

FARMERS' FORUM

Vol. 15; No. 03; June-July 2015 ₹100 www.farmersforum.in

Issues and Ideas for Indian Agriculture



FATAL FARMS

Inertia at the Time of Crisis

PRABHA JAGANNATHAN | BHAVDEEP KANG | ASHIM CHOUDHURY | BHARAT DOGRA
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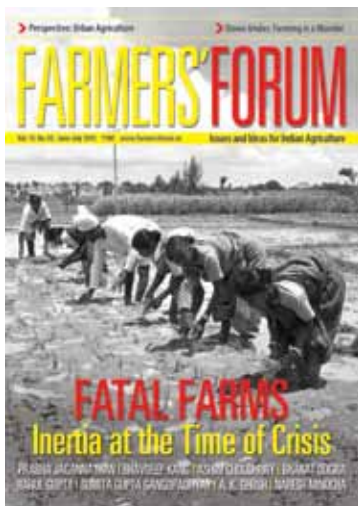


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Volume 15; No. 03;
June-July 2015
RNI No. DELENG/2001/5526

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Design
© PealiDezine
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Owner
Bharat Krishak Samaj

Published at
Bharat Krishak Samaj,
A-1, Nizamuddin West,
New Delhi 110013

Printed at
Brijbasi Art Press Ltd., E-46/11, Okhla
Industrial Area, Phase-II, New Delhi

Cover photo
© Dinodia

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Farmer Forgives; Nation Forgets

Set in an agrarian economy, the Bhagwad Gita's teachings reflect an 'occupational' mindset, as it were: "Keep working without worrying about the results." Farmers live that preaching. Blaming misfortune to celestial stars, they easily forgive. They are just as easily forgotten. India's farm policy continues to be impractical and unfeasible, contrived, as it is, by economists, directed by industry and hemmed in by high-profile NGO's, making inclusive growth improbable. Policy, over the years, has transformed an unequally prosperous rural society to one that is equally distressed.

For the first time in history small and marginal farmers feel worse off than the landless classes. Farm income of the smallholder is insufficient to sustain him and suicides predominantly take place in such farmer families that have no additional source of non-farm income. The public is merely distracted by farmer suicides. As the 18th century evangelist, John Wesley, said in another context: "When you set yourself on fire, people love to come and see you burn"; and no more. However, after analysing data, sociologists and statisticians have deciphered poverty as reduced. For the sense of desperation that now pervades rural India, however, blame must be appropriated by all political parties.

There are too many unpredictable facets of behavioural economics and climatic circumstances for a policy based on pure logic to succeed in the farm space. Even regional diversity is not taken into account when designing policies; something that a federal system could help address. The biggest challenge for a regime is to design farm support programmes under which the small and marginal farmers get their proportionate share; more so in rain-fed areas. Many things are required to ensure farmer prosperity. Contentious solutions arouse fierce debate and must be put aside for a minimum acceptable agenda for a polarized society.

Ideas for a *kisan* channel, crop insurance, skill development and soil health cards of the new regime are path breaking but with a caveat. The fine print around the designing and implementation is worrisome and may end up in the programmes being detrimental to a nation. The government may find it difficult to accept that a *kisan* channel will fail to ignite the farmer's imagination because the channel has taken the form of a 'patronage' programme. Crop insurance can only be termed a success if, after three years when a natural calamity strikes, farmers are automatically paid by crop insurance companies. As for the skill training

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diplomas, the numbers will not matter but the quality of training will. One suspects that the government will manage to issue millions of soil health cards but one worries about their technical accuracy and whether or not they cover micronutrients. Farmers too will have to be explained the implications of soil test, which is only a means to an end and not the end itself.

India's irrigated lands are becoming salt pans without drainage facilities while the rest of the country is slowly getting parched. Successive governments have lacked the political will to tackle the issue. Yet one can say with certainty that it is possible to reduce India's fertilizer, pesticide and water consumption per acre and still achieve higher yields. Few farmers recognize the potential to increase yields sustainably as a solution to the distress. Increases in yield per acre and per animal is integral to any solution to the rural distress. It is equally imperative to increase farmer's

income and resilience to withstand weather and price shocks.

These requires sustained effort, at least over a decade. Politicians, however, do not have the patience as elections come around every five years. It is never too late to begin a good programme; it only becomes more difficult with each lapsed moment. From the politician's point of view, it is definitely getting late to start programmes that will deliver meaningful results that will transform into electoral gains. It will take more to deliver benefits and stop the perception that welfare programmes and farmers are being abandoned. At a later date, when the government is under pressure on account of non-delivery, it will quote numbers to explain away the problems without actually convincing anyone.

Economists are artists who will crunch numbers and conjure success out of sheer failures as in the past. Success cannot be measured by numbers alone. Explaining numbers is easy, measuring success is difficult; experiencing the transformation, more so. The fear is that three years from now, realizing that no results are in sight, the regime will be compelled to flood the nation with meaningless, populist schemes to garner votes.

In a democracy, the opposition is usually good at channelizing distress into dissent but dissent should be made meaningful by alternative ideas of development. The timing has to be perfect. The opposition could learn from Maharaja Surajmal of Bharatpur who waged war or dispatched raiding parties after the harvest season since the farmers would be free to join and bolster the forces. The opposition ought to keep the fires lit on farm issues while hoping that the government succeeds with its development agenda. It is the success of any government plan that leads to the success of the nation. That success should be equitable; a consummation devoutly to be wished for. ●

04 ECONOMISTS ARE ARTISTS WHO WILL CRUNCH NUMBERS AND CONJURE SUCCESS OUT OF SHEER FAILURES, AS IN THE PAST



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COVER STORY 07

FATAL FARMS: INERTIA AT THE TIME OF CRISIS

Naresh Minocha

**DISTRESS CYCLE TO DISTRESS CYCLE: CIRCLING
THE RURAL INDIA STORY 20**

Prabha Jagannathan

UREA SURGE: NBS FALTERS, CAG INDICTS 28

**DESIGNED TO FAIL: CAG RAPS FLAWED PLANNING
FOR RKVY WOES 30**

CONTROVERSY

LARR: AN ACT OF COMMISSION AND OMISSION 32

Bhavdeep Kang

CONFLICT

FARMING IN TIGER TERRITORY 38

Ashim Choudhury

CASE STUDY

KALAHANDI SHOWS THE WAY 44

Bharat Dogra

PERSPECTIVE

**URBAN AGRICULTURE:
UNTAPPED POTENTIAL
FOR CREATING
SUSTAINABLE CITIES 52**

*Rahul Gupta and Sumita Gupta
Gangopadhyay*

VIEWPOINT

**FARMLAND SECURITY:
INSURING AGAINST
SUICIDES 58**

A. K. Ghosh

GREEN FINGERS

**DOWN UNDER, FARMING
IS A WONDER 64**

Ajay Vir Jakhari

To the Editor

Callous urban Indians

Sir, Apropos of your Editorial, 'Consenting to Agitate?' (*Farmers' Forum*, April-May 2015), I totally agree with your statement that less than 50 per cent of India lives in the cities and they do not care about land acquisition. They have largely been ignoring the huge debate around the land acquisition bill. Not only that, the urban Indian largely avoids any political activity, which is what allows every government to continue to do whatever they do and get away with their actions. Do keep up your good work on highlighting such important issues.

Prakash Dhyani,
Nainital, Uttarakhand

Distress helpline

The article 'A Crisis for Every Farmer: Rich or Poor' (Cover Story, *Farmers' Forum*, April-May 2015) by Prabhakar Kelkar, was an eye-opener. The facts that he highlights regarding the current government's policies on farmers' issues are revealing, especially since he is general secretary of the Bharatiya Kisan Sangh, a Rashtriya Swayamsevak Sangh affiliate, which is considered close to the Bharatiya Janata Party government. I totally agree with his statement that there should be some government agency or trust which the farmer can turn to for succour in periods of dire distress in order to get immediate help. I think the government should take note of this fact.

Joginder Singh,
Jalandhar, Punjab



More bees, please

In the article, 'Increasing Food Production the Natural Way', (Green Fingers, *Farmers' Forum*, April-May 2015) the famous physicist Albert Einstein is quoted having said that if bees were to disappear from the surface of the earth, then humans would have no more than four years to live. With the little pollinator's population declining from use of chemicals and pesticides, it was heartening to read of research towards increasing its count under the Global Pollinator Project in Almora. This should be of great help to farmers.

Kartik Chaturvedi
Hyderabad, Telangana

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earlier numbers.**

Bridge the gap

The article, 'Is India Losing Agri Policy Independence?' (Cover Story, *Farmers' Forum*, April-May 2015) by Hannan Mollah raises a very important but neglected question. He asks: "A farmer gets ₹1 per kilo for tomatoes, which sells in Delhi for ₹80 per kilo. Where does the ₹79 go?"

I believe that if the gap between the farmer and the consumer can be bridged, it would benefit both. The farmer could get a better price for his produce and the consumer cheaper tomatoes. Wouldn't this be a much better solution than numerous unrealized subsidies and relief plans for farmers?

Sneha Mukherjee,
New Delhi

Missing skills

The article, 'Skilling the Farm Worker, An Ignored Opportunity' (Perspective, *Farmers' Forum*, April-May 2015), portrays the problem of massive migration of unskilled labour from rural to urban areas evocatively. It seems government policies such as the National Rural Livelihoods Mission have failed to address skilling opportunities for the farm sector specifically and are rather geared to train rural youth for work outside agriculture. Shikha Mukerjee rightly paints their situation as 'fourth class citizens' whose existence is based on illegalities in terms of employment and living conditions.

N.K. Sinha,
Panipat, Haryana

FATAL FARMS

Inertia at the Time of Crisis

Naresh Minocha

“Soon after I close my speech, it may be stated... by some members of the government that they are seized of this question of agricultural finance... My trouble is this. This is a kind of answer that the government of India has been giving whether it has come in after the achievement of freedom or before, for the last so many years. Ever since 1934, those of us who are so much interested in the agriculturists, have been pressing for some such institution as this and for the kind of initiative on the part of the government of India as is being suggested in this resolution... So little has been done... We were being given the same kind of answer: ‘Wait and see’. Till now we have been waiting and seeing. Meanwhile, the problem has been growing more and more serious.”

The late **Prof. N. G. Ranga**,
Moving a resolution for setting up of an
all-India agricultural credit corporation
in the Rajya Sabha on April 24, 1953.

The late Prof. N. G. Ranga, veteran parliamentarian, was perspicacious, if nothing else, in his observations on farmer indebtedness in India more than 60 years back. With the agrarian crisis grabbing mindspace across the country, thoughts go back to his speech, moving the vital resolution. Prof. Ranga had more wisdom to offer to the country that seems so relevant today.

Referring to the sale of land by farmers to reduce their indebtedness, Prof. Ranga, a pioneer of peasants’ movements, observed: “If... through the neglect of the government or through the failure of the steps taken by the various state governments, our farmers were to be reduced to the plight of having to sell their lands and then reduce their indebtedness, it would only mean inducing the people and helping them to sell their lands and their own economic independence and give up a portion



NARESH MINOCHA
Veteran journalist,
specializing in
agriculture

of their own social security and abandon their own source of employment.”

Such soul-stirring alerts from reputed opinion leaders since Independence seem to have fallen on deaf ears as the central and state governments have let farmers’ problems snowball into a multi-dimensional agrarian crisis. There is now no easy way-out from this. The crisis can be resolved only through a comprehensive package for agricultural renaissance, jointly formulated by the Centre and states and implemented in toto, and under the strict vigil of the National Democratic Alliance (NDA) government’s brainchild, the Niti Aayog, if not under the Inter-State Council or the National Development Council (both moribund at present).

The NDA government has not shown the requisite political will to analyze the problems of agrarian economy in an integrated manner and to act accordingly. Even the United Progressive



Alliance (UPA) government was found wanting on this count in spite of good intentions and best advice from the National Commission on Farmers (NCF) and other official entities.

Under the British Raj and prior to that, agrarian stress was primarily due to the feudal system, private moneylenders' machinations, vagaries of nature, farmers' vulnerability to markets and the emerging pressures of an expanding population, leading to fragmentation of farm holdings. Much remains the same.

- The private moneylender's rise may have been stemmed but he is still a factor to reckon with. So is the role of nature, notwithstanding the increase in irrigated area, emergence of varied and improved agronomic options and provision of crop and animal husbandry insurance cover to a section of farmers.
- The vulnerability of farmers to markets has been mitigated only partly and mainly with respect to a few crops. A majority of farmers is still forced

to sell vegetables and fruits at ridiculously low prices and often resorts to distress sale.

- The population explosion-driven fragmentation of farm holdings has evolved into the foremost cause of agrarian crisis, rendering many small and marginal farms unviable.
- The farming business has come under additional strain due to several factors including the failure to spread a sustainable green revolution to all parts of the country, break the new yield barriers, disbalance in use of fertilizers, poor soil healthcare and NGO-judicial activism against what has been very controversial introduction of genetically engineered crops, considered crucial for improving the viability of shrinking farms by a large segment of opinion leaders.

Another major reason for erosion of the viability of farming is the persistent low capital formation in agriculture with deficient funding both by the centre and the states. The Committee on Review of Agricultural Policies and Programmes (CRAPP)

said, way back in 1990: "Agriculture requires two kinds of capital investments; one by government for creating the necessary infrastructure for growth; and the other, for on-farm investment by farmers. Unless conditions are created to promote the second kind of investment, the first kind may also prove unproductive if not infructuous."

Yet another major cause of agrarian distress is the failure of governments to create adequate non-farm work opportunities in rural areas for enabling growers to supplement their farm income.

These have pushed agrarian stress into a critical state, largely rendering small and marginal farming unviable over the last 25 years. The crisis is, however, acknowledged only periodically, particularly when distressed farmers commit suicide. As and when the news about the harakiri peters out, the political class and other stakeholders of the democracy turn their attention to other riveting issues that have no relevance for rural masses.

The agrarian distress is manifested well in the findings of the latest Situation Assessment Survey (SAS) of Agricultural Households released by the National Sample Survey Office (NSSO) in December 2014. The SAS shows that average monthly income including non-farming earnings per agricultural household during the agricultural year July 2012-June 2013 was an estimated ₹6,426. This earning was marginally higher than the average monthly consumption expenditure of ₹6,223 per household.

Cut to the slum, where a migrant family earns much more today, spends much more and repatriates some savings to his village home. "Even an average slum dweller in the cities is better off than an average villager in terms of nutrition," says CRAPP in its report submitted under the chairmanship of Bhanu Pratap Singh to the agriculture ministry in July 1990.

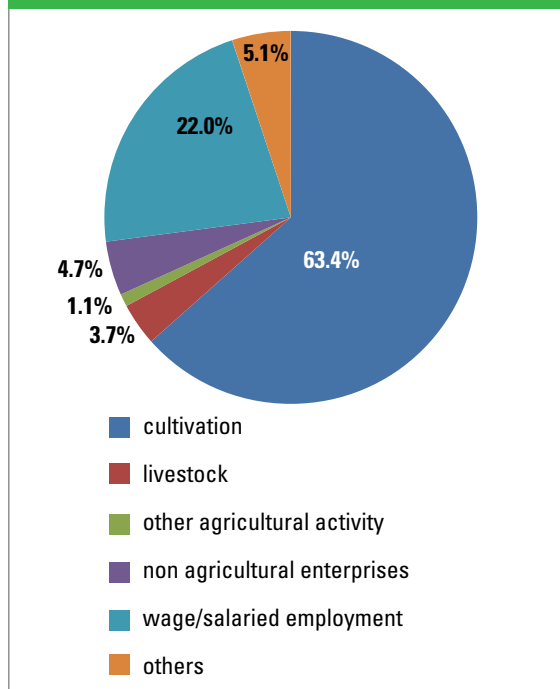
Another alarming finding of the SAS is that every second agricultural household is indebted. The average amount of outstanding loan per agricultural household was ₹47,000, which is 7.3 times the monthly income. The inability to cope with indebtedness, coupled with varied social factors, heightens farm distress and drives certain farmers to end their lives. The state governments, however, pay a pittance as low as ₹1 lakh as a relief to members of the deceased farmers.

The Centre's reluctance to take the agrarian challenge head on is evident from its answers to questions raised in Parliament. The replies on



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Figure 1: Percentage distribution of agricultural households by principal source of income



Source: NSSO's Key Indicators of Situation of Agricultural Households in India, December 2014

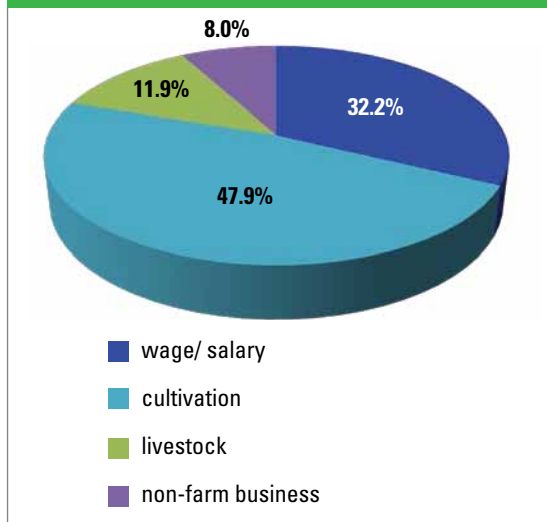


The average outstanding loan per agricultural household was ₹47,000, 7.3 times the monthly income. Indebtedness heightens farm distress

issues relating to agrarian distress and farmers' suicides have been similar and almost identical under both the NDA and UPA regimes.

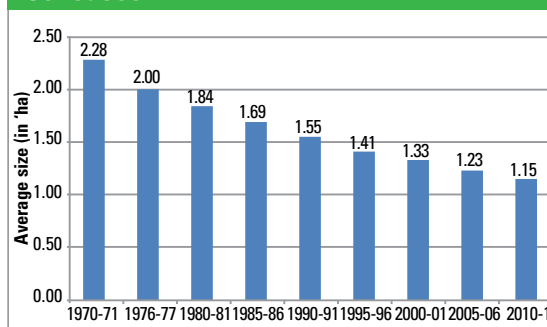
Consider the reply to a question on farm suicides given by the Minister of State for Agriculture Sompal during the NDA I regime in Rajya Sabha on May 28, 1998: "It is primarily the responsibility of the state governments concerned to provide relief to the people affected by natural calamities. The central government supplements the efforts of the state governments by providing additional resources in accordance with the recommendations of the finance commissions appointed from time to time."

