

## **Community Food Sovereignty : time for altered perspectives**

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This paper called **Community Food Sovereignty : need for altered perspectives** tries to challenge the present assumptions about food security and make a case for moving away from a centralised national food security system to a completely decentralised community based Food Sovereignty system as the future of the food and nutritional security of rural India.

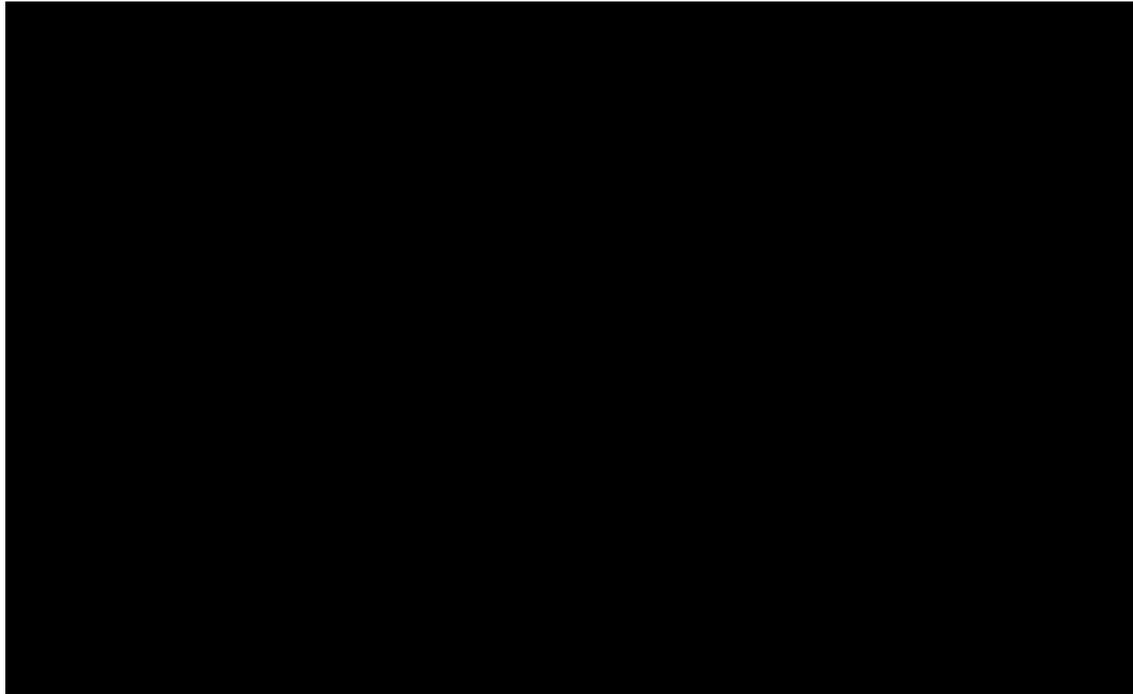
Probably the biggest blow to the claim of **Resurgent India** that it is a completely food secure nation was dealt in 2003 when the government owned FCI [Food Corporation of India] warehouses were brimming with over 65 million tonnes of grains while many starvation deaths were being reported from not so distant Orissa. A situation reminiscent of the Great Bengal Famine, which several analysts say, was not caused because of underproduction but because of the state's incapacity to reach food to the hungry. How does one explain such a stark similarity between an unconnected, infrastructure-starved colonised nation of the 1940s and a nation in circa 2000 that is among the four largest economies of the world; a nation that boasts of half of the top ten billionaires among its citizens; a nation which tries to export its surplus grains at a subsidised price to the war hit Iraq and a nation that has regularly recorded a 9% growth rate for over half a decade; and a nation that boasts of the highest number of mobile phones in the world, longest railway and road network?

The Orissa and FCI tale does not end in 2003. In 2012, when the fairy tale of the resurgent India is at its peak [barring the last few months when the Finance Minister tried "foolishly" to constrain a tax defaulting Vodafone] this country still finds itself on the sixtieth position among the hungriest nations of the world. **According to the 2009 Global Hunger Index, India ranks 65th among 88 hungry countries with a hunger rate of 23.9. Almost 21 per cent of the Indian population was undernourished (between 2003 and 2005), 43.5 per cent Indian children were under the age of five were underweight (between 2002 and 2007) and the under five-year-age infant mortality rate in 2007 was 7.2 per cent.**

