

LAND BANK JOURNAL

VOLUME 56 • MARCH 2018 • ISSUE IV



NATIONAL CO-OPERATIVE AGRICULTURE AND
RURAL DEVELOPMENT BANKS' FEDERATION LTD.



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- Deposits :
- Loans & Advance :
- Investments :
- Money at Call & Short Notice :
- Net Profit :
- Working Capital :

(₹ in Lakhs)
As on 31.03.2015

₹ 12948.76
₹ 169084.53
₹ 93134.67
₹ 59872.44
₹ 33855.68
₹ 948.69
₹ 206913.46

(₹ in Lakhs)
As on 31.03.2016

₹ 12109.05
₹ 185809.61
₹ 108032.74
₹ 64598.97
₹ 34274.75
₹ 250.46
₹ 223670.87



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LAND BANK JOURNAL (QUARTERLY)

Managing Editor
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SUBSCRIPTION RATES

Annual
₹60/- (For Members)
₹200/- (For Others)

Price per copy
₹15/- (For Member)
₹50/- (For Others)

Published by

**National Co-operative Agriculture and
Rural Development Banks' Federation Ltd.**
701, BSEL TECH PARK, 7th Floor, A-Wing,
Opp. Railway Station, Vashi, Navi Mumbai-400 703

Phone No. (022) 27814114, 27814226, 27814426
E-mail : nafcard.org@gmail.com
Website : www.nafcard.org

Printed by:
ACHSA PRINTERS
Shop No. 39, Maruti Paradise, Sector - 15,
CBD Belapur, Navi Mumbai - 400 614.
Tel.: 27571209 / 27571210

*The opinions/views expressed in the Land Bank Journal are
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News

There is a clear shift of emphasis in this year's union budget in favour of social sector in sharp contrast to the thrust on reforms in the previous three budgets. There are a number of announcements for poor and under-privileged sections. National Health Protection Scheme offering free medical expenses upto ₹ 5 lakh per individual in 10 crore poor families and raising the target of free LPG connection to poor women from 5 crore to 8 crore are important among these announcements. Budget also gives high priority to education which is an important area in social sector with an allocation of ₹85000 crore and focus given on strengthening and modernising infrastructure systems and also providing quality education to tribal communities by setting up special schools for them. Even in agriculture, there is a shift of emphasis to income and welfare of farmers rather than just growth in terms of production.

Agriculture was the theme of a good part of this year's budget speech. Govt once again reiterated its commitment to the goal of doubling farmers' income by 2022. It was stated that the objective was to help farmers to produce more and realise higher prices. Following are the important measures announced in the budget to achieve this goal.

Introducing a general norm for fixing Minimum Support Price (MSP) at 150% of production cost and fixing MSP for all crops throughout the country. Govt also promised arrangements to ensure that farmer gets a price which is not less than MSP.

Creating an institutional mechanism to ensure doubling of farmers' income within the target time includes, developing 22000 Gramin Agro Centres as direct sales points and linking 470 APMCs to eNAM for ensuring optimal farm price realisation by farmers.

Govt will launch 'Operation Green' to regulate prices of potato, onion and tomato which is expected to benefit both farmers and consumers but the allocation of ₹500 crore for this appears to be not enough to create required impact.

Food processing sector is given higher allocation from ₹750 crore last year to ₹1400 crore. It is also proposed to promote specialised agro processing and financial institutions and cluster based crop production to boost this sector.

Setting up state of the art testing facilities in 42 mega food parks for agri exports which has potential to reach 100 billion US \$ from 42 Billion US \$ at present.

The target for agriculture credit is raised to ₹11 lakh crores from ₹10 lakh crores last year. It is also proposed to extend Kisan Credit Card scheme to fisheries and animal husbandry loans as well.

In agriculture, increase in production does not guarantee higher income. Stability in prices and markets are the main factors determining farm incomes. The new norm for fixing MSP at 150% of production cost is an important measure to

ensure remunerative prices for agriculture produce. But MSP will not benefit farmers unless there is market intervention especially during harvesting season when prices are the lowest. Market intervention for multiple crops throughout the country is a big challenge in terms of transport, storage and other logistics. When it comes to perishable items like vegetables and most of the fruits, market intervention involves not only procurement but also timely resale or processing. The infrastructure and finance required for market intervention at this scale just does not exist at present. All that is mentioned in the budget is that NitiAayog in consultation with Central and State Govts will put in place a fool proof mechanism so that farmers get adequate price for their produce. It is also seen that the budget has provided only ₹ 200 crores for 2018-19 for market intervention and price support scheme causing serious concerns about the implementation of the scheme. The only way to make MSP effective is to equip the network of rural cooperatives with infrastructure and working capital for market intervention. However, it is seen that the Govt once again failed to see the useful role of rural cooperatives and to involve them in this process. Agriculture cooperatives being farmers' organisations also offer scope for undertaking post harvest value addition activities like Farmers Produce Organisations separately set up as companies or cooperatives. These institutions are in existence for ages and a good number of them have required infrastructure and capability to perform these functions. Central and State Govts should jointly implement a scheme to strengthen these institutions to undertake activities like aggregation, processing, storage and marketing of agriculture produce in addition to their present activities which mainly relate to credit services.

The budget also has not included any of the proposals submitted by cooperative movement including those related to long term cooperative credit structure. Implementation of revival package for LTCCS which was announced in the Union Budget 2008-09 continues to be a nonstarter. Farmers who avail crop loans from ARDBs along with long term investment credit continues to be excluded from the benefit of interest subvention under the crop loan interest subvention scheme of the Govt. Similarly, we have been repeatedly requesting Govt of India and RBI for evolving norms for conversion of ARDBs into full-fledged banks which is also not considered so far. NABARD's refinance to SCARDBs is slowly drying up due to difficulties in obtaining govt guarantee. Under this circumstance, there is a strong case for SCARDBs which fulfil required norms to be licensed as Primary Cooperative Banks or Small Finance Banks in order to make them resource based institutions capable of meeting the credit demand in the rural sector adequately.

K K. Ravindran
Managing Editor

AFFORDABLE HOUSING IN PARTNERSHIP

By N.S. Mehara*

Introduction

The World Cities Report 2016 on Urbanisation and Development: Emerging Futures, says that the top 600 cities, with one-fifth of the world's population produce 60% of global Gross Domestic Product (GDP). However, when unplanned and unmanaged, urbanisation can lead to increased inequality, the growth of slums and disastrous impacts on climate change.

Currently, more than 1 billion people are living in slums. Over the next 25 years, more than 2 billion people will add to this growing demand for housing and basic infrastructure services. The situation is particularly serious in developing countries where governments at central, regional and local levels often lack the resources to adequately address this challenge. As such, the provision of Affordable Housing at scale remains a challenge to most countries, particularly those in the developing world and in transition.

Over the years, with regard to provision of housing, the role of the Government has transformed from a provider to a facilitator while the role of the private sector and that of public-private partnership has enhanced. Still, housing continues to stay a pressing issue.

Rightly so, housing is a priority issue for Governments across the globe. Affordable Housing is fast taking centre stage globally as well as in the national agenda in India. With housing recognized as a basic need, governments at every level are discussing ways and means to provide access to housing for their citizenry. The role and function of housing is multifaceted-housing choices impact access to infrastructure, employment, household wealth, health, education, poverty levels, maternal and child mortality, women's participation in workforce, and many other well-being indicators. As India seeks to improve its living conditions on a large scale, access to Affordable Housing becomes a major stumbling block for its populace.

Defining Affordable Housing

Defining Affordable Housing is important to create targeted policies aimed at making financing more accessible, providing interest rate subsidies, or favourable terms on par with infrastructure financing. Globally, housing affordability is defined in multiple ways. One of the most commonly accepted definitions of affordability refers to housing

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affordability which is taken as a measure of expenditure on housing to income of the household. This is also accepted by the Government of India. As such, Affordable Housing refers to any housing that meets some form of affordability criterion, which could be income level of the family, size of the dwelling unit or affordability in terms of EMI size or ratio of house price to annual income.

Affordable and low-cost housing are often used interchangeably, though they have different connotations with regard to target groups and income category. In India, low-cost housing is typically meant for the Economically Weaker Sections (EWS). The dwelling units constructed for this category by the public agencies are highly subsidised. On the other hand, Affordable Housing of late relates to the housing needs of the upper LIG and MIG segments. The National Urban Housing and Habitat Policy 2007 as well as the 11th Five Year Plan, talked about Affordable Housing but did not define it. In order to provide a more standardised approach on the subject, the High Level Task Force on Affordable Housing for All, 2008 prescribed the parameters in terms of area and income and defined Affordable Housing as under:

Category	Size	Income
EWS/LIG	Carpet Area between 300 and 600 sq ft.	Cost of house not exceeding four times the household gross annual income and EMI/rent not exceeding 30 percent of the household monthly income
MIG	Carpet Area not exceeding 1200 sq. ft.	Cost of house not exceeding five times the household gross annual income and EMI/rent not exceeding 40 percent of the household monthly income

Later on, the Guidelines on Affordable Housing in Partnership, 2013 defined Affordable Housing as under:

Category	Size	Income
EWS	Carpet Area between 21 - 27sq.m.	Income Rs 8,000 per month per household or Rs 1 lakh per annum
LIG	Carpet Area between 28 - 40 sq.m. (LIG-A)	Income Rs 8001 to 16,000 per month per household or between Rs.1 lakh and Rs 2 lakh per annum
	Carpet Area between 41 -60 sq.m. (LIG-B)	

Demand for Affordable Housing

There are several demand drivers for Affordable Housing in India. First is the progressive urbanization, going hand in hand with a growing urban population, that increased from 109 million in 1971 to 285 million in 2001 and 377 million in 2011, which is further projected to grow to 600 million by

2030. The consequence of the growing concentration of people in urban spaces is felt in land and housing shortages and congested transit, besides the stress on basic amenities such as water, power, and lung space. The Technical Group on Urban Housing Shortage estimated a housing shortage of 18.78 million houses during the 12th plan period, with about 96 percent in the economically weaker and lower income groups. Slums and informal tenements are estimated at 65 million as per Census 2011. Second, alongside the growth of the urban population, rising income levels have led to the expansion of the middle class. This has led to a spike in demand for housing that is 'affordable' but includes basic amenities. Third, the real estate sector is a major component of the Indian economy. It is estimated that the real estate sector contributed to 6.3% of the GDP in 2013-14. As per CREDAI estimates this sector employed about 7.6 million people during the year 2013 and it would generate more than 17 million employment opportunities by 2025. Housing is the largest component of the financial as well as the construction sector. A thrust on Affordable Housing not only leads to better quality of life, but also significantly provides a boost to the GDP of the country.

Impact of Affordable Housing

Affordable Housing provisions are important at the national level, the city level, as well as the individual level. Cities are engines of economic growth, and housing that can be afforded by the median wage-earner is a pre-requisite for the city to attract and retain the labour force required to ensure its economic success. From a national perspective, Affordable Housing is one of the indicators of balanced growth in the country. When housing becomes unaffordable, there is either a bubble in the housing market with serious repercussions to economic policy or other imbalances in the economy. Affordable Housing has multiple linkages to other aspects of the individual's well-being like benefits to the larger community in education and health. It leads to better access to health care, to education, and to perceived control and life-satisfaction. Affordable Housing also serves to reduce crime and has significant wealth effects on the residents due to employment stability.

Institutional Framework for Affordable Housing Delivery

Affordable Housing is a term largely used in the urban context. The policy framework for Affordable Housing is provided by the National Urban Housing & Habitat Policy (NUHHP-2007), along with the Jawaharlal Nehru National Urban Renewal Mission (JNNURM-2005), Basic Services for the Urban Poor (BSUP), Integrated Housing & Slum Development Programme (IHSDP) and the Rajiv Awas Yojana.

The NUHHP-2007 lists a number of objectives that include urban planning, land availability, special provisions for women, public private partnerships, management information systems and so on. With respect to Affordable Housing, it aims to: accelerate the pace of development of housing and related infrastructure; create adequate rental and ownership housing stock while improving affordability through capital or interest subsidies; and use technology to modernize the housing sector for energy and cost efficiency, productivity and quality, green and intelligent building, and mitigate disaster impacts.

The JNNURM 2005 was launched with the objective of encouraging and expediting urban reforms, and included within its ambit construction of 1.5 million houses for the urban poor in 65 mission cities between 2005 and 2012. The BSUP aimed at providing seven entitlements viz: security of tenure, affordable housing, water, sanitation, health, education and social security to low income segments in 65 mission cities. The IHSDP covered those cities/towns that were not covered by BSUP, and conceived of an 80:20 sharing ratio between the national and state governments/urban local bodies (ULBs)/beneficiaries. Similarly, Rajiv Awas Yojana (RAY) was launched to provide support to enable states to redevelop existing slums in a holistic and integrated way to create new Affordable Housing stock and the scheme of Affordable Housing in Partnership was dovetailed with RAY.

Affordable Housing has traditionally been the purview of the state: it is only recently that the private sector has entered into building houses for the lower-middle and middle-class segments. Several factors propelled this development. The demand slowdown of 2008-09 in the high-end residential real estate sector led to exploration of diversification options for developers in the affordable segment. Easier availability of land in the suburban areas along with infrastructural connectivity, availability of facilitating and financing agencies such as the National Housing Bank, international developmental organizations, international NGOs, micro finance institutions and private equity players, economies of scale and first mover advantages have also propelled this interest. From 2009 onwards, real estate developers have launched projects across Indian cities in locations which are away from the core central business/secondary business districts where land prices are affordable.

A number of State Governments have also taken initiatives for development of Affordable Housing. These includes: earmarking 10 percent of developed area for EWS and LIG in plotted as well as group housing schemes in Andhra Pradesh; transferring land released after repeal of ULCRA to

ULBs at nominal prices to execute projects for EWS/LIG in Gujarat; earmarking certain percentage of land and housing units for the poor in all developed projects in Haryana & Madhya Pradesh; additional FAR as incentives in Tamil Nadu, Madhya Pradesh and Maharashtra. Affordable Housing Policy, 2013 notified by Haryana Government intends to encourage planning and completion of group housing projects having apartments of pre-defined size and rates within a targeted time-frame. New housing policy of Maharashtra focuses on cluster development, redevelopment of Asia's largest slum Dharavi and old MHADA buildings in Mumbai to generate more residential units in the space starved city. Likewise Rajasthan has also taken some positive policy initiatives to promote Affordable Housing.

Of late, the Government of India has embraced on the path of making housing for all a reality. Housing sector has been one of the areas of special focus in its recent policy decisions. In order to address the housing needs of all in a time bound manner, the Government has launched the Pradhan Mantri Awas Yojana for building about 2 crore houses in urban areas and one crore houses in rural areas by the year 2022.

Pradhan Mantri Awas Yojana-Urban

The Pradhan Mantri Awas Yojana-Urban (PMAY-U) launched by the Government of India, in Mission mode envisions provision of Housing for All by 2022, when the Nation completes 75 years of its Independence. It seeks to address the housing requirement of urban poor including slum dwellers through four programme verticals namely: (i) Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource; (ii) Promotion of Affordable Housing for weaker section through credit linked subsidy; (iii) Affordable Housing in Partnership with Public & Private sectors; and (iv) Subsidy for beneficiary-led individual house construction /enhancement.

Beneficiaries under PMAY-U

The beneficiaries include EWS, Low-Income Groups (LIGs) and Middle Income Groups (MIGs). The annual income cap is up to ₹ 3 lakh for EWS, ₹ 3-6 lakh for LIG and ₹ 6-18 lakhs for MIG. EWS beneficiaries are eligible for assistance in all four verticals of the Mission whereas LIG and MIG categories are eligible under only Credit Linked Subsidy Scheme (CLSS). For identification as a EWS or LIG beneficiary under the scheme, an individual loan applicant will submit self-certificate/affidavit as proof of income.

A beneficiary family comprises of husband, wife, unmarried sons and/or unmarried daughters. The family should not own a pucca house either in its name or in the name of any

member of the family in any part of India to be eligible to receive central assistance under the mission. An adult earning member will be treated a separate household. States/UTs, at their discretion, may decide a cut-off date on which beneficiaries need to be resident of that urban area for being eligible to take benefits under the scheme.

Scope

The PMAY-U provides central assistance to implementing agencies through States and UTs for providing houses to all eligible families/beneficiaries by 2022. It is being implemented as Centrally Sponsored Scheme (CSS) except for the component of credit linked subsidy which is a Central Sector Scheme. The PMAY-U with all its components has become effective from June, 2015 and will be implemented upto March, 2022.

Coverage

All 4041 statutory towns as per Census 2011 with focus on 500 Class I cities and the towns notified subsequently would be covered in three phases under the PMAY-U. It supports construction of houses upto 30 square meter carpet area with basic civic infrastructure. States/UTs have flexibility in terms of determining the size of house and other facilities at the state level in consultation with the Centre but without any enhanced financial assistance. Slum redevelopment projects and Affordable Housing projects in partnership should have basic civic infrastructure like water, sanitation, sewerage, road, electricity etc. Urban Local Bodies (ULB) to ensure that individual houses under credit linked interest subsidy and beneficiary led construction should have provision for these basic civic services.

The houses constructed/acquired with central assistance to be in the name of the female head of the household or in the joint name of the male head of the household and his wife, and only in cases when there is no adult female member in the family, the dwelling unit/house can be in the name of male member of the household.

The minimum size of houses constructed under each component has to conform to the standards provided in National Building Code (NBC). If available area of land, however, does not permit building of such minimum size of houses as per NBC and if beneficiary consent is available for reduced size of house, a suitable decision on area may be taken by State/UTs with the approval of the State Level Sanctioning and Monitoring Committee (SLSMC). All houses built or expanded under the Mission should essentially have toilet facility. Further, the houses are also to be designed and constructed to meet the requirements of structural safety

against earthquake, flood, cyclone, landslides etc. conforming to the NBC and other relevant Bureau of Indian Standards (BIS) codes.

State/UT Government and Implementing Agencies need to encourage formation of associations of beneficiaries like Resident Welfare Association etc. to take care of maintenance of houses being built under the mission.

Implementation Methodology

The PMAY-U is to be implemented through four verticals giving option to beneficiaries, ULBs and State Governments. These four verticals are briefly discussed below:

In-situ Slum Redevelopment

This vertical is to be implemented with a concept 'Land as a resource' with private sector participation for providing houses to eligible slum dwellers. Slums, whether on Central Government land/State Government land/ULB land, Private Land, to be taken up for 'in-situ' redevelopment for providing houses to all eligible slum dwellers. Slums so redeveloped should compulsorily be de-notified. Slum rehabilitation grant of ₹ 1 lakh per house, on an average, is admissible for all houses built for eligible slum dwellers in all such projects.

