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FOOD FREEDOM AND SUSTAINABILITY- REVOLT AGAINST FOOD DICTATORSHIP: VANDANA SHIVA'S PERSPECTIVE.

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Abstract:

Food security is primarily associated to the socio-economic conditions of people and broadly the survival questions in long run. The improvement of the food conditions and security are seen as vital constituents to sustainable development. What sustainable development wants is to meet the needs of the present people without compromising the needs of the future generations. But problem arises when the profit motivated business industries come to destroy our foods at the costs of our lives. Genetically engineered hybrid seeds, transgenic food plants are not good for health, as Shiva points out. So her revolt against the GM foods and go for the local, climate friendly foods are the main trust area of this paper. In dealing with all these, various dimensions of food security also comes under the ambit of its discussion.

Keywords: Food security, Sustainability, GMO, Food freedom.

Introduction:

Food security is the basis of a nation's development. The most common and acceptable definition of food security is that it exits "when all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for and active and healthy life" (FAO 1996). The province of this definition is very broad. It includes many components of food security, namely, physical, social, economic accessibility of food; both quality and quantity of food for the nutritious balance of an individual; safety and health benefits etc. The definition of security has evolved over time to time. Earlier the food security issue focused on the availability of food at national level. Over time other different factors and conditions are added to the basic understanding which expands its province to the ability of households to access the food available, the amount of food consumed by an individual, intra-household distribution of food and nutritional quality of food etc. Currently the most recent adaption is sustainability.

At the 1974 World Food Conference the term food security was defined with an emphasis on supply. Food security, they said, is the "availability at all times of adequate, nourishing, diverse, balanced and moderate world food supplies of basic food stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices" (FAO 2003). Later definitions added demand and access issues to the definition. The final report of the 1996 World Food Summit states that food security "exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO 2013). Household food security exists when all members, at all times, have access to enough food for an active and healthy life. Individuals having food secure are not living in hunger or food starvation.

Food security is traditionally conceptualised as having only three dimensions: Availability of food, Access to food and utilisation and Consumption of food. The Food and Nutrition Technical Assistance II Project (FANTA-II), founded by the US Agency for International Development (USAID), succinctly elaborates on these three dimensions of food security: "Food availability is derived from domestic agricultural output and net food imports at the national level. Food access is the ability of a household to acquire sufficient quality and quantity of food to meet all household members' nutritional requirements for productive lives. Food utilisation/ consumption is determined by how much a person eats and how well a person converts food to nutrients, all of which affect proper biological use of food, nutritional status and growth" (Deitchler, M. et al. 2010).

Now, regarding the measurement of food security, we can ask, how to determine or say that a person having security in his food. As a reply it can be said that a predetermined number of calories is given as a mark of food security by several research works. If the calories consumed by an individual are less than that predetermined calories, then he is food

insecure. Apart from this a person's height, weight, iron count are also important factor in the measurement of food security. In case of the measurement of household food security, the quantity and quality of food acquired by a household, quality of the staple food taken, household income spend on food over a specified period of time are to be count.

Dimension of Food Security:

If we analyse the dimension of food security, we find basically four key points to be analysed. They are accordingly: Food Availability, Food Access, Food Utilisation and Food Stability.

I. Food Availability

Food availability implies physical existence of food in both national and household considerations. Domestic food production, import and export of commercial food, food stocks are come under the national level. The household food availability implies home garden production and food brought from markets etc. Climate change, improper irrigation etc. can hamper this factor. But with proper resource use food can be made available to all. Now regarding the insecurity of women it can be said that it is due to inequalities of ownerships and control of livelihood assets, tenure insecurity of women which further results in reduction of women's income and food security.

II. Food Access

Food accessibility implies assurance of enough resources to obtain food in sufficient quantity, quality and nutrition. Apart from this, balance of physical, social and policy environment is also considered here, because misbalance in any of these factors can seriously do negative impact on food access of households, i.e. due to flooded cropland and drought in land, accessibility of food becomes poorer in some places. Now regarding women's accessibility of food in the house is like that although the food is available in the house but the food intake of the women may not necessarily be as accessible as compared to the male member of the family.

III. Food Use and Utilisation

We can understand and discuss it with two extents. One is socioeconomic aspect of household food utilisation i. e. how and which nutritious food should be consumed in a house for proper nutrition and balance diet. Another aspect is biological utilisation of food i. e. ability of human body to take food, what types of food and how much is needed for a person of different age and workers are come under this utilisation of food. Women's role in this aspect of food security factor is very much important. Women allocated in the agricultural sector for food production are definitely needed much amount of nutritious diet to herself for the smooth running of her health. How they use the income gained form her work is also an important element.

IV. Food Stability

Food stability is that dimension which includes other three factors as well, i.e. it refers to food being available and accessible, and can be utilised at all times. Stability is given when food and nutritious level of a house (and a country), income and economic resources remains constant in the long run. For the stability, maintenance of the environmental balance is necessary. Differences among the men and women affect food stability to some extent. Again during any crisis it is seen that women are forced to reduce their intakes, and men leave their house in search of employment elsewhere leaving women to fight against disaster and feeding the family. From this we are identified that the security of women are always questioned. Apart from household sector, in different arenas also women are seen as food insecure.

