and local families to teach them sustainable agricultural practices such as organic fertilization and no-till farming, helping them improve the quality of production and increase their environmental awareness.
- ◆ **Cooperation with Environmental Organizations:** Cooperation with environmental organizations and associations can organize awareness workshops and training sessions, introducing the community to new ideas and enhancing their understanding of Al-Hakura as a means of preserving natural resources.

◆ Innovation in Sustainable Agricultural Technologies

- ◆ **Using Modern Irrigation Systems:** Drip irrigation or rainwater harvesting are effective solutions for improving water resource management in Al-Hakura, as they help reduce water consumption and increase crop productivity.
- ◆ **Biotechnology to Develop Drought-resistant Crops:** Biotechnology enables the development of plant varieties adapted to harsh environmental conditions, allowing farmers to diversify crops and increase productivity.
- ◆ **Recycling and Organic Fertilization Techniques:** Employing techniques to convert organic waste into organic fertilizer helps improve soil fertility naturally, reducing the need for synthetic fertilizers and enhancing crop health.

◆ Strengthening Cooperation with International and Local Institutions

- ◆ **Obtaining Funding and Technical Support:** Many international organizations provide support for sustainable agricultural projects, and these opportunities can be exploited to obtain funding for Al-Hakura development and provide training for farmers.
- ◆ **Establishing Research Partnerships:** Cooperation with universities and research centres can contribute to the development of new technologies and improve environmental practices for Al-Hakura, allowing local communities to benefit from academic and field expertise.
- ◆ **Participation in International Sustainable Development Programs:** Farmers can join programs and initiatives that support ecological agriculture and provide technical and financial support, such as the FAO program for ecological agriculture and other international and local institutions.

◆ Developing Markets and Supporting Organic Agricultural Products

- ◆ **Establishing Local Markets for Organic and Environmental Products:** Establishing dedicated markets for organic products allows farmers to sell their products at reasonable prices, supporting them financially and encouraging them to expand Al-Hakura practices.
- ◆ **Supporting Trademarks for Organic and Environmental Products:** Developing a distinctive trademark for organic and environmental products increases their value in the market and encourages consumers to choose local organic and environmental products.
- ◆ **Cooperating with Restaurants and Stores:** Farmers can form partnerships with restaurants and stores to sell Al-Hakura products, opening new doors for marketing fresh and organic products and boosting farmers' income.

◆ Focusing on the Local Circular Economy

- ◆ **Recycling Agricultural and Household Waste:** Farmers can convert agricultural waste into organic fertilizer to be used in Al-Hakura, reducing costs and preserving the environment.
- ◆ **Encouraging the Exchange of Agricultural Products:** Farmers can exchange the surplus of their Hakura production with their neighbours, strengthening social relationships and increasing local economic support.
- ◆ **Providing Workshops on Sustainable Agriculture for Families:** Families can be encouraged to adopt agriculture through Al-Hakura and achieve partial or even complete food self-sufficiency, supporting the local economy and increasing environmental awareness.

◆ Adapting to Change and Managing Environmental Risks

- ◆ **Crop Diversification:** Planting several types of crops in Al-Hakura improves its resilience to climate change and reduces the risk of crop damage.
- ◆ **Benefiting from Ecological Farming Practices:** Applying ecological farming techniques enhances Al-Hakura's resistance to drought and sudden changes in temperature, increasing resource efficiency and reducing risks.
- ◆ **Encouraging Mixed Cropping:** By planting different types of crops next to each other, ecological balance can be enhanced and the garden's resistance to pests can be increased, reducing the need for chemical pesticides.

◆ Strengthening the Role of the Local Community and Empowering Women and Youth

- ◆ **Empowering Women in Agriculture:** Al-Hakura can provide opportunities for employment and additional income for women, enabling them to exploit small areas to produce food and sell it, promoting economic independence and contributing to their empowerment.
- ◆ **Encouraging Youth to Engage in Environmental Projects:** Supporting and empowering young people to work on Al-Hakura projects can contribute to creating a new generation of farmers who are aware of the importance of ecological agriculture, and reduce unemployment in rural communities.
- ◆ **Strengthening Community Cooperation:** Encouraging community members to participate in workshops and share experiences about Al-Hakura strengthens social relations and increases the sustainability of these practices.

Conclusion

By exploiting these opportunities, the role of Al-Hakura in achieving the goals of sustainable development, supporting local communities, and achieving economic and social independence for farmers and families can be enhanced.



Section VI: Recommendations

To enhance the preservation of Al-Hakura practices and increase community participation, comprehensive awareness programs targeting various segments of society can be developed, designed to raise awareness of the importance of Al-Hakura and its role in supporting food security and environmental sustainability. This documentation focuses on expanding the scope of community participation and raising public awareness through a set of strategies and initiatives.