Affordable Housing through Credit Linked Subsidy

Under Credit Linked Subsidy Scheme (CLSS), beneficiaries of EWS and LIG can seek housing loans from Banks, Housing Finance Companies (HFCs) and other such institutions for new construction and enhancement to existing dwellings as incremental housing. The credit linked subsidy is available only for loan amounts upto ₹ 6 lakhs and such loans would be eligible for an interest subsidy at the rate of 6.5 % for tenure of 20 years or during tenure of loan whichever is lower. Any additional loans beyond ₹ 6 lakhs, will be at nonsubsidized rate. Interest subsidy will be credited upfront to the loan account of beneficiaries through lending institutions resulting in reduced effective housing loan and Equated Monthly Instalment (EMI). There is no processing charge payable by the beneficiary for housing loans upto ₹ 6 lakh. For additional loan amounts beyond ₹ 6 lakh, Primary Lending Institutions (PLIs) can charge the normal processing fee.

The size of dwelling units (carpet area) being constructed under this component is upto 30 sq.m. for EWS category and upto 60 sq.m. for LIG category. This means that if the carpet area exceeds the respective limits, then the beneficiaries would not be eligible to avail of the benefit under this component. Preference under the Scheme to be given to Manual Scavengers, Women (with overriding preference to widows), persons belonging to Scheduled Castes (SCs),

Scheduled Tribe (STs), Other Backward Classes (OBCs), Minorities, Persons with disabilities and Transgender subject to beneficiaries being from EWS / LIG segments.

Credit Linked Subsidy Scheme for Middle Income Groups –CLSS (MIG)

- ▶ The window of fulfilling the aspiration of owning a pucca house for the taxpaying large middle class population has been made operational from January 1, 2017, salient features of which are as under:
- ▶ Middle Income Groups (MIG) with annual incomes of above ₹ 6.00 lakhs and up to ₹ 18.00 lakhs are eligible for interest subsidy on housing loans under the new CLSS (MIG). Those who have been sanctioned housing loans and whose applications are under consideration since 1st January 2017 are also eligible for interest subsidy.
- ▶ A beneficiary family is defined as comprising of wife, husband and unmarried daughters and sons. Unmarried and earning young adults are also eligible for taking the benefit of interest subsidy for acquisition/construction of a new house including repurchase. Preference is to be given to women with overriding preference to widows, single working women, persons belonging to SCs, STs, Backward Classes, Differently abled and Transgender people.
- ▶ Interest subsidy is provided on loans for construction/acquisition of house with carpet area of 90 sq.m. by those earning ₹ 12.00 lakh per annum and of 110 sq.m. by those earning ₹ 18.00 lakh per year.
- ▶ The tenure of loan has been stipulated to be 20 years or that preferred by the beneficiary, whichever is lower.
- ▶ As middle income groups are better equipped to take advantage of the interest subsidy scheme in quick time and to enable meeting the Housing for All target by 2022, implementation of CLSS (MIG) was initially envisaged for one year i.e. upto December, 2017. This has now been extended upto March, 2019.
- ▶ Beneficiaries are eligible for an interest subsidy of 4% on housing loans of up to ₹ 9.00 lakhs of those with an annual income of ₹ 12.00 lakh and of 3% on housing loans of up to ₹ 12.00 lakh of those earning ₹ 18.00 lakh per year.
- ▶ Small Finance Banks and Non Banking Finance Companies-Micro Finance Institutions also have been recognized to function as Primary Lending Institutions (PLIs) to widen the scope of implementation in addition to Scheduled Commercial

Banks, HFCs, Regional Rural Banks, State and Urban Cooperative Banks for accepting applications directly from beneficiaries and advancing loans under the scheme.

- ▶ Beneficiaries eligible for interest subsidy can directly apply to PLIs which after due verification of applications will sanction loans and thereafter claim subsidy from Central Nodal Agencies (CNAs). No processing fee will be charged by PLIs from the applicants.
- ▶ The National Housing Bank (NHB) and Housing and Urban Development Corporation (HUDCO) have been designated as CNAs for implementation of CLSS for both MIG and EWS/LIG who would reimburse interest subsidy to PLIs based on the loans advanced to beneficiaries by them.

Subsidy for Beneficiary-led Individual House Construction

This is assistance to individual eligible families belonging to EWS categories to either construct new houses or enhance existing houses on their own to cover the beneficiaries who are not able to take advantage of any other component of the mission. Such families may avail of central assistance of ₹ 1.5 lakh and should be part of Housing for All Plan of Action (HFAPoA). A minimum addition of 9.0 sq.m. of carpet area to the existing house is required to be eligible for central assistance under the 'Beneficiary Led Construction' component of the housing mission.

The beneficiaries desirous of availing this assistance need to approach the ULBs with adequate documentation regarding availability of land owned by them. Such beneficiaries may be residing either in slums or outside the slums. Beneficiaries in slums which are not being redeveloped can be covered under this component if they have a kutch or semi pucca house. Central assistance will be released to the bank accounts of beneficiaries identified in projects through States/UTs as per recommendations of State/UT.

Affordable Housing in Partnership

The scheme of Affordable Housing in Partnership (AHP) aims to encourage private sector participation in creation of Affordable Housing stock recognising that mere efforts of Government would be insufficient to address the housing shortage.

This component of the Mission is a supply side intervention and provides financial assistance for EWS houses being built under different partnerships by States/UTs/Cities. An affordable housing project can be a mix of houses for

different categories (EWS, LIG, and HIG etc) but it will be eligible for central assistance, if at least 35% of the houses in the project are for EWS category and a single project has at least 250 houses. Other important features of AHP are:

- To increase availability of houses for EWS category at an affordable rate, States/UTs, either through its agencies or in partnership with private sector including industries, can plan Affordable Housing projects.
- Central Assistance at the rate of ₹ 1.5 Lakh per house would be available for all EWS houses in such projects.
- The States/UTs are empowered to decide on an upper ceiling on the sale price of EWS houses in rupees per square meter of carpet area in such projects with an objective to make them affordable and accessible to the intended beneficiaries. For that purpose, States/UTs and cities may extend other concessions such as their State subsidy, land at affordable cost, stamp duty exemption, etc.
- Sale price is fixed by the States through open transparent process factoring in incentives provided by the Government in case the project is implemented with private participation and allotment of houses is done by private partner authorised to sell EWS houses to eligible beneficiaries, whereas it is fixed on the basis of no-profit-no-loss, if there is no private partnership.
- The Central Sanctioning and Monitoring Committee (CSMC) of the Government of India, however, can reduce the requirement of minimum number of houses in one project on the request of State Government.
- Allotment of houses to identified eligible beneficiaries in AHP projects is made after following a transparent procedure as approved by SLSMC and the beneficiaries selected should be part of HFAPoA.
- Preference in allotment is to be given to Physically Handicapped Persons, Senior Citizens, SCs, STs, OBCs, Minority, Single Women, Transgender and Other Weaker and Vulnerable Sections of the Society.
- While making the allotment, the families with person with disability and senior citizens may be allotted house preferably on the ground floor or lower floors.
- Detailed Project Report (DPR) of such projects prepared by concerned implementing agencies is to be approved by SLSMC.

New PPP Policy to promote private investments in Affordable Housing

The Government of India has recently announced a new PPP Policy for Affordable Housing that allows extending central assistance of up to ₹ 2.50 lakh per house to be built by private builders even on private lands besides opening up immense potential for private investments in Affordable Housing projects on government lands in urban areas.

The new policy gives eight PPP (Public-Private-Partnership) options for private sector to invest in Affordable Housing segment. It seeks to assign risks among the government, developers and financial institutions, to those who can manage them the best besides leveraging underutilized and un-utilized private and public lands towards meeting the Housing for All targets by 2022.

The two PPP models for private investments in Affordable Housing on private lands include extending central assistance of about ₹ 2.50 lakh per house as interest subsidy on bank loans as upfront payment under the CLSS component of PMAY-U. Under the second option, central assistance of ₹ 1.50 lakh per house to be built on private lands would be provided, in case the beneficiaries do not intend to take bank loans.

The eight PPP options, including six for promoting Affordable Housing with private investments using government lands have been evolved after extensive consultations with States, promoter bodies and other stakeholders. The six models using government lands are:

- 1. DBT Model:** Under this option, private builders can design, build and transfer houses built on government lands to public authorities. Government land is to be allocated based on the least cost of construction. Payments to builders will be made by the public authority based on progress of project as per agreed upon milestones and buyers will pay to the Government.
- 2. Mixed Development Cross-subsidized Housing:** Government land to be allotted based on number of affordable houses to be built on the plot offered to private builders, cross subsidizing this segment from revenues from high end house building or commercial development.
- 3. Annuity Based Subsidized Housing:** Builders will invest against deferred annuity payments by the Government. Land allocation to builders is based on unit cost of construction.
- 4. Annuity-cum-Capital Grant Based Affordable Housing:** Besides annuity payments, builders could be paid a share of project cost as upfront payment.
- 5. Direct Relationship Ownership Housing:** As against government mediated payments to builders and transfer of houses to beneficiaries in the above four models, under this option, promoters will directly deal with buyers and recover costs. Allocation of public land is based on unit cost of construction.
- 6. Direct Relationship Rental Housing:** Recovery of the costs by builders is through rental incomes from the houses built on government lands.

Under these six Government land based PPP models, beneficiaries identified as per the norms, can avail central assistance of ₹ 1.00 to ₹ 2.50 lakh per house as provisioned under different components of PMAY-U.

The private sector so far has not entered Affordable Housing segment on desired lines despite huge scope for the same under the PMAY-U and an enabling eco-system put in place through several concessions and incentives offered including the grant of infrastructure status for this segment. As a 'Way Forward'; the Government has announced a time bound review of FSI/FAR norms in 53 cities, with a population of million and above each, and State capitals to enable better utilization of scarce urban land parcels. Online mechanism for time bound approvals for building plans and construction permits has already been introduced in Mumbai and Delhi and the same is likely to happen soon in 53 cities as mentioned above.

Affordable Houses on private land in Maharashtra

Government of Maharashtra has taken a number of measures to promote Affordable Housing to meet the substantial housing shortage in the State. In addition to reserving certain percentage for the poor in developed projects and provision for additional FAR and TDR, the State Government has launched PPP led Affordable Housing projects in partnership.

The Raynagar Cooperative Housing Federation (RCHF) in Solapur, Maharashtra submitted a proposal to build 30,000 houses for its members, comprising beedi and textile workers and other urban poor, belonging to the EWS at a cost of ₹ 1,811 crores under the PMAY-U. The State Government of Maharashtra, after due examination, agreed to provide an assistance of ₹ 300 crores for the same and forwarded the proposal to the Centre.

An inter-ministerial Central Sanctioning and Monitoring

Committee (CSMC), in July, 2017, approved the project of RCHF which is a first-of-its-kind Affordable Housing project on private land, after detailed discussions with the Maharashtra Government. Central assistance of ₹ 450 crores has been approved for the project. This approval is aimed at giving momentum to Affordable Housing in urban areas by extending the scope of the scheme to private lands. The PMAY-U was earlier applicable to Affordable Housing projects built on lands belonging to the state or municipal corporations.

The ownership of land area of 189 hectares is with the RCHF, which acquired it for building the houses. The RCHF is the implementing agency and all the proposed beneficiaries under the project have been Aadhaar-linked. The cost of each dwelling unit of ₹ 6,03,777 has been determined in a transparent manner and with Central and State assistance. The delivery price would be ₹ 3,53,777 per house. The SLSMC of Maharashtra Government will oversee the implementation of the project. This approval for the Affordable Housing project is expected to trigger more such projects on private lands under the AHP component of the PMAY-U.

Cooperative Housing for Weaker Sections

Housing supply through the cooperative sector has reached all sections of the society. Furthermore, the cooperative housing sector has effectively catered to the less affluent sections of the society with comparatively higher proportion of the housing finance mobilized as well as dwelling units constructed through it being for LIG and EWS. Thus on the whole, the cooperative housing sector is largely for the benefit of lower income families. The cooperatives involve beneficiary participation in labour and material mobilization and also using simple indigenous technology and local materials.

While it is true that a number of cooperative housing societies have been floated by members from the more affluent sections of the society, it is also true that the cooperative housing sector has enabled several households in the LIG to gain access to housing. In fact, most such households could not have been able to construct houses of their own without recourse to cooperative housing as no worthwhile house can be built by individual effort with meager resources, whereas through cooperative action considerable economy can be effected in land development, purchase of building material, technical consultancy, efficient architectural planning and providing of other infrastructure facilities like sewerage, water supply, electricity, approach roads etc. to bring the overall cost of housing down and within the reach of poor families.

The cooperative housing in India is an important sector for the low income housing, slum improvement, social rental housing and rural housing areas which are almost neglected by private agencies due to low profit margins in these areas. However, there are many impediments to its growth and functions, including difficulty in getting land for construction activities, low interest loans, lack of proper training in cooperative management for the primary cooperative executives, large number of Government regulations in land, legal and planning and such other problems. The cooperatives need Government support to overcome these problems so that they supplement governmental efforts of providing housing for all.

Need for ACHFs as Implementing Agencies

The cooperative housing movement has made tremendous progress in our country. Every year more and more people belonging to EWS/LIG/MIG join the umbrella of housing cooperatives to have affordable decent homes through group efforts. The State level Apex Cooperative Housing Federations (ACHFs) functioning in various States/Union Territories have advanced long-term loans to the tune of over ₹ 12600 crores to housing cooperatives and also individuals for construction/purchase of about 25 lakh dwelling units.

Cooperative housing has been recognized as an ideal mechanism for providing Affordable Housing as members save 20-25% in cost owing to self-help, voluntary management and adoption of cost-effective technologies. Housing cooperatives have shown the capacity to provide qualitatively superior homes through cost-effective and efficient process of housing supply. By infusing housing related community socializing, housing cooperatives foster better social environment resulting in improved quality of life. Though the platform amalgamates people from varied communities and walks of life, it is mention-worthy that there has been hardly any incidence of riot, human or property loss in housing cooperatives.

The ACHFs which are working as central financing agencies for housing cooperatives in their respective States needs to be included in the list of institutions eligible to implement the ambitious housing programme like PMAY-U. Housing cooperatives are an effective and powerful medium for promoting Affordable Housing with the users full participation. Cooperatives attract household savings into housing sector as a whole and at the same time serving the beneficiaries directly. Involvement of beneficiary families in the process of shelter solution promotes cost recovery. The advantages of choice of the neighbourhood groups, prior awareness of the likely neighbours as also their cultural and



ethnic cohesiveness, is possible through cooperative housing. Thus, given a system and an appropriate strategy, the cooperatives have potential to cater to all sections of the population including the weaker sections.

If the State Governments/Union Territories approves them as implementing agencies, ACHFs can get land and may even raise funds on the security of land for their housing projects. This will also facilitate ACHFs to avail benefits of various programmes being sponsored by the Government of India and State Governments thereby passing on the same to their affiliated primary housing cooperatives as well as individual members and reach out to low income families in a more effective way.

Being a promotional body of cooperative housing sector, the National Cooperative Housing Federation of India (NCHF) has called upon the State Governments to designate ACHFs of their respective States as the implementing agencies under the PMAY-U: Housing for All especially for the promotion of Affordable Housing for Weaker Sections through Credit Linked Subsidy Scheme. ACHFs/Housing cooperatives may be recognised to function as PLIs under the Scheme like Commercial and Cooperative Banks, HFCs, etc.

Conclusion

Addressing the housing needs of the poorest and most vulnerable, especially women, youth and those who live in slums or slum like habitats must be a priority in the development agendas of the Central/State Governments and other stake holders. The time has come to adopt enabling policies and programme for improving the living conditions of the disadvantaged sections of the society and ensure that the benefits reach the needy so that the target of ensuring access to adequate, safe and affordable housing and basic services for all and upgradation of slums is achieved by 2030.

It is commendable that the Government of India has taken certain positive initiatives in recent years which includes: infrastructure status to Affordable Housing, interest subvention to EWS as well as the lower and middle income groups; tax incentives for Affordable Housing based on carpet area instead of build-up space; reduction in holding period for computing capital gains from transfer of immovable property and shifting of base year from 1981 to 2001 for calculating indexation benefit; announcement of new policy to promote public-private-partnership in affordable housing; timely review of FSI/FAR norms;

streamlining the process for approvals of building plans and construction permits; simplification of environment clearance process for building projects, etc.

The thrust on Affordable Housing shows the commitment of the Government to ensure social justice and equality under its inclusive development approach. The positive initiatives will go a long way in achieving the target of providing Affordable Housing to all and facilitate the common man to realize long cherished dream of owning a house. The private stakeholders including cooperatives must seize the investment opportunities in Affordable Housing in the prevailing enabling environment and take advantage of the new initiatives to strengthen their housing programmes.

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Expectations of Long Term Cooperative Credit Structure from the Union Budget 2018-19

K.K. Ravindran*

Being the last budget before general elections, this year's budget is generally viewed as a big opportunity for Govt to reassure its support to farmers, small and medium enterprises (SMEs) and salaried classes and also to fulfil some of its election promises which are yet to be fulfilled. Expectations of farming community from the budget are high especially on the background of their growing distress. No improvement has taken place over the years in the working and living conditions of farmers. Imbalance in the sectoral distribution of income is growing. Agriculture sector supports 48% of the population with its share of only 15% of national GDP. Farming households on the average get 60% of their income from agriculture. This makes their share to just 25% of national GDP. In other words, the incomes of farming households is just half of others. Increased productivity and addressing issues relating to market and prices are important to increase incomes of farmers. Higher allocations are expected in the budget under the programme of doubling of farmers' income with suitable measures to ensure price stability and strengthening risk mitigation system. SMEs sector look for special support in the budget to come out from the present slow down. There is also demand for streamlining GST compliance system for effective compliance and reducing the amount of time and resources wasted for compliance at present. Salaried classes are burdened by higher tax rates and growing cost of transport, education and health care. Further, employees of Central and State Govts are dissatisfied with the new pay package which failed their expectations. Employees expect relief in the budget by way of higher exemption limit and rate cut in the tax liability. There is also a demand for reduction in the rate of corporate taxes to stimulate the corporate sector. However, how far these expectations will be fulfilled is to be seen in the context of revenue crisis faced by the Govt on account of lower GST collections and slower growth in direct tax collections than expected. Moreover, the budget needs to make substantially higher allocations for defence in view of growing tensions along borders both in the North and East and for education and skilling in order to reduce the gap between the present 3.5% of total govt spendings and 6% which was promised in the election manifesto.

