

Indian Millet Vs Quinoa: Exploring the Political Contours

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Abstract

Agriculture in India has become the site of marginalization of indigenous knowledge systems on farming, cropping, and cultivation to modern scientific knowledge on agricultural practices and irrigation. Modern scientific knowledge is seen as the premier of development and economic efficacy. The interaction of the existing knowledge system with modernity and scientific knowledge in India has resulted in hierarchies in agricultural production and emergence of cash crops. The path of development followed by India after colonialism to battle poverty and hunger was to match the western modern-scientific cannons. This kind of economic planning and technological advancement also resulted in the green revolution and High yielding variety of seeds (HYV) of rice and wheat. The production of rice and wheat boomed since then and millets in India became “*Coarse grains*” with constant declining production over the last six decades. The prevalent crisis of malnutrition today has established the fact that India’s road to development was unsustainable. It actively marginalized the production of millet in India which were the nutritional supplement in the diets of the poor, especially tribal people and farmers of arid regions. The traditional production of millets by the tribal people and the farmers maintained the balance between ecology and consumption. But modern scientific practices of agriculture and the use of chemical fertilizers and pesticides have resulted in a disbalance in nature. Climate change has

become a recurring obstacle in agriculture. The drought-prone exploited soils now need crops which can sustain with less water and harsh climates. That is why urgent attention has to be shifted towards diversifying crops and going back to millet production to tackle the problems of malnutrition and extreme weather because millets can grow in arid and semi-arid regions with extreme temperatures. But it is now challenged by the increasing demand for Quinoa in India which has been promoted as a superfood in a capitalist market.

Keywords: *Politics of food, Indian Millet, Quinoa, Indigenous Knowledge*

INTRODUCTION

In recent times, urban India is witnessing a surge in the demand of global superfood Quinoa which is native food of Latin America and is imported in India. But does India really need the imported Quinoa when it has its traditional millets full of nutrition and health benefits? Millets are much cheaper in prices in comparison to Quinoa. The decline in millet consumption in India, has resulted in malnutrition especially among children and now India falls really low on the Global Hunger Index. There is an urgent need to shift to millet production in India rather than to superfood quinoa. The production of Millets in India faces a two-way challenge. Firstly, the production of rice and wheat has been inversely proportional to the production of millet “coarse grains” in India historically. The tastes and preferences of the Indian population has shifted towards rice and wheat due to various political and economic reasons. Secondly, the global market has captured the vision of nutrition in modern society and made available superfoods like quinoa high in nutrition far from its site of production. There is rise in global demand for Quinoa which has resulted in production of quinoa in India in the states of Andhra Pradesh, Karnataka, Rajasthan and others. The millets can easily grow without the use of chemical fertilizers and can grow in dry lands, non-fertile soils and even in harsh climates.

In the growing season they grow in 65 days from seed to harvest. They are also designated as famine reserves as their easy storage demands. The millets can help to address many current health issues and are the source of great nutrition. They are really good for diabetes, obesity, and gut health. The diversity in our diet through different millets can help us to balance the micro-biomes of our body. Millets are the food of the poor, the prices of millets are really low compared to other cereals like quinoa, wheat, rice and oats which makes it easily accessible to all income sections of society. My paper intends to situate millet production with the increasing demand for quinoa in India in the overall framework of politics of knowledge. It also intends to make explorations as follows - Firstly it explores the historical background of millet production in India in the context of green revolution; Secondly, it explores the policy formulation around millet production in India and promotion Quinoa in India; Thirdly it explores the political economy of millet production and deconstruct Quinoa as danger to millets in Indian markets.

