

Sikkim's Organic Farming Delusions

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Since the stage-managed TV show Satyamev Jayate in the year 2012, Sikkim's organic agriculture hogs the limelight in the media with repeated rounds of glorification and applause. The latest to join the fan club is Washington Times. As a result, many within India and abroad have come to believe that Sikkim's agriculture is a wondrous model worthy of emulation by the rest. Well, nothing can be more delusionary and disastrous.

The Sikkim Government announced its plans to go fully organic by way of a resolution in the Sikkim assembly in the year 2003 and disallowed use of chemical fertilizers and pesticides in agriculture. Available data shows a sharp decline in production of food grains in the state after the introduction of organic farming.

Fall in Staple Food Grains Production in Sikkim (Thousand tonnes)

Food Grain	1995-96	2015-16
Rice	25.30	19.68
Wheat	21.60	0.35
Barley	2.86	0.47
Buck Wheat	0.54	3.47
Finger Millet	7.31	2.91
Pulses	15.02	5.38
Total Food Grains	72.73	32.26

Source: Department of Agriculture, Govt. of Sikkim

Sikkim's Organic Farming Fiasco

Isn't the above data deeply unsettling? Clearly, the organic farming is floundering. In the past 20 years the production of staple food grains in Sikkim has declined by an alarming 60% even as her population increased from 4 lakhs to 6.5 lakhs (plus 14 lakh tourists). The huge shortfall in food grains production inevitably leads to huge shortages. Over the years, Sikkim the 100 % organic state, has come to heavily depend on other states to feed her people and tourists. Frankly speaking, there would be starvation deaths and social unrest in Sikkim, if food grains fail to move in daily from the food grains surplus states such as West Bengal, Punjab, UP, Bihar, etc. Remember, all these states practice intensive agriculture using chemical inputs!

Rice is the most important staple food for the people of Sikkim. The per-capita consumption of rice in Sikkim is

40.4 kg as against the all India average of 17.1 kg (Source: ICRIER Working Paper 294). Sikkim is highly deficient in rice. The state produces only 20% of its annual requirement of over 100,000 tonnes.

Sikkim's requirement of pulses is 11 700 tonnes as against the state's production of 5800 tonnes.

As the wheat production in the state has fallen from 21600 tonnes in the 1990s to 350 tonnes, over 95% of Sikkim's requirement of wheat now comes from other states.

Can a student who fails to score minimum pass marks be hailed as a model of academic excellence? Similarly, can Sikkim, a state that fails to achieve self-sufficiency in food be hailed as a role model in agriculture?

Experts whom we spoke to feel that the 100% organic policy introduced by the government of Sikkim is a political camouflage to smokescreen the public from the government's chronic failure to achieve self-sufficiency in food. The introduction of organic farming policy in the food deficient Sikkim allows opportunity for spinning fairy tales and chest thumping while hiding the harsh realities on the food security front. Period.

The only grain crop that has registered an increase in production in the state of Sikkim is maize which is a feed grain rather than a food grain. The production of maize in Sikkim increased from 59000 tonnes to 68000 tonnes between 1996 and 2016 mainly on account of area expansion.

Sikkim has caused India losing the world leadership in large cardamom. In the year 2004, Sikkim produced 5400 tonnes of large cardamom. It has since plummeted to less than 4000 tonnes in 2015. India's neighbour, Nepal produces 6000 tonnes of large cardamom and has overtaken India as the world's largest producer. In the year 2016-17, India imported 3120 tonnes of large cardamom from Nepal.

The organic stores of Sikkim State Co-operative Supply and Marketing Federation Ltd (SIMFED) sell mainly branded organic products sourced from outside Sikkim such as Natureland (Rajasthan), Ecolife (Tamil Nadu) and Tattva (UP).

Commenting on the precarious state of food production in North Eastern states including Sikkim, the North East Council in its 12th Plan Report (2012-2017) said that "*self-sufficiency in food grains would be unattainable in the foreseeable future*".



Crop Yields. Punjab vs Sikkim (kg/hectare)

Crop	Punjab	Sikkim
Rice	4149	1845
Wheat	5743	1071
Barley	3667	1056
Maize	3845	1753
Potato	25969	4870

Source: Punjab Economic Survey 2016-17, Sikkim Annual Report 2015-16, Horticultural Statistics at a Glance 2017

Why Sikkim's organic farming is a utopia?

To feed 1.3 billion Indians and to have exportable surplus, we need the likes of Punjab in India and cannot afford the likes of Sikkim. Remember, India will have 1.5 billion people, the largest in the world by 2050.

Sikkim is the worst kind of model for the other states in India to follow. Make no mistake about it. Sikkim is a burden on India's agricultural economy.

Sikkim's organic agriculture suffers from a fatal combination of narcissism and politically propagated delusions. The Encyclopedia Britannica defines the term "delusion" as a rigid system of beliefs with which a person is pre-occupied and to which the person firmly holds despite the logical absurdity and lack of supporting evidence.

Does organic farming embody a more sustainable form of agricultural production? To equate organic farming with sustainability is to misunderstand the word "sustainability." The Oxford English dictionary defines "sustainability" as the property of being sustaining and capable of enduring.

The agricultural production system in the world was 100% organic until six to eight decades ago when the world population was less than half of what it is today. Yet, the organic farming failed to produce viable yields to supply adequate food and could not endure/sustain itself.

Food shortages and starvation deaths were frequent occurrences in India till 1960s, in the era of organic farming forcing our government to seek and accept food aids from foreign countries. It fetched us the infamous tag of "ship to mouth existence". The USA was the major donor of food grains and cotton to India to provide for our *roti aur kapda*. What a significant progress since then! India now produces more rice, more wheat, more cotton, more fruits and vegetables and more milk than the USA. The application of science and adoption of intensive farming have made the

difference. It is time to salute science; it is time to salute our farmers.

To quote the World Bank, "India has brought about a landmark agricultural revolution that has transformed the nation from chronic dependence on grain imports into a global powerhouse that is now a net exporter of food." India ranks second in the world in agricultural production.

The top five countries in the world agricultural production are: **1. China 2. India 3. USA 4. Brazil 5. Indonesia**. Together, these five countries account for over 40% of world's agricultural production. The following table shows the share of organic agriculture in each of them.

Country	Share (%) of organic agricultural area	Share (%) of conventional agriculture area
China	0.4	99.6
India	0.8	99.2
USA	0.6	99.4
Brazil	0.3	99.7
Indonesia	0.2	99.8

Source: FiBL & IFOAM Report "The World of Organic Agriculture 2018"

In these agricultural majors, organic farming forms a fraction of the total agricultural area. Certainly, there must be strong reasons for this. The organic farming can at best be a minor part of the total farming.

Falling food grain production apart, there are other signs of distress as well. The suicide rate in Sikkim is as high as 37.5 per one lakh population. This is 3.5 times higher than the national average of 10.6 (Source: NCRB, 2015). In the year 2000, Sikkim's suicide rate was 14.9. It has since more than doubled. The North Eastern states of India have very high rates of cancers in India, much higher than the national average.

This data based discourse is in fact a "reductio ad absurdum" which is the legitimate way of demonstrating the absurdity of projecting Sikkim's organic farming to the level of paranormal beliefs despite evidence establishing the contrary.

The purpose of this article is to deliver a well-intended warning to all concerned against being swayed by the infatuation with organic farming.

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