Perspective: Nightmare in India's Farmlands

Hot Potato; Rot Potato

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Issues and Ideas for Indian Agriculture

BUDGET 2018
BIG ON PROMISES; HOLLOWS WITHIN

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The Farmer in the Centre; the Devil in the Allocations

The good news is that not even the worst critic of the current government can accuse it of ignoring the farmer; the farmer and rural India are all over the budget. This rural focus marks a clear and distinct change by way of public acknowledgment that something is amiss in the poor, policy-battered farm sector, even if not by way of redressal.

Yet, as Article 112 of the Constitution clarifies, the union budget is simply a statement of the estimated receipts and expenditure of the government for a particular year. It has, however, traditionally been indicative of policy directions that the government of the day will follow; the fiscal allocations should logically follow the government's intentions.

It is only fair then that the budget, apart from being an annual report of the government, be the platform for the Prime Minister to address the nation from with his ideas for the coming year, based on which the finance minister's budget is presented, instead of becoming an annual jamboree for announcing policies.

To be fair to the Prime Minister, the first step towards atonement or for penance is to acknowledge past failure, which seems to be the underlying message of the budget speech. As the Economic Survey preceding it states, real incomes of farmers have been stagnant. The next step is to take corrective measures and redeem the situation. An effort has been initiated in that direction in this budget.

Amongst the most positive announcements is the assurance to purchase all crops at a promised A2 (actual paid out cost)+50 per cent profit. While procuring all crops at a predetermined price is a worthwhile promise to make, there are questions about its feasibility and one only hopes that it will not follow in the footsteps of another pre-election promise of C2+50 per cent, which was conveniently forgotten.

For any full blooded correction, there should have been a simultaneous announcement of the Ramesh Chand Committee's recommendations on the calculation of MSP, which has not been made. Yet one survives on hope and faith, amongst others, that the Niti Aayog will evolve into a credible policy think-tank. Hopefully again, it will come up with a suitable mechanism to enable institutional credit access to lessee farmers.

What are the other things that will bring the smile back on some farming faces? A ₹2,000 crore corpus Agri-Market Infrastructure Fund is in the offing for developing and upgrading agricultural marketing infrastructure in the 22,000 Gramin Agricultural Markets and 585 Agricultural Produce Market Committees (APMCs). This will enable farmers in remote locations without any institutional mechanism to connect to markets.

'WE MUST ALL HANG TOGETHER OR MOST ASSUREDLY WE WILL ALL HANG SEPARATELY'

"Operation Greens" on the lines of "Operation Flood" to tackle the volatility of tomato, onion and potato prices is another positive programme as is the fulfilment of the long-standing demand of income tax exemption for farmer producer organizations. Also, a ₹10,000 crore fund to finance the infrastructure requirements of fisheries, aquaculture and animal husbandry should generate rural employment and supplement farmer incomes.

The other welcome developments include the intent to mitigate the Delhi-NCR air pollution woes by subsidizing the machinery required for in-situ management of crop residue. Targeted programmes like those under the Prime Minister's Krishi Sinchai Yojna for 96 irrigation-deprived districts, where less than 30 per cent of the land holdings gets assured irrigation, is the way forward. The focus on horticulture clusters and conversion of cattle dung and solid waste in farms to compost, fertilizer, biogas and bio-CNG is also commendable.

Then comes the mixed bag. The flagship National Health Protection Scheme to cover over 50 crore poor and vulnerable beneficiaries, providing coverage up to ₹5 lakh per family per year for hospitalization, is most welcome though the fund allocation for the programme is insignificant. The abiding worry is that these will suffer the fate of many of last year's budget announcements that have not materialized due to paucity of allocations.

Not just in India, even in Davos a general scepticism regarding the data presented to project the Indian growth story is evident. A similar apprehension persists regarding the fund allocations in this budget. Where the budget sorely disappoints is in its failure to seriously address the climate change worries. This is left virtually untouched as agriculture R&D has been ignored. Nor is there any mention of balanced use of fertilizers. The magic-bullet demand for changing the centre-state funding ratio from 60:40 to 90:10 for agriculture-related schemes has unfortunately been overlooked too.

The worst part of this mixed bag is the continuance of the red thread running uniformly through the budgets of the past 10 years, presented by three finance ministers of India: the relentless toll that suicides have taken of farmer lives. The last three years have claimed upwards of 36,000 farmers, who have taken their embittered lives.

Power in a democratic system should mean the capacity to change the lives of people. The Prime Minister must now direct his immense power to bring the sorry saga of farmer suicides to an end. Budget allocations serve as the perfect instrument to change the narrative of resentment to one of hope, which must not be belied. He must quickly resolve the farm sector crises or be warmed about the consequences. As Benjamin Franklin cautioned: "We must all hang together or most assuredly we will all hang separately".

WHERE THE BUDGET SORELY DISAPPOINTS IS IN ITS FAILURE TO SERIOUSLY ADDRESS THE CLIMATE CHANGE WORRIES. THESE HAVE NOT BEEN HANDLED AS AGRICULTURE R&D HAS BEEN IGNORED

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COVER STORY

To the Editor

Opting for the loser's cup

Sir, Apropos of your editorial, "Glorified Farming; Unglorified Farmers" (*Farmers' Forum*, December 2017-January 2018), you hit the nail on the head when you point out the lack of understanding in parliament; that "for the farmer, the heartbreak is all the more pathetic because parliament seems to have abdicated its responsibility to the farming communities". There are new concepts around farming, farm finance and development finance for agriculture, just as there are new ideas on sustainable agriculture and organic farming that can really create winners. Instead, India seems to have opted for the loser's route. The farmer is the worst off victim of all this.

Deepak Negi
New Delhi

Whither consultation?

Your editorial, "Glorified Farming; Unglorified Farmers" (*Farmers' Forum*, December 2017-January 2018) rightly refocusses on the absence of genuine consultation with the farmer stakeholders, who are the principal players in the farm economy and need policy to be supportive to deliver good outcomes for both the crop grower and the crop consumer. Instead, policy seems to be regularly hijacked by organizations representing business and importer interests. As is common knowledge, this coterie of vested interests is closely clued in to the system and well funded. It can not only influence the government's farm policy but can even tweak good policies or manipulate their implementation.

Prabhat Sureka
Mathura, Uttar Pradesh

Policy shift from food to farmer

The budget suggestions submitted by Bharat Krishak Samaj at the pre-budget consultation, "Time to Shift Focus from Food Policy to Farmer Policy" (*Farmers' Forum*, December 2017-January 2018) were really the need of the hour. BKS has raised some serious points like the collapse of farm extension, which would have been the key to any transformative change in farms. This necessitates urgent redressal and one hopes that the government is paying attention.

Ankit Singh
Kolkata, West Bengal

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Securing farmer incomes

Naresh Minocha's "Routes to Secure Farmer Incomes" (*Farmers' Forum*, December 2017-January 2018) makes a vital point about enactment of a law to guarantee certain minimum income to farmers. It may be a good idea to look at the Kerala situation closely in terms of a Farmers' Income Guarantee Act, which has featured in the state's Agricultural Development Policy, three years ago. It promises that "the government will be directly accountable for improving the net incomes of farming households" but there are still no clear indications about when and how that can happen.

The other states can work together to figure that out because it is essential to have a worthwhile formulation that will assure "all farming households a dignified living income to meet the basic living expenses". It is important that the Kerala government transforms its intent into a law for assured income for Kerala farmers. It should seriously explore the scheme to provide regular additional income to farmers as a small share of value-added to their produce along the crop value chain.

Nand Kishore
Neemuch, Madhya Pradesh

Photo- Pixabay

BUDGET 2018

Amazing Announcements; Maze of Confusion

Surinder Sud

Seldom in the past have so many initiatives been announced for the agricultural sector in one go as has been done in the 2018-19 budget. Most of these, prima facie, well-intended moves are aimed directly or tacitly at boosting farm incomes. Yet, the budget falls short of offering any worthwhile succour to farmers; to provide them an immediate relief from economic distress.

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Outlining the theme of the elaborate agricultural package mooted in the budget, the finance minister, Arun Jaitley, said: "Our emphasis is on generating higher incomes for farmers. We consider agriculture as an enterprise and want to help farmers produce more from the same land parcel at lesser cost and simultaneously realize higher prices for their produce".

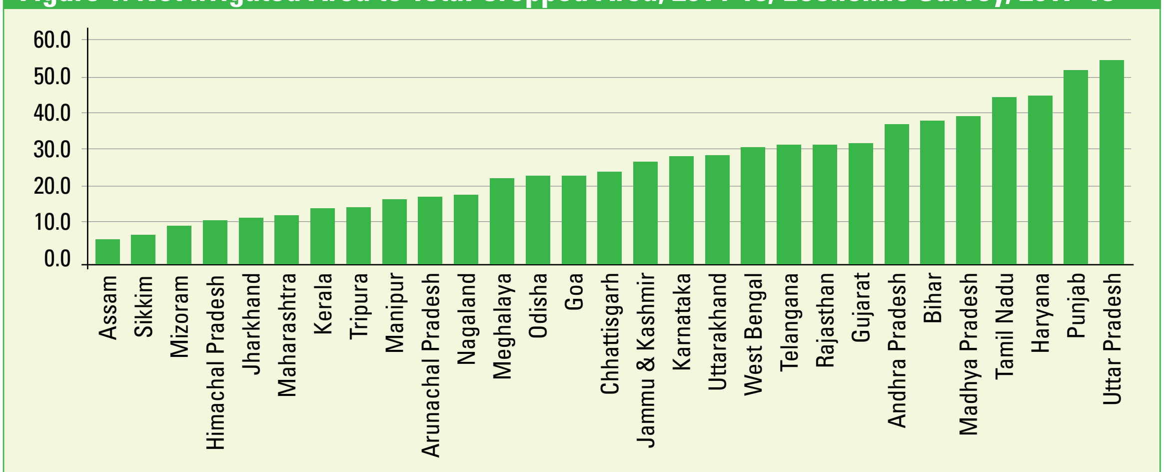
This statement, examined along with the proposals outlined in this budget and some other recent measures taken by the government, including the vow to double the farmers' income by 2022, indicates a subtle deflection in the focus from "production" to "income".

This is more or less in line with the recommendation of the National Commission on Farmers headed by the noted agricultural expert, M. S. Swaminathan. The commission's suggestion was, however, relatively more sweeping in nature as it entailed measuring agricultural progress not in terms of increase in production, as is done now, but in terms of increasing farmers' income.

Nevertheless, even the kind of the policy shift that the budget is hinting at may ultimately help improve the economic status of the farmers and mitigate their financial woes to an extent. The salient features of the agricultural package mooted in the 2018-19 budget, which can potentially have a noticeable bearing on farm incomes, are as follows:

- Reaffirmation of the commitment to double farmers' income by 2022.
- MSPs of all hitherto unannounced kharif crops to be fixed at least at one-and-half times of the production cost.
- Niti Aayog to develop a mechanism in co-ordination with the centre and state governments to ensure that farmers actually get the benefit of MSPs.
- Creation of institutional mechanism for price and demand forecasting to enable farmers take timely decisions about which crop to grow and also to suggest the optimum level of production for maximum profit.
- Hike in the target for the flow of institutional credit to the farm sector in 2018-19 to ₹11 lakh crore from ₹10 lakh crore in 2017-18.
- Launching a ₹500-crore 'Operation Greens', on the lines of the milk sector's 'Operation Flood', to address the issue of price volatility of potato, tomato, onion and other perishable commodities for the benefit of both producers and consumers.
- Sanction of ₹200 crore for supporting organized cultivation of highly specialized medicinal and aromatic plants and financial assistance to the associated industry to ensure markets for these crops.
- Promising to develop and upgrade 22,000 rural *haat*s into Gramin agricultural markets (GrAMs) to help farmers sell their produce directly to consumers and bulk purchasers outside the

Figure 1: Net Irrigated Area to Total Cropped Area, 2014-15; Economic Survey, 2017-18



Note: Net Irrigated Area is Gross Irrigated Area minus Area irrigated more than once. *Source: Directorate of Economics and Statistics.*

Photo: Pixabay

The National Commission on Farmer's suggestion entailed measuring agricultural progress not in terms of increased production but in increased farmer incomes

regulated markets run by the Agricultural Produce Marketing Committees (APMCs).

- A ₹2,000 crore fund to develop and upgrade agricultural marketing infrastructure in the 22,000 GrAMs and 585 APMC markets.
- Doubling the allocation for the food processing sector from ₹700 crore to ₹1,400 crore and promising to promote specialized agro-processing financial institutions.
- Allocation of ₹10,000 crore for the development of infrastructure for animal husbandry and fisheries.
- Promising to extend Kisan Credit Cards to fisheries and animal husbandry farmers to save them from taking loans from usurious moneylenders to meet their working capital needs.
- Exemption of income tax on the profits of Farmer Producer Companies (FPCs) having turnover of up to ₹100 crore for a period of five years from 2018-19 onwards.
- Allocation of ₹1,290 crore to the re-structured national bamboo mission to facilitate inclusion of bamboo farming in agro-forestry and to promote bamboo sector in a holistic manner.
- Creation of an institutional mechanism to guide export and import policies aimed at achieving an ambitious export target of $100 billion by 2022-23.
- Setting apart ₹2,600 crore under the Prime Minister Krishi Sinchai Yojna to provide assured irrigation in 96 districts deprived of irrigation facilities.

Post-budget, the finance minister made it clear that the entire gamut of costs involved in crop production would not be taken into account while fixing the MSPs

- Launching a scheme to Galvanize Organic Bio-Agro Resources Dhan (GOBAR-DHAN) to manage and convert cattle dung and solid farm wastes into compost, bio-gas or bio-CNG.
- Earmarking ₹14.34 lakh crore for the creation of livelihood sources and infrastructure in rural areas to generate more avenues of employment and income.
- Increase in the total budgetary allocation for the agriculture and allied activities to ₹63,836 crore for 2018-19 from ₹56,589 crore for 2017-18 (revised estimates).

Of all the takeaways from the budget, what hogged the limelight is the government's decision to keep the minimum support prices (MSPs) of crops at least one-and-half times their production cost. This, in a way, fulfils one of the commitments made by the ruling Bharatiya Janata Party (BJP) in its election manifesto. It can also be viewed as a step towards meeting the farmers' demand for accepting the Swaminathan Commission's counsel on crop pricing.

The catch here is that the term "cost of production" has been left undefined. All that the finance minister's budget speech said was that the National Institution for Transforming India (Niti) Aayog would, in consultation with the central and state governments, put in place a foolproof mechanism to ensure that the farmers got adequate prices for their produce.

However, going by the post-budget clarification by the finance minister, it is clear that the entire gamut of costs involved in crop production would not be taken into account while fixing the MSPs. Only the tangible costs, including the paid-out costs (termed as A2 costs) and the estimated value of family labour (FL) would be considered for this purpose.

The Swaminathan Commission had, in fact, called for fixing the MSPs at 50 per cent above the comprehensive cost of production (C2) that, apart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from the cash costs and family labour, would also include imputed value of rent on owned land and depreciation and rental value of capital assets.

The MSPs computed on the basis of the government's formula would provide only cold comfort to the farmers. This is because the MSPs of many crops are already equivalent to or higher than one-and-half-times the A2+FL costs and, therefore, may not require any significant increase.

For instance, the MSP for wheat grown in the 2017-18 rabi (winter) season, announced in November 2017, is 112 per cent above the A2+FL costs. Similarly, the current MSPs of gram, lentil and barley exceed the A2+FL costs by 73 per cent, 75 per cent and 67 per cent, respectively.