I

HISTORICAL CONTEXT OF MILLET PRODUCTION

Historical Background of Millets in India

The production of millets in India is traced back from the Indian Bronze Age. It is one of the oldest foods available to people of the Indian subcontinent and also used as fodder for the cattles. Even before independence it was not only a staple food but an integral part of the local food cultures of India. The millets were traditionally grown in rainfed areas mainly by marginal farmers and tribals in India. They are the oldest food available in India which can grow in arid as well as semi-arid regions. Millets have main two species - major millets like Sorghum and pearl millets and the other minor millets

represented by further six species like Kodo millets, Foxtail millets, Finger millets, Indian Barnyard millets, proso millets and little millets. Various states had different millet consuming patterns in India. We have Bajra (Pearl millet) consumed in Rajasthan, Jowar in Maharashtra, Ragi in Karnataka. Before the green Revolution millets constituted 40% of cultivation of grains in India. They were staple foods and integral part of our local cultures. but now with the time it has been looked down upon as the “coarse grains”. Now, diet has shifted towards more “refined” food and millets have become the village ancestor food. But this refined diet of the urban consumers lacks the important nutrients required for the body. Indian agriculture after independence has seen tremendous technological advancement but its impact on the cereal crops varies. Mainly Rice and wheat are benefitted in production than the coarse cereals. The composition of cereal grain consumption has shifted towards rice and wheat though coarse grains have more nutritional value than the both. The government policy has favored not only the production of rice and wheat but also the market support policies and the distribution of it through a public distribution system.

Millets: Part of Tribal Knowledge System

Millets were traditionally cultivated by the tribals and other marginalized communities in India. The tribal communities have a significant connection to the Millet production in India; it not only produces millets for their consumption but also maintains a balance among production, consumption and ecology. The tribals of Madhya Pradesh have minor millets of ‘kodo’ and “kutki”, the tribes of BR hills in Karnataka have ragi and even celebrate the festival on harvesting of millets called Habba and the list is

endless.¹The Indigenous tribal agricultural practices have not only potential of raising the production but also sustaining it. For years it is because of the indigenous practices of tribal communities in India we have millet production alive. Millets by tribals are not only used as food but also have a wide array of other uses like medicinal uses, used as fodder and many more. Sahu and Sharma in their work on Tribal farmers of Bastar Plateau Zone of Chhattisgarh has documented that tribes used millets as the fertilizer for onion fields, as a insect-pest control, for strengthening the mud walls, to protect pulses in storage, for the treatments of animals and poultry, raising milk productivity in the cattle, treatments of burns and many other uses. The small millets have some medicinal uses, used as a green fodder and also as snacks.² Studies conducted by Pradhan et.al at Basatar, Chhattisgarh by the survey of 18 persons who were diabetes patient and their diet was replaced by the multigrain flour and no other dietary changes were made. After consuming this flour the decreased blood glucose was recorded in the patients and people who did not take ragi has increase in their blood glucose level.³ The green revolution has also affected tribal agriculture in many ways. Their ways of farming have changed due to state-led initiatives which undoubtedly promote production of wheat, rice and paddy.

Role of Green revolution in Millet production

The violence in human history has always resulted from the conflict of scarce material resources. To address this scarcity in rural India, the green revolution was brought as a development strategy to create abundance of scarce resources to meet the needs of

¹ Behera MK. "Assessment of the state of millets farming in India". *MOJ Eco Environ Sci.*, vol 2(1), 2017, pp.16-20. DOI: 10.15406/mojes.2017.02.00013

² See pg .596 in Sahu RK, Sharma ML. Medicinal and other uses of small millets by the tribal farmers of the Bastar Plateau Zone of Chhattisgarh. *Hind Agricultural Research and Training Institute.* 2013

³ Pradhan, A., Nag, S.K., Tomar, N.S. and Sharma, R.L. (2008). Ragi controls diabetes. *Kurukshetra*, 56 (9): 47-48; 2016.