Following are the proposals submitted by the Federation in

its pre-budget memorandum to Hon'ble Finance Minister. These proposals need urgent consideration by the Govt since it relates to the problems faced by farmers in meeting their credit needs.

Implementation of revival package

Implementation of revitalisation package for LTCCS recommended by Vaidyanathan Task Force II is the most important proposal in our pre-budget memorandum to the Govt. Like other segments in the rural financial system, institutions in the LTCCS also suffered huge financial losses on account of Govt policies in the past. Losses in implementing Govt sponsored credit programmes especially in the 70s and 80s, uncompensated portion of debt waiver schemes of Govt of India in 1990 as well as various waiver schemes by various State Govts in the last 15 years and the regime of regulated interest rates till mid 90s without allowing adequate margins to meet transaction and risk costs account for most part of the accumulated losses of institutions in LTCCS. While similar losses of other agencies in the rural credit system were compensated by implementing recapitalisation schemes by the Govt of India, LTCCS continues to be the only sector not covered by any such scheme. The revitalisation package recommended by Vaidyanathan Task Force II included financial support for recapitalisation and strengthening infrastructure along with wide ranging legal and policy reforms to make the structure financially strong and viable. Even though the Govt announced implementation of this package in the union budget 2008-09 no further action was taken to operationalise that announcement. The failure of the Govt to implement the revitalisation package has resulted in the structure becoming defunct in major States like Maharashtra, Bihar, Orissa, Assam and Madhya Pradesh severely impacting the rate of capital formation and productivity in agriculture in those States. More than institutions, farmers are the real sufferers of the weakening of the structure. At present 103 lakh farming households who have taken long term loans from these institutions on the security of mortgage of their land face acute credit crisis due to the inability of ARDBs to meet their subsequent credit needs due to their weak financial position. Having mortgaged their land to LTCCS, these farmers by and large are also unable to avail loans from other agencies.

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Banking licence to SCARDBs

Though ARDBs are engaged in advancing of loans to farmers for nearly 100 years they are not licensed as banks so far. This has seriously crippled their ability to raise resources and to meet diverse credit needs of members. As they are not fullfledged banks, SCARDBs are also not allowed to implement various Govt schemes for farmers including interest subvention scheme for crop loans, education loans and incentive schemes for affordable housing, renewable energy etc. The Task Force for strengthening rural credit system headed by Jagdish Kapoor (1999) recommended that ARDBs should work as fullfledged banks under BR Act 1949. Vaidyanathan Task Force appointed by the Govt in 2006 for suggesting revival package for LTCCS also said that "If any entity in the structure fulfils the conditions necessary for obtaining a banking licence, the banking regulator may consider it on merit." However, RBI has not prescribed norms for granting banking licence to ARDBs so far. The Federation has been persistently taking up this issue both with Govt and RBI.

Extending interest subvention scheme to SCARDBs

Farmers who borrow investment loans from SCARDBs have been pleading for a long time to restore crop loan facility from the same agency. Presently, majority of these farmers are not able to access crop loans from other agencies as they already mortgaged their entire land to ARDBs as security for investment credit. Though NABARD introduced a scheme in 2008-09 to provide refinance to SCARDBs for advancing crop loans at 7% the same was withdrawn after three years on the ground that crop loan interest subvention scheme of Govt

was not extended to SCARDBs. Due to difficulties in availing crop loans, farm assets created out of investment loans are not made use of fully, affecting income and repaying capacity of loanees. Though there is no justification to deny the facility of crop loan to a large section of farmers on the ground that the term SCARDB is missing in the list of implementing agencies of the scheme, the Govt has not restored the benefit of crop loan interest subvention to these farmers so far.

Subventing cost of investment credit

While crop loan is available at affordable cost the cost of investment credit remains in the range of 12-14% in the absence of interest subvention by the Govt. High cost of investment credit is a major disincentive for long term investments in the farm sector. Investments in irrigation, farm mechanisation, technology and capital intensive farming methods, storage and processing are accorded high priority in the context of doubling of farmers' income by 2022, which has to be realised mainly by increasing agricultural productivity and maximising returns by integrating farmers in the value chain. The Govt needs to introduce a scheme similar to crop loan interest subvention to bring down the cost of investment credit to agriculture also at affordable level, to accelerate investments in the farm sector.

Cooperative sector is generally seen neglected in the union budgets. We wish for a change in this trend this time in view of the significant contributions of cooperatives to the rural economy and their role in bringing people with limited means to mainstream social and economic life.

LAND BANK JOURNAL

(QUARTERLY PUBLICATION)
w.e.f. June 2016

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**STATEMENT OF OWNERSHIP AND OTHER PARTICULARS ABOUT
LAND BANK JOURNAL AS REQUIRED UNDER RULE 8 OF THE REGISTRATION OF
NEWSPAPERS (CENTRAL) RULES 1956**

FORM – IV

1. Place of Publication	:	Mumbai
2. Periodicity	:	Quarterly
3. Printer's Name	:	K.K. Ravindran
Nationality	:	Indian
Address	:	Managing Director National Co-operative Agriculture and Rural Development Banks' Federation Limited 701, 7th Floor, A-Wing, BSEL Tech Park Opp. Vashi Railway Station, Vashi Navi Mumbai – 400 703
4. Publisher's Name	:	K.K. Ravindran
Nationality	:	Indian
Address	:	Managing Director National Co-operative Agriculture and Rural Development Banks' Federation Limited 701, 7th Floor, A-Wing, BSEL Tech Park Opp. Vashi Railway Station, Vashi Navi Mumbai – 400 703
5. Editor's Name	:	K.K. Ravindran
Nationality	:	Indian
Address	:	Managing Director National Co-operative Agriculture and Rural Development Banks' Federation Limited 701, 7th Floor, A-Wing, BSEL Tech Park Opp. Vashi Railway Station, Vashi Navi Mumbai – 400 703
6. Names and addresses of individuals who own the newspaper and are partners or shareholders holding more than one percent of the total capital	:	National Co-operative Agriculture and Rural Development Banks' Federation Limited 701, 7th Floor, A-Wing, BSEL Tech Park Opp. Vashi Railway Station, Vashi Navi Mumbai – 400 703

I, K.K. Ravindran, hereby declare that particulars given above are true to the best of my knowledge and belief.

Navi Mumbai
31st March, 2018

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UNION BUDGET 2018-19 AND FARMS

By K.G. Karmakar*

Consolidation of Farm holdings and Computerisation of Agricultural Land holdings continue to be neglected as powerful lobbies prevent these from happening. In the interests of preventing corruption and giving a boost to good governance practices, these need to be implemented without any further delay. Land to the tiller, removal of benami holdings and levying of income tax for all agricultural incomes in excess of ₹ 10 lakhs per annum, are all essential and should have been done long back. That these are studiously ignored as the Farm sector languishes!

New Technologies which help to reduce costs and risks, better access to storages, fair spot markets, commodity exchanges where farmer producer organisations co-exist with traders, cheap credit are all essential for commercialising agriculture. Diversification into fruits and vegetable crop production requires a change in mind-sets, skills, knowledge and practices and even more exposure to risks besides costlier inputs and sufficient credit resources. For all the production risks, weather risks, market risks the farmers margins are very thin as the traders' margins are ever-increasing with hardly any risks. This only ensures leaner and starving farmers and their families and fatter agents, aadtyas, money-lenders and traders. With chemical fertilisers poisoning the soils and groundwater (the tragedy of rural Punjab) there is need to go in for rain-water harvesting, watershed development and intensive drip irrigation so as to conserve scarce water resources. Agricultural extension services and organic farming practices are like fairy-tales today. Without proper post-harvest facilities, farmers will find it very difficult to enhance their profit margins. The State APMC Acts and Essential Commodities Act and a host of outmoded Acts need to be consigned into oblivion as soon as is feasible as these have outlived their utility value. The roll-out of the National Market Plan, with more efficient and modern warehouses, cold storages and private mandis are all essential today. For the smallholder farmer, diversification into animal husbandry and fisheries in ponds is an essential need and not an option so as to diversify risks.

More Farmer Associations, Farmer Producer Groups, Joint Liability Groups and Artisanal Clusters are needed today to offset the pernicious strangle-hold of traders and agents who continue to ensure better margins for themselves. In the Commodity Exchange markets, the strangle-hold of Agents and Traders continues while the Farmers are not at all represented. Capital Investment for enhancing land productivity, building up the farm assets base and diversifying from subsistence farming into commercial farming, is essential if the smallholder farmer is to survive. While our poor farmers are unable to lobby effectively in the seats of Power, it is worthwhile to remember that the Farm Sector is the largest Private sector component of our Economy in terms of manpower but not in terms of Investment!

Climate changes and global warming due to heavy carbon and methane emissions have reduced farm yields and productivity.

*Former Managing Director, NABARD and Director of India Post Payments Bank

With all these plethora of problems, sustainable farming for smallholder farmers is easily forgotten and in the mad struggle for survival by smallholder farmers and their families, the goal of food security is often forgotten. The smallholder farmers need a helping hand by creating more agri-market infrastructure and small warehouses so as to be able to store food grains for some time so as to get better prices after 2-3 months when prices are not likely to be depressed. Also Warehouse Receipts need to be encouraged by registered warehouses and banks so that farmers are able to get better margins. Finally, the smallholder farmers need a helping hand by creating better agri-market infrastructure and institutional assistance as and when required. For Artisanal Clusters, emphasis on quality, reliability and cost reduction means that innovative systems and processes have to be continuously explored as in this age of de-centralised production, cost control and customer satisfaction by the most efficient and adaptable to agile manufacturing systems, only will emerge clear winners.

Insurance penetration in rural areas is abysmal as is financial inclusion! Most rural people have no bank accounts or insurance facilities and have poor access to health and educational facilities. It is no wonder that younger people are deserting rural areas and prefer to live urban slums so that they have some access to daily-wages and employment. Older people remain back in rural areas as they are unable to stay in degraded living conditions and by 2030, it is feared that 50% population will be living in urban areas. Will the 50% left in rural areas be able to feed the urban dwellers? Are the nation's planners worried about the future?

Some major initiatives are yet to be taken. The computerisation of land records was initiated in 1975 and as on date has only been completed in Karnataka. Land consolidation and land realignment as also land mutations need to be taken up on an urgent basis. Cooperatives need to be revived and without the help of vested interests. More Farmer Clubs, Joint Liability Groups and Farmers Associations as also Farmer Producer Organisations need to be set up urgently. Mobile-based apps for farmers about crop prices, agri-inputs and prices, various Central/State government schemes and farmer advisories need to be in place with the help of NGOs/State Governments. Local seed villages, better connectivity with Mandis (roads/bridges) are essential as are stable input costs. The need to use water judiciously and not waste water, better water drainage systems and micro-irrigation devices (drip, sprinklers) are all very essential. More producer companies and production cooperatives are urgently needed. HYV seeds, diversification of risks with animal husbandry, dairy, fisheries, floriculture, vegetable cultivation are needed urgently. How to increase the net income of farmers is the ultimate test of the Rural Economy. To achieve double digit GDP growth, agricultural GDP must be enhanced to 5% soon. That is the challenge to India if we aspire to be a World Power. Without enriching our farmers, India will fail.

(Syndicate: The Billion Press)



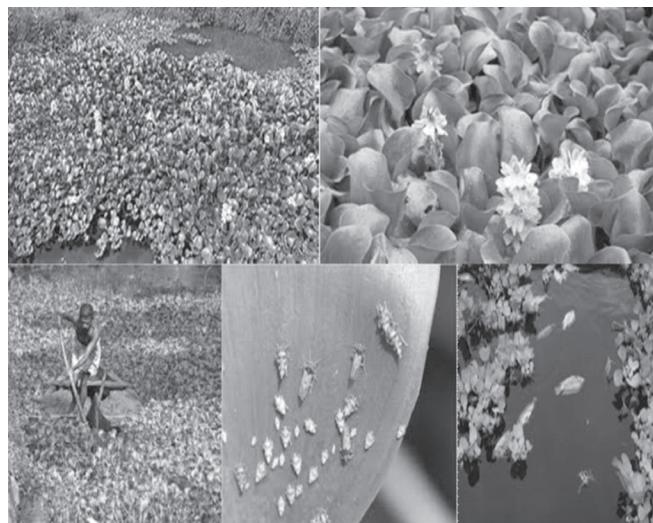
Wealth from waste : Water Hyacinth as a resource in agriculture, energy production and Rural Enterprise

Dr. Jayasree Vaidyanathan*

On the struggle to eradicate the water hyacinth, most invasive aquatic plant is taking a different approach: weed control can turn to generate economically self-sustaining operation

Water Hyacinth, the genus, *Eichhorina* the beautiful blue devil plant, known as the killer weed causes immense damage to nature. It is identified as the world's worst tropical aquatic weed because water Hyacinth has proven to be a significant economic and ecological burden to many parts of the globe. Recently, the plant has been identified useful for various uses, turning the pest into profit.

Negative consequences of water hyacinth



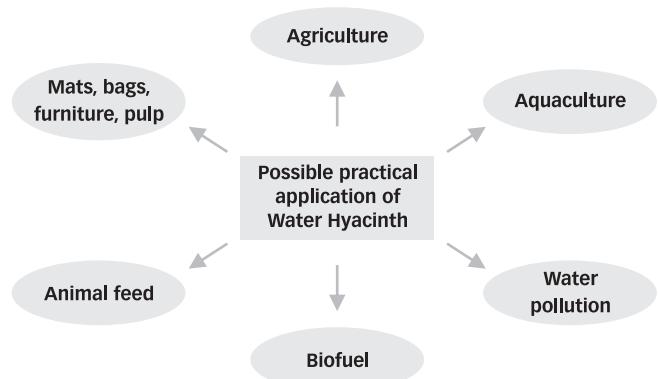
One of the most vivid and far-reaching invaders, the water plant can cause is detrimental effects on environment, human health and economic development. Because of its capacity to form dense mat over the water surface, a large amount of sunlight is blocked, oxygen exchange is prevented and dissolved oxygen levels drop due to which food web is altered, threatening the survival of aquatic species apart from invading the biological diversity of water bodies. Water hyacinth also reduces biological diversity, impacts native submersed plants, alters immersed plant communities by pushing away and crushing them, and also alter animal communities by blocking access to water and/or eliminating plants the animals depend on for shelter and nesting. They

even impede irrigation, prevent water traffic, reduce water supply, obstruct water ways and even slow the hydropower generation and sometimes cause flooding in low lying areas (Verma, 2016). Water hyacinth also adversely impacts agriculture and human health by attracting pests and mosquitos. Unless removed, water hyacinth releases nutrient pollutants back to water and further pollute the water bodies when they die. It is imperative to control the invading plant growth so as to minimize its harmful impact.

Complete eradication of water hyacinth is not possible because of various environmental and financial challenges. Various strategies have been adopted to control its management. However, even manual or mechanical clearing of water hyacinth and its growth control using chemicals have proven next to impossible because of their extensive uncontrollable growth and management problems. Global concern on the problem of infestation of water bodies by water hyacinth has provided the impetus for researchers and other concerned bodies to explore ways of controlling its spread.

Turning pest into profit

Despite its harmful effects, waterhyacinth can be turned harnessed to profit. Judicious use of the plant can be turned into profits for its wide application for agriculture, aquaculture, water pollution abatement; bio-fuel generation and raw material in many industries including ornamental materials; paper and pulp manufacture industries (Ojeifo et al 2013). They are already used in producing crafts and furniture, liquid fuels, art papers and cards.



Possible applications of water hyacinth

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In agricultural production, their use as organic fertiliser, compost and as green manure can reduce the harmful effects of chemical fertiliser. Application of water hyacinth in aquaculture as a fish feed not only increases the fish productivity, but also allows existence of flora and fauna living in the water ecosystem. High protein content in them makes it also possible to be used as a fodder for livestock. Their capacity to abate water pollution can be exploited for both water purification as well as for treating sewage systems by virtue of its high photosynthetic efficiency and oxygen production (Lissy and Madhu, 2010). They have the ability to reduce nutrients, heavy metals, organic compounds and pathogens from water (Balamurugan et al 2015). Water hyacinths are excellent substrate for mushroom cultivation and briquettes are made out of them that supplements to fuel needs. Baskets, rope, furniture, Pulp, paper, fibre boards, and many other products can be manufactured from water hyacinth. High hydrocarbon content in water hyacinth has been exploited for biogas and biofuel production which is the unsurpassed route to transforming waste into energy (Tawanda, 2013).



Various usable products from Water Hyacinth

Use of water hyacinth for various practical uses is demonstrated by many countries including India. Still, largely in the state of development, there is ample opportunity for research and development of the potential uses of this invasive plant.

Water hyacinth as a source of bio-energy

Water hyacinth invasions can be harnessed for environmental benefits and in energy production. Being naturally grown vegetation, having high low lignin content per unit volume of dry matter and easily degradable nature makes it an ideal biofuel crop. Search for alternative fossil fuel intensifies in the age of modernisation and industrialization, coupled with increasing energy costs holds a promise for use of efficient use of water hyacinth for energy production. Bio-energy generation is an appealing solution to

control the ever expanding infestation of this nuisance plant as well as to successful shifting from non-conventional to renewable energy technologies. Controlling water hyacinth growth is not a good social investment, but transforming waste into useful bio-energy could be a best solution for both its control as well as production of energy. With growing energy crisis supplemented by environmental concerns, biomethanation of water hyacinth can serve as a biomass to energy generation alternative (Sarkar and Banerjee, 2013).

Biogas generation from water hyacinth is very simple. Its biomass is used in production of biogas and the by-products can be used as organic manure or for producing bioethanol by further decomposition of fermentable saccharides. Manufacturing process involves clearing of water hyacinth from water bodies, which is dried and placed in a biogas plant. The kiln of the plant acts an anaerobic reactor. Metal covering of the plant has a small hole through which powdered nickel is added initially before the plant is locked. When entry of air is blocked, it starts fermenting and producing gas in less than 24 hours. Biogas in raw form contains methane, carbon dioxide and sulphur and dust. It is extracted and purified till pure methane is extracted. Methane can be stored in cylinders and can be used as a fuel for cooking, lighting or for powering an engine to provide shaft power. Residue is a good fertiliser.

Experiments have shown that 1kg of water hyacinth can produce 10 kg methane which can fill a 6-7 kg cylinder. Biogas can be produced at Rs. 17/kg. One hectare of water hyacinths can produce more than 70,000m³ of biogas, generate between 90-180 m³ of methane, equivalent to approximately 3.44 to 6.88 Giga-Joule of energy production.

