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FARMERS' FORUM

A BKS
MEMORANDUM
FOR ACTION

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Issues and Ideas for Indian Agriculture

NOTE BANDI

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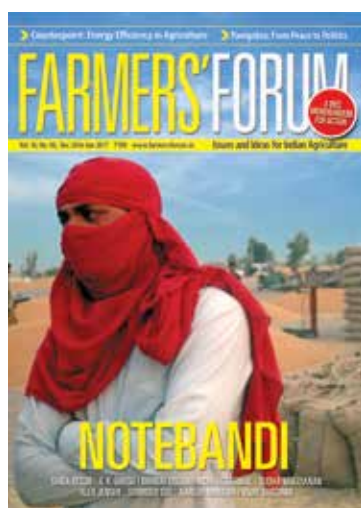
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A Move Far from Noteworthy

It is not a little sad that the farmers this year are unable to celebrate “Kisan Diwas”, dedicated to the memory of Choudhry Charan Singh, a messiah for farmers, who was born on a cold winter day of December 23, 1902, in district Meerut, Uttar Pradesh. The Indian farmer has far more pressing matters to attend to. For the past century the farmer has been assailed either by natural disasters or government policies but this time grappling with the latter has been a challenge of herculean proportions.

Reactions to the demonetization of ₹500 and ₹1,000 bills have been pronouncedly divided in India and Bharat, though opinions are being reshaped by experience even as these lines get written. The large section of society, living at the bottom of the pyramid, far lower than the echelon termed the middle class, which does not populate the social media chatrooms, initially supported the move as they silently revelled at the apparent misery of the richer lot.

The support for the Prime Minister’s ‘notebandi’ initiative emanated from the pent up frustration against the growing inequity stemming from flawed policies of governments past, which had fuelled corruption and crony capitalism. As days passed, however, neither the government nor the social media of the party in power could throw much light on the promised long-term benefits or even convincingly define ‘long term’.

Meanwhile, the pain caused by the withdrawal of the veritable oil that kept the wheels of farming moving meant that the sector was feeling choked and the enthusiasm for the demonetization initiative was gradually being lost to the all pervading confusion and pain. The Prime Minister had promised long-term gains and asked the people to bear a short-term pain of 50 days. The pain is expected to last far longer.

In one stroke of the pen all rural banking transactions were brought to a standstill. Problems were inevitable. It is the extent of mismanagement that is astounding. Demonetization created a cash shortage that hit the fresh produce purveyors the most because it meant that consumers cut down on buying fresh produce and farmers taking their perishable fruits and vegetables to the wholesale market were being squeezed like lemons there.

Traders have reasoned that small street vendors and shopkeepers do not have money to purchase perishables. Sales are down about 20 per cent and even prices being received by farmers for their produce are down 25 per cent. Truck drivers get paid on delivery for their transport cost by the commission agent where perishables are delivered. Furthermore, traders at Sabzi

**SUPPORT FOR
‘NOTE BANDI’
EMANATED
FROM
FRUSTRATIONS
WITH THE
INEQUITY
STEMMING FROM
FLAWED POLICIES
OF THE PAST**



IT APPEARS THAT THE CONSEQUENCES OF 'NOTE BANDI' ARE NOT EVEN GENDER NEUTRAL

Shopkeepers demanded 30 per cent higher value for same inputs if farmers offered older notes. Villagers are being forced to exchange one ₹500 note for four bills of ₹100. On the one hand farmers selling their produce were being forced to accept old currency and, on the other, if they demanded new notes they are given a smaller value.

Possibly over a third of the rural population does not even operate a bank account in a cash-based rural economy. Those specifically hurt are the rural women who are being forced to reveal their secret savings to their husbands; even the small stash that took years to build. It is highly unlikely that husbands will return the savings to their spouses. It appears that the consequences of 'notebandi' are not even gender neutral.

A society that loses faith in its own currency is in a precarious situation. The economy is slowly grinding to a stop even though the majority of the people believes this bold reform is about striking at the root of the black money menace and continues to support the Prime Minister. Yet experience is a great game changer and it is a far from pleasant one so far.

The mission is now turning into a race between the government logistically making available cash in banks for people to exchange and withdraw and the disillusionment courtesy the repercussions of a badly executed transition that threaten to become the tipping point in the political lifespan of the leader.

As the angst and agony grows, farmers are demanding the Prime Minister sack the RBI governor not only because he failed to fulfil his mandate in terms of 'advising' the government but also failed to manage the roll out of the new currency. The Prime Minister may say that he is behind the bold move but there are times when a scapegoat becomes essential. ●



Ajay Vir Jakhar

Ajay Vir Jakhar
Editor

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Time to Relearn the Economics of Co-operative Banking

The call from the Prime Minister seeking sacrifices from the citizens found a heartwarming response. Fifty days of hardship is a little time to offer for transformational changes in governance. Farmers, in particular, accustomed to pain, caused by decades of government policy failure, were prepared to bear the pain. Yet how is the farmer expected to react to the engineering of a systematic failure of the rural co-operative banking sector save to describe it as an act of unpardonable desecration.

India's district co-operative banks have always received step motherly treatment. Things got out of hand when, following a surgical strike by an order from the Reserve Bank of India, all district co-operative banks were directed not to exchange or even accept ₹500 and ₹1,000 bills from account holders. Remember that the demonetized currency bills read "I promise to pay the bearer the sum of... rupees" and were signed by the RBI Governor?

That solemn oath was broken courtesy a notification whereby around 120 million customers of all the 33 state co-operative banks (SCB) and 367 district co-operative banks (DCB), duly licensed under the banking regulation act by the RBI were barred from depositing old bills in their own accounts or even exchanging petty cash. As other commercial banks, all SCBs and 349 of the DCBs are on the core banking solution (CBS) platform and 260 of these banks even issue RuPay debit cards.

Similarly governed, the scandalous urban co-operative banks continue to function as normal banks. Even public sector or private sector (Axis Bank, in which the government of India holds maximum shareholding, for instance) banks, also in the midst of a storm, go unscathed, accepting deposits and conniving with black money hoarders at the expense of the Prime Minister's reputation.

In their earlier stints, both the Prime Minister (as chief minister, Gujarat) and the economic affairs secretary, Shakti Kant Das (as secretary in Tamil Nadu), have experienced the workings of co-operative banks and have genuine concerns



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regarding these bank managements. One can validate these apprehension with one's personal exposure in Punjab.

It is indeed correct that most of such banks in Punjab and elsewhere are controlled by politicians and are run like personal fiefdoms with state government patronage. Lack of supervision and governance on the one hand and the politically-controlled registrar of co-operative societies, on the other, have created this crisis. The already afflicted farmer is now positioned between the proclaimed commitment to end the black economy and the crooked co-operative bank managements and is being milled like wheat flour.

Transformational governance would mean that politically controlled bank managements of co-operative banks must be dismissed for they are not representative of interests of primary agriculture societies and farmers. Even new currency notes being made available to various bank branches are not being equitably distributed but being cornered by bank management using names and accounts of unaware customers.



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When the UPA government was in power, the ministers responsible for law and the finance were responsible for the Nabard exercising supervising authority over the co-operative banks. Yet these legal and supervisory responsibilities were abdicated and this has come to plague the co-operative banks today. Ironically, there are former UPA ministers representing crooked co-operative banks managements as lawyers today.

In essence they have literally destroyed any chance of relief to farmers who bank with the co-operative banks by failing to distinguish between bank managements and farmers while making their arguments in the Supreme Court. Ch. Charan Singh, former Prime Minister, who earned his LLB degree in 1926, would have vehemently opposed the line of argument adopted by these urban centric, capitalist mindsets. Farmers must now explore other legal options and appeal to the Supreme Courts after December 31, 2016. Alternately, the face saving solution for the government would be to waive all farmer loans issued by co-operative banks.

Most small and marginal farmers take loans from co-operative banks. About 50 million farmers, having fulfilled the KYC norms, have received loans courtesy Kisan Credit Cards, for instance, and cannot even repay their loans. Yet they continue to be charged interest. The point is that farmers normally repay loans after the harvest but under the trying circumstances are unable to repay loans on time. This means that they will not be eligible to claim the

The demonetized currency bills read: "I promise to pay the bearer the sum of... rupees", signed by the RBI governor. That solemn oath was broken...

four per cent interest subvention either. New loans are only given on repayment of old loans and rabi season loan off-take is also severely impacted.

At an all-India level, the co-operative banking system has a net crop loan outstanding of nearly ₹200,000 crore. One option would have been to allow the DCCs to accept repayment of the crop loans in old currency. Banks could, later at their discretion, re-issue the loans. Farmer loan NPAs of commercial banks are substantially reduced courtesy demonetization as will be borne out by data when it is available.

Under the current circumstances, co-operative banks, saddled with only defaulting customers will meanwhile head for failure because, as stated, most farm loans are repaid post harvest. Had the demonetization been thought through, the administrators would have realized that rural co-operative banks branches with online facility on the CBS platform need not have been placed under this draconian requirement. Yet policy-makers have a habit of acting and then thinking of the consequences, if they do at all.

What obtains now is that when bank refuse to accept payment in old currency, these deposits will become NPAs in the books of the bank and bank balance sheets will be decimated. Customers are starting to withdraw or transfer their deposits from co-operative banks and good capital will flow to private or public sector banks, never to return again, clearly leading to a Catch 22 situation. The collateral damage is that the farmer's reputation and track record will suffer.

What makes this situation laughable, had it not been for the terrible tragedy visiting the victims, is that farmers were given loans by the RBI licenced banks with RBI issued currency bills. Now, upon harvest, when farmers want to return the loans to the same branches from where they were issued, banks are refusing to accept cash deposits. On Kisan Diwas it is only logical for farmers to refuse to repay loan when such demand is raised. ●

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To the Editor

No farm reform sans stakeholder involvement

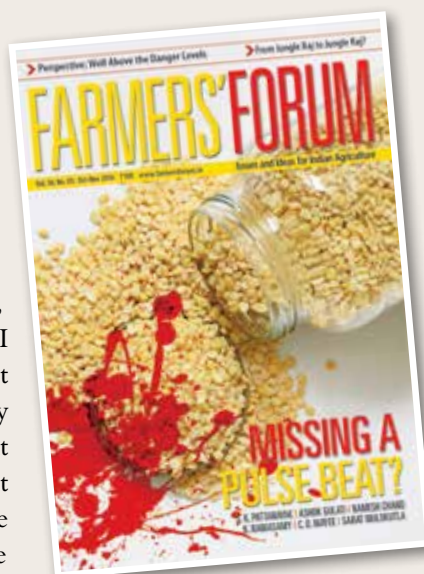
Sir, Apropos of your editorial “Squinted Lenses for Cost: Benefit Analysis” (*Farmers’ Forum*, October–November 2016). I totally agree with you that without stakeholder participation, policy objectives get lost as the fine print is deviously tweaked to benefit private companies. The example that you have presented is quite striking and this “farm machinery scheme” should serve as an eye opener. Bharat Krishak Samaj is doing great work by taking up the cause of the farmers at the right forum on the one hand and presenting it for the general public on the other.

Sanjay Sharma
Alwar, Rajasthan

Jungle raj here and elsewhere

Sir, I enjoyed reading Green Fingers “Palia Kalan: From Jungle Raj to Jungle Raj?” (*Farmers’ Forum*, October–November 2016). You show the plight of rural India courtesy the many failures of the government machinery. One hopes that you will keep informing us about the distress in rural areas by travelling to different parts of the country. More importantly, I am interested in your point about history distorting perceptions. You talk about “China where Mao is fondly remembered even though his policies led to millions of Chinese dying as he destroyed agriculture during the Long March” and say that you have a story to tell there. Hope that you will not keep us waiting.

Bhupinder Singh
New Delhi



Feeling the pulse's pulse

Sir, Why does one feel that nothing is farther from the government's mind than “Getting a Feel of the Farmer's Pulse” (*Farmers’ Forum*, October–November 2016)? One must, however, compliment you for organizing the conference on “Pulses in India” that discussed the pulse phenomenon threadbare and had such erudite people to present different perspectives. It was a very good and timely meet because it is important that all pulse-related questions be brought in public domain.

Ashok Rauthan
Garhwal

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the earlier issues.**

Must question this mustard

Sir, I followed with interest your detailed exposition on the report of the Delhi University's Centre for Genetic Manipulation of Crop Plants (CGMCP) vis-à-vis GM mustard (*Farmers’ Forum*, October–November 2016, The GM Mustard Dilemma, Reading Between The Lines). I wonder if the CGMCP has come up with any convincing arguments against the points raised by the expert committee. Failing that, one will have no option but to accept that the testing standards around DMH-11 transgenic mustard hybrid were unscientific bordering on the fraudulent. I also wonder what is the status of the demand that the application be rejected in toto. Or, as all things that are anti-people, will all the evidence provided be placed in the trash can?

Ananda Layak
Meerut, Uttar Pradesh

Thumbs up for futures

Sir, Apropos of Sarat Mulukutla position on ‘Futures market for pulses: myths and realities’ (*Farmers’ Forum*, October–November 2016), the country should support the futures market to facilitate physical trade as well. The NCDEX has, for instance, created substantial warehousing infrastructure, available for spot markets on the one hand and close to the farm-gate on the other. There is the advantage of credibility with banks once commodities are in an exchange warehouses. There should be a PR campaign to change perceptions.

Mukund Prasad
Patna, Bihar

RICHES OF THE SOIL

The Wealth in Local Knowledge Systems

Shiba Desor

Five of the crops that Adi Kumbruka planted last year failed. The progressive Adi had, however, planted 75 crops in his two-acre field in village Kunduguda in the Niyamgiri hills of Odisha. This meant that he got a harvest for 70 crops!

While such farming may be considered as 'poor' in terms of cash generation, it is an important example of ecological agriculture, as was practised before the interventions of modern hybrid seeds, mechanization, monocultures and chemicals.

The 'prosperous' farming methods of the green revolution usually push for putting all the eggs in one basket. Failure of even one crop can become a matter of life and death when this happens. Is not then the prevalent logic of 'richness' and 'poverty' grossly perverted?

While the impressive figure of 75 crop types on Adi's farm may be more of an exception than the rule, even within the practitioners of traditional multi-cropping, it is usual to find 30-35 crop species, a mixture of diverse millets and pulses, oilseeds, maize and seasonal vegetables, in most



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such farms, grown traditionally with a logic of combinations that is inherent rather than explicitly taught.

Such multi-cropped systems are a heritage that can no longer be ignored. Their richness in terms of diversity, nourishment, resilience and sustainability offers important lessons for all who depend upon food and farming.

An important aspect of the richness of local agricultural systems lies in their seed sufficiency. The currently advocated model of agriculture makes the farmer dependent on external agencies for seeds since most hybrid seeds hold little viability in the next year, leading to a trap of dependency and debt.

Seed-saving and seed-sufficiency, however, have been an old and still prevalent system in India. Loknaath Nauri of the Korandiguda village is wise and says: "He who does not have seed is not worthy of being called a farmer".

The culture of saving seeds is not restricted to any one small region but permeates throughout the country. Vijay Jardhari of Beej Bachao Andolan narrates a local story from the Garhwal region of



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'Kya hai jungle ke upkaar, mitti, paani aur bayaar. Mitti, paani aur bayaar, zindra rehne ke aadhar'. (The gifts of forest, soil, water and wind, are the basis of life)

Uttarakhand. A deadly drought once affected the region. Visitors to the land found dead bodies all over and no sign of food. Then they spotted a dried bottle gourd with seeds stored inside, tied to the roof of a house. Farmers had chosen to die rather than eat the seeds that would be needed for feeding the fields next year.

Local agricultural systems are no less input-intensive than the 'green-revolution' approach. It is the nature of inputs that widely differs though. In the technological approach of modern agriculture, the inputs would be fuel for tractors, electricity for borewells, chemicals for spraying the soil and plant. Local agricultural systems have their own set of inputs.

Richness of nutrients and microbes in soil, availability of water during the right seasons and close attention to the needs of the plant, often requiring hard manual labour, are inputs that often go into this system. These inputs are more directly connected to their surrounding ecosystem and

unlike the ones used in modern agriculture, these can further enrich the system rather than cause degradation or pollution.

Because of the symbiotic relationship of such agriculture with forests of it cannot be practised in isolation or at the level of mere individual, while the forest degrades to nothingness. It needs the forest to remain healthy. That is why such people come together and raise their voice against forest destruction.

One of the slogans that has rung through the Garhwal mountains of Uttarakhand during various protests for protecting the forests is:

'Kya hai jungle ke upkaar, mitti, paani aur bayaar.

Mitti, paani aur bayaar, zindra rehne ke aadhar'.

(The gifts of forest, soil, water and wind, are the basis of life).