the remaining population has only left us with the ecological, political and cultural costs. The Green revolution was a great mix of science and politics intending to bring peace and prosperity in terms of 'rural development'. But ironically it has induced conflict and violence in Punjab both ecologically and politically instead of reducing it as claimed by Vandana Shiva in her book "*The violence of Green revolution*".⁴ She also deconstructs the myth of the "miracle seeds" which are HYV but are responsible for the destruction of genetic diversity. The Green revolution made an unfair comparison between the 'miracle' seeds and the diversity of indigenous crops they replaced. They are seen as superior and advanced than the indigenous crops and varieties. The traditional farming practices were based on rotational or mixed cropping systems which included farming of diverse varieties of cereals, pulses and oilseeds. The HYV seeds offer the higher yield of one crop even at the cost of decreasing yield of the other. Thus, the Green revolution brought genetically uniform monoculture in the cropping systems. The crops which yielded were high were rice and wheat as compared to other millets and pulses. The diverse and complex rotational cropping of diverse varieties of Millets cannot be compared with the simplified monocultures of HYV seeds. The measurement of productivity and yield in green revolution is concerned with the processes which increase the production but is devoid of the processes which sustains the productivity. It does not measure the ecological effects which impact the future yields. It is said that the Green revolution is the only option available to increase food production. But India did not explore the avenues of its indigenous knowledge of mixed cropping systems of millets. It ignored the avenues of food production of millets which were more ecological. The millets were the most cultivated crops in Punjab. The millets like 'Kutki', 'jawar', 'mandal' and 'bajra' covered 43% of cultivation in Punjab.⁵ There were also some lesser known millets with rich

⁴ Shiva, Vandana. *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics*. United Kingdom. Bloomsbury Academic, 1991.

⁵ See pg 82 in Shiva, Vandana *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics* United Kingdom. Bloomsbury Academic, 1991.

diversity like amaranth, sil, batu, Gauhar and many more. But after the green revolution the agricultural lands were converted to monoculture cultivation of wheat and rice.

II

STATE AND ITS POLICIES ON MILLET PRODUCTION IN INDIA

Science, State, and Policies

The interaction of traditional agriculture patterns with modernity and scientific knowledge in India has resulted in hierarchies in agricultural production and emergence of cash crops. The path of development followed by India after colonialism to battle poverty and hunger was to match the western modern-scientific cannons. The development of agriculture based on western scientific cannons after independence did not follow the down to top approach. The experts, scientists and policy makers in the government were seen as the source of reliable knowledge and therefore were part of policy formulation. The local food culture of millets produced mainly by the tribals and marginal farmers was marginalized. Their knowledge of crop production was rendered obsolete on the account of being just a traditional culture. To meet the needs of the large poor population experts, focus their production on rice and wheat and other cash crops. There were meager technological advancements made in millet production. There was an active marginalization of millet production in India after independence.

This kind of economic planning and technological advancement also resulted in the green revolution and High yielding variety of seeds (HYV) of rice and wheat. The production of rice and wheat boomed since then and millets in India became “*Coarse*

grains” with constant declining production over the last six decades. But thanks to the cultural traditions that millets have yet survived in India. Millets are also returning to many farms and fields in India due to some state led-policy and initiatives for being climate-smart and drought resistant crops. But the modern techniques of farming have led to erasure of traditional farming of millets. The production of millets has gone, but in recent years it has seen improvement through the HYV seeds and improvisation in the technology of its production but yet they are not enough. The main reasons behind the decline of production of millets have been state policies of lack of remuneration, lack of input subsidies, and price incentives and also the subsidized supply of other cereals like rice and wheat through the Public Distribution System.

Revival of millet production or policy initiatives for quinoa?