An equally, if not more, important aspect of the MSP-based price support system is the need to ensure that the farmers actually get the fixed floor price. This, unfortunately, does not happen. Various studies and surveys have shown that over 70 per cent of farmers seldom get the MSP for want of actual government intervention in the market through procurement. These farmers have to part with their produce at whatever prices are offered to them in the post-harvest peak marketing season.

These rates are generally far lower than the MSPs. Also, the MSP system effectively covers only a few crops – mainly wheat and rice and, occasionally, a couple of other crops – and that too only in a handful of states. For the rest of the crops, the procurement infrastructure does not exist. Unless there is greater clarity on how the MSPs fixed at remunerative levels will be actually enforced, it is futile to discuss the implications of the government's new agricultural pricing policy.

Regardless of the MSPs, the needed improvements in agricultural marketing are critical to ensure reasonable prices to farmers for all crops, even those not covered under the MSP mechanism. The National Policy for Farmers, formulated in 2007, after the presentation of the Swaminathan Commission report, had described assured and remunerative marketing as the key to enhancing farm productivity and profitability.

Lucrative returns prompt farmers to invest more in productivity enhancement measures. Unfortunately, neither the agricultural marketing infrastructure nor the legal regime governing farm marketing has kept pace with the changing times. Most of the APMC markets, too, are inefficient and non-transparent and are dominated by middlemen and cartels despite the amendments of the APMC laws in several states.

The indication in the budget that the government plans to carry the marketing reforms forward and to strengthen the marketing infrastructure outside the APMC system is, therefore, noteworthy. This has been necessitated because of the failure of the past bids to persuade state governments to amend their APMC laws in accordance with the model APMC Act circulated by the centre way back in 2003. Though most states have amended their APMC statutes, the amended versions do not conform strictly to the guidelines outlined in the centre's model Act to make the marketing system pro-farmers rather than pro-traders or pro-middlemen.

The 2018-19 budget seeks to address this issue by treating agricultural marketing virtually as a thrust area in the farm package. Noting that 86 per cent of the small and marginal farmers are unable to transact at the APMC mandis, the budget seeks to develop an almost parallel marketing infrastructure that would be readily accessible to even the small growers in distant and remote areas.

This is proposed to be done by developing and upgrading around 22,000 existing rural *haats* (informal agricultural markets) into Grameen

Agricultural Markets (GrAMs). The physical infrastructure of these GrAMs is planned to be strengthened by using the facilities available under some ongoing government schemes, including the Mahatma Gandhi National Rural Employment Guarantee programme (MNREGA).

The restructured markets would be linked to the electronic National Agriculture Market (e-NAM) and would be exempted from APMC regulations. These would facilitate direct sale of the farm produce to consumers and bulk buyers to ensure better returns for the cultivators. The e-NAM itself is also proposed to be expanded by connecting it electronically to 585 APMC markets. At present only 470 markets are linked to the e-NAM's electronic platform.

For the smooth marketing of tomato, potato, onion and other highly perishable farm products, which normally witness vicious price fluctuations to the detriment of both producers and consumers, the budget moots an entirely new business model. The finance minister acknowledged in his budget speech that seasonal and regional production of these commodities posed a challenge vis-à-vis connecting farmers and consumers in a manner that satisfies both.

The government, therefore, plans to launch an "Operation Greens" on the pattern of the "Operation Flood" that has been working very well in the case of milk that is also a highly perishable product requiring specialized post-production handling. The Operation Greens is envisaged to promote farmer producer organizations to handle these items. Besides, it would promote the necessary logistics infrastructure, processing facilities and professional management in milk marketing to bring about the much needed stability in the prices of highly perishable farm products. A sum of ₹500 crore has been allocated for this purpose.

In another significant step towards revamping and strengthening agricultural marketing, the finance minister announced the creation of an institutional mechanism, with participation of all concerned ministries, to formulate appropriate policies and practices for forecasting the likely prices and demand for farm commodities in near future.

Other means mooted in the budget to provide better marketing facilities and opportunities to the farmers to increase their profits include the use of futures trading and options trading in more farm goods and expansion of the warehousing depository system to allow farmers to take loans

Photo: Pixabay

The government should ensure stable and export-conducive external trade policies to achieve the ambitious agri-exports target

against their produce kept in storage for deferred sale. Import and export decisions are also proposed to be taken with farmers' interests in view. Besides, steps have been mooted to improve the connectivity of rural habitations with GrAMs and other agricultural markets.

The budget has announced liberalization of agricultural exports to achieve this sector's full export potential of $100 billion. These exports, at present, are worth only around $30 billion. This move is meant obviously to provide the needed additional outlet for surplus farm produce to prevent domestic prices from crashing in the wake of bumper harvests. Higher exports can also help ensure good returns to the farmers.

State-of-the-art facilities are planned at the existing 42 mega food parks or those in the process of being set to help boost agri-exports. The recently launched Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters (SAMPADA) is also part of the broad programme of boosting agricultural exports. So is the proposed doubling of allocation for the food processing ministry from ₹715 crore to ₹1,400 crore.

The Krishi SAMPADA scheme is expected to help in the establishment of specialized agri-processing financial institutions besides setting up modern quality testing facilities in the food parks. However, the government would have to ensure stable and export-conducive external trade policies to achieve the ambitious agri-exports target. The agri-exports product basket would need to be expanded and diversified too. At present, it is confined chiefly to products like Basmati rice, buffalo meat, spices, fresh and processed fruits and vegetables, marine fisheries (largely shrimps) and a few other items.

To encourage specialization in farm production, especially in the cultivation of products predominantly produced in a particular area, the budget moots a cluster-based approach for their development in a scientific manner on the lines of the industrial sector's cluster-based development model.

About 96 districts having less than 30 per cent land under assured irrigation would be taken up under the Sinchai Yojana to achieve the objective of "Har Khet ko Pani"

This would help the selected crops, particularly the horticultural crops, to reap the advantages of scale and also benefit from the proposed creation of infrastructure for the post-harvest activities from production to sale. It would further consolidate the recognition of areas for specific crops for which these are famous. The agriculture ministry has been asked to take up the promotion of such clusters in partnership with other ministries, including the food processing and commerce ministries.

Additionally, the budget aims to promote organic farming to capitalize on the premium prices and the niche market that the organically produced products normally enjoy. Farmer Producer Organizations and Village Producers' Organizations would be encouraged to take up this environment-friendly farming in large bunches, preferably of 1,000 hectares or more each. Moreover, women Self Help Groups (SHGs) would also be involved in taking up organic farming under the National Rural Livelihood Programme.

Recognizing the need for expansion of irrigation facilities to raise farm productivity, the budget seeks to expand groundwater irrigation under the Prime Minister Krishi Sinchai Yojana. About 96 districts having less than 30 per cent land under assured irrigation would be taken up under this programme to achieve the objective of "Har Khet ko Pani" (water for every farm). About ₹2,600 crore has been earmarked for this purpose. (see Percentage of Net Irrigated Area to Total Cropped Area, 2014-15 as published by the Economic Survey)

The budget speech takes note of the fact that many farmers are installing solar water pumps to draw groundwater for irrigating their crops. To encourage this environment-


Photo: Pixabay

friendly and pro-renewable energy trend, the government plans to establish a mechanism for the purchase of farmers' surplus solar electricity by power companies or licensees at reasonably remunerative rates.

The state governments would be asked to contribute to this effort. This measure can be expected to encourage the farmers to go in for solar power production to meet their energy needs and earn some additional income.

Livelihood development has been projected in the budget as a priority area for creating more employment and income avenues in the rural areas. A massive sum of ₹14.34 lakh crore has been set apart for the development of livelihood through agricultural and allied activities in the rural sector in 2018-19. This includes extra-budgetary and non-budgeted resources worth around ₹11.98 lakh crore. This proposal will generate an estimated employment of 321 crore person-days, besides facilitating the construction of 3.17 lakh kms of rural roads, 51 lakh rural houses and 1.88 crore toilets.

This apart, the finance minister has put on record the government's intention to come up with a Model Land Licence Cultivation Act to serve as a guide for the states to amend their land related statutes. This would be a major land reform that has become imperative because of the unabated shrinking and fragmentation of land holdings.

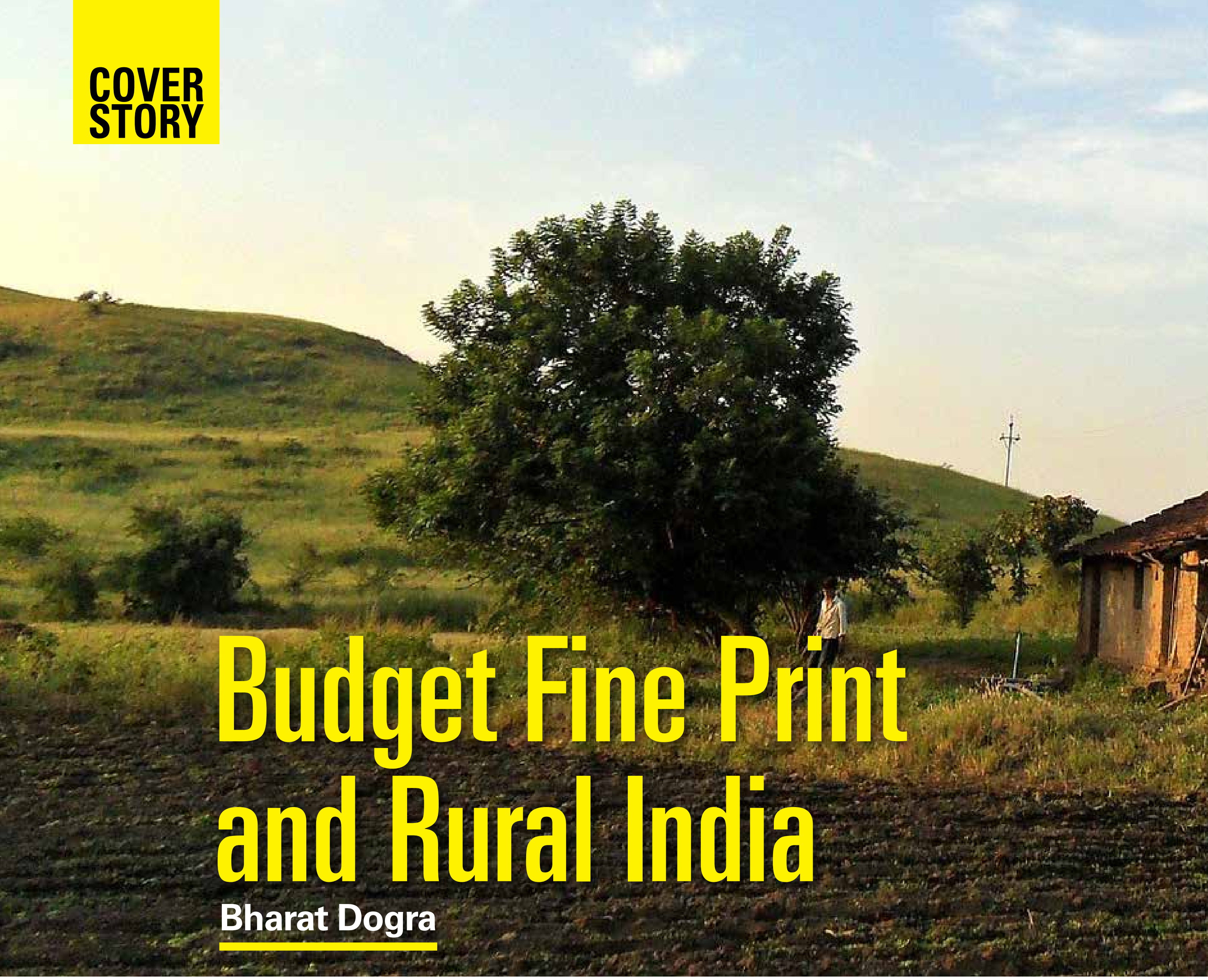
Since it may not be possible to replicate the kind of land consolidation drive that was carried out in the 1950s in some states, regularization of land leasing appears to be the next best alternative to facilitate an increase in the size of operational holdings without changing the ownership of land. A large chunk of arable land held by non-farmers and the absentee landlords often remains uncultivated as the owners do not want to lease it out to other farmers for fear of losing their proprietary title.

The legalized land leasing under the suggested new law would encourage tiny and small farmers to take land on rent to expand their operational holdings to economically viable size. More importantly, it would enable them to access cheap institutional credit, subsidies and other facilities and services offered by the government. The Niti Aayog has been asked to take this issue forward with the help of state governments.

While concluding the part of his speech related to agriculture and rural sector, the finance minister stated: "As my proposals outlined indicate, the focus of the government next year will be on providing maximum livelihood opportunities in the rural areas by spending more on livelihood, agriculture and allied activities and construction of rural infrastructure".

This seems part of the broader strategy to create additional sources of employment and income generation to increase total earnings of the farm households that are unable to subsist on meagre agricultural income. However, since agriculture is a state subject under the Indian Constitution, most, not all, measures listed in the 2018-19 budget to develop agriculture and increase farmers' earning capacity would have to be carried out by the state governments.

The centre can act only as a facilitator by putting in place favourable policies and providing adequate funding for the implementation of the development programmes. The credit or the blame for the success or failure to achieve the coveted objective of raising farmers' income would ultimately go to the states. ●

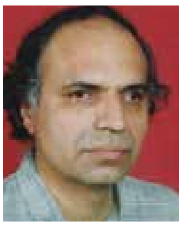


COVER STORY

Budget Fine Print and Rural India

Bharat Dogra

Amongst the abiding disappointments around farm policy is the brouhaha over minimum support price and once again most of the attention vis-á-vis the union budget of 2018-19 has focused on the implications of the assurances over minimum support price for farm produce. It is important, however, to park this issue aside and try and figure out the story around the other figures.



BHARAT DOGRA
Senior journalist, specializing in the farm sector

The actual increase in the budget of the Union Ministry of Agriculture and Farmers Welfare is quite modest, particularly after accounting for the impact of inflation. Between this and the previous year, the increase is from ₹6,000 crore to ₹7,000 crore and, depending on whether one compares the revised estimate or the budget estimate, an increase of around 13 per cent or so. One may pause to wonder if this is the increase that can possibly herald a pro-farmer budget.

It is also significant that in the previous year the revised budget for this ministry was lower than the original allocation. In the case of some important schemes of this ministry, the downward revision was even more pronounced. It is not a little disturbing to see that the budget estimate (BE) for the Rashtriya Krishi Vikas Yojana of ₹4,750 crore was later revised down to ₹3,050 crore while the BE of the Paramparagat Krishi Vikas Yojana (an important scheme for protecting traditional wisdom and diverse seed varieties as well as promoting organic farming) for ₹350 crore was pared down to ₹250 crore. Other important schemes too were similarly whittled down last year and that includes allocations for the National Food Security Mission and the National Oilseeds Mission.

The outlay for the crop insurance scheme, the Pradhan Mantri Fasal Bima Yojana, has been raised from last year's revised estimate (RE) of ₹10,688


Photo: Pixabay

Food subsidy allocation has risen by 20 per cent, which is largely accounted for by the dues for the Food Corporation of India, leaving little room for a big increase in the procurement price

crore to this year's BE of ₹13,000 crore. However worries about this scheme benefitting insurance companies more than farmers have continued to persist. Also, this increase must be seen against the fact that the sum insured under the scheme increased from ₹69,000 crore in kharif crop 2015 to ₹1,41,265 crore in kharif crop 2016, raising doubts whether the budgeted increase is adequate to meet the premium.