This is reiterated by Gond adivasi Ijamsai Katenge, associated with Amhi Amchya Arogyasathi of Gadchiroli in Maharashtra. "We have very little savings in a bank. The jungle is our bank".

The dependence on forests is also mirrored in

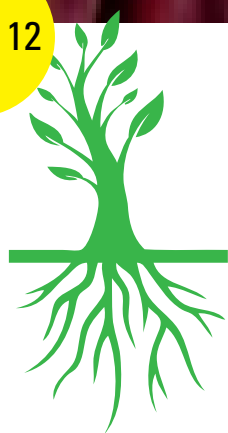




Photos: Shrishtee Bajpai and Meenal Tatpati



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The logic of many of these practices is a mixture of intuition, tradition and experience. It often comes with a way of relating to the environment in a more direct manner

the lives and daily diets of many such communities. Their meals are often supplemented by tubers, green leaves, berries, mushrooms, honey and small catch from the forests. This dependence on uncultivated foods also adds a richness to diets, which has saved many lives during times of calamities and crop failures.

They provide a source of sustenance to the adherents to this school of agriculture by giving them something to fall back upon. Yet, this is a richness that is looked down upon in this upside-down world and is thus fast being lost. This needs to be changed. Adi talks about how, in a year, his family gets sufficient crops from the fields for 10 months and depends on the forests for the other two months.

In some areas, the practices, for long sustained, have lost out and got eroded under the pressures of urbanization and markets. In other areas they continue to be sustained. How do these practices sustain themselves? How have they carried on for centuries? How have they evolved?

There are no direct answers to these questions. There is a story that Vijay ji narrated of how, during the drought, one farmer kept ploughing his fields. When asked why, he answered that it was so that he does not forget how to work his land. Is there a very important moral to this story that one is missing out?

The logic of many of these practices is a mixture of intuition, tradition and experience. It often comes with a way of relating to the environment in a more direct manner, viewing soil as a living entity. These are internalized and taken from one generation to another in forms of rituals, stories, songs and day-to-day life.

Today, it is clear that in persisting with the economic growth-focused model of development and agriculture, the environment is getting severely depleted, health and nutrition are badly affected and the agricultural system is becoming a debt-trap. Yet, while 'environmental sustainability' and 'climate change' have become buzz words, instead of all efforts being focused on saving what remains



of such local knowledge systems, these systems are constantly threatened.

While local agricultural systems are contextual in their approach, policies framed by governments expect a regular pattern of farming. Loknath describes how in his upland field, where plants are sown according to slope height, line sowing is being pushed by the government, defying the plain logic of common sense.

The policies can also unwittingly cause malnutrition as in the case of shift to cash crops like soyabean. With such a shift to cash crops, there is often a parallel regressive power shift with the control over seeds shifting from women to men since now the seed is bought from the market. Adding to the issue of malnutrition, forests are taken away for timber plantations, creating monocultures that no longer can provide the nourishing base that they have grown up with.

Ruha Hikoka of Niyamgiri hills rues: “Sarkar (government) will not be able to give the diversity we eat from our farms and forests. They are snatching our food away, cutting our jungles and telling us to plant hybrid crops and eat urea-fed rice. Our health is getting affected by it”.

Then there is the issue of taking away of forest

and grazing commons as well as agricultural land for purposes of mining, industry or infrastructure. At the same time, there are strategic attempts to break down the traditional informal dispute-resolution systems and, instead, create structures that are easier to control from a central level.

There is, besides, the inevitable and inescapable truth of the connectivity of the planet. Local agricultural systems are resilient in the face of natural calamities but how much of man-driven destruction can they tolerate? What about the increased unpredictability in seasons, coupled with the decimation of flora and fauna, the degradation of soils and the severe depletion and pollution of water sources?

These are crimes that the local traditional farmers may also have to pay for, even though they had played no part in creating this situation. Yet, if there is any hope or possibility of fostering resilience, it cannot come without understanding, appreciating and practising once more such contextual forms of agriculture and life. ●

This article is based on thoughts and information shared by the persons referred to in this article during the Vikalp Sangam on Food organized in Muniguda, Odisha (September 17-20, 2016)

**COVER
STORY**

DEMONETIZATION

A 'Stressed' View From Rural India

A. K. Ghosh



“We run an NGO in Sandeshkhali Block I and II and Hingalgun. Our organizations cannot withdraw more than ₹4,000 per week even when the government promised weekly withdrawal quota of up to ₹24,000. We have to run the orphanage and laboratory for soil and water testing besides assisting more than 2,000 Women Self Help Group (SHGs). How could we continue to work in this desperate situation?”

— DINOBONDHU DAS

Secretary of Joygopalpur Youth Development Centre in Sandeshkhali, in the Sundarbans, West Bengal

West Bengal will get a share of between ₹900 crore and ₹1,000 crore out of the ₹21,000 crore additional fund sanctioned by the Nabard for the current rabi sowing season to tide over the post-demonetization cash crisis. How does this confident claim from the Nabard chief general manager, A. K. Raybarman (DNA, November 25, 2016)¹, supported by other banks — along with assertions about measures to make adequate cash available in rural India to spare farmers all suffering during the sowing season — measure up against the reality on the ground?

Why is it at such sharp variance with the picture painted by the economist and former Prime Minister of India, Dr Manmohan Singh, in his speech on November 24, 2016? Remember, rural India mostly depends on co-operative banks that, by the admission of India's Attorney General, Mukul Rohatgi — appearing for the government in a case before the Supreme Court hearing a batch of pleas challenging various aspects of demonetization — “lack proper facilities, mechanism and proper infrastructure as compared to scheduled banks” and have been left out of the demonetized note exchange programme.

One of the hardest hit in this scenario, are the farmers of India. In Punjab, irate farmers “downed the shutters” of a Co-operative Bank, locking the employees inside the bank reports the Tribune News Service (Faridkot, December 7, 2016), to register their protest against the bank officials for not giving money from their accounts. They were angered by the bank's inability to give them money for more than 10 days, while they stood in the queue for four to five hours every day. The hapless officials

¹ <http://www.dnaindia.com/india/report-demonetization-west-bengal-to-get-up-to-rs-1000-cr-from-nabard-for-rabi-crop-2276881>



A. K. GHOSH
Former Director General, Zoological Survey of India heads the Centre for Environment and Development, Kolkata

had no solutions because the government had not funded the bank. It needs to be remembered that the co-operative banks were not authorized to exchange the old ₹500 and ₹1,000 notes because they lacked the facilities to check for fake currency. Essentially then, a large chunk of rural India has been deprived of its money without the ability to virtually exchange the demonetized notes.

One of the worst affected community is in rural Bengal in the deltas of the Sundarbans, spread over in 50 odds islands. Most farmers and fishers are organized under Community Based Organizations (CBO)

and are now in a quandary because they cannot draw money to carry on everyday business. Dinobondhu Das, Secretary of Joygopalpur Youth Development Centre in Sandeshkhali, in the Sundarbans, West Bengal, has worry beads on his forehead even on a cold winter morning. “There is a crisis with payments for daily labour for harvesting the kharif crops because there is no cash for paying daily wages. Kisan Credit Cards do not work and the promised seeds are not available” (November-December 2016).

Kanailal Sarkar of Tagore Society for Rural Development of Rangabelia of Gosaba Block in South 24 Parganas has an identical story: “In villages most of the people do not have ₹500 or ₹1,000 notes; they depend on small currency. They do not have debit or credit cards although there are a number of State Bank of India branches. While we support the movement against black money, how long do we

“While the government claims that the farmers will face no problem in getting money from their accounts, we are so helpless that it is difficult to purchase even the daily required grocery items to keep the hearths burning.”

— Faridkot farmers in *The Tribune*



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Prices of paddy, cotton, soya and tubers have declined due to the demonetization, with the potential to push up farm indebtedness of the Indian farmer

have to suffer helplessly with all the restrictions of withdrawal and lack of cash in the banks. No one was prepared for this sudden decision and small and marginal farmers and the small traders in the island villages are the worst victims”, says Sarkar.

Dr Manmohan Singh said that the way demonetization is “being implemented will hurt agricultural growth in our country”. To get some perspective, 80 per cent of the Indian economy runs on cash. Therefore, agriculture cannot but be affected, particularly because of its primarily informal nature. India’s informal economy is estimated as 45 per cent of the GDP or \$2.1 trillion.

Experts believe that the overall impact of demonetization will be spread over both current quarter as well as on the last quarter of present financial year ending in March 2017. The farm economy is an integral and a critical part of the Indian economy that has grown by around 7.6

per cent in 2015-16 and by 7.1 per cent in the first quarter of the current financial year. Dr Manmohan Singh believes that the sudden ‘demonetization’ can impact the Indian GDP by triggering a nearly two percentage point decline, which he said was “an underestimate and not an over estimate” (*The Telegraph*, November 25, 2016).

It does not need a rocket scientist to figure out that the demonetization jolt has delivered a cash crunch at a period when farmers need money to pay daily labourers to harvest the crop from the field and also to prepare for the winter crop (rabi). Reports indicate price of paddy, cotton, soya and tubers have shown sharp decline due to demonetization process, with the potential to push up the indebtedness of the farmers in India. The major farming activities dependent on credit are faced with a drying up of credit flow and one cannot imagine the extent of distress, never mind the Nabard assurance.



'Sundar' but neglected...
mangroves of Bengal

18

In fact, none of the institutions and programmes to help the farming poor seem to be able to deliver comprehensively, from irrigation to insurance

One perishable crop loss observed is in the rice bowl of West Bengal, in the Bardhaman district. A system of 'Labour Haat' used to supply labour – nearly 4,000 of them – featuring seasonal migrants from Nadia and Murshidabad districts of West Bengal and Sahebjanj and Katihar in Bihar – has been hit. The medium and large farmers book groups of such labours both for harvesting the kharif crop at this time and preparing the field for rabi crop. Media report shows that no labour was available as farmers cannot pay in cash (*The Statesman*, November 16, 2016). For harvesting one bigha of land a day, an average of seven wage labourers are employed at ₹150 per day plus food.

Without farm labour, extensive losses in the yield are apprehended due to the winter dew. Marginal farmers face the crisis since they have no means to pay farm labour other than offering paddy as wage. Migrant farm labour needs cash to take home. Apart from plight of farmers in absence of

farm labour, paddy procurement now reportedly hangs in balance in Bengal.

It is estimated that total ratio of paddy production is 1.75 crore tonnes (which is 65 per cent of annual paddy production in Bengal) in 338 Community Development Blocks. The West Bengal government runs 70 camps per district for procurement and this year's procurement target is 52 lakh tonnes with minimum support price of ₹1,470 per tonne. With no cash, 80 per cent of farmers have not been able to engage farm labour for harvesting (*The Times of India*, November 24, 2016).

It is not only paddy in crisis; potato farmers in Bengal are also left in the lurch as the supply chain splutters (*The Times of India*, November 25, 2016). The promised disbursement of loan seems to be a mirage! Farmers in West Bengal – the state producing highest amount of paddy (1.75 crore tonnes in kharif season in 338 Community Development Blocks), are facing the cash crunch.



Photo: Uma Ghosh

The dearth of money in circulation hit the marginal and small farmers the hardest; it has affected harvesting, processing, purchasing seeds and fertilizer and also the transportation business (*The Telegraph*, December 1, 2012).

How are things on the seeds front? Is the government's permission to use old notes to purchase seeds helping the situation? The state agriculture department reported that of the 30 centres, only four are run by the centre and the other 26 by the state. Each district has only one or two seed centres that are highly inadequate to meet the demand. People are worried about the shortage of seeds for want of purchasing power/ability and its impact on the next season of cultivation (*The Statesman*, November 23, 2016)

The chaos around implementing demonetization is best in evidence in the record number of circulars issued by the Reserve Bank of India. Why does Dr Manmohan Singh argue that "what has been done can weaken and erode our people's confidence in the currency system and in the banking system"?

The Nabard has been late to take action to keep the co-operative banks going though the amount to be disbursed through co-operative banks is

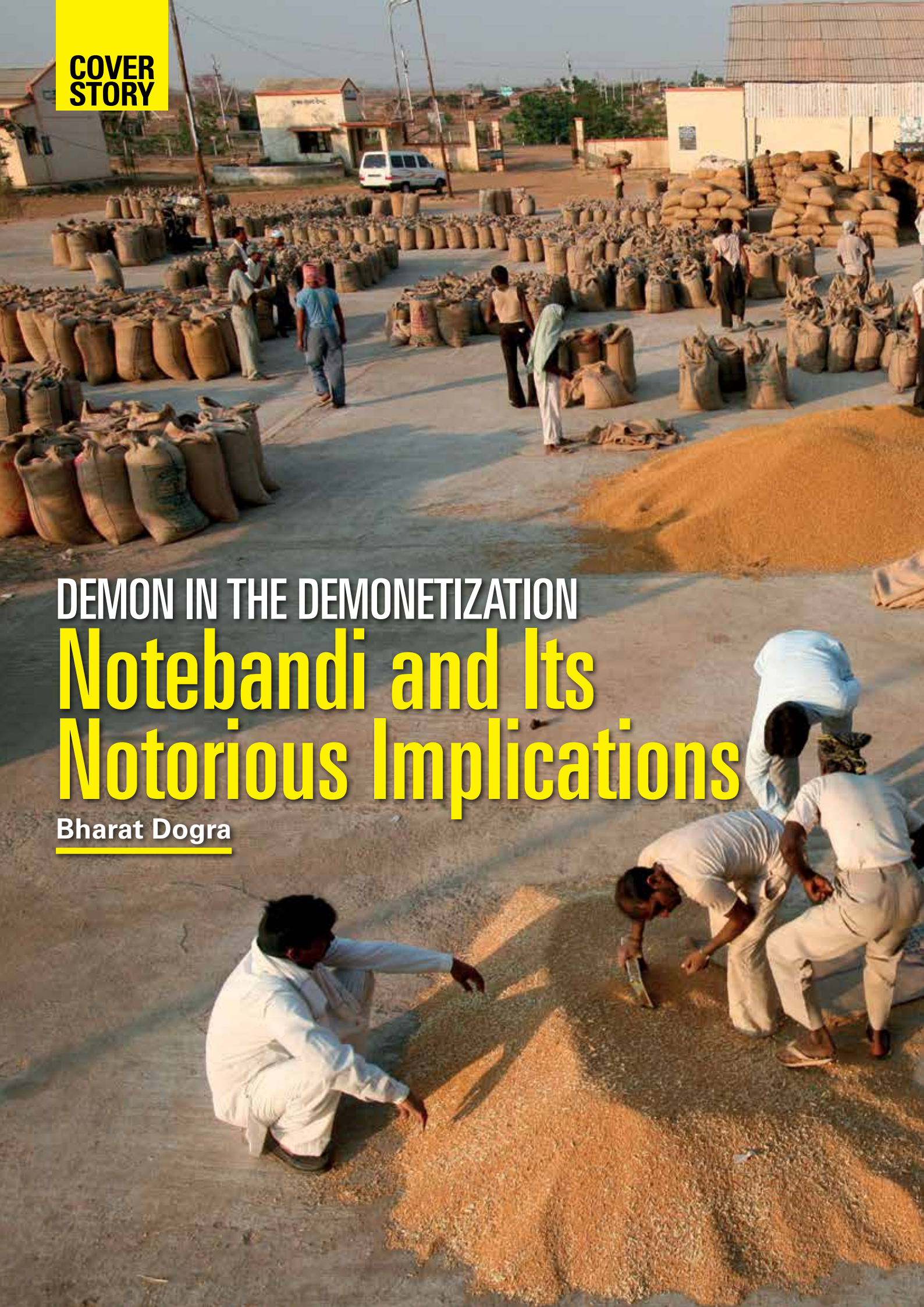
₹21,000 crores (*Bartaman*, November 24, 2016). One has to remember 2016 recorded a bumper kharif crop after two consecutive years of scanty rainfall. In any event, institutions like the Nabard have never been able to address the credit needs of rural Indian comprehensively even in normal times, which is why the money lender reigns supreme in the countryside. In fact, none of the institutions and programmes to help the farming poor seem to be able to deliver comprehensively, from irrigation to insurance.

Farmers, India's vast army of self-employed people, with even ready crops, are not finding buyers or are being approached by buyers who offer them meagre prices. Inability to sell kharif crop will most certainly hit the rabi crop as well and this augurs poorly for the food situation in India and well as farmer well being. The currency crunch has hit the marginal and small farmers hardest and affected harvesting, processing, and purchasing seeds and fertilizer as well as transportation business. The situation provides little cheer in the rest of the country with rural food trade taking a hit with prices crashing. While urban prices have not fallen, it is the farmer who is being forced to sell cheap. ●

**COVER
STORY**

DEMON IN THE DEMONETIZATION **Notebandi and Its Notorious Implications**

Bharat Dogra





“Ever since demonetization my life has been greatly disturbed as I had to deposit my earnings from sale of paddy crop but later had great difficulty in withdrawing any money. First I stood in the queue several times and later my sister stood in the queues but we could withdraw very little money. Hence the sowing of my rabi crop was delayed. My children were ill. In desperation, I had to sell poplar trees valued at over ₹100,000 for just ₹25,000”.