The year of 2023 will be considered as the International year of millets after a proposal of India at Food and Agricultural Organization (FAO). India still remains the largest producer of millets in the world. In 2018 also the year was observed as the National Year of millets by the government of India to promote millet production and consumption. It has also launched India’s Millet mission Under National Food Security Mission launched in October, 2007. This mission has a goal of implementing the production of nutri-cereals in 202 districts of 14 states. The millers Currently in the country are promoted through quality seeds, raising awareness, technological advancements, inclusion in PDS and minimum support price. But millets are still expensive in the villages of India. Even among the millets Ragi is emerging as the dominant one and leading to disappearance of many minor millets. Ragi increases the soil fertility, can be easily intercropped and is also economically viable. The seeds of other seeds are also not easily available. But again, we need to be alarmed since cultivation of only will Ragi will take us to the monoculture cropping. Telangana launched a mini mission on millets in 2018 for

a period of five years in six districts. The four main components of the project are promotion, consumption, processing and marketing of millets. The recent state led policies are anticipating the green revolution in millet production. But this time we cannot go the old way which only exploited our soils and has several social costs. The technological advancements need to be sustainable, one where the knowledge of the local stakeholders is part of policy formulation on millet production. There has to be a balance of knowledge drawn from traditional production and modern-scientific production of millets.⁶

On the one hand the state has made policies for the revival of millet production and on the other hand it is promoting the production of Quinoa due to its global demand. This makes a serious challenge to the revival of millet production. The popularity of Quinoa owes its success not only to the global markets but also due to initiatives taken by the Indian Government to promote the production of Quinoa. The production of quinoa is rapidly growing in Andhra Pradesh, Uttarakhand and Rajasthan. The "Project Anantha " a state sponsored project was launched in Andhra Pradesh seeking to Push Quinoa in the Anantapur district which is dry - drought prone area. And Quinoa due to its lower water intake and good market prospects due to demand is seen promoted as the alternative crop. In the Financial year of 2017-18 the Rajasthan government even distributed the quinoa mini kits in nearly 13 districts.⁷ There have also been initiatives by Indian Council of Agriculture research (ICAR) to research on the agronomical and nutritional values of quinoa. These policies led by the state instead of revving the millet production are further endangering the Quinoa because quinoa has established their demand in the market and millets are yet to establish their demand in the market. Moreover, Quinoa are sold 10 times

⁶ Behera MK. "Assessment of the state of millets farming in India". *MOJ Eco Environ Sci.*, vol 2(1), 2017, pp.16-20. DOI: 10.15406/mojes.2017.02.00013

⁷ Dhaka, Annvi, and Manoj Prasad. "Imported superfood quinoa versus Indian nutri cereal millets." *Current Science Association*, vol. 118(11), 2020, pp. 1646-1649.

higher than millets. The Farmers will choose the production of Quinoa not production of Millet in the scenario of state through policies promising to make them the global producers of Quinoa.

III

POLITICAL ECONOMY OF MILLETS IN INDIA AND DEMAND OF QUINOA IN INDIAN MARKET

Production, Consumption and Distribution pattern of Millets

Millets had been badly distributed through the Public Distribution system which resulted in constant declining patterns of consumption of millets and subsequently production. The demand and supply of millets have seen decline after independence with lack of incentives by the government.⁸ Indian agriculture after independence has seen tremendous technological advancement but its impact on the cereal crops varies. Mainly Rice and wheat are benefitted in production than the coarse cereals. The composition of cereal grain consumption has shifted towards rice and wheat though coarse grains have more nutritional value than the both. The government policy has favored not only the production of rice and wheat but also the market support policies and the distribution of it. This shift has resulted in the lowering of the nutritional intake. Ramesh Chand and Praduman Kumar in their work “*Long-Term Changes in Coarse Cereal Consumption in India: Causes and Implications*” uses the data drawn from National Sample Survey form 1983 to 2000 they draw a table on how consumption of cereals varieties across different income groups over the years. The change in consumption pattern is attributed to mainly