The increase in the allocation of the Department of Animal Husbandry, Dairying and Fisheries is more impressive at 30.6 per cent compared to the 11 per cent for the Department of Agriculture, Co-operation and Farmers Welfare. With the very limited increase in the budget of the Department of Agriculture, the claims of increasingly significantly the procurement price of farmers have to be tested against the increase in the allocations for food subsidy as administered by the Ministry of Consumer Affairs, Food and Public Distribution.

The budgetary allocation for food subsidy has risen by about 20 per cent compared to the revised budget for the previous year. However, as explained by Prof. Jayati Ghosh at a recent panel discussion on the budget, organized by the Centre for Budget and Governance Accountability in Delhi, this is largely accounted for by the accumulating dues for the Food Corporation of India. Hence within this budget allocation for food subsidy also there is very little room for a big increase in the procurement price of a wide range of crops as indicated in the budget speech.

The lead story in the *Financial Express* of February 8, 2018 titled 'MSP based deficiency payments could cost ₹80,000 crore or more' by Sunil Jain states: "The budget's promise of minimum support price-based deficiency payments, should the government not be able to procure all crops at MSP, could cost around ₹80,000 crore based on conservative estimates... The estimates are based on current MSPs, not on the hikes that will need to be made if the new MSPs — also a budget promise — are based on 1.5 times the A2+FL costs, which are lower than the C2 costs that the MS Swaminathan report had recommended. Though the budget did not specify which cost will be used, chances are the lower A2+FL will be used. In the case for paddy, for instance, MSPs will need to be raised by around 11 per cent,18 per cent in the case of cotton, 41 per cent for jowar etc., using even this lower cost as the base".

It is clear that the promises of increase in MSPs are not backed by any clear and adequate increase in budgetary allocations just as the allocations for the health insurance scheme for 50 crore people seem questionable. The credibility of these promised steps that are supposed to give a big relief to a large number of rural people is thus compromised. The budget is all about matching schemes and their expenses with allocations but this is not true of the two biggest initiatives announced in the budget.

The budget is all about matching schemes and their expenses with allocations but this is not true of the two biggest initiatives announced in the budget

- As far as the Department of Rural Development is concerned, its overall budget has increased very marginally in absolute terms while, as a proportion of the total union budget, this has declined from a revised estimate of 5.1 per cent in the previous budget to an allocation of 4.8 per cent in the present budget. The allocation for NREGA has not increased at all though there are huge pending wage bills under this account.
- The allocation for rural housing scheme called the Pradhan Mantri Awas Yojana Grameen has actually decreased by nine per cent in the budget estimate for this year compared to the revised estimate of the previous year. This, even as the available statistics indicate that the houses built are substantially below the target for the previous year.
- The pensions under the National Social Assistance Programme administered by the Department of Rural Development have remained stuck at the shocking low level of ₹200 per month (the addition by state governments to this differs from state to state).
- The allocation for such a critical need as clean drinking water has decreased. The revised allocation for the National Rural Drinking Water Programme (NRDWP) was ₹7,050 crore in the previous year and this has been reduced to ₹7,000 crore this year.
- Despite all the publicity given to the Swachh Bharat Abhiyan, the budget of its rural component that as per revised estimate was ₹16,948 crore has decreased to an allocation of ₹15,343 crore in this budget.
- The budget for the umbrella scheme for development of scheduled tribes, the Vanbandhu Kalian Yojana has decreased from a budget estimate of ₹469 crore in the previous year to an allocation of ₹420 crore this year. Last year,

Photo: Debashish Mitra

Mainstreaming CSA

Mainstreaming CSA and Climate Change Adaptation (CCA) policies in India are still at its nascent stage. In order to address the risk associated with Climate variability and climate change, climate resilient technologies are being demonstrated in 153 model villages under KVK covering 23 states under "National Innovations on Climate Resilient Agriculture" (NICRA). In addition, 623 contingency plans have been prepared so far and hosted on ICAR/DAC websites (*farmer.gov.in*; *agricoop.nic.in/acp.html*; *crida.in*) and circulated to all state agriculture departments to manage various weather aberrations such as droughts, floods, cyclones, hailstorms, heat and cold waves. The contingency plans are useful for preparedness and real time implementation towards sustainability of agriculture production system in the events of weather aberrations and extreme climatic events.

— *Economic Survey*

its revised budget too was reduced to ₹394 crore from an original allocation of ₹469 crore.

- Shockingly, there has been no increase in the allocations for the Climate Change Action Plan and the National Adaptation Fund, which remain stuck at low levels of ₹40 crore and ₹110 crore respectively. Clearly, as the Economic Survey says, Climate Change Adaptation policies are still in their "nascent stage", which is not something that India can afford. (*See box Mainstreaming CSA*).

The survey highlights that the incidence of climate change on agriculture can be in the form of increased variability in temperature and rainfall and intensity of extreme weather events like drought and floods ultimately creating disturbance to agro-ecosystems, thereby impacting farmers and farming community. This necessitates the need to address adaptation and rural development in an integrated manner, so as to achieve climate resilient development.

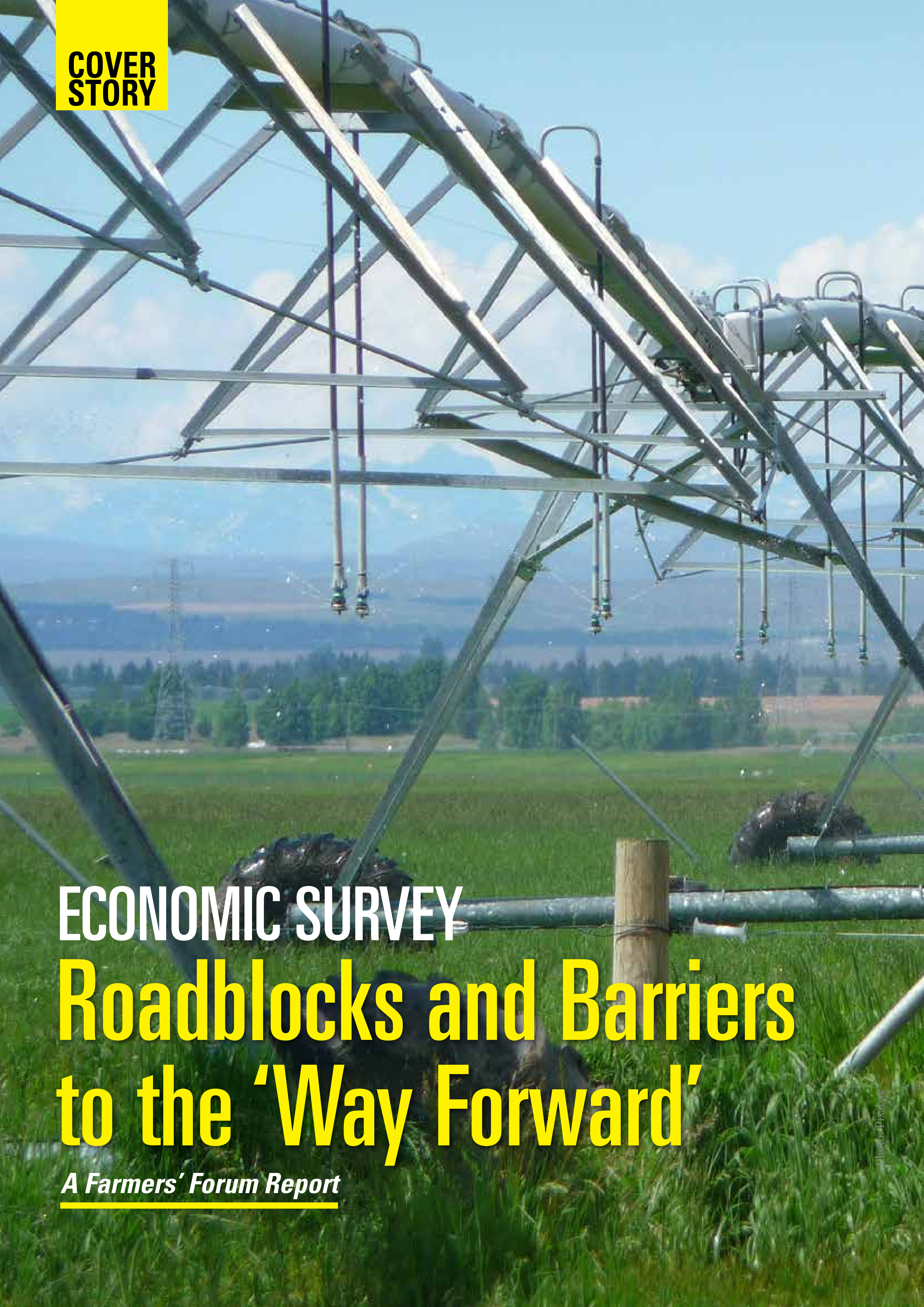
It also discusses the concept and significance of 'Climate Smart Agriculture (CSA), an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. "CSA aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions wherever possible".

The Economic Survey highlights that CSA is an approach for developing agricultural strategies to secure sustainable food security under climate change. CSA provides the means to help stakeholders identify agricultural strategies suitable to their local conditions.

- Off-grid/distributed and decentralized renewable power is important for meeting the electricity and energy needs of remote villages in an eco-friendly way but its allocation has decreased from the revised estimate of ₹1,121 crore in the previous year to an allocation of ₹1,037 crore this year.

The veneer of the rural focus thus gets erased by the inadequacy of the numbers with hopes belied of any significant change in the quality of development and welfare of rural India. Given the large-scale rural distress in many parts of the country, surely the government could have been more grounded in reality.

COVER STORY



ECONOMIC SURVEY
Roadblocks and Barriers to the 'Way Forward'

A Farmers' Forum Report

Photo: Pixabay

"The agriculture sector in India is experiencing structural changes that are opening up new challenges and opportunities. The government has initiated reforms in the field of agricultural marketing, given a big push to the use of technology in agriculture and also adopted Direct Benefit Transfer (DBT) mode for timely delivery of extension services, credit and other inputs to small and marginal farmers. The central priority of the government will be to provide opportunities for farmers to diversify their income generating opportunities to reduce the various risks by facilitating the development of agricultural sub-sectors like livestock and fisheries".

— *Economic Survey, 2017-18*

Photo: Pixabay

India's latest Economic Survey (ES) is an apparently wise document. It seems to perceive a great deal and present it well, connecting the dots sometimes; cutting the 'T's or dotting the 'I's. If only its thoughts were well connected with those of the government's or matched the budget numbers without which thoughts and words amount to little.

First, it flags the worry that Gross Capital Formation (GCF) in Agriculture and Allied Sectors relative to GVA in this sector has declined from 18.2 per cent in 2011-12 to 16.4 per cent in 2015-16. The GCF in agriculture and allied sectors as a proportion to the total GCF has been declining; from 8.3 per cent in 2014-2015 to 7.8 per cent in 2015-16. This is attributed to the reduction in private investment the ES says. The movements in public investments have not been touched upon.

Amongst the other areas that the ES focuses on, two are of critical importance. Regrettably, the ES shows a curious reluctance to connect some dots that are visible at critical junctures on the roadmap here that are important for the agriculture and allied sector to perform its "critical role in ensuring food security, reducing poverty and sustaining growth in India", to quote the survey.

The main area of disconnect remains around publicly accepting the flipside of the green revolution from the human and soil health perspectives and directing policy towards professionalizing the use of agrochemicals. The wanton abuse needs to stop with directions coming from the top. The second is not being forthcoming enough around the limitations of the crop diversification mission.

- Improved productivity in agriculture, the survey believes is a factor of critical inputs like irrigation,

Table 1: Agriculture Sector – Key Indicators

Item	2012-2013	2013-2014	2014-2015	2015-2016	2016-17 PE
Growth in GVA in Agriculture & Allied Sectors at 2011-12 Prices	1.5%	5.6%	-0.2%	0.7%	4.9%
Share of Agriculture & Allied Sectors in Total GVA at Current Prices	18.2%	18.6%	18.0%	17.5%	17.4%
Share of Agriculutre & Allied Sectors GCF in Total Gross Capital Formation at Current Prices*	7.7%	9.0%	8.3%	7.8%	NA
Share of Crops*	6.5%	7.7%	6.9%	6.5%	NA
Share of Livestock*	8.0%	0.9%	0.8%	0.8%	NA
Share of Forestry and Logging*	0.1%	0.1%	0.1%	0.1%	NA
Share of Fishing*	0.4%	0.5%	0.5%	0.5%	NA

* Calculations have been based on National Accounts Statistics, 2017. NA=Not Available

Source: Central Statistics Office

Photo: Pixabay

Probably the worst damage to Indian farming had been done by the rampant increase in water and agro chemical guzzling cropping patterns, encouraged by near absent counselling

seeds, fertilizers and mechanization. Curiously, there is not a word about the downside to the misuse of a component of this formula that India had adopted since the sixties when it was necessary to ensure food security at all costs.

Probably the worst damage to Indian farming has been done by the rampant increase in water and agro chemical guzzling cropping patterns, encouraged by near absent counselling from agriculture extension workers, effective soil testing or even spreading basic knowledge on the nature, use and storage of the chemicals being marketed to unsuspecting farmers. No overarching comment on Indian farming should ignore this sad denouement.

- Crop diversification is another vital focal area and the ES notes that the new dynamics of agricultural growth reflects a reduction in the share of crop sector and an increase in the share of agricultural sub-sectors. Risks related to production, weather, prices and policy make it important to capitalize on the structural changes in the agriculture sector by diversifying income-generating activities that can mitigate the risks and sustain growth of the economy it says.

Table 2: Agriculture Sector – Key Indicators

Period	GCF in Agriculture & Allied Sector (in ₹Crore) at 2011-12 prices			GVA in Agriculture & Allied Sector (in ₹Crore)	GCF in Agriculture & Allied Sectors as percentage of GVA of Agriculture & Allied Sector (in per cent)		
	Public	Private	Total		Public	Private	Total
2011-12	35,696	2,38,175	2,73,870	15,01,947	2.4	15.9	18.2
2012-13	36,019	2,15,075	2,51,094	15,24,288	2.4	14.1	16.5
2013-14	33,925	2,50,499	2,84,424	16,09,198	2.1	15.6	17.7
2014-15	36,714	2,40,701	2,77,415	16,06,140	2.3	15	17.3
2015-16*	44,957	2,20,081	2,65,038	16,17,208	2.8	13.6	16.4

* As per provisional estimates of Annual National Income, 2016-17 and uarterly estimates of GDP for the 4th Quarter (Q4) of 2016-17 (latest available) released on 31st May 2017.

Source: Central Statistics Office (CSO), M/o Statistics & Programme Implementation.

This year, in Punjab alone, farmers had to throw away ₹250 crore worth of potatoes. This has happened in West Bengal, Uttar Pradesh, Madhya Pradesh and several other states

Indeed crop diversification has been remunerative where it has worked but, in a large measure, farmers who have come forward to support crop diversification have not received state infrastructure support and got entrapped in serious debt. It has been so for farmers shifting to grape cultivation and making a success of them and many others. The required hand holding by government for deserving cases has just not been there. (Read *www.livemint.com/Politics/wHr2p2ukDKL847DOxa4mVO/Indian-farming-Chronicle-of-a-crisis.html*). Elsewhere uninformed diversification and unexpected developments have landed farmers in a mess. The question is how the doubled allocation for the food processing sector from ₹700 crore to ₹1,400 crore will be used and how effectively the specialized agro-processing financial institutions support the beneficiaries.

The potato farmer (see *Greenfingers; page 56*) finds himself in one such abyss with there being neither taker for his potato from the ordinary household nor from the potato-based agro industry, which is why he has taken to potato dumping. Farmers who have come forward to support crop diversification have not received state infrastructure support. (*www.livemint.com/Politics/wHr2p2ukDKL847DOxa4mVO/Indian-farming-Chronicle-of-a-crisis.html*). Even horticulture development is similarly handicapped.

Farm sector expert, Devinder Sharma, flays the myopia on the horticulture crop front that is served by no meaninful planning. "The allocation of ₹500 crore (as announced in the budget) is nowhere close to being enough. This year, in Punjab alone, farmers had to throw away ₹250 crore worth of potatoes. This has also happened in West Bengal, Uttar Pradesh, Madhya Pradesh and several other states and is not a small problem that can be taken care of by a meagre allocation of ₹500 crore".

One does not dispute the importance of crop diversification in a country with 179.8 Mha (9.6 per cent of the global net cropland area) of net crop land area (United States Geological Survey 2017), spread over a vast variety of agro-climatic conditions that should enable risk mitigation with professional policy support. Yet the states have fared poorly on crop diversification save

Photo: Pixabay

for Himachal Pradesh and Jharkhand that have shown increasing values in crop diversification on the Index of Crop Diversification (ICD) for India.

The ES has published an ICD, computed for major states and the whole of India. It examines changes in the cropping patterns across states. The index value ranges between 0 and 1 and the higher the value, greater the diversification. There is a declining inter-temporal behaviour in crop diversification for the states like Chhattisgarh, Haryana, Madhya Pradesh, Odisha, Punjab and Uttar Pradesh with Odisha showing the sharpest decline. The index for Odisha fell from 0.740 in 1994-95 to 0.703 in 2005-06 with 2010-11 experiencing a steeper decline in the index that fell to 0.380 and subsequently to 0.340 in 2014-15.

The crop diversification scenario for India as a whole appears to be almost stable throughout the periods. However, in Odisha, 80 per cent of the cropped area (by 2014-15) has been under rice, around 10 per cent under other pulses and around four per cent under other food crops. In Punjab too, wheat and paddy cover 83 per cent of the cultivable area. Such monoculture has led to declining productivity, lower fertilizer response ratio, degradation of soil health and declining profitability of cultivation. The survey underscores the need to make a success of crop diversification to improve soil health, productivity and thereby profitability.

Alarm Over Aloo

Productivity and quality are likely to suffer as farmers have used last year's carry over seed

PRODUCTION IN 2017

160L tonnes Uttar Pradesh

110L tonnes West Bengal

487/quintal MSP announced by UP Government

AGRI MINISTRY'S ESTIMATE

12% Rise in Production for 2016-17

48.6MT India's Production for 2016-17

1% Rise in Production for 2017-18

49.3MT India's Production for 2017-18

The government is now emphasizing on crop diversification in the original green revolution states of Punjab, Haryana and in western U.P.; diversifying from paddy towards less water cunsuming crops like oilseeds, pulses, coarse cereal, agroforestry and shifting of tobacco farmers to alternative crops/cropping system in tobacco growing states of Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal, the ES says.

COVER STORY

A Dozen Questions; Zero Answers

Debashish Mitra

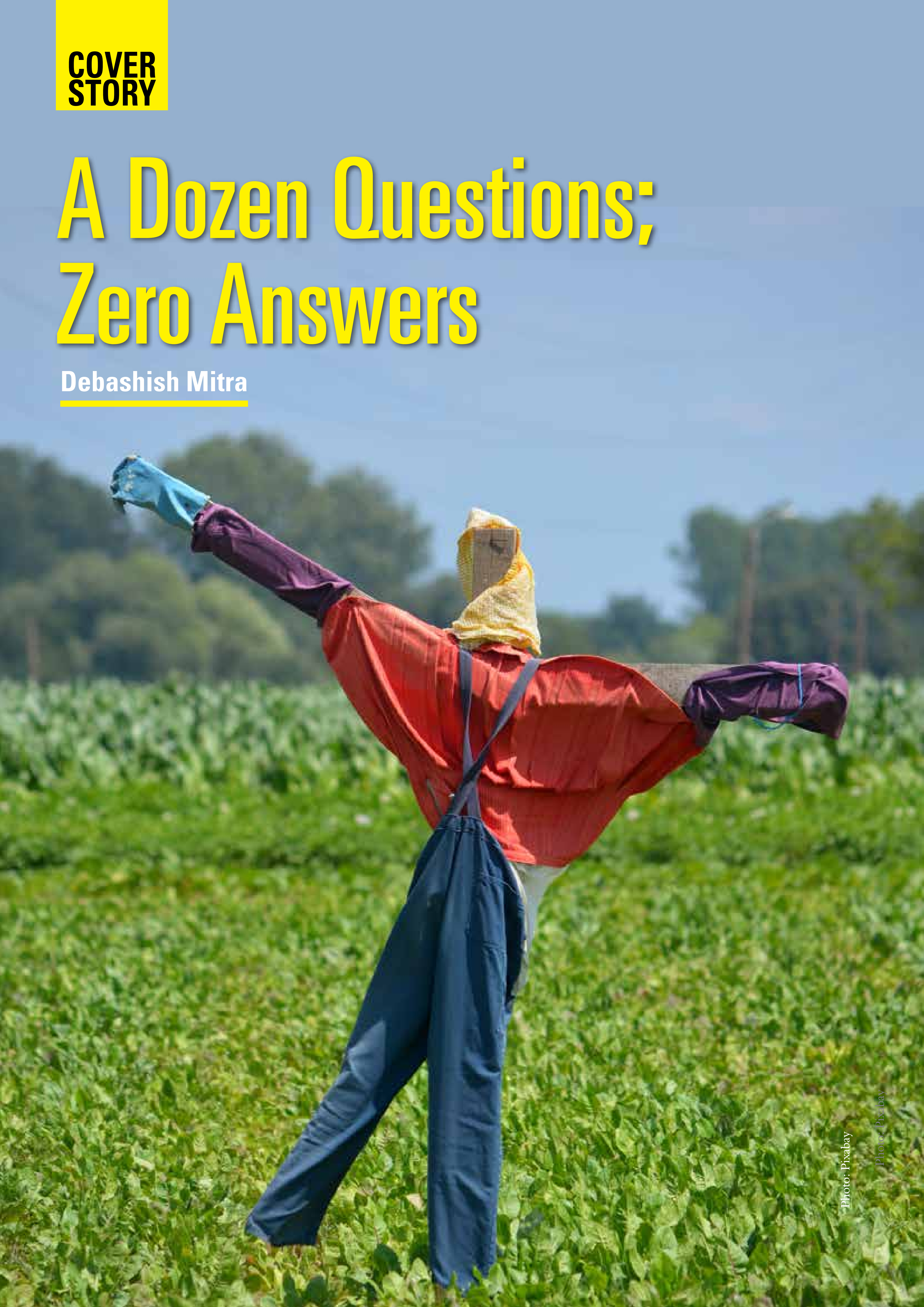


Photo: Pixabay

DEBASHISH MITRA
The writer is Founder and CEO, PACT for Rural Livelihoods Pvt Ltd; an enterprise engaged with small, marginal and tribal farmers in eastern India

There is more to developing rural and farm sector solutions than platitudes, slogans or tokenism. Even throwing some or large sums of money does not deliver results; delivering speeches does even less. Given the state of rural stress, one would have expected a "farmer-friendly" government to present a well thought out quantum shift in strategic orientation towards farm sector issues. Yet the budget confuses and confounds.

Examine a dozen issues, ranging from allocations to loans to export and import and to a doubling of farmer incomes and there is nothing to convince one that this budget focuses on rural India and the farmer. On none of the following 12 issues does the budget pass muster:

1. Institutional Credit to the Farm Sector

The biggest numbers talked of in the budget feature institutional credit that the government claims has increased from ₹800,000 crore in 2014-2015 to ₹10 lakh crore in 2017-2018 and is now proposed to be raised to ₹11 lakh crore in 2018-2019. This is seemingly an increase of 37 per cent but the actual disbursals are lower and skewed and serve as a useful indicator to the disappointing flow of funds to the allocated sectors.

The actual off take for 2014-15 was ₹730,122.6 crore, well below the target of ₹800,000 crore and the actual off take in 2016-17 was ₹845,000 crore against the target of ₹850,000 crore. Simply raising the target for 2017-18 to ₹10 lakh crore does not represent a well considered shift in thinking; neither does the timing of the disbursals inspire confidence.

In any event, the increase in the credit target this year is less than the increase in the previous year by ₹50,000 crore (₹100,000 crore from ₹10 lakh crore to ₹11 lakh crores against ₹150,000 crore — from ₹8.5 lakh crore to ₹10 lakh crore). The finance minister says that banks have disbursed ₹5.88 lakhs crore by September 30, 2017, at the end of the kharif season, which is the main season for credit off take as most farming is done by farmers who depend on the monsoons. (*Paragraph 3; page 2*).

Certain numbers throw up interesting questions. Page 1 of the macro economic framework statement for 2018-19 in the current budget says that the annual production of paddy was 110.2 million tons for 2016-17, while page 2 says that of this 96.4 million tons was produced in the kharif season. This is 87 per cent of the total production. Estimates for 2017-18 are 96.4 million tons. This implies that despite a good monsoon, the acreage may be similar for the two years and this year could be lower, as good rains normally increase yields.

Kharif, especially kharif paddy, is the main crop for India and is at the core of subsistence farming. Almost all those who farm — be they land owners big or small or lessee farmers — grow their paddy for their own consumption. It is only the surplus that comes to the market. If 87 per cent of the production consumes 50 per cent of the target credit, what is the chance that the remaining 13 per cent would use the balance 50 per cent?

The actual disbursals are likely to be much lower than the ₹10 lakh crore target for this year if, at the half way mark, when 80 per cent of the agriculture operations are over post monsoon, the disbursal is only ₹5.88 lakh crore. They may well be the same as the previous year and closer to ₹85,000 crore as kharif is still the largest period of credit absorption for the rural economy.

As has been evident, the farm sector has been severely impacted by demonetization and GST. Clumsy and insensitive outcomes like the initial levy of GST on agri inputs and rolling out of GST in the midst of the kharif season preceded by the demonetization in the middle of the kharif harvest and rabi sowing, showed the complete disconnect between the policy makers, decision takers and rural and agricultural India.

Coupled with sharp drop in prices of most agricultural produce, clearly the scope for

Large 'bhujia' makers, edible oil mills, dairies and cold storages can get cheap, priority sector loans and there is a large loan disbursal in March, when little agriculture takes place

absorbing more capital, in the absence of big ticket government spending, is limited. It is important to get the latest estimates, as even the rabi sowing is over with harvests round the corner whereafter the picture will be clearer in terms of credit disbursals.

2. The Debt Factor

Is debt the only way of increasing rural growth? The budget speech acknowledges (page 7, paragraph 33) that lessee cultivators, who comprise the largest number of small and marginal farmers, are unable to take crop loans. This leads to a double negative of large tracts of land remaining fallow while those being cultivated by these lessee farmers require borrowings at usurious rates (one of the major reasons behind farmer suicides).

The Niti Aayog is expected to evolve a suitable mechanism for helping these large numbers to access credit, without compromising the rights of the land owners. Several legitimate questions arise:

- How it will accomplish this with 27 state governments to be dealt with in one year?
- Is the lessee farmer part of this credit target for the year?
- Will these farmers also be entitled to MSP for all crops announced, for the ensuing kharif season.

If so, how? If not, most of the kharif farmers will be excluded as the lessee farmers constitute the largest number of the farmers during kharif. If they are and their lease rental and interest costs of borrowing are not taken into account, they will be grossly under paid in the MSP plan.

Clearly then the ₹1.5 times MSP will be another promise that will be high on decibels but invisible on the field.

3. The Corporate Farmer & Misdirected Loans

The truth of the matter is that the government has been unable or is unwilling to disburse loans

directly to farmers, despite platforms like the Kisan Credit Cards or Jan Dhan accounts. However, banks with the support of the Reserve Bank were able to expand the nature of rural priority sector, especially agriculture, to the wonderfully ambiguous term called 'agriculture and allied industry', which includes anything that adds value to agriculture, like food processing, storages, agri-clinics, agro centres and such others.

Since single corporate loans in excess of ₹2 crore will also be deemed as agriculture allied industry loans large processors of 'bhujia'; edible oil mills and dairies and cold storages can get the cheap, priority sector loans under this head. Little surprise then that an analysis of the disbursal periods show a significant disbursal of loans in March, before the end of a fiscal year, when practically no agriculture activity takes place.

How are loans misdirected? Take the example of an average small farmer who borrows ₹50,000 for a crop loan. The loan for a 5,000 mt multipurpose cold storage would be around ₹10 crore; the per farmer equivalent would be 2,000 small farmers. If each of these farmers grows an acre of potatoes and gets a yield of 10 mt (below the national average), this will mean 20,000 mt of potatoes, which is at least four times the value being created in terms of agricultural output (conservative; multiplication ratio of potato).

If these farmers were able to sell their output at ₹10 per kg, it would have meant an income of ₹20 crores, twice the bank loan. By repaying the loan, the next crop would be self-financed and banks could rotate the capital, as potato is a short term (3-4 month) crop. The cold storage, however, would be given seven years or more to repay the loan. In the same period, the 2,000 farmers, would have created ₹70 crore of surplus value, which could easily finance the cold storages needed for their output.

The banks, however, prefer to lend to one borrower, to meet their targets, than reach 2,000 farmers. The cold storage capacity created, would be insufficient to meet the output of these farmers, leading to waste and reduction in their incomes, forget doubling. The banks feel further disincentivized because they cannot ask for collaterals for the low cost farmer loans as per the RBI guidelines while the corporate cold storage borrower needs to give collaterals to the banks.

Thus, despite government urging and RBI rules, banks are reluctant to lend directly to farmers.The problem gets compounded if these are lessee farmers, as acknowledged by the finance minister in his speech. To bridge the gap and obviate the pressure, an interesting bypass for rural lending has evolved in the shape of micro finance institutions (MFIs). These are funded by banks to bridge this gap and the MFI outreach is used to get to the small borrower.

Unfortunately, the MFI interest rates are steep, even at around 20 per cent whereas the interest income, from a priority sector farmer loan for a diligent farmer is two per cent. Why would the banks want to lend to farmers directly when higher profit routes are available? The MFI crisis following farmer suicides in Andhra, is an example of the outcome of this flawed policy and focus of the banks.

Another interesting statistic that supports this bank bias is to be had from the State Bank of India's latest results. The SBI's corporate loan growth was lower by 4.22 per cent at ₹9.09 lakh crore (yoy), which means that the largest Indian bank has a corporate loan book equivalent to the total lending by all financial institutions to the entire agricultural sector.

The bottom line is that the banking sector is far removed from the reality of rural India and the world of the small, marginal and tribal farmers and their credit needs. What makes the credit to improve livelihoods disbursal worse is the large swathes of the unbanked and underbanked areas, particularly in eastern India.

Had the government been serious about making a difference, the budget would have provisioned for investment in rural infrastructure on a war footing, like cold chains, rural storages, farming inputs, food processing units and other related factors that would have made for a strong and vibrant rural centric economy.

4. Time for 'Grow in India & Feed the World'

India produces 300 million tons of fruits and vegetables, 275 million tons of grains,175 million of litres of milk and millions of tons of fish, poultry and other produce, including wood for the paper

Photo: Pixabay

The budget would have provided for rural infrastructure on a war footing, like cold chains, rural storages, farming inputs, food processing units... that would lead to a vibrant rural economy

and wood products industries. The overall volumes of produce from the rural and agriculture sector would be in the range of a billion metric tons, which is probably the largest and most complex range of produce anywhere on the planet and growing every year: from jasmine flowers to jowar; from marigold to maize; and from carp and chicken to cauliflower and cotton, aside from hundreds of other kinds of agri produce.

In 10 years, at an easy pace of six per cent per annum, this would double to two billion metric tons or even more. India has a 140 million hectares to farm and can truly work on a 'Grow in India and feed the world' mission instead of going for a 'Make in India, with foreign capital'.

'Grow in India, on our lands, by our farmers and rural folks' is certainly a better way forward but there is little evidence of any attempt to understand what is needed to farm these lands, move these kind of volumes, add value to them and take them to local and global markets even in this so-called path-breaking budget.

On a related note, the need to move these billion tons of agri-produce will require a big investment in multiple sectors, for example in railway wagons and specialized containers and related equipment. For want of such planning, the reason given for turning down the demand for a railway wagon factory in Odisha, is lack of demand for wagons. Modern logistics seems to be a non-farm sector preserve.

5. Doubling Farmer Incomes by 2022

The much touted objective of doubling farmer incomes by 2022 and the Pradhan Mantri Krishi Sampadak Yojna, which is supposed to deliver this objective, calls for value addition to the agri-produce. This will enable farmers get a better price and sell directly to processors. Towards this end, the government has deemed that food processing is the key and has doubled the budget of the Ministry of Food Processing, from ₹715 crore to ₹1,400 crore.

However, this is less than half the ₹3,073 crore allocated to the combined cyber and physical systems and Digital India Programme. One may well ask if farmers are going to double their income by digital means or through serious efforts to create an integrated and value-adding food and agri economy. Surely, the government cannot believe that linking markets electronically will lead to doubling of farmer incomes.The E-NAM experience that has supposedly increased farmer incomes is driving its extension to rural 'haats' though there is reason to be sceptical about the outcome.

6. Agri Exports

The budget speech (*Page 6, para 26*) refers to India's agri exports being $30 billion with the potential of touching $100 billion. This is to be achieved by liberalizing export of agri commodities without working out a protective net for the poor and malnourished. Were this to happen, the beneficiaries of such liberalization would be some large industrial houses, who are major players in commodity exports, not the small grower of the agro produce being exported.

Photo: Pixabay

There are less than 10 modern onion cold storages in the country. Most of the onion is stored in thatched open sheds, leading to a crop loss of over 50 per cent during storage

The finance minister further states that towards achieving this goal he intends to put up state-of-the-art testing facilities at the 43 mega food parks, as if this has been the only impediment to exports. The Food Processing ministry web site says that only nine out of the 43 are operational and it would be useful to know how much of the $30 billion is going through these mega food parks. The Patanjali Food Park in Uttarakhand is amongst the largest and it may be worthwhile to understand the Baba's formula to accomplish this $100 billion potential.

7. Green for Red, Brown & Purple

Three products, one red, one brown and one purple (tomato, potato and onion) are now coming in for a 'Green Revolution', apart from the 'Rainbow Revolution' to promote horticulture and the Operation Flood for dairy farming. The three vegetables, tomato, potato and onion, have different characteristics, require different storage and transport conditions. Every year, their main production areas in each region experience price crashes at the time of the peak harvest. Farmers are forced to throw their produce on the roads and rarely if ever, get a fair price for their produce; be it tomatoes, onions or potatoes.

At the same time, the urban poor have to cope with a rapid increase in the price of these staples, in a short period, post the main harvest. The problem is not one of production but storage and post harvest management. It is a tragedy that perhaps less than 10 modern onion cold storages exist in the country and most of the onion produced is stored in thatched open sheds, which leads to a loss of over 50 per cent of the crop, during storage. The consequence is an increase of prices from ₹5 per kg of onions at the time of harvest in May, which is what the farmers get, to often ₹50 or more by October, which is what the consumer pays.

This can hardly be representative of a modern India. The question is whether such problems can be solved digitally and if there is an allocation for this in this budget because the breakdown for the ₹500 crore is not available. The approximate annualized output of these three vegetables is 100 million tons and the ₹500 crore may well amount to ₹50 per million ton; too paltry sum by any reckoning. Meanwhile, there is little indication of what the thousands of crores collected as Krishi Kalyan Cess have been used for.

The announcement of schemes galore does not compensate for the complete paucity of thinking and reluctance to understand the complex technical, scientific and social issues involved in making changes in the rural and agriculture economy.

8. The Solar Power Solution

A delightfully vague notion has the farmer with solar pumps selling excess power to the local grids with little thought on the distance between the grids and farms and if the cost of evacuating the power makes the exercise financially feasible. If the lines to take the power are in place, surely power can be brought to the fields too without the farmer having to produce his own solar energy.

Power has not reached rural India because of the cost of putting up grid lines and the unreliability of grid power in remote rural areas. Solar pumps were introduced to reduce the consumption of fossil fuels for pumping and not to generate solar power that is experiencing a falling rate per unit and currently at around ₹2 per unit now. There is an element of absurdity here that can hardly be expected to help double farmer incomes.

9. Health & Education

Rural India needs holistic development beginning with education and healthcare above all and the focus should have been on proper schools and healthcare centres at least on par with those in the cities. Instead of allocating additional capital towards improving this critical infrastructure for human development, there is now a disturbing development in government thinking.

Page 7 of the macro economic statement says: “From FY 2018-2019, it has been decided that the government will do away with RD (revenue deficit) targets. In a country like India, there is little or no evidence to say that capital expenditure should enjoy pre-eminence. Maintenance expenditure especially on schools and hospitals that includes salaries for teachers and doctors are as important as building new schools".

There is a suggestion here that India's rural schools and primary health care centres need no further investment; that students should continue to sit on floors; not have books, pencils, computers or other important tools of education; and no more schools and hospitals should be built by the government. This may well be an attempt to privatize even rural education and healthcare. Without good schools or health care centres rural India can hardly be expected to compete with urban India.

10. The Subsidy Cut & Disinvestment

A similar thinking is evident in the reduction of subsidies in fertilizer, food and fuel by ₹10,000 crore, that primarily benefits the rural poor and the agricultural sector. This reduction seems to have been used to pay for the increases given in the 7th Pay Commission; the numbers are an interesting coincidence. Is this the message that is being sent to rural India?

Pushing rural women to get gas cylinders, with no income for their refill, makes a mockery of the poor. Allocating additional money for this, instead of, for example, creating thousands of briquette-making units using local agro waste, a more practical and cheaper solution, shows up the government's short-term orientation.

Surely the government knew that oil prices would rise and it could not (and it does not) subsidize these costs. Prices of gas cylinder refills have almost doubled since the scheme was introduced, with no means of income to pay the difference as should

Photo: Pixabay

Photo: Pixabay

have been anticipated. The poor woman who adopted this change in the belief that she would be able to afford this new cooking medium is now left in the lurch. Also, given the other options available, was this the most sensible way to reduce fossil fuel consumption?

A serious strategic mistake seems to have been made in the disinvestment arena with the state-owned ONGC paying ₹30,000 crores to acquire another state owned corporation, HPCL, to enable the government to meet its disinvestment targets. This will leave the ONGC with less money for critical expenses of oil and gas exploration to safeguard India's fossil fuel security and, in turn, ensure that India continues to import the gas needed for the cooking gas cylinders, which have become increasingly unaffordable.

Women are returning to their 'free fuel' of wood and cow dung. The same will apply to gas-based fertilizer plants. Is the plan to continue to import fertilizers and not make them here on cheap gas, which could be from Indian owned sources

India should be thumping tables to open up overseas markets to its agri-exports but is happy encouraging imports. It should move its farm economy to the world

discovered and produced by ONGC? Or is this is another way to push in big business?

11. The Insurance Dilemma

Whilst the need for quality healthcare for the citizens of the country is not disputed, the delivery method needs careful evaluation. The current debate seems to be more around the cost of the insurance than the actual outcome. The Krishi Fasal Bima Yojna is an important indicator of what could happen. Apparently around ₹24,000 crore has been paid as crop insurance and only ₹12,000 crore has been disbursed as claims.

This means the insurance companies have made a profit of ₹12,000 crore. It would be interesting to figure out what could happen with a health insurance scheme. Since most of the target beneficiaries of this scheme would be from the rural poor, mainly the small, marginal and lessee farmers, this could well be another way of transferring wealth in the name of the poor, to the private insurance companies and health care companies? It is extremely unlikely, given the limited nature of the coverage, that all families insured would claim anything near the ₹5 lakhs that they are proposed to be insured for.

12. Game of Imports

Nothing is more intriguing than the massive food import by India that gives rise to suspicion of some unseen pressure from the large first and second world agri producers, to open the country up for imports of basic and value added foods. The various bilateral and multilateral trade discussions and the WTO do not enhance the sense of confidence that India is able to resist such pressure. India should be thumping tables to open up those markets to India's agri-exports but instead seems to be happy to be encouraging imports and bargain for services, a euphemism for labour, be it physical or technical. If India is really able to move its farm economy into the world, which has been its traditional strength, the multiplier effects would be manifold.

One needs to check who are the beneficiaries of the highly successful agro imports — wheat, maize and non basmati rice — that increased by 110 times between 2014 and 2017. India's imports of agricultural produce in 2015-16 is reported at 1.4 lakh crore. This may well be money taken away from its farmers and sent overseas, as all those products could have been grown locally. Is this direction of how the farm sector will be treated by this government?

For all its pro-farmer focus what comes through clearly is the lack of understanding of the issues involved in the agrarian crises and, therefore, its possible solutions. It is indeed possible for the current crisis to be converted into opportunity for wealth creation for the hundreds of millions of small, marginal and tribal farmers with significant and comprehensive multiplier effects on the whole economy. The question is will the government want to. ●

PERSPECTIVE

THE NITROGEN FACTOR

Nightmare in India's Farmlands

A. K. Ghosh

Photo: Wikimedia Commons

India celebrated agricultural revolution — the 'Green Revolution' of late 1960s — in the era of American PL 480 Project Grant, which saw tonnes of free wheat for starving Indians being offloaded on Indian shores, has come to a tragic turn.

A. K. GHOSH
is a biodiversity expert and director of the Centre for Environment & Development (*cedkolkata@yahoo.com*)

The USA did not seek a dollar value for the food but was happy to keep it in rupee funds for financing research projects of mutual interests now known as PL 480 Projects. Quite clearly they did not lead to the quality of improvements in Indian agriculture that may have been envisaged.

The green revolution in the Indian farmland was achieved courtesy heavy doses of irrigation water, chemical pesticides and chemical fertilizers that replaced age-old farmers' varieties with high yielding varieties (HYV) of seeds. The outcome seemed nothing short of a miracle. Miracles, however, have a habit of fading over time.

Withdrawing the ground water for uncontrolled pumping for irrigation (or flooding) of fields led to several side effects of arsenic contamination, fluoride contamination of drinking water; overuse of chemical pesticide led to cancer in an epidemic form within the farming community of Punjab, the most productive segment of the Indian farming population.

No one raised a voice because food security was sacrosanct; human life was not; nature was not. Till recently, hardly anyone discussed the ill effects of subsidy to chemical fertilizer leading to use of massive dosage of NPR (sodium, potassium, nitrogen).

In 2009, the United Nations Environment Programme (UNEP) and the secretariat of the Convention on Biological Diversity (CBD), called a three-day meet in Paris to discuss Article 11 of CBD dealing with incentives and disincentives for conserving biodiversity offered by member countries. (India was led by this author, who also chaired the three-day meet). It was pointed out that Article 11 of CBD dealing with 'Incentives and Disincentives in Biodiversity' had encountered different stories in different countries.

India's cause suffered a major disservice because there were incentives to promote chemical fertilizers with heavy subsidy, with its serious collateral damages. It was mentioned, however, that from 2009-10 nutrient-based subsidy would be promoted through a special scheme, the fate of which is not quite known. What has come by way of a shocker in 2018 at both the national and state level of West Bengal merits serious discussion. A 'Down to Earth' Report on India's Assessment of Nitrogen Pollution is alarming.

Country Scenario

The credit for first Assessment Report of impacts of nitrogen goes to members of Society for Conservation of Nature that initiated a coalition of some 120 scientists with diverse expertise to start an in-depth study through an expert body called Indian Nitrogen Group (ING). "Nitrogen level in agriculture to increasing emission from the transport" came under the ambit of the study. It resulted in more than 500 pages of 50 review papers: 'The Indian Nitrogen Assessment Report' is the first ever of its kind.

Earlier assessments of this nature have come from the USA and the European Union. The main source of nitrogen in India is agriculture and cereal crops are the main consumers though rice and wheat, the major cereals, take up maximum land under cultivation (nearly 37 million ha and 26.69 million ha). India uses 17 million tonnes of nitrogen fertilizer annually. However, only a third of the nitrogen is used by the plants; the remaining 66 per cent of the nitrogen stays in the soil and gets into the surrounding environ.

It is now revealed that the remaining unused nitrogen affects surface water and pollutes the groundwater. Studies in Punjab, Haryana and Western Uttar Pradesh — major user states of fertilizers — revealed that nitrate (NO3) concentration extends to dug wells and shallow tube wells. The permissible limit is 50 mg/litre but the results from these areas revealed 99.5 mg/litre, which is nearly double the permissible limit.

Not only is the water resource affected. The impact of nitrogen on soil health is equally alarming. It becomes counterproductive to crop yield as the extra nitrogen reduces soil carbon content; sometimes up to 28 per cent. Add to this the impact on climate change.

One of the most discussed global environmental issues has been anthropogenic action. Nitrous oxide is now considered a green house gas (GHG). Fertilizers are major emitters followed by vehicular emission, emission from industrial and domestic

Photo: Pixabay

sewage which, according to some, form the second largest source. The share of road transport varies between 66-74 per cent.

A question has been raised about how much nitrogen can be used on the planet earth or what should be the planetary boundary for nitrogen. According to Prof. William Steffan of Australian National University, the current use of nitrogen, mainly through use of fertilizers, is 150 Tg N per year, which is three times higher than the planetary boundary of 44 Tg (Tera Gram).

What could India do to reduce fertilizer subsidy? While other fertilizers continue to remain under control, government still controls production, import and distribution of urea. Currently, the cash subsidy offered ($7 billion) is a heavy burden to taxpayers. The report points out 'India loses nitrogen worth $10 billion per year as fertilizer value while the cost of N pollution on health and ecosystem and climate is calculated at $75 billion per year (*Source: Sangomla Ankit, 2017: When N means noxious, Down to Earth, December 1-15, 2017, New Delhi p16-19*).

In a coincidence, right after this report appeared

Excess of nitrogen can be linked to a condition called methanaglobinemia, in which abnormal haemoglobin is produced, impairing oxygen transfer to tissues

in public domain (December 2017), an Indian Institute of Technology, Kharagpur report, published by the Times of India, January 8, 2018, pointed out the ills of overuse of chemical fertilizers in West Bengal. It emphasizes their hazardous health impact when applied without soil testing.

The study says that 50 per cent of the fertilizer use in West Bengal can be cut down. Dr Arindam Biswas, a medical consultant at the Rabindranath Tagore Institute of Cardiac Sciences, says that excess of nitrogen can be linked to a condition called methanaglobinemia, in which abnormal haemoglobin is produced, impairing oxygen transfer to tissues. It can also cause neural tube deficits (defective brain and spinal cord function) and hyperthyroidism.

How much N fertilizer should a farmer use? This should be determined after soil testing. Lack of affordable soil testing laboratories across the state or the country makes farmers easy targets for fertilizer companies. Ideally nitrogen, phosphorus and potassium should be used 4:2:1 to help crop growth. IIT has developed a testing method with spectroscopy. The question is how this development instrument can be made accessible to the farming fields.

In the entire 24 Parganas district of West Bengal, there are two NGOs that run soil-testing laboratories, providing results at affordable prices: the Nimpith Ramakrishna Ashram and Tagore Society for Rural Development at Rangabelia. Recently, in Sandeshkhali, Hindustan Petroleum has helped setting up Soil Testing Laboratory in the premises of an NGO, Joygopalpur Youth Development Centre under its CSR initiative.

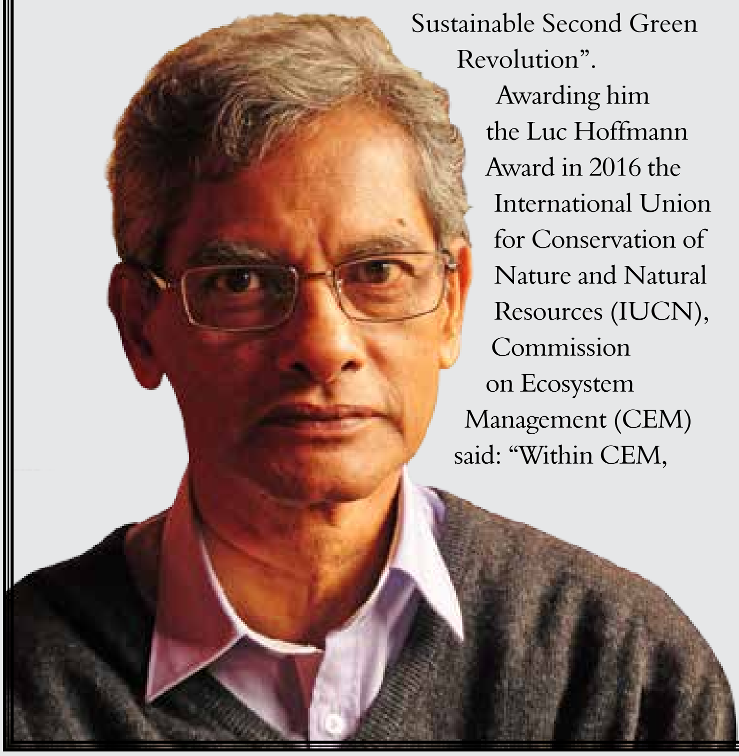
A soil health card for each farmer remains a distant dream. Till such time the nitrogen menace will be the ultimate nightmare for the Indian farmer. ●

'Only Ecological Restoration Can Lead to a Sustainable Second Green Revolution'

Aditi Roy Ghatak

Dhrubajyoti Ghosh, who passed away in Kolkata on February 16, 2018, was a leader amongst the new generation ecologists, who had learnt to read nature, understand its messages and interpret them for the wider world of ecologists and ordinary citizens. That he should have got the Ashoka fellowship and become a United Nations' Global 500 laureate fairly early in life was only natural. Very few realized the value of special ecosystems and the enormous contribution they made to easing human life — with their contributions from drainage to fertilization; from renewal to conservation, impacting environment, climate, soil and agriculture — as well as he did.

As far as Indian agriculture was concerned, his overarching message was "Only Ecological Restoration can Lead to a Sustainable Second Green Revolution".



Awarding him the Luc Hoffmann Award in 2016 the International Union for Conservation of Nature and Natural Resources (IUCN), Commission on Ecosystem Management (CEM) said: "Within CEM, professionals from science and practitioners in ecosystem management are united in a network where innovative ideas emerge from the meeting of these two groups of constituents. While members of CEM are professionals, volunteering their time for the commission, we also regularly meet other individuals, spending substantial amounts of energy to conserve our natural resources. Many do not belong to a network like ours, and all too often have no access to anything other than their own direct surroundings. They demonstrate environmental leadership within their communities, thereby setting shining examples for the outside world".

Dhrubajyoti Ghosh did so unobtrusively, quietly and with all the humility that only sheer greatness as a human being — along with extreme clarity of thought and passion about conserving environmental order — can command. Upon his passing, the CEM chair Piet Wit said: "When writing this, I realize that I am writing in the past sense. But to do justice (to him), we should write in the present and in the future sense. He is still with us, and we will continue his struggle for a better world to live in. A better world, not just for the happy few and not for a short time to come only but for every single person and his great-great-grandchildren. People from city slums to palaces, from wetlands to alpine skies".

Very few realized the value of special ecosystems and the enormous contributions they made to easing human life as well as he did

His work on using waste as resource — which is exemplified in the East Kolkata wetlands — has been around conserving the fragile ecosystem, identifying its uniqueness and opportunities since 1981 and taking up an age old practice that he put on the global conservation map. He also mapped the region, calculated the economic value it added to the economy of the metropolis and worked towards having it declared as a Ramsar site in 2002.

The East Calcutta Ramsar Site provides about 150 tons of fresh vegetables daily, as well as some 10,500 tons of fish per year, the latter providing livelihoods for about 50,000 people directly even as it cleans the city's waste water.

He was just as sensitive to the plight of "The Trash Diggers" of Dhapa, just besides the wetlands, on whom he wrote his last book, almost an album on his working life spent in the Dhapa region and its denizens.

A reader of Farmers' Forum and a regular contributor — 'Only Ecological Restoration can Lead to a Sustainable Second Green Revolution' – *Farmers' Forum*, September-October 2012; 'Vegetables, and Truly Green' – *Farmers' Forum* (July-August 2012); 'Little Help for India's Wonder Crop: Jute' – *Farmers' Forum* (July-August 2011) — he also inspired others to write for the magazine.

Till the very end — he was only 71 — he fought against the "counter-ecological urbanization" driven by the realtor-bureaucrat-politician lobby. He was equally irked by all the tall talk on climate restoration. "In both the cases we can see public decisions are being taken privately. While in case of EKW it is done nakedly, in the second case it is wrapped under the confusing statements of heads of the states and smart spokespersons of transnational NGOs".

DOCUMENT

GOVERNANCE & AGRI GROWTH

Strengthening Institutions, Infrastructure and Markets

A Farmers' Forum Report

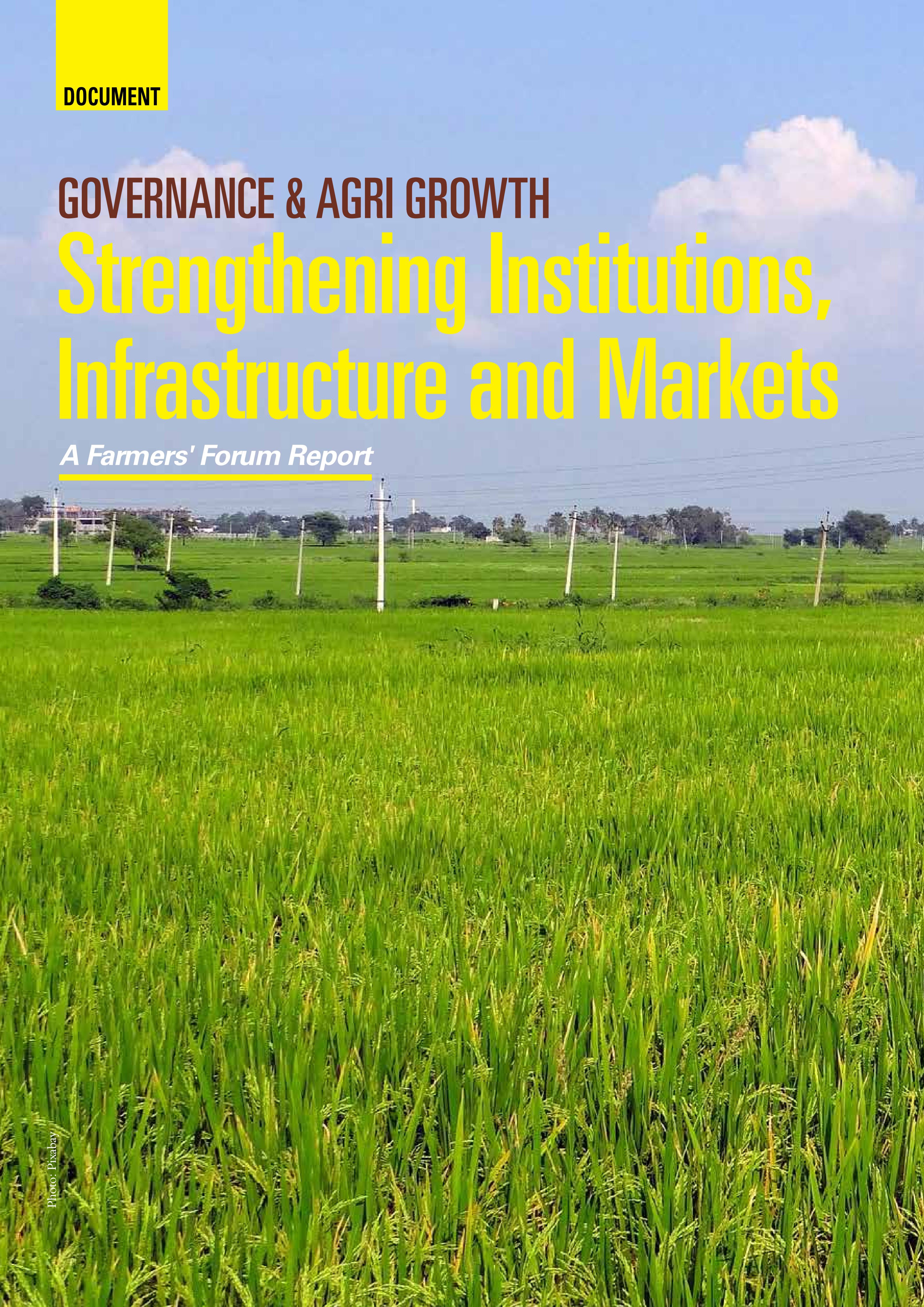


Photo: Pixabay

"The impressive agricultural growth and gains since 1947 stand as a tribute to the farmers' resilience to multiple challenges and to their grit & determination to serve and secure the nation's demand for food and raw material for its agro-industries.

It is an irony, that the very same farmer is now caught in the vortex of more serious challenges. The average income of an agricultural household during July 2012 to June 2013 was as low as ₹6,426, as against its average monthly consumption expenditure of ₹6,223. As many as 22.5 per cent of the farmers live below official poverty line".

Report of the Committee on Doubling Farmers' Income, Volume XIII; Ministry of Agriculture & Farmers Welfare.

The Ministry of Agriculture & Farmers Welfare Report of the Committee on Doubling Farmers' Income, Volume XIII, on "Structural Reforms and Governance Framework", focuses on "Strengthening the Institutions, Infrastructure and Markets that Govern Agricultural Growth". The document, prepared by the Committee on Doubling Farmers' Income, Department of Agriculture, Co-operation and Farmers' Welfare, released in January 2018, has done some plain talking around the state of the farmer. Indeed, while not convincing around the solutions, it has provided a fair measure of the problems.

The entire report is structured through 14 volumes and prioritizes post-production interventions inclusive of agri-logistics (Vol. III) and agricultural marketing (Vol. IV) along with sustainability issues (Vol. V & VI) around production. All other volumes, including the one on extension and ICT (Vol. XI) connect the source and sink of technology and knowledge and have been positioned along a particular logic, says Ashok Dalwai, Chairman, Committee on Doubling Farmers' Income.

Significantly, the report specifies that:

- Farmers constitute a singularly large professional section of the society;

Farmers are engaged in a livelihood and are self-employed and relieve the government of an obligation of providing alternate jobs to a large population

- They are engaged in producing food and non-food commodities to meet the nation's requirement;
- They are engaged in agriculture as a livelihood and are self-employed and relieve the government of an obligation of providing alternate jobs to a large population.
- However, agriculture, a biological process is highly risk prone along its entire chain.

The report begins with an assessment of agriculture vis-à-vis the net sown area in India of 141 million hectares, with field crops dominating as exemplified by 55 per cent of the area under cereals. With agriculture diversifying over the decades, horticulture now accounts for 16 per cent of net sown area with India's livestock population at more than 512 million.

The economic indicators, however, expose a lack of "equitable and egalitarian" growth in income of the "human factor behind agriculture", the farmers, who tragically "remain in frequent distress, despite higher productivity and production", with pernicious inadequacy of incomes that has prompted the current demand for government procurement and adequate returns.

In a reorientation of the approach, the expert committee suggests self-sustainable models empowered by improved market linkage as the basis for income growth of farmers. While emphasizing the positives, "India today is not only self-sufficient in respect of demand for food but is also a net exporter of agri-products occupying seventh position globally. It is one of the top producers of cereals (wheat and rice), pulses, fruits, vegetables, milk, meat and marine fish", it talks about the "chinks in the production armoury, when evaluated against nutritional security that is

Photo: Aditi Roy Ghatak

Poverty-stricken Land Owners

Farmers own land. Land is a powerful asset. That such an asset-owing class of citizens has remained poor is a paradox. They face the twin vulnerabilities of risks and uncertainties of production environment and unpredictability of market forces. Low and fluctuating incomes are a natural corollary of a farmer under such debilitating circumstances. While cultivation is "boundarized" by the land, the market need not have such bounds.

so important from the perspective of harvesting the demographic dividend of the country".

The lot of the average farmer is worse than that of many other independent earners. Indeed, agriculture is the largest enterprise in the country and one that can survive only if it can grow consistently. Such growth is incumbent upon savings and investment, both functions of positive net returns from the enterprise, which determine the level of income of an entrepreneur; the farmer in this case. The numbers here are worrisome.

The average income of an agricultural household during July 2012 to June 2013 was as low as ₹6,426, as against its average monthly consumption expenditure of ₹6,223. As many as 22.50 per cent of the farmers live below official poverty line, says the report and amidst mounting problems that are exacerbated by the facts that:

- Large tracts of arable land have turned into problem soils, becoming acidic, alkaline and saline physico-chemically.
- Another primary factor of production, water, is also under stress.
- Climate change is beginning to challenge the farmer's ability to adopt coping and adaptation measures that are warranted.
- Technology fatigue is manifesting in the form of yield plateaus.
- India's yield averages for most crops do not compare favourably at the global level.
- The costs of cultivation are rising.
- The magnitude of food loss and food waste is alarming.
- The markets do not assure the farmer of remunerative returns on his produce.
- In short, the report says that sustainability of agricultural growth is in serious doubt and the agrarian challenge, even in the midst of surpluses, has emerged as a core concern.
- Besides, the country faces a deficit of pulses and oilseeds.
- While the availability of fruits, vegetables, milk, meat and fish has increased they are not affordable for a vast majority, including a large number of farmers.

The report is clear that any transformation of the agricultural eco-system will need structural weaknesses to be removed. These range from operational limitations, policy controls and infrastructural constraints to unpredictable variables and climate change impact. They need to be addressed as a whole and not each in isolation. "The targeted outcome should aim to measure a shift in the productivity curve, improved resource use efficiency and in yielding higher returns to farmers. Mitigating the basic structural weakness will be an important facet in implementing and guiding the agenda to double farmers' income".

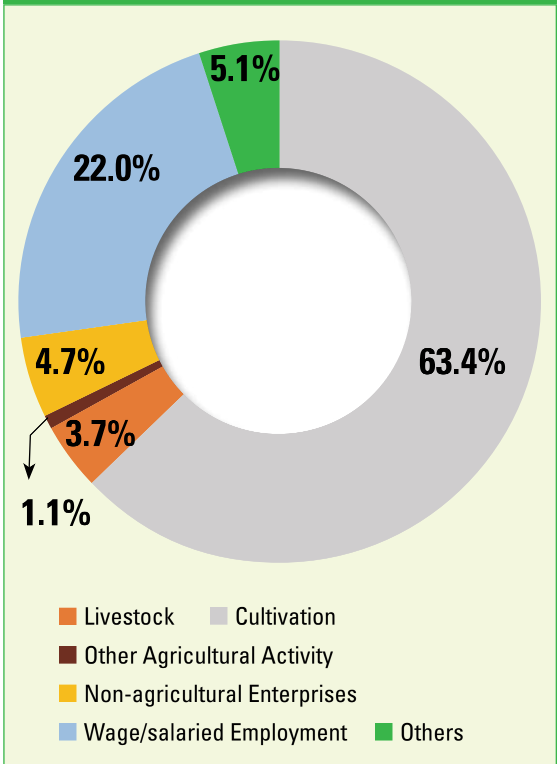
The basic structural issues identified are land divisions and fragmentation, definition of a farmer — many exclusions; uncontrolled variables — production risks and market unpredictability,

controlled regime — difficulty in doing agri-business, agricultural policies — holding back income growth, infrastructure constraints — limiting the market growth and climate change that has complicated challenges facing Indian agriculture.

The strategy platform recommended by the committee is built on four concerns: Sustainability of production; monetization of farmers' produce; re-strengthening of extension services; recognizing agriculture as an enterprise and enabling it to operate as such, by addressing various structural weaknesses that seem to begin with the structure of land holdings.

Chapter 2 of the report highlights the issues with land, the principal asset of a farmer and the basic input in farming, which has been whittled down to handkerchief size thanks to subdivision and fragmentation that have placed the viability of farming and the farmer's income at jeopardy. Towards this end, land pooling needs to be incentivized through legislating the Model Land Leasing Act, 2016. "The Act safeguards owners land rights while providing tenants, including share croppers access to government support for cultivation", suitably supported by a Model Contract Farming Act.

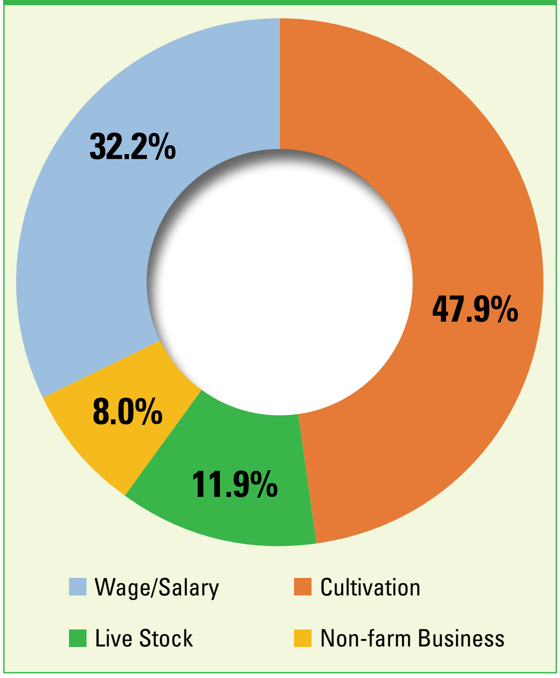
Figure 1: Percentage Distribution of Agriculture Households by Principal Source of Income



Source: NSSO's SAS of Agricultural Households (July 2012 – June 2013)

Photo: Pixabay

Figure 2: Distribution of Average Monthly Income per Agricultural Households by Sources



Source: NSSO's 70th sound SAS, July 2012 – June 2013

The definition of the farmer needs to be expanded to include cultivators, lessee sharecropper... to enable cultivators to access the support-system for those pursuing an agricultural enterprise

The report notes that the ratio of farm income was directly correlated with the size of the landholding (categorized as marginal + small, medium + semi-medium, large): The income ratio from cultivation increased from 36.5 per cent (marginal + small) to 70.8 per cent (medium + semi-medium) to 85.5 per cent (large). The income ratio from livestock declined from 14.8 per cent (marginal + small) to 11.5 per cent (medium + semi-medium) to 6.9 per cent (large). The income ratio from wages and salaries declined from 37.5 per cent (marginal + small) to 13.0 per cent (medium + semi-medium) to 3.2 per cent (large). The income ratio from non-farm business declined from 7.2 per cent (marginal + small) to 4.8 per cent (medium + semi-medium) to 4.4 per cent (large).

The committee also wants farmer producer organizations (FPOs), including farmer producer companies (FPCs) registered under the Companies Act. FPCs should be given priority for cultivation on pooled land and for allied infrastructure development for economy of scale in operations. Alongside, comprehensive digitization of land records including geo-tagging, location agnostic online registration of land transactions and such others to generate seamless and updated record of landownership should be carried out.

Chapter 3 addresses the problems around inclusiveness of the farmer whose entitlements are linked to possessing title deed of the land. Given that a substantive number of farmers who cultivate land as lessees, sharecropper, tenants and such others stand deprived of access to the beneficial support system. The committee talks of the need to adopt a liberal approach in defining a farmer so that the cultivator who farms without owning the land does not get excluded from government benefits, which "for all intents are designed for farmers (those who possess a revenue record to establish ownership of agricultural land)".

Thus the definition of the farmer, needs to be expanded to include cultivators, lessee sharecropper

and such others to enable the cultivators to access the support-system intended to buttress those pursuing an agricultural enterprise. An online and annually authenticated database may be developed to identify and define a farmer, to render him/her eligible to avail agriculture related support-system, the committee says.

It also suggests a harmonized web-portal to enable interested individuals to upload and update their status as farmers from time to time. This will allow the support-system to optimize their offer benefits to the most eligible beneficiaries.

Chapter 4 focuses on the uncontrolled variables vis-à-vis production and markets. Agriculture being a biologically driven process is dependent on nature and vulnerable to production risks apart from market uncertainties given India's inefficient marketing structure. Information on price and demand forecast can help mitigate some of these aggravating factors. The report suggests that the Directorate of Marketing & Inspection be restructured to take onus for market intelligence and undertake price and demand forecasting.

The cropped area and production estimates can be modernized, using geo-spatial tools for more accurate assessments. Farmers and other stakeholders can also supplement the estimates by uploading data on a specially designed crop coverage area portal. Using the information from crop coverage data and demand data for incisive decisions on selecting the planned cultivation can be done through the agricultural extension system, the report says.

Comprehensive drought-proofing of the 151 districts identified as highly vulnerable in a time-bound manner is another urgent need. This could be facilitated by deployment of sensor-based technologies, including some in combination with robotics and analytics, to build a robust IOT platform and improve resource use efficiency. The "touch points in the various agricultural supply chains, need to be empowered with shared data related to production, pests, weather, markets" and such others to allow farmers to make best suited decisions in response to the changed dynamics.

This will contribute to making the agricultural value system more integrated and transparent and the system should be backed by post-harvest management and improved holding capacity of farmers through enhanced availability of post-

Fear of Losing Ownership

The fear of losing right, title and ownership over one's own land by leasing out, discourages the land owners, even when they are themselves unable to cultivate, to lease out their parcels of land. This is the cause behind substantive extent of land remaining fallow. The state revenue laws provide for right to ownership by proving adverse possession for a certain period as prescribed by the actual tiller. The census 2011 reveals, that the extent of lease in the country is around six per cent. In the absence of a legal provision back-stopping such leasing, most of it is oral and, therefore, does not entitle the lessee to claim the status of a farmer and access various benefits available from the government and credit institutions.

It is further known, that a lot of land remains fallow for many do not opt to offer their piece of land on oral lease. It is, therefore, necessary that lease be legally recognized by enacting a suitable law. However, it should explicitly and emphatically protect the interests of the land owner, in supersession of any other provision of law that may be in force.

Photo: Pixabay

Fear of losing right, title and ownership by leasing out discourages the land owners, themselves unable to cultivate, to lease out their parcels of land

harvest loans and strengthening the allied logistics and marketing infrastructure.

The agricultural trade policy does not promote agricultural trade, the report concedes in Chapter 5. The policy is mainly used to control prices in the domestic market in reaction to short-term circumstances. "The frequent changes in export and import policies are often triggered by concerns of consumers' unease over domestic prices. The effect is a short-term shift in supply and market value but this in turn, causes disruptions in the production plans of farmers. Such disruption can have long-term implications, as they tend to affect next season's cropping plans, resulting in an unhealthy cobweb of production, price and trade".

Discussing the trade regime and export promotion and credit, the report underscores that policies that affect agricultural trade, including export and import of agricultural produce, have tended to ignore the interest of farmers. They need to be strengthened to keep farming interests in mind and the reoriented trade regime should focus on the national perspective of doubling farmers' income. It thus wants agricultural trade policy to be applied mainly to control supply to the domestic market when triggered by consumer prices.

However, "imports may be adjusted, at pre-set triggers, to correct price fluctuations where deemed necessary. Commodity specific price or production parameters may be determined so that importers of agricultural commodities can monitor the triggers accordingly". It urges that exports not be used as a price control mechanism but be promoted aggressively to allow agricultural growth and steady access to international demand. "Trade Policy for agriculture should aim to facilitate and promote ease in doing business, rather than be restrictive and disruptive to business planning".

Restrictive policies need to be liberalized and simplified (chapter 6). "It is generally believed, that liberalization of the input and output management aspects of agriculture will help farmers gain access to alternate options for choosing inputs and marketing". The committee also points out that a large part of the agricultural production system is already driven by market forces and that reforms are needed to ensure that farmers have a greater choice of inputs, at right quality and rational costs.

"The seed chain, from production to supply, including development of new varieties can be liberalized" but only along with close co-ordination among different agencies responsible for production of different generations of seeds that can ensure the availability of right quantities of the needed crop seeds and varieties.

"In a way, the breeder seed, which is the originating point, determines the basis of the final quality of seed made available to the farmers", the report says. In order to produce the required quantities of breeder seeds in consonance with the production plan, it is very critical that indents are compiled and shared with ICAR, at least 18 to 24 months in advance of the sowing season".

The Department of Agriculture Co-operation & Farmers' Welfare compiles the indents from different state governments but the latter should be able to assess their requirements two years ahead of the production season and share it with the department.

"The implication is, that the broad cropping plan should have been prepared by the states in time, which unfortunately is a weak link as of now. Hence, the state governments need to be made more sensitive to the importance of assessing and estimating their breeder seed requirement", says the report.

It also talks of a fundamental change in the fertilizer regime that was established when the need was for intensive farming. These need a revisit in the light of soil health management, sustainable farming and the need to be judicious to lower input costs. The report urges promotion and development of innovative products by providing them a level playing field. "Farmers are not responsive to new products because of substantive price difference between subsidized and non-subsidized fertilizer products" and the fertilizer subsidy policy should encourage balanced use of primary, secondary and micro-nutrients. Secondary and micro-nutrients

Integrated Pest Management (IPM)

Pesticides will be a major component of the pest management bouquet so a range of pesticides, their quality, safety and effectiveness duly assessed, should be available. The proposed bill should:

- Incentivize domestic R&D by the pesticide industry.
- Encourage competition among products and reduce dependence on imported formulations.
- Promote 'Make in India' and reduce dependence on imports to reduce input cost and create local jobs.
- Aim at increasing export of Indian agri-inputs by Indian industries (domestic and MNCs) to help reduce the cost of local products (on account of economy of scale and adoption of best practices to become globally competitive).
- Help farmers access new molecules from across the world.
- Enable a robust retail network, managed by qualified dealers, to provide extension service and not just sell pesticides to the farmers.
- Provide for a strong enforcement through a pro-active partnership between trained centre and state officials and a strengthened laboratory infrastructure with suitable penal provisions for violators.

Photo: Debashish Mitra

The report suggests reforms that include a rationalization of the pesticide regulations and makes other recommendations, including "checks and balance" of inspectors

need special support. They may be placed on the platform on the lines of P and K. "In the interest of balanced use of fertilizers and sustained soil health management the transition should happen from general fertilizers to specific fertilizers. An appropriate policy framework and education of farmers, are needed".

The report suggests a series of reforms that include a rationalization of the pesticide regulations and makes other recommendations, including "checks and balance of inspectors". Besides, it wants the output market environment needs to be liberalized with private sector participants and for states to modernize their agricultural market architecture and legislate the Model APLM Act 2017.

Infrastructure is a key constraint to growth in agri-business, says chapter 7. This needs to be developed to converge on some common outcomes to uplift and promote agriculture as a sustainable enterprise. Irrigation, rural roads-transport and energy are critical to attract larger private sector investment in agriculture, says the report that points out that "public expenditure can be co-ordinated into organically linked investment heads so as to make the environment attractive to private corporate investment. (*See Table 1*) The report also wants a dedicated division for investment and enterprises in the Ministry of Agriculture & Farmers' Welfare. "The data shows that public investments have been rising and, in 2015-16, the growth of public investment under all four heads was 12.45 per cent. However, the required growth rate for public investment is estimated at 16.8 per cent per annum. This glass ceiling has not yet been broken at the national level", says the report.

Climate change compounding agricultural risks is a harsh reality and in evidence in a shift in some cropping patterns with direct impact on cultivation and farm profitability. Long-term changes in weather patterns will affect associated

Table 1. Future Public and Private Investments

	Private Investment in Agriculture			Public Investment 'for' Agriculture		
	2015-16 (base year current investment)	**2016-17 to 2022-23** (additional over 7 years)	**Total Investment** (base year plus additional)	**2015-16** (base year current investment)	**2016-17 to 2022-23** (additional over 7 years)	**Total Investment** (base year plus additional)
At 2015-16 prices	₹61,000 crore	₹78,424 crore	₹1,39,424 crore	₹1,17,100 crore	₹2,29,904 crore	₹3,47,004 crore
At 2004-05 prices	₹29,559 crore	₹46,298 crore	₹75,857 crore	₹64,022 crore	₹1,02,269 crore	₹1,66,300 crore
Annual growth rate	9.15% (2002 to 2012)	12.5%	_	12.45% (2000 to 2013)	16.8%	_

Note: Private ivestment by farmers, estimated at all India level; Public investment estimaed for 20 select states; Public investment 'for' agriculture is sum total of agriculture, irrigation, rural road transport and evergy heads.

Climate Change Takes a Toll

Examples of how extreme weather events have impacted farmers in the short term.

- Lakhs of poultry died in May and June 2003 in Andhra Pradesh due to heat wave;
- High rainfall in 1998 and 2005 (>1,500 mm) affected kharif and late kharif crop of onion and damaged rabi nursery;
- Cold wave in north in 2006 caused frost and ice damage to crops;
- Flowering occurred on trees already bearing mango in Bengaluru in February 2010; and
- Heat wave caused lower milk yield from cattle and fish mortality in shallow water ponds.

food security, says the report in chapter 8. It urges more rigorous monitoring of climate change and technologies to mitigate adverse impact; extensive propagation of new technologies to help transition in cropping system, crop selection, livestock care and adoption. It also wants the entire agricultural system, including farmers, to be prepared for possible shifts in practices and habits that have developed over generations.