Energy production and income generation as a rural enterprise

Commercial production of bioenergy from water hyacinth has been proven expensive and labour intensive, effective use of the plant for biogas generation especially as a small scale technology can resolve ever-growing energy crisis.

However, as an abundantly available source of biomass, the extensive growth of water hyacinth can be used in energy production as well as a resource of various important uses and income generation by using simple methods with minimum cost. For example, small community groups such as women self-help groups in small communities can turn this weed into useful products such as biogas for household uses, organic fertilizer, as an animal and fish feed, substrate in mushroom cultivation, briquette making, ornamental mats and other useful products. Such women units can function as small individual and community enterprise. Integrating such

activities through women self-help groups could not only be beneficial in reducing the harmful effects of water hyacinth, but also for income generation and economic well-being of communities involved. By converting the waste plant into wealth, the social-economic benefits of bio-gas generation and new eco-sensitive livelihood can be reaped through by its community. This not only reduces the harmful consequences of water hyacinth spread, but also for the overall socio-economic welfare of the region.

Additionally, water hyacinth can provide an eco-sensitive livelihood to rural communities as its positive impacts outweigh the negative consequences. As a small enterprise, biogas generation as well as use of the plant for effective use not only proves as a livelihood option for the rural communities. With institutional support from government and NGOs, water hyacinth menace could be transformed from nuisance to wealth generation, employment and

poverty alleviation. The economic and social benefits of biogas generation, soil reclamation and new livelihood from waste water management will be a financial incentive for communities to collect and treat this waste and convert to wealth. The removal of water hyacinth to produce biogas can also contribute to water quality improvement and GHG emission reduction. Such projects could be a potential micro-economic option in water pollution control, renewable energy development, energy saving and emission reduction. It is high time we befriended the noxious water hyacinth rather than keeping it away. Needless to say, if there is concerted efforts by all concerned and with proper coordination, water hyacinth can be management as has been proven in many part of the world. Harvesting the crop might be labour and energy intensive, but this cost is offset by the fact that the major pest is destroyed while at the same time yielding energy and useful produce.

घटि पीओएस टर्मिनल लगवाने की रप्तार

देश भर में बैंकों के पीओएस प्लाइंट आफ सेल्स टर्मिनल लगवाने की स्पीड पिछले कुछ महीनों में धीमी पड़ी है। सरकार नोटबंदी के ऐलान के बाद पीओएस टर्मिनल लगवाने में अचानक तेजी आई थी। रिजर्व बैंक आफ इंडिया के डेटा के मुताबिक सितंबर से नवंबर 2017 के बीच पीओएस टर्मिनल की संख्या 29 लाख के साथ स्थिर बनी हुई है। पिछले साल मार्च से जून के बीच यह 8% बढ़कर 27 लाख पहुंच गई थी। दिसंबर 2016 से फरवरी 2017 के बीच भी पीओएस टर्मिनल की संख्या 30: की बढ़ोतरी के साथ 22 लाख हो गई थी।

ना सिर्फ पीओएस टर्मिनल लगवाने की रप्तार धीमी पड़ी है बल्कि बैंकों ने छोटे व्यापारियों के यहां जो टर्मिनल लगवाए थे उन्हें वे वापस कर रहे हैं। इसकी वजह यह है कि पीओएस टर्मिनल के जरिये इतना टांजैक्शन नहीं हो रहा कि वह छोटे कारोबारियों के लिए फायदे का सौदा साबित हो।

मुंबई बेरस्ड एक पेमेंट कंपनी के सीईओ ने नाम नहीं जाहिर करने की शर्त पर बताया 'पीओएस टर्मिनल कम लग रह है। सरकार के नोटबंदी के फैसले के बाद पीओएस टर्मिनल में तेज ग्रोथ देखी गई थी वह अब थम गई है। कई छोटे व्यापारियों ने अब कैश पेमेंट लेना शुरू कर दिया है। इसलिए वे मशीने वापस लौट रहे हैं। मुंबई

की पेमेंट कंपनी कई सरकारी बैंकों के साथ मिलकर पीओएस टर्मिनल इंस्टॉल करवा चुकी है।

इंडस्ट्री एग्जिक्यूटिक्स का कहना है कि 2017 के पहले कुछ महीनों में लगभग सभी बड़ी पीओएस कंपनियों ने इनवेंटरी बचा कर रखी थीं। इसके बावजूद कम डिमांड की वजह से मार्केट में इनकी सप्लाई बढ़ गई है। एक सीनीयर बैंकर ने कहा कि कुछ बड़े बैंकों ने पीओएस लगवाने की एग्रेसिव तैयारी की थी, लेकिन अब कम वाल्यूम के चलते काफी मशीनें वापस की जा रही हैं। कुछ मामलों में इनवेंटरी को लेकर बैंकों के साथ झूठ बोला गया था।

बैंकरों का कहना है कि असंगठित क्षेत्र की कंपनियों के पीओएस बिजनेस में उत्तरने की वजह से ऐसा हो रहा है। एक अन्य एग्जिक्यूटिव ने बताया ज्यादातर मामलों में पीओएस टर्मिनल के लिए 350 से 400 रुपये किराया था, जिसे व्यापारियों के लिए माफ कर दिया था। अगर वे टर्मिनल का वाजिब इस्तेमाल नहीं कर पाते तो उन्हें बिना रेंट के इसे लौटाने का ऑप्शन दिया गया था। इसके अलावा भारतक्यूआर और युनिफाइड पेमेंट इंटरफेस के आने से भी पीओएस का सस्ता साधन है और इनके लिए कारोबारियों को कोई मेंटेनेंस फीस भी नहीं देनी पड़ती।



किसानों की आय बढ़ोतरी के सुझाव

आद्यांत कुमार, बबलू शर्मा एवं प्रभात कुमार सिंह *

भारत में खाद्य समृद्धी के बावजूद, जनसंख्या वृद्धि के कारण देश में खाद्यान्न की कमी लगातार बनी हुई है। इसलिए कृषि से जुड़े लोगों का अधिक उपज और समृद्ध खेती की तरफ रुझान आवश्यक है। समृद्ध खेती भूमि की अवस्था, उपलब्ध उपकरण और खेत में पिछले वर्ष लगी फसल पर निर्भर करती है। खेती को लाभदायक बनाने के लिए दो ही उपाय हैं - पहला उत्पादन को बढ़ाएं और दूसरा लागत को कम करें।

कृषि की लागत नियन्त्रित करने के लिए कृषि के मुख्य आदान जैसे - बीज, उर्वरक, पौध संरक्षण, रसायन और सिंचाई तंत्र का संतुलित एवं आधुनिक विधियों द्वारा प्रयोग करना चाहिए। कृषि की हर एक इकाई का सही समय पर सही तरह से उपयोग करके, इनका अपव्यय रोक कर व इसके विकल्प ढूँढ़कर खेती को लाभदायक बनाना चाहिए।

निम्नलिखित सुझावों से किसानों को बेहतर एवं किफायती कृषि करने के साथ-साथ अधिक उपज लेने में मदद मिल सकती हैं:-

अच्छे किस्म के बीजों का प्रयोग, बीजोपचार एवं समय पर बुआईः

कहते हैं जैसा आप बोओगे वैसा पाओगे इसलिए बीज एक ऐसा आदान है जिसकी समृद्ध खेती में काफी अहम भूमिका होती है। बीज के ऊपर लगभग १० से १५ प्रतिशत लागत आती है और अच्छी पैदावार लाने के लिए यह महत्वपूर्ण है कि बीज उन्नत किस्म का हो और उसे पनपने के लिए अनुकूल परिस्थितियां मिलें। फसलों, फलों और सब्जियों के प्रमाणित उत्तम बीजों का उपयोग करना चाहिए जिनमें अधिक पैदावार देने की क्षमता, सिंचित एवं सुखा प्रभावित क्षेत्रों में पनपने की प्रवृत्ति और रोगों के प्रतिरोधन की गुणवत्ता हो। हालांकि यह बीज थोड़े महंगे हो सकते हैं, परन्तु इनके इस्तेमाल से उत्पादकता एवं गुणवत्ता में काफी वृद्धि मिलती है। किसान बीजोपचार अवश्य करे ताकि कम लागत में फसले निरोग रहें। इसके अलावा सिफारिश के अनुसार अग्री/पछेती किस्में अपनाएं ताकि अच्छी पैदावार हो।

आरंभिक जुताई एवं संरक्षण खेती का महत्वः

शुरुआती जुताई से बीज को पनपने के लिए अच्छा माध्यम मिलता है एवं खर-पतवार पर नियंत्रण प्राप्त होता है। अगर खेत समतल नहीं जुता है तो बीजों का अंकुरण प्रभावित होगा एवं पौधों का विकास कम होगा। शून्य जुताई (जीरो टीलेज) बुआई की एक विधि है जिसमें किसान पूरे खेत को नए सिरे से नहीं जोतता है परन्तु पुरानी फसल काटकर उसी खेत पर ही बुआई कर देता है। इससे किसान की जुताई का खर्च, डीजल, समय इत्यादि बच जाता है और साथ ही साथ जमीन में पोषक तत्व, आर्द्रता, मित्र जीवाणुओं का भी संरक्षण हो जाता है। इसके अतिरिक्त किसान अपनी सुविधा एवं समय अनुसार बुआई कर सकता है। इस विधि से खर-पतवार भी कम आते हैं जिससे खेती का खर्च भी कम रहता है एवं मिट्टी की प्राकृतिक संरचना भी बनी रहती है जो की भू-संरक्षण एवं पर्यावरण बचाव के लिए अत्यंत महत्वपूर्ण है।

विधान चन्द्र कृषि विश्वविद्यालय, मोहनपूर, नदिया, पश्चिम बंगाल ७४१२४२

बीज की सिफारिश मात्रा एवं बीजाई के नए तरीकेः

बीज की मात्रा सिफारिश के अनुसार प्रयोग करना और कतारौं में बुआई करें। बीज ड्रील मशीन, कम बीज और कम समय में ज्यादा क्षेत्र में बुआई करने में सक्षम होती है। यांत्रिक ड्रील से एक दिन में औसतन १२ से १५ एकड़ क्षेत्रफल में बिजाई संभव है। बीज ड्रील द्वारा बिजाई करने पर लागत लगभग ५० प्रतिशत तक कम हो सकती है। इस विधि से पोथो के बीच समान दूरी बनी रहती है और उनका विकास भी अच्छा होता है।

उचित पौध-पोषणः

फसल के विकास की महत्वपूर्ण अवस्थाओं में खाद एवं उर्वरकों की सही मात्रा का प्रयोग होना चाहिए। प्राय यह देखा गया है कि किसान सिफारिश की सीमाओं से कहीं ऊपर नत्रजन उर्वरकों का फसल में इस्तेमाल करते हैं। इन नत्रजन-युक्त उर्वरकों के अंधाधुंध प्रयोग से न केवल भूमिगत जल प्रदूषित होता है परन्तु ऊजोन परत, जो सूर्य की पराबैंगनी किरणों से हमें बचाती है उसको भी बुरी तरह से प्रभावित करते हैं। कुछ तकनीकें जैसे एलसीसी (लीफ कलर चार्ट), जो फसल में उचित नत्रजन की मात्रा उपलब्ध कराने में सहायक हैं और वैसे ही फॉस्फोरस की उपयोग क्षमता को बढ़ाने के लिए फॉस्फोरस घोलक बैक्टीरिया का उपयोग करके उर्वरकों की सही मात्रा में उपयोग किया जा सकता है। किसान मिट्टी की जॉच करवाकर सिफारिश के अनुसार संतुलित उर्वरक का प्रयोग करें ताकि उर्वरकों पर कम लागत आए।

जैव-उर्वरक का प्रयोगः

हरित कङ्गति के बाद रासायनिक खादों के अंधाधुंध प्रयोग से मिट्टी की उर्वकता धीरे-धीरे कम हो गयी है, जिसने उत्पादकता पर भी गहरा नकारात्मक प्रभाव डाला है अब समय है कि किसान फिर से जैविक खाद की तरफ रुझान करें। जैविक खाद जैसे गोबर की खाद, कम्पोस्ट या केंचुआ खाद आदि का प्रयोग भूमि के लिए लाभदायक पाया गया है। इसके अतिरिक्त जीवाणु कल्वर (राईजोबियम या एजोटोबैक्टर) का उपयोग भी उपज बढ़ाने में सहायक है। जैविक खाद के साथ-साथ उर्वरक के संतुलित प्रयोग से उच्च पैदावार प्राप्त होती है। जैविक खाद कम लागत के आदान हैं व तुलान्तक रूप से इनसे अधिक लाभ प्राप्त होता है। उदाहरण के लिये किसान गोबर के उपरे बनाकर उसे ईंधन के रूप में प्रयोग करते हैं अगर इसी गोबर को गोबर-गैस में इस्तेमाल करने के बाद यदि जैविक खाद के रूप में प्रयोग किया जाये तो और भी बेहतर परिणाम आएंगे। प्रायः यह देखा गया है कि किसान फसल की कटाई के बाद बचे हुए डंठलों को खेत में ही जला देते हैं जिससे मिट्टी के पोषक तत्व एवं मित्र जीव नष्ट हो जाते हैं और साथ ही यह प्रदुषण भी बढ़ाता है। किसानों को इसके विपरित कटाई के बाद खेत में एक बार मिट्टी पलटने के लिए हल चलाना चाहिये ताकि डंठल मिट्टी में दबकर उचित नमी द्वारा खाद में परिवर्तित हो जायें।

हरित खाद फेसले लगाएः

हरित खाद वो फसलें हैं जो दो फसलों के अंतराल में लगाई जाती है और बहुत तेजी से बढ़ती है। इन फसलों से न केवल भूमि के पोषक तत्वों में वृद्धि होती है अपितु इनके इस्तेमाल से भूमि कटाव रुकता है, पानी का

रिसाव कम होता है, मिट्टी की संरचना बेहतर होती है एवं नमी संग्रहण होता है। जैसे कि फलीदार फसलें, सैंज इत्यादि का प्रयोग हरी खाद के रूप में किया जा सकता है।

अंतरवर्तीय फसल पर ध्यान दें:

एक ही खेत में दो या दो से अधिक फसलों को एक साथ लगाने की विधि को अंतरर्वर्तीय कृषि कहते हैं। अंतरर्वर्तीय कृषि से फायदे मुख्यतः सामान क्षेत्रफल में ज्यादा आमदनी, एक फसल क्षतिग्रस्त होने पर दूसरी द्वारा बचाव, मिट्टी से बेहतर पोषक तत्व लेने की शक्ति आदि हैं। किसान गेहूं, जवार, मक्का, कपास आदि फसलों के साथ अंतरर्वर्तीय फसल के रूप में चना, उड्ड, अरहर आदि लगाकर कृषि को लाभदायक बना सकते हैं।

उन्नत सिंचाई विधियों को अपनाएः

उन्नत सिंचाई साधनों के इस्तेमाल से किसान समय, श्रम व पानी की बचत कर सकता है और इससे पौधों का विकास भी बेहतर होता है। कतार (अलटरनेट) सिंचाई, फुहार सिंचाई (स्प्रिंकलर), टपक सिंचाई (ड्रिप) आदि सिंचाई विधियों का प्रयोग और फसल की कतारों के बीच अवरोध (मल्ट्य) परत आदि तकनीकों का उपयोग करके सिंचाई करनी चाहिए। सीमित पानी की उपलब्धता के तहत वैकल्पिक फसल या फसल प्रणाली का प्रयोग करें। यद्यपि टपक एवं फुहार सिंचाई तकनीक महंगी होती है, परन्तु फलों एवं सब्जियों के लिए यह उपयुक्त हैं क्योंकि इनमें उपज के दाम भी बेहतर मिलते हैं।

पौध-संरक्षण को अपनाएँ:

समेकित नाशी-जीव प्रबंधन (इंटीग्रेटेड पेस्ट मैनेजमेंट) पौध संरक्षण की एक ऐसी प्रणाली है जिसमे जैविक, यांत्रिक और रासायनिक पद्धतियों से कीटों को नियंत्रित करने का प्रयास किया जाता है। इसमे कीटों का सम्पूर्ण उन्मूलन करने का प्रयास नहीं किया जाता अपितु उन्हें इस स्तर पर रखा जाता है कि वो नुकसान के न्यूनतम स्तर को पार न कर पायें। इस प्रणाली से कृषि पर खर्च भी कम होता है और पर्यावरण भी तुलात्मक रूप से सुरक्षित रहता है। इनके नियंत्रण के लिए स्वच्छ कृषि, पर्जीवी व शिकारी कीड़ों व कीड़ों को हानि पहुँचाने वाले फूंदोंव वायरस का प्रयोग किया जाता है। इनके अलावा नीम, हींग, लहसुन के उपयोग, अंतरवर्तीय फसलों, ट्रैप, प्रकाश प्रपंच आदि वैकल्पिक साधनों के उपयोग से भी लागत कम और उत्पादकता बढ़ाई जा सकती है। कीट या रोग से नुकसान की उचित सीमा (इकनोमिक थ्रेशहोल्ड लेवल) को पहचाने या अपने निकटतम अधिकारी/वैज्ञानिक की सहायता लें और उनके द्वारा बताये गए उचित प्रबंधन का प्रयोग करें।

समाकलित खेती को अपनाएँ:

इस प्रकार की व्यवस्था में कृषि उत्पादक के साथ-साथ पशु-पालन, मछली पालन, वानिकी, रेशम-उत्पादन इत्यादि को भी सम्मिलित किया जाता है। जिससे प्रति क्षेत्रफल बेहतर उत्पादकता अर्जित की जा सकती है। समाकलित कृषि से किसान की लाभप्रदता में वृद्धि होती है क्योंकि इसमें खाद और चारौ का इंतजाम खरीदकर नहीं करना होता है। यह किसान को अपनी कृषि क्रियाओं से ही प्राप्त हो जाता है। इस व्यवस्था के तहत कई तरह की फसलों को उगाने से और अन्य माध्यमों से किसान को संतुलित आहार प्राप्त होता है।

सही समय पर कटाई, उचित छंटाई एवं भण्डारणः

सही समय पर कटी फसल सही तरीके से पक जाती है जिसका अच्छा बाजार मूल्य मिलता है और किसान की सुखाने और संरक्षित करने की मेहनत और खर्च बच सकता है। किसान अपने उत्पाद को अलग-अलग किस्मों में छांट कर बेचें। शैणीकरण करने से उत्पाद की भौतिक दिखावट में सुधार होता है और बेहतर मूल्य प्राप्त होता है। अनुचित भंडारण कारणों से उत्पाद की गुणवत्ता कम हो जाती है फलस्वरूप अच्छा बाजार मूल्य नहीं मिल पाता।