— SHAKTI SINGH, A MEDIUM-LEVEL FARMER OF PATNI VILLAGE (SARSAWA BLOCK), IN WESTERN UTTAR PRADESH

There are many Shakti Singhs strewn all over India. Demonetization has spread its tentacles throughout the countryside even though several farmers and their groups had initially welcomed the government's step. It was publicized and even widely perceived as a strong step against the hoarders of black money. As the days passed and farmers came face to face with many problems associated with this step and when these problems did not ease even after their patient wait of a month, they started questioning the wisdom of the government decision of notebandi.

Every other farming problem seems to have taken a backseat as post November 8, a world of unexpected and unanticipated problems has descended on Indian farmers, worsening the farm sector crisis. At the time of writing, demonetization has completed one month and this writer visited some villages of Saharanpur district in Western Uttar Pradesh to study the impact of demonetization on farmers and farm workers. Efforts were made to contact well-informed persons in other villages that could not be visited. A special effort was made to contact women. Apart from individual interviews, group meetings were also organized so that views of villagers could be obtained in a



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up in banks to deposit their ₹500 and ₹1,000 notes. This itself was a problem but nothing compared to the really big problem of withdrawing money.

Many farmers and their family members have spent long hours in bank or ATM queues. Some farmers said that despite the exceptionally cold weather here they queued up from 5 am to 6 am but returned empty handed or with just one ₹2,000 note apiece. Till the end of

the first month they had not even seen the new ₹500 note. The ₹2,000 note is very difficult to get change for in the village market for buying daily necessities.

As these daily hassles increased, farmers had neither the time nor the cash to go ahead with planting the rabi crop smoothly. Many failed to plant the rabi crop on time or failed to plant it with normal care. They could not get the inputs as, despite government announcements, they could not get these from co-operative credit societies on credit or by using old currency notes.

Meanwhile, much of the remaining kharif crop could not be sold promptly in many cases for want of new currency. Traders and arhatyas had no money to give. Farmers growing perishable crops like vegetables had to sell at cheaper rates as the traders pleaded non-availability of cash to pay them.

Despite the exceptionally cold weather farmers queued up between 5 am and 6 am but returned empty handed or with just one ₹2,000 note apiece

more interactive setting. The results of this study, presented here, identify some emerging trends vis-à-vis the impact of demonetization along with individual experiences and issues more specific to women. There is an emphasis on issues concerning farm workers.

Demonetization came at a particularly bad time for them as they were preparing to plant the rabi or winter crop. Wheat is the main rabi crop in western Uttar Pradesh. When the demonetization decision was announced, several farmers had sold their paddy crop while others were in the middle of this activity. They hoped to use some of the sales proceeds to quickly plant the rabi crop as timely planting helps with better yields. However, after notebandi was announced they had to leave their preparations for rabi in the middle and queue

Sugarcane farmers were apprehensive about being able to get timely payments given the increasing problems and delays in the banking system.

The last resort for the farmers of this area are poplar trees grown on a part of the land by many. To meet mounting cash needs some decided to sell all or some of their poplar trees. Here too a cruel surprise awaited them. Due to demonetization and the resulting cash crunch, many plywood factories and other units buying poplars had stopped operating for almost a month and the price of poplars had crashed. So several farmers had to sell poplars at less than a fourth of the anticipated price, suffering another heavy loss.

As the cash crunch continued many farmers had to borrow not just for planting the next crop but also for several household expenses including medical





expenses and educational expenses of children. Hence their debt burden increased. This, along with the likely lower than normal rabi yield, can lead to the current difficulties getting linked to longer-term adverse implications for many farmers.

Another important trend post-demonetization was that some agreements for leasing in or leasing out land came under pressure. As long as the tenant could pay the landowner promptly, the arrangements worked more or less smoothly. Once the cash payment could not be made or assured, after the cash crunch, it became clear that the earlier agreement might not work.

In small and marginal farmer households there is an increasing trend for one or more members to support their family by taking up work in industrial units closer to their village so that they can commute daily to and from work. Soon after demonetization many such units shut down, at least temporarily, depriving several small and marginal farmers of this income to make matters worse. Indeed, the many changes suddenly

“I am quite willing to concede that notebandi was a well intentioned step, its motives were good but its planning was obviously faulty as we farmers have to suffer a lot. We got old notes from the sale of our crop and now we have to meet our expenses using the new ones. Just see how difficult the situation is with the banks. How can farmers cope with the new situation and the new problems for which they are not prepared?”

— Sachin Kumar, farmer, Patni village

injected into the system by demonetization have disturbed the normal flow of rural life and thrown it into a turmoil.

The experience of Abdul Wahid, Patni village is typical. “To plant my eight-bigha field, I need to pay the tractor owner, I need to buy seeds and fertilizers but it has become so difficult to withdraw any money from bank. It is strange that you deposit but cannot withdraw. How can I complete the planting of my fields in time? If I delay, the yield will drop?”

Shagufta, a woman from a farmer family of Musail village says: “We have 20 bighas of land. Earlier, we would lease this out on contract and the arrangement has been working out well. This time, the farmer who had leased out the land said that he does not have the cash to give to us. He also said that we can give the land for rabi planting to someone else. We decided to cultivate the land ourselves but had a lot of problems in getting the necessary inputs. Our planting has been greatly delayed and we are very worried”.

Women farmers have different cups of woe. As it is they have been working in very difficult conditions. Julie Saini is a widow with two children who looks after cultivation of her fields as well as household expenses. She says that recent cash crunch has made things very difficult and her family is facing shortage of the most essential goods.

Kunta is another hard working lady from this village who makes up for her family’s small land holding by leasing in extra land. This year the planting was very difficult due to the cash crunch and while they planted what they could in a hurry, the yield is likely to be low. Kunta also grows vegetables for which it has been difficult to get a fair price for such perishable crops.

Several women of farmer households take up extra work to add to the family income. Pratibha is one such woman who takes up sewing. She complains that she has hardly received any payment during these days of cash crunch. Women like her are facing increasing problems in meeting pressing needs such as paying school fees of children, she says.

All these three women are also members of self-help groups. These SHGs have played a very useful role here in helping to provide easy, low-interest loans to women in times of need and mobilizing their savings for livelihood support. The cash

Baburam Saini, a farmer of Sultanpur Chilkana village says: “This time crop planting was very difficult due to shortage of cash and difficulty in buying inputs and so my rabi crop has been delayed. Due to my difficulties I had no other option but to sell a lot of my poplar trees at a very low rate. In normal times I would have received ₹2 lakh but I got only ₹25,000 in these difficult times; even that I am yet to receive in full; such is the cash crunch”.





Baljit is a worker of Dindoli Khera village. He has only one hand but is known for his hard work. He led a team of workers for sugarcane work. On behalf of the team he got a payment of ₹21,000 in old, cancelled notes. In order to deposit these and get new currency notes he stood in bank queues for eight days. On three days he did not get any payment at all. On other days he managed to get part-payment. Meanwhile, his co-workers have been harassing him to clear their payments.

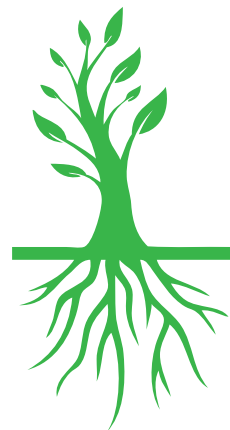
crunch has adversely impacted the activities of self-help groups too.

A special source of social security for women has been savings that they make quietly, using small gifts, ceremonial and shagun payments as well as savings from household expenses. Over the course of a few years, this becomes a significant amount and is regarded as a source of security by them. It is also readily available savings right at home to meet any emergency.

Such savings by women are likely to exist more in rural areas because of lesser access to formal banking system. However, following demonetization they had to take out the bulk of these savings and surrender them to banks. It is unlikely that they will get back the much of it. In any event, they have faced taunts for having secret stashes of money. In fact, there have been stray cases of violence against women for having kept their savings a secret.

While analyzing problems of farmers, due attention is rarely given to the problems of farm workers, who make a very important contribution to agriculture and food production. Following demonetization, it became increasingly difficult for farm workers to get employment because they wanted new money to meet their daily needs. Sheeshpal is a farm worker of Patni village. He says that employment has become scarce after notebandi. It has also become difficult to get payment in currency that will enable him to buy his daily needs.

Chandar was a farm worker of Chilkana village, guarding the fields of a big farmer at night. During the cash crunch he fell ill. His wife, Resham, could not withdraw money from bank even after standing in a queue for a long time. Chandar died because there was no money for his treatment on account of the cash crunch. Any tears for Chandar? ●



**COVER
STORY**

AGRIMARKETS & DEMONETIZATION **A 50-Day Report**

Nidhi Aggarwal & Sudha Narayanan

December 29, 2016 marked the end of the 50-day period after which Prime Minister Narendra Modi promised that the pain afflicted upon the citizens of the country due to the process of demonetization will be rewarded well. While it remains to be seen how this pain is translated into a net benefit for the overall country, the state of the agricultural markets and the overall farm sector continues to be dismal.

Even at the beginning of the period, there were worries that agriculture would be one of the worst hit sectors due to demonetization. The kharif harvest was coming to the market and rabi sowing was to begin from the sale proceeds of the kharif crop. Early evidence suggested that market arrivals had been affected for a wide range of crops. An analysis of mandi arrivals data for 42 different commodities across the country provides evidence that the demonetization shock has indeed hurt the agricultural markets significantly.

Aggregated mandi arrivals for rice in the post demonetization period (November 9, 2016



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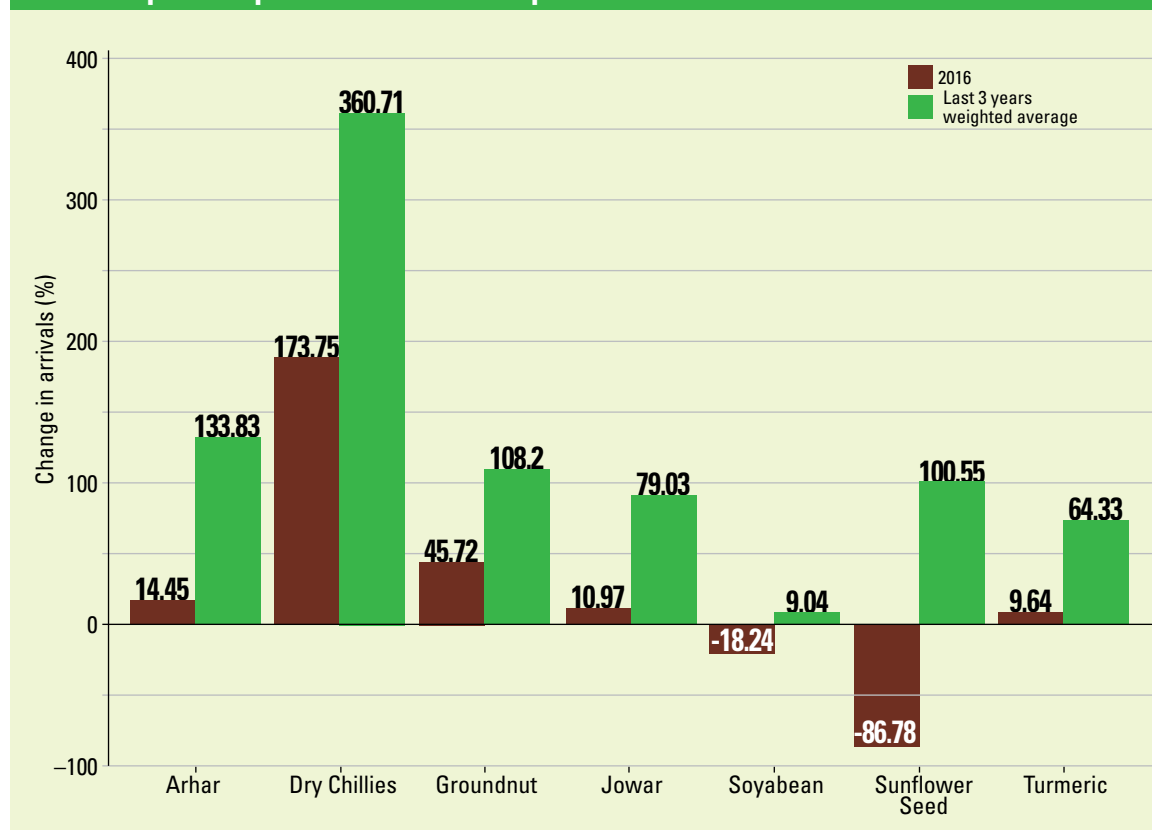


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to December 29, 2016) saw a decline of 1.17 per cent relative to the period prior to the demonetization (October 1, 2016 to November 8, 2016). The corresponding period in the last three years saw an average increase in rice arrivals of about 118 per cent. A similar decline was recorded in ragi, which saw a reduction in arrivals by about 14 per cent in the post demonetization period, compared to an average increase of 144 per cent in the previous three years.

The impact was not limited to cereals but was seen across the board. Spices (turmeric, dry chilli, coriander seed), pulses (bengal gram, arhar) and oilseeds (groundnut, soyabean, sunflower) also recorded poor arrivals relative to the period prior to the demonetization in comparison to the corresponding period in the last three years. *Figure 1* shows the percentage change in arrivals relative to the period prior to demonetization for some of these commodities. To put these numbers in perspective, *Figure 1* also shows the average percentage change in mandi arrivals for the corresponding period in the last three years.

Figure: 1 Bar chart of change in arrivals for selected commodities in pre and post demonetisation period



Though less severe in degree, perishable commodities such as cabbage, onion and potatoes also felt some impact. Relative to the period prior to demonetization, onion arrivals saw an increase of only 41 per cent vis-à-vis the previous three years' average of 88 per cent. Cabbage saw an increase of 35 per cent vis-à-vis the average increase of 93 per cent for the same period in the last three years. Within the 42 perishable and non-perishable commodities analyzed, there were only nine commodities that did not see a significant impact of demonetization. These include cashewnuts, cumin, guava and niger seed (ramtil). The remaining commodities recorded reduced arrivals vis-à-vis the previous three years average.

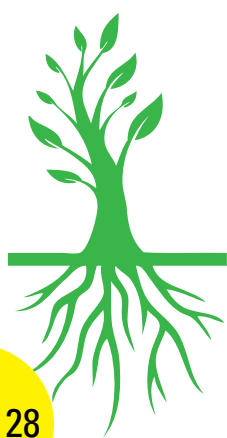
It is not clear whether this impact will show up in aggregate agricultural growth. In terms of rabi sowing, the aggregate numbers released by the government indicate an increase in total area sown relative to the last year. The government uses this as evidence of no significant impact of demonetization¹. However, the reality could

be much different and there could be multiple explanations for the observed increase in rabi sowing. Field visits to different villages of Sonapat district in Haryana provide one example.

In our visit to the Ganaur mandi in Haryana, we met several labourers, farmers, commission agents and traders. The Ganaur mandi primarily trades in export quality paddy. Although the peak season had passed, there was reportedly a decline of about 18 per cent on daily arrivals after demonetization. Due to the cash crunch, commission agents were not able to pay the farmers for the sale of the produce.

Even though there were about 20 banks in the region, there was not enough money in the banks. This was despite the ₹50,000 withdrawal limit granted to the APMC-registered traders as a relief measure². We were told that due to paucity of cash in the banks, traders were not allowed to withdraw money at that rate. The farmers who did not have enough resources to store the commodity or who could not take the risk of future price uncertainty,

Within the 42 perishable and non-perishable commodities analyzed, only nine (like cashew, cumin, guava...) that did not see a significant impact of demonetization



Labourers at the
Ganaur mandi
in Haryana

Photo: Simran Rana

Farmers expressing their
discontent on demonetization
at Ganaur mandi in Haryana



Photo: Nidhi Aggrawal

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were selling their produce in the hope of receiving cash at a future date, with no fixed timeline.

These statements were validated by different farmers we met in the mandi and nearby villages. Some farmers also grew sugarcane and were worried that they did not have enough cash to pay to the labourers. They were agitated by the demonetization and said that despite standing in long queues in the banks/ATMs, they were only getting ₹2,000 notes that was of no use since nobody were giving them any change for the large amount.

The farmers had managed to sow the rabi crop by buying seeds and fertilizers on credit from commission agents and input dealers but had been asked to repay in 7-10 days. They were worried about how they would manage the cash.