◆ Organizing Awareness Campaigns in Schools and Community Centres

- ◆ **Introducing Al-Hakura into Curricula:** Subjects related to ecological agriculture and the importance of Al-Hakura can be included in school curricula, raising awareness among future generations about the importance of sustainable agriculture.
- ◆ **Conducting Practical Workshops:** Organizing workshops in schools or community centres where children can learn to cultivate in Al-Hakura and acquire practical skills in ecological agriculture.
- ◆ **Developing Experimental School Gardens:** Establishing a small Hakura in schools as a living educational environment where students can learn how to grow plants, preserve soil, and use resources sustainably.

◆ Cooperating with the Media to Raise Awareness

- ◆ **Producing Awareness Programs:** Broadcasting awareness programs on local television and radio about the benefits of Al-Hakura and how to utilize small spaces for growing food.
- ◆ **Using Social Media:** Posting educational videos on social media about how to prepare a Hakura at home and how to utilize it to achieve food security.
- ◆ **Highlighting Success Stories:** Sharing stories of farmers and individuals who have established a successful Hakura in their homes, which can inspire community members to emulate these experiences.

◆ Launching Community Training Programs

- ◆ **Educational Workshops on Ecological Agriculture Techniques:** Providing training for communities on organic fertilization, rainwater harvesting, and natural pest management, helping residents establish sustainable Hakura.
- ◆ **Training Courses for Women and Youth:** Supporting programs that target women and youth specifically, providing them with knowledge on how to prepare a Hakura at home, empowering these groups and contributing to the spread of environmental practices.
- ◆ **Cooperating with Local Experts:** Inviting agricultural engineers or even experienced farmers and experts in ecological agriculture to provide community training on Al-Hakura, enhancing the credibility and effectiveness of the information.

◆ Encouraging Community Participation Through Shared Hakura Initiatives

- ◆ **Establishing a Community Hakura:** Allocating plots of land within cities or villages and converting them into a community Hakura, where residents can grow different crops and exchange products among themselves.
- ◆ **Organizing Volunteer Planting Days:** Inviting community members to participate in volunteer planting days, where they can participate in planting Al-Hakura, strengthening cooperation and

community belonging.

- ◆ **Encouraging the Exchange of Products and Knowledge:** Encouraging community members to exchange crops and agricultural ideas between Al-Hakuras, enhancing food sustainability and supporting the local economy.

◆ Developing Educational Materials and Guidance Tools

- ◆ **Publishing Brochures and Guidance Manuals:** Preparing explanatory brochures on the steps of preparing a home Hakura and best practices in ecological agriculture, providing residents with resources they can refer to.
- ◆ **Designing Posters and Planting Schedules:** Designing educational posters on how to grow seasonal crops and irrigation schedules, helping residents to learn how to manage Al-Hakura correctly.
- ◆ **Producing Educational Videos:** Preparing short videos that present simple steps for establishing a Hakura and caring for plants, and providing tips on soil management and organic fertilizers.

◆ Organizing Environmental Awareness Campaigns

- ◆ **Cleaning and Planting Campaigns:** Organizing community campaigns to clean and plant public areas to establish Hakuras, enhancing the beauty of the local environment and encouraging residents to participate.
- ◆ **Distributing Seedlings and Plants:** Distributing local plant seedlings and pest-repellent plants as part of community campaigns, making it easier for residents to start their own Hakura.
- ◆ **Raising Awareness of the Benefits of Al-Hakura in Adapting to Climate Change:** Spreading awareness of how Al-Hakura can help adapt to climate change, such as storing carbon and reducing the use of non-renewable resources.

◆ Involving Community Leaders and Local Institutions

- ◆ **Cooperating with Municipalities, Councils, and Community Institutions:** Municipalities and community institutions can support Al-Hakura initiatives by providing logistical support and helping to provide land or resources.
- ◆ **The Role of Mosques and Churches in Awareness:** Organizing awareness lectures on ecological agriculture and Hakuras in mosques and churches, contributing to raising awareness among community members.
- ◆ **Training and Employing Agricultural Advisors:** Appointing local advisors to help communities establish their Hakura and provide advice on best environmental practices.

◆ Encouraging Government Support and Local Policies

- ◆ **Providing Financial Incentives for Farmers:** Providing financial support or tax incentives for individuals who cultivate ecological Hakura, encouraging more people to join this agricultural style.
- ◆ **Supporting Local Markets for Organic and Environmental Products:** Promoting local markets that sell organic and environmental products from Al-Hakura, helping farmers achieve income from their products and encouraging them to continue.
- ◆ **Providing Technical and Advisory Support:** Allocating agricultural advisors to provide technical support and guidance to farmers and Hakura's owners, helping them improve Al-Hakura productivity.

Conclusion:

Community awareness and increased participation in Al-Hakura practices are important steps towards enhancing food security and environmental sustainability in the community. Through awareness campaigns, training programs, and support from local policies, communities can benefit from Al-Hakura to achieve environmental and economic benefits and ensure the sustainability of these practices for future generations.



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