प्राथमिक प्रसंस्करण विधियों अपनाएः

प्रसंस्करण से न केवल भण्डारण आयु बढ़ती है अपितु उत्पाद के मुल्य में भी वृद्धि में भी वृद्धि होती है। किसान भाई स्वयं सहायता समूह बनाकर अपने उत्पाद स्वयं प्रसंस्कृत कर सकते हैं, जिससे गावों में लोगों को रोजगार भी मिलेगा।

सक्षमता कष्टि तकनीक एवं परिशब्द खेतीः

परिशुद्ध खेती उपग्रह के प्रयोग, कंप्यूटर, मोबाइल और अन्य सूचना तकनीकी यंत्र पर आधारित व्यवस्थित प्रबंधन है। इससे पोषक तत्वों के सही मात्रा और सटीक समय पर प्रयोग के लिए सही जानकारी मिल सकती है।

इससे हम कीटनाशक तथा अन्य आदानों के संतुलित प्रयोग कर सकते हैं। यह आधुनिक तकनीक है और अभी इस तकनीक को व्यापक बनने में कुछ समय लगेगा।

फसल बीमा

भारत में कृषि प्राकृतिक आपदाओं जैसे सूखा, बाढ़ आदि से प्रभावित होती है जिससे किसानों की फसल पर काफी असर होता है। कृषि बीमा प्राकृतिक कारणों से होने वाले कृषि नुकसान की भरपाई सस्ते में करने का एक अच्छा समाधान है। फसल बीमा हाने के कारण किसान फसलों की नई किस्म और नई कृषि तकनीकों को भी प्रयोग में ला सकता है क्योंकि यह जोखिम, बीमा द्वारा रक्षित होता है। फसल बीमा प्राकृतिक आपदाओं से किसानों की रक्षा और अगले सत्र के लिए अपने क्रेडिट पात्रता सुनिश्चित करने के लिए आवश्यक है। इस प्रयोजन के लिए भारत सरकार ने देश भर में कई कृषि योजनाओं की शुरुवात की है, जैसे-व्यापक फसल बीमा योजना, प्रयोगिक फसल बीमा, कृषि आय बीमा योजना, राष्ट्रीय कृषि बीमा योजना आदि।

कृषि भूमि और फसल की उत्पादकता बढ़ाने के लिए उत्पादन की लागत को कम करने के लिए सुधार कृषि प्रथाओं का उपयोग करें और सरकार द्वारा समर्थन मूल्य को ध्यान में रखें। इसके अलावा किसान विभिन्न कृषि कार्यक्रमों में भागीदारी बढ़ाएं जिससे उन्हें नवीनतम तकनीक एवं कृषि की जानकारी हो।



₹ 8,000-crore fund to help milk co-ops expand capacity

NABARD will soon get going on a ₹8,000-crore fund to support the dairy sector. Under the Dairy Processing and Infrastructure Development Fund, NABARD is the nodal agency to finance projects over a period of three years. It targets to sanction proposals to create new milk processing capacity of 27 million litres per day in the cooperative sector this year. "This year, 39 projects by various cooperative dairies will be cleared under the dairy processing and infrastructure development fund, entailing an investment of ₹600 crore to ₹1,000 crore," NABARD Chairman Harsh Kumar Bhanwala said. "With this investment, the milk processing capacity (in the co-operative sector) would increase from the current 66 million litres per day to 92.6 million litres per day. Further, the bulk milk-chilling capacity would go up from 48

million litres per day to 63 million litres," said Bhanwala.

The dairy processing infrastructure of cooperatives needs modernisation and capacity enhancement, and with most cooperatives sharing their profits with milk producers they need support, the officials said. In the current setup, NABARD would lend the fund to the National Dairy Development Board (NDDB) and the National Cooperative Development Corporation (NCDC) at 6% per annum. The two agencies would on-lend it to eligible borrowers at 6.5%. The Agriculture ministry has prepared the operational guidelines to disburse the funds and these will be issued soon, officials said. A memorandum of agreement is expected to be signed by the ministry with NABARD, NDDB and NCDC.

Technology to the rescue of carrot farmers in Bharatpur

A machine for washing agricultural produce is helping farmers grow carrots at Indroli village in the Bharatpur district of Rajasthan. Two carrot washing machines installed in the village have enhanced farmers' profits. "Carrots are grown on land measuring about 500 acres in Indroli during winter. The replacement of manual washing with the mechanical devices has immensely helped us in increasing our production, Lal Singh Saini, who brought the first carrot washing machine to Indroli four years ago from Punjab.

Villagers with a bumper crop of carrots in the current season are sending about 100 quintals of it every day, after washing, to the agricultural mandi at Kosi Kalan in neighbouring Uttar

Pradesh, from where it is supplied to markets in cities like Delhi, Gurugram and Agra. Mr. Saini, a landowner, said farmers in his village had earned ₹2 crore over the past three months as a result of fast and clean washing of carrots with the machines. "Our produce is sold in the market just with the identity of Indroli. Our carrots are big, shining red, and nutritious," he said.

The other machine installed in the village was manufactured locally as an imitation of Mr. Saini's apparatus. Both machines are used by their owners and also rented out for use by other farmers. Bharatpur-based Lupin Foundation provides technical assistance for their maintenance.

Govt introduces 45kg urea bags in place of 50kg to cut demand

The government has introduced 45kg bag of urea in place of existing 50 kg bag with a view to bringing down the consumption by 10%. Urea manufacturers have been given six months for smooth implementation. The consumption of urea stood at 296 lakh tonnes last fiscal. "In the light of increased effectiveness of NCU (neem-coated urea), government has decided to introduce 45 kg bag of urea in place of existing 50 kg bag," Minister of State for Chemicals and Fertilisers Rao Inderjit Singh said.

"Since farmers mostly assess the requirement of urea in

terms of bags for agriculture purpose, it is estimated that the availability of urea in 45 kg bags instead of 50 kg bags may bring down consumption of urea by 10%," he said.

The consumption of neem-coated urea stood at 296.14 lakh tonnes in 2016-17 as against around 306 lakh tonnes each in the previous two years. To encourage balanced use of fertilisers, the government has made it mandatory for all the domestic producers of urea to produce 100% as neem-coated urea. Urea production was 242.01 lakh tonnes in 2016-17.

For persistent farmers, vanilla brings flavour of success

Vanilla cultivation seems to have turned a viable proposition for farmers, in Kerala, Karnataka and Tamil Nadu has benefited from the harvest as the crop prices are now ruling at ₹5,500/kg for green beans and ₹30,000/kg for dry beans.

The three-month harvest season, which ended in December, recorded a production of around 10 tonnes from the three States.

Joseph Sebastian, a vanilla farmer of Thangamony in Kerala's Idukki district, told that flowering for the next season should start in April and a renewed interest among farmers might perk up the production the next season. Prices have been on the higher side in recent times due to low yield in Madagascar because of climatic issues. This, coupled with the declining production in Indonesia, helped push up domestic prices.



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Key Financial Indicators of the Bank as on 31.03.2017

(₹ in crores)

Sl. No.	Particulars	Position as on 31.03.2016 (opening Balances)	Position as on 31.03.17	% of Increase/ Decrease
1	Paid - up Share Capital	109.27	120.48	10.26
2	Reserves	417.50	432.47	3.59
3	Owned Funds	52.677	552.97	4.97
4	Deposits	3252.41	3424.38	5.29
5	Borrowings	3055.37	3202.04	4.80
6	Investments including call & Short Term deposits	2865.34	2813.49	-1.81
7	Loans & Advances	4080.28	4457.90	9.25
8	Net Profit (after tax)	16.97	26.55	56.45



Dr. Nethi Muralidhar
Managing Director



Shri. Konduru Ravinder Rao
President, TSCAB

Yet, not many farmers are ready to take up vanilla cultivation as it is a labour - intensive crop and requires manual pollination of flowers. Besides price volatility of the crop, he

RBI launches ₹ 10 notes
The RBI has come out with a new design and chocolate-brown coloured ₹10 note. The bill will have the same height of 63mm but the width will be 123mm — slightly lesser than the existing width of 137mm.

Besides the colour and the size, another difference is that the reverse of the bill will carry a motif of the Konark Sun Temple. The existing ₹10-note carries the image of Indian fauna - rhinoceros, elephant and tiger. The central bank said that it would be putting out the new note into circulation bearing the signature of RBI governor Urjit Patel soon. The bill has other designs and geometric patterns aligning with the

Profits of DCCBs decline, bad loan ratio rises

Maharashtra's District Central Co-operative Banks have reported a decline in profits but showed a rise in non-performing assets (NPAs) during the fiscal that ended in March 2016. Figures released by the Reserve Bank of India (RBI) in the last week of December 2017 show that 31 DCCBs posted a lower profit ₹ 328.2 crore in the 2016 fiscal against ₹ 559 crore in the same period last year. Gross NPAs of these co-operative banks to advances ratio rose from 14% to 15% during the year.

Coir sector seeks measures for product value addition

The Coir Board is looking to encourage setting up of large industries to make value-added coir products. S. Mahesh Kumar, Director of the Federation of Indian Coir Exporters' Association, said that there was an increasing trend of exporting the raw material (coir fibre) to countries especially China. And, there have been instances of coir mattresses being exported back to India by China.

A scheme with a difference

"Baniya deta mandi mein, jo bachta hai woh sarkar deti hai" (what the trader gives in the market, the government gives the balance). That's Bhavantar Bhugtan Yojana (BBY) for Arjun Singh Sendhav with five-bigha (2.9 acres) farmer from Chaubara Jagir village is a beneficiary of this scheme that the MP government launched in October, four months after widespread agrarian protests over falling crop prices.

Sendhav sold 18.86 quintals of soyabean at the Sonkatch agriculture produce mandi from October 16 to 24 in four instalments, for which he received between ₹ 2,500 and ₹ 2,600 per quintal. Apart from what he got from traders, the young farmer was entitled to ₹ 8,464 of payments under BBY, in which the state government credits the difference between the minimum support price (MSP, which is ₹ 3,050 for soyabean) and the corresponding "modal rate" (which was fixed at ₹ 2,580 for October, based on average prices

said labour shortage, threat of fungal disease, also discouraged many from taking up vanilla farming.

in chocolate brown colour

overall colour scheme, both at the obverse and reverse. Existing bank notes in the denomination of ₹ 10 will continue to be legal tender.

Other features of the new bill include a see-through register with denominational numeral 10, written also in Devanagari script, and a portrait of Mahatma Gandhi at the centre. The new note will continue to have windowed de-metallised security thread with inscriptions Bharat (in Devanagri). Like the other new-series notes, the ₹10 bill will have the year of its printing on the left, the 'Swachh Bharat' logo with its slogan, and a language panel.

bad loan ratio rises

In terms of bad loans, Maharashtra ranks fourth behind Jharkhand that reported NPAs of 47.6%, Bihar, 24.5% and Jammu & Kashmir at 15.1%. DCCBs in Rajasthan reported the lowest NPA to advances ratio of 3.8% among states. Punjab DCCBs, too, showed a lower NPA ratio of 4.8%. In the case of State Co-operative Banks (SCBs), Maharashtra reported a decline in profit, from ₹ 410 crore to ₹ 242 crore, during 2016 fiscal. However, it managed to bring down NPAs from 11.7% to 9.3%.

product value addition

In an effort to promote value addition in the country, the board is expected to unveil a scheme under which 25% subsidy would be offered for a ₹10 crore investment in plant and machinery. Applications for the scheme would also be processed in less than a month from the date of submission. The demand for coir geo textiles and rubberised coir sheets used in mattress sector is high in countries such as the U.S.

A scheme with a difference

prevailing in mandis) directly into the bank accounts of farmers.

Sendhav has so far got only ₹ 2,594 out of the total price difference payable. "I have no reason to doubt them because my younger brother (Bhim Singh Sendhav) got the full price difference of ₹ 4,644 on the nearly 10 quintals that he had sold at one go," says Sendhav.

Standing next to the wheat crop at his field in Gandharvpuri, about 10 km from the Sonkatch mandi, Babloo Doliya is a happy man, having received ₹3,691 under BBY. "I had no clue what the scheme was when I had registered under it in August.

Vikram Singh Patel, who farms 20 bigha (11.5 acres) at Dehri village in Kannod tehsil of Dewas, feels BBY is a good scheme, especially since the money is deposited directly into bank



accounts. Patel has sold 43.29 quintals of soyabean in all, but has got only ₹ 2,500 out of his ₹ 20,346 price difference amount.

Millet Mission to promote nutrient-rich cereals; ₹800-crore outlay on the cards

In the National Year of Millets, the Centre proposes to adopt a mission-mode approach to promote the nutrient-rich cereals, including sorghum, ragi and foxtail millets with an outlay of ₹800 crore for the next two years to boost production of these cereals, which are naturally rich with protein and nutrients such as iron, calcium and zinc, and also consume less water and inputs, thus being ecologically sustainable.

Nutrition security

The proposed mission, will be implemented in at least 16 of the 21 States that grow millets. Besides supporting farmers with technical inputs, including seeds, it will focus on farm-gate processing, aggregation, and provide linkages to the value addition industry and markets.

Also, seed hubs are being planned in major millet growing States and a referral lab is being set up at the Hyderabad-based Indian Institute of Millets Research to give a fresh impetus to R&D activities. On the demand side, the proposed mission will focus on creating consumer awareness. India, which grows over half-a-dozen varieties of millets, produces around 20 million tonnes of these nutri-cereals, which make

Landless cultivators to be farmers too

Over 14 crore households who cultivate on land owned by others under a formal lease agreement or even under a temporary arrangement overseen by the gram panchayats or other official functionaries may soon start getting assorted sops doled out to "farmers" by the government just as their land-owing counterparts do. According to official sources, the definition of farmer will be changed via a gazette notification to include cultivators who don't own the farm

But irrespective of success, one thing is clear: the Bhavantar scheme has made some difference on the ground.

Millets in mid-day meal

Speaking on the national roadmap for millets at the International Trade Fair on organics and millets in Bengaluru, Agriculture Secretary SK Pattanayak said the NITI Aayog has recommended including millets in the public distribution system. Making a pitch for inclusion of millets into the mid-day meal schemes in schools, especially in aanganwadis, where they can help tackle malnutrition, Pattanayak also called upon growers to place millets on the supermarket shelves of the US.

In fact, Akshaya Patra, the mid-day meal implementing agency in Karnataka, has recently launched a pilot with a millet-based diet in Bengaluru and has started distributing a millet-based snack to school children in Telangana.

Karnataka gets Asia's largest drip irrigation project with Israeli tech

land being used by them, on the lines of the recommendations made by the Ashok Dalwai Committee recently. The panel said without the proposed definitional change that would make landless farmers eligible for benefits, "the objectives of the government intervention, which are all meant to improve the status of agriculture in the country may not be equitable and inclusive".

The largest drip irrigation project in Asia, the Ramthal project in Karnataka, executed by Megha Engineering and Infrastructures Limited (MEIL), has been commissioned. Netafim, an Israeli corporation, has provided technical assistance for this project, which is based on the Israeli drip technology. The Ramthal Marola project in the Bhagalkot district of Karnataka has been implemented by Krishna Bhagya Jala Nigam Limited. MEIL will be in charge of the operation and maintenance of this project for the next five years. A total of 2,150 km length of pipeline was laid for this drip irrigation project.

As a part of this drip irrigation scheme, every farmer will receive water through a cylinder installed in their respective farmlands. And the system enables them to mix fertilisers and pesticides in the cylinder. This system will help in eliminating water wastage and the technology used in this project will also purify the wastage that flows in the backwaters of River Krishna. The project is expected to reduce water and pesticide usages, costs and increase yields for the farmers. MEIL deployed specially manufactured pipes for longer duration use.

After the operations and maintenance period of five years, MEIL will hand over the project to the farmers. Every year farmers are to deposit ₹1,300 per acre in the bank. After five years, this amount will be used in case of requirements.



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SEMINAR ON RESTRUCTURING OF ARDBs on 15th to 17th January 2018 at National Institute of Rural Banking, BANGALORE

A three days' Seminar on Restructuring of ARDBs was organised by the Federation from 15th to 17th January 2018 at NIRB, Bangalore. In all 28 participants from Bihar, Gujarat, Karnataka, Kerala, Punjab, Tamil Nadu and Uttar Pradesh SCARDBs have participated in the Seminar. The Seminar was inaugurated by Shri P.V. Prabhu, Trustee-Secretary, NIRB who delivered the key note address. Shri K.K. Ravindran, Managing Director of the Federation while delivering his talk on **Status of LTCCS – Major Challenges and Reform initiatives by the Federation** indicated that it was considered expedient to interact with the Senior and middle level officials of ARDBs the various challenges being faced by the LTCCS because of the inherent structural weaknesses like one product, viz., investment credit, being offered to the clientele and high level dependency on external institutions like NABARD for resource support. ARDBs are not having adequate own resources to meet the growing demands of investment credit. He drew the attention of the participants that ARDBs need to be self-reliant, self-supportive by generating adequate resources thereby reducing the dependency on any particular agency for refinance. Increased accretion to internal resources would make the ARDBs eligible for borrowing from other agencies on the strength of ARDBs' own resources.



Seen on dais (L-R) Shri. R. Venkataswamy, Director, NIRB, Shri. P.V. Prabhu Trustee-Secretary, NIRB, Shri K.K. Ravindran, Managing Director, NCARDBF, Shri V. I. Ganesan, Senior Consultant, NCARDBF

Sessions on Appraisal of Farm and Non-farm sector projects, NPA Management and Recovery, Human Resource issues and solutions, Financial Inclusion/PMJDY and Role of Cooperatives, Business Expansion for development - How to improve the flow of investment credit through LTCCS and changing business initiatives etc. were handled by Shri R. Venkataswamy, Director, NIRB, Shri V.I. Ganesan, Senior Consultant of the Federation and Faculty Member of NIRB. This was followed by a field visit to Mysuru PCARDB for understanding its working. The participants were highly appreciative of the usefulness of the Seminar and requested the Federation to continue to hold such Seminars regularly. A few photographs taken during the course of Seminar are appended.





CMFRI begins programme to train 5,000 fishermen in sea cage farming

Central Marine Fisheries Research Institute (CMFRI) has started a major project for boosting the open sea cage farming in Indian waters by launching a training course for 5,000 fishermen. Cage fish culture or farming is a practice of growing fish in confined areas, which facilitate feeding, harvesting and other management procedures. It has been established as an intensive fish farming system and India, with its abundant water bodies, including the backwaters, estuaries and offshore sea, offers tremendous potential for cage farming. This method is prevalent and quite successful in Vietnam and Scandinavian countries. While speaking on the inauguration of the training programme, CMFRI director A Gopalakrishnan said the cage fish farming technology has proved 70 times more productive than the normal methods of the fish farming in ponds. "Conventional pond culture of marine fishes produce an average 0.5 kg/m³ (5000 kg/ha) whereas cage farming offers a production of 35 kg/m³", he said.