The labourers in the mandi and the nearby villages were also facing severe difficulties. They said that they had not been paid since

demonetization. They were managing their daily needs by borrowing from neighbours and friends. Migrant labourers had not been able to send any money to their homes ever since demonetization. One family of farmers also said that it was eating chapati and chillies, which it grew on its farm since it did not have any cash to buy vegetables.

Our learning both from the field visits and the data analysis is that demonetization has hit the rural economy very hard. Various relief measures announced by the government have not had much impact. The cash economy has been reduced to a credit and a barter economy and people in villages are living on subsistence. The informal ties with the commission agents and the local lenders that the government has long sought to remove have been strengthened instead. It is difficult to quantify this impact. The only hope now is that in days to come, the situation will improve. ●

1 www.livemint.com/Industry/7YumAmZPbvV8qqy969cdM/Demonetisation-Critics-have-been-proved-wrong-says-Arun-Ja.html

2 www.firstpost.com/india/demonetisation-govt-eases-restrictions-on-farmers-allows-withdrawal-up-to-rs-50000-per-week-3110238.html

ENERGY EFFICIENCY IN AGRICULTURE

Agro-Ecological Vs Industrial Farms

Alex Jensen

“Labour-saving is not the chief end of life and farm work is not a bad thing”

— ROBERT NETTING

A commonplace argument against small-scale, diversified, agro-ecological farms (SDAF) vis-à-vis large-scale, industrial farms (LIF) is that the former are ‘inefficient’ or ‘wasteful’. This issue is of great relevance to Indian agriculture, where the majority of farms continues to be closer to SDAF (or at least small-scale) while the elite view of such farms is that they are hopelessly backward and should eventually be replaced by LIF, roughly along the lines practiced in the West.

A closer examination of the efficiency question, however, reveals that — as with other assumptions in the elite’s case against SDAF — this is a warped argument. Proponents of the LIF line normally have efficiency of labour in mind in terms of the food that one LIF worker can produce using large, sophisticated machinery. The SDAF worker uses either smaller, simpler machinery usually with human or animal muscle power. Such a comparison is not only odious but it leads to wrong conclusions in terms of worker productivity.

A broader look at the total ‘energetic’ budgets of the two systems; all food outputs minus all energy inputs; sometimes abbreviated as EROEI or energy return on energy invested, clearly shows that SDAF is far more efficient, holistically. LIF can only appear efficient by an act of accounting legerdemain, where the multiple external energy inputs to the system — especially fossil-fuel for the machines, pump-irrigation and synthetic chemicals applied — are simply effaced.

To call a system efficient, based strictly on the output of its labour, without accounting for the external energy inputs upon which that output is entirely based — or future inputs to manage its ecological and health effects — (*details in next column*) is like calling a palace, that has been cleaned of its trash, which has been swept into cans and hauled off to a landfill, a paragon of frugality. It misses the subtraction side of the ledger.

Research on the EROEI, looking at ‘calories in, calories out’ has long proved illusory the much-vaunted ‘efficiency’ of LIF. While farm labourers in LIF in the USA have been shown to indeed produce enormous amounts of food calories



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for every calorie of their bodily energy expended (one figure is 210 food calories for every human energy calorie), according to EROEI analyses, each food calorie also requires anywhere from 7 to 12 fossil fuel energy calories (Bodley 2008: 159).

In the case of large-scale, industrial greenhouse vegetable production, the figure can be as much as 1 to 600! (Netting 1993: 124) As ecological anthropologist, John Bodley, has noted, “It is apparent that the industrial food system is actually operating at an energy efficiency deficit” (Bodley 2008: 159).

Conversely, studies from human ecology have consistently shown that according to EROEI, the more complete accounting, the farms, especially of traditional people (SADF), so commonly denigrated as inefficient and wasteful, are actually the champions of holistic energy efficiency.

Anthropologist Roy Rappaport did one of the earliest, now classic, studies on this question among the Tsembaga of New Guinea, finding that they produced 17 calories of sweet potatoes and 17 of taro yams for every calorie of human energy input (Bodley 2008).

Leading scholars in agroecology have presented further evidence on impressive EROEI from traditional systems around the world:

- “Swidden (farming practised in Siberia at least until the 1930s) cultivators with low labour requirements and few other energy inputs (discounting for the moment the heat lost in burning off forest growth) achieve a ratio of about 7.08 calories of output to 1 calorie of input in Iban dry rice, 36.2 to 1 in African millet and 61.0 to 1 in African cassava.” (Netting 1993: 130)
- “... the caloric production of corn alone from a single ha would in every case (peasant farms in Mexico, Guatemala and Nigeria) surpass the 3,504,000 kcal that would provide 2,400 kcal/day for four man-equivalents over an entire year. With this level of consumption and using the not unreasonable energy ratio of 25:1 for swidden cultivators alone, the caloric needs of a family could be provided with 1.6 MJ, about two hours of physical work per day.” (ibid.)
- “Russian collective farms of several thousand

hectares devote only about seven per cent of their land to private plots (averaging 0.3 ha) but these intensively tilled areas of potatoes, cabbage, orchards and domestic animals have provided 25 per cent of total national agricultural output.” The energy returns of the Russian gardens are comparable to those of British allotment gardens at 11.2:1. (ibid.)

- “On Mexican hillsides, maize yields in hand-labour dependent swidden systems are about 1940 kg/ha, exhibiting an output/input ratio of 11:1” (Altieri and Toledo 2011)
- “In Guatemala, similar systems yield about 1,066 kg/ha of maize, with an energy efficiency ratio of 4.84” (ibid.)
- “...the average villager (in Zangskar, on the Tibetan Plateau of the Indian Himalaya) harvests enough grain to supply 4000 kcal/day, well above the original FAO standard energy needs (3,500 kcal/day/worker) and nearly three times as much as the 1500 kcal/day, which we think villagers actually eat.” (Osmaston 1994)

Another study of the energy flow through an indigenous village in northeast India found that the “energy efficiency of the Apatani agroecosystem is around 60 to 80 joules per joule of input. Green revolution agriculture fares dismally in comparison: it gives less than a joule for every joule of input.” (Down to Earth 2005, citing Kumar and Ramakrishnan 1990).

Ecologist Fred Cotrell summarized such findings saying that they “may be surprising to those who think modern agriculture yields far more per acre than does hoe culture (or smallholder non-mechanized farming)... In every case, these illustrations cited show hoe culture producing more surplus energy per acre than mechanized methods” (Cotrell 2009).

The fossil fuel energy-intensity of LIF is enormous and, as part-and-parcel of a globalized, industrialized food system, more broadly constitutes one of the major contributors of greenhouse gas emissions (Pimentel 2009; Lin et al. 2011). In a situation of climate chaos precipitated by these emissions, as well as peaking fossil energy supplies, intensification of dependence on that system over the genuine energy efficiency of SDAF is reckless.

As one of many examples, according to David Pimentel (2009), the energy cost of the fertilizers alone applied in the USA to respond to the exhaustion and erosion of soils by LIF (estimated at 13 metric tons/hectare/year) is 1.6 million kcal/hectare or 20 per cent of the total energy input for producing a hectare of corn. It is estimated that “synthetic fertilizer



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production consumes 3-5 per cent of the world’s natural gas and 1-2 per cent of the world’s annual energy supply” (Lin et al. 2011: 4).

Worldwide, use of synthetic nitrogen fertilizers increased from 8.6 kg/ha in 1961 to 62.5 kg/ha in 2006 and these release nitrous oxides to the atmosphere, greenhouse gases two hundred times as potent as CO₂ and are responsible for over 40 per cent of the greenhouse gas contribution of industrial agriculture (GRAIN 2009).

Pesticides/herbicides are similarly energy-intensive (apart from their toxicity): “Herbicide weed control (including 6.2 kg of herbicide per hectare plus sprayer application) requires about 720,000 kcal/ha or about twice the amount of energy used for mechanical weed control in organic farming” (Pimentel 2009: 98).

The energy costs in terms of both production and repair and fuel, of intensive, large farm machines constitutive of LIF is substantial (about 333,000 kcal/ha and 1.4 million kcal/ha, respectively) (Pimentel 2009). Nearly one-third of the energy needed to produce a hectare of crops in LIF systems is embedded in machine operation (ibid.). Even if small-scale farms use some degree of mechanization, the machinery is smaller and



Photos Courtesy: Alex Jensen



Even if small-scale farms use some degree of mechanization, the machinery is smaller and this has been shown to contribute to their overall reduced energy inputs vis-à-vis LIF

this has been shown to contribute to their overall reduced energy inputs vis-à-vis LIF (ibid.).

Of course, human and draft animal power is even more energy efficient and continues to be a main source of labour power for SDAF around the world, including in urban gardens in highly industrialized societies. Pimentel has shown that using draft animal power in agriculture will require an increase in human farm labour, but this alongside a decrease in fuel-run machinery is “necessary to decrease fossil fuel use in the United States food system”. One might add, in all other heavily industrialized systems as well (Pimentel 2009: 100).

Through agro-ecological techniques, avoidance of synthetic chemicals and less mechanization facilitated by smaller scale, SDAF systematically uses dramatically less fossil-fuel energy inputs. SDAF can even contribute greatly to climate change mitigation through soil protection and biological enhancement, carbon and nitrogen fixation in soils and other mechanisms (all stemming from plant

diversification) and integration of animals and cycling of their excrement into the farm ecosystem (GRAIN 2009a, 2009b; Pimentel 2009; Lin et al. 2011).

Presented with such research, some critics might still maintain that, given the urbanizing, apparently farmwork-averse direction in which the world seems to be heading, there is no choice but to embrace LIF with its energy-intensive, enormous productivity-per-labourer. In other words, there simply will not be enough people on the land to actually do the work of SDAF.

However, as both GRAIN (2014) and ETC Group (2009) have shown, the fact is that the majority of the world’s food still comes from SDAF today, despite having access to a fraction of the world’s agricultural land. Thus neither the demise of the small-holder, the urbanization explosion, nor the further concentration of land in few powerful hands – often for precisely the purpose of installing LIF for export crop production, incidentally (example, Magdoff 2013) – is inevitable.





The 'labour efficiency' of LIF is another way of saying that 'labour-displacing' is a hallmark of mechanization since the very inception of capitalist industrialization

Policies could be re-designed and implemented to arrest and reverse these types of trends and to lend backing to SDAF. Furthermore, there is evidence of a resurgence in interest in and desire to do small-scale farming even within heavily de-agrarianized countries like the US (USDA 2007; youngfarmers.org).

This movement too is hampered by economic and political factors (such as accelerated speculation on and concentration of land ownership by small groups of elites in everywhere (Aziz 2013; St. Peter and Patel 2013) and could similarly be encouraged by a reform of those factors. In a time of rising unemployment, the higher labour requirement of SDAF, far from being a negative factor to bemoan, may be a boon from the standpoint of labour.

From this perspective, the 'labour efficiency' of LIF is another way of saying 'labour-displacing,' is a hallmark of mechanization since the very inception of capitalist industrialization. Robert Netting aptly argued: "In countries where urban unemployment and the underemployment frequent in the informal economy are rife, the labour-absorptive capacity

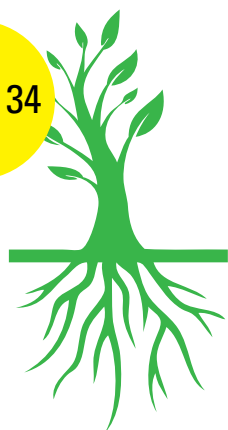
of smallholder intensive agriculture should be welcomed as an economic stimulus".

Popular prejudice notwithstanding, Netting points out "labour-saving is not the chief end of life and farm work is not a bad thing. When labour and property rights are combined and when the farm household organizes and schedules its own skilled activities as an independent enterprise, the relations of production are not those of alienation" (Netting 199: 331).

Of course, by focusing narrowly on caloric energy, this discussion has left out a critical component, namely, the quality and nutritional diversity – hence, the healthfulness – of the foods produced by the two systems. Not only do SDAFs, by definition, produce a wider range and variety of foods (containing, in turn, a wider range and variety of nutrients, vitamins, and minerals) vis-à-vis the narrow range of crops produced from LIF, they do so with much less or absolutely no ecologically-or-health-harmful synthetic chemical inputs.

If the former system helps society avoid costly medical expenses or environmental remediation interventions, while the latter system causes or exacerbates human health woes and ecological contamination, a proper accounting of overall energy efficiency too must account for these differences.

SDAF helps society avoid enormous future energy costs while LIF compounds them. Of course, there are many more and, arguably, more important, costs besides energy costs associated with ecological and health harms. This article merely demonstrates another energy subsidy by society at large to LIF, hence magnifying its energy efficiency deficit. ●





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CHANGING THE AGRICULTURE NARRATIVE THROUGH THE BUDGET

The BKS Memorandum

A Farmers' Forum Report

“Over decades the nation has been instilled with fear” about its inability to feed itself by increasing food production and it is “time to change the false narrative of farm policy to one of inclusive growth and farmer prosperity”. Food systems that make available safe, nutritious, food, grown sustainably, are the way forward. The Bharat Krishak Samaj, a non-partisan association of farmers advocating the crucial need for India to focus on farmer prosperity, had a 33-point memorandum for the pre-budget 2017 consultation with the finance minister that was sent in November 2016:

1. Demonetization worries require immediate attention. Restrictions on exchanging and accepting old currency notes imposed on district co-operative banks must be removed immediately. This can begin in branches that are electronically connected to the Reserve Bank of India system. Cash availability to APMC markets must be enhanced per week to the tune of 15 per cent of the shopkeeper's weekly average turnover recorded in APMC books in the last financial year. It will help revive the stagnating flow of perishable fruits and vegetables.
2. Anomalies in the draft GST bill must be removed.
3. Increased outlays for agriculture to be higher than for 2014-15. It is pertinent to note that the budget allocation for 2015-16 was lower than 2013-14.
4. Target two per cent of agriculture GDP as expenditure on agriculture R&D over the next few years.
5. Revive agriculture extension. Announce a five-year plan to appoint one agriculture graduate as extension worker for every 10 villages; create 60,000 jobs.
6. 10 times increased funding for data collection and assessment needed. The government should create a 'nationally consistent database' to be made available at a nominal cost to all stakeholders.
7. Equitable distribution of resources to all,



irrespective of land holding size to be calculated for a two-hectare farm. (direct payment to bank account of women member of the farmer family).

8. Incentivize balanced use of fertilizers; increase urea price and simultaneously decrease price of P&K fertilizers to obviate added burden on the farmers or the government.
9. Emphasize “Agro Forestry” for income generation.
10. Animal husbandry sector funding must reflect priorities for preventive measures as is being delivered by NDDDB and AMUL rather than target to cure disease. Animal health is a major driver for disease in humans.
11. Fund gaushala’s with the condition that 40 per cent of total animals in their keep be male cattle.
12. More incentives for bio gas units without restricting incentives for electricity generation.
13. Incentivize farm machinery leasing services to enable farmers to use good farm machinery without having to own machinery. Stop misuse and changing terms of support under

sub-mechanization of agricultural machinery scheme.

14. Media reports allege that farmers declare income of crores. Suggest income tax return of all citizens declaring agriculture income over ₹10 lakhs be scrutinized by the IT department.
15. Farmers are responding to consumer’s preference and demands. Taxes can change consumption behaviour and it is imperative to tax unhealthy food (excess sugar and salt that lead to increased health care costs). Funds could be used to incentivize sustainable farm practices.
16. Paramparagat Krishi Vikas Yojana promotes organic farming. Increase outlay by 10 times with specific incentives to increase crop diversity in individual farms.
17. Initially, target to replace chemical use in farms by 10 per cent. Fund setting up of laboratories to test for sub-standard and spurious pesticides. Additionally, fund laboratories to check fresh and processed food imports.



18. Agro-processing incentives should be restricted to small and marginal entrepreneurs with preference to FPOs. This will increase additional employment in rural areas and also facilitate enhancing farmer income.
19. Need long-term agriculture import-export policy with stable tariff structure. Charge maximum permissible import duties on fresh farm produce. No restrictions on export of agriculture produce.
20. All the incentives being provided under Startup India mission to be extended to Farmer Producer Organizations (FPOs), including tax exemptions, provision of capital and infrastructure. Though agricultural income of farmers is exempt from income tax, the income of FPOs is taxable at 30 per cent from the very first year – this is a major disincentive for farmers to come together to establish collective business entities. Allocation should be taken up to ₹3,000 crore.
21. India now imports more than 70 per cent of its edible oil needs and this is increasing by the year. A collateral damage of this is the shrinking supply and higher prices of oil meals that has a bearing on the cost of production of poultry and animal husbandry. The remedy is to keep the edible oil duties higher for farmer to see value in oilseed cultivation. Minimum Support Prices should be effectively implemented for pulses and oilseeds, operationalizing the new MSP concept articulated in Economic Survey 2016-17 (social and environmental rationalization of MSP) so that these measures incentivize the higher production of pulses and oilseeds in the country.

