Perspective: Towards a Saner Agricultural Future

When Enterprise is Not Enough

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Issues and Ideas for Indian Agriculture

INDIAN AGRICULTURE

Where the Numbers Do Not Add Up

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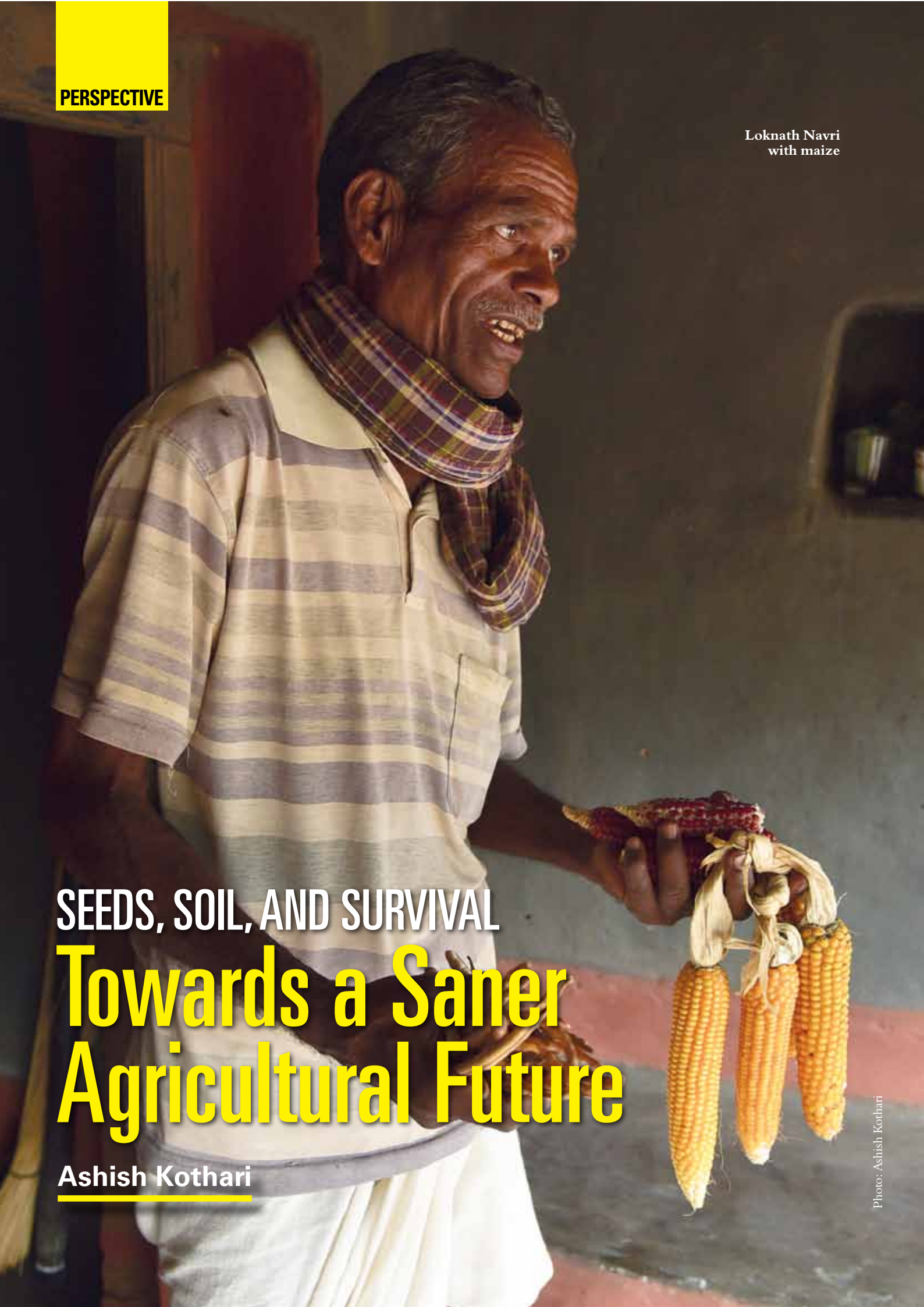

Loknath Navri with maize

SEEDS, SOIL, AND SURVIVAL

Towards a Saner Agricultural Future

Ashish Kothari

Photo: Ashish Kothari

"In just two years, we gave up all pesticides as we saw the results of vermicompost and amritpani … now we are well on way to stopping chemical fertilizers too".