Four schemes launched in agriculture and allied sectors

The state government launched four schemes to promote entrepreneurship in agriculture and allied sectors among the economically backward segments. It would include imparting training to 2.5 lakh youths across rural Maharashtra.

Apart from providing loans and interest subsidies, there is a provision to impart skill development training in fields related to agro-industries and allied services. The larger objective is to generate employment avenues for rural youths in agriculture and related industries.

The four schemes were formally launched by Chief Minister Devendra Fadnavis in Mumbai. The Annasaheb Patil Arthik Backward Development Corporation (APABDC) is the nodal body for the four schemes. The corporation, which is provided a dedicated budget by the state government,

CMFRI has already commenced the process to establish a brood bank of high value marine fishes suitable for cage farming with a financial support of ₹ 9 crore from the NFDB. Mariculture Division of the CMFRI is coordinating the training programme to fishermen. Imelda Joseph, head of Mariculture Division said that by 2030, fish consumption in developing and developed countries is expected to increase by 57% and 4% respectively, adding that the open sea cage farming proved economically viable as it required comparatively less cost of capital input. Species such as cobia, seabass, groupers, snappers, mullet, lobster and pearl spot are highly suitable for cage farming in sea waters.

The project envisages accelerating the process for ushering in the 'Blue Revolution' by providing effective training to 5,000 fishermen across the country with a financial support of nearly ₹1 crore from the National Fisheries Development Board (NFDB) under the ministry of agriculture.

agriculture and allied sectors

would also provide interest waiver on loans availed by economically backward entrepreneurs in agriculture and related industries.

The four schemes include extending loan along with interest subsidy. The second would be for group farming, the third for group projects related to agro-industries, small and medium scale entrepreneurs and the fourth relates to skill development training in agriculture. The beneficiaries would be in the age group of 18 to 41 years depending on category.

The annual income of the family of the individual who takes the loan cannot exceed ₹ 8 lakh. The banks will provide loans to eligible candidates. The interest would be borne by APABDC. The repayment of the principle would stretch between seven months of taking the funds up to 84 months, in equal installments.

Sikkim organic produce to reach market in govt vehicles

Sikkim Chief Minister Pawan Kumar Chamling said the state government would provide a vehicle in each Assembly constituency for bringing fresh organic produces to the market. The state government's decision is apparently

aimed at mitigating shortage of vegetables and fruits in the market in future, as supply of non-organic produces from outside Sikkim will be banned from April 1, 2018.

State has highest allocation of bank credit, but lags in growth

Maharashtra is the state with the highest allocation of bank credit in India but the growth in the six months till December was one of the lowest, shows data released by the RBI. Total bank credit in Maharashtra at the end of December was ₹ 23.16 lakh crore, almost 28% of the country's total. This was a growth of 2.91% from the number at the end of June, the data shows. Overall bank credit stood at ₹ 83 lakh crore at the end of December, up 6.1% from six months earlier. Among

the top 10 states in terms of quantum of credit allocation, Andhra Pradesh recorded the fastest growth at 13.42%, followed by Kerala at almost 10%. Maharashtra did not fare well in terms of deposits increase. Growth in the six months to December was 1.02%. Deposits at the end of December stood at ₹ 21.60 lakh crore in the state, about 20% of the country's total.



Maharashtra adopts food park model to enhance farmers' income

The state government has taken the decision to float a chain of regional food parks to take ahead its policy of providing minimum support price (MSP) to the farmers across Maharashtra. Chief Minister Devendra Fadnavis has mooted the concept of incorporating the food park model towards sustainable agriculture and also higher income for the farmers.

The food parks which have been planned spans across Satara, Ahmednagar, Wardha, Nagpur, Nashik, Jalgaon, Latur and Sindhudurg.

Where Women Stand & the way ahead

As a recent International Monetary Fund research pointed out India's GDP can expand by 27% if only its women get equal opportunity to participate in the workforce as much as men. We need many positive interventions to correct the gender gap in all aspects of work, life and play.

The government is doing some - launching the Beti Bachao Beti Padhao and Sukanya Samridhi Yojanas. It has also made 26 week's maternity mandatory leave mandatory.

An actionable strategy to make doubling of farmers' income possible

The goal to double farmers' income (DFI) by 2022 set by the Prime Minister is the paradigm shift in the agricultural policy with focus is now on the "profitability" rather than simply the "productivity" aspect of farming. The Modi government has further launched a number of schemes such as Pradhan Mantri Krishi Sinchayee Yojana, Pradhan Mantri Fasal Bima Yojana, Soil Health Card, Neem-coating of Urea and e-NAM (electronic National Agriculture Market) for achieving sustainable agricultural growth.

This article focuses on a few broad actionable strategies that the Centre as well as state governments may prioritise in order to make DFI a reality.

Institutional and Governance Reforms

Many reforms relating to agricultural marketing, warehousing, land leasing, contract farming, etc. have been recognised as key to meeting the DFRI objective. Issues concerning revitalising the farm extension network, skilling youth for setting up scientific agri-food system enterprises, strengthening the institutional credit structure, improving post-harvest management and promoting farmer producers' organisations/companies (FPO/FPC) need to be focussed.

Climate-smart agri-technologies

Adaptation and mitigation strategies to address climate change challenges have to be at the forefront of any agricultural policy agenda today. Research, too, has to be designed to suit local crop ecology and promote sustainable farm management in terms of soil, water and energy use.

The primary concern for a food park is the high power cost. At commercial rates it works to ₹ 8 to 9 per unit. But if the food parks are provided solar feeders, electricity cost will become ₹ 2.75 per unit to ₹ 3 per unit.

At Wardha, the government has planned an orange processing unit with Coco-Cola spread over 500 acres of land. The fruits and vegetables processed in the state does not exceed 1.5% of the overall production. Almost 35 to 40% of the fruits and vegetables are wasted in absence of food processing units in state.

Companies with over 50 employees are also obliged to provide creche facilities. India Inc too is seeing the fruit of such positive intervention. The Companies Act of 2013 mandated a certain class of companies to have at least one woman director on board. Now, out of 1,723 NSE listed companies, 1,667 companies had met the mandate of one woman director on board, according to data from Prime Database.

Food and Nutrition Security

There can be no inclusive growth without nutrition security - a shift in focus from calorie intake towards delivering nutrition. Neglected crops such as pulses and millets are now receiving attention, not only because of their high protein and nutrition-dense characteristics, but also for their climate resilience and low carbon and water foot-prints. Moreover, consumer demand and dietary patterns are slowly changing, creating a potential market for growers of these "smart crops". The government should also move from a "cereal-centric" policy focused on subsidised procurement and distribution of rice and wheat to a diversified mix of nutritious millets and legumes.

Stable Farm Export Policy

India ranks second in overall agricultural production, next only to China. Without an open and stable farm export policy, there's no predictability for farmers to access global markets and obtain the best possible prices for their produce. Movement to high-value crops (in protected cultivation, wherever possible), developing and exploiting the market for organic produce, creating farm export clusters, complying with international food-safety requirements, and doing away with multiple authorities for monitoring/regulating agricultural trade are the need of the hour.

An integrated value-chain approach

Farmers must be integrated into modern value chains that can raise their incomes and also minimise the risks arising from middlemen and markets. There should be integration of



The Haryana State Co-operative Agriculture and Rural Development Bank Ltd., Panchkula.

Date of Establishment : 1st November 1966
Number of Affiliated Banks : 19 District Co-op. Agri. & Rural Dev. Banks

Performance and Target

Sr. No.	Sector/Schematic	Projected Target for year 2015-16	Advancement 2015-16	Projected Target for year 2016-17	Advancement 2016-17
1	Minor Irrigation	56.25	67.47	75.00	38.34
2	Farm Mechanisation	15.62	6.68	25.00	3.08
3	Land Development	25.00	23.63	33.00	13.81
4	Dairy Development incl. Cattle Shed	15.62	11.21	25.00	6.42
5	Hort./Farm Forestry	15.63	18.37	23.00	11.44
6	Rural Housing	21.88	8.92	29.00	5.10
7	Non Farm Sector	25.00	22.28	32.00	13.88
8	Purchase of Land	15.63	3.42	23.00	2.37
9	Rural Godowns	3.12	0.06	5.00	0.41
10	Others	56.25	6.38	80.00	3.49
TOTAL		250.00	168.42	350.00	98.34

Loan Schemes

1. Rural Housing Scheme;
2. Combine Harvester;
3. Strawberry Cultivation;
4. Scheme for setting up of Agri-clinics & Agri-business Centres for Agri. Graduates;
5. Cattle Shed Scheme;
6. Financing of Community Hall;
7. Rural Educational Infrastructure
8. Marriage Palace, all kinds of IT activities and other services;
9. The Bank has opened the window of credit for replacement of defunct tubewells with new Submersible tube wells.
10. Purchase of Agri. Land
11. Straw-Reaper;
12. Commercial Dairy for Self Employment
13. Financing of Medicinal & Aromatic Plants;
14. Financing of 2-Wheelers to Farmers;
15. Rural Godown;
16. Organic Inputs;

Incentive Schemes for Loan Repayment

- 5% interest rebate scheme of Govt. of Haryana for prompt repayment extended upto 31.03.2018.
- Bank extended benefit of Rs.114.33 crs. to loanees under the Recovery linked OTS scheme implemented by the Govt. of Haryana from 10.11.2013 to 31.07.2016.

DHANESH ADALAKHA
Chairman
HSCARDB PANCHKULA

NARESH GOYAL
Managing Director
HSCARDB PANCHKULA

post-harvest, marketing and processing infrastructures, adding value and quality to the raw produce of farmers through FPOs/FPCs.

Digital Agriculture as backbone for modern farming

Use of ICT has been successfully tested for timely delivery of

Solar pumps: A nondescript village in Gujarat shows the way

The NDA government, which announced the proposed ₹1.44 lakh crore solar irrigation scheme in the Union Budget 2018-19, had got its inspiration from the success of half a dozen farmers in a nondescript village in Kheda district in Gujarat. The farmers, with technology assistance and funding from two international agricultural research organisations - International Water Management Institute (IWMI) and CGIAR research programme on Climate Change (CCAFS) - deployed solar irrigation pumps two years ago, but managed to accrue multiple benefits. "Solar irrigation pumps, apart from giving them a clean and cost-effective way to irrigate their fields, helped them generate substantial non-farm income by selling surplus electricity to the grid," said Tushar Shah, a research fellow at IWMI's field unit in Anand. Besides, they also contributed their bit to the ongoing national effort of reducing carbon emissions.

These six farmers in Dundhi village in Kheda formed the world's first solar pump irrigators' cooperative at the

cropping, weather and price information to farmers. All these digital agriculture initiatives require a robust data infrastructure, which, when integrated with Aadhaar, will also make for a monitoring and evaluation system to track farmer incomes and implementation of various government

Solar pumps: A nondescript village in Gujarat shows the way

instance of the IWMI-CCAFS in early 2016. For the farmers, the IWMI-CCAFS team set up a 7.5-10.8 kWp (kilo-watt-peak) capacity solar irrigation pumps which were connected to each other in a micro-grid.

So far, these farmers have been able to rake in a total of ₹7 lakh from selling surplus power. Besides, they were able to generate additional revenue by irrigating their neighbouring fields," said the IWMI official. Using solar pumps has larger societal benefits as well. They reduce the carbon footprints of farming which is said to be 5 per cent of the cumulative carbon dioxide. In addition, they would also help reduce amount of groundwater withdrawn.

In India, there are around 18 million grid-connected irrigation tube-wells which account for an estimated ₹70,000 crore of power subsidies. But solar irrigation pumps may offer a way-out perhaps. Under the Kusum scheme, the government has proposed to provide for 17.5 lakh solar irrigation pumps.

After waiver, disbursement of crop loans plummets from 72% to 41%

The loan waiver has hit crop loan disbursements by banks in the state, data from the state-level bankers committee (SLBC) till the end of January shows.

In 2016-17 till the end of January, the state's banks achieved 72% of their crop loan target. But during the same 10-month span in 2017-18, they have achieved just 41% of their target. In absolute terms, disbursal has fallen by ₹ 15,004 crores. In 2016-17, banks lent ₹ 37,099 crore till the end of January. By 2017-18, the figure fell to ₹22,095 crore. The reason, bankers say, is that recoveries from farmers have been hit since they

Rajasthan govt waives loans of up to ₹ 50,000

Rajasthan chief minister Vasundhara Raje announced a waiver for farm loans up to ₹50,000 taken by small and marginal farmers. The waiver will cost the state exchequer ₹8,000 crore. Raje said 20 lakh farmers would benefit as outstanding loans taken from co-operative banks are waived. However, the budget makes a provision of only ₹2,000 crore for the loan waiver and the remaining ₹6,000

are waiting for the waiver payout. Unless defaults are cleared, banks do not extend fresh loans. The new sowing season begins in June.

Of the state's crop loan target of ₹54,221 crore in 2017-18, the highest share is that of scheduled commercial banks followed by commercial banks and then public sector banks. The highest disbursement so far has been of ₹ 13,001 crore from scheduled commercial banks. The lowest has been ₹665 crore from regional rural banks.

Mumbai 12th richest city globally; total wealth at USD 950 billion

crore would be passed on to cooperative banks in a staggered manner from next year. The state government has also earmarked ₹ 544 crore for providing short term crop loans and interest rate subvention. Around 60%, in the small and marginal category took short-term crop loans from cooperative banks.

wealth held by all the individuals living in each city. It includes all their assets (property, cash, equities, business interests) less any liabilities. Government funds are excluded from the figures. Mumbai, also features among the top 10 cities in terms of billionaire population. The city is home to 28 billionaires, individuals with USD 1 billion or more in net

has been named among the top 15 wealthiest cities globally, while New York topped the list. According to a report by New World Wealth, the economic hub of India is the 12th wealthiest city, followed by Toronto with a total wealth of USD 944 billion, Frankfurt (14th, USD 912 billion) and Paris (15th, USD 860 billion). Total wealth, refers to the private



assets. Regarding Mumbai, the report said, "total wealth held in the city amounts to USD 950 billion. Mumbai is the economic hub of India. It is also home to the Bombay Stock

Exchange (BSE), the 12th largest stock exchange in the world.

India's forest area shows rise of 6,700 sq km

India's forest cover increased by 6,778sq km over the last two years with Andhra Pradesh, Karnataka, Kerala, Odisha and Telangana increasing their green footprint during the period though there is a worrying decline in six north-eastern states, including shrinkage of 630 sq km in the eastern Himalayas.

While overall green cover, including tree patches outside

recorded forest areas, reported an incremental 1% increase (8,021 sq km) over the last assessment year in 2015, the quality of forests remain a hotly debated subject even as satellite monitoring has increased availability of data.

The increase, based on satellite data and subsequent 'ground truthing', has put the total forest cover at 7,08,273 sq km which is 21.54% of the country's geographical area.

State government paves way for privatisation of co-op mills

In a bid to script a turnaround of cooperative spinning mills and powerloom societies, the Maharashtra state government has decided to allow them to go in for privatisation. A new state textile department policy allows them to change land use, which means they can use it for reasons other than industrial purpose. According to the new policy, cooperative spinning mills and powerloom societies will be allowed to be privatised provided they are ready to return the government equity, loan and interest thereupon. Besides this, a charge has to be paid to the government for change in land use under the 'one-time exit policy'. The new policy will be in force till 2023.

There are 136 societies and mills across the state that had

sought funds in the form of share capital, out of which 66 are running, while some others are 'under installation'. A few have opted for liquidation and three have shut down.

The policy is aimed at generating 10 lakh new jobs in the next five years and doubling farmers' income by 2022 by attracting investments worth ₹36,000 crore. The government claims the policy will provide many benefits, including competitive power tariff and increased capital subsidy for SC/ST and minority categories. The policy lays special focus on strengthening the knitting, garmenting and hosiery sector which will create ample employment opportunities for women.

Punjab to install micro ATMs in co-op institutions across the State

To deliver effective core banking services at the village level, the Punjab government plans to install micro ATMs in all its 3,535 primary agricultural cooperative societies and district central cooperative banks under its rural financial inclusion plan. Additional Chief Secretary-cum-Financial Commissioner (Cooperation) D.P. Reddy said NABARD has accepted a proposal sent by the cooperative department to extend the digital transaction facilities to the rural populace and sanctioned 4,545 micro ATMs by financing 90% of the

cost of the device.

He said the Punjab State Cooperative Bank was providing credit services to all sections of society since its establishment in 1949 and was now making great strides towards fulfilling the aspirations of its stakeholders. He said after implementation of these core banking facilities, farmers would be able to get fertilizers and seeds from the nearest PACS by swiping the KCC card at the micro ATMs.

RBI sets up panel to monitor bad loans, rising cases of frauds, audits

Stung by the ₹ 11,400 crore fraud in Punjab National Bank, the RBI has constituted an expert committee under the chairmanship of Y H Malegam, a former member of the Central Board of Directors of RBI, to look into the entire gamut of issues relating to classification of bad loans, rising incidents of frauds and effectiveness of audits. The RBI also said it had confidentially cautioned and alerted banks of such possible misuse, at least on three occasions since August 2016, advising them to implement the safeguards and about

the potential malicious use of the SWIFT infrastructure.

The committee will look into the reasons for high divergence observed in asset classification and provisioning by banks vis-à-vis the RBI's supervisory assessment, and the steps needed to prevent it, factors leading to an increasing incidence of frauds in banks and the measures (including IT interventions) needed to curb and prevent it and the role and effectiveness of various types of audits conducted in banks in mitigating the incidence of such divergence and frauds,



the RBI said.

The members of the committee will be: Bharat Doshi, Member, Central Board of RBI, S Raman, former Chairman and MD, Canara Bank and former Whole-Time Member,

SEBI and Nandkumar Saravade, Chief Executive Officer, Reserve Bank Information Technology Pvt Ltd (ReBIT). A K Misra, Executive Director, RBI, will be the Member-Secretary of the committee.