22. IRRIGATION

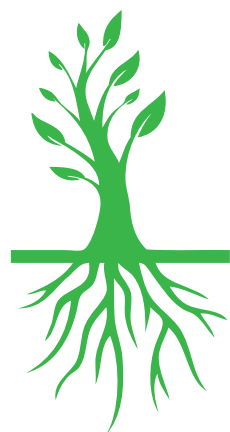
- (a) Fund repair and maintenance of all existing irrigation projects. Provide drainage for existing irrigated areas. Do not fund new flood irrigation projects.
- (b) Increase outlay for Watershed Management subsumed under the Pradhan Mantri Krishi Sichi Yojana by 10 times with special focus on Rainfed Areas.
- (c) Fund one million small water storage reservoirs and distribution of soil moisture measuring sensors to all farmers.
- (d) Support by way of granting infrastructure status to the micro-irrigation industry that may be treated as priority sector for all fiscal and tax exemptions.



- (e) Solar pumping systems to be subsidized and promoted for individual farmers/ community irrigation projects. Need budgetary provision of 250,000 solar pumping systems per annum against 50,000 today.
- (f) At present, the infrastructure being created by the irrigation and agriculture departments is without reference to each other or in isolation. Request fundamental change in the planning and departmental functioning.

23. CREDIT

- (a) Double number of farmers receiving loans of up to ₹200,000 at one per cent. Link Aadhar to such loans accounts to avoid duplication. Subvention is not helping, do away with it.
- (b) Institutional credit is not reaching small farmers. Announce corrective measures. Order a CAG audit of agriculture credit lending portfolio of public sector banks.
- (c) Ensure tenant farmers or lessee farmers get access to bank loans as a matter of high priority. In view of the Bhoomiheen Kisan Credit scheme and Niti Aayog report highlighting the need to support lessee farmers, set up a Credit Guarantee Fund to increase the bankers' confidence in lending to non-land owning "licensed" cultivators, both as individual farmers and in Joint Liability Groups. Such a fund needs to be established and can have around ₹5,000 crore set aside for the purpose in 2017-18.





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24. MARKETS

- (a) For delivering remunerative prices to farmers the 'Price Deficiency Payment Mechanism', as envisaged by Niti Aayog, must be implemented immediately.
 - (b) Cover more crops in the 'Market Intervention Scheme' and the 'Price Stabilization Fund'. Increase outlay to ₹5,000 crore.
 - (c) The public distribution system should be used to procure pulses and millets too. This will increase the food basket for poor consumers and encourage farmers to diversify through assured markets.
 - (d) Fund to increase the number of agriculture market yards 'mandi' by 50 per cent and provide full infrastructure in all existing agriculture market yards.
 - (e) In farm marketing, not only should the compulsion of going through regulated mandis (APMC mandis) be removed but emergence of private markets and farmers' mandis for direct sale to consumers should also be encouraged.
 - (f) Lowering of market levies and middlemen is essential. Since lowering of marketing levies are bound to reduce state governments' revenues and, therefore, be resisted by them, consider compensating full or part of these losses for five years.
25. More funds for the Indian Metrological Department, specifically for improving medium-term weather forecasts for agriculture.
26. Natural disasters affecting farmers are annual events, occurring in different locations. Substantially increase funding for SDRF/ NDRF. Outlays for disaster relief to farmers should be increased to at least ₹25,000 crore.
27. System of Rice Intensification must be incentivized with more funding.
28. In the light of 7th Pay Commission coming into force, the incomes of the employees in organized sector will see a substantive increase, whereas the incomes of farmers are either stagnant or declining (taking inflation into consideration). Establish a permanent, statutory Farmers' Income Commission to ensure basic living incomes to all agricultural households. A Farmers' Income Guarantee Act must be enacted. There should be budgetary allocations for 2017-18 to set up the Farm Income Commission and get the institution up and running towards a fullfledged income security mechanism from 2018-19.
29. A comprehensive programme to establish homestead gardens should be promoted to boost household nutrition.
30. Fund allocation must be sensitive to protecting and sustaining bio-diversity. Direct funding to panchayats must be on condition that the panchayats will set aside/create 10-acre bio-diversity reserves.
31. To raise farmers' income, incentives need to be provided to them to switch over to high-value agriculture involving cultivation of fruits and other high-priced crops, dairying, poultry, piggery, beekeeping, fisheries and integrated farming.
32. When funding urban renewal or smart cities, make it mandatory for cities to allocate space for farmer markets in residential areas based on population density.
33. Budget should also encourage the concepts like provision of urban facilities in rural areas (PURA) to improve the quality of life in villages and reduce the gap between cities and villages in this respect. Instead of funding smart cities, it is suggested that 4,000 smart census towns be funded.
- To save the farm sector it is crucial to create off farm jobs so no more than one-third of the Indian population is dependent on agriculture. India's achievements have become its biggest challenge today and it is necessary to generate the momentum that will change the narrative, leading to a new future. ●



WAITING FOR THE
BUDGET

Agri-Agenda for Budget 2017-18

Surinder Sud

Without undertaking radical reforms, it is impossible to transform agriculture and double farmers' income", reads a recent statement by the government's think tank, the National Institution for Transforming India Aayog (Niti Aayog), virtually setting the tone of the broad agricultural agenda for the government and its forthcoming budget for 2017-18.

The statement added that the state governments have been extremely sluggish in implementing the much-needed reforms to create a policy and market environment conducive for the farmers to raise crop productivity and earn higher income. The Aayog has, therefore, given a clear cue to the centre to nudge the states to shed their indifference towards vital agricultural sector reforms. Huge funds that the centre gives to states through the budget can be used gainfully to leverage these reforms.

The process of economic reforms pursued



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three areas for immediate reforms which may find an echo in the 2017-18 budget.

- Agricultural marketing;
- Land leasing;
- Farm forestry involving felling and transporting of trees grown on private lands.

Though these fields are well-chosen, guided largely by the felt needs, confining the effort to just these three would not suffice to meet the challenges confronting Indian agriculture. What this sector truly needs are comprehensive and all-embracing reforms to become modern and efficient.

The focus of the last year's Union budget was basically on revival of the rural economy hit badly by two consecutive droughts. For this, allocations were substantially hiked for schemes like Krishi Vikas Yojana (KVK), Mahatma Gandhi National Rural Employment Guarantee Programme (MNREGA), Pradhan Mantri Gramin Sadak Yojana, Krishi Sinchai Yojana and Pradhan Mantri Fasal Bima Yojana among others.

The budget could give priority to areas that, if revamped, can enhance farm productivity, input-use efficiency, prices and on-farm and off-farm value-addition

since 1991 has, regrettably, either by-passed the farm sector or touched it only at the fringes, thus restraining this sector from growing to its true potential. Even the areas where some reforms had been initiated, such as agricultural marketing, institutional credit and crop insurance, the progress has been below par due largely to half-hearted implementation by the states.

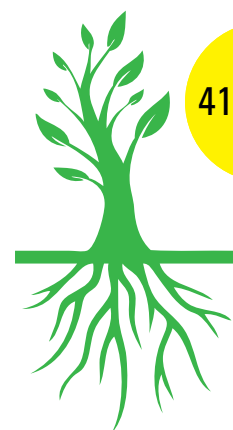
As a result, while the industry and services sectors have seen robust growth to push the country's total gross domestic product (GDP) growth to above seven per cent a year over a prolonged period, the long-term agricultural growth has remained around a modest three per cent. The fastest this sector grew over a continuous ten-year period was 4.7 per cent way back in the 1980s.

Little wonder, therefore, that the share of the agriculture and its allied activities in the overall GDP has steadily shrunk to merely 14 per cent. This underscores the urgency to carry out well-conceived reforms in the farm sector to achieve the twin objectives of boosting farm productivity and lifting farm incomes. The Niti Aayog has picked up

The emphasis on these programmes can be expected to continue in the next year's budget as well to consolidate the pro-poor and pro-farmers image of the government. However, good monsoon this year has provided some room to the government to shift its focus towards income generation in the farm as well as non-farm rural sectors. For this, the budget could give priority to some selected areas that, if revamped, could have a bearing on farm productivity, input-use efficiency, remunerative prices and on-farm and off-farm value-addition of agricultural produce to create more avenues for employment and income generation.

This may mean higher budgetary allocations for measures like soil health cards, irrigation programmes, agricultural insurance and electronic platform-based National Agricultural Market (e-NAM), besides spurring use of latest technology. The aim would, obviously, be to ensure that these programmes yield time-bound results.

One of the significant reforms that began way back in the early 2000s but has not yet made much headway is in the area of agricultural marketing.



A sizeable section of farmers still have to dispose of their produce at throw away prices for want of proper marketing facilities. The union government had circulated a draft of model Agricultural Produce Marketing Committee (APMC) Act to all states in 2003 to serve as a guide for them to amend their respective APMC laws.

This was broadly aimed to rid the farm marketing of monopolies, inefficiencies, lack of transparency and a stranglehold of intermediaries, besides encouraging expansion of marketing network. Though many states have, for record's sake, amended their APMC Acts but few have done so strictly in accordance with the model law. The net result is that the farmers continue to lack freedom to sell their produce to whoever and wherever they can get good prices.

Though the centre has now floated the e-NAM to take care of some of the glaring shortcomings in the existing farm marketing structure and provide a seamless countrywide market for the farmers it

spur them to raise production, is another critical area that needs looking into. The present practice of fixing minimum support prices (MSPs) and enforcing them through procurement-backed market intervention has served only a limited purpose.

Though the government announces MSPs for more than 20 crops, the farmers do not get these prices except in the case of wheat, rice and, to an extent, cotton and sugarcane, and that too, only in a handful of states. It is, obviously, not feasible for the government to physically procure all the commodities covered under MSP mechanism from all parts of the country. Yet, for some inexplicable reasons, the successive governments have seldom thought of looking beyond this mechanism.

The Niti Aayog has again taken the initiative to conceive an alternative system to ensure the farmers of at least reasonable returns, if not remunerative ones. It has come up with a novel concept of "price deficiency payment", which essentially involves compensating the producers if the prices slide

Many states have, for record's sake, amended their APMC Acts but few have done so strictly in accordance with the model law and farmers are at a loss

has made a rather tepid beginning. A good deal of spadework still remains to be done to connect the farmers with this market and let them sell their produce at reasonable prices.

Many agriculturally important states are yet to participate in this initiative. It has now transpired that the states are lukewarm towards exchange-based marketing because it would end the APMC mandis' monopoly over the sale of farm produce and require reduction in market levies, thus resulting in loss of revenue to the state exchequers.

Fortunately, the Niti Aayog has now offered to address this issue by crafting a fresh model of APMC Act that would, most probably, provide for compensation to states for the revenue loss. Besides, it is expected to pave the way for setting up of private mandis, legalizing contract farming and facilitating direct transactions between producers and end-users, including consumers, to eliminate or, at least, reduce middlemen. The states would, hopefully, come round and ameliorate farm marketing in the interest of the farmers and consumers alike. The budget can incentivize action in this direction.

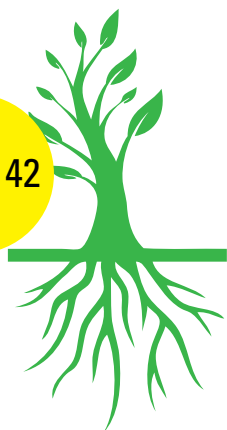
Ensuring remunerative prices to farmers for their produce, which is vital to boost their income and

below the pre-specified floor prices for different crops. The threshold for such payment can be determined on the basis of market prices in the preceding three or four years.

This system will spare the government the burden of actually procuring the stuff at the MSP and storing it in its godowns at huge costs. The finance minister would do well to weigh the pros and cons of the mooted new system and consider trying it out on a pilot basis in selected districts.

Among land-related issues, the most pressing need now is to make operational farm holdings economically viable. Otherwise, farmers do not deem it worthwhile to invest in yield-enhancing inputs, including new and improved seeds, adequate application of plant nutrients and plant protection measures and, most importantly, mini and micro irrigation. Over the years, a sizeable proportion of farm holdings has got shrunk and fragmented into tiny, unviable pieces, forcing many farmers to look for work elsewhere to supplement their family income.

The current land leasing laws in most states, framed soon after Independence, when abolition of zamindari and redistribution of land to the





actual tillers were the prime considerations, do not encourage leasing in or leasing out land without jeopardizing its ownership rights. Consequently, even some of the productive land tends to be left idle, instead of being leased to others for cultivation, for fear of losing ownership.

Making land leasing legal and secure by amending the land-related statutes can help bring such idle lands under farming, thus, tacitly facilitating consolidation of operational land holdings. This would also make tenants eligible for credit and other facilities and sops offered by the government. Luckily, most states seem convinced about the utility of legalizing land leasing. Some prodding and stimulation from the centre might make them do the needful in this direction.

Farm forestry has, by and large, remained a neglected field though it has substantial potential to augment farmers' earnings. In most states, farm forestry is also subjected to the same laws as applicable to forests that pose hurdles in felling, transportation and processing of agro-forestry produce. There are also curbs on the inter and intra-state movement of timber, even if produced on agricultural lands, thus, disallowing farmers to get good returns for such timber. These statutes need to be revisited and liberalized to promote farm forestry as agriculture's allied activity.

One of the most formidable challenges that the country's agriculture faces today – and which the

2017-18 budget must address – is to boost farm productivity. The average crop yields in India, barring that of wheat and a few other crops, compare poorly with the yields in many other countries. The crop productivity also varies from region to region with several agriculturally laggard states harvesting much smaller crops than the progressive ones like Punjab, Haryana and some southern states.

Bridging this yield gap is deemed one of the easiest ways of increasing overall agricultural production and also enhancing farmers' income. It requires introduction of improved technology, much of which already exists and has been gainfully tried out in the farmers' field even in the agriculturally backward areas. The key mantra for raising farm productivity is to popularize the use of improved crop varieties and ensure more efficient use the inputs like seeds, fertilizers, water and pesticides.

The other means of stepping up productivity as well as profitability of farming includes, among others, switching over to high-value agriculture wherever feasible; promotion of animal husbandry, including dairying, poultry, piggeries, bee-keeping and fisheries; expansion of precision farming and conservation agriculture techniques to more area; and spurring evolution and use of new technologies, including evolution and approval of genetically modified seeds.

The budget would need to provide suitable incentives to promote all these fields.

- Agricultural exports should be encouraged by ensuring a stable tariff structure to link the farmers with the international market.
- Increased use of machines is a necessity to ensure greater precision in farm operations and to save time, reduce costs and enhance farm productivity. The budget should moot more fiscal sops, in addition to the subsidies available on some of the useful farm machines and change import tariff to enable farmers to go in for indigenous and foreign farm machinery.
- Greater mechanization of agricultural chores is an answer to the growing shortage and surging wage rates of farm labour in many parts of the country, particularly where intensive agriculture is in vogue.
- Special emphasis is needed on machines required for precision farming, including laser land levelling and conservation agriculture techniques such as minimum tillage, raised bed planting and system of rice intensification (SRI).
- Increased use of machinery to step up efficiency of farm operations and reduce drudgery can help retain rural youth's interest in farming which is waning very rapidly.

Indian agriculture can surely do with greater research and development (R&D) support, especially from the local farm research centres that can churn out the need-based and situation-specific technologies. Regrettably, the country's vast agricultural research and education network, which is deemed by far the largest in the world, has neither seen the needed reforms nor got adequate funding support from the government.

Private investment in agricultural R&D is, in any case, negligible. As a result, the national agricultural research and education system is plagued with several handicaps, the most notable ones among them being understaffing, gender inequity, illogical educational curricula and rampant academic inbreeding with the institutions' own pass-outs being absorbed in their faculties.

The data gathered under the 'agricultural science and technology indicators programme' (ASTI) of the International Food Policy Research Institute (IFPRI) bears this out. It reveals that the overall investment in agriculture research and education is far short of even the modest goal of one per cent of the agricultural sector's gross domestic product (agri-GDP) – the actual figure being merely 0.3 per cent of the agri-GDP.

What is worse, is that instead of rising, this investment has steadily declined – from 0.34 per cent



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in 2000 to 0.32 per cent in 2009 and just 0.3 per cent in 2014. More disquietingly, bulk of the available funds (73 per cent) goes towards salaries alone, leaving little for actual research and teaching work. The number of agricultural scientists per 100,000 farmers has ebbed from 5.52 in 2000 to 4.62 in 2014.

This apart, all is not well with the course curricula followed by most agricultural universities. Though about half of the employment opportunities for agricultural graduates is normally generated in the private sector, including banks and farm input producing industries, the curricula of most universities are targeted predominantly to meet the needs of the public sector.

There is, therefore, a strong case for not only increasing the funding support to the R&D sector but also carrying out other well-advised reforms in the research and education centres. The forthcoming budget can – and, in fact, should – make a beginning in this direction. Given that investment in R&D usually yields high returns, higher spending on this sector is worth it.



Agricultural extension is another weak area that needs urgent attention. It is widely viewed as a speed-breaker in agricultural development

Agricultural extension is another weak area that needs urgent attention. It is widely viewed as a speed-breaker in agricultural development. The extension machinery in most states is in a shambles, marred by shortage of staff and funds. The extent of area required to be covered by each extension personnel is usually too large for them to do justice to their jobs. Most extension workers are out of touch with the latest technologies for want of adequate interaction with research centres.

The state governments need liberal financial assistance to revamp their extension setups. It may also be worthwhile to conceive ways and means of ensuring greater private participation of the private sector in agricultural extension. Unless the forthcoming budget addresses these issues, much of the technology being generated by the agricultural universities and research centres might not reach the farmers. ●



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WAITING FOR THE
BUDGET

Farm Policy Shifts through Budget Pronouncements

Naresh Minocha



The finance minister's annual budget speech has emerged as the prism through which one can discern the policy drift or direction of the government of the day. As the speech is also an ideal platform for political posturing, the discerning eye has to segregate wheat from the chaff of budgetary announcements.

Do budget speeches, right from Independence, reflect any strategy for agricultural development? Do they constitute changing and random initiatives announced with an eye to vote bank? Does the political rhetoric about farmers get transmitted to the ground as inclusive, robust growth of entire farming community? Do the specific measures to mitigate agrarian crisis have the desired impact in the long run? How often is the old wine is passed off as new wine to humble farmers?

The answer to such questions would help the farming community take budget speeches in the right perspective. It would be worthwhile to analyze the agricultural content of budget speeches



NARESH MINOCHA
Business and
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Intensive Agricultural Development Programme (IADP) to boost agricultural production.

Thus, the agricultural strategy was driven more by the need to feed the masses by any means than by the need to attain this goal through extreme focus on ramping up farm output. The hint that this strategy was flawed emerged in first half of the sixties.

The late Morarji R. Desai, said in his budget speech for 1963-64: "With a view to stimulate agricultural production and to give the agriculturist the confidence that if he stepped up production, he would not lose by a fall in prices, minimum prices for wheat and procurement prices for rice were announced, the ceiling price for cotton was further raised and measures to sustain jute prices at remunerative levels have been strengthened".

Morarji Desai's successor, the late T.T. Krishnamachari, articulated this in his budget speech for 1964-65: "It is now generally agreed, for example, that trying to keep agricultural prices

India's agriculture strategy was driven more by the need to feed the masses by any means than by the need to attain this through focused ramping up of farm output

right from the first one, for 1947-48, to the latest one for 2016-17.

The trend of dependence on imports for management of food economy continued after the Independence. The focus of the government then was to keep ration food supply smooth and tame inflation, especially food inflation, through liberal imports. In the fifties, food imports used to make the largest dent on scarce foreign exchange resources, year after year.

India depended on bilateral deals including grants for food imports from countries such as the United States, Canada and Australia. The massive wheat imports under PL 480 loans extended by the US became the pivot around which the food economy was managed.

The consumer was thus the focus. Nowhere was he figured in the scheme, a bitter fact borne by the absence of the common noun 'farmer' or its variant in budget speeches till 1960-61 (See box). The government banked on the 'Grow More Food Campaign/Scheme', which lacked missionary zeal in the fifties. In the sixties, it later relied on

too low for producers may defeat the objective of raising agricultural production" (see box MSP raj).

Even as the fruits of a fledgling green revolution started appearing, the short-sighted mandarins

MSP Raj

In 1965-66, the budget speech of T. T.

Krishnamachari marked the first farmer-centric milestone by voicing the need for payment of remunerative prices to growers: "We shall, however, take care that the agencies we have created for the purchase of foodgrains will maintain prices at levels remunerative to the farmer, so that he will have a continuing incentive for producing more. These agencies will at the same time take advantage of the current improvement in supplies to build up buffer stocks so that, in future, we shall be able to deal better with any fluctuations in agricultural output ... We are attempting to evolve a price structure for agricultural commodities in keeping with these general principles".



in the Indira Gandhi government fished for an opportunity to tax the perceived rise in agricultural prosperity. Finance minister, the late Y. B. Chavan, observed in his speech for 1972-73: "It has often been said that the agricultural sector, which has been witnessing significant growth in income over recent years, should also make an appropriate contribution to the overall needs of the country" and levied excise/customs duties on tractors, fertilizers and power-driven pumps.

Armed with the recommendations of Professor K. N. Raj committee on taxation of agricultural incomes and wealth, Y. B. Chavan turned his eyes on direct taxation of agricultural income in his BS for 1973-74: "One of their principal recommendations is that agricultural income should be taken into account in determining the rate of tax applicable to non-agricultural income. This will help to reduce sharp disparities in the tax burden on persons with similar incomes. I consider this recommendation of the Committee to be well-conceived, and am accepting it".

Y. B. Chavan then provided for the "aggregation

showing impressive results under IADP, he pieced together four elements of green revolution in his budget speech for 1975-76. The elements that he listed were: HYV, fertilizers, irrigation and farm credit and farmer service societies for providing agri-inputs and for marketing farm produce.

C. Subramaniam also injected the idea of inclusive development of agriculture: "The increase in agricultural output that we are aiming at is thus not a matter of mechanically reaching a magic number. Considerations of balance between classes of farmers and of regions, and of ensuring a pattern of production that is in consonance with our socioeconomic objectives are equally important."

In his next speech, C. Subramaniam remained grooved to green revolution without using the term. He announced reduction in fertilizer prices keeping in view "the importance of ensuring that the output-input ratio in agriculture does serve to stimulate further investment and thus larger production." He also pitched for growth of industries that have backward or forward linkages with the agriculture.

"Building a forward looking, dynamic and diversified agricultural economy", needs an "integrated development of crop production, livestock and poultry, fisheries and forestry"

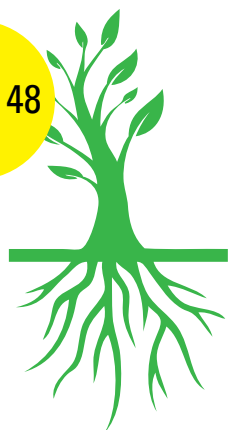
of both the agricultural and non-agricultural components of a taxpayer's income for purposes of determining the rates of income-tax that will apply to the non-agricultural portion in cases where the taxpayer has non-agricultural income exceeding the exemption limit".

In the very next year, he accelerated the tax button on farming: "I also propose to rationalize some of the exemptions available at present under the Wealth Tax Act. I propose to withdraw the separate exemption in respect of farm houses. Tax payers will, however, have the option to claim exemption in respect of one farm house, or one other house property within the existing limit of ₹1,00,000. Exemption in respect of agricultural land will be linked with the exemption in respect of specified financial assets, so that the total exemption in respect of agricultural land and specified financial assets will be limited to ₹1,50,000."

Y.B.Chavan's successor, the late C. Subramaniam, apparently tried to offset the adverse of agri taxation with certain positive initiatives. With high-yielding varieties (HYV) of foodgrain and fertilizers

The baton for holistic growth of agriculture was picked up well by C. Subramaniam's successor, H. M. Patel, under the first non-Congress regime; the Janata government who said in 1977-78: "We feel that for building a forward looking, dynamic and diversified agricultural economy, it is necessary to aim at integrated development of crop production, livestock and poultry, fisheries and forestry. Special emphasis will need to be laid on development of dairy industry on a co-operative basis 'with a view to enabling milk producers to get better and fair prices. Creditable progress has been made in the first phase of Operation Flood Scheme and we must now get moving to take the full advantage of Operation Flood Phase II."

The budget speech for 1978-79, saw H. M. Patel scrapping excise duty on power-driven pumps primarily used for irrigation and giving a "rebate of duty" on electricity used for agricultural purposes. The paradigm shift in perspective for agriculture happened next year when the Deputy Prime Minister, late Ch. Charan Singh, presented the budget for 1979-80.





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Apart from announcing a huge hike in allocation of funds for agriculture, Charan Singh unveiled a slew of tax concessions to give a leg-up to farm production. These included income tax exemption to Agricultural Refinance and Development Corporation to facilitate reduction in interest rates on loans meant for irrigation and land development.

The return of Congress at the centre in 1980 was accompanied with farm governance pragmatism. The late R. Venkataraman thus abolished agricultural wealth tax on farm assets except plantations in his budget speech for 1980-81: “Our experience of over the last decade has been most disappointing. The amount realized as wealth-tax on agricultural property has generally been less than ₹1 crore per annum. The valuation of agricultural land has posed difficulties leading to complaints of harassment”.

In the interim budget speech for the same year, he announced the decision to set up the National Bank for Agriculture and Rural Development (Nabard), thereby fulfilling Congress promise made in its 1977 election manifesto. His successor, Pranab Mukherjee, carried forward farm tax reforms by abolishing wealth tax on plantations in his budget speech for 1982-83. The next year he abolished estate duty on farm land.

The late V. P. Singh, in the Rajiv Gandhi

Estate duty in respect of agricultural land is a State subject and that the Centre has levied estate duty on agricultural land only by virtue of resolutions passed in this regard by States enabling the Union to do so. Our experience is that the valuation of agricultural land leads to administrative difficulties and litigation. The yield from this levy has also not been significant over the past several years. Moreover, after the abolition of wealth-tax on agricultural land, including plantations, there is little practical justification for continuing the levy of estate duty on agricultural land. I, therefore, propose to remove the levy of estate duty on agricultural land”.

— Pranab Mukherjee, 1983-84

government, paid attention to easing agrarian distress in 1985-86: “A crop failure, in the event of a drought or flood, can have disastrous effect on the livelihood of our farmers and their families. The government has, therefore, decided to introduce a comprehensive scheme of crop insurance. Henceforth, there will be a built-in insurance cover for all crop loans.”

In the subsequent year, he set in motion the process of phasing out cess on agricultural commodities. V. P. Singh stated: “The Long Term Fiscal Policy recognizes that cesses levied as excise

duties contribute to the multiplicity of taxes. As an endeavour to reduce the number of these cesses, it has been decided to dispense with the cess on cotton, copra and vegetable oils". Rajiv Gandhi, who took finance portfolio from V. P. Singh, unveiled tax concessions for agro-based industries such as textiles, jute and food processing.

In 1988-89, finance minister N. D. Tiwari took a slew of measures to provide relief to farmers facing four successive poor monsoons. The initiatives included restructuring of farm loans, reduction in interest rates and setting up of the National Agricultural Credit Relief Fund. He also asked fertilizer companies to provide a 7.5 per cent discount on fertilizer prices.

The finance minister, S. B. Chavan, unveiled a slew of tax concessions for the food processing industry and its products to consolidate the agricultural value chain 1989-90. The emergence of the short-lived National Front government, under Prime Minister V. P. Singh, marked a new milestone in mitigating agrarian distress. Finance minister, Prof. Madhu Dandavate, announced debt waiver scheme for poor farmers and certain other rural folk in his speech for 1990-91.

He also announced the government decision to unveil an Agricultural Policy Resolution on the lines of Industrial Policy Resolution, 1956. The return of Congress to power at the centre put Dr Manmohan Singh in the hot seat of the finance minister. In his maiden budget speech for 1991-92, he focused on fertilizer subsidy reforms by announcing price decontrol of four fertilizers and a cap on subsidy for another fertilizer. In the subsequent year, he retained the theme of fertilizer subsidy reforms while unveiling new initiatives such as intent to constitute a Small Farmers' Agri-Business Consortium.

Dr Singh kept struggling with fertilizer subsidy reforms in his budget speeches for 1993-94 and 1994-95. The next year, he turned his focus on agricultural capital formation. He thus announced his decision to establish a new Rural Infrastructural Development Fund within the Nabard. The objective of the proposed fund would be to sanction loans to states and their public enterprises to complete ongoing irrigation, soil conservation, watershed management projects and other forms of rural infrastructure, he explained.

Then came the Deva Gowda/United Front government (UDF) and the emergence of P. Chidambaram as the new face of economic



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The Relief Factor

"Over the years, poor farmers, artisans and weavers have accumulated debt which they are unable to repay. They have been caught up in a vicious circle of indebtedness and low incomes which keeps them in perennial poverty. In order to relieve our farmers from the burden of debt, an assurance was given in the National Front's manifesto that relief will be provided to farmers with loans upto ₹10,000 as on 2nd October, 1989. I am glad to inform the House that we are now ready with the scheme of implementation of debt relief to fulfil the promise, and redeem the pledge given to the kisans and artisans".

— Prof. Madhu Dandavate, 1990-91

reforms in 1996. In his budget speech for 1996-97, P. Chidambaram talked of removing controls on agriculture. He also articulated the UDF's resolve to double flow of credit to agriculture and agro industries within five years.

The next year P. Chidambaram unveiled agro industries decontrol reforms. "The Rice Milling Industries (Regulation) Act, 1958 and the Ginning and Pressing Factories Act, 1925 will be repealed. Licensing, price control and requisitioning under



In 1998-99, Yashwant Sinha, in his maiden speech, addressed farm debt and farmer suicides. He created a milestone in farm credit by introducing Kisan Credit Cards

the Cold Storage Order, 1964 will be removed. The Edible Oils and Edible Oil Seeds Storage Control Order, 1977 and the Cotton Control Order, 1986 will be invoked only in well-defined emergency situations. Domestic futures trading would be resumed in respect of ginned and baled cotton, baled raw jute and jute goods". He also announced excise duty exemption for agricultural and horticultural machinery, milking machines and dairy machines and all jute products.

Later, the birth of the National Democratic Front government led to a re-focus on alleviating farm distress. In his maiden budget speech for 1998-99, Yashwant Sinha who addressed issues of farm debt and farmer suicides and created a new milestone in farm credit by announcing the decision to introduce Kisan Credit Cards (See box):

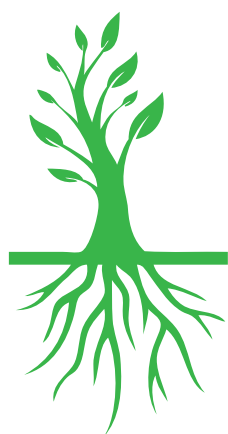
In the speech for 1999-2000, Yashwant Sinha announced the decision to launch the National Programme for Rural Industrialization (NPRI) with the mission to set up 100 rural clusters every

year. In the subsequent year, he announced intent to merge 28 ongoing separate centrally sponsored schemes of agricultural development into one comprehensive programme. In his BS 2001-02, he announced a scheme for setting up of agriclincs and agribusiness centres by agricultural graduates.

In 2002-03, Yashwant Sinha changed the tune to political rhetoric by underpinning his speech to the 'Kisan Ki Azaadi' concept: "Freedom to the farmer, Kisan Ki Azaadi is the overarching goal of our policy" that focuses on diversification of agriculture and removal of regulatory and procedural rigidities. The exit of the NDA and formation of an United Progressive Alliance (UPA) government kindled new hope for farmers during 2004.

In his speech for 2004-05, P. Chidambaram announced a few targets, the chief being doubling agricultural credit in three years. The next year, 2007-08, he returned to fertilizer subsidy reforms with a steep hike in subsidy bill. He disclosed his intent to launch a pilot scheme to provide





fertilizer subsidy directly to farmers. In 2008-09, with an eye on Lok Sabha polls, P. Chidambaram unveiled a big-bang ₹71,000-crore farm debt waiver scheme.

With the return of the UPA, P. Chidambaram's successor, Pranab Mukherjee, returned to fertilizer subsidy, which has remained Gordian knot in spite of patchy reforms since 1991-92. In 2009-10, Pranab Mukherjee announced the intent "to move towards a nutrient based subsidy regime instead of the current product pricing regime", which he believed would "lead to availability of innovative fertilizer products in the market at reasonable prices".

The next year, he unveiled a proposal to spread green revolution to the eastern region of the country. He also mooted a scheme to organize 60,000 "pulses and oil seed villages" in rain-fed areas during 2010-11. The saga of announcing new schemes, repackaging old ones and coining of new politically correct schemes has continued since then. Thus, the present finance minister, Arun Jaitley, announced a decision to roll-out Kisan TV in his maiden speech for 2014-15. He also announced a credit scheme for half a million "Bhoomi Heen Kisan" groups, apart from pitching for "Protein Revolution".

In his speech for 2016-17, Arun Jaitley articulated the Prime Minister's Narendra Modi's

Of Debts and Suicides

"Farmers often face chronic problems of overdue loans due to circumstances beyond their control. They are even committed to civil prison for this default. While the repayment culture must improve, this government is determined to create conditions so that no farmer goes to jail for a loan repayment default or is forced to commit suicide ... The Reserve Bank will be issuing appropriate guidelines to the banks for hassle-free settlement of old cases of over dues. Banks will be encouraged to provide appropriate relief on accumulated interest in deserving cases".

— Yashwant Sinha, 1998-99

decision to facilitate a doubling of farmers' income in five years, apart from unveiling a revamped crop insurance scheme named the Prime Minister Fasal Bima Yojana. The Nabard recently invited offers for undertaking studies to grapple with the challenging and nebulous objective of doubling peasants' income by 2022.

The budget speech has been transformed into a political platform to create right noises on agriculture, which has continued to struggle for sustained, long-term four per cent annual growth rate since the Independence. ●

From Zero to Hero: The Kisan in the Finance Minister's Speech

The Indian public takes it for granted that the annual budget speech of the finance minister would be laced with flowery reference to the yeomen service rendered by farmers in providing food security.

Whether ornate mentions are ritualistic or reflect the government's genuine concern for farmers is a moot point. Equally debatable is whether there is any correlation between the lavish praise for farmers in the budget speech and their morale, in terms of reduction in agrarian distress and farmers' suicides.

The number of mentions of the common noun 'farmer' or its synonyms (peasant/agriculturalist) in the annual budget speech has increased from nil in the first decade of Independent India to a record 32 times in 2016-17 budget speech delivered by finance minister, Arun Jaitley.

The agricultural community might not be amused to know that successive finance ministers never cared to mention the word 'farmer' even once in their budget speeches beginning 1947-48 till 1960-61. In the latter year, the late Morarji R. Desai, finance minister, for the first time, ended the drought on this count by using the word agriculturalists in his budget speech. He did this with regard to taxation proposals too and not with reference the labours of the farmers in reducing food imports.

Delivering the 1960-61 budget speech on February 29, 1960, Morarji Desai stated: "At present, the business income of such societies is exempt from tax. This exemption is justified having in view the objective of the Co-operative Societies Act of 1912, namely, to facilitate the formation of co-operative societies for the promotion of thrift and self-help among agriculturists, artisans and persons of limited means. However, as the House is aware, of late, co-operative societies have widened their fields of activity and are carrying on substantial business involving transactions of a large scale with non-members. There is no justification for a complete tax exemption of business profits in their case."

Morarji Desai factored in the crucial role of farmers in making the proposed Third Five Year Plan a success in his budget speech for 1961-62: "A substantial increase in food production is the foundation on which the Plan rests, and I should like to take this opportunity of appealing both to our farmers and to the official and non-official agencies concerned with development in the rural areas to concentrate their effort on achieving the target of 100 million tons set out in the Draft Outline of the Plan".

The humble farmer, however, had to wait till

1979-80 to hear a finance minister express gratitude from his heart to farming community's contribution to food security. The deputy prime minister-cum-finance minister, the late Charan Singh, noted in his budget speech that record food production for the second year in a row was due to three factors that included the farmers' contribution.

Charan Singh, one of the most important kisan leaders that India has had, said: "It (record production) is also in a great measure due to the energy and toil of millions of farmers who have undertaken investment, absorbed new technology, adopted new cultural practices and contributed to the general good by growing two ears of corn in place of one".

N. D. Tiwari set a new record by referring to the 'farmer' 16 times in his budget speech for 1988-89. "We are proud of our farmers. By their hard work and unflinching determination through the years, they produced enough to enable us to build substantial food stocks. This helped us to withstand the impact of the current drought without acute food scarcity and widespread economic dislocation."

N. D. Tiwari's 16-mention record was doubled to 32-mentions by Arun Jaitley in his budget speech 2016-17. His speech on February 29, 2016, said: "We are grateful to our farmers for being the backbone of the country's food security. We need to think beyond 'food security' and give back to our farmers a sense of 'income security'. Government will, therefore, reorient its interventions in the farm and non-farm sectors to double the income of the farmers by 2022."

Farmers would prefer concrete action for doubling their average incomes to doubling of platitudes in the forthcoming budget speeches to 2022.



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ANNUAL AGRI UNDER-PERFORMANCE

Bigger Menace than Black Money

Vijay Sardana

Rising food inflation, rising imports and declining exports cost the Indian economy dearly. The department of commerce of the government of India says that agriculture-based commodity imports have gone up by ₹1,98,734 crore between 2014-15 and 2015-16 even as India lost export markets in agri-based commodities worth ₹2,58,324 crore. Add the food losses and wastage of about 30 per cent every year and the figure mounts to about ₹100,000 crores per annum. Neglect of agriculture thus cost India lost about ₹1,50,000 crores last year.

This is the revenue loss in just one year. The loss to farmers on account of not getting remunerative prices, even the minimum price, is another huge cost to society and the rural economy. This is more than the total black money that the country supposedly has. One is not considering the impact of food inflation on other sectors of economy or on public health and nutrition, which are not factored



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in into these calculations. India's political leadership has taken a drastic step like demonetization to address the black money issue within India. Can similar action and political be expected to address agriculture and food security issues in the country?

No country can ensure its political sovereignty without food security; there is a close relationship between food security, economic growth and law and order in the society. Economic growth is directly related to food inflation. Higher the food inflation, lower the economic growth because high food inflation reduces

consumer spending on non-food economic activities. India adds about 15 million people every year who will need to be fed nutritious food.

Given these basics, there is no hope that food inflation will come down in the near future unless there is serious rethinking about food production, food supply chains, lifestyle and consumption habits in the country. The biggest challenge for the policy



Policy makers habitually offer freebies as political bribe to voters to win elections but do not look at productivity and efficiency as criteria for policy reforms

makers and for governance will then be improving productivity and preventing food losses to ensure food security for masses at an affordable price. How much food India will need in the coming years? It is good to hear that India is food secure and no doubt food supplies have been managed to a great extent but India is now at the cross roads. It is high time to recognize ground realities lest it be too late.

In a country of 1,270 million, where per capita income is lower than the world average and where 30 per cent of the population lives below the poverty line, about 45 per cent of the children suffer from undernourishment, the majority of child mortality is on account of stunting, with lactating mothers not getting enough food to feed the new born, food inflation is and will always remain the biggest political issue in every election. The management

of food inflation will be the corner stone of good governance claims by any ruling party.

Agriculture reforms will take time because no government has the capability to take on vested political interest. Policy makers habitually offer freebies as political bribe to voters to win elections but are not keen to look at productivity and efficiency as criteria for policy reforms. Yet economic success of India demands that the agriculture sector get due attention from political establishments. Long-term consistent policy is a pre-condition to ensuring minimum food security. There is need to develop a food security plan.

There should be a national food security plan to serve as a blue print for all and to encourage private investment. This document should include growing demand for food, feed, fibre and fuel. This plan must



address supply chain issues at all levels, including agriculture-based inputs for other industrial sectors. This should give a clear direction to all stakeholders for the next 10 to 15 years, which can be evaluated on a yearly basis for any corrections based on experiences on the ground. The question is that if all is well and India is comfortably placed in the food market; why is it losing export markets and global competitiveness, as evident from decline exports in major commodities.

According to FAO study, food energy requirements for the south Asian population will be about 2,700 calories per capita, per day in 2025. In India, foodgrain availability is around 525 gms per capita per day at present whereas the corresponding figures in China and the USA are 980 gms and 2,850 gms respectively.

- If, due to improvement in per capita income, per capita consumption is 650 gms, the foodgrain requirement will be of about 390 MT by 2025.
- In case of pulses, according to WHO requirements, India will need about 35 million tons of pulses by 2025.
- Edible oil demand, it is estimated, will be about 17



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Estimates of the agriculture ministry reveal that nearly 120.72 million ha of land is degraded due to soil erosion and about 8.4 million ha has soil salinity and water-logging problems

kg per capita per year. It means that India will need about 23.8 million tons of edible oils by 2025.

- The deficit for feed and fodder is already between 35 per cent and 65 per cent in various regions.

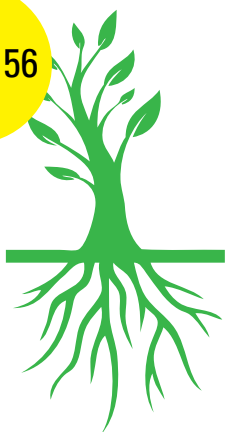
Indian agriculture is dominated by small farmers with small landholdings for cultivation. The average size of the landholding was 2.30 ha in 1970-71, which declined to 1.32 ha in 2000-01. The absolute number of operational holdings increased from about 70 million to 121 million. If this trend continues, the average size of holding in India would be a mere 0.68 ha in 2020 and get further reduced to a low of 0.32 ha in 2030. This on the one hand and, on the other, by 2025, per capita agriculture land available will be a mere 0.1 ha per capita. In other words, just 100 feet x 100 feet plot per person will be available to meet the daily needs of food, fuel, fodder and fibre round the year. With increasing population this area will further shrink.

There are other worrisome aspects too. Estimates of the agriculture ministry reveal that nearly 120.72

million ha of land in the country is degraded due to soil erosion and about 8.4 million ha has soil salinity and water-logging problems. Besides, huge quantities of nutrients are lost during the crop production cycle. India loses nearly 0.8 million tonnes of nitrogen, 1.8 million tonnes of phosphorus and 26.3 million tonnes of potassium per annum. The deteriorating quality and health of soil is have to be stemmed. Problems are further aggravated by imbalanced application of nutrients (especially nitrogen, phosphorus and potash) and excessive mining of micronutrients, leading to deficiency of macro and micro nutrients in the soils.

Water is the next big concern. According to the agriculture minister, by 2025, India will have about 1,700 m³ of water per person and 84 per cent of this water will be used for irrigation purpose. This is stress level.

- At the time of Independence, the population was less than 400 million and per capita water availability was over 5,000 cubic meter per year (m³/yr).
- In 2007, India's population was about 95 crore





and per capita water availability had fallen to about 2,200 cubic meters per year.

- With the population crossing a billion mark, water availability has fallen to about 2,000 m³/yr per capita.
- By 2025, the per capita availability is projected at only 1,500 m³/yr or just 30 per cent of availability levels in comparison to what was available at the time of Independence.
- By 2025, the water requirement for irrigation will be 790 billion cubic meter but India's total reservoir capacity will be about 300 to 350 billion cubic meter.
- This per capita water availability will further fall to about 1,500 cubic meter per year by 2025 due to increasing population.
- This means about 4,000 litres of water per day per person to meet all of India's requirement for food, feed, cleaning, industrial and non-industrial activities like recreation and such others.
- Animals need water to survive that is yet to be factored in.

All this while, India's economic growth and individual wealth are shifting diets from predominantly starch-based to meat and dairy, which require more water. Producing a kilogram of rice, for example, requires about 3,500 litres of water,

a kilogram of meat some 15,000 litres and a cup of coffee about 140 litres. The water requirement for a litre of milk production is about 2,000 litres. This dietary shift will have the greatest impact on water consumption over the next 10 years and is likely to continue well into the middle of the 21st century.

These make for a very complex and serious problem around food security that needs to be a major concern of every Indian. Meanwhile, India will emerge as a major net importer of food products in the coming years. The author's estimate suggests that even with the best of the efforts and resources India will be not be able to produce enough essential commodities to meet its growing demand mainly in the area of edible oils and pulses for human consumption and protein meals and fodder for livestock. Milk production growth reach will reach stagnation.

Again to go by the author's estimates, in order to meet the demand for food and other agriculture products, by 2030, India will need double the land mass to produce food and other agriculture items if the productivity remains static at the same level. The alternative is to double the yield per unit area to meet the growing demand or look at other sources of food supplies. There are many supply side challenges that will need out-of-the-box-thinking because the



Demand projections by author based on various recommended consumption parameters (million tons)

Category	In 2015 (Estimated)	By 2030 (Projected)	Required Growth in production per year (in Million tons)
Pulses	17.2	40.0	1.52
Coarse Cereals	41.7	102.0	4.02
Wheat	88.9	95.0	0.41
Rice	104.8	156.0	3.41
Oilseeds	26.7	70.0	2.89
Milk	146.3	182.0	2.32
Fish	10.1	16.0	0.39
Egg	39.2	57.0	1.19
Meat	6.0	15.0	0.60
Fruits	86.0	110.0	1.60
Vegetables	167.0	180.0	0.87
Tea	0.9	1.1	0.01
Sugar	25.0	33.0	0.53
Total food Demand	759.8	1057.1	19.82

Note: Demand for many other items which make part of food system is yet to be estimated.

Source: *The Politieconomy, Int'l Research Journal of Political Economy, Volume 3, Issue 1, September 2016, Page 135*

Indian agriculture is losing global competitiveness is also visible from decline exports in major commodities.

HS Code	Agro-based Commodity Exports from India (All Values are in ₹ Lakhs)	Export Value in 2014-2015	Export Value in 2015-2016	Export Growth in Value Terms
10	Cereals.	5,828,222	4,096,626	-1,731,596
13	Lac; gums, resins and other vegetable saps and extracts.	1,189,543	567,190	-622,353
23	Residues and waste from the food industries; prepared animal fodder.	1,000,615	523,662	-476,953
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	3,208,438	2,937,892	-270,546
12	Oil seeds and olea. Fruits; misc. Grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	1,356,084	1,096,778	-259,306
2	Meat and edible meat offal.	3,018,653	2,760,392	-258,261
22	Beverages, spirits and vinegar.	231,523	209,761	-21,761
15	Animal or vegetable fats and oils and their cleavage products; pre. Edible fats; animal or vegetable waxex.	595,502	574,181	-21,321
4	Dairy produce; birds' eggs; natural honey; edible prod. Of animal origin, not elsewhere spec. Or included.	231,358	214,579	-16,779
5	Products of animal origin, not elsewhere specified or included.	60,838	60,251	-586
6	Live trees and other plants; bulbs; roots and the like; cut flowers and ornamental foliage.	46,080	48,341	2,262
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	36,609	43,426	6,817
11	Products of the milling industry; malt; starches; inulin; wheat gluten.	186,709	195,504	8,795
20	Preparations of vegetables, fruit, nuts or other parts of plants.	308,948	320,095	11,146
21	Miscellaneous edible preparations.	359,105	372,659	13,554
19	Preparations of cereals, flour, starch or milk; pastrycooks products.	299,646	331,359	31,713
1	Live animals.	7,775	46,627	38,852
18	Cocoa and cocoa preparations.	84,866	126,761	41,895
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	95,198	138,745	43,547
8	Edible fruit and nuts; peel or citrus fruit or melons.	985,913	1,040,376	54,463
24	Tobacco and manufactured tobacco substitutes.	586,859	645,236	58,377
7	Edible vegetables and certain roots and tubers.	721,603	826,753	105,150
9	Coffee, tea, mate and spices.	1,756,310	1,932,656	176,346
17	Sugars and sugar confectionery.	657,473	1,160,778	503,305
	Exports (in ₹ Lakhs)	22,853,871	20,270,629	-2,583,242
	Exports (in ₹ Crores)	2,285,387	2,027,063	-25,832

Data: Dept. of Commerce, Govt. of India & Analysis by Vijay Sardana

Food inflation in agriculture system

HS Code	Agro-based Commodity Imports into India (All amounts are in ₹ Lakhs)	Import Value in 2014-2015	Import Value in 2015-2016	Import Growth in Value Terms
7	Edible vegetables and certain roots and tubers.	1,735,882	2,640,929	905,047
15	Animal or vegetable fats and oils and their cleavage products; pre. Edible fats; animal or vegetable waxes	6,518,454	6,892,714	374,260
8	Edible fruit and nuts; peel or citrus fruit or melons.	1,628,775	1,988,399	359,624
10	Cereals.	13,650	122,541	108,892
9	Coffee, tea, mate and spices.	446,276	505,682	59,406
23	Residues and waste from the food industries; prepared animal fodder	202,261	249,999	47,738
17	Sugars and sugar confectionery.	418,870	456,252	37,382
22	Beverages, spirits and vinegar.	332,245	366,706	34,462
13	Lac; gums, resins and other vegetable saps and extracts.	111,812	133,446	21,634
12	Oil seeds and olea. Fruits; misc. Grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	196,584	214,340	17,757
21	Miscellaneous edible preparations.	76,176	90,082	13,906
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	37,929	44,152	6,223
20	Preparations of vegetables, fruit, nuts or other parts of plants.	45,923	51,371	5,448
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	13,782	18,978	5,196
4	Dairy produce; birds' eggs; natural honey; edible prod. Of animal origin, not elsewhere spec. Or included.	30,519	34,045	3,526
24	Tobacco and manufactured tobacco substitutes.	29,845	33,122	3,277
5	Products of animal origin, not elsewhere specified or included.	22,694	25,113	2,418
6	Live trees and other plants; bulbs; roots and the like; cut flowers and ornamental foliage.	11,337	11,440	103
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	2,001	1,861	(140)
11	Products of the milling industry; malt; starches; inulin; wheat gluten.	37,570	37,263	(308)
2	Meat and edible meat offal.	1,966	1,276	(690)
19	Preparations of cereals, flour, starch or milk; pastrycooks products.	40,008	38,739	(1,269)
1	Live animals.	7,398	6,123	(1,275)
18	Cocoa and cocoa preparations.	155,163	139,891	(15,272)
	Import Amount (in ₹ Lakhs)	12,117,120	14,104,464	1,987,344
	Import Amount (In ₹ Crores)	1,21,171	1,41,045	19,873

Data: Dept. of Commerce, Govt. of India & Analysis by: Vijay Sardana



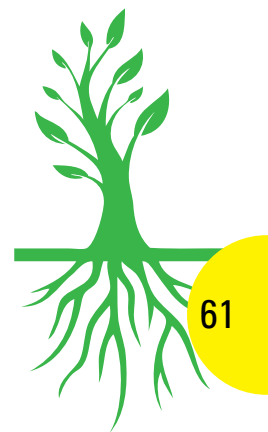
Develop a national agriculture technology policy and make the agriculture universities accountable for the growth in productivity in their regions and do so urgently

current way of working has exhausted its potential to deliver results. Meanwhile, food inflation is indicating stress in the agriculture system and it encompasses most essential commodities. Efforts to stabilize domestic prices means increasing imports.