⁸ Chand, Ramesh, and Praduman Kumar. “Long-Term Changes in Coarse Cereal Consumption in India: Causes and Implications.” *Indian Journal of Agricultural Economics, Indian Society of Agricultural Economics*, vol. 57(3), 2002, pp. 316-325,

two factors. The first one is the change in prices or the angle in tastes and preferences of people over the time due to relative change in the prices affected by the supply and distribution policy like the Public Distribution System (PDS). The second one is the income effect where change in cereal intake happens due to change in income group. The findings of the table were that the increase in income had a positive impact on the consumption of rice and wheat and negative impact on the consumption of coarse cereals. The consumption of rice and wheat has not shown very clear change but consumption of coarse cereals have shown constant decline across all income groups. They took out several inferences that the coarse cereals are treated as the inferior good and the income effect on wheat and rice are positive. The Indian diet is also shifting away from cereals to non-cereals with a sharp decline in coarse cereals and moderate in rice and wheat. Overall sharp decline in per capita consumption of cereals even with increase in per capita income.⁹

Quinoa endangers the endangered millets in the market

The millets in India which were finally seeing little revival but are now endangered by demand for Quinoa, before dwelling on its nutritional value it is important to look at the history of the emergence of quinoa. Quinoa has been native food to latin america for decades but during the 1990's the period of globalization it rapidly spread to the other countries. It is known for its high protein value which varies from 13.8 %- 16.5%. It also has high mineral contents like iron, magnesium, copper, zinc and calcium. It also has a high amount of B2, Carotene and vitamin E compared to other crops like wheat and rice. It is a significant source of the balanced diet. But when it comes to the Indian context, do

⁹ Chand, Ramesh, and Praduman Kumar. "Long-Term Changes in Coarse Cereal Consumption in India: Causes and Implications." *Indian Journal of Agricultural Economics, Indian Society of Agricultural Economics*, vol. 57(3), 2002, pp. 316-325, <https://ideas.repec.org/a/ags/inijae/297889>

we need Quinoa when we have our traditional millets full of nutritional value equal to quinoa? ¹⁰ The groups promoting the Indian variety of millets sees Quinoa a potential threat which could take over the Indian local millets. The Quinoa has become a feature essential in the social media culture of promoting a healthy and nutritious lifestyle in videos, in celebrity chefs' dishes and in healthy keto dishes of expensive restaurants. The increasing demand of Quinoa in Urban India is increasing the production of Quinoa in India and the state sees that as an opportunity as India can also potentially become the exporter of Quinoa in the global market and quinoa will have good market prospects overall. We have already explored in the previous policy formulation section how state led-policies on Quinoa are also endangering the millets in India. The consumption pattern of Quinoa in urban India is really worrisome. The rise in demand has also raised its prices almost 100 times higher than millets. Even the Indian producers of Quinoa themselves cannot afford this expensive nutrition. The obsession of Quinoa will have some serious implications on changing the production and consumption patterns of Millets in India.

Deconstructing “superfood quinoa” from the marxist lens

Many new researches have suggested the inclusion of superfoods in the daily diets due to their high nutritional value and health benefits. Millets, chia seeds, avocado, quinoa, oats, berries etc all are superfoods. Globalization captured this need of nutrition and is even making available the foods which are out of their geographical territories. Indian consumers are not exclusive to this wide range of nutritional superfoods. But the matter of concern is that our native traditional millets which are high in nutrition lie on the

¹⁰ Dhaka, Anvi, and Manoj Prasad. “Imported superfood quinoa versus Indian nutri cereal millets.” *Current Science Association*, vol. 118(11), 2020, pp. 1646-1649.

margins in the Indian food market. But the international companies have ensured the grains like Quinoa and oats to get on the mainstream Indian food market.

If seen every day through the marxist lens “superfoods” in capitalist markets are presented as something with magical powers on health and are much beyond its use value. There is nutritional politics even behind the quinoa boom in the capitalist market. The small farmers who produce quinoa even can't afford that nutritious quinoa. Capitalist market has captured their subsistence agriculture production and commercialized quinoa at the cost of nutritional benefits of traditional food.¹¹ It is significant to note that all the superfoods and nutritional food in one way or the other is linked to traditional people and their knowledge on production of those foods. Yet they are least informed of rural development. It is a market which takes away all the profit. The market has captured the food production of Quinoa which was traditional food in Peru. It has commercialized it in a way that makes it look attractive to the consumer desires.