Export-oriented aquaculture farms to have GPS database

The Marine Products Export Development Authority (MPEDA) has launched an initiative to develop a GPS-based database of export-oriented aquaculture farms in the country to ensure their traceability and quality control. Under the scheme, MPEDA is enrolling all the farms engaged in production of shrimp, shellfish and other exportable varieties of fish by providing farmers cards carrying a unique identification number (Farm ID) and quick response (QR) code containing basic information about the farm. MPEDA chairman A Jayathilak said the purpose of enrolment is to identify each farm and hatchery unit for extending the assistance schemes as well as ensure their traceability. The produce from the enrolled units can be traced from farm to consumer in case of detection of unwanted or unauthorised

substances in the produce.

The QR-coded cards were launched by Union commerce minister Suresh Prabhu and Andhra Pradesh chief minister N Chandrababu Naidu during the state government's Partnership Summit 2018 event here. An estimated 100,000 farms covering about 195,994 hectare are under shrimp culture in India. Out of this, MPEDA has collected GPS data for 65,595 farms covering 148,321 hectare, while enrollment has been completed for 54,165 farms. In Andhra Pradesh, more than 65,000 farmers covering an area of over 75,000 hectare has been enrolled in nine coastal districts of the state.

Foodgrain production may touch record 277 mn tonnes

India's overall foodgrain production may touch a record of 277.49 million tonnes in the 2017-18 crop year (July-June) with output of pulses and rice reporting a new high. The agriculture ministry released its latest estimates.

Option of extending the government's guarantee to banks and lending agencies to ensure that state agencies do not face fund crunch for procurement is likely to come up before the Union Cabinet for approval.

The move will help states go for procurement of pulses, oilseeds and cotton under the Price Support Scheme (PSS) through central nodal agencies and the other crops by state

agencies at the Minimum Support Price (MSP) without worrying about paucity of funds.

The basic objectives of PSS are to provide remunerative prices to the growers with a view to encourage higher investment and production and safeguard interests of consumers by making available supplies at reasonable prices.

The fall in wheat production can be attributed to farmers' decision to shift to pulses with the hope of better MSP. Farmers in Rajasthan, Punjab and western Uttar Pradesh shifted to pulses during the Rabi season.

Maharashtra APMCs join eNAM

Out of 60 Agriculture Produce Market Committees (APMCs) in Maharashtra, 30 have switched to digital transactions and have begun e-auctions. These 30 APMCs were part of the first phase of the Union agriculture ministry-promoted electronic platform National Agriculture Market (eNAM). Soon, 15 more mandis are expected to begin e-auctions as well. Maharashtra cooperation minister Subhash Deshmukh, who reviewed the functioning of the 60 market committees in the state, said that directives have been issued to completely stop cash transactions in these 30 committees

and move on to digital transactions. He stated assaying laboratories have been set up in 28 market committees for quality control of the agricultural produce.

Under eNAM, harmonisation of quality standards of agricultural produce and provision for assaying (quality testing) infrastructure in every market is mandatory to enable informed bidding by the buyers. Till date, 2,24,487 farmers, 7,570 traders and 6,991 commission agents have registered under eNAM.



Farm Prices could hold key to several political fortunes

TABLE 1: AVERAGE WHOLESALE PRICES VERSUS MSPs (₹ PER QUINTAL)

	Nov 2017	Nov 2016	MSP
Groundnut (Gujarat)	3,790.47	4,061.33	4,500*
Cotton (Gujarat)	4,475.59	4,912.59	4,820**
Soyabean (MP)	2,578.33	2,839.19	3,050
Bajra (Rajasthan)	1,173.36	1,414.79	1,425
Maize (Karnataka)	1,173.26	1,399.81	1,425
Jowar (Maharashtra)	1,621.76	1,627.24	1,700
Urad (UP)	3,551.26	6,435.93	5,400
Moong (Rajasthan)	4,270.96	4,529.88	5,575
Arhar (Karnataka)	3,946.41	6,761.22	5,450
Potato (UP)	433.07	913.55	487***

*Inclusive of Gujarat government's ₹ 50/quintal bonus;
 **Inclusive of Gujarat government's ₹ 500/quintal bonus;
 ***Procurement rate under Market Intervention Scheme for UP.
 Source:agmarknet.gov.in

Doubling of Farmers' Income

The Committee on Doubling Farmers' Income (Chaired by Dr. Ashok Dalwai), set up by Ministry of Agriculture & Farmers' Welfare, GoI, has submitted nine volumes of the report. A few major policy recommendations of Volume V, VI, VII, VIII, IX, XI, XIII are presented below.

Volume V: Sustainability Concerns in Agriculture:

The universal soil health card (SHC) scheme needs to connect Soil Health Card Portal with Integrated Fertiliser Management System (I-FMS) of Department of Fertilisers, to ensure that SHC based fertiliser is supplied to all the farmers.

Adoption of suitable crop rotation, preferably legume, non legume, remunerative crop diversification and intercropping for enhancing carbon sequestration and crop assurance in the changing climatic scenario.

Augmentation of existing water supplies by development of additional water resources and/or by conservation of existing resources.

There is a need to recategorise the agro ecological zones of the country. Need to develop a crop residue management policy in each state.

Improve water use efficiency of crop plants and drought and pest resistance for better adaptability.

Volume VI: Strategies for Sustainability in Agriculture.

Watershed Development

Understand Integrated Watershed Management (IWM) principles & adopt at the local level.

Apply customized approach to various situations & challenges, rather than a "one size fits all" approach.

Strengthen & improve socio-economic & physical science for water management.

Promote tank-based watershed development by including tank rehabilitation as a component.

Water in rainfed areas

Optimize the balance between centralized water management & services with community water ownership & management.

Impart specialized training on participatory irrigation management (PIM).

Promote micro-irrigation systems as production & income enhancement proposition rather than as a technology that merely saves water.

Delineate Rainfed Agro-Economic Zones (RAEZ) with participatory watershed development & integrated farming systems approach.

Integrated Farming System

Harness supplementary & complementary relationships of crop, animal husbandry, poultry, fisheries, multipurpose trees systems through integrated farming system (IFS), particularly in case of small & marginal farmers.

Promote non-renewable resources & their efficient use in farming systems.

Promote orchard-based farming & non-farm activities like post-harvest management, agro-processing, tailoring, weaving, food processing, etc.

Organic Farming

Promote organic farming in rainfed & hilly tracts.

Promote niche-based organic farming for low volume high-value crops like spices, medicinal plants, etc.

There is scope to bring about 14 million ha under organic farming. Promote cluster-based approach.

Volume VII: Input Management for Resource Use Efficiency and Total Factor Productivity

Soil Health Management – Balanced Nutrients

Need to transition from the present supply-driven to a demand-driven approach.

Revisiting fertilizer recommendations as existing package of



practices are sub-optimal in nature.

Government Extension System should focus on advocating and promoting balanced use of fertilizer and soil health management, letting private sector play the dominant role in testing/ backward facilities.

Water Use Management

Har khet ko pani In addition to 99 major and medium projects under Accelerated Irrigation Benefit Project (AIBP), the remaining 50 projects may be taken up by increasing the corpus of Long term irrigation Fund (LTIF).

Promoting water use efficiency Per drop more crop adoption of precision technology and efficient water management practices.

Ground water recharge Adoption of multi pronged approach of ground water recharge, crop alignment and community based water management. Watershed based treatment should be the principal intervention.

Seeds

Continuous development of new and improved varieties, as well as hybrids of crops & efficient system of production & supply of seeds to farmers.

Agricultural Mechanisation

Adoption of a broader definition encompassing deployment of deployment of machinery across all sub-sectors of agriculture and call it "Agricultural Mechanisation" rather than "Farm Mechanisation."

Agricultural Credit

All state governments should take up digitization of land records on a "Mission Mode" to enable farmers & banks to have easy access to land records for extending hassle-free and timely loans to farmers.

For the purpose of effective credit planning, sector-wise, sub-sector-wise, activity/ purpose-wise, borrower category-wise, bank-wise, state-wise granular data may be extracted directly from CBS of banks.

Volume VIII: Production Enhancement through Productivity Gains:

Growth enhancing technologies, pest management systems and farming practices like precision farming are important aspects that need to be promoted.

Good quality planting material is a pre-requisite for increasing productivity.

Promotion of micro /drip and sprinkler irrigation and adoption of alter-nate drought-tolerant crops, emerging computerised GPS-based precision irrigation technologies, scientific irrigation scheduling, site-specific irrigation, anti-transparents, etc.

The inputs used in horticulture sector should be made available to the growers at affordable prices for better profits.

Agri-supply chain and storage infrastructure, including market yards need to be strengthened.

Reforms to the marketing system to permit pan-India trades, electronic auctions and trading in warehousing receipts.

Credit should be made available for perennial crops as term loan so that more marginal land can be covered in rainfed area and farmers may be encouraged to adopt such plantations.

Volume IX: Farm Linked Activities and Secondary Agriculture

Secondary agriculture (SA) is an elevated level of agricultural operations, or those linked to agricultural activities, whose primary aim is on generation of additional income on-farm or near-farm. The approach of secondary agriculture is 'value capture' through multiple activities, using slack time or manpower.

Promotion of SA activities whose output can be in the nature of either value added goods or services, that help primary sector capture more value from its primary products (grain, fruit, vegetable, milk, fish, fibre, etc.) and/ or by-products (straw, stalk, biomass, etc.).

The best way to use slack/ idle mandays of farmer- family is to enable them to make use of farm generated resources, as also biological resources in their environment from value addition through micro enterprises.

The scope of SA can be extended by promoting secondary and tertiary sector enterprises that are principally based on farm-generated primary products and by products.

Setting up of an institutional mechanism that will facilitate advocacy and promotion of micro- enterprises; and linkages to secondary and tertiary sector enterprises.

Potential list of micro-enterprises may be converted into bankable projects, so that subsidy and credit linked support can be given to the farm families.

In compiling potential avenues, gender-specific needs and strengths should be kept in mind.

Promotion of SA cannot happen without recognising it as an independent mandate working of roll out to create additional job opportunities for income generation to enhance farm income.

State and district level committees for consideration and monitoring.

A dedicated extension system for SA.



Volume XI: Empowering the Farmers through Extension and Knowledge Dissemination

Co-opting and converging the multiplicity of public, private and not for profit extension services; Rejuvenating the ATMA; Reinventing Agricultural Extension; Capacity building of extension functionaries, Agribusiness oriented extension system; Networking of Institutions and Knowledge base; ICT based Extension Services need to be promoted; Revisiting curriculum in Agricultural Universities.

To achieve inclusive economic growth, there is a need for renewed emphasis on promoting new generation farmer collectives such as, Commodity Interest Groups (CIGs), Village Producer Organizations (VPOs), Farmers Producers Organizations (FPOs) and Farmer Producer Companies (FPCs).

Various district level plans, such as SREP of ATMA, C-DAP of RKVY, PLP of NABARD, NICRA of ICAR, District Irrigation Plan (DIP) of Ministry of Water Resources (MoWR) and DAC&FW should have a common objective of contributing to the doubling of farmers' income by 2022-23.

Economic Survey 2017-18 – Major Highlights

The Economy

Real GDP growth to reach 6.75% in 2017-18 and will rise to 7.0 to 7.5% in 2018-19, thereby reinstating India as the world's fastest growing major economy.

Gross Value Added (GVA) at constant basic prices is expected to grow at the rate of 6.1 per cent in 2017-18 as compared to 6.6% in 2016-17.

Agriculture, industry and services sectors are expected to grow at the rate of 2.1%, 4.4%, and 8.3%, respectively in 2017-18.

Urgent action needed on the 4th R, viz. reforms

Increased investments in infrastructure, industry and agriculture are needed.

While Gross Fixed Capital Formation (GFCF) declined from 34.6% (2011-12) to 29.3% (2015-16), Gross Domestic Savings (GDS) declined from 34.6% to 32.3%.

Fiscal Developments – GST

- Reforms have increased tax rolls
- 50% increase in unique indirect taxpayers, after GST.
- 1.8 million additional individual income tax filers since November 2016.
- Formal sector is much bigger than assessed.
- 75 million (30%) more if formality defined as firms providing social security

Volume XIII: Structural Reforms and Governance Framework

The Directorate of Marketing & Inspection can be restructured to take onus for market intelligence and undertake price and demand forecasting.

Promoting development of innovative products by providing them a level playing field.

Fertilizer subsidy policy should be such as to encourage balanced use of primary, secondary and micro-nutrients.

Seed chain, from production to supply, including development of new varieties can be liberalised.

The pesticide regulations need to be rationalized.

More rigorous monitoring of climate change and technologies to mitigate adverse impact is needed.

Climate change and technologies to mitigate adverse impact is needed.

The expected transition in cropping system, crop selection, livestock care and adoption of new technologies have to be extensively propagated.

Economic Survey 2017-18 – Major Highlights

- 127 million (50%) more when defined as firms being in the GST net.

Monetary Management & Financial Intermediation

Monetary policy remained steady with only one policy rate cut in August.

Bank credit growth remains subdued, especially to the industrial sector.

The Insolvency & Bankruptcy Code (IBC) mechanism is in place to resolve NPAs in banking sector

10 year G-sec yield has hardened since September 2017

Prices & Inflation

Gradual transition from high (5.9% CPI inflation in 2014-15) to low inflation (3.3% in 2017-18) economy last 4 years

Significant reduction in food inflation (avg. 1.2% in 2017-18)

Pulses, vegetables, fruits & fuel inflation are the major determinants of inflation

Climate Change, Agriculture & Sustainable Development

India is vulnerable to the vagaries of weather as 52% of cultivated area is rainfed (73.2 million ha. area of 141.4 million ha. net sown area).

Climate Change could reduce annual agri-income by 15-18%, and up to 20% to 25% for unirrigated areas.



What India's return as fastest growing emerging economy really means?

What is GDP?

Gross domestic product or simply GDP is the market value of all goods and services produced in an economy in a specific period- a quarter, a year and so on. In most countries a major share of economic production is for self-consumption and hence GDP gives an idea of the general standard of living. When expressed in the current exchange value of US dollars, India is the world's seventh largest economy.

Is India among the world's fastest growing economies?

IMF estimates for GDP growth at constant prices show India should grow at 7.4% in 2018. This is the world's seventh highest rate. The growth rate alone, however, is a misleading indicator as even a small absolute change in the economies of countries with a low GDP base will inflate the percent-age figure.

Isn't India the fastest growing big economy?

Among the ten largest economies, India is expected to grow at the fastest rate in 2018. But because of the difference in overall size, growth rate alone can be misleading.

How much do large economies add in absolute terms?

Despite growing at a slower rate as compared to India, China, the US and Germany will add far more to their economy. China is expected to add \$1,181 billion to its economy at current prices - 5.5 times India's addition. The US is estimated to have added \$838bn, and Germany

\$283bn, compared to India's \$215bn in 2017-18.

But isn't over 7% growth rate a significant achievement?

Any improvement in the growth rate is good. But a better yardstick to measure quality of life in various countries even in purely economic terms is GDP per capita, or GDP divided by the population. By this yardstick India stands nowhere compared to other large economies. US's per capita GDP (larger economy, lower population) is more than 32 times India's. China has a larger population but its per capita GDP is five times India's. To significantly increase its GDP at per capita level India will have to maintain double digit growth for many years and hence 7% is a modest achievement.

Why is GDP at times expressed in purchasing power parity (PPP)?

It is standard practice to convert GDP to US dollars for international comparisons. Economists, however, point out that currencies of developing countries have a higher purchasing power in their domestic markets than their international exchange rates would suggest. Hence converting into dollars at the prevailing exchange rate tends to underestimate the actual size of these economies. To overcome this, Purchasing Power Parity (PPP) rates are devised by comparing prices of a similar basket of goods and services in different countries. Expressed in PPP dollars, the Indian economy is the world's third largest. But at per capita levels, we are still far below other economies.

Union Budget 2018-19 Highlights

Health, Education and Social Protection

Sukanya Samriddhi Account Scheme was launched in January 2015. Until November, 2017, more than 1.26 crore accounts were opened across the country in the name of girl child securing an amount of ₹19,183 crore.

Allocation of ₹56,619 crore for SCs and ₹39,135 crore for STs in 2018-19.

Estimated schematic budgetary expenditure on health, education and social protection for 2018-19 is ₹1.38 lakh crores.

Medium, Small & Micro Enterprises (MSMEs) and Employment

- Allocation of ₹3794 crore to MSME sector for credit support, capital and interest subsidy and innovations.

- Target of ₹3 lakh crore for lending under MUDRA for 2018-19.

- Allocation of ₹7148 crore for the textile sector in 2018-19.

Infrastructure & Financial Sector Development

- Allocation of ₹1,48,528 crore for Railways.
- Decision to eliminate 4267 unmanned level crossing in the broad gauge network in the next two years.
- Increase allocation of ₹3,073 crore in 2018-19 for Digital India.
- Allocation of ₹10,000 crore in 2018-19 for creating and augmentation of telecom infrastructure.



Commodity Focus Vegetables

Tomato, Onion & Potato (TOP)

Tomato, onion and potato are major vegetable crops in India in terms of area under cultivation, production and consumption. The area under cultivation of tomato is estimated to increase from 7.97 lakh ha in 2016-17 to 8.01 lakh ha in 2017-18. Irrigated area under tomato, onion and potato are 71%, 51% and 86%, respectively. While the estimated area under cultivation of onion is set to decline from 13.06 lakh ha in 2016-17 to 11.96 lakh ha in 2017-18, that of potato is estimated to decline marginally from 21.79 lakh ha to 21.76 lakh ha. The production of tomato is estimated to increase to 22.34 million tonnes (MT) (2017-18) from 20.71 MT (2016-17). It is estimated that the production of onion would decline from 22.43 MT (2016-17) to 21.40 MT (2017-18). Potato is expected to witness an increase in production from 48.61 MT (2016-17) to 49.34 MT (2017-18). The Union Budget 2018-19 has announced "Operation Greens", with a view to reducing the volatility in the prices of tomato, onion and potato (TOP), and enabling enhancement in income of farmers on a sustainable basis.

Tomato

- Monthly movement of average all-India wholesale prices of tomato during agriculture year 2016-17 indicates a steady decline from July 2016 (₹ 2,658/ Quintal) to March 2017 (₹ 1,213/ Qtl) in the. However, the prices increased sharply to ₹ 3,551/Qt in June 2017.
- During agriculture year 2017-18, the average wholesale prices touched a high of ₹ 3,984/Qt in July 2017, followed by a continuous decline to ₹ 1,342/Qt in January 2018.
- Wholesale prices of tomato declined in most of the states, viz., Andhra Pradesh, Assam, Gujarat, Haryana, H.P., J&K, Karnataka, Kerala, Delhi, Punjab, Rajasthan and West Bengal, in January 2018, compared to December 2017. The average price in January 2018 (₹ 1,342/Qt) declined sharply from the average price in December 2017 (₹ 2,088/Qt). It was also lower than the average price of January 2017 (₹ 1,672/Qt).