– Villagers of Kedia village, Bihar

"This year I planted 45 varieties of crops and got enough produce to last the family the whole year, plus had some left over to sell in the market and earn ₹2 lakh. My expenditure for the year? ₹18,000. Would have been better were it not for drought conditions this year!"

– Nadimidoddi Vinodamma, dalit woman farmer of Nagwar village, Telangana

"On my three acres I have this year grown 72 crop varieties, enough to feed family of 10, plus income from sale of ragi, sesame, pigeon pea ... in a year with 30 per cent less than normal rainfall".

– Loknath Navri, Talia Kondh adivasi farmer of Kerandiguda village, Niyamgiri, Odisha

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These three narratives are representative of a slow but steady transformation that is taking place in India's agriculture, providing flickers of hope in an otherwise bleak scenario of farming distress, symbolized most tragically by the spate of farmer suicides across the country. Over the last few decades an industrial model of agriculture has certainly increased yields of crops, milk and other produce. The ecological, economic and social costs are, however, so high that even scientists within the government establishments are recognizing its unsustainability.

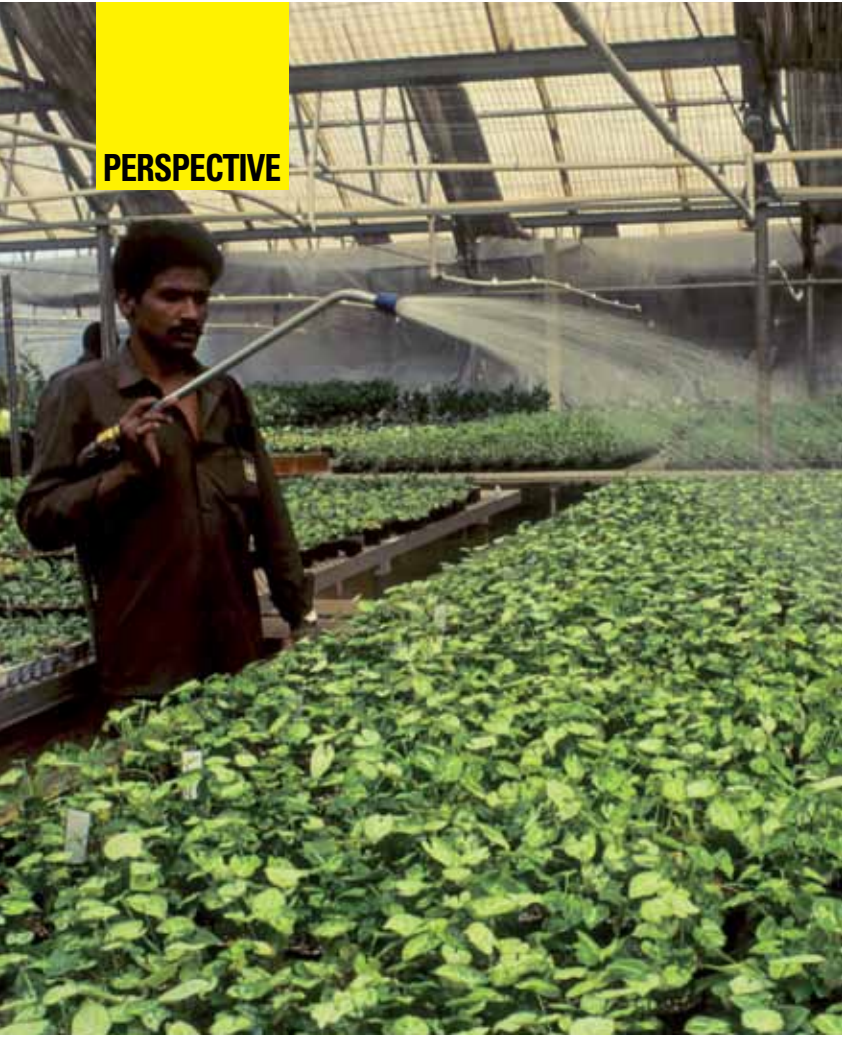
It is a bit like being on steroids for a while and collapsing when the steroids are withdrawn or no longer effective because, meanwhile, the body itself has been shorn of its inherent strengths. Externally generated or artificial inputs of fertilizer, pesticide, lab-grown seeds and surface irrigation have been the steroids but, in many places, they are not only no longer working but have damaged the soil, eroded seed and livestock diversity, erased centuries of in-depth knowledge, pushed marginal and small farmers out of business such that they who can no longer afford even subsidized chemicals and seeds.