Food Freedom and Sustainability:

"whenever we engage in consumption or production patterns which take place more than we need, we are engaging in violence" (Shiva Earth Democracy 102). The growing concern for the food freedom is due to several reasons. They include, the animal products that we use are not properly benefited for our health, since they are increasingly use for profit; the monocropping food has also bad impacts on both human health and environment; foods are transported and processed using large amount of non-renewable resources, since resources are limited we have to limit our uses too; foods are being genetically engineered, cloned and patented for which they lost natural beneficial qualities which are needed for human organism, and instead of benefits it carries many disease germs for human as well as nature. We are separated from the local organic foods day by day. Industrialised food grasps our life totally. Foods are corrupted, and thereby our lives too. Food is our basic need, so we have to find a middle path for both the profit for the industries and benefit of our health through food.

Vandana Shiva says that the transfer of this universal technology i.e. from local to global supermarket is responsible for the disappearance of indigenous knowledge and the introduction of unsustainable ecological situation. Shiva also mentions about the threat of biotechnology to the conservation of biodiversity. Shiva points out that the biotechnical mega projects and programmes are motivated by their enthusiasm to reap quick

profit and that creates only dependence instead of fostering self-reliance. These greed-based projects even destroy the food rights of the small farmers. Because of the increase of business based agriculture and the benefits are going to corporations. "Recent development is Plant Genetic Engineering, which involves inserting a gene (or sequence of genes), copied from a bacteria, virus, plant, animal or human, into a plant. The gene of interest often referred to as a "transgene", if the gene moves across species; the genetically modified plant is known as a "transgenic" plant" (Mohideen and Haroon 160). This high- yield seed varieties through GMO rooted in commercial capitalism destroyed local agricultural and economic diversity and forestry which affects directly on food security of people. It carries many health threats too, if they are not properly monitored. "The main characteristic of these miracle seeds was to avoid lodging by biologically engineering dwarf varieties through hybridisation. The important feature of these new varieties is not that they are particularly productive in themselves but they can absorb three or four times the amount of fertilisers that traditional varieties do and convert it into grain, provided proportionately heavy and frequent irrigation applications are also available. In the context of higher inputs, the HW seeds are resourcewasteful. Besides the heavy demands made on water and fertilizers, the new seeds have a high vulnerability to pests and diseases" (Shiva Staying Alive 117). There are many health hazards originating from genetic engineering:

"(i) Genetic engineering use substances from organisms that have never been a part of the human food supply to alter the basic nature of the food people eat. No one knows if these foods are safe without long-term testing. (ii) Genetic engineering can result in unexpected mutations in an organism, which can develop new and higher levels of toxins in foods. (iii) Genetic engineering can produce unpredictable allergens in foods. (iv) Transgenic foods can misdirect consumers with fake freshness. A delicious looking genetically engineered bright red apple could be many weeks old with little nutritious value. (v) Without labels on the foods that indicate that it is a GM food, health agencies are powerless to trace the problems that may come up. The side effects of GM food even kill someone. 37 people have died, 1500 people have been paralysed, and 5000 more people have been temporarily disabled by a syndrome that has just recently been linked to tryptophan which is made by genetically engineered bacteria" (Mohideen and Haroon 158).

Shiva says that these profit motivated biotechnological projects view nature as a source of raw materials for creation of manufactured materials, rather than seeing it as self-balancing and having self-integrity. Again the conditions of these corporate businesses are like that a farmer

who buys hybrid seeds cannot use the next generation of seeds for planting without paying a royalty to the company. This is what Shiva termed as "Biopiracy". In short, "biopiracy (is) biological theft, illegal collection of indigenous plants by corporations who patent them for their own use" (Shiva No Patents on Seeds 2005).

Sustainable food is not only about food itself, but food production, and consumption, maintenance of natural resources, distribution environmental impact also comes under its province. Now question is what the steps for the sustainable food uses are. To this the answer is eat locally. Though it is not possible for all to grow food for their family in the backyard of their house, yet we can go for the local foods and can source out local ingredients, seasonal vegetable and fruits which can avoid diseases and has health benefits too. Preserving harvest is another sustainable way of fooding, which can help growing food for next season. Sustainable farming practices are so much important. These includes organic and low carbon food production, avoids artificial fertilisers and avoids uses of monocrops, plantation of varies crops which can further help in maintaining soil fertility and biodiversity. No doubt food production needs to be profitable. But instead of using chemical fertilizers and chemical based pesticides, by going for local fertilisers the famers can be profitable without compromising the local diversity of the eco-system and health of the masses. Minimisation of finite resource use, food wastes are to be considered too. Finally, the bio-technological projects should be revised by a more holistic approach to food sovereignty and agricultural production, so that the agro-ecological alternatives are not foregone and that only ecologically sound aspects of biotechnology are researched and developed. By keeping in mind the negative impacts of transgenic food and seed, researchers should start re-orienting their work for the overall benefits and sustainability goal of society and nature.

Conclusion:

The aforementioned points that we have covered till now make a humble attempt to see the concept of sustainability from the standpoint of food security. There is no denial that a society needs to get developed. But the development in the sense of 'sustainability' simply does not hang in the air. We need to act in such a way so that the society can smoothly run and also can contribute towards holistic sustenance of the society. Food freedom which has been the trust area of this paper demands awareness from every citizen. No doubt in this modern era we all are concerned with our development. For the all-round development, technological advancement is very much needed. But development at the cost of people's life should not be compromised.

Food is for people. Dictatorship of food by the corporate business motive industries, not only challenge the health of the people, but also it becomes threat to nature. Keeping in mind the sustainability issues, we should go for local organic food which has health benefits. GMO kinds of things are only for the profit oriented business, not useful for the people. So Shiva says to become vocal for the corporate sectors and use local foods.

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