Let us indulge in a bit of number-crunching here. Comparing USA to India maybe seen as very inappropriate. But a nation which sprints to occupy a high table at the G-20 or at the World Economic Summit cannot escape this comparison and see where it is positioned in the contemporary food landscape. In 2003, US per capita grain consumption was 946 kg per year which increased to 1046 kg in 2007. By way of comparison, India's per capita grain consumption has remained static over the same period. It's not just grains. Milk consumption, in fluid form, is 78 kg per year for each person in the US, compared to 36 kg in India. [Subodh Varma in Times of India, May 4, 2008 quoting USDA data release in 2007] **It is interesting to note that these were the very years marked by 9% GDP growth in India and an unprecedented prosperity.**

Another agricultural watershed year for India was 1960 when Green Revolution was ushered in with trumpets blazing that this will be the ultimate answer to India's food insecurity. How true was this? Did we rescue ourselves from food insecurity? As P Sainath, Rural Affairs Editor of The Hindu argues, in terms of the per capita availability of food grains in India **"The highest figure for any year in our history was the 510.1 grams for 1991", the year that preceded Structural Reforms in India.** Since then, as Sainath correlates the economic reforms years with the per capita foodgrain availability data, you can see a picture of downhill slide all the way. Economic reforms had no impact on the food grain availability. The average for 2010, after nearly two decades of "reforms," was 440.4 grams per capita consumption. This figure which is more or less the same as five decades ago, runs completely against the popular argument that the lot of the poor gets vastly better with economic reforms. The poor were eating more or less the same quantity of food but of much poorer quality as I would argue a bit later.

Let us also take a look at what this measly increase of a few grams in the food intake of the poor meant in the form of chemical inputs forced into the Indian soils. Let me take just the instance of chemical fertiliser consumption.



In 1950 when our food production was around 50 million tonnes, we used no chemical fertiliser at all in our farming. By 2010 when the food production was reaching about 220 million tonnes, an increase of 4.5 times, we were using approximately 15000 times more chemicals compared to 1950. The amount of soil and water pollution this has created, the soil fatigue this has ushered in, is another story altogether. But it is worth nothing that consequent to such use of industrial models of food production, our food has become less and less safe. As the Rodale Institute points out, **many studies have shown greater nutrient density in organic foods, and higher levels of polyunsaturated fats (the good fats) in grass-based, organic livestock.** Therefore not only are we eating less food but also less safer food.

That there was a policy malfunction that failed in providing adequate quantity of food to the Indian people is now clear. But were we at least been able to improve their nutrition levels by using food policy instruments and providing them foods that are richer in nutrition?

As you look at the food consumption patterns of the Indian population since 1950s it becomes glaringly evident that the Indian state's food policies have also prevented even the marginal improvement in food security translating into nutritional security for the Indian poor. The picture that emerges is the issue of systematic monoculturing of Indian food system, decimation of diversity and demolition of all major nutrients from

the food systems of the country. The prime responsibility for this situation must be borne by **the mechanisms that ensured complete centralisation of food production, storage and distribution.**

Table 1 points to the phenomenal failure of the Indian state not only to feed its population adequately even while making their food nutritionally deficient.

**TABLE 1**

Per Capita Net Availability of Foodgrains (Per Annum) in India (1951 to 2010)							
(Kgs. per Year)							Food Grains
Year	Rice	Wheat	Other Cereals	Cereals	Gram	Pulses	
1951	58	24	40	122	8	22	144
1961	73	29	44	146	11	25	171
1971	70	38	44	152	7	19	171
1981	72	47	33	152	5	14	166
1991	81	60	29	171	5	15	186
2001	70	50	21	141	3	11	152
2010(P)	67.4	61.3	19.8	148.5	4.9	11.6	160.1

The story is clear. While carbohydrate rich and nutritionally poor rice and wheat [both products of Green Revolution] were being forced into the food system of the Indian poor through PDS [100% more wheat and 11% more rice in 40 years], nutritionally rich millets [coyly mentioned as other cereals], grams and pulses were pushed out of the dietary systems of the poor. Compare the nutrition value of millets with that of wheat and rice. A picture of forced deprivation starts becoming clearer.

Table 5: Proximate composition of small millets, wheat and rice (per 100g)									
Name	Protein	Fat	Minerals	Fibre	Carbohydrates	Calcium	Phosphorus	Thiamine	Edible Matter
Finger Millet	7.3	1.3	2.7	3.6	72.0	344	283	420	100
Proso Millet	12.5	3.1	1.9	7.2	70.4	14	206	400	59
Foxtail Millet	12.3	4.3	3.3	8.0	60.9	31	290	590	79
Little Millet	7.7	4.7	1.5	7.6	67.0	17	220	300	66
Kodo Millet	8.3	1.4	2.6	9.0	65.9	27	188	330	58
Barnyard Millet	6.2	2.2	4.4	9.8	65.5	11	280	300	65
Job's Tears (Milled)	17.5	6.0	1.8	0.5	63.4	23	480	310	100
Rice (Milled)	6.8	0.5	0.6	0.2	78.2	45	160	-	100
Wheat	11.8	1.5	1.5	1.2	71.2	41	306	-	100

Source: Ghosal & Krishna, 1995

It was not just on the supply side that nutritional grains were getting scarcer. Their very production system was being decimated. Look at Table 2 for the change in cultivation areas.

**TABLE 2: CHANGE IN AREA OF CULTIVATION OF DIFFERENT CROPS BETWEEN 1950-2010 [figs in '000 Ha]**

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Year	Rice	Jowar	Bajra	Maize	Ragi	Wheat	Other Cereals & Small Millets	Total Cereals & Millets
1950-51	31056	15554	9744	3250	2254	10010	5576	149742
2009-10(p)	42309	7801	8997	8251	1357	28576	855	98764
% Change	36.23	-49.85	-7.67	153.88	39.8	185.5	-84.67	-34.04

While wheat and maize recorded a phenomenal increase in area of cultivation by 150-185%, and rice making a substantial increase of 36%, millet areas saw a sorry shrunk. Correlated with the increase in population between 1950 and 2010, one can easily imagine the severe impact this has had on the proportion of millets in our foods and its impact on our nutrition. We must refuse to be deceived by the increase in the area of maize cultivation. Officially, maize is coupled with other millets and arguments are made that the overall cultivation of millets has not come down significantly. This is a red herring since 70% of maize is used as poultry feed and not feed the poor. Other millets that were a traditional part of the poor people's diet have gradually disappeared from their diets.

It will also be interesting to juxtapose the millet figures with the data on the growth of cultivation area under grams and pulses between 1950 and 2010. You will arrive at a compounded picture of the nutritional depravity.

YEAR	Gram	Tur or Arhar	Other Pulses	Total Pulses	Total Food-grains
1950	7803	2228	10523	20554	101196
2009-10	8047	3383	12538	23968	122731
% CHANGE	3.12	51.84	19.14	16.6	21.28

None of this is comparable with the rise in wheat or maize. Why did this happen is a mystery that needs to be cracked. The legume area has not grown in pace with the major cereals viz., wheat and rice. Since both wheat and rice are basically crops of

monoculture, no other crop is grown alongside them. The situation is diametrically different with millet fields. Every traditional millet field grows millets side by side with grams, pulses and oilseeds in a biodiverse package, as it were. Millets anchor pulses and grams since they form a kind of crop guild that grow happily and healthily together. That is why Indian farmers in their immense wisdom grew them as mixed crops for the last thousands of years. This practice is also reflected in a larger context of food cultures and food philosophies. As one of the most respected food activist groups in the world, **ETC [Erosion, Technology and Concentration]** group of Canada argues

***We eat foods, not nutrients, and different foods fulfil a wide variety of roles in our lives, not simply in terms of sustenance but physiological, social and cultural. We use food for reward, for pleasure, to express status, culture and religious preferences, and so on. In spite of the overall adequacy of food availability in the world, however, there continue to be huge differences in the amount and quality of food that people eat..***

***Food comes from our environment people have to grow or gather it, or fish or hunt it. Continued food supplies depend upon maintaining a healthy environment and upon having a diverse range of plants and animals available to us to make it possible to keep breeding varieties that can cope with the diseases, changes in climate and other stresses that farmers, fishers and herders face. That is why agricultural biodiversity is crucial. And it means that ecological wellbeing is a core requirement for our future food supplies, and that new technology development needs to take that new technological development needs to take it into account (ETC Group, 2004).***

This is precisely what the dryland farming practices of millions of traditional farmers is in India. They grow millets, pulses, grams and oilseeds on their farm in a farm to kitchen model not only to address their food and nutrition needs but also ensure multiple securities such as food, fodder, fuel, fibre, health, nutritional, livelihood and ecological securities on their farms.

It is common knowledge that every region grows the crops that are eco systemically adapted to that region and simultaneously develop a food culture that compensates for the lacunae in the crops produced by them. That is the reason every food activist fights for the local food culture. In the words of poet Edwin Muir

*Men are made of what is made,  
The meat, the drink, the life, the corn,  
Laid up by them, in them reborn.*

**The denial of local foods to a population must be seen as a political action, a form of food colonialism.** The native Indians in the USA were systematically denied their great foods and were made slaves to junk foods such as burgers and beer. The untold havoc this altered food system wreaked on them enervated them to such an extent that they submitted totally to the brutal white colonial force.

The situation is no different in modern India. 65% of the Indian population which was habituated to eating millets and associated crops, which are storehouses of nutrition, was forced to eat nutritionally very poor rice and wheat with no nutrition supplements available to them. Let us revisit the nutritional parameters of millets in comparison with rice and wheat.

### **Nutrition content of most used millets**

<b>C R O P</b>	<b>Protein (g)</b>	<b>Fibre(g)</b>	<b>Minerals (g)</b>	<b>Iron (mg)</b>	<b>Calcium(mg)</b>
<b>Pearl millet [Bajra]</b>	<b>10.6</b>	<b>1.3</b>	<b>2.3</b>	<b>16.9</b>	<b>38</b>
<b>Finger millet [RAGI / Mandua]</b>	<b>7.3</b>	<b>3.6</b>	<b>2.7</b>	<b>3.9</b>	<b>344</b>
<b>Foxtail millet [Kaun]</b>	<b>12.3</b>	<b>8</b>	<b>3.3</b>	<b>2.8</b>	<b>31</b>
<b>Little millet [Saawa]</b>	<b>7.7</b>	<b>7.6</b>	<b>1.5</b>	<b>9.3</b>	<b>17</b>
<b>Rice</b>	<b>6.8</b>	<b>0.2</b>	<b>0.6</b>	<b>0.7</b>	<b>10</b>
<b>Wheat</b>	<b>11.8</b>	<b>1.2</b>	<b>1.5</b>	<b>5.3</b>	<b>41</b>

You can clearly see the grains that provide nutrition and those that don't.

Whenever I see an image of balanced food in the text books, on media and listen to the exalted nutrition experts I feel aghast. I wonder from which planet these people who propagate this

picture of nutrition come from. Most popular image of nutrition is a plate full of fish, eggs, meat, poultry, lush vegetables etc. This is the policy prescription for the nutrition of a country where the Planning Commission determines a princely figure of Rs.35 for a person to jump above the poverty line. This Rs.35 has to buy three meals a day, cover the health, travel, clothing and other costs that a human person has to meet for a day to day existence. What fraction of the prescribed nutrition can this Rs.35 buy? Is there an answer? Does that mean India at its current poverty levels can never escape the extreme malnutrition tag it is stuck with? Especially during the coming decades of climate crisis? Not necessarily. There are other answers.

Before seeking those answers, let us also look at the Nutritional Transition that the Indian middle classes as well as the Indian poor are going through and the possible agrarian, socio economic and political consequences of the current dietary habits into which the Indian population is either being lured into or forced into. Some figures to support my argument are as follows:

*The prevalence of hypertension in 20 - 80-year-olds in the city of Bombay in 1959 was approximately 3% and rose 5-fold to 15.5% by 1980 and to approximately 44% in 1999 (18 - 60 years). Diabetes has similarly shown dramatic increases in urban areas, where most studies have been done.*

*The prevalence of diabetes in New Delhi, for example, was 2.3% in 1972, 6.7% in 1991 and 11.6% in 2000 (as part of the National Urban Diabetes Survey). Current reports indicate that diabetes is between 2- and 10-fold higher in urban areas compared with rural areas in different parts of the country. It is estimated that India accounts for 17% of global cardiovascular mortality,<sup>17</sup> and this is projected to rise to 50% in the future.*

<sup>1</sup>St John's Institute of Population Health and Clinical Research, Bangalore, India, and  
<sup>2</sup>Population Health Research Institute, McMaster University, Canada  
M Vazi, S Yusuf, A V Bharathi, A V Kurpad, S Swaminathan

**Dr Prakash Shetty of the Food and Nutrition Division of the FAO concludes from his studies that “the results indicate that the demographic changes, rates of urbanisation and changes in dietary patterns are contributing to the changing trends in chronic disease in India”.**

He also concludes that “here is clear evidence of a demographic, epidemiological and nutrition transition in India that is fuelling the epidemic of chronic diseases and obesity, particularly in the urban areas”.

**Nutrition transition over the past 30 years (1973–2004), has resulted in a 7% decrease in energy derived from carbohydrates and a 6% increase in energy derived from fats. *A decreasing intake of coarse cereals, pulses, fruits and vegetables, an increasing intake of meat products and salt, coupled with declining levels of physical activity due to rapid urbanization have resulted in escalating levels of obesity, atherogenic dyslipidemia, subclinical inflammation, metabolic syndrome, type 2 diabetes mellitus, and coronary heart disease in Indians.* In view of rapidly increasingly imbalanced diets, a multisectoral preventive approach is needed to provide balanced diets to pregnant women, children and adults, and to maintain a normal body weight from childhood onwards, to prevent the escalation of DR-NCDs in India.**

These scare situations are primarily caused by the homogenisation of our food systems which has not only affected our health and nutrition but also our cultural traditions. The cultural traditions of a society are a product of the eco systemically adopted farming practices. Every Indian festival, particularly those observed by the Hindu, Muslim and tribal communities are an expression of food and farming diversity nurtured by these communities. Different festivals and rituals demand a certain kind of grain or food. While rice growing areas use rice to bless the newly weds, sorghum growing areas of the Deccan use sorghum as the blessing grains. Rare grains and cuisines from the local crops are treated the most auspicious and demand that those grains are grown within the habitat of those people. For eg. In Nagula Panchami in the Deccan one must worship the snake with a particular variety of sorghum called Pyalala Jonnalalu [Popping Sorghum]. No other sorghum will do. These kind of practices ensured a diversity of food to be grown, which in turn ensure high levels of nutrition.

In contrast to such wise practices of our farming tradition, the current obsession with monocultured food production with high external inputs is a trend that is increasingly worrisome. Such monoculturing of seeds and grains will have a serious impact

on the nutrition levels of Indian population in the coming decades. Already India occupies a shamefully low 128<sup>th</sup> level of malnutrition in the list of malnourished nations of the world. If the contemporary agricultural trends continue unaltered, India will be at the bottom of the global malnutrition table. This has serious consequences on the physical and mental health of our nation.

There are estimates that India's requirement of millets is likely to increase at least fourfold in the next 20 years. But there appears no ground level preparation to meet this demand in this country. This is frightening since this also implies that last minute techno fixes and silver bullets will be sought to repair the situation. This might lead the country to look for solutions in Genetic Engineering. The consequence for the nutritional security of the nation will be an increased disaster.

In the face of it all the looming climate crisis is going to pose a severe challenge to Indian food policy. Unless we start promoting through all possible policy instruments, cultivation and consumption of millets, crops that are climate change compliant, by being the least water demanding, stress tolerant and capable of growing on poor soils, we will have to abandon not only nutritional security but also food security itself for this country.

One of the policy instruments that need to be used urgently is to completely decentralise our Public Distribution System. Today this has become a hydra headed monster that cultivates corruption, inefficiency and malnutrition. It is a shame for a country that cultivates dozens of different crops to depend upon only two grains, wheat and rice for its food security. And that too from a very narrow genetic stock. Instead if we can use rice, wheat, sorghum, pearl millet, finger millet, foxtail millet, proso millet, kodo millet, barnyard millet, and a range of other crops which had been the basis of our food and farming systems, India can never be food insecure. Moreover each of these crop species have multiple local varieties and land races which are not only extraordinarily rich in their diverse qualities, nutritional and otherwise.

The only way to do so is to base the principles of PDS on local production, local storage and local distribution. This will rejuvenate local production of local food crops and in a manner of saying will allow **thousand crops to bloom**. Such a diversity will not lay stress over one kind of crop or one kind of

production system. Furthermore, since most local crops, especially millets and millet related local land races are characteristically very nutritious they have the capacity to heal the current nutrition insecurity of Indian nation. Each crop also brings with it the diversity embedded in its production system. Thus it will add grams, pulses and uncultivated foods that are characteristics of such production systems.

***.....this heritage and our capacities to produce healthy, good and abundant food are being threatened and undermined by neo-liberalism and global capitalism. Food sovereignty gives us the hope and power to preserve, recover and build on our food producing knowledge and capacity.***

***.....from the Declaration of Nyeleni on Food Sovereignty***

**Thus I would argue that food sovereignty is the key to the nutritional crisis enveloping us.**

This is the only way forward for India to tackle its shameful global position as a country of hunger and malnutrition.