

The Prosperity of Farming Community is Possible by Adopting the Culture of “Sustainable Diet” i.e. “Taking Nutrition Via Food Rather Supplements or Medicine”

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Abstract

Now a day, peoples are taking about the malnutrition and rising incedents of health related problems. It is partly due to agriculture production and processing are not having nutrient outputs as an explicit goal. A better understanding of what is required from agricultural production and food processing for healthy and sustainable diets is needed. Sustainable diet can only be possible by adopting the nutrition sensitive agriculture. To implement the Nutrition-sensitive agriculture, it is needed to consider and understand the role of biodiversity in improving dietary quality along-with dietary diversity as well as seasonality in food supply. In order to close the nutrition gap, apart from improvement in agricultural systems, efficient storage and food processing technologies to prolong the availability of nutrition along with shelf-life are required. The essential part of nutrition sensitive agriculture is to ensure that, farmers are knowledgeable enough about production systems, which sustainably provide adequate amounts of nutritious food while conserving the environment. At the same time, for the benefits of nutrition-sensitive agriculture to be realized, it is must to educate the consumers to understand what constitutes a healthy and sustainable diet.

This paper has aim to cover the gist of sustainable diet and nutrition sensitive agriculture. It is highlighting what is needed to change in the current practices of entire food chain i.e. from production to consumption or in other words from farm to plate to enrich and preserve the nutrition for ensuring the transfer of optimal health benefits through natural way i.e. through natural food. We can say it, as change in production, processing and packaging, storage, supply chain system to attaining the goal of sustainable diets specifically suited for individual's diet and health requirements. Producing the nutrition sensitive food most suited for consumer's health will also fetch good revenue to the farmers.

Keywords: Farming; Culture; Sustainable Diet; Food

Background

Worldwide, each year, approximately 5% (1.7 million) of the deaths through non-communicable diseases (NCDs) are happening due to low fruit and vegetable consumption (lack of nutrition) alone (WHO 2013) and approximately 2.5 million children die every year from childhood malnutrition (FAO 2012b). These figures demonstrate the inadequacy of the contemporary food system (production as well as processing) so, it must be replaced with innovative approach which can produce sustainable diet.

Balanced diets throughout the year

The UN System High Level Task Force (HLTF) on Global Food Security claims that enabling “all people to secure year round access to the varieties of food required for good nutrition” would be an important means by which hunger and malnutrition could be ended (UN 2012). While already in 1996 the definition of “Food Security” included the concept of seasonality (FAO 1998), the UN

HLTF emphasized again that, national goals for reducing hunger and improving nutrition need to include “ensuring consistent availability and accessibility of sustainably produced, nutritious and safe food in local markets”. Same is also suggested by the World Bank.

Introduction

A major part of our population is facing the problems of malnutrition which is also termed as ‘Hidden Hunger’. It is partially due to agriculture production is not having nutrient output as an explicit goal and partially due to nutrition and health communities have used agriculture too little as a primary tool in their nutrition programmes. Now consumers itself have started searching for sustainable solutions to such failures through holistic food-based systems and innovative agri-startups started focusing on linking agricultural production with improved nutrition and human health,

sustained livelihood, a potential business alternative and a route for rural prosperity.

It needs coordinated work in production, harvesting, post harvesting activities, food processing, supply chain, logistics and marketing activities for ensuring the availability of food with needed ingredient for domestic as well as export markets. It needs application of due technologies and expertise at each and every level to ensure the prevention of nutrition losses Definition of sustainable diet:

- The sustainable diet can be defined as: “Sustainable diets are those 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 and accessible, economically fair and affordable, nutritionally adequate, safe and healthy while balanced and sustained utilization of natural resources”.
- The above definition indicates that the diversified farming is the sustainable farming and sustainable farming is the natural road for sustainable diet or nutrition-sensitive custom diet. Other than the production, when moving along the food value chain, nutrition sensitive food will encounter a big road blocks where food processing starts

Current problems

Micronutrient deficiency is a very widespread form of malnutrition, caused by inadequate intake of fruits, vegetables, animal-source products and other micronutrient-rich foods. The nutrients deficiency is the root cause of many of the health issues of common people. It is high time to ensure the nutrition access to common people and address the many of the health and nutrition issues. To achieve this a comprehensive long term policy should be implemented which can ensure a continued efforts to increase dietary diversity in agriculture production. It will give a long-term solution to all forms of malnutrition and health issues arising due to lack of nutrition.

Solution of the Problem

In-order to address nutrition security issues and convert the concept of nutritional functional diversity into reality, the agriculture production practices should emphasize the availability of nutritionally distinct crops in a cropping system rather just looking only at the relationship between crop diversity and nutrition with the human health.