The sugarcane misadventure is a notable story here. The report says that "With advocacy by industrialists and interest shown by the co-operative sector, Maharashtra developed a wide network of sugar mills, creating a ready market for farmers. This influenced them to take up sugarcane cultivation, a water-intensive crop, in areas not naturally endowed with water. Growing sugarcane in rainfall vulnerable regions, made these areas more vulnerable when rains were not as expected. The same areas traditionally grew millets and oilseeds, which required less water. Cultivation of paddy in semi-arid Punjab is another example, that with changes in glacial melt and already depleted ground water, will be increasingly vulnerable to changes in weather patterns. Now, as a result of climate change, including erratic or changed rainfall patterns, these regions, where cropping patterns were changed in disharmony to natural ecology, are facing higher vulnerability and stress".

The second part of the report Volume XIII-B deals with the governance framework with chapter 9 spelling out what farmers' welfare means in a regime where agriculture is not just as a profession or enterprise but in terms of farmers, whereby the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human element assumes greater importance and addresses the paradigm of 'farmers' welfare'. The disparities between agriculture and non-agriculture incomes are stark (see *Table 2*).

- Kisan Kalyan is correlated to empowerment leading to social and economic wellbeing and welfare in context of farmers' income and is to do with ease of doing agri-business.
- Both personal income and government support determine intensity and extent of all aspects of welfare that is available to farmers.
- Farmers' welfare must aim to result in a virtuous cycle that creates a progressive environment and state of overall wellbeing.
- All famers are not equal and priority may be given to the small and marginal and in relatively less developed regions.
- Indicators and measures of farmers' welfare are suggested and a comprehensive parametric based scale should be developed to measure and monitor farmers welfare.

The agricultural sector enjoys both breadth and depth and can facilitate building supplementary and complementary relations amongst different resources can help optimize output. Chapter 10 presents a review of the institutional arrangements for agriculture and says: "its strength is its weakness too, for the complexity emanating from pluralistic stakeholders, multiple resources and uncontrolled external variable warrant a strong institutional system from the village to the national level to achieve the set goals and listed objectives".

- The existing planning and review mechanism needs to be strengthened with an institutional arrangement that includes both the state and central machinery.
- A three-tier planning, review and monitoring committee is recommended at district level, state level and national level.
- A four-tier arrangement for co-ordination and convergence in implementation is recommended, beginning at the block level to include a bottom-up approach.

All technologies, policies, advocacies, schemes, programmes and missions are meant to reach the farm and co-opt farmer in the process of change, says chapter 11 that deals with grassroots level participation. What, therefore, marks the efficiency and effectiveness of the agricultural delivery is the strength of the cutting edge system at the farm level. The DFI Committee believes that the farmer needs to be reoriented and capacitated in respect of:

Table 2. Disparities in Agriculture and Non-agriculture Income

Year	Farm income per Cultivator (₹) F	Wage earning per agricultural Labourer (₹) L	Income per non-agricultural Worker (₹) N	Ratio L:F	Ratio N:F
1983-84	4,286	1,467	12,786	0.34	2.98
1987-88	5,653	2,201	18,036	0.39	3.19
1993-94	12,365	4,784	37,763	0.39	3.05
1999-2000	24,188	8,938	78,565	0.37	3.25
2004-05	26,146	10,043	1,06,688	0.38	4.08
2011-12	78,264	32,311	2,46,514	0.41	3.15

Source: Estimates and Analysis of Farm Income in India, 1983-84 to 2011-12, Ramesh Chand, Raka Saxena, Simmi Rana, EPW : May 30, 2015, Volume No. 22.

The report wants the entire agricultural system, including farmers, to be prepared for possible shifts in practices and habits that have developed over generations

awareness, knowledge and skill; openness to new ideas and technology; perception of agriculture as an enterprise — transition from subsistence (production-dominant) to commercial (market-centric) practices and willingness to join interest groups like FPO, value chain platform, FLG, cluster and such others. For more inclusive grassroots level participation of farmers, gram panchayats can be made responsible for agricultural development and village level action plans should be prepared at the gram panchayat level.

Gram panchayats are optimally positioned to become last mile outreach centres for various welfare schemes, including pension, insurance, girl-child benefits, stress counselling and such others, says the report.

For decentralized decision-making, the Gram Sabhas provide a platform for deliberations that include direct participation of farmers. Such participation can be expanded and made location agnostic through deployment of portals, IVR and video conferencing facilities.

The report wants farmers to take advantage of IT network to break the bottleneck of hierarchy and to allow a more user-friendly and horizontal partnership with government and says that the FPOs, in their various formats, can be federated into larger entities so as to engage farmers with common interests in participative governance. "Despite these plethora of formal and informal institutions, organizations and platforms, a large majority of the farmers feel that they are not well represented in decision making and that their interests are not well protected. The challenge, therefore, lies in evolving systems that will facilitate wider and more genuine participation from all type of farmers", the report says.

The process of transformation of agriculture and re-positioning it as an income-yielding enterprise calls for certain tools that help measure the farm income, monitor performance in real time and forecast demand and price for an array

Photo: Pixabay

of agri-commodities enabling the farmer to make rational production and marketing decisions.

The final chapter 12 deals with some of these needed interventions and the support tools. They include:

- The need to formulate and adopt a harmonized standard of measure of farmers' income for more wholesome and accurate monitoring.
- An interoperable MIS system that outputs a centralized dashboard; currently the data structure is isolated, duplicated and not standardized.
- An urgent need to restructure, reorganize and re-mandate the various agencies and institutions, especially those with the purpose of converging and sharing the targets, efforts and resources to enable outcome-based resource use efficiency in governance.
- The identified gaps in the agricultural value system, such as in agri-logistics, capital formation, market value capture and such others that require a comprehensive reorganization of divisions within the Department of Agriculture Co-operation & Farmers' Welfare.
- The need for reforms to enable and promote ease of doing agri-business rated by a state and UT ranking system for ease of doing agri-business. ●

Form IV (See Rule 8)

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I, Ajay Vir Jakhar, do hereby declare and confirm that the above particulars of Farmers' Forum English Bi-monthly are correct and true.

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Sd/-
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Signature of Editor,
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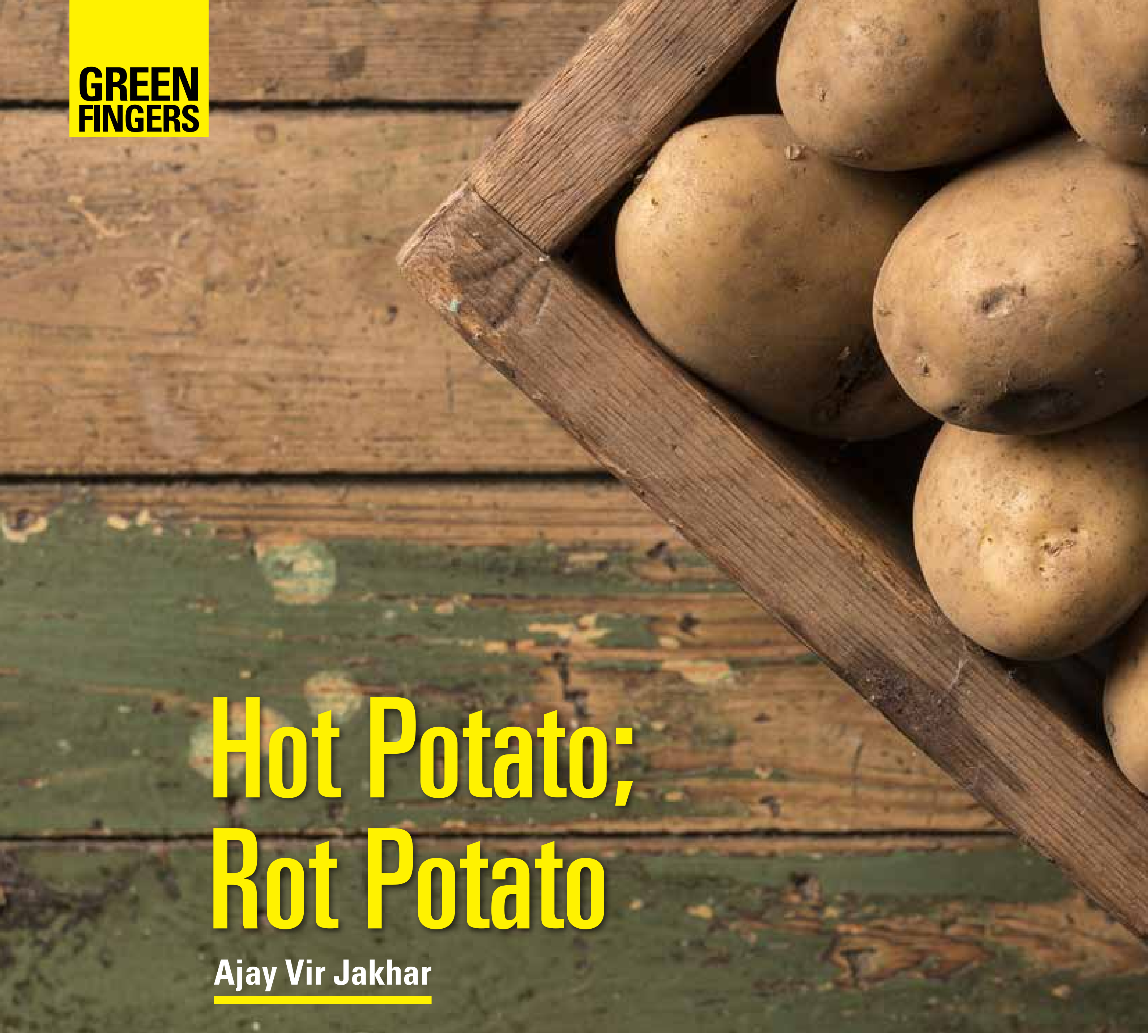

GREEN FINGERS

Hot Potato; Rot Potato

Ajay Vir Jakhar

Farmers are often great raconteurs. My grandfather's favourite story was about his midnight encounter with a farmer sitting beside a heap of potatoes. Given that potatoes were finding no takers in those days, he stopped to check what was compelling the man to engage in this strange midnight vigil. The hapless man said that he had to keep watch lest other farmers dump their unsold spuds on his field.

Amusing, entertaining but absolutely devastating for the potato farmer, this 40-year-old episode got a rerun recently when the potato growers dumped their unsold produce in front of the home and office of the Uttar Pradesh Chief Minister, Yogi Adityanath, in Lucknow.

The dump-the-potato programme has been gaining momentum across Indian farmlands, along with tomatoes. Not just farmers, even warehouses with old uncleared stocks are dumping them as they clear their premises for the new season.

The potato crises in Lucknow, however, is of the government's own making. Its genesis lies in June 2014, soon after the BJP won a stunning mandate in the general elections. One of the first acts of the union government was to rein in the price of potatoes ('Making a hash of it', *Indian Express*, July 5, 2014, Ajay Veer Jakhar) by imposing a minimum export price (MEP), which was followed by bringing potatoes under the Essential Commodities Act (ECA) and permitting duty-free imports even though imports carried the risk of new diseases.

Farmers were harassed and cold stores raided. The euphoria of the electoral victory celebrations drowned out the farmer's sorrow. Farmers took

Photo: Pixabay

home meagre profits, substantially less than they could have easily made. The presumptive loss to five million potato farmers on a very conservative basis was ₹30,000 crore (total production 42 million tonnes x ₹7/kg, the subdued price) amounting to ₹60,000 per potato farmer.

Profits from the previous harvest usually determine the acreage under sowing for the next season. Consequently, in the following year, India had a bumper crop of 48 million tonnes of potato in 2015 and prices crashed to ₹2.75/kg. The government ignored the plight of farmers, who subsequently failed to even recover the cost of sowing.

The next year, 2016 was a normal crop year in India, with 44 million tonnes of potato production. Without credible data, fearing inflation, the government overreacted and again imposed MEP.

In 2014, the centre imposed a minimum export price on potatoes, put it under the Essential Commodities Act and permitted duty-free imports. Five million farmers lost around ₹30,000 crore

Without access to international markets, the prices faltered. Unfortunately, the November 2016 demonetization made matters worse. A presumptive loss of ₹22,000 crore (₹5/kg) was incurred by farmers, amounting to an average loss of ₹44,000 per potato farmer for 2016 alone.

India's export restrictions were a bonanza for farmers in Pakistan and Bangladesh. Importers seek reliable business partners and India has become an unreliable supplier due to arbitrary policy decisions. The Indian produce now sells at a substantial discount compared to that of its neighbours.

In 2017, due to the relatively firmer prices of 2016 and with a good weather to boost sentiments, farmers produced 48 million tonnes of potato and prices literally crashed through the basement. When, even after 10 months of storage, prices were hovering between 50 paisa to ₹2/kg, farmers completely lost hope. The cost of growing potatoes being ₹6.50/kg and the additional cost of storage ₹2.50/kg, it became unfeasible to even reclaim stocks from cold storages and potatoes were strewn in Lucknow and elsewhere.

Do the farmers' math: In two of the four years of the Modi government, when an opportunity arose to double farm incomes, the government's inflation targeting strategy kicked

Photo: Pixabay

In two of the four years of the Modi government, when an opportunity arose to double farm incomes, its inflation targeting strategy kicked in and each farmer lost around ₹1,04,000

in and each potato farmer lost approximately ₹1,04,000. The loss incurred by a farmer in just two crop seasons is more than the debt waiver announced by the government of Uttar Pradesh.

There is no denying that controlling food inflation has to be a priority. I confess, as a potato farmer, I have a vested interest in the issue but this experience gives me insight. The farmer's demand is fair and simple: should the government intervene to subdue potato prices in a bad crop year, it is morally bound to give a minimum support price of ₹9/kg in a year of excess production year.

Logically, a farmer allowed to make money in one year would be better prepared to bear the losses in the next. If not, the farmer gets into a perpetual debt cycle and is compelled to seek "financial sops". Consequently, most farmer organizations are content to limiting themselves to what the farmer understands — "farm loan waiver" — and venture no further into the policymaking quagmire.

In 2018, the planting is lower by a mere five per cent and potato prices are expected to be remunerative. Historical data, however, indicates that a short-sighted government may respond by imposing MEP/ECA. The solutions to the farm crises are not limited to budget allocations but rooted in a system where interventions to control food inflation are not harmonized with crop-price compensation.

As far as the farmer livelihoods are concerned, state governments and the Ministry of Agriculture & Farmer Welfare are becoming less relevant. Decisions of the Ministry of Food, Public Distribution & Consumer Affairs are demolishing the Prime Minister's grand plan for doubling farmer incomes.

The potato farmer is a demoralized person; the promised "sab ka saath sab ka vikas" ringing hollow. A telling report about a potato farmer following the budget speech caught my attention. This is the story of a Saras village grower, Devi Singh (46) who lost heavily on his crop in 2017, with wholesale prices of potatoes dropping below the cost of production, as captured by journalist Kabir Agarwal. (*The Wire*, February 7, 2018)

Devi Singh, farms potatoes in the rabi season in Saras, a village of 1,200 people in Mathura, in Uttar Pradesh's potato belt. As he sat at the village tea shop watching Arun Jaitley deliver the budget speech, he said: "Aalu kisanon ki awaz Dilli tak pahonchi thi is bar. To humein yakeen tha ki vitt mantri humein kuch raahat denge (This time the voice of potato farmers had reached Delhi. Therefore, we were sure that the finance minister will grant us some relief)".

He went home shaking his head: "Kuch bhi nahi kiya humare liye. Bade-bade wade karke chhor diya. Humara jo nuksan hua hai uski bharpayi ka koi zikr nahi. Yahaan aalu kisan barbaad hue ja raha hain aur kisi ko parwah nahi hai (Nothing has been done for us. Only big promises have been made, nothing else. There was no mention of compensating us for the losses that we have incurred. Potato farmers are being ruined and nobody cares)". ●