They have reduced the independence and self-reliance of rural communities and distorted state and national economies because of the thousands of crore of subsidy having to be paid by governments. Increasingly, agricultural policy, R&D and resources like seeds too are being controlled by private corporations. This is an oft-repeated story.

Does the latest budget, labelled by many as a pro-farmer, pro-village exercise that will help revive agriculture and rural livelihoods, signal a shift in government policy towards agriculture? That the central government has finally recognized, even if on paper, the need to boost the rural economy seems to be a sign of hope. That the budget even contains, for the first time ever, provision for organic farming, is also encouraging though the overall neglect of farming continues to be shocking.

What are the initiatives trying to get the country out of this mess (not related to pastoralism, a usually neglected topic that needs separate treatment)? Briefly, taking three examples, one can look at policy implications and directions that the country needs to take if agriculture is to be revived and food security achieved. The three quotes at the beginning represent stories of resistance and transformation, resistance to the continuing push for the green revolution kind of farming and transformation towards more sustainable, equitable forms.

Kedia village, which I visited in February this year, is in the Jamui district of Bihar. The economy of its 94 households is predominantly agriculture-based.



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Till 2013, its agriculture was typical of so many across India, with an increasing homogenization of crops, heavy dependence on chemical pesticides and fertilizers, poor market returns for their produce and consequently the inability to generate a decent livelihood from farming.

It was in 2013 that Kedia's residents, being on the route of a 'Living Soils' padayatra that Greenpeace (GP) India had taken out, offered their village as a testing ground for what this organization proposed. They started with sample plots where GP India and enterprising farmers experimented with the use of biofertilizers and biopesticides, including vermicompost.

The results were remarkable enough for an increasing number of households to turn to organic methods. GP India helped them in obtaining government funds allocated for activities like vermicomposting (itself a big struggle as bureaucratic hurdles had to be overcome!) and the village's considerable cattle wealth (all of a local desi breed) was harnessed. Over just two years, the residents were convinced that they could completely stop pesticides and reduce chemical fertilizers by about 70 per cent.

Had the yields declined? "Yes, a bit", said Kedia's farmers, but confident that "We will go back to the yields that we were getting earlier as the

Kedia villagers have turned to organic methods and managed to stop pesticides and reduce chemical fertilizers use by about 70 per cent

fertility of the soil returns; and even higher over time. Besides, our inputs costs have gone down significantly and so we are better off." Increasingly, they are also going back to or trying new mixed and inter-cropping techniques, enhancing overall food yields and maintaining the soil fertility.

Nadimidoddi Vinodamma, ably helped by her husband Vinayappa, is part of a woman's Sangham (voluntary village level association) set up by the Deccan Development Society. I met her and her husband in their field, surrounded by a bewildering array of jowar, bajra, ragi, red gram, green gram, til, sama, korra and other crops. She spoke about how she is merely using knowledge handed down over generations, trusting the land and traditional seeds. This year there has been about 40 per cent less rainfall than usual, she said. So they may need to go to the market to buy vegetables; otherwise the produce is enough to feed the family. The surplus jowar is sold and fetches a handsome amount.

As we walk through Vinodamma and Vinayappa's farm, they point to five varieties of jowar (sorghum), telling us how one grows quite fast and with very little water (and is therefore called 'poor person's jowar'). Another is good for diabetics, a third one has high productivity and so on. We notice some trampled jowar and bajra; Vinayappa tells us that wild pigs sometimes get into the field but even after the pigs, birds and other creatures have done their damage or taken their share, there is enough for the family!

As in the case of Kedia village, Vinodamma and other members of DDS Sanghas use natural products for dealing with pests or adding fertility to the soil, such as vermicompost, cowdung powder, dried neem powder, jaggery water (attracting ants that will feed on pests).

In Odisha, at the foothills of the Niyamgiri hills (globally famous for the iconic struggle of the Dongria Kondh adivasis against a multinational mining company, Vedanta), I visited Loknath Navri, a Talia Kondh adivasi farmer of Kerandiguda

village. His crop diversity of 72 varieties was even higher than Vinodamma's. In the three acres he farms, he produces enough to feed a family of ten.

Members of the NGO, Living Farms, which has been documenting and helping farmers like Loknathji, told me that the area is full of farmers continuing to thrive on agriculture based on traditional knowledge, diversity, and organic inputs, in some cases with recent innovations or new seeds but still with relative independence from the market and the government. As in the case of the dalit women farmers of Telangana, here too much of the farming is dryland, rainfed, not with heavy surface irrigation.