The markets for the superfood often emerge in the First world countries and producers are often the Third world- countries but the access to profit and traditional food in the domestic market for these producers is almost absent. The First world fancy consumerism with Quinoa featuring in the food vlogs, in expensive restaurants dishes and in food magazines is exploiting the producing traditional communities which have no same access to the nutritional food as the first world consumers do. The commercialisation of “traditional” food involves promoting it as the tool for multicultural and sustainable rural development. In Peru, the largest producer of Quinoa, this exploitation has happened. The Peruvian State with local and international development organizations worked

¹¹ McDonell, Emma. “Nutrition Politics in the Quinoa Boom: Connecting Consumer and Producer Nutrition in the Commercialization of Traditional Foods.” *International Journal of Food and Nutritional Science.*, vol.3 , 2016, pp.1-7 ,10.15436/2377-0619.16.1212.

together to transform the subsistence farmers which were culturally backward and economically unproductive according to them into the modern capital producers. It refashioned their identity in consonance with modernity and development. So, many subsistence agriculturalists took up the production and commercialization of market - oriented quinoa.

India: Global Market for Millets

Even after the marginalization of millet production in India, it is one one leading producers of millets in the world. Many of its proponents are demanding the green revolution of millets or millet revolution in India. But the basis of this revolution is the same as it happened in the case of rice and wheat. My paper intends to revive the millet production in India but does not intend to say that it should happen at the cost of exploitation of the ecology as it happened during the Green revolution. The effects of green revolution like soil erosion, health related problems due to use of chemical pesticides and fertilizers, loss of genetic diversity of crops and many more are still experienced in corners of the country. The revival of Millet production should not happen this way by only seeing modern-scientific technologies as superior to the traditional-indigenous knowledge of the local farmers or producers. The balance approach of taking from both modern and indeginous knowledge should be followed. My paper does not hold that all modern technologies are exploitative and also that traditional practices of agriculture are obsolete. They both should learn from each other in a dialogical/hermeneutical way.a problem because the production of the millets will be boosted by innovations like HYV seeds which have already come up in the market. The same way it happened in the green revolution in the case of cash crops. The emergence as a global market will again bring transformations in millet production like the way it happened in the case of Quinoa in Peru which we have already dealt with.

The promotion of India as the global market has a problem because the production of the millets will be boosted by innovations like HYV seeds which have already come up in the market. The same way it happened in the green revolution in the case of cash crops. There is danger to again fall in the monoculture cropping of highly breedable millets and others neglected. The emergence as a global market will again bring transformations in millet production like the way it happened in the case of Quinoa in Peru which we have already dealt with. So, the aim should be to create a self-sustaining production through millets which address the lingering issues of climate change, poverty and malnutrition.

IV CONCLUSIONS

- ***Millets for food security and nutritional security-*** A large section of our population faces starvation. Almost one fourth hunger population resides in India. We have nearly 190 millions of malnourished people. Malnutrition is worst among children which further makes us fall short in the Human development Index. The deficiency of nutritional diets has also led to diseases like obesity, diabetes, hypertension, etc. The genetic diversity of the millets has potential to meet our need for food in the future.
- ***Millets are an urgent alternative to quinoa-*** In this scenario of malnutrition and hunger do we really need superfood Quinoa which is sold at high prices in the global market or do we need indigenous millet crops which can be easily available to a large section of society? We definitely need to look for alternatives in our indigenous knowledge systems which surely is in our traditional millet production. There is an urgent need to revive millet production and adaptation to the modern markets.

- ***Millets strike a lost balance of ecology and equity-*** Millet is much suited to Indian land which has damaged soil after the green revolution. Indian agriculture depends a lot on rainfall than irrigation and millets are most suited to rainfed areas. It is especially good in drought prone-areas in the scenario of climate change. Millets are cheaper and have the potential of feeding all sections of society without disbalancing the environment. It challenges the monoculture of food production.

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