Nutrition-sensitive agriculture requires consideration and understanding of the role of agro-biodiversity in improving dietary quality and dietary diversity. it is acknowledged that the consumption of a variety of foods across and within food groups almost guarantees adequate intake of essential nutrients.

To achieve the objective, our Vision should focus on becoming a leading global player in this upcoming innovative food market and work with a mission to stay ahead in R & D, innovation, production, processing and marketing with creating long-term meaningful global partnerships with farmers, academia, industry and consumers for understanding their real needs and consistently delivering the superior quality food ingredients and services.

Although supplementation and fortification of food are well-established methods to cover the micronutrient needs in our diets. There are many such examples like iodine, vitamin A and iron. Many other well-known nutrients, such as zinc, have received less attention although elimination of zinc deficiency improves health status considerably. But the key point here is the presence of nutrition in available form and the side effect of the fortification.

What to do

Nutrition-sensitive food production

Agriculture practices can use several approaches to improve the nutritional quality of food crops and output of agricultural systems but to achieve this, active involvement of nutrition and health sectors with agriculture production is a must. Government policies must support these approaches and the profitability of participation in the relevant approaches must be made clear to farmers. Nutrition-sensitive agriculture package of practices needs to examine all food groups and production intensity at the regional level, especially fruits and vegetables, to ensure adequate supply in quantity and quality.

Development of integrated food system rather just agriculture system

The role that agricultural production can play in contributing to balanced nutrition is outlined but it must be understood that a multitude of effects exist along the entire food supply chain that add up to a complex model. all sectors of the food chain are not integrated in the agricultural system. At some point food processing starts and from here the responsibility of agriculture for food systems ends. No clear borders exist between the different fields of activities like food production, post harvest and food processing at household or at food industry level. Communication between the stakeholders of the different fields is an important prerequisite to understanding the different roles and responsibilities for producing and processing foods that will ensure sustainable diets (diet with required nutrients).

Suggestive implementation strategy

For ensuring the nutrient-sensitive customized food for consumers, it is mandatory to focus on all the areas linked to the food cycle i.e. from farm to plate (production to consumption). The major areas of food cycle which, required monitored attention are as follows:

- **Input to farm:** The input supplied to soil during production is the primary factors as well as base for nutrition and contaminations of the food. Most of the input to crop should come from natural resource base like water, soil, air, climate.
- **Soil fertility and quality:** Complex chemical, physical and biological processes carried out by the soil biota affect the availability of nutrients in the soil. These in turn affect the quality of the soil, the quality and yield of crops and the general health of ecosystems.
- **Integrating legumes into cropping systems:** Legumes crops are naturally supplying the nitrogen to the soil and improving the soil health so, integrating legumes into a farming system is one solution to naturally increase nitrogen inputs and recycle the nutrients as well as conserve soil resources for low input agriculture.
- **Bio-fortification of soils:** In combination with fertilizers, essential mineral micronutrients that are deficient in a population could be added to the soil, which would not be very expensive. It is questionable how sustainable this approach is in the long term as the micronutrients have to be continuously available and affordable for farmers. There are also questions about application methods, soil composition, and mineral mobility in the plant.
- **Agro-biodiversity:** Agro-biodiversity is the basis of the food and nutrient value chain and its use for agriculture production is important for sustainability of food and nutritional security. It is mandatory to adopt the production diversification (diversified farming) to ensure the production of nutrient-dense crops and livestock
- **Food processing:** As we know nutrition starts depleting with processing and preservation. Most of the prevailing practices of processing and preservation are not made to preserve the nutrition and alkalinity of the food, they are just to increase the shelf life. The nutrition starts depleting just after the harvest and it is more in fresh items like fruit and vegetables so, it is needed to develop most effective processing and preservation practices to protect the nutrition and alkalinity of the food so that we can say it as non-junk food.
- **Food fortification:** Food fortification is either a market driven fortification suitable for commercial choice for providing extra nutrients in food, or it is a public health policy driven fortification which aims to reduce the number of people with dietary deficiencies in a population. Fortifying foods with micronutrients is a valid strategy as part of a food-based approach however, it is not an alternative to the consumption of a variety of available foods constituting a nutritionally adequate diet. Fortified foods are only acceptable when necessary food supplies are not available or accessible.
- **Storage:** To prevent the nutrition and hygiene in the food, storage plays a crucial role and it becomes more critical in case of fresh foods like fruits and vegetables. The storage and cold chains should be designed with the prospective preserving the nutrition as well as shelf-life.
- **End point supply chain and retailing:** Contamination and loss of nutrition are more prominent while handling the end point distribution for retailing. At this point contaminations are more prominent than nutrition however end point handling may also lead to loss of nutrition along with the contaminations.

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