Recommendations for Policy Makers:

1. Move away from the political slogans and accept that the situation is not under control.
2. As with demonetization, India's food security should be a personal priority for the Prime Minister and not be delegated to another minister or ministry because inadequate handling of this vital issue will derail all plans to provide 'acche din' to the masses. In 2019, food inflation will emerge as major political issue.
3. Learning from the GST experience, India must create a "National Food Security Council" because agriculture is a state subject and unless all states are committed to food security, no central initiative will work.
4. Food security and agriculture must get priority in fund allocation once GST is implemented because food and nutrition are essential to livelihood and employment for unskilled and semi-skilled masses in urban as well as in rural area. No industrialization and technology can provide jobs for some 30 million people and developing their skills competently will take a minimum of 20 years.
5. Develop a national agriculture technology policy and not just an agriculture policy. Agriculture universities should be made accountable for the growth in productivity in their regions. Even if the mandates of the India Council of Agriculture Research (ICAR) and agriculture universities have to be changed in order to do so, they must be done in the forthcoming budget session.
6. The Niti Aayog should develop a state-wise action plan and report the progress on a quarterly basis so that no time or resources are lost.
7. Government must also create a large agriculture infrastructure especially focussing on food handling infrastructure and related facilities to minimize food wastage and to save financial waste.
8. All technology options like satellite technologies and IT technologies must be explored to manage agriculture and food systems in India.
9. If India invests just 50 per cent of the revenue lost in last one year for the development of agriculture, it can save at least \$50 billion every year.
10. Food security and agriculture are the only sectors that can ensure that India remains a political power on the world stage. Without food security, India will lose its strategic political and economic power on world stage.

2017 will be crucial for national food security. India does not have buffer stock across the commodities spectrum to ensure a comfort zone for policy makers. ●



PANIGOBRA

From Peace to Politics; From Prosperity to Pandemonium?

Aditi Roy Ghatak

“*Sujalam, suphalam, malayajashitalam, shasya shyamalam...*” One wonders whether Bankim Chandra was in these environs when he wrote these inspired lines that were set to tune by the national bard; while Sri Aurobindo translated it to interpret its deeper meaning for the world at large: “Rich with thy hurrying streams, Bright with orchard gleams, Cool with thy winds of delight, Dark fields waving”.

On a cool December morning I find myself in village Panigobra (Pincode 743293), officially under

taluk Eojnagar, Jadurhati sub office, division Barasat, District North 24 Parganas, West Bengal. This is the district in which Bankim Chandra was born. The idyll that he described is pretty much true of most of West Bengal and much of rural India.

The vehicle wended its way over a two-hour stretch from Kolkata on a mix of good, motorable road or “under repair” roads. It made for an interesting journey through bustling mofussil towns and endless fields; lush green farms with large dashes of bright yellow (it is mustard season now), just below coconut or date palms that pose against a clear blue Bengal sky. It is a sight to please any soul, pro or against the state.



Panigobra is a slip of a village — a kilometer and a half wide and 3.5 kilometer long, says 59 year old Md Jinat Ali, who is a local entrepreneur, a political activist and an endearing man. More of a hamlet, a part of the larger Eojnagar village, under the Begumpur Bibipur Gram Panchayat, it is seems pretty much self-contained; producing enough for its needs and with some to spare that is sold at the Swarupnagar or Jadurhati markets a couple of kilometers away. There are the local “van garis”, rickshaws, autorickshaws that carry the produce for those unable to walk the distance. There are no middlemen involved, as farmers take their produce and sell directly to the customers.

Nature has been kind to Panigobra. It still has adequate ground water that is sometimes taken out with hand pumps and is in evidence all over in the many village ponds. The 2011 census document on the region confirms that water is drained into the field through various canals. The presence of abundant rivers, creeks and such others that “help

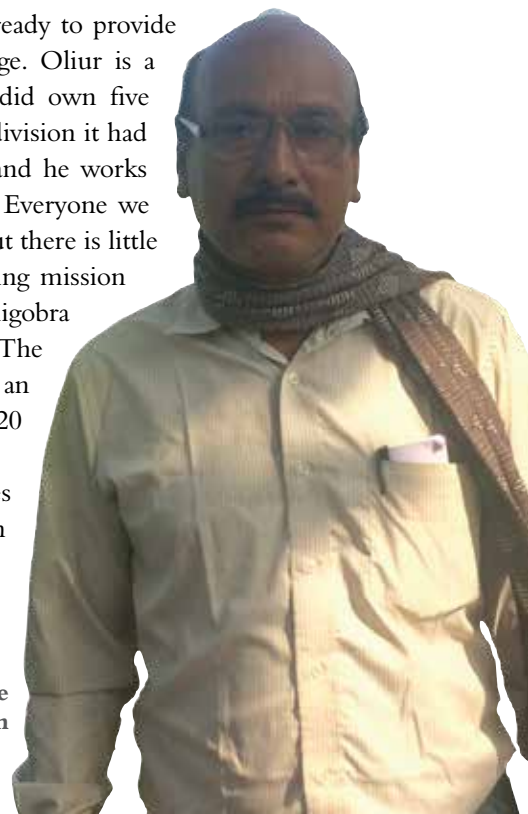
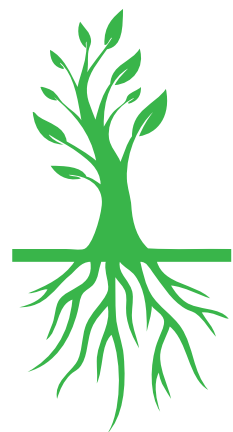
One does not see abject poverty anywhere. One has not heard of farmer suicides here because the investments are little; living is simple; and people are at peace with their circumstances

the cultivators a lot”. This is true of the entire district. This is possibly why one does not see abject poverty anywhere. One has not heard of farmer suicides here because the investments are little; living is simple; and people are at peace with their circumstances.

Not everyone is a cultivator though. In fact, the general environment of liberalism that one senses possibly stems from the fact that people from the village have worked outside the region for centuries. Md Jinat’s grandfather father worked at the Alipore Judge’s Court in Calcutta; his father, Amjed Ali, worked at the Ichapur gunshell factory and he has been an entrepreneur. The little land that the family owned got subdivided and the two acres that was his share is worked on by share croppers.

Panigobra has 475 families of which 300 are farming families while others only have houses and are engaged as farm labour, iron smithy or in rope making. Oliur Rahman (45) joins the conversation that we are having. In fact, a host of interested village folks gather round, ready to provide information about the village. Oliur is a landless labour; his father did own five kathas of land but with subdivision it had whittled down to nothing and he works on fields or as a raj mistry. Everyone we meet here is multi-skilled but there is little evidence of the famed skilling mission of the centre here. Panigobra is far from New Delhi. The Bangladesh border is just an hour’s drive; probably 20 kilometers as the crow flies.

People fend for themselves though. Oliur gets farm work for around 200 days a month at ₹250 a day and, occasionally, MGNREGA



Panigobra could do with more work. MGNREGA projects do not happen round the year and even 50 days of employment under it is a matter of chance

work at ₹174 a day. “Not everyone is keen to get the work because it pays less and the payment is delayed”, someone in the group piped up. Does the payment finally come though? Yes, it comes directly into the bank account, the people confirm.

Two pretty ladies have meanwhile joined the conversation. Aloka Das (40) and Jhankari Biswas (23). Very smart and with sparkling eyes, they work as farm labour; as do their husbands. They are not from the village though but from the neighbouring one. Aloka’s original home is in Nyalpur and Jhankari’s in Kamalpur but they have been married into the village just next to Panigobra. Work is harder to come by there without the right political connections, which is why they work in Panigobra.

The residents themselves could do with more work though. MGNREGA projects do not happen round the year and even 50 days of employment under it is a matter of chance. There could, of course, be more active involvement by the banks in terms of promoting local industry, they say. The Allahabad Bank is the lead bank for the Swarupnagar region and there is no co-operative bank here, which may be a blessing of sorts in times of demonetization.

Panigobra is a three-crop village in the main with rice, jute and mustard as the main crops. Then there are the magnificent mango trees, between 3,000 and 5,000 of them, that produce Lengra and Himsagar, Bengal’s favourites, amongst others. While mango trees bear fruit every alternate year, the average annual earning per tree is around ₹5,000 after taking care of all expenses. Most orchard owners contract out their produce at a fixed price. The mango trees are neatly surrounded by tall supari trees that not only make for extra income but bind the soil as well.

There are also the lovely coconut palms, some 7,000 to 10,000 of them. “The coconut was a good source of income but the trees have been afflicted by a virus and are developing strange marks”, says Hafizur Rehman. No central extension



Residents eager to talk...

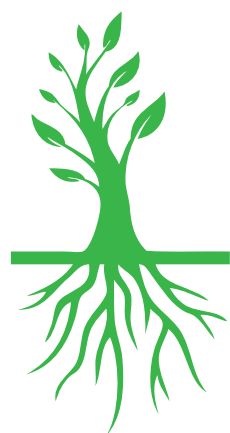


worker is apparently worried about this problem. The coconut palm owners have gone to the local krishi projukti sahayak, employed by the state government, who has asked them to spray pesticides. “This is not easy to do on a coconut palm. We do spray occasionally but that is hardly the solution as earnings have dropped by at least 50 per cent for nearly nine years now”.

Professional agri-consultancy is clearly absent as are subsidized agri-inputs. Fertilizer is bought from the local traders for there is no subsidized sale in the region. Urea costs between ₹10-₹12 a kg; phosphate between ₹8-₹9 a kg, potash between ₹8-₹10 a kg; the Sufala group of dana saar, 1435 and 1026, sell for between ₹25-₹28 a kg.

There is also excellent pisciculture; around 50 bighas of sweet water fishery producing tilapia (tilapia), golda (giant river prawn), mrigel (*Cirrhinus cirrhosus*, also *Cirrhinus mrigala*) and rui (carpo), katla (Bengal carp). Even non-residents have acquired land here to promote fishery with local involvement in artificial pools. It is the abundance of fish that accounts for the fact that the locals look healthy even without access to a great deal of money for nutritious food. They have access to fish and fruit.

What pleases most is the apparent keenness to learn. Right from the nearest town (of sorts) at Berachampa, where we stop for tea, there are signs of academic institutions, coaching schools,





Thankri Biswas (left)
and Aloka Das

“Abundance of fertile lands supported by handful rainfall had made the district an agricultural paradise. Total area used for production of different cereals and pulses in the district is 239.1 thousand hectares during 2010-11. Oil seeds are grown in 45.6 thousand hectares of land and fibres are grown in 50.6 thousand hectares of land”.

— Census of India 2011 document about West Bengal, in its section titled District Census Handbook, North 24 Parganas, Village and Town Directory

advanced learning and indeed even the hamlet has a primary school for children of ages 1-4, a shishu shiksha kendra, also up to class IV, a madhyamik shiksha kendra, up to class VIII and an Integrated Child Development Centre for infants of ages 2-3. For higher education, children walk for 10 minutes or cycle down to a neighbouring village that has the Ucchamadhyaik High School.

There is a health centre within a 10-minute walk and there is the hospital at Dhanya Kuria around four kilometers away. Most importantly, almost every house in the village has electricity, the ponds are protected and the basic infrastructure is in place; save for toilets. What one found was a little enclosure within which men bathe, while women go to the local ponds. There are toilets in the few pucca houses though. In one of them lives the local panchayat member, Tanuja Khatoon, who won in the 2013 Panchayati election. Here the idyll ends.

Probably, the Panigobra has had it relatively good over the years and did not opt for “poriborton” as much as the rest of West Bengal did. It had just about enough food, water, electricity, work, schools and health care for its simple folk to be at peace with their circumstances. Women have woven themselves into self-help groups with around five of them engaged in sewing, cooking for the mid-day meal programmes, running small poultry farms (haans-murgi) and generally managing.

Into this life was injected poisonous politics when Panigobra voted for status quo, choosing to elect the marxists back to power in the assembly elections. Leading the CPM charge was Tanuja’s father-in-law, Jinat, whom we had met at the outset. Jinat has been a gram pradhan in the past and ran a rope-making business that employed some 60 families in Panigobra. Clearly, Jinat had to be taught a lesson.

On a June morning, in broad day light there came an armed gang on bikes, with petrol in their jerrycans, which we later learnt were filled at a petrol pump close to the village. They cordoned Panigobra off, set fire to the houses of those working at the rope factory, broke into the club house and destroyed it. The gang blocked the road to the village preventing the and fire tenders from reaching. When the police did manage to enter, the goons attacked them too as hundreds of villagers were forced to flee Panigobra, which remained deserted for a week.

Were these all Trinamool workers? “No, says Jinat. I believe that no more than five of them could have been locals. The others were all outsiders. In the pillage, even some Trinamool supporters’ houses

“North 24 Parganas district is part of the Gangetic delta, lying east of the Hooghly River. The country is flat. It is a little raised above flood level and the highest ground borders the river channels. The rivers in the district were formerly distributaries of the Ganges but their mouths have long been filled up and blocked. The area is described as a sort of a drowned land broken by swamps. Land in the north-east of the district is higher than that of the rest of the district. The sturdy peasants raise crops of rice, jute and sugarcane from the alluvial soil. There are clumps of palm and fruit trees in which village homesteads nestle. Industrial activity is concentrated in the narrow strip of land along the Hooghly River. The south-eastern part of the district gradually merges into the Sunderbans. Parts of the metropolitan city of Kolkata extend over southern parts of the district”.

— Census of India 2011 document about West Bengal, in its section titled District Census Handbook, North 24 Parganas, Village and Town Directory

were damaged. Some have lost almost everything, from household materials to utensils; their aadhar and ration cards. They have even lost their source of livelihood because the rope kaarkhana was destroyed as was all the raw material. Our first mission is to somehow find work for these people if we are to save them from starvation”.

This is where the community spirit has kicked in. The unaffected residents of the village and folks from the neighbouring village rushed in with help and, for a change, politics took a back seat here. Even a CPI(M) set up relief camp helped everyone, as Kaser Ali Sarala (45) farm labour, pointed out: “I may not support left politics but I cannot support any attack on my village. What happened was very wrong and I am not afraid to say so”. It is possibly this camaraderie that has brought smiles back on the faces so soon after such an enormous tragedy.



Many boardings about education in Berachampa

Politicians, judges, academics and social activists have visited us, says Rafizur Rehman, who had been following the discussions. “We are rich in natural resources but there are forces trying to erode our innards”. That is what must be resisted. Mita Chakrabarty, social activist, associated with the Save Democracy movement talks of getting a rehab plan prepared by professionals to tap into the local skills and turn the village around, even while focusing on those who have lost everything.

Is Jinat hopeful at all? “I am very hopeful”. he says, “So many people have turned up to help. They are talking of tapping into the national skilling mission, examining the potential of local enterprise and skills and helping the village on a professional plane. They are planning to crowdsource expertise to help us. Appeals will go out in the social media and I am sure that we can work something out. As far as I am concerned, I need to get my business back on the rails and I will be able to contribute to this turnaround plan”. He has managed to put some rope-making machines back in operation but it will take a while to get back to normal. Around ₹10 lakhs worth of finished products and raw material was lost and the suppliers have not been paid.

Are the local banks helpful? “Zero help”, says Jinat. I went to meet them but was told that there are a lot of unrepaid loans from this area and that they would not consider my appeal for a loan. I argued that I had no debts in any bank. That did not cut any ice with them”.

Yet hope reigns supreme. The soil is fertile, the hearts are still pure as the air in the countryside, people are hardworking and children study. All should become right with this world, if only politics is kept out of its threshold. ●

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