Onion

- Monthly movement of average all-India wholesale prices of onion during agriculture year 2016-17 indicates that the prices declined gradually from ₹ 1,357/ Qt in July 2016 to ₹ 1,054/ Qt in September 2016, increased to ₹ 1,343/ Qt in November 2016, and declined gradually to ₹ 1,080/Qt in April 2017, before rising to ₹ 1,243/ Qt in June 2017.
- During agriculture year 2017-18, the average wholesale prices increased sharply from ₹ 1,230/ Qt in July 2017 to

₹3,506/Qt in December 2017, before declining to ₹ 3,215/Qt in January 2018.

- Wholesale prices of onion declined in most of the states, viz., Andhra Pradesh, Assam, H.P., J&K, Jharkhand, Karnataka, Kerala, Delhi, and Telangana in January 2018, compared to December 2017. The average price in January 2018 (₹ 3,215/Qt) declined from the average price in December 2017 (₹ 3,506/Qt). However, the price in January 2018 was significantly higher than that of January 2017 (₹ 2,624/Qt).

Potato

- Monthly movement of average all-India wholesale prices of potato during agriculture year 2016-17 indicates that the prices increased from ₹ 1,669/ Qt in July 2016 to ₹ 1,885/ Qt in August 2016, and declined steadily to ₹ 763/ Qt in May 2017, before rising to ₹ 1,193/ Qt in June 2017.
- During agriculture year 2017-18, the average wholesale prices declined steadily from ₹ 1,219/Qt in July
- Wholesale prices of potato declined in Himachal Pradesh, Kerala, Delhi, Odisha, Punjab and West Bengal, and increased in Assam, Jharkhand, M.P. and Maharashtra in January 2018, compared to December 2017. The average price in January 2018 (₹ 760/Qt) declined from the average price in December 2017 (₹ 836/Qt). Further, the average price in January 2018 was significantly lower than that of January 2017 (₹ 1,034/Qt).

Policy Issues – Tomato, Onion and Potato

- Breeding of Tomato, Onion and Potato should focus not just on improving yield and pest resistance, but also for specific market segments.
- Market-led plant breeding through seed companies may be encouraged.
- Amendments in APMC Act should allow direct purchase of Tomato, Onion and Potato from farmer producer organisations (FPOs)/farmer producer companies (FPCs).
- Strengthening value chains by linking with processing industry and organised retail.
- Increasing investments for appropriate infrastructure in food parks, storages and logistics, for longer shelf life.

Other Commodities

Paddy

- Monthly movement of average all-India wholesale prices



of paddy during agriculture year 2016-17 indicates an increasing trend from July 2016 (₹1,668/ Quintal) to February 2017 (₹1,899/ Qtl). However, the prices declined to ₹1,741/QtL in June 2017. The prices remained above MSP during the year.

- During agriculture year 2017-18, the all-India average wholesale prices experienced an increasing trend and touched a high of ₹2,027/QtL in January 2018, followed by a decline to ₹1,975/QtL in February 2018. The prices remained above MSP during the year.
- Average wholesale prices of paddy remained above or near minimum support price (MSP) in most of the states in February 2017 as well as February 2018, except Assam and West Bengal in February 2017. The all-India average price in February 2017 (₹1,980/QtL) was above the average price in February 2018 (₹1,974/QtL). The average prices for both the months were above the respective MSPs (₹1,470/QtL in 2016-17 and ₹1,550/QtL in 2017-18).

Wheat

- Monthly movement of average all-India wholesale prices of wheat during agriculture year 2016-17 indicates the price declined gradually from July 2016 (₹1,805/ Quintal) to September 2016 (₹1,772/ Qtl). However, the prices increased to ₹1,925/QtL in February 2017. The prices remained above MSP during the year.
- During agriculture year 2017-18, the all-India average wholesale prices of wheat experienced slight fluctuations and touched a high of ₹1,952/QtL in September 2017, followed by a decline to ₹1,726/QtL in January 2017 and a slight increase to ₹1,746/QtL February 2018.
- Average wholesale prices of wheat remained above or near MSP in most of the states in February 2017 and February 2018, except Chhattisgarh in February 2018. The all-India average price in February 2017 (₹1,844/QtL) was above the average price in February 2018 (₹1,743/QtL). The average prices for both the months were above the MSP (₹1,550/QtL).
- The average prices for both the months were above the respective MSPs (₹1,625/QtL in 2016-17 and ₹1,735/QtL in 2017-18).
- Wholesale prices of wheat were below MSP in Rajasthan, Telangana, U.P. & West Bengal in January 2018. Prices were above or close to MSP in rest of the states, The average price of all states was 105% of MSP.

Commodity Focus of the Month: Cereals - Rice and Wheat

Rice and wheat are major cereals in India in terms of area

under cultivation, production and consumption. The area under cultivation of rice is estimated to decrease by 4.9% from 43.2 million ha in 2016-17 to 41.1 million ha in 2017-18 (Table 1). However, the production of rice is expected to increase by 1.2% to 111 million tonnes (MT) in 2017-18 (Table 2). While the area under cultivation of wheat is estimated to decline by 0.6% to 30.4 million ha in 2017-18, from 30.6 lakh ha in 2016-17 (Table 1), production is estimated to decrease by 1.4% to 97.1 MT in 2017-18 (Table 2).

Policy Issues - Paddy and Wheat

- Improving productivity of rice and wheat through bridging yield gaps and improving efficiency is the most effective and sustainable way to enhance the farmers' income.
- Increasing investments for appropriate infrastructure in storages and logistics.
- Decentralized procurement of rice need to be practised in states where market prices fall below MSP.
- Strengthening value chains by linking with processing industry and organised retail.
- Effective operationalization of e-NAM.
- Reforming the State APMC Acts.

Other Commodities

Gram

- Wholesale prices of gram were below MSP in most of the states, except Kerala and Tripura in February 2018. Due to new arrivals in the Rabi season market, prices of gram are mostly below MSP. The average price of all states was 99.5% of MSP.

Margin of MSP over Cost of Production – Rabi Pulses – Gram & Lentil (Masur)

- MSP of gram for Rabi 2017-18 is 179% of A2+FL and 125% of C2.
- MSP for masur for Rabi 2017-18 is 180% of A2+FL and 125.0% of C2.
- The average wholesale price of gram at ₹4,376/qlt in February 2018 was 95 % of MSP, 178 % of A2+FL and 124% of C2.
- The average wholesale price of masur at ₹4,631/qlt in February 2018 was 109% of MSP, 196% of A2+FL and 136% of C2.

Margin of MSP over Cost of Production – Pulses

- MSP of arhar for khraif 2017-18 is 121.3% above A2, 64.3% above A2+FL and 18.2% above C2.



- MSP for moong for kharif 2017-18 is 98.5% above A2, 30.1% above A2+FL and 2.2% below C2.
- MSP for urad for kharif 2017-18 is 125.75 above A2, 65.4% above A2+FL and 19.6% above C2.
- The average wholesale price of arhar at ₹ 4,428/qlt in January 2018 was 18.8% below MSP, 33.5% above A2+FL and 4% below C2.

- The average wholesale price of moong at ₹ 5,389/qlt in January 2018 was 3.3% below MSP, 25.7% above A2+FL and 5.5% below C2.
- The average wholesale price of urad at ₹ 4,519/qlt in January 2018 was 16.3% below MSP, 38.4% above A2+FL and was almost same as C2.

Agri News Snippets

- National Collateral Management Services Ltd. (NCML) has launched online platform mktyard.com for trading in warehouse receipts.
- Commerce Ministry, GoI, is planning to do away with minimum export prices (MEP) for onions, tomatoes and potatoes.
- India loses \$11 bn agricultural produce to weeds according to a study by ICAR.
- India's rice exports estimated to have jumped 22% in 2017 to a record 12.3 million tonnes.
- NCDEX has introduced options in guar seed.

- Union Budget 2017-18 has extended Kisan Credit Card to dairy and fisheries.
- The Centre will procure 320 lakh tonnes of wheat during rabi marketing season (starting 01 April 2018) 2018-19.
- Onion prices crashed to below ₹ 12/Kg on 19 Feb. 2018 at Lasangaon mandi (Maharashtra), an 8-month low, with rising arrivals.
- Import duty on chana (chickpeas) raised to 40% from the current 30%.
- 15% decline in export of fresh vegetables to \$581 million during April-December 2017 from year-ago period. But, export of processed vegetables rose 39% to \$197 Million.

RBI, NABARD raise objection for inclusion of cooperative banks in FRDI Bill

The RBI and the National Bank for Agriculture and Rural Development have raised few objections to including 'eligible cooperative banks' under the purview of the Financial Resolution and Deposit Insurance (FRDI) Bill. As per Clause 120 of the FRDI Bill, 'eligible cooperative banks' are deemed 'insured service providers' for two years, extendable by one year. The Bill also provides for the liability of the proposed Resolution Corporation (RC) to insured depositors of eligible cooperative banks. The RBI said that according to the Bill, an eligible co-operative bank is defined as a co-operative bank other than a multi-state co-operative bank, and if the RC wants the power to supersede the board of a bank or to wind one up, the State cooperative law will have to be amended.

Cabinet nod for law to ban unregulated deposit schemes

The Union cabinet on Tuesday approved the introduction of a proposed law to ban unregulated entities from collecting deposits from individuals in an effort to protect small investors from ponzi schemes.

The Banning of Unregulated Deposit Schemes Bill, 2018, which is likely to be tabled in Parliament in the second half of the budget session starting next month, seeks to plug loopholes in existing laws.

The bill was envisaged after the collapse of Saradha Group in

The RBI is learnt to have told the panel to seek clarification from the Centre on including the eligible cooperatives under the FRDI's ambit. The RBI also suggested that the eligible cooperative banks may not be contributing to the resolution fund so the corporation insurance fund could be used under the resolution scheme as is now being done under the Deposit and Credit Insurance and Credit Guarantee Corporation Act of 1961. Nabard said that incorporation, registration, election to the board/committees, audit and winding up of cooperative societies are governed by the State Cooperative Acts. Nabard told the panel that the definition of the eligible cooperatives must be in tune with the provisions of the State cooperative Acts.

Comprehensive central legislation is needed to curb illicit deposit-taking schemes and boost the confidence of

investors in dealing with financial products, said Abhishek A. Rastogi, a partner at law firm Khaitan & Co.

"The guidelines and legislation should ensure that the activities are regulated so that there are no frauds but at the same time not kill the schemes as the benefits cannot be ignored," Rastogi said.

The cabinet's decision comes at a time when the government is under pressure following two banking frauds that have recently come to the fore.

The bill proposes to prevent companies which are unauthorized to collect deposits from promoting, operating, issuing advertisements and collecting deposits. It also proposes to make these offences ex-ante. This means that the government won't have to wait till the fraud comes to light but can act beforehand to stop such soliciting.

The bill also proposes the setting up of a competent authority

by state governments with powers to attach properties and recover dues to depositors in case the entities do manage to raise funds illegally.

The bill sets a timeline for both the attachment of properties and for recovering the amounts, the government said in a statement.

It also proposes creation of an online central database for collection and sharing of such deposit-taking activities and designation of courts to try such cases and oversee repayment to depositors. The bill will list the regulated deposit schemes, giving powers to the central government to expand or trim the list.

Finance minister Arun Jaitley, in his 2017-18 budget speech, had said the government will introduce the bill as part of a 'Clean India' agenda.

No income tax exemption to cooperative banks: govt tells Lok Sabha

The government on Friday ruled out giving income tax exemption to profit-making cooperative banks saying they functioned like commercial banks and should be treated on par.

Finance Minister Arun Jaitley said in Lok Sabha that the cooperative banks functioned like any other commercial bank and the principle of mutuality, which is central to granting exemption under Section 80P of the Income Tax Act, does not apply to them because their area of operations extends even to non-members.

Now, a solar-based cold storage for farm produce

Engineers at the Indian Agricultural Research Institute (IARI) in New Delhi have developed a solar-powered on-farm storage structure that can increase the shelf-life of fruits and vegetables in regions where cold storage facilities are absent.

The four-cubic-metre storage space, designed by Pramod Kumar Sharma and others at IARI's division of agricultural engineering, can retain the quality and freshness of fruits and vegetables for an additional period of up to five days, they reported in the journal Current Science.

Farmers can install them on their farms and need only four solar photovoltaic panels to run. To keep the costs down, they use an inverter that converts DC type power generated by solar cells into AC type and has a battery backup.

The low-cost air-cool chamber is more suitable for farmers living in villages where grid electricity hasn't yet reached. According to the scientists, up to a third of fruits and vegetables produced in the country are perished in post-

"Income tax is a tax on profits and there is no rationale for exempting profit-making cooperative banks from payment of income tax," he said during Question Hour.

Jaitley said most of these banks provided standard banking facilities such as opening of letters of credit, bill discounting and collection, lockers and safe deposit vaults and bank guarantees. "These banks are thus no different from commercial banks and therefore are required to be treated at par with them," he said.

Now, a solar-based cold storage for farm produce

harvest losses. Temperature and relative humidity are said to be the two most important environmental factors influencing the quality and storage life of fresh produce. If the surrounding air temperature is brought down within four hours of harvesting, it can slow down the deterioration of the quality and freshness of the produce.

The structure is very similar to desert cooler used in hot and dry climes of North India but has an exhaust fan on the roof of the container. Four sides of the structure are covered with commercially available cellulose pads which are constantly fed with water using an underwater cooler pump.

The tests carried out by the scientists using the prototype showed that the structure could not only lower the temperature at which the produce are kept, but also increase the relative humidity, which is also known to help increase shelf-life of fresh fruits and vegetables. Among its advantages are low-cost of manufacturing and negligible operating cost.



Four apps for farmers

India owes a lot to its farmers. But unfavourable import/export policies and the myriad troubles in connecting to consumers directly have made life difficult for them. Technology can make a big difference to farmers' lives; but how effective have tech interventions been so far?

A BCG report released last year says the rural areas are where much of the growth in internet use will happen for the rest of the decade.

The number of connected rural consumers is expected to increase from about 120 million (in 2015) to almost 315 million in 2020. On the occasion of 'Farmers' Day' on December 23, we take a look at some of the fastest growing applications in the agriculture space. Apps promoted by the Centre - M Kisan, Kisan Suvidha and others

My Agri Guru - Total downloads: 3.25 lakh

Key users: Madhya Pradesh (22%), Maharashtra (20%), Uttar Pradesh (14%), Rajasthan (8%), Delhi (7%), Gujarat (7%), Bihar (4%), Haryana (4%), Karnataka (4%)

Features: This free android app created by Mahindra Agri Solutions provides complete information on 16 crops including wheat, paddy, bengal gram, chilli, cotton, maize, mustard, soyabean, banana, onion, potato and tomato. Also provides advisory on sowing practices and pest management. It lets the user interact with agri experts and peer farmers through the Agri Buzz feature. Since its launch in February, more than 35,000 interactions have occurred on MyAgriGuru (over 400 happening each day).

The app also provides APMC mandi prices across the country, exchange-traded agri commodity prices and weather forecasts. There is demand-driven content creation too, where topics farmers are interested in are picked up, and information on them is published under the section Agri Update. The app is available in Hindi and English.

Krishi Mitr- RML Farmer - Total downloads: 14 lakh

Key users : Maharashtra, MP, Gujarat, Karnataka

Features: RML AgTech's app helps farmers improve their profitability. It helps farmers decide what to grow, how to grow and where to sell. Along with basic information on about 70 crops and information on their prices in 900 mandis pan-India, the app also provides information on weather and pest control techniques. The app has a paid version too, that costs ₹500 to ₹1,000 a month.

Here, everything gets personalised for the farmer - from weather forecast, crop selection, production and harvest methodologies. It is supported through ground intervention by field staff and through crop doctors available on call. This

includes an advance alert if there is a pest attack, and entire nutrition schedule planning.

Additionally, the company also helps farmers in the export business through precision agriculture techniques on ways to control chemical residues on their crops.

Jayalaxmi Agro Tech (JAT) - Total downloads : 2.3 lakh

Key users: Karnataka (80%), Andhra Pradesh, Telangana, Maharashtra

Features: Jayalaxmi Agro Tech has several crop-specific mobile applications. It is available in English, Kannada, Telugu, Marathi and Oriya languages.

The app can be downloaded through a mobile hotspot from AgriPole, a hardware device sold by the company that serves as a portable hotspot tower that stores data and shares it to smartphones via Bluetooth. This addresses the problem of poor internet connectivity in the rural areas. The app provides information on sowing and transplantation methods, fertilisers to be used and their dosage, also advices on pest management. Users receive reminders via the app on schedules for irrigation and harvest and on ideal insemination periods and vaccination cycles for livestock (there is a separate app for animal husbandry and horticulture).

The app is free for all users and can be downloaded on Android or iOS phones. The company uses the data collected through its app to do back-end analytics. It identifies trends in disease and pest-related information based on the farmers' browsing patterns and alerts farmers in the neighbouring areas.

UNESCO has done a case study on the JAT app as a part of a series highlighting how digital solutions can help people with low skills or low literacy levels use technology in ways that support skill development.

Plantix - Total downloads: 9 lakh

Key users: AP, Telangana – 70%

Features: It is a plant disease and pest diagnostic app developed by Progressive Environmental and Agricultural Technologies (PEAT), Germany, in collaboration with its knowledge and extension partner, ICRISAT, and the Acharya NG Ranga Agricultural University. Currently the app is available in Telugu and Hindi, and can soon be downloaded in Tamil, Kannada and Marathi.

Farmers take pictures of the affected crop and upload them on the app. The photographs are analysed using artificial intelligence algorithms and the results returned immediately to the farmer. Critical information on symptoms, triggers,

chemical as well as biological treatments are provided. All pictures sent via the app are geo tagged, enabling real time monitoring of pest and diseases.

The database has half a million pictures covering 35 crops worldwide and offers prescriptions for over 175 crop diseases.

How this Israeli technique is giving a plug to Gujarat's vegetable growers

Kalpesh Patel, a middle-aged vegetable farmer of Prantij, a graduate, farming has never been so exciting and rewarding than in the last 25 years. Thanks to Israeli farming technique, Patel and hundreds like him from Gujarat have spotted a financially viable vegetable farming opportunity.

"Unlike in the past, now we can have better quality and increased yield of cauliflower. This fetches better price for sure, but the early harvest by about 8-10 days is the key to success. The Israeli technique of precision farming under controlled environment is giving such encouraging results," says Patel, who has 16 bighas (8 acres) under cauliflower.

Patel requires 34,000 seedