

Harvesting Health: Sustainable Dietary Habits for Us and the Planet

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Abstract

The United Nations approved the Sustainable Development Goals (SDGs) in 2015 as a global call to action to end hunger and poverty, safeguard the planet, and guarantee inclusion, peace, and prosperity for everyone. Due to their interconnectedness with nearly every facet of the economy, environment and society, food and agriculture play a significant role in many of the Sustainable Development Goals. Sustainable diets, as defined by the United Nations' Food and Agriculture Organization, are “diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Food loss and waste (FLW) threaten the sustainability of our food systems by squandering resources such as water, land, energy, labor, and capital. There are many ways in which healthier and sustainable dietary habits can be adopted. Millets have abundant health advantages and are environmentally friendly due to their minimal water and input requirements. The article discusses the environmental consequences of food waste, strategies for sustainable eating and their associated benefits while also discussing the importance of millets.

Keywords: Sustainable, Food, Environment, Millets

Introduction

Sustainability was defined by the United Nations Brundtland Commission in 1987 as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”(1) In 2015, the United Nations approved the Sustainable Development Goals (SDGs) as a global call to action to end hunger and poverty, safeguard the planet, and guarantee inclusion, peace, and prosperity for everyone. Due to their interconnectedness with nearly every facet of the economy, environment and society, food and agriculture play a significant role in many of the Sustainable Development Goals.(2) The second goal is to eradicate hunger from the planet by 2030. Of course, ending hunger is closely related to ending poverty (SDG 1). SDG 3 states that ensuring healthy lives and promoting well-being for everyone depends on having access to safe and nutritious food. In order to ensure sustainable patterns of consumption and production, it is imperative to address overconsumption and food waste (SDG 12).(2) Climate change poses risks to ecosystems, triggers extreme weather, and threatens biodiversity, impacting our lifestyles. Over 60% of global Greenhouse Gas emissions and 50-80% of total resource use are linked to household food consumption. Therefore, fostering environmentally sustainable eating habits is increasingly crucial.(3) Unhealthy diets contribute to 11 million deaths annually, with an additional 420,000 from unsafe food consumption. Three billion people lack access to a healthy diet, and such diets are linked to six of the top 10 global disease risk factors. Unsustainable food practices drive deforestation, biodiversity

loss, ocean depletion, zoonotic diseases, and antimicrobial resistance.(4) Globally, around one-third of the edible portions of food produced for human consumption are lost or wasted, amounting to 1.3 billion tonnes annually. Food is wasted at every stage of the food supply chain, from the first agricultural production to the last stage of domestic consumption in the food supply chain.(5) Sustainable diets, as defined by the United Nations' Food and Agriculture Organization, are “diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources”(6) Promoting health, nutrition, and environmental sustainability is crucial for transforming food systems. The 2021 United Nations Food Systems Summit (UNFSS) emphasized the urgent call to adopt healthy diets from sustainable food systems, resonating across dialogues, social movements, and national pathways.(4) India prioritized promoting fair livelihoods through active participation in the UNFSS, with a key focus on enhancing the well-being of farmers. A significant highlight was the national dialogue held in April 2021, addressing 'Agri-Food Systems Advancing Equitable Livelihoods.(7) The article discusses the environmental consequences of food waste, strategies for sustainable eating and their associated benefits while also discussing the importance of millets.

Food wastage and impact on environment

In a world witnessing a gradual increase in hunger since 2014, it's crucial to minimize food losses and waste. Approximately 13% of globally produced food is lost between harvest and retail, with an additional 17% wasted in households, food services, and retail. Addressing this issue is vital to ensure food security and sustainability. (8) Food loss and waste (FLW) threaten the sustainability of our food systems by squandering resources such as water, land, energy, labor, and capital. Disposing of this waste in landfills further emits greenhouse gases, exacerbating climate change. This issue not only jeopardizes food security and availability but also drives up the overall cost of food.(8) FLW contribute to 8-10% of global greenhouse gas emissions, leading to climate instability and extreme weather events. These disruptions harm crop yields, diminish nutritional quality, and disrupt supply chains. Prioritizing the reduction of FLW is crucial for building sustainable agri-food systems that efficiently use natural resources, minimize environmental impact, and enhance food security and nutrition.(9) Widespread use of non-biodegradable materials in packaging has heightened environmental pollution worries. Globally, the packaging industry, especially in the food sector, extensively employs paper, glass, and plastics, contributing to over two-thirds of material consumption. This surge in plastic use by the packaging industry becomes a major contributor to the alarming rate of plastic waste entering the environment. Embracing green packaging is crucial, encompassing three key types:

1. Reusable packaging, like glass, for repeated use after cleaning.
2. Recyclable packaging, such as paper, for reprocessing and reuse.
3. Biodegradable packaging, like cotton sacks, breaking down harmlessly in the environment.(10)

Strategies for Sustainable Eating and Their Positive Impacts

There are many ways in which healthier and sustainable dietary habits can be adopted. These can be done in the following ways:

Optimize purchasing and storage: To cut down on waste and costs, one must carefully plan meals using a shopping list. To maintain freshness and keep pests away, food items must be stored in airtight containers, giving older products priority over open goods.(11)

Decipher Labels: To guarantee food safety, distinguish between "use-by" and "best before" dates. Sometimes food is still safe to eat after the "best before" date, whereas it's the "use-by" date that tells an individual when it is no longer safe to eat. Labels must be reviewed for harmful additives and to steer clear of products containing excess sugar or salt.(11)

Value food, use leftovers, and reduce waste: People must learn about how food is produced and the farmers behind it. Leftovers must be utilized by refreezing or repurposing them in new meals. Food waste can be put to good use through composting which will help in enriching the soil and curbing the carbon footprint.(11)

Choose Local Foods: Opting for locally grown and distributed food reduces transportation emissions, minimizes food loss, preserves biodiversity, and offers fresher, healthier, and traditional options. It's crucial to ensure efficient, environmentally-friendly, and socially responsible practices throughout the production, processing, and distribution chain.(12)

Utilization of food and vegetable waste (FVW): The FVWs can be utilized to extract as well as obtain bioactive compounds that can be used in cosmetics, food, textile and pharmaceutical industries.(13)

Consume peels: Fruit and vegetable peels are a great source of fibre, antioxidants, vitamins, and minerals. One may increase the overall intake of these nutrients by eating the peel along with the pulp.(14)

International year of millets

For ages, millet has been an essential component of our nutrition. Apart from their abundant health advantages, millets are environmentally friendly due to their minimal water and input requirements. At the behest of the Government of India, the United Nations declared 2023 to be the International Year of Millets with the aim of creating awareness of the grain and increasing its production and consumption.(15) In March 2021, the UN General Assembly declared 2023 as the International Year of Millets. Led by the FAO and in collaboration with stakeholders, the initiative promotes millets, resilient crops that thrive in arid conditions, as a solution for countries to enhance self-sufficiency and decrease dependence on imported grains.(16)

Millets are a broad category of cereals that include pearl millet, proso millet, foxtail millet, barnyard, kodo, browntop, finger and Guinea millets, as well as fonio, sorghum (or great millet) and teff. They can thrive in various climates with low water needs, making them resilient to heat, drought, and floods. They are useful "nutri-cereals" because of their high vitamin content, low glycaemic index, high protein content, and minerals like calcium and iron. Millets are high in fibre, free from gluten, and can help control blood sugar, lipids, bowel movements, diabetes, and increase feelings of fullness.(17)

Conclusion

Adopting sustainable diets is critical in solving the problems of resource depletion, hunger and environmental degradation. A thorough guide is provided by the United Nations' definition of sustainable diets, which emphasizes the importance of environmentally conscious, culturally acceptable, economically fair, and nutritionally adequate food choices. Policies and rules to reduce food loss and waste must be implemented as early as possible. Food loss and waste lead to inefficient use of precious resources such as labour, capital, water, land, and energy. They also threaten the sustainability of our food systems.

Individuals are essential in creating a system of sustainable food use. People can greatly reduce the environmental impact of their diets by adopting conscious decisions including valuing leftovers, adopting green packaging, improving purchasing and storage habits, reading labels to reduce waste, and composting food waste. Incorporating regional meals and encouraging the use of nutrient-dense food peels and crops like millets also contribute to the improvement of sustainability initiatives.

To put it simply, a change to sustainable diets necessitates group effort at the individual, community, and society levels. We can clear the path for a more resilient and sustainable future for the present and future generations by making dietary decisions that are consistent with values that uphold biodiversity, ecosystems, and fair resource use.

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