What makes these three examples tick, why are these different from the very many places in India where farmers, especially dryland farmers, are in severe distress? There are many factors but consider few (not in any order of importance). A full picture of the complexity of factors would need a more in-depth study and much more to explain.

One crucial reason for the success of the farmers of Kedia, Zaheerabad and Niyamgiri is that they are part of or helped by larger collectives. For instance, Vinodamma's Sangham is one of several such Sanghams in 45 villages affiliated to the DDS, with about 3,000 women members. Through seed exchange, fund collection and management, knowledge sharing, collective labour and other joint activities, the Sanghams have overcome the barriers and limitations that each individual marginal farmer faces, especially as a woman.

As the umbrella organization, DDS has helped in many ways: getting credit and linking women to banks, conducting participatory natural resource documentation and planning exercises, overcoming resistance from men and upper castes, trying to get women ownership of or rights to lands they are cultivating, dealing with hostile or indifferent government officials and bringing in helpful ones, providing information on the dangers of chemicals and hybrids and genetically modified seeds, helping build capacity to understand policies and laws, marketing of organic produce through a co-operative called Sangham Organics and in many other ways, facilitating the empowerment of women to take back control over their lives.

Another important factor in success has been the facilitation and support of civil society organizations. In Kedia, Greenpeace India's help was instrumental not only in reviving the village's belief in organic fertilization techniques while introducing technical innovations but also in advocacy with local government agencies responsible for agriculture and rural development. In Niyamgiri, Living Farms has helped network many of the farmers and the activist

Nadimidoddi Vinodamma with jowar varieties

Photo: Ashish Kothari

researcher, Debal Deb, has shown innovations in combining diversity with productivity through some painstaking scientific work in his small fields (he lives in a hut in the same village as Loknath Navri, carrying out what is possibly the most rigorous research on rice diversity undertaken in India).

None of the above would have worked, of course, were it not for the farmers' own knowledge and skill base and the availability of essential inputs like seeds and biomass (gobar, leaf manure, cow urine, neem or other trees amongst others). One reason Kedia's farmers asked GP India to work with them — and GP India too agreed — was the presence of a large number of cattle and, therefore, of gobar. Unfortunately, this is a significant constraint now in many parts of India, where even if farmers want to move away from chemical fertilizers, the options are limited. This is where a policy shift of the incredibly

Neeraj Jain of Lokayat puts it in perspective when he says: "the fact that most eloquently brings out the absolute unconcern of India's policy makers with regard to the severe crisis gripping the agricultural sector is the total government spending on agriculture as a proportion of its total expenditure / the country's GDP. It works out to an abysmal 0.3 per cent of the GDP and just 2.25 per cent of the total budget outlay — for a sector on which even today nearly 70 per cent of the people are dependent for their livelihoods. Compare this to the tax concessions given to India's rich, some of whom are amongst the most wealthy people in the world — they amount to 4.1 per cent of the country's GDP, and are equivalent to nearly one-third of the union budget!"

Photo: Ashish Kothari

Kedia farmer with organic crops

One of DDS's most important innovations is the parallel public distribution system (PDS) in which the organic jowar produced by the farmers is offered at reasonable rates to residents in the villages, helping create a local cyclical economy that benefits both producers and consumers. This example has been used to advocate fundamental changes in the official PDS system across India, including its decentralization (in terms of democratic control) and localization (in terms of diverse foods relevant to local ecologies and cultures).

Perhaps as a result of this and advocacy from other groups, the Food Security Act 2013 states that "the central government, the state governments and local authorities shall, for the purpose of advancing food and nutritional security, strive to progressively realize the objectives specified in Schedule III", and Schedule III includes "(a) incentivizing decentralized procurement including procurement of coarse grains; and (b) geographical diversification of procurement operations". Without any mandatory, time-bound provision, however, it is not clear if this part of the Act will get implemented in the near future; or at all.

There are some other hopeful signs of policy shifts; well before the central government recognized the need to support organic farming, over a dozen states had already instituted policies or programmes for this. Sikkim's move to become 100 per cent organic is by now well-known, though the continuing dependence on exports to fuel this shift is worrying given the fickleness of export markets and the fact that the ecological costs of transporting food long distances is simply being externalized.

One of DDS's important innovations is a parallel distribution system. Farmers offer their organic jowar to villagers at lower rates creating a local cyclical economy

high subsidy on fertilizers, ₹70,000 crore for the current year, towards organic inputs, could play a massive role in promoting organic farming.

Other than the need for reorienting government subsidies towards organic, there are a number of other policy changes that are needed if these three examples (and many others like them) are to be multiplied across the country. These include providing better market access and prices (the government's minimum support prices for most crops have remained shamefully low, and farmers in Kedia complain about this being the biggest hurdle). This can be done in many ways.

Kerala, Andhra Pradesh and a number of other states are actively promoting organic cultivation; to this they need to add a focus on biologically diverse farming, particularly traditional crops like millets, old rice varieties, indigenous vegetables and fruits. When I visited Vinodamma and other farmers near Zaheerabad, I participated in a programme titled 'Organic Medak', organized by DDS, where the district collector, D. Ronald Rose, and superintendent of police, B. Sumathi, assured help in transforming the district into a hub for organic farming with millets as a fulcrum.

In Jamui, Bihar, the block agricultural officer, Haroon Rashid, was all praise for the organic initiative in Kedia. He said that the Bihar government is substantially increasing its support to vermicomposting and other such inputs (he also gave the hopeful news that fertilizer consumption on the district had decreased by 30 per cent). According to the 2016 Union budget speech, there is now a provision for "10 lakh compost pits for production of organic manure", and a ₹412-crore "scheme called 'Organic Value Chain Development in North East Region', (with) emphasis on value addition so that organic produce grown in these parts find domestic and export markets". If implemented in earnest, the latter could support states in north-east India that have avowed commitments to promote organic.

Yet another major policy shift has to be to provide farmers a central place in agricultural R&D. After all, they are the ones who, over millenia, have generated India's incredible diversity of crops and livestock, created and sustained sophisticated knowledge systems regarding soil and weather and other components of agriculture, and linked all these to complex cultures. Yet in the last few decades of the green revolution, they have been relegated to 'recipients' of what 'experts' in laboratories produce.

What we need now is to place the farmer back in the centre of research and innovation, with the formally trained scientists facilitating them. In fact,

Collaboration of Kondh farmers and workers of Living Farms and scientists like Debal Deb is an example of different knowledge systems combining to achieve sustainable farming

the Krishi Vigyan Kendra (Agricultural Science Centre) at Pastapur is run by the DDS women with help from government-appointed scientists, one of the few in India where the curriculum is set by farmers. The collaboration between Kondh farmers and workers of Living Farms and scientists like Debal Deb is another example of different knowledge systems combining to achieve sustainable farming.

Facilitating linkages between farmers and consumers is another important arena for policy support. To make the local organic food more popular, DDS has set up Café Ethnic and a Sangham Organics shop in the town of Zaheerabad, where millet-based products and dishes predominate. The group, Timbaktu Collective, has set up Dharani, a farmers' company that enables more collective processing of organic agricultural produce, its branding, its enhanced pricing for the market, outreach to consumers and equitable sharing of revenues; similar producer companies or cooperatives are coming up in many agricultural communities.

Certification is also a crucial part of policy support. Private or government certification of organic produce is costly, way beyond the ability of small farmers but several groups like Timbaktu and DDS have pioneered a peer-review based certification system (the Participatory Guarantee Scheme). Farmers are involved in the process that is recognized by the government. Providing farmers across India with an orientation on how PGS can be used is important.

All this will not work, of course, unless the corporate grab of India's agriculture land

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is stopped. The increasing stranglehold that companies (domestic and multinational) have not only on farmers but also on decision-making in government circles, the entry of genetically modified crops with all their attendant problems are just some of the menaces. The hope lies in the many networks like the Alliance for Sustainable and Holistic Agriculture (ASHA), Anti-GM Coalition and Millets Network of India (MINI) and others that have been lobbying hard against these forces.

Over and above all this, is something that everyone must reflect on: how much do we respect the farmer? Every time I am with extraordinarily 'ordinary' farmers like Vinodamma and Loknathji, I am reminded that I may be starving or be eating substandard artificial food dished out by corporations, were it not for people like them. Recognition of the absolutely crucial role played by the small farmer and especially of women, is long overdue; across the world they remain the major producers of our food.

Yet for the middle or richer classes, they are a forgotten category and even the periodic reports of farmer suicide are treated by us like any other news. Is the urban middle-class Indian prepared to move out of his or her comfort zone, build relations with farmers and provide facilitation to their voices and needs, bring them into our institutions as teachers and co-learners and colleagues and honour them as our annadatas? ●