Figure 2: Distribution of average monthly income per agricultural households by sources



Source: NSSO's Key Indicators of Situation of Agricultural Households in India, December 2014

Figure 3: Average size of operational holdings as per different agriculture Censuses



Compare it with the reply given by Sharad Pawar, Minister for Agriculture, in the UPA II regime in response to a question in the Rajya Sabha on November 27, 2009: "Agriculture is a state subject and all necessary initiatives continue to be taken by the state governments. However, the government of India has been supplementing the efforts of the state governments in this regard and has always laid great emphasis on solving the problems of the farmers."

Compare it further with the reply given by the Minister of State for Agriculture, Mohanbhai Kundaria, to a question raised in Lok Sabha on December 2, 2014: "Government has not conducted any such study (on agrarian crisis) as agriculture is a state subject under the Constitution and the states are primarily responsible for development of agriculture sector including welfare of farmers."



Table 1: Estimated number of agricultural households, its percentage share in rural households in the major states during the agricultural year July 2012-June 2013

State	Estimated no. of agricultural households (00)	Estimated no. of rural households (00)**	Agricultural households as percentage of rural households (%)
(1)	(2)	(3)	(4)
Andhra Pradesh	35,968	86,763	41.5
Assam	34,230	52,494	65.2
Bihar	70,943	140,611	50.5
Chhattisgarh	25,608	37,472	68.3
Gujarat	39,305	58,719	66.9
Haryana	15,693	25,849	60.7
Jharkhand	22,336	37,516	59.5
Karnataka	42,421	77,430	54.8
Kerala	14,043	51,377	27.3
Madhya Pradesh	59,950	84,666	70.8
Maharashtra	70,970	125,182	56.7
Odisha	44,935	78,120	57.5
Punjab	14,083	27,552	51.1
Rajasthan	64,835	82,722	78.4
Tamil Nadu	32,443	93,607	34.7
Telangana	25,389	49,309	51.5
Uttar Pradesh	180,486	241,328	74.8
West Bengal	63,624	141,359	45.0
All India*	902,011	1,561,442	57.8

*All India figures include all States and UTs which are not shown in the statement

** The estimate of rural households as per the results of the Land and Livestock Holding Survey of NSS 70th round

Source: NSSO's Key Indicators of Situation of Agricultural Households in India, December 2014

The Disaster Management Act, covering drought, floods, hailstorm and other disasters should be fully implemented as a tribute to thousands of farmers driven to suicide

How many more farmers have to commit suicide to force the union government to give up the alibi of the Constitutional division of governance turf between the Centre and the states?

As a tribute to thousands of farmers who were driven to suicide, both the centre and the states should fully implement the Disaster Management Act (DMA), which covers drought, floods, hailstorm and several other disasters. The DMA provides for a National Disaster Response Fund (NDRF), a State Disaster Response Fund (SDRF) in each state and, within the states, a District Disaster Response Fund (DDRF) in each district.

The Law also envisages a National Disaster Mitigation Fund (NDMF), State Disaster Mitigation Funds (SDMF) and District Disaster

Mitigation Funds (DDMF) for disaster mitigation.

The 14th Finance Commission in its February 2015 report says: "So far, at the national level, only the NDRF has been constituted. All state governments have constituted an SDRF but only a few have constituted an SDMF. Very few state governments have constituted DDRFs. During a disaster, relief activities at the district level are generally carried out through transfers from the SDRF."

Apart from setting up all statutory funds with respectable corpuses and ensuring speedy disbursements, the centre and states must unveil an all-weather and all-crop and animals insurance scheme. The premium for subscription under this scheme should be borne in the ratio of 70 per cent





Table 2: Average monthly income (₹) from different sources, consumption expenditure and net investment in productive assets (₹) per agricultural household during July 2012-June 2013 for each size class of land possessed

Size class of land possessed (ha)	Income from wages/salary (₹)	Net receipt from cultivation (₹)	Net receipt from farming of animals (₹)	Net receipt from non-farm business (₹)	Total income (₹)	Total consumption expenditure (₹)	Net investment in productive assets (₹)	Estd. no. of agri. households* (00)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
< 0.01	2,902	30	1,181	447	4,561	5,108	55	23,857
0.01 - 0.40	2,386	687	621	459	4,152	5,401	251	287,381
0.41 - 1.00	2,011	2,145	629	462	5,247	6,020	540	315,008
1.01 - 2.00	1,728	4,209	818	593	7,348	6,457	422	154,810
2.01 - 4.00	1,657	7,359	1,161	554	10,730	7,786	746	83,964
4.01 - 10.00	2,031	15,243	1,501	861	19,637	10,104	1,975	33,519
10.00 +	1,311	35,685	2,622	1,770	41,388	14,447	6,987	3,499
All sizes	2,071	3,081	763	512	6,426	6,223	513	90,2039

Source: NSSO's Key Indicators of Situation of Agricultural Households in India, December 2014

Fragmented farms spelling doom

Fragmentation of farm holdings due to division of property among the family members over the generations has rendered farming an inadequate source of livelihood for many farmers. It has also increased the cost of crop production, thereby raising a big question about the very viability of farming as an occupation.

A Policy Research Working Paper published by the World Bank in November 2014 pointed out: "Fragmentation increases cost of production in India even once potential endogeneity due to market participation or crop choice is accounted for. Second, our findings suggest that the main mechanism underlying this phenomenon is substitution of labour for mechanical and chemical technology. Finally, analysis by farm size group highlights that fragmentation is not neutral from a distributional perspective, as associated cost increases are disproportionately borne by those in the smallest farm size class."

The paper titled: 'Does Land Fragmentation Increase the Cost of Cultivation? Evidence from India' says: "A more consolidated holding structure would thus contribute to equity by benefitting poor and marginal farmers most." Fragmentation has been a festering problem right from the British Raj era. The state governments, which govern agriculture and land under the Constitution, have largely failed to put in place workable options for consolidation of holdings.

With unabated fragmentation overshadowing whatever consolidation that has taken place, the future of farming is bleak. This is in spite of serious concern expressed by different committees over the decades. The National Commission on Agriculture (NCA), for instance, noted: "Land consolidation in India had its beginnings in the attempt to stop or restrict subdivision of fields and to prevent fragmentation when the Settlement Department of Bombay decided in 1847 not to recognize or enter plots below a certain area in the revenue records and enter the name of the eldest son in the record of rights. Without statutory sanctions, these reforms measures proved ineffective."

The NCA, which completed its work in January 1976, stated: "A major impediment to efficient cultivation is the fact that agricultural holdings generally consist of small scattered fields lying at considerable distance from one another. By the custom of dividing landed property amongst heirs, the successive generations descending from a



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common ancestor inherited not only smaller and still smaller share of land but also land broken into smaller and tiny plots." It argued that the problem of excessive fragmentation of farms is different from that of small and uneconomic size of farms but emphasised their interlinkages as each aggravates the drawbacks resulting from the other.

Fourteen years after the NCA submitted its final report, the Committee on Review of Agricultural Policies and Programmes observed: "It is surprising that consolidation of holdings, which undoubtedly increases the productivity of land, has not received attention that it deserves. More than 60 per cent of land holdings in the country remain scattered in many pieces all over the village."

In its report submitted in July 1990, CRAPP stated: "This reduces the farmers' efficiency and is the greatest deterrent to installation of tube-wells by small farmers. In land reform programmes, consolidation of holdings, about which there is already a great deal of unanimity, should be given top most priority."

About 16 years later, the National Commission on Farmers (NCF) observed: "Legislation on consolidation was adopted in some states in order to reduce inefficiency in operations and cultivation. For the most part, these laws and associated consolidation



programmes have failed to achieve their goals because of the lack of political will and administrative difficulties. The legislation was difficult to formulate and did not consider the reality of the caste system within the farming communities and the local processes of politicization. Except in Punjab, Haryana and Uttar Pradesh, consolidation programmes have not made any impact. Given its importance and the extremely unsatisfactory results of this programme, it is essential to evaluate the effectiveness of the legislation and to rethink an institutional solution.”

In its 4th report submitted under the chairmanship of noted farm scientist Prof. M. S. Swaminathan in April 2006, the NCF thus pitched for legislation and its timely implementation to “arrest fragmentation and minuscule of land holdings to promote self-reliance and to ensure livelihood security of farm households.”

The issue once again came under focus when Indian Council of Agricultural Research (ICAR) unveiled its Vision 2030 document in January 2011. It said: “The average size of the landholding declined to 1.32 ha in 2000-01 from 2.30 ha in 1970-71 and absolute number of operational holdings increased from about 70 million to 121 million. If this trend continues, the average size of holding in India would be mere 0.68 ha in 2020 and would be further reduced to a low of

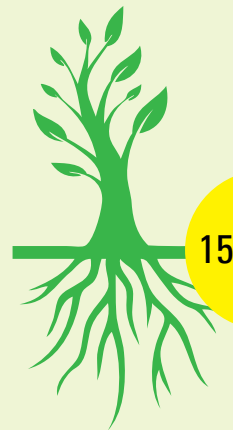
0.32 ha in 2030. This is a very complex and serious problem, when share of agriculture in gross domestic product is declining, average size of landholding is contracting (also fragmenting) and number of operational holdings are increasing.”

It stated: “Declining size of landholdings without any alternative income augmenting opportunity is resulting in fall in farm income, causing agrarian distress. A large number of smallholders have to move to post-harvest and non-farm activities to augment their income. The research focus should be to evolve technologies and management options to suit needs of smallholders’ agriculture, and also to involve them in agri-supply chain through institutional innovations.”

The legislation of land failed to consider the entrenched caste system within the farming communities and the local processes of politicization

- One of the institutional arrangements to overcome fragmentation and improve income of farmers is contract farming. If implemented under a vigilant regulatory framework, contract farming can transform land fragments into a virtual large farm, offering economies of scale for cultivation of a commercial crop. Under a model contract, the farmers should be advised to agree for joint cultivation of a crop under the clearly defined contract farming deal.
- Alternatives to contract farming such as self-help groups or co-operative farming should be encouraged to achieve the deemed consolidation of holdings, which is key to reducing cost of cultivation and enhancing productivity.
- Apart from institutional options, the centre and the states should explore the prospects of enactment of a central consolidation law and remove hurdles in the way of land leasing.

The National Development Council’s Sub-Committee on Agriculture and Related Issues in its report submitted in May 2007 says: “Land leasing should be made legal in all areas, along with a provision that the size of holding of a farm family should not be above the ceilings fixed in respect of various categories of land in each state so as to prevent misuse of such provisions.”



by the centre, 20 per cent by the states and 10 per cent by the farmers. Subsidization of insurance premium is better than excessive subsidy on urea as the former would promote equity among farmers under all farming systems.

The government should consider recommendations of different panels and studies on crop insurance, including the latest one from the Committee to Review the Implementation of Crop Insurance Schemes that submitted its report in May 2014. Apart from recommending enactment of the Agriculture Insurance Act, the committee has recommended linkage between crop insurance and disaster-mitigation initiatives of the government. It has also pitched for educating farmers about the virtues of crop insurance, who largely consider it as an “investment”.

Mitigation of risks should thus be the first approach to reducing farm distress. This should be simultaneously supported by massive investments in storage and utilization of surface water for irrigating farms. This would also help the country arrest the alarming decline in groundwater in many areas due to over-reliance on tubewells.

The agrarian crisis should serve as a trigger for the Bharatiya Janata Party (BJP) to redeem its Lok Sabha poll promise of *har khet ko paani* (water for every farm). The government also has to put on a high pedestal the subject of combining the traits of drought-resistant, flood-tolerant, diseases-resistant with high yield and other valuable traits in varieties. Such wholesome dream seeds can only be developed through genetic engineering, according to some experts.

Their argument is that though genetically modified (GM) crops are a sure-fire bet against the agrarian crisis, the successive governments have allowed a handful of foreign-aided NGOs to whip up demonic fears about GM food in the mind of consumers with the support of judicial activism. Their position is that:

- The time is now ripe to draw a balance between imagined fears and the right of farmers to increase their production and productivity through all modern techniques.
- The judiciary should give as much priority to rights of farmers and to national food security as given to freedom of expression, right to life, right to sleep and such others.

Table 3: Profile of suicide victims classified according to profession – 2013 (All India)

Sl. No.	Profession	Number of suicidal deaths								
		Upto 14 years			15–29 years			30–44 years		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	House wife	0	26	26	0	9,697	9,697	0	7,809	7,809
2	Service:	2	8	10	4,239	1,089	5,328	5,857	813	6,670
	(i) Government	0	0	0	305	131	436	646	97	743
	(ii) Private	2	6	8	3,301	809	4,110	4,352	552	4,904
	(iii) Public sector undertaking	0	2	2	633	149	782	859	164	1,023
3	Student	709	614	1,323	3,660	3,064	6,724	231	90	321
4	Unemployed	15	17	32	2,776	698	3,474	3,102	467	3,569
5	Self-employment:	259	271	530	11,135	2,628	13,763	16,779	2,191	18,970
	(i) Business	1	3	4	1,521	170	1,691	2,774	230	3,004
	(ii) Professional activity	4	0	4	988	119	1,107	1,495	105	1,600
	(iii) Farming/ Agriculture	13	9	22	2,379	426	2,805	3,834	440	4,274
	(iv) Others	241	259	500	6,247	1,913	8,160	8,676	1,416	10,092
6	Retired person	0	0	0	0	24	24	44	19	63
7	Others	561	409	970	4,906	2,452	7,358	6,086	2,118	8,204
	Total	1,546	1,345	2,891	26,716	19,652	46,368	32,099	13,507	45,606

Source: Accidental Deaths and Suicides in India 2013, National Crime Records Bureau

Table 4: Snapshot of weather-based crop insurance scheme

Scheme							
WEATHER BASED CROP INSURANCE SCHEME (WBCIS)							
Company							
ALL COMPANIES COMBINED							
From Kharif 2007 to Rabi 2013-14 - State-Wise							
Rs. in Lakh							
Sl. No.	State / UT	No. of Farmers Insured	Area Insured (Ha)	Sum Insured	Gross Premium	Claims	No. of Farmers Benefitted
1	Andhra Pradesh	2789628	4,509,638.594	1,136,477.67	113,336.4	87502.98	2016440
2	Assam	859	296.0698	200.09539	20.05253	6.917171	68
2	Bihar	11,039,526	11,413,353.75	2,660,436.08	22,7554.3	152,819.5	767,9325
3	Chhattisgarh	312,875	557,947.7098	108,184.124	8,635.475	9,230.572	185,522
4	Gujarat	497,661	413,126.4	22,394.745	2,239.477	857.3528	170,576
5	Haryana	359,343	601,956.6842	189,823.697	16,764.47	6,178.176	201,135
6	Himachal Pradesh	152,419	1,016,063.59	64,990.1713	7,485.462	4,776.635	66,723
7	Jharkhand	362,907	344,627.6092	66,320.7679	5,818.656	4,413.825	313,476
8	Karnataka	819,520	1,036,405.672	137,472.033	14,960.21	11,870	631,623
9	Kerala	98,584	70,868.04482	21,404.997	2,208.875	1,455.805	59,034
10	Madhya Pradesh	964,190	1,676,806.177	363,946.543	32,685.66	18,140.49	804,398
11	Maharashtra	643,217	734,610.1693	254,898.929	31,662.19	27,187.28	476,129
12	Odisha	315,755	456,503.668	117,798.568	5,656.268	3,210.353	215,814
13	Punjab	67	338.2	47.576	4.793926	0.67415	50
14	Rajasthan	32,886,047	450,49023.28	3,897,854.51	357,568.4	230,408	1,804,2120
15	Tamil Nadu	131,558	178,622.6961	31,801.9226	3,040.745	1,742.522	57,848
16	Uttar Pradesh	533,852	368,593.5053	124,969.937	11,625.25	5,875.651	322,346
17	Uttarakhand	88,961	191,620.9513	28,958.9602	3,475.095	4,399.763	51,840
18	West Bengal	105,294	116,493.4455	18,311.0081	1,779.563	1,402.739	61,480
	Total	52,102,263	68,736,896.22	9,246,292.33	84,6521.3	57,1479.1	31,355,947

Source: Annual Report of Department of Agriculture and Cooperation for 2014-15

Robust storage, transport and marketing infrastructure should be developed with public funds to reduce farming risks. In addition, full-fledged marketing reforms are needed

Yet another crucial initiative to reduce farming risks is the development of robust storage, transport and marketing infrastructure with public funds. This has to be coupled with full-fledged marketing reforms to create mechanism that enable farmers to get remunerative prices for their produce without tortuous wait at the exploitative mandis.

The comprehensive package to tackle agrarian crisis should also herald a shift from the calamities-driven rescheduling and write-off of farm loans to a strategy to keep indebtedness below the distress levels while providing the requisite credit.

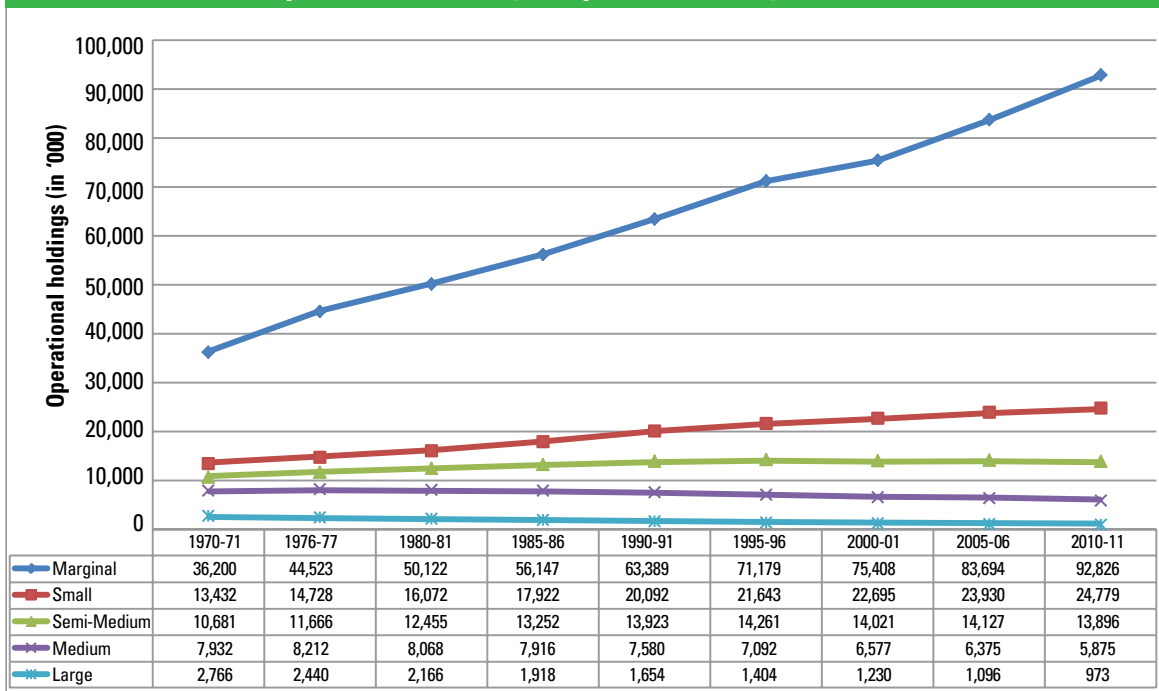
The strategy can be developed by integrating recommendations of different committees set up by the government and the Reserve Bank of India (RBI) to resolve farm credit issues over the last 15 years. It is pertinent to turn to the report of the 'Working Group to Suggest Measures to Assist Distressed Farmers' submitted to the RBI in November 2006.

It observed: "Manifestation of distress is stressful behaviour arising out of social, economic and psychological reasons. However, one common factor that can be seen across all regions is that manifestation of economic distress is primarily through indebtedness."





Table 5: Number of operational holdings as per different agriculture Censuses



Source: Agriculture Census 2010-11

ICICI Bank pays ₹219.4 crore to government due to CAG-PAC's vigil

"As managing director and CEO since 2009, she has brought India's largest private bank a global vision and impressive returns, while also reaching out to the nation's masses with branches in remote villages where banks simply didn't exist."

This is how Mr Anshu Jain, Co-CEO of Deutsche Bank, profiled ICICI Bank CEO Ms. Chanda Kochhar in Time magazine, which included her in its annual list of the World's 100 most influential people released on April 16, 2015.

Mr. Jain's perception has to be taken with a pinch of salt. It should be read along the disclosures contained in three different reports tabled in Parliament, the latest one of which was presented on April 27, 2015.

The latest one from the Public Accounts Committee (PAC) revealed that ICICI Bank has paid ₹54.80 crore penal interest on ₹164.60 crore that the latter wrongly took from the government under a farm loan waiver scheme. It was implemented by UPA regime during the two-year period ending June 30, 2010.

In its action taken report (ATR) on 'Implementation of Agricultural Debt Waiver and Debt Relief Scheme' (ADWDRS), 2008, the PAC said: "Rs 164.60 crore has been recovered from ICICI Bank along with penal interest of ₹54.80 crore effecting a total recovery of ₹219.40 crore."

In the main report, PAC had quoted the government

as saying: "Rs 164.60 crore had been recovered from ICICI Bank and the RBI had been advised to recover the penal interest due from the Bank."

PAC had turned the heat on Finance Ministry's Department of Financial Services (DFS) and Reserve Bank of India (RBI) for serious irregularities unearthed by Comptroller and Auditor General (CAG) through a test audit of the implementation of ADWDRS.

In its report presented to Parliament in March 2013, CAG had stated: "A Private Scheduled Commercial Bank has received reimbursement for loans, amounting to ₹164.60 crore extended to Micro Finance Institutions (MFIs) in violation of the guidelines."

In May 2008, RBI had announced guidelines for implementation of ADWDRS that envisaged write-off of loans taken by 3.69 crore small and marginal farmers. The guidelines also provided for partial relief to other farmers. The scheme envisaged total cash outgo of whopping ₹68,376 crore from the national exchequer. The scheme's ambit did not cover MFIs.

As CAG put it, "Only agricultural loans disbursed directly to farmers were eligible for reimbursement. In November 2010, DFS also clarified to Audit that agricultural loans extended to MFIs by banks were not eligible under the scheme for reimbursement from the government of India. During audit in five states (Andhra Pradesh, Chhattisgarh, Odisha, Tamil

Cottage and micro enterprises can produce standardized items made from farm produce and farm by-products/wastes. These need to be given a fresh impetus

To save farmers from the exorbitant interest rates charged by private lenders, the group, chaired by reputed economist Dr S. S. Johl, recommended legislation of a 'Moneylenders Regulating Act'. The proposed law should stipulate that the total liability of the borrower should not exceed double the amount borrowed. It should also cap interest rate at the prime lending rate of SBI plus a margin of, say, four per cent.

The government should also realize that existing non-farm employment schemes such as MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) and food parks are not adequate to ameliorate the plight of rural people. There is need to fine-tune existing schemes and step up allocations. It ought to

launch new schemes with active participation of reputed co-operative and private marketing entities. The underlying objective should be to give a fresh impetus to cottage and micro enterprises that would produce standardized items made from farm produce and farm by-products/wastes.

The Modi government should thus unveil an innovative programme that facilitates dispersal of manufacturing and service industries, especially ancillaries, to semi-urban and rural areas. As Dr Johl's group said: "The secret of amelioration of farmers' 'distress' may well lie in the non-farm sector. These farmers must either be empowered with alternative skills to make them capable of moving out of farm sector or be enabled to become part-time farmers." ●

Nadu and West Bengal), it was noticed that a Private Scheduled Commercial Bank has received reimbursement for loans, extended to MFIs."

CAG dismissed ICICI's explanation that it had lodged a claim under ADWDRS for certain borrowers sourced through MFIs that acted as service providers.

CAG found that disaggregated data of the loan accounts sourced through MFIs was not maintained by the Bank. These loans could not be considered as direct lending to farmers since a lump-sum credit arrangement facility was given to the MFI, against which the MFI actually disbursed the loan to borrowers identified by it.

The report observed: "there was no evidence to show a direct relationship between the recipient farmer and the bank, i.e. the individual loan accounts were not on the books of the bank. This was also evidenced by the fact that the debt waiver/debt relief was credited, not to individual accounts but to the account of the MFI."

CAG also could not "get any reasonable assurance that benefits of such waiver were extended to the actual beneficiary as copies of the certificates duly acknowledged by the individual beneficiaries, as stipulated in the guidelines, were not available with the Bank."

There is nothing in the public domain to show that ICICI Bank made a public disclosure about the

financial impact of CAG-PAC reports on its operations. It has thus left a question mark on corporate governance and business responsibility norms.

ICICI is not the only bank that has operational linkages with MFIs for reaching out to poor rural households. Then how is that no other bank filed claims for routing loans through MFIs under the Scheme?

As for Mr Jain, being one of the world's most competent banking professionals, he knows that Indian banks are obligated by RBI to spread their network to unbanked areas under its branch authorization/licensing policy.

"The current branch authorisation policy mandates that banks have to open at least 25 per cent of all branches opened in a year in unbanked rural centres," says RBI's Master Circular on Branch Authorization dated July 1, 2014.

It is also baffling to find that public interest litigation (PIL) activists have not lapped up the PAC and CAG reports to demand a thorough probe into several irregularities in the execution of ADWDRS.

PAC's latest report has quoted the Finance Ministry as stating that "in 4,030 cases of tampering of records, 22 FIRs (first information reports) were filed."

Was there any FIR against any ICICI official? Would any RTI activist facilitate answer to all such questions by seeking all relevant documents on the waiver scam?

**COVER
STORY**

DISTRESS CYCLE TO DISTRESS CYCLE: Circling the Rural India Story

Prabha Jagannathan



In the seven decades since Independence India's rural development policy has suffered neglect, wanton blindsiding, hollow rhetoric and lack of political vision. That persistent vacuum of a holistic and sustainable state policy for the farm sector has ensured that growth in rural India remains episodic and abrupt.

Decades of depressed agri produce prices have allowed only the richest farmers to access good housing, education, affordable medical care, transport, insurance against risk, affordable labour, modern farm technology and real time price discovery. Despite these immense odds, the Indian farmer has battled to remain a private entrepreneur. An overwhelming 85 per cent are small and marginal holders who depend on the rains to raise crops. As landholdings fragment, farming has become exponentially unviable, with each passing decade.

The average holding is only 1.15 hectares and defined by low productivity. Experts say that even two crops and a high output cannot provide a comfortable income for a family of five. Yet, India



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developments

the comparatively better rural growth period of 2003-04 to 2013-14 could well now be history. Add to that forecasts of a poor monsoon and continued high volatility in global commodity prices through 2015, the report card on India's rural economy is likely to remain grim unless urgent measures to redress the situation are taken.

Labour Bureau numbers point to the shocking conclusion that for the first time in 10 years, the average annual growth rate in rural wages has been pegged at a record low of 3.8 per cent in November, the lowest since July 2005. The 3.8 per cent year-on-year increase is reportedly a significant drop relative to the two-digit growth rates prevailing until June, and the peak 20 per cent-plus levels of 2011.

Going by the high suicide numbers in rural India, the farm sector has never fully emerged from its crisis state post the economic reforms. The National Crime Records Bureau (NCRB) figures suggest that the total numbers since 1995 is as high as 2.75 lakh countrywide, with Maharashtra accounting for over

For the first time in 10 years, the average annual growth rate in rural wages has been pegged at a record low of 3.8 per cent in November 2014, the lowest since July 2005

remains the top global producer of rice, wheat, vegetables, fruit and milk. If the current trends persist, however, all of that may very soon become a boast of the past, throwing the nation's food self reliance to the winds.

The 2009 drought was the worst crisis faced by the Indian farmer in the last three decades, but the following years of good crop production and political factors encouraged policymakers into glossing over the fundamental flaws in the rural economy that could jeopardise overall growth. The contribution of agriculture to the gross domestic product (GDP) has fallen significantly over the years, from 50 per cent before Independence to 20 per cent in the early 2000s, to only 13.7 per cent at present. But it still hosts 50 per cent of the total workforce, both directly and indirectly, which makes it important for any government in power to chart a holistic policy blueprint for this crucial sector.

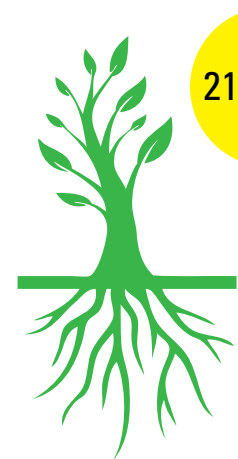
The resurgent rural distress in 2014-15 should force reluctant policymakers to acknowledge that

60,000. Some of the suicides have been among rich commercial crop farmers including those farming vanilla, coffee and sugarcane.

In order to coin sustainable, inclusive and growth-boosting long term solutions, the rural/agrarian growth graph should be read in continuity from distress cycle to distress cycle and not from distress to revival cycle, especially in the complete absence of a beyond-the-monsoon infrastructure. Without proactive intervention, the prognosis appears far from happy.

MGNREGA, Redefining the Rural Economy

The revival of the rural economy under the United Progressive Alliance (UPA) was rooted in the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which boosted wages manifold. As a ripple effect, it also doubled and tripled (sometimes even quadrupled) the wages of home and other unskilled workers in urban areas drawn from rural backgrounds, whose remittances spruced up the rural economy. The



intent of the scheme was never in question: it promised demand-based work for one member of each eligible family for a guaranteed 40 days a year at ₹100 a day. Months into the scheme, studies concluded that after decades of highly and deliberately depressed rural wages (farm and non-farm), MGNREGA was the only legitimately enforceable scheme by which unskilled labourers could expect to earn anything remotely close to minimum wages.

A study by Manoj Jatav and Sucharita Sen on the growth processes in rural non-farm employment has concluded that the sector went through major restructuring leading to an increase of casual labour in tandem with a continuous decline of self and regular employment. This study based on the 2009-10 employment and unemployment round of the National Sample Survey Office (NSSO) observed: "Considering the overall deceleration of rural employment until 2009-10, the importance of the MGNREGS in rural employment generation and the feminisation of casual workforce in the non-farm sector (has to be emphasized). The results indicate the crisis of joblessness would have been



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The UPA too, towards the end feared high wages would directly impact the farm sector in sowing and harvesting times. It opposed a High Court ruling on a higher wage rate

more acute without the scheme." The study adds that the overall quality of rural employment, driven by distress factors, had deteriorated significantly in the period 2009-10 from 2004-05.

While it may be a good idea for policymakers to streamline and constantly straighten out glitches in the implementation of the scheme, it may not be as good an idea to throw the baby out with the bathwater without carefully considering all aspects of the scheme's impact on the rural economy.

MGNREGA Under the Modi Government

It is a fact that MGNREGA became a source of massive fund leakage away from actual beneficiaries and delivered far less than it was actually committed to. Its effectiveness in rural infrastructure building had come under stringent scrutiny forcing the UPA government to introduce auditing and widen the scope of productive activities under the scheme. Towards the end of its tenure even the UPA leadership feared that high wages would directly impact the farm sector in crucial sowing

and harvesting times. As a consequence the UPA government had opposed the Karnataka High Court ruling on linking payment under MGNREGA to far higher minimum wages. (The Centre had fixed the wage rate for agricultural workers in Karnataka at ₹82, as per a January 2009 notification; the High Court held that the appropriate wage rate of ₹119.42 should be paid. The Union government appealed against the high court order in the Supreme Court.)

If Prime Minister Narendra Modi's sharply negative reaction to the world's largest job guarantee programme is any indication, MGNREGA will only find decreasing priority in its policy perspectives. In Parliament, Modi mocked the Congress over the ineffectiveness of the scheme. The jibe was highly political in nature but it was based on a definite worldview. In developed nations, which had undergone a farm sector crisis, the migration of rural labour into the manufacturing sector was a matter of natural progression in overall economic growth. The government's policymakers are of

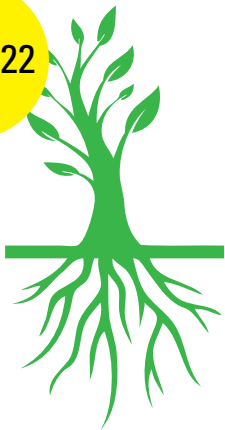




Table 1: Agriculture productivity in India, growth in average yields from 1970 to 2010

Crop	Average YIELD, 1970-1971	Average YIELD, 1990-1991	Average YIELD, 2010-2011
	Kilogram per hectare	Kilogram per hectare	Kilogram per hectare
Rice	1,123	1,740	2,240
Wheat	1,307	2,281	2,938
Pulses	524	578	689
Oilseeds	579	771	1,325
Sugarcane	48,322	65,395	68,596
Tea	1,182	1,652	1,669
Cotton	106	225	510

Source: Wikipedia

the view that the mammoth scheme, based on entitlement and mandatory “high” wages, has been the biggest block to rural growth, damming this natural flow of excess rural workforce into other sectors. In its absence, it is felt, there would have been decreased pressure on land, which could have naturally led to rural economic growth and rejuvenation, both farm and non-farm.

But the numbers that migrated from rural to urban India are stupendous, indeed, and outline a perennially mobile nation in search of work even in the decade between 2003-04 and 2011-12. Agri economists attribute the movement of an estimated 37 million to urban jobs in the construction,

manufacturing and services sector to a booming economy, good crop prices and high rural wages. “This (movement of labour from agriculture) had never happened before in India’s history. But it also gave rise to labour shortages in the countryside,” contends Ashok Gulati, former chairperson of the Commission of Agricultural Costs and Prices.

According to the 2011 Census, for the first time in 90 years, India’s urban population is higher (91 million more than in 2001) than its rural population (90.6 million higher, at 833.1 million) compared to a decade ago. The Census cites three possible causes for the urban population to have risen more than the rural: migration, natural increase and the rapid



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urbanisation of heretofore rural and semi-urban areas.

But Magsaysay awardee and writer on rural affairs P Sainath, viewing the developments in a larger post-reforms timeframe, suggests that this historic movement may have been driven primarily by a disguised and perennial rural crisis, (notwithstanding an apparent boom in the last decade marked by higher crop production, better prices, higher rural wages). During this decade, in fact, urban growth-driven fresh opportunities in construction, manufacturing, even the services sector, may have lured rural workers to new opportunities, once they were assured that things at home were relatively better than before. Post reforms, rural India has been on the move, in times bad and worse.

Dangers of a Distress-Driven Solution: Push vs Pull Factors

The Modi government wants to focus on urban growth-centric measures to engender rural farm and non-farm rejuvenation. Part of the plan is to foster conditions for the exit of excess rural workforce to urban India. The plan includes facilitating the sale of land (including cultivated land) by simplifying rules under the Land Acquisition Bill.

But can a real solution to the fundamental

problems of the primary sector, spurred by sustained institutional and policy blindsiding, actually be found in driving huge rural workforces to urban centres with creaking infrastructure and sluggish growth? At the same time is it possible to be just, fair, unexploitative and ensure prolonged well-being to rural workers?

It is most worrying that the government's development plans for the rural sector appear mainly distress-driven and not growth-driven, based on push rather than pull factors. Workable long-term solutions for rejuvenating the primary sector can only emerge from a 4 per cent growth floor for agriculture, Gulati has suggested. In short, it is attempt to a constructive overhaul of the sector from below, that growth level would be distress driven and remain cosmetic.

Arming rural youth aggressively with specialised technical skills that are in demand in urban growth narratives could be one part of the solution or for that matter, incentivising activities like poultry and bee-keeping. State policies could also be oriented to encourage cooperative farming and agriculture-based cottage and micro industries with assured marketing avenues linked to towns and cities. But there are no shortcuts to this. Some studies, based

on the number of labour force that exited the rural sector in the last decade, suggest that the structural shift of employment out of crisis-hit agriculture (of the sort experienced by developed countries) has already taken place in India. It suggests that the scattered and informal, unskilled workforce may have been absorbed mainly by the construction sector. But key questions remain since India deviated from the traditional growth trajectory from farm to manufacturing. And the weary feet of the millions of always moving rural families in search of work tells a hard tale.

A comprehensive Modi mantra for the revival of the rural economy has yet to emerge. But broadly, its strategy seems two-pronged: One, to boost manufacturing sector growth exponentially and two, to plot agriculture sector growth by, ferreting out “disguised unemployment” and forcing excess rural workforce to employment in cities. There seems to be a priority to avoid boosting investment

the latest cropping practices, organic farming, affordable and accessible connectivity, physical and communication, electronic linkages to the closest mandi to facilitate real time price discovery for commodities, a smooth supply chain connectivity, risk mitigation options, last mile financial inclusion, giving a huge boost to warehousing receipts as negotiable instruments and so on.

Despite being mulled for years, this last mile has yet to capture widespread imagination, mainly due to the sore absence of standardised temperature-regulated warehouses and godowns. The agriculture price stabilisation fund designed to ensure an assured income for the farmer’s produce across crops is yet to take off. All of these need a huge and intelligent forward push.

It also implied loans to meet unmet needs of the farmer’s family including for births, marriages, gifts, pilgrimages, medical and consumer goods spends etc as distinct from farm loans. The NSSO

Some studies, based on labour that have left rural India in the last decade, suggest that the structural shift of employment out of crisis-hit agriculture has already taken place in India

in farm and rural infrastructure exponentially. Government spending in the primary sector has plummeted to only 14.7 per cent of the total over the years. And the private sector wants land where rural infrastructure pre-exists and modernisation of technology and access to markets is assured.

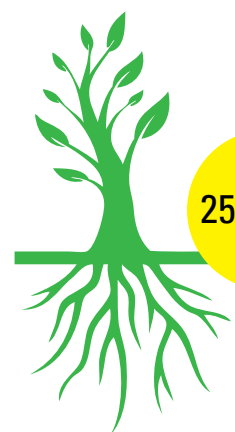
Building a Beyond-the-Monsoon Infrastructure

The beyond-the-monsoon infrastructure referred to in successive Budget speeches by former Finance Minister P. Chidambaram implied both hard and soft infrastructure to insure the farm sector against the vagaries of the weather. This included roads, rail connectivity, warehouses to store grain against a high price season, cold storage for horticulture, fruits and vegetables and long term and steady power supply for both irrigation and storage. It also included aggressive government spending on creation and sustenance of local water bodies (as opposed to large irrigation projects), rainwater harvesting to keep water tables healthy, periodic soil health checks and report cards, an aware and informed extension service that will impart latest knowledge on crop, poultry and other insurance, government help programmes and schemes,

survey numbers bear out that over 40 per cent of the loans taken by farmers are spent on non-farm social and cultural activities, many of these are inextricably linked with the farmer’s own standing in his society. In addition to formal loans, private money lenders and other non-institutional sources are also tapped heavily mainly by small and marginal farmers in rainfed regions but also by richer farmers in irrigated areas.

Dr M. S. Swaminathan acknowledges that the farm credit system is fundamentally skewed. Plus, there are no studies linking higher credit to higher productivity. But in times of crisis, most farmers have little option for survival as input costs soar and commodity face high price volatility. One season of loan impacts the farmer for three crop seasons (and the repayment burden runs even through a good crop season) but a repeat weather disaster may well push him to the brink of debt trap and destruction.

To speedily boost last mile financial inclusion for those outside the system, the Modi government has introduced some new schemes. But how well will these succeed? At present close to 70 per cent of the accounts under the Prime Minister’s Jan Dhan Yojana show nil activity for a variety of physical and financial reasons.



Making India Through Make in India

To boost growth in manufacturing, the government is working on changing crucial labour laws (“we believe in making many small changes rather than resorting to a big bang”) to make workforce cheaper to speed up urban growth. In her April 2015 article on the Modi regime’s approach to labour, Anamitra Roychowdhury contends: “One of the major policy instruments through which this (the 2011 National Manufacturing Policy which aimed at creating 100 million jobs along with hiking the share of the sector in the GDP to 25 per cent by 2022 from only 15 per cent) was sought to be achieved is by changing the labour laws.”

Similarly, the Modi regime, to ensure the resounding success of Make in India “...has proposed far reaching amendments to the Factories Act, 1948; Apprentices Act, 1961 and the Labour Laws (exemption from furnishing returns and maintaining registers by certain establishments) Act, 1988...” In the Factories Act one of the proposed amendments are to reduce drastically the paid leave eligibility for workers from 240 days to 90 days.



Will the government’s schemes to boost last mile financial inclusion for those outside the system succeed? Presently 70 per cent of Jan Dhan Yojana accounts show nil activity

Hire and fire rules for workforce are also sought to be made easier for industry. Other labour law changes include allowing women workers on night shift (but with requisite safety measures in place).

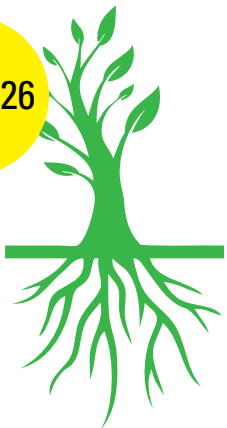
Roychowdhury maintains “...it is clear that the recent labour law changes are overwhelmingly in favour of the employers and detrimental to the cause of the working class. These changes are primarily aimed at improving India’s rank in the ‘Ease of Doing Business’ index which actually slipped from 140 to 142 in 2014...” Political analysts are of the view that the NDA government led by former Prime Minister Atal Behari Vajpayee lost its support on account of an urban-centric ‘Shining India’ campaign in the thick of a rural economic down-spiral and that the Modi government would do best politically to directly address fundamental flaws behind the rural crisis.

In particular, they question the timing of the proposed changes (the only long term livelihood insurance for farmers) in the land acquisition bill as much as the rationale behind making it central to the rural economic growth plans. “If rural infrastructure were put in place two decades ago,

the private sector would have moved in and farmers would have reaped the fruits of modern technology and market connectivity by now, alleviating rural distress and driving excess workforce out of farming by choice towards fresh opportunities elsewhere,” asserts farmer Rajendra Singh from Dinesh Nagar, off Pilkhwa on NH24 whose two sons are professionals in nearby Ghaziabad town.

Spectre of Jobless Growth in Manufacturing

Economists attribute the rise in rural wages since 2007 to increased non-farm employment on the back of an economic boom spurred by improved telecom and physical connectivity from rural areas, high rural wages and the MGNREGA scheme alongside regularly upped floor prices for key crops. With all causal factors weakening, they contend, there is a reversal in rural economic health after 2014. In the context of food inflation, this is viewed, ironically, as a “positive” development, irrespective of whether the producer is getting a fair price for his produce. But there could be another key concern for the Modi government’s plan of massive manufacturing sector growth.





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Analyst Kannan Kasturi acknowledges that for the first time since 2004, absolute numbers employed in agriculture have declined, as evidenced in the sharp 10 per cent drop between 2004-05 and 2011-12. The declining participation of labour force in the country's transition towards industrialization, he says, could have been treated as a natural and inevitable phase but for the disproportionate employment trends visible in the industrial sector. From 2004-05 to 2011-12, he contends, India's real non-agricultural GDP grew by an average 9.4 per cent per annum, but employment therein grew only at 3.5 per cent. Between 2004-05 to 2011-12 services and manufacturing were the fastest growing sectors at 10.1 per cent and 8.9 per cent respectively. However, they added jobs only at 2.5 per cent and 1.5 per cent respectively.

Given the backdrop, the biggest challenge for the government could be to ensure that the manufacturing sector does not get trapped in jobless growth as it did in UPA's time but provides dignified employment avenues to millions of "unskilled" farm workers trapped in unviable agriculture. ●

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Urea Surge: NBS Falts, CAG Indicts

A report of the Comptroller and Auditor General (CAG), the constitutional guardian of the public purse in India, has held the Department of Fertiliser (DoF), a part of the Union Ministry of Chemicals and Fertilizers, responsible for failing to implement the Nutrient Based Subsidy (NBS) policy for the benefit of farmers while favouring the fertiliser company to take advantage of the subsidy. According to the report, tabled in Parliament on May 8, 2015, miscalculation of the benchmark price has resulted in a loss of ₹5,555 crore to the Government of India (GoI). It observes that the amount lost could have been used for the benefit of farmers.

This is the first time that the CAG has conducted an audit of NBS policy, which was introduced by DoF (from April 1, 2010) in order to improve agriculture productivity, ensure balanced use of

fertilisers, promote growth of indigenous fertilizer industry and to reduce the burden of subsidy. Under the NBS policy, minimum retail price (MRP) of phosphatic and potassic (P&K) fertilizers has been left open.

Prior to this a 'Concession Scheme' was in place for decontrolled P&K fertilizers (decontrolled in August 25, 1992), introduced in October 1992 and continued till NBS was put in place. Consequent to decontrol, the prices of P&K fertilisers had registered a sharp increase. Under the concession scheme, the maximum retail price of P&K fertilizers was fixed by the government at a level lower than the actual cost and the difference between the actual cost and MRP was reimbursed by the government to manufacturers/importers in the form of subsidy.

The failure in implementing NBS, the CAG report argues, pushed farmers to buy more urea because

it was the cheaper option vis-à-vis P&K fertilizers. Being sold at ₹15,150 per metric tonne (PMT), even P&K fertilizers had higher proportion of nitrogen than the required ratio of the components, making it a product much like urea.

Excessive usage of urea (main component is nitrogen) leads to soil degradation and low productivity. Usage of urea leads to the formation of ammonium (source of nitrogen for plants) and hydroxide, increasing Ph of the soil upto 9 and in long term use results in soil infertility.

Most vegetable crops are cross-pollinated. An extensive use of urea or any fertiliser with high nitrogen content doesn't only decrease the soil fertility but also kills the natural pollinators in the process, resulting in low crop yield.

The CAG report (2010-11 and 2013-14) which acts as performance audit on NBS policy highlights the following facts:

- DoF has distributed a total subsidy of ₹137,611 crore during the period 2010-11 to 2013-14 under NBS Policy to the fertiliser companies for providing decontrolled P&K fertilizers.
- The preferable ratio of NPK (Nitrogen, Phosphorus and Potassium) in P&K fertilizer is 4:2:1. As against the preferred ratio, 'N' jumped to a ratio level of 8.2 in 2012-13 and stood at 8:2.7:1 in 2013-14. This implies that fertiliser companies producing P&K increased the ratio of nitrogen which made NPK a product much like urea thereby decreasing cost of production.
- Urea was sold at a market price of ₹5,360 in 2013-14 at only 1 per cent increase in cost compared to its market price in 2010-2011. NPK's market price in 2013-14 was ₹15,150, which was a whopping 104 per cent increase in the cost when compared to its market price in 2010-11. This huge difference in cost naturally pushed farmers to buy more urea than NPK fertilisers.
- There was no increase observed in the production levels of diammonium phosphate (DAP) and complex fertilizers during NBS regime.
- The benchmark price of DAP for 2011-12 was fixed by DoF at \$450 PMT was less as compared with prevailing prices for that period. As a result, fertiliser companies could not enter into contracts for import of DAP. As a result, the benchmark price was refixed

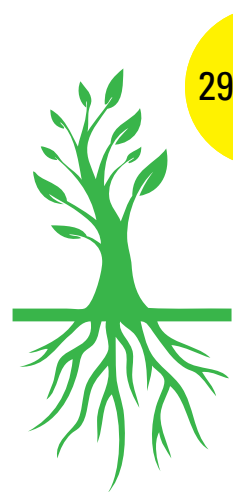
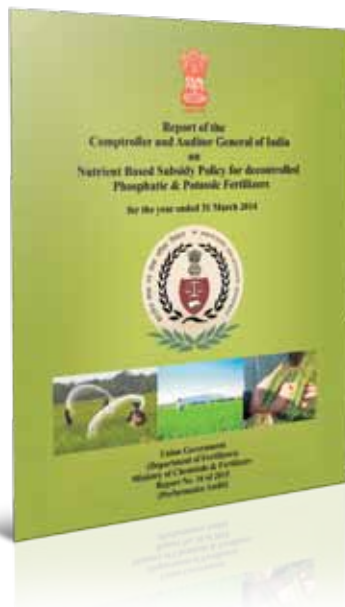
at \$612 PMT in May 2011, leading to additional subsidy burden of ₹5,555 crore for the government.

- The recommendation of the inter ministerial committee (IMC) to pay a lump sum amount of ₹200 PMT as freight to Single Super Phosphate (a local fertilizer) manufacturers was notified by DoF, without taking an approval from the cabinet (w.e.f January 1, 2011). The implication of removal of secondary freight subsidy was only ₹104 PMT the additional payment of INR 96 PMT was not justified and resulted in excess payment of ₹25.74 crore.
- In circumstances where manufacturers were free to set MRP of P&K fertilizers, such manufacturers (using cheap gas) were unduly benefitted. DoF was time and again directed and reminded by the Empowered Group of Ministers (EGoM) and Minister of State for Chemicals & Fertilizers to finalize guidelines for effecting recovery of these undue benefits but DoF, neither finalized any such guidelines nor made any ad hoc recoveries, even after a lapse of two years.

Urea was sold at a market price of ₹5,360 in 2013-14 at only 1 per cent increase in cost compared to its market price in 2010-2011

- DoF decided on February 8, 2012 that DAP, NPK (all grades) and Muriate of Potash (MOP) fertilizers arriving in various ports during February 2012 and March 2012 would not be dispatched to any state till further orders. DoF however reversed the decision on February 28, 2012 despite adequate availability of these fertilizers in the country. The decision of DoF to revoke its earlier position provided an opportunity to the fertilizer companies to keep on supplying imported fertilizers and claim subsidy at a higher rates, resulting in additional avoidable subsidy burden of ₹653 crore on the government of India.
- There are no logical guidelines laid down by DoF to assess and enforce the reasonableness of MRP fixed by the fertilizer companies. ●

Research and Compilation: Sneha Mukherjee



Designed to Fail: CAG Raps Flawed Planning for RKVY Woes

A performance audit report on the Rashtriya Krishi Vikas Yojana (RKVY) tabled in Parliament on May 5, 2015 by the Comptroller and Auditor General (CAG) has flagged ineffective policy implementation and irregularities. In the period 2007-08 to 2012-13, on which the audit report is based, against an allocation of ₹32,460.45 crore, ₹30,873.38 crore was released to 28 states and seven union territories, out of which only ₹28,083 crore could be spent.

The RKVY was launched in 2007-08 as part of the 11th Five Year Plan. It was designed as a state plan scheme with complete flexibility to the states to choose projects specifically tailored to their conditions for generating growth in agriculture and allied sectors. The scheme was to act as a catalyst in incentivizing the states so that 4 per cent annual growth in the agriculture sector could be achieved.

The experience from BRICS (Brazil, Russia, India, China and South Africa) countries indicated that a one per cent growth in agriculture was at least 2-3 times more effective in reducing poverty than the same growth emanating from the non agricultural sectors. But India has witnessed a constant decrease in agricultural growth rate from 4.8 per cent (8th Five Year Plan) to 2.5 and 2.4 per cent in 9th and 10th Five Year Plans respectively.

Not only that, cases of farmer suicides continue to be reported on a regular basis. According to an Intelligence Bureau (December 19,

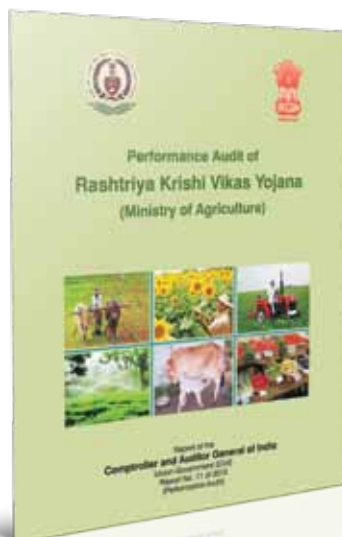


2014) report, there has been a surge in cases of farmer suicides in Maharashtra, Telangana, Karnataka and Punjab recently, besides reporting of instances in Gujarat, Uttar Pradesh and Tamil Nadu.

An average Indian still spends almost half of his/her total expenditure on food, while roughly half of India's work force is still engaged in agriculture for its livelihood. Being both a source of livelihood and food security for a vast majority of low income, poor and vulnerable sections of society, its performance is significant.

The CAG audit has highlighted that out of 393 projects selected in 19 sectors of the RKVY for examination cases of underperformance and irregularities were noticed in 150 or roughly 38 per cent of the projects. Among the reasons cited for underperformance is the lack of a detailed planning process upfront without consideration of local factors.

- In 24 of total 27 states covered in the review (excluding Mizoram), there was no participation of grassroots agencies – Gram Panchayats, Gram Sabhas, Block Agriculture Planning Units, Village Agriculture Planning Units in





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formulating district agricultural plans. In five states, 143 projects with approved cost of ₹1,962.29 crore were included in the state agricultural plan without being reflected in the district plan

- 73 project proposals of nine states costing ₹367.99 crore were overlooked by the State Level Sanctioning Committees (SLSC's) and were sanctioned without addressing their deficiencies as pointed out by the ministry.
- In four states, 10 projects costing ₹64.40 crore unrelated to agriculture and allied sectors were approved by the SLSC's and received funds under RKVY.

The CAG report also highlights clear cases of financial mismanagement in the deployment of RKVY:

- As per ministry records, in the period 2007-08 to 2012-13, out of an allocation of ₹31,732.06 crore, ₹30,494.50 crore was released and expenditure of ₹27,938.52 crore was incurred.
- In 11 states grants amounting to ₹759.03 crore were found parked in personal ledger, personal deposit, and savings bank accounts.
- There is a gross mismatch of ₹3,978.01 crore in the figures of release and expenditure as reported by the ministry and the states. While the states reported expenditure of ₹31,916.53 crore in the period 2007-08 to 2012-13, the

corresponding figures reported by the ministry was ₹27,938.52 crore. The ministry did not try to reconcile the figures.

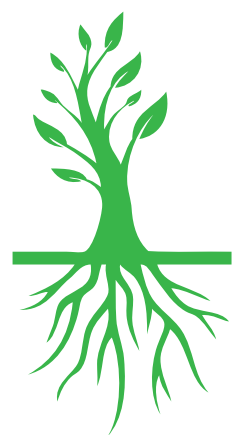
Some instances of the expected benefits of RKVY are as follows:

- In Gujarat a project of crop development costing ₹43.81 crore aimed at enhancement of production and productivity of crops of maize, bajra and mustard remained incomplete due to a lack of distribution of pesticides, fertilisers and micronutrients to farmers at subsidised rates.
- In Andhra Pradesh, 8,000 maize shellers were distributed among only 2,916 farmers.
- In Maharashtra ₹4.26 crore was wasted because a project of pre-cooling, ripening and cold storage for banana could not take off.
- In Uttar Pradesh (UP), under the Green Manure Programme, 1.20 lakh seeds (43 per cent of the total seeds supplied) costing ₹61.43 crore were supplied after sowing time. Besides, a huge amount from the budget was wasted. Also in UP, in 10 selected districts, a subsidy of ₹9.12 crore was utilised for construction of deep and medium tube wells, an act which violated recommendations made in the State Agricultural Plan and posed grave environmental hazards.
- In Karnataka, under a project to supply livestock vaccines to farmers, six pieces of equipment costing ₹5 crore were lying idle due to delay in modifying the laboratories to good manufacturing practices (GMP) standards adversely affecting the production of vaccines. Also in Karnataka, a project of ₹15 crore for organic farming suffered, since the important market link for selling products grown organically was not provided, leading farmers back to inorganic methods of farming.

Making a concluding remark, the CAG said that it couldn't find come up with a measure to evaluate how effective RKVY was vis-a-vis increased production and growth rate of the agricultural sector. As per Central Statistical Organisation, during 11th Plan period (2007-08 to 2011-12), the average growth rate of agriculture and allied sectors were 3.6 per cent which was 0.1 and 0.8 per cent in 2008-09 and 2009-10 respectively. It was 1.9 per cent in 2012-13.

The CAG observed that no relation between RKVY implementation and agricultural growth rate could be established, as it was not a measurable target under the scheme. ●

Research and Compilation: Sneha Mukherjee



A close-up photograph of a person, likely a woman, wearing a bright orange shawl over a blue shirt. She is carrying a large, flat, metallic bowl balanced on her head. The background is a blurred natural setting with green foliage. The text 'CONTROVERSY' is in the top left, and the main title and author's name are in the bottom left. A copyright notice is in the bottom right.

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LARR:

An Act of Commission and Omission

Bhavdeep Kang

A few days short of the first anniversary of the incumbent National Democratic Alliance (NDA) government, the Bharatiya Janata Party (BJP) president, Amit Shah, told a group of mediapersons at an informal interaction over dinner: “Not an acre of land acquired by the government will be handed over to industrialists” (under the proposed Land Acquisition Amendment Bill, 2015). A few hours earlier, the subject had come up during a meeting with representatives of Rashtriya Swayamsevak Sangh (RSS) frontal organizations, the Bharatiya Kisan Sangh, the Bharatiya Mazdoor Sangh and the Swadeshi Jagran Manch, all of whom opposed the Amendment bill. Shah assured them it was kosher: the private sector would not get its hands on government-acquired land.

Over the next few days, Shah gave a series of interviews to various media organizations, hammering home his promise not to yield farmland to corporates. The “acre” shrank to an “inch” in the headlines. “Not an inch of land will be given to corporates,” he declared. The bill itself, going



BHAVDEEP KANG
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specializing in
land and farm
issues

prepared by a parliamentary committee headed by BJP Member of Parliament, Sumitra Mahajan. The BJP joined hands with the Congress to pass the bill, after much debate, discussion and assertions that it did not go far enough to protect farmers. The LARR Act came into effect on January 1, 2014.

The act was intended to ensure that landowners were not stripped of their property, displaced from ancestral holdings and given peanuts for compensation, only to have their land handed over to the private sector to make a killing. Too many farmers had witnessed their fields being sheathed in concrete, for the benefit of industries – that sucked up all the ground water and polluted the whole area – or to opulent malls where they dared not set foot.

The act enhanced compensation to the point where it would match or at least approach the market rate (circle rates and registeries, on which compensation is based, are famously a fraction of the market price). It laid down strict norms for rehabilitation and resettlement. Most important, it

Farmers regularly see their fields being sheathed in concrete for the benefit of industries that suck out groundwater and pollutes the area. The fields also give way to opulent malls

strictly by the wording, offers no such guarantee.

Indeed, Shah’s statement is puzzling because it seems to go against the very spirit of the proposed Bill. If the private sector is not to get access to acquired land, why amend a provision of the LARR Act which makes it easier for it to do so? The government thus wants the nation to go by its *niyat* (intention) rather than its *niti* (policy) – a line it has consistently taken to pacify its RSS critics.

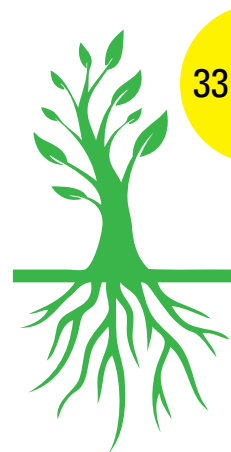
First, what is all the fuss about? A quick recap: as the sun was setting on the United Progressive Alliances’s (UPA’s) scam-ridden second innings, it made a last-ditch attempt to win farmers over before the 2014 Lok Sabha elections. The government moved a landmark bill, intended to right a historical wrong: the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (to the relief of TV commentators, the wordy title was immediately shortened to LARR Act). While the motive was political, the result was praiseworthy.

Interestingly, the bill was based on a report

also demanded that four-fifths of the landowners consent to the acquisition for private entities and 70 per cent for public private partnership (PPP) projects, on the premise that many farmers – sick of farming – would actually want their land acquired at reasonable rates or, if the proposed project involved a hospital or a college or a water harvesting system, they would happily surrender their land for a noble cause. The social impact assessment preceding the acquisition would take into account the possible social cost of the proposed exercise.

An act with many flaws (since it left a number of loopholes), nonetheless worthy of applause, at least from the 60 million people – living or dead – forcibly displaced from their lands since Independence, all to serve a larger “public purpose.”

Take the Delhi Development Authority (DDA), for instance. It indiscriminately acquired large tracts of land from Delhi’s villages for housing. Sometimes, the farmers fought back – in courts and in the streets – braving police lathis and tear gas. So much land was acquired that even the





Opposition condemned dilution of the LARR Act claiming the hand of big business behind it. The government then proposed an amended bill that would dilute the ordinance

DDA has no idea just how much land it owns. Earlier, this year, it “stumbled” across plots worth ₹2,500 crore. Now, the DDA’s chickens have come home to roost. Under the LARR Act, 2013, the Delhi High Court has passed a series of orders cancelling acquisitions going as far back as 1986. In many cases, it was found, the DDA had not even compensated farmers after taking their land!

The acquisition of land by DDA was justified on the grounds that it was a government agency, building affordable housing that was only leased, not sold. The DDA units now command market rates of up to ₹4 crore per unit and have been converted to freehold (for a heavy price, paid both over and under the table). Land was also handed over to developers, for hotels, malls and such others. So much so for ‘public purpose’. The LARR Act was thus long overdue. The abuse of eminent domain

– the power to take private property for public use – by the politician-bureaucrat-businessmen nexus had reached a point where it fit Frederic Bastiat’s definition of ‘legal plunder’. Tragically, most of the victims were forest dwellers.

When the NDA government, one month into office, said it would amend the act to make acquisition of farmland easier, hackles rose all through rural India, in tandem with smiles across boardrooms. Finding no takers for its proposed amendment, the government resorted to an ordinance, in the hope that it would muster up support to have it passed in the next session of Parliament. No dice. In fact, the issue injected life into a moribund Congress and awoke aspirations of becoming a farmer neta in Rahul Gandhi’s breast. In and outside Parliament, the opposition (such as it is) condemned the dilution of the



LARR Act, claiming it was being done at the behest of big business.

To be fair, the Congress took its cue from the Bharatiya Kisan Sangh, which had lobbied strongly against the bill. The government took a step back and proposed an amended bill that would dilute the ordinance somewhat. That did not help either. Finally, admitting defeat, after being characterized as a pro-corporate and anti-farmer “suit-boot sarkar”, the government referred the bill to a select committee. There the matters stands.

All the fuss centres around one little sub-section in the original Act. This is Section 2(2)(b), which refers to the eventuality of a government acquiring land “for private companies for public purpose, as defined in sub-section 1.” What does “for private companies for public purpose” imply? Going by the said sub-section 1, public purpose can mean practically anything. So the proviso that any such acquisition must have the consent of farmers and be preceded by a social impact assessment was welcome.

The amendment bill dilutes that proviso. It

inserts a fresh proviso, which says that five sectors will be exempt from the consent and social impact clauses. These are defence, rural infrastructure, affordable housing, industrial corridors set up by the government and “infrastructure projects including projects under PPP where ownership of land continues to vest with the government.”

Read in conjunction with sub-section 2 of the original act, do the amendments ensure that acquired land will not be passed on to the private sector? Then why propose the amendment in the first place? Acquisition of land by the government, under section 1 of the LARR Act was, in any case, exempt from the consent and social impact assessment clause.

Section 3 of the proposed law says, “In the principal Act, in sub-section (2) of section 2, after the second proviso, the following proviso shall be inserted, namely: ‘Provided also that the acquisition of land for the *projects listed in sub-section (1) of section 10A* and the purposes specified therein shall be exempted from the provisions of the first proviso to this sub-section’.”



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Section 10 A(1) lists the sectors exempted from the aforementioned consent and social impact clauses. Where, in all of this, does it say that land acquired for say, industrial corridors, will not be given to the private sector through lease or sale? Shah states that in the case of industrial corridors, ownership of land will continue to vest with government. The act does not.

BJP spokespersons, meanwhile, struggle to make the citizen believe that the amended bill is pro-development, pro-farmer and pro-corporate. It is pro-development because annoying hurdles like social impact assessment and consent would slow the process of land acquisition down, thereby making it harder to initiate development projects. It is pro-farmer because land acquired from the farmers will be used to develop rural infrastructure and displaced farmers will be comfortably rehabilitated and given jobs, apart from receiving compensation. It is pro-corporate because it will free them from the necessity of negotiating with farmers for the purchase of land – provided, of course, their project is defined as ‘public purpose’!

Given that the LARR Act, in any case, places no hurdles in the way of land acquisition for defence establishments or a public purpose – be it roads, hospitals, schools, hotels, housing – provided

ownership and control of land continues to vest with the government, it is difficult to understand how it holds up development. Anyhow, given the restricted scope of eminent domain in developed nations, that argument does not hold good.

One big plus: bringing land acquisition under 13 previously exempted Acts within the scope of the LARR Act is a positive step. One big minus: allowing acquisition of multi-cropped land.

Setting aside the transfer of land from the poor (farmers) to the rich (corporates), land acquisition has thus far been a brutal exercise, in which whole villages were uprooted, families ripped apart, legally mandated resettlement norms violated and human rights abused.

The consent and social impact assessment clauses, by mandating a participatory approach, offer a more human method of acquiring land. Do farmers want a power project in their backyard? How will it affect their lives? Will it pollute the environment and create water stress? Will it offer decent employment to village youth? Is it indeed of larger benefit to the village, block, district, nation? Arguments on both sides will doubtless be presented and hopefully, a consensus reached by the affected gram sabhas. Is this utopian? Perhaps but of all the approaches so far, this is the only one consistent with human rights. ●

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Bringing plant potential to life

Farming in Tiger Territory

Ashim Choudhury

With wildlife, nature and environment taking primacy, at least in the mental space, whenever one hears of man-animal conflict, the tendency is to blame man; possibly because humans, believing that they alone have inherited the earth, have steadily encroached on territory meant for other species of planet earth. As space for wildlife shrinks, people living on the periphery of forests have constantly been blamed, sometimes for no fault of their own. Having lived in these areas for generations, they suddenly find themselves 'entrapped' by forest laws. What is it like living in areas where man and the wild come face to face on a regular basis?



ASHIM CHOUDHURY
Journalist; Author,
The Sergeant's Son

The man-animal conflict is perhaps nowhere as palpable as in the Ramnagar division; home to India's most famed tiger park, Corbett. At Pawalgarh, an extension of Corbett, recently declared a conservation reserve, it is all too evident. Farms hem the forest, home to tigers, leopards, elephants, antlers and an array of lesser wildlife and birds of different feathers. Moving from one forest corridor to another, with a dividing road between, animals, particularly elephants and the deer, often stray into human territory, attracted by the lush farms.

For farmers, protecting their crops from animals is often a full time occupation here. Farmers have put up white and coloured buntings that flutter in the



Photo: Ashim Choudhury

wind in the hope that they will scare the animals, but had little luck. Many farms are dotted with raised platforms where farmers and their kin sleep at night keeping an eye open for raiders from the forest.

At the edge of the forest, right behind our guest house in Pawalgarh is a vast green expanse of wheat, mustard and other winter crops. Looking over the protective compound wall, I noticed an old woman working in the wheat field. She approaches me and I ask Madhavi Devi, 92, if animals ever raid her farm. “We are *pareshaan*... troubled by these animals, we cannot even beat them,” she laments. Then she shows me how the wheat that is close to the forest has been grazed by the deer; something that I had failed to notice. The wrinkles on her face show anguish. Her common enemies are the deer and monkeys.

What about tigers? “Yes, tigers also come, I have seen them so many times but, at least, they do not destroy our crops. Our worst enemies are the monkeys and *cheetals*,” she says. Her brother sleeps on the raised machan to keep a watch on the animals at night. Yet they sneak in, plundering the farms around the forest. As we chat, a bunch of langurs prance on the treetops around Madhavi Devi’s house.

Soon after the conversation with the old lady, we head for a safari into the virgin sal and teak forest of Pawalgarh. As we cross the dry riverbed on a trekker, cut by two ribbon-like streams, our guide points to the tiny homes dotting the distant hill side forests. They look beautiful and I had not expected to see homesteads in this conservation reserve. “Those villages you see in the distance are in the Kota Bagh block of the Nainital district, which include several villages like Rani Kota, Pandey Gaon and Amla Kot. The conservation reserve is on this side of the river, not across,” my forest guide clarifies. Animals, though territorial by instinct, do not understand territory the way humans do. These revenue villages were, like it or not, in animal territory. Some call it buffer zone or forest periphery. Animals are very likely to stray into these areas. I wanted to find out for myself. The next morning I set out in the direction of Kota Bagh. Every family there has a tale to tell; of animals ruining their farms.

From Pawalgarh the road climbs uphill through dense green forest. After three to four kilometres, the forest ends abruptly and you find yourself facing a vast valley surrounded by hills. It is almost as beautiful as Srinagar, minus the Dal Lake. This is Chandpur, Kota Bagh block’s first village of roughly 60-70 households scattered across the flat wheat and mustard fields. I approach what must be among the last mud houses in this area. It is on the edge of the forest and belongs to Kali Ram, who says he is nearly 85.

Originally from the hills around Pithoragarh, he came here some 50 years ago. Sitting on his charpoy, Kali Ram says: “The monkeys have spread *atank* (terror) in the area. They ruin the crops as well as the fruits on trees.” Other animals that trouble them include elephants, wild boars, the deer and, to a lesser extent, tigers. His extended family, surrounding him, nods in agreement. When I ask who among the large family has actually seen a tiger, all hands go up.

The oldest among them, Kali Ram’s son, Bachi





Navin Chandar says that farming has become impossible



Kali Ram says monkeys have spread terror

Animals, though territorial by instinct, do not understand territory the way humans do. Animals can stray into revenue villages, often in buffer zones, within forest periphery

Ram, 37, says he has often encountered the tiger on his forays into the jungle where he takes his goats for grazing. “He is the king...it is his territory. He often crosses the jungle road on his way to the river.” Bachi Ram never goes alone into the forest and is accompanied by two or three other villagers who together herd 40-50 goats. “The tiger never attacks. He growls warning us of his presence... and we change our course in the jungle,” says Bachi Ram. Rarely, when hungry, has the tiger preyed on his goats.

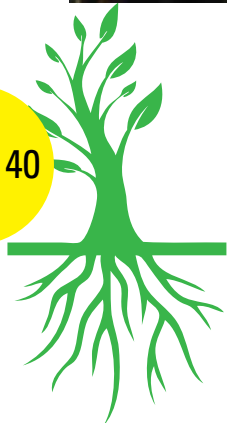
For him elephants are the bigger menace. Bachi Ram takes me to the back of his house where an elephant recently trampled upon part of his wheat crop. “It broke the wire fencing. Earlier there was a mild electric current. Now it is useless,” he says, pained by the damage to his crop. Normally, Bachi Ram and his family keep a vigil but it was raining on the night that the elephant came and they did not hear it. They saw the damage the next morning.

Kali Ram or his family are not the only farmers who feel trapped by the jungle and its forest protection laws. A little further up the road, Jagdish Rawat, 56, runs a tiny shop to supplement his meagre farm income. He has not seen a tiger in a

long time. His fields are in the middle of the valley but even here they are not safe. He says the wild animals, including the hare, raid his fields. It was his grandfather who first settled here. As children, he and his friends often went to the forest to collect wood; not any longer.

“Now we cannot even bring wood for our kitchen fire. Things have become bad. We are forced to cook on gas,” he says. Forest officials counter this saying villagers are permitted to collect grass and firewood for their kitchen. Earlier, the villagers were issued passes permitting them to kill small animals. “Now they are very strict. Even if a tiger has killed an animal you cannot take its meat. They will blame on you for the dead animal,” says Rawat.

He proceeds to show an old local newspaper cutting where a man who had scraped five kilos of meat from a tiger’s kill was forced to pay a fine of ₹25,000. Such stories are a deterrent for humans but have emboldened the animals. Rawat’s friend Amar Singh, 65, narrates how a *bagh* (tiger) had attacked an animal shed and taken away the goats. He points across the valley to a few homes contiguous to the forest: “A *bagh* had come just last week. They keep coming, off and on,” he said. His





Jagdish Rawat finds an alternate source of income from his tiny shop



Krishanand has given up farming

Photos: Ashim Choudhury

friend gets into an argument. I get excited listening to the tiger tale until it is clarified he was referring to the leopard and not to the tiger. Leopard attacks are not uncommon in the area and in much of Uttarakhand but Singh, like many others, says that elephants and wild boars cause the maximum damage to crops.

Unable to cope with the losses caused by wild animals, further up the road at Devi Rampur, Krishanand, 76, has given up farming. “*Durdasha hai* (plight). It is terrible...,” he says about the plight of farming in what is essentially tiger territory. “When the elephants come, they destroy the fields. So is it with the *neelgais*, hare, *cheetal* and *kakad* (a small goat-like deer),” he says, clearly disgusted with the idea of keeping a constant watch on his three-bigha farm. So he has given up farming.

Earlier he grew wheat, rice, onion and sugarcane. Now a tiny grocery shop is his only source of income. An amiable sort, Krishanand does not mince his words: “We do not love the animals; they have destroyed our lives.” His young neighbour, another farmer, sums it up: “We are fed up of the day-night vigil we have to maintain. It is just not worth the while.”

Now that Pawalgarh has been upgraded from a reserve forest to a conservation reserve, it means that the forest laws have only become stricter. It also means that the forest officials have to pay compensation when farmers’ crops are destroyed

by wild animals. Range officer, Kripal Singh Bisht, often has to face angry villagers when their crops are destroyed by wild animals. That is the easy part. When they catch poachers or timber smugglers, taking punitive measures becomes even more difficult as these offenders have powerful local leaders getting them off the hook.

That is where the greater problem lies. Bisht remembers recently catching a tractor with illegally mined sand from the river but taking action was difficult as the block Pramukh was right behind the offender saying, “*Chhor dow* (leave him).” Forest personnel have little option but other than succumbing to political pressure.

For farmers it is a different story. It is they who often feel violated by the wildlife. Take Navin Chandar, who owns the only tiny teashop in Pawalgarh with green fields in the backdrop. While he readies to prepare tea, I casually ask him if wild animals have ever bothered him. Putting the kettle on the gas, he orders me to follow him. At the small patch of land right on the road he shows me telltale signs of an elephant’s footprint.

“Look at this,” he says clearly irritated. “It was two or three weeks ago. They come every now and then.” Preserving the signs of damage is important to claim compensation. Then, pointing to a farm in the horizon he said: “You see there...only yesterday an elephant came and finished off the standing wheat.” Chandar, who grows wheat, maize and

mustard in his three-acre farms right behind his shop says that farming has become impossible. Like Chandar, many local farmers have taken to additional occupations to supplement their meagre farm income.

Paramjit Singh, Chief Conservator of Forests, (CCF) Kumaon, and one of the prime movers behind the creation of the Pawalgarh Conservation Reserve allays the fears of farmers. "There are no plans to move people out of the areas where they are living...there will be no rehabilitation," he says emphatically. This is for the simple reason that they do not fall within the conservation reserve. The top forest officer goes a step further saying that the tiger cannot be saved "unless people are involved."

According to Singh, local farmers are part of the forest management plans. "Each gram pradhan is part of the Forest Management Committee by law," he says. "Nothing happens without participation of the local people." Unless local people are involved, tiger conservation cannot be a reality. To reinforce his point, he mentions Sariska and Ranthambore, where people had been evacuated from forests. "You know what happened. Sariska had no tigers left," he says.



Paramjit Singh, Chief
Conservator of Forests,
Kumaon Range

The man animal conflict is bound to rise unless farmers are co-opted into the conservation and wildlife tourism programme

CCF Singh is happy about the healthy presence of some 46 tigers in the twin reserves of Pawalgarh and Sitabani. "Our gate collections alone account for upwards of ₹1.5 crore a year," he says. Local people from around have already started benefitting, he says, with some 20 odd hotels and resorts mushrooming around the forests. Local villagers are also offering some 40-50 homestay rooms to the tourists.

"Plenty of locals are benefitting through employment as drivers, trekker-tour operators and guides as demand from wildlife tourists rises," he says. These hotels and resorts, however, are mostly owned by outsiders in which some locals do get



On the road to Kota Bagh

Photo: Ashim Choudhury

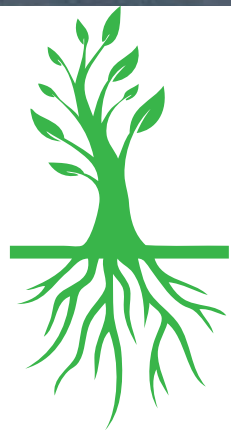
petty employment. In scenic Chandpur, children were playing cricket in an empty field where, one learnt, was two-acre plot dotted with amla trees that now belonged to a rich man from Chandigarh. “Hotel *khulega* (open),” they said.

Farmers do not quite share the enthusiasm of forest officials about the prospect of tourism. Like in Tadoba, the benefits may start trickling in soon and perceptions might change. That will also mean more vehicular traffic on the roads and more disturbance for the animals; something that goes against the grain of conservation.

The man animal conflict is bound to rise unless the farmers are co-opted into the conservation and

wildlife tourism programme, as CCF Singh points out. For that to happen, however, the benefits must start accruing to the local farmers through homestays and other employment opportunities that come from ecotourism. Keeping the big ‘sharks’ out will be the key to its success.

Meanwhile, there comes news that the same state government which upgraded Pawalgarh to a conservation reserve is promoting Kota Bagh as an industrial zone! True Kota Bagh is not inside the conservation reserve but it is an intrinsic part of the larger forest landscape. Thereby hangs another tale how the local farmers will be edged out before wildlife meets its nemesis. ●



FARMING SOLUTIONS

Kalahandi

Shows the Way

Bharat Dogra

There has been much discourse around ways and means to ameliorate the farmers' lot including thoughts on reducing costs, making better use of local resources, organic farming, mixed farming of several food crops, creating more space for horticulture and animal husbandry, improving local processing of food products as a cottage industry and such others. Amongst the many groups providing possible solutions is the Sahabhagi Vikash Abhiyan (SVA) that has a deep understanding of grassroots issues and works with the active involvement of farmers.

The SVA (Campaign for Participatory Development) was started as a collective of several concerned individuals and community-based organizations in 1993-94. This network has grown with more members, most of whom are small and marginal farmers as well as middle-level farmers, farm workers, tribals and dalits, other backward classes, amongst others. The members are by and large from the weaker sections of society.

Some SVA members (including its founder president Jagadish Pradhan) have been activists



BHARAT DOGRA
Senior journalist

for the farmers' cause from much earlier, having participated in not only struggles and campaigns for farmers but for forest produce collectors and other villagers. Pradhan had emerged as a community leader with in-depth understanding of the issues facing these communities and the ability to effectively articulate them.

He played a leading role in presenting an alternative vision for people-based development of the Kalahandi region in a much-discussed paper, 'Drought in Kalahandi - The Real Story', published in the *Economic and Political Weekly* (May 29, 1993), of which a more detailed version was circulated widely. Specific issues like depletion of traditional irrigation and cottage industries were highlighted; how recent expensive interventions had failed to make up for these losses was exposed; and specific alternative lines of action were suggested.

Significantly, this approach emphasized not just the problems but also solutions with specific suggestions and alternatives that were credible and injected a sense of hope. Pradhan focused on the capabilities and potential of the people and drove home the point that the real solution lay in the united



action of the villagers themselves in terms of playing a stronger role vis-à-vis determining the best use of natural resources to improve livelihoods, income and as well as the social structure. For instance, a well-argued campaign by SVA resulted in the removal of restrictions on inter-district movement of foodgrain and ensured better rates for farming produce. The idea was also to invest everyone with a sense of dignity and to ensure sustainability.

Paddy farmers felt the need for small-scale rice mills closer to their farms and be spared the harassment and exploitation in the processing of their produce at far away big mills. Such smaller mills were not being set up in the village due to bureaucratic indifference and corruption-ridden procedures for obtaining a licence for a rice-mill. After struggling for some time, Pradhan took the issue to a veteran Gandhian leader Manmohan Chaudhary, who approached public-spirited lawyers to explore the possibilities of a public interest litigation (PIL) in this matter.

Legal orders were finally obtained to make the setting up of rice mills much easier. This had an all-India impact in terms of improving possibilities of setting up small scale rice mills by village entrepreneurs and groups. The SVA made use of the new possibilities to

set up several cottage scale rice mills in the villages. Rice milling was thus made much easier for paddy farmers, who could also get the rice bran for use as cattle feed. Such campaigns, usually taken up without any significant financial support, were able to bring relief worth tens of crores to farmers, forest-produce gatherers and other villagers.

An even bigger achievement has been the sustained SVA campaign for self-reliant, low-cost, ecologically protective and organic agriculture. Considering the elaborate work of Pradhan with the farmers and the down-trodden as well as his understanding of the issues concerning Indian agriculture, the union government nominated him to the eight-member National Commission on Farmers.

The SVA has also repeatedly warned against chemical-intensive, polluting, hazardous and expensive technologies that made farmers highly dependent on purchasing seeds and other inputs as well. It was not enough to warn; it was more important to suggest alternatives to increase productivity and income. The initiative constantly engaged and experimented with farming systems to develop farming patterns, methods and technologies to increase productivity and income in ways that are

low-cost, ecologically protective and self-reliant and as close to the concept of Gram Swaraj as possible.

The SVA recommended practices are suitable for small farmers as they do not demand significant cash investment (that the small farmers cannot make) but require careful cultivation. An important aspect involves combining the cultivation of cereals, millets, legumes, vegetables, fruits and spices with animal husbandry (with special emphasis on cows and bullocks) in such a way that various parts can be complementary to and supportive of each other. It is common for farmers with two to three acres to use this technology to grow more than 20 mixed and diverse food crops within a single cropping year. Some of them grow more than 30 food crops and there is continuous effort to improve the mutually supportive role of various crops.

- A cereal crop is likely to be followed by a legume crop.
- Turmeric and ginger are likely to be grown under the shade of mango trees to avoid exposure to excessive heat.
- Efforts are on to improve storage practices

- SVA conducted and published a study on traditional rice varieties in Bolangir in 1998 featuring 112 traditional varieties and 13 improved and high-yielding varieties cultivated by the farmers of Nuapada, Kalahandi and Bolangir districts.
- Collection of improved seeds, based on selection method and establishment of seed banks is encouraged.
- Farming methods that minimize purchased inputs are prioritized to lower costs. Hence chances of indebtedness are reduced. Some expenses cannot be avoided (such as in the case of borewells) but attempts are made to make good use of existing government schemes to reduce expenses to the extent possible.
- A programme supported by the National Bank for Agriculture and Rural Development (NABARD) and implemented by the SVA has helped many small farmers to reduce expenses of irrigation, soil-conservation, fencing and pit-digging significantly. The overall approach is optimistic, assertive with an innovative, 'can do' approach. This is reflected

Cereals, millets, legumes, vegetables, fruits and spices grown with animal husbandry in a supportive role can grow more than 20 food crops in a single cropping year

(particularly for onions) so that a better price can be obtained at a later date and damage to crop can be avoided.

- Efforts are on to add value by increasing facilities for agro-processing such as small and cottage-scale rice mills, cottage-scale, locally fabricated, improved oil mills and grinders.
- Extensive facilities for marketing spices like coriander, chilly and turmeric have been created, including packaging under the brand name, Gram Swaraj.
- Food crops are emphasized in the cropping pattern, helping to improve the nutrition levels in rural households. There is a clear improvement in nutrition (particularly with the availability of many types of vegetables) in households following the SVA pattern.
- Organic crops being emphasized has increased availability of organic food both in rural households and in the local markets. Organic farmers say that retail customers and traders are eager to buy their produce that sells fast.
- Traditional seed varieties are valued and prioritized.

in many barren fields becoming highly productive, including the SVA's own small campus in village Belanjore. Combining all these factors, the SVA had produced very good results in under two years in the NABARD supported Wadi project in the Sinapali block. A Gujarati word which means small orchard, the Wadi project aims at reducing the migration of tribal people to urban centres by providing them livelihoods through income and basic necessities like fuelwood, timber and cattle fodder. This project has emphasized mango and lemon orchards with vegetable farming but integrated it with other components of the SVA approach that has been very useful.

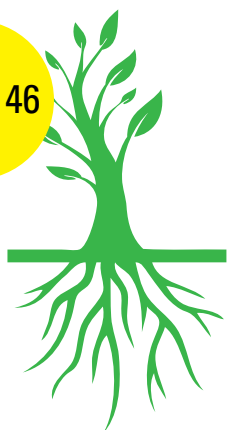
Model Farmers

Grafting a Successful Farm

Suresh Mallick and Shobhavati Mallick

(Chhata village, Komna block, Nuapada district)

In India a very large number of farmers own no more than about two acres of land but if even such a small plot can be used innovatively they can provide an adequate income. The prospects





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become even more exciting if such innovation is successfully done in low-yielding or infertile land.

Suresh Mallick and his wife Shobhavati have achieved remarkable success having converted what was once a lowest category land, on which hardly anything was likely to grow, into one in which every inch is covered with greenery, brought about by highly diverse plant species. This is surely a message of great hope for the country's agriculture.

The harbinger of this great hope is a short, slightly built but very alert and innovative farmer, Suresh, who has had a harsh life thus far. The adversities and injustices that he suffered could have broken his spirit but Suresh was made of sterner stuff. He has overcome problems and has emerged as a symbol of hope for India's small farmers.

Earlier, Suresh served as a Gandhian social activist working with senior Gandhian leaders like Narayan Desai and Manmohan Chaudhary. It was probably from them that he imbibed his optimism that built upon his innovative spirit. Suresh has come up with many brilliant applications of organic farming technology propagated by the SVA, with which he is closely associated as a leading member of its farmers' club in Chhata village. He has also been helped by the considerable grafting skills he acquired in the course of his earlier training in Gujarat. He gives equal credit to his wife Shobhavati who works equally hard on their farm.

Suresh is committed to organic agriculture that

also helps to reduce the farming costs. A lot of attention is given to preparing adequate compost, vermi-compost and organic sprays that help to keep away pests and diseases while also helping growth of plants. The use of plentiful, high quality composts has made the once unproductive land fertile today.

Suresh emphasizes on growing a very wide diversity of food crops and plants including cereals, pulses, vegetables, fruits and spices. As all these have to be grown within a small plot of land, he has to focus on making the best possible use of scarce land and water. Ginger and turmeric are grown under the shadow of mango trees to protect them from heat stress and also make good use of available space.

On their two acres, Suresh and Shobhavati have been able to grow paddy, pulses, mangoes, oranges, bananas, papayas, coconut, lemons, jackfruit, anvla, beans, bitter gourd, carrots, sugarbeet, onions, turmeric, ginger, chilly, coriander, supari, pomegranates and other crops. Mango and lemon will soon be in abundant supply as many mango and lemon trees have been planted in recently. Suresh is an expert grafter and his grafting skills are very evident in his farm especially for improving the strength and yield of mango trees.

The Organic Mantra

Bhaja Sabar and Savitri Sabar

(Reng village, Komna block, Nuapada district)

Bhaja and Savitri cultivate their four-acre farm in the



Hemlata is the main farmer as well as the manager of the farm; her in-laws help sell the vegetables. Habelal is a social worker, very active with the farmers' clubs and other activities of SVA

outskirts of village Reng in such a productive way that it not only provides highly nourishing and healthy food to the five-member family but also fetches them a net income of over ₹15,000 a month. From agrochemicals, Bhaja and Savitri have switched to organic methods. Savitri says: "Organic food is definitely more tasty and also more healthy. There is more demand for organically grown produce." Organic farming has enabled this Sabar household to reduce costs; making compost and pest repellent liquid on their farm, by and large with resources available free on their farm or in the village.

They have also gone in for crop and animal diversification to increase net income. On the four-acre farm this Sabar (tribal) family grows paddy, moong (a pulse), onion, tomatoes, sugarcane, pumpkin, maize, coriander, blackberries, lemons, mangoes, tamarind, papaya, bamboo, subabool (for fodder), radish, beans, belfruit, *aanvla*, bananas, mustard, turmeric, local green leafy vegetables and other produce. This farm gets dry fruit from chiraunji, oil from karanj oilseed (also from mahua seeds), medicine from bahera and other plants and toothbrush from babool trees. It has three cows,

two bullocks and two calves. Use of SRI technology for paddy cultivation has helped to improve yields. Irrigation is available from well and the farm pond.

Bhaja has been an active and respected member of the farmers' club associated with the SVA. Both husband and wife work very hard on their field and Bhaja says that his wife Savitri's contribution is higher than his for making theirs a productive farm. "She works even more than I do," he says with respect. They have four daughters, one of whom is married. They used their improved earnings to provide good education to their daughters, one of whom is in college. The worry is the expenses that the family has to incur during their daughters' weddings. This is a social ill that forces the sabars to borrow from their relatives and one that they are still trying to address.

Crop selection wins the trick

Habelal Majhi and Hemlata Majhi

(Haldikhol village, Sinapali block, Nuapada District)
With a plot of land in the interiors of village Haldikhol and another 3.5 acre plot in the outskirts on which it grows vegetables and fruits mainly, the Majhi family has a happy story to tell. It has planted

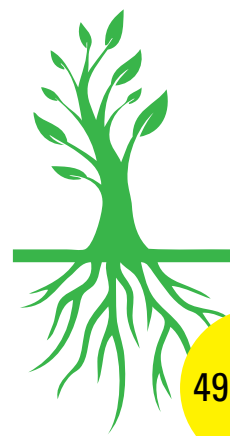


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SVA: Close to the grassroots

The SVA works in four districts of Odisha (Kalahandi, Nuapada, Bolangir, Bargarh), covering a population of about 15 lakh with direct links with about 16,000 households. These include members of its various co-operatives, self-help groups, farmers' clubs, producer companies, Udyan Vikas Samitis (Orchard Development Committee) and such others.

Women self-help groups have made an important contribution to economic security and reducing dependence on usurious moneylenders. These groups have contributed to increasing income by taking up activities like agro-processing, small shops, vegetable vending and such like. Several self-help groups are further linked to bigger co-operatives. Producer companies have been set up to take on more commercial work such as processing and marketing of spices.



many mango trees in this plot recently and hopes to get fruits from next year. Hemlata is the main farmer as well as the manager of the farm; her in-laws mainly help with selling of vegetables while Habelal is more of a social worker, very active with the farmers' clubs and other activities of the SVA.

Hemlata is completely organic. No chemical fertilizer and pesticide is used on this farm, she says. Compost and organic pest-repellents are prepared on the farm. This farm has other activities over the 3.5 acres. There are more than a 100 poultry birds, four bullocks, two cows, six sheep, apart from a mango and lemon orchard as well as banana and guava trees. This year's vegetables include cauliflower, beans, okra, bitter gourd and local green leafy vegetables. Onions are grown on a larger scale and coriander to a lesser extent.

Hemlata grew cauliflower on just five decimals of land (one-twentieth of an acre) and cauliflower worth ₹33,000 was sold in around three months. She asserts that organically grown vegetables are more tasty and nourishing for she has compared the produce with that grown at her mother's farm using chemicals.

Success breeds optimism

Santosh Majhi and Sano Majhi

(Haldikhol village, Sinapali Block, Nuapada district)

Santosh Majhi, a tribal farmer, cultivates about five

acres, including some land settled recently under the Forest Rights Act. Paddy and millets apart, he has taken up horticulture in a big way, thanks to SVA's help under a NABARD supported project. He has planted 42 mango trees and taken to growing vegetables in a big way: beans, radish, brinjals, onions and green vegetables. In addition, he is growing spice crops like turmeric, chilli and coriander and everything the organic way. He prepares compost, vermi-compost and organic pest repellent on his fields.

Santosh and Sano Majhi are a hard working couple. Their elder son is good with the plough. Wearing jeans and a T-shirt with a message 'Get in tune - Art is a form of Catharsis', he looks like a city boy but works on the farm, helping his parents. Santosh is enthusiastic about the new opportunities arising out of the SVA work. Like many other farmers, he spends a lot of his time in the outskirts of the village, where once barren or poor-yielding land has been improved by soil-conservation work and irrigation. Santosh gets irrigation from a borewell. All this has given him a new sense optimism and he is keen to work hard to improve his family.

No more forced migration

Haldhar Majhi and Dasse Majhi

(Haldikhol village, Sinapali block, Nuapada district)

Forced migration is a thing of the past for the

Majhi couple of village Haldikhoh. Earlier farming was limited to some paddy and millets in the rainy season after which Haldhar and his wife Dasse had to migrate, usually to brick-kilns near Hyderabad, where life was hard and the couple had to work “till 12 in the night,” says Dasse. This drudgery seems to be over as Haldhar and Dasse have more opportunities of growing vegetables and fruits on their fields, thanks to the recent NABARD initiatives.

The terms of this project are very favourable as Haldhar gets help for land development and horticultural activities. A strong fence has been created and soil erosion work taken up. Encouraged by this, Haldhar has grown okra, chillies, brinjals, beans, tomatoes and green leafy vegetables and planted planting 45 mango trees and 12 lemon trees. He prepares compost and vermi compost on his land and uses organic methods of cultivation. Haldhar has been able to grow and sell significant quantities of onions and onion seedling recently. In addition, he gets some income from mahua and chiraunji trees in his farm.

The problem is with inadequate irrigation (available from a well) because of which some brinjal plants perished. Nevertheless, overall living standards have improved significantly and Haldhar and Dasse are optimistic about the future. Wages received under the NABARD’s Wadi project and sale of farm produce have enabled them to avoid migration this year and pay full attention to improving their own farm. The greatest joy is that their two children can attend school regularly.

Changing the rural landscape

(Haldikhoh village, Sinapali block, Nuapada district)

Haldikhoh is a remarkable example of a village that is rapidly reducing its dependence on forced migration with local opportunities improving, courtesy land and farming based sources of livelihood within the village. Earlier many families were forced to migrate to brick kilns and to a life of immense hardship. Now they can work hard on their own land, in their own village, towards sustainable and sustaining agriculture thanks to people’s initiatives organized by the SVA that strives to help farmers to realize their potential.

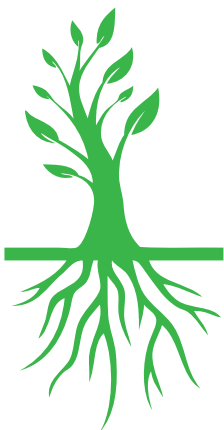
The SVA was, in turn, assisted by two new facilities created by the Prime Minister’s office (when Atal Bihari Vajpayee was the Prime Minister) that helped many activists to prepare village level micro plans with the participation of



villagers. The plans as well as the planning process featured discussions in the many group meetings organized for this purpose, helping the villagers to improve their common understanding of the issues and their own potential for improving sustainable livelihoods by tapping into the many possibilities in and around their villages.

The SVA was also supported by the NABARD’s horticultural development based ‘Wadi’ project. Villagers were assisted to improve their land, take up soil-erosion and land-levelling work, increase their irrigation and, above all, prepare the base for multifaceted improvements in horticulture and agriculture. As a lot of “barren” land, hitherto unproductive was restored and became productive, opportunities for horticulture were increased and villagers were enthused to improve their farming quality, devoting more time to their fields and protecting them from wild animals.

Their hard work, creativity, enthusiasm and extensive support from the SVA led to significant improvements in income and production in a short time. Many farmers have been able to significantly increase incomes by selling





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vegetables. This is likely to increase further when the mango trees start yielding fruit, hopefully next year.

The SVA and its volunteers also worked hard to have claims settled under the Forest Right Act and many tribal farmers in the region could secure rights over their land, which entuses them to work harder to make their lands productive.

The SVA has also provided an onion storage facility to the village for farmers to store their onion crop for some time and obtain a better price. Besides, it has put up cottage scale agro-processing units in the form of a small rice-mill, maize sheller, oil expeller and other implements. It is now planning a mango-processing unit to add value to the expected mango harvest by making pickles, jams and juice. Most importantly, the SVA has spread organic farming encouraging several farmers to go 100 per cent organic.

It feels good to be home

(Chatta village, Komna block, Nuapada district)

The Chatta village has a population of about 1,700 with about 300 households. About 40 per cent is

tribal, 30 per cent dalit and the remaining 30 per cent OBC. This was a poor village where poverty forced people to migrate. Much of this has changed after the intervention of SVA, though some migration continues because people need the lump sum payment at the beginning of the work-period that helps villagers meet some urgent expenditure. The SVA, the farmers' club and self-help groups associated with this organization as well as sister organizations like Banabashi Sangha and Sarvodaya Relief Committee had all been active in this village.

The SVA has emphasized organic agriculture with preparation of compost, vermi-compost and organic pest-repellent sprays in the village. This has helped many villagers to obtain healthier food while also reducing costs. Villagers feel strongly that earlier chemical-based agriculture led to the worsening of health problems in their village. There were 10 cases of paralysis in the village in around two years or so. Other health problems also increased. Villagers feel that the shift to organic farming and food will help them gradually to improve health and nutrition.

Enterprising farmers like Trilochan Kanta have taken up new activities like pigeon farming too. He has also won several awards in farming and competitions and fairs for his high-quality vegetables. His show-piece is a pomegranate farm developed in greenhouse conditions, subsidized by the horticulture department of the state government. However, other villagers feel that this is an unnecessarily expensive technology and the SVA emphasizes low-cost and self-reliant farming methods that are also environmentally sustainable.

Village women too are enthusiastic participants in the many-faceted development activities of the SVA including self-help groups and co-operatives. There is much sharing of knowledge here and the better off villagers help the more vulnerable families. Panamati, deserted by her husband and struck by partially disability due to disease, was helped and encouraged by the villagers to overcome many of her problems.

Several farms in the village provide good examples of low-cost, organic, mixed farming practices leading to high productivity and income, using environmentally protective and sustainable methods. The farm of Suresh and Shobhavati Mallick is most remarkable and serves as an eye opener around sustainable progress possible using low-cost methods that even a small farmer can afford. ●

PERSPECTIVE

URBAN AGRICULTURE

Untapped Potential for Creating Sustainable Cities

Rahul Gupta and Sumita Gupta Gangopadhyay



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Globally, for every urban dweller, there were 6.7 rural dwellers in 1990. Projections for 2025 indicate that there will be about three urban dwellers for every two rural dwellers (Satterthwaite, McGranahan & Tacoli, 2010). As per the United Nation's projections, between 2000 and 2030, urban land will triple and the urban population will double to 4.9 billion, leading to shortages in water and other natural resources along with pressure to eat into prime agricultural land.

This rapid growth of urbanization will be more pronounced in the emerging countries, with half of the world's increase in urban land occurring in Asia in the next 20 years with China and India, two of the largest economies of the region, witnessing the maximum change. In India, this overwhelming increase in the urban population is resulting in the loss of agricultural land in the fringes of the expanding cities; more so around smaller cities.

During the first decade of this millennium, each state has lost about one per cent of the total geographic area due to this shift. This translates to about 16,000 square kilometre (sq km) per year, according to the Ministry of Agriculture (2011 Census pegs it at 24,000 sq km per year). A study on Hyderabad-Secunderabad fringe in 2007 says that agriculture is no more the main activity in 25 mandals where 900 sq km have gone out of cultivation in one year (Gupta & Gupta Gangopadhyay, 2014). The land loss is more pronounced in states/districts with higher rate of economic growth.

With the 'advances' in the economy, there is an inevitable growth in urbanization and in the share of manufacturing and service sectors. Most of the developed world is urbanized. The worry is around ensuring urban food security and the trend worldwide, especially in low and middle income countries where millions of urban dwellers are



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facing severe under nutrition and food shortage.

Are there ways and means to mitigate such the effects of urbanization such as increase in urban poverty and food insecurity, loss of agricultural land, displacement of marginalized agricultural workers of these regions (who seek refuge in the expanding urban regions)? Carefully drafted out plans to adopt urban agricultural practice will help meet this challenge of restoring food security, providing jobs, maintaining ecological balance and ensuring sustainable development. This displaced agricultural labour force can be gainfully employed, putting to use its indigenous skills and traditional knowledge in cultivation, passed across generations.

In India with limited natural resources, water, land area and a vast majority of its people being poor and uneducated underutilized human resource, cities are becoming increasingly unsustainable. Good urban agriculture provides employment for the urban poor while improving the built environment. Ecologically sustainable urbanization is quite inconceivable without good practice urban agriculture practices. Today, close to a billion people worldwide are engaged in urban food production.

What is urban agriculture? Inherent in this concept is the transformation of urban waste (organic solid waste to compost for local farming) and waste water (treated sewage for irrigation of urban/peri urban farms) into resources for growing food and generating employment. It creates a better living environment, better public health, energy and natural resource savings and cost reduction in urban management.

Where can urban agriculture be practiced? In the backyards, derelict land, vacant lots, underutilized areas along rivers and canal banks, periphery of schools, hospitals, jails and other public buildings, garbage landfill sites, city parks (for fruit trees), ponds and other water bodies, sewage lagoons, rooftops of private and institutional buildings, along road sides, new townships (provision to be made at the planning stage), abandoned brick fields and such others.

'Good practice urban agriculture' is effectively regulated agriculture to provide 'safe food' to the city dwellers. This includes farming, horticulture, forestry, poultry and livestock development. It has the potential to provide substantial benefits in nutrition improvement, income generation, enterprise development and land as well as waste



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management. Urban agriculture is the practice of developing cultivation in and around city areas through innovative land use and techniques to allow production of vegetables, fruits and fish, to be contained in much smaller plots of land. The practice promotes urban sustainability by bringing food production closer to the consumer. In the process, it reduces road transportation, resulting in energy savings and lesser greenhouse gas emission. To be successful, it has to be driven efficiently by competent authorities — national, regional and local — as has been the learning from successful implementation in many comparable countries like Brazil, China and African countries.

Globally, urban agriculture produces 15 per cent of food consumed in urban areas. It is estimated that this will double in the next 20 years. The beneficiaries in most cases are the poor. On the one hand they save by consuming food produced at home and, on the other, they sell the remaining produce in the market for extra income. Recent studies show that 72 per cent of Russian and 68 per cent of Tanzanian households raise food. In China, 85 per cent of vegetables consumed in 14 major cities comes from urban farms. In Shanghai, the



Regulated urban agriculture includes farming, horticulture, forestry, poultry and livestock development. It can aid nutrition improvement and income generation

total value of output from urban farms is two per cent of its gross domestic product. In Berlin, there are 80,000 urban farmers.

Though there are not many success stories in India, where only piecemeal attempts have been made, in the eastern fringes of Kolkata there exists a successful peri-urban agriculture endeavour that has been going on for decades. Spread over about 12,500 hectares, the East Kolkata Wetland is a classic example of gainful utilization of wetlands. Earlier, organic solid waste deposited there everyday was converted to compost and these garbage farms were used to cultivate for vegetable cultivation. About 1,000 million litres of raw sewage is naturally treated and the treated waste water is used for pisciculture and for irrigating the vegetable farms. These activities result in not only valuable agricultural output but also bring about substantial savings by eliminating costs for running conventional waste treatment plants. The treated

water used for irrigation adds to the savings.

The East Kolkata Wetland produces 10,000 tonnes of fish and 16,000 tonnes of rice every year and about 156 tonnes of vegetables a day (Raychaudhuri, Mukherjee, Ghosh & Thakur, 2012). The fish satisfies about a quarter of the city's demand and is consumed mainly by the poor.

About 80,000 people, mainly belonging to the underprivileged class eke out a livelihood courtesy this agri-aquaculture/peri-urban agricultural practice. The economic benefit resulting from these traditional activities of the wetland is estimated around ₹230 crore (Ray Chaudhuri, Mukherjee, Ghosh & Thakur, 2012).

Similar but smaller ecosystems also operate in the Mudiali Fishermen's Co-operative within the Kolkata Metropolitan Corporation and Titagarh-Bandipur area near Kolkata. Save for these, little initiative has been taken by the state and local governments to regularize any practice of urban agriculture.





The East Calcutta Wetlands provide livelihood to at least 80,000 underprivileged people. The agri-aquaculture/peri-urban agricultural activities are estimated at around ₹230 crore

Elsewhere in India, there are instances of wastewater irrigation. About 2,100 hectares along the Musi River in Hyderabad have been irrigated by waste water to grow paddy, vegetable and flower. The Mumbai Metropolitan Region has witnessed promotion of vegetable cultivation by Indian Railways (through allotment of 176 hectare of land to its class IV employees), predominantly irrigated with waste water. The Delhi Metropolitan Region has 1,700 hectares of land irrigated through waste water under vegetable cultivation. In Kanpur, 2,770 farmers irrigated 2,500 hectares of land using wastewater. There are similar instances in Varanasi,

Coimbatore and Chennai (Vazhacharickal & Gupta Gangopadhyay, 2014)

The bottomline is that there must be a long-term regional perspective to make cities sustainable through urban agriculture. The rivers, canals, agricultural land, garbage filled land, vacant and unkempt land, underutilized land, water bodies, abandoned brick fields and forest cover in the metropolitan areas are connected with those in the surrounding region. Urban agriculture and associated developments can be the link between urban and rural areas. 'Good practice urban agriculture' should be incorporated as a new type of land use. ●

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**VIEW
POINT**

FARMLAND SECURITY

Insuring against Suicides

A. K. Ghosh

In a predominantly agrarian India, there are 120 million cultivators and 144 million landless agricultural labourers. Between 2001 and 2011, nine million people left agriculture, while a whopping 38 million joined the ranks of agricultural labourers. Read between the lines and it becomes clear that this complex series of immigration around agriculture is due to lack of opportunities in other sectors on the one hand and problems with the farming business itself on the other.

There have been public discussions around land holding in India that seems to determine the destiny of millions of Indian farmers; some 85 per cent of them are classified as marginal and small land holders. It is the income and expenditure of these farmers, owning less than one to two hectares of land (as revealed by the latest National Sample Survey Organization data) that is shocking (Varma, *Times of India*, April 10, 2015).

For small farmers, who represent 10 per cent of the community, having one to two hectares of land, the monthly saving is ₹500, after meeting



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risks faced by marginal and small farmers. The remaining 15 per cent, large farmers, have no apparent distress because those with landholding of over 10 hectares (ha) seem to have an average monthly income of nearly ₹20,000. Yet on December 14, 2010, the Supreme Court of India quoted the NCRB saying that nearly 200,000 farmers committed suicides between 1997 and 2008 and two-thirds took place in the states of Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh and Chhattisgarh. The Supreme Court commented that: “even though Maharashtra is one of the richest states in the country and 25,000 of India’s

100,000 millionaires reside in its capital Mumbai, the Vidarbha region is today the worst place in the whole country for farmers.

Why do farmers commit suicide? Disease related inabilities, for instance, result from a failure to access the public healthcare system or to get required nutrition. No researcher has gone into the details but one tends to agree with K. Nagraj, an expert (as quoted by Bhattacharya, *Times of*

For small farmers, owning 1-2 hectares of land, the monthly saving after expenses is ₹500; for marginal farmers, it is less than ₹1,500 a month, signifying a state of critical existence

all expenses; for marginal farmers, the figure is minus ₹1,500 a month, signifying a state of critical existence. This deficit obviously leads to more borrowings and that too at two per cent per month from the market moneylenders. Any assistance from the National Bank for Agriculture and Rural Development (NABARD) remains elusive for most of them. The end result is there for all to see.

The current national preoccupation with the causes of farmers’ suicides in recent months, especially in northern India, is better understood by pursuing data from the National Crime Records Bureau (NCRB) presented by the Minister of Agriculture on March 28, 2015, in the Rajya Sabha (see *Table 1* on year-wise farmer suicides between 2011 and 2013 and those attributed to ‘agrarian distress’).

Admittedly, not all suicides can be attributed to distress due to crop failure or other reasons like non-receipt of minimum support price or non-holding of procurement camps, to assist the Food Corporation of India operations. However, the statistics presented here seem to be concealing the

India, April 12, 2015) that “proximate cause or last cause being recorded as the reason for suicide is completely meaningless.”

The uncertainties around climate in recent times seems to be exacerbating the factors leading to farmers’ suicides, every year. In the Bundelkhand area of Uttar Pradesh alone, 73 farmers committed suicide during March-April, 2015, according to the non-governmental organization (NGO), Action Aid. This is attributed to unseasonal heavy rain. District administrations, however, continue to deny any connection between the two. Not only Uttar Pradesh, the entire northern belt of India, suffered

Table.1: Farmer suicides in India (2011-2013)

Year	Total suicides	Suicide due to agrarian distress
2011	14,027	1,016
2012	13,754	890*
2013	11,772	1,351

*No data from Uttar Pradesh, Tamil Nadu and Jharkhand



heavily due to untimely rainfall and devastating damage to the standing crops. It is estimated that the standing Rabi crop, over 8.5 million ha in 14 states of India, suffered heavy damage between end February and early April, 2015, due to untimely rainfall.

Rain has been a vital deciding factor, especially for the marginal and small farmer. Deficit monsoon rain causes devastation in 46 per cent to 48 per cent of unirrigated farmland in the country. Untimely heavy rainfall, as seen in 2015, can also cause havoc. How can one make a fool-proof protective shield for farmers?

Climate scientists have repeatedly warned about the impending disasters if the current global temperature rise is not contained at 20°C level; sea level rise and coastal inundation, storm surge and cyclones, untimely rain or prolonged drought, all seem to be viciously staring at the croplands. How one can adapt and survive against such a process of uncertainty and misery? This is not just a farmers' issue.

The governor of the Reserve Bank of India (RBI) fears of the declining farm output could lead to inflation, in view of 17 per cent of the sown area being

(85 per cent of the farmer community) are covered by insurance or can access loans from the banks.

For 2015, the Indian Meteorology Department predicted the monsoon at 93 per cent of the long-term normal. Once again, such forecasts is apt to raise concern around output prospects of summer crops, including rice, sugarcane, soyabean, cotton, as also maize, bajra, moong, tur and urad. This is especially significant because Kharif or the summer crop in India accounts for nearly half of the total agricultural output. The danger of further farm misery cannot be ruled out and no one-time relief can hold out much reassurance. A review of India's crop insurance policy maybe worthwhile under such a scenario.

Three major actions are normally suggested to protect the farmer from farming losses:

- (i) Minimum support price: Although offered for few selected crops like rice, most the crops in most states do not receive the minimum support price,
- (ii) Contract farming: Very limited effort or action has been taken in this regard to ensure

Rain is vital for the marginal and small farmer. Deficit monsoon rain causes devastation in 46 to 48 per cent of India's unirrigated farmland. Heavy rainfall, as in 2015, can also cause havoc

threatened by untimely rain. The RBI, however has not suggested any effective measures to protect farmers' interests and ensure the country's financial stability. One possible remedy that can be offered to the farmers of India, is a low-cost crop insurance policy, offering compensation for the lost crop and pre-empting the fatal decision to commit suicide.

A report (*Times of India*, April 15, 2015) stated: "The Centre has asked state governments to ensure early completion of formalities for setting claims of farmers who lost their Rabi crop due to unseasonal rain." In order to obtain fair and precise estimate of yields of principle crops, including wheat, rice, maize, sugarcane and cotton, "crop-cutting experiments are conducted through stratified random sampling techniques." Claims are to be fixed on the result of such findings, which will be time consuming, while the farmers will continue to suffer. The government has, therefore, directed that 25 per cent of the claim be paid immediately, as the farmers are eligible to get the same under the modified national insurance scheme. Banks have been asked to extend loan repayment period. The big worry is how many marginal and small farmers

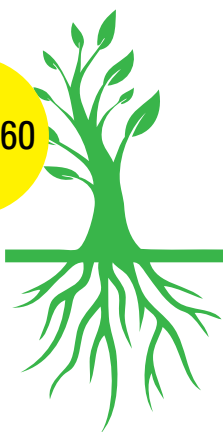
committed financial return. One example is of potato farming for a multinational, Pepsi, to produce potato chips, and

- (iii) Future trading: This is yet to be established in India.

Experts feel that the crop insurance is the most desirable option, "to address the risk to output and income resulting from various natural and man-made events" (Raju & Chand, 2008). India does have multi-purpose crop insurance programme but it is very expensive and may need to be subsidized heavily.

Insurance can be based on individual approach or on weather index or on area yield basis. A community whose income is dependent on the weather will invariably try to avail of a weather index insurance but frequent change of weather and lack of dependable data (due to lack of widespread weather station) may make it difficult. This may be the best option in India, experts believe.

The first individual approach scheme was taken up in 1972-1978 for cotton, groundnut, wheat and potato, in six states covering only 3,110 farmers for a total premium of ₹4.54 lakh against a claim of ₹37.88 lakh. (Raju & Chand, op. cit); it was followed



by a pilot crop insurance scheme during 1979-80 to 1984-85 in 12 states, covering 6,067 farmers.

A Comprehensive Crop Insurance Scheme (CCIS) was taken up during 1985-89 in 15 states and two union territories, covering 763 lakh farmers with ₹404 crore premium against a claim of ₹2,303 crore. Then came the National Agricultural Insurance Scheme (NAIS) in 1999, in nine states and extended to all states except Punjab in the north and Arunachal, Manipur, Mizoram and Nagaland in the north-east by the end of 2006-07, covering 8.5 per cent of all India holdings and 9.2 per cent of all India cropped area. There is thus

a huge gap in insurance cover for a large part of the Indian cropland.

Besides NAIS, the Farm Income Insurance Scheme and the Livestock Insurance Scheme were also in the public sector. The Agriculture and Insurance Company (AIC) of India too started a rainfall insurance scheme in 2004 and extended its ambit to 130 districts in 2005 as Varsha-Bima. The AIC later introduced the Weather Based Crop Insurance Scheme (WBCIS) in selected areas of Karnataka and later extended it to seven other states in 2007-08. (Table 2)

Why do farmers not accept crop insurance

Table 2: Crop Insurance Schemes in India

Insurance Scheme	Period	Approach	Crops covered	Farmers covered (Lakh)	Amount (Crore)		Salient features
					Premium	Claim	
Crop Insurance Scheme	1972-78	Individual	H-4 Cotton, groundnut, wheat, potato	0.03	0.05	0.38	Voluntary Implemented in 6 states
Pilot Crop Insurance Scheme	1979-85	Area	Cereals, millets, oilseeds, cotton, potato and chick pea	6.23	1.95	1.56	Confined to loanee farmers, voluntary, 50% subsidy on premium for small and marginal farmers
Comprehensive Crop Insurance Scheme	1985-99	Area	Food grains and oil seeds	763	404	2303	Compulsory for loanee farmers
Experimental Crop Insurance Scheme	1997-98	Area	Cereals, pulses and oil seeds	4.78	2.86	39.78	For covering non-loanee small and marginal farmers also in addition to loanee farmers.
National Agricultural Insurance Scheme	1999-continuing	Area and individual	Food grains, oilseeds, annual commercial and horticultural crops	971	2,944	9857	Available to all farmers. 10 per cent premium subsidy for small and marginal farmers.
Farm Income Insurance Scheme	2003-04	Area	Wheat and rice	2.22	15.68	1.5	Insurance against production and market risks. Compulsory for loanee farmers.
Weather/ Rainfall Insurance	2003-04-continuing	Individual	Food grains, oilseeds annual commercial and horticultural crops.	5.39	NA	NA	Available to all farmers. Based on rainfall received at the IMD / block rain gauges.

Source: Raju and Chand, 2008



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Extreme events, untimely downpour or a weak monsoon, possibly indicate the future vagaries due to climate change. This calls for a relook at the food-water-energy nexus scenario

universally? One survey shows that 48 per cent of the farmers do not know what insurance is. The more important question is, even if he knows what insurance is, will the marginal and the small farmers ever be financially capable of paying the premium. In developed countries like USA and Canada and even in Spain and Philippines, subsidy towards crop insurance varies between 38 per cent and 100 per cent with an average as high as 70 per cent.

With ever increasing human population and limited land and water resources, India is apt to face a serious crisis of food security in coming years. This has become more evident under the threat of climate change. Today, only 20 per cent of the farmers have insurance cover in one form or

the other and such insurance companies are largely under the public sector. Marginal and small farmers can hardly access loan from the banks or other financial institutions and one wonders whether crop insurance coverage in its present form can be availed of by them.

Currently, large landowners can access the benefits of subsidy and bank loans from the public investment. Their land holdings empower them to acquire more wealth, flex muscles and exert political influence, while 85 per cent of the marginal and small farmers continue to face uncertainties of hazards and a bleak future. It is time that Members of Parliament rise above politics and help the real food providers of the country. ●

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BRINGING SEEDS OF PROSPERITY

Down Under, Farming is a Wonder

Ajay Vir Jakhar

64

Invited to Australia to speak at the Global Food Forum, 2015, I used the opportunity to try to understand agriculture issues in that country. I had arrived at the hotel an evening earlier, at 6.30 pm, to attend a reception at 7.30 pm and had to be ready for work very early the next morning. The day began at 5 am, the sky was overcast and we were off to visit the Melbourne Wholesale Fruit, Vegetable and Flower Market on Footscray Road in Melbourne, Victoria. We were very late, for the market had opened at 3:30 in the morning and the auctions were almost winding up for the day. On an average day, 400 buyers buy produce at the market.

The system was very similar to that in the Azadpur Sabzi Mandi. The technology and systems are far advanced though. Purchasers walked in groups from one seller to the next; buying and competing for fruits and vegetables. The commission charged by agents or middlemen, as we prefer to call them in India, was 15 per cent. I was surprised by this high figure but I realized that the auction was very fair and, unlike in India, there was no cartelization by the middlemen.

Fresh produce is sold and dispatched to different countries. Beijing is the big buyer, but Chinese buyers have lately started to buy directly from Australian farmers rather than go through the market. Trucks laden with farm produce had started arriving at 10:00 pm the previous night, as is usual. Most of the produce is sold in boxes. Boxes were unloaded, loaded and transported within the market on pallets by forklifts. There were 800 forklifts in the premises. Each forklift owner charged AUS\$ 1-2 per pallet.

In the market place, traders paid AUS\$ 350 per square metre for storage space and auction blocks, which amounts to anywhere between AUS\$ 20,000 and AUS\$ 60,000 per year, depending on the size of space allotted. Open space hired by farmers is available for AUS\$ 2,000 per year. Farmers vacate the space after the auction was over and all the unsold farm produce is taken away. One million kilogrammes of fruits and vegetables are distributed to food banks free of charge every year by the market authorities. The estimated loss recorded every year is 10,000 tonnes of fruits and vegetables. The market is being moved to Epping. All permanent trading

and storage blocks in the new market have been sold to traders even before the market has opened.

Finishing our quick trip to the market we hurried to the day-long conference that turned out to be a fascinating event. The Hon'ble Cabinet Minister for Agriculture and the shadow Cabinet Minister were present. Concerns were raised about Chinese investments in Australian farmland even when the investment is capped at AUS\$ 15 million. One delegate said that India's share of the world gross domestic product (GDP), currently at three per cent, would rise to 20 per cent in a few decades and it would be a huge potential market.

When it was my turn to speak, taking my cue from the discussions, I reminded them that India's GDP was 19 per cent of the world when it got colonized and by the time it got Independence, India's GDP was at a pitiful one per cent. I shared the Indian farmers' concerns about import of fresh Australian fruit and vegetable produce into India and explained our confusion about the status of multilateral agreements like the WTO in view of the bi-lateral trade agreements being signed by many countries, including Australia. No one had an answer to my issues but it was still the most constructive farm conference that I have attended even though I may have come across as a pessimist to many. Personally,

Concerns were raised about Chinese investments in Australian farmland even when investment was capped at AUS\$ 15 million. This was in presence of a Cabinet minister

I would rather speak the truth than give false hopes.

The conference ended at five in the evening and we drove to Shepparton and reached our destination by 9 pm. We had a working dinner discussing the next day's hectic schedule, before going to my room at the motel where we were staying. The bottle of water in the room was priced at AUS\$ 3.50 for 500 ml. It was only the next day that I found out for myself that milk was cheaper than water in Australia. How economies work confuses me.

The next day began early with a visit to the PACTUM Dairy of Australian Consolidated Milk Pty Ltd, established in 2007. This very successful venture not only owned dairies but also aggregated and processed milk. Here the quality of raw milk was considered to be the greatest asset of the dairy and the price of milk was based on parameters like fat and protein content. The cost of producing milk is between 35 cents and 40 cents a litre. Last year,

the farmers had been paid 49 cents per litre. This year the price has dropped to 45 cents.

The cost of fodder had not increased but for a dairy to be profitable 60 per cent of the feed must be produced on the farm. As a rule of the thumb, the cost of feed should not be more than 50 per cent of the price of milk. A standard 500-cow farm could be managed by just four people. That would be unimaginable in India. The dairy was also making lactose free milk, AZ and protein enhancing drinks for different customers. They even had a UHT (Ultra High Temperature) plant where the lifespan of the milk increases to 10 months. Bulk buyers were in China and Indonesia.

Half of the wholesale milk price normally goes to the farmer and the milk sells in China for AUS\$ 2.25 per litre that amounts to ₹100 per litre. This is far more than paid by Indian consumers. Milk is put for test for seven days before being allowed to be sold. This milk can be put on ships but if found unsuitable it would not be sold but destroyed. Safety, hygiene, automation and efficiency of operations saw me turn green with envy, even as farmers were struggling with low milk prices. The dairy industry was deregulated a few years ago and has grown in the golden valley. It was the best dairy I have ever seen in my life and I sincerely doubt if I

will ever see a better one.

The dairy visit over, we went to the Horticulture Centre of Excellence at Tatura. There were 3,375 horticulture businesses taking advantage of the centre. I guess that each farmer or factory is called a business. Stone fruit and 'Pink Lady' apples were the main crop of the area and 80 per cent of the fruit is exported fresh and the area is constantly looking for new markets. Lately, unshelled almonds are becoming a major export to India.

Soil fertility is a key issue at the centre. Due to constant irrigation, drainage is a major issue. What surprised me was that they were contemplating using cow manure to tackle salinity developed due to constant irrigation and fertigation. Lunch was served at the centre. I learnt that they even advised on marketing and conducted diploma courses. I could have spent the whole day at the centre if time permitted for they were ready to patiently explain





'Pink Lady' Apples

rights to be connected with ownership of land. It used to be the same in Australia but now these have been separated and water has become a tradeable commodity. Farmers can buy and sell water to each other if permitted by the infrastructure that carries the water. This has allowed efficient use of water. Thereafter, farmers grow crops depending on optimum use of water unlike in India that continues to suffer.

The authority that gives the services of delivering water has been privatized. A farmer can inform the service company about his water requirement and the canal gates are automatically opened by the company to deliver the required quantity of water to his field. It is controlled by satellite communication. In India, canal water distribution is measured in terms of minutes of supply and operations are conducted manually unlike in Australia where water is measured in litres and distributed automatically. Such sophistication is unheard of in India. The take away message was that nothing is free, neither the extension services

In India, rights to use water are connected with ownership of land. It used to be the same in Australia but now these have been separated and water has become a tradeable commodity

the nuances of extension services. I will remain ever grateful to them for that.

The cost of farmland can vary from AUS\$ 5,000 to 20,000 per hectare. There are many Indian Sikh farmers all over Australia. The all-inclusive cost of putting a stone fruit orchard is AUS\$ 80,000 per hectare. What shook me to the core were the daily wage rates being paid to labour for farm activities like picking fruit. Farm labourers were paid AUS\$ 17 per hour, which amounts to ₹180,000 for a month of work. At those rates, millions of India would migrate to Australia as farm labour if Australia was to open migration to Indians.

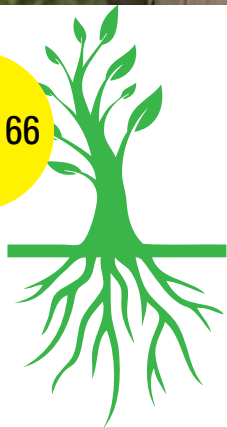
After lunch we visited Plunkett Orchards, which grew stone fruit and apples. They also aggregated and packed fruit for export. They had a waxing plant, where they processed over 30,000 tonnes of produce annually. We even squeezed time to visit the legendary Jeftomson brand apples offices. They were the first to export from Australia. The pioneers of farm trade in the continent.

Returning to Melbourne in the evening along the highway, we saw an irrigation channel and waterworks, like I have never seen before. In India,

nor supply of water, everything was paid for by the farmer. It seemed to work for them very well.

On the way to Melbourne, I got a chance to see the countryside. It was a wide expanse of dry small grassland. It was my first trip to Australia and I had never seen kangaroos in the wild. I was lucky to spot a mob or troop of kangaroos in the wild, a little distance away. On the third and the last day of my whirlwind trip, I had half a free day. A history and a war buff, I chose to visit the Museum commemorating the anniversary of World War I. It was a beautiful tribute to the anguished times and sacrifices. It reminds me that troops returning from World War II to Australia were given mile by mile pieces of land to settle in Shepparton, to enable them to eke out a living. It must have been a tough life for them given that there were no canals then.

There is more to write but I will pause for the time being. I will always recall the trip as most informative and enjoyable and I put on record my appreciation of the Australians who took the time to educate us, even though as a farmer, I remain sceptical about imports of fresh fruit and vegetables from Down Under. Thank you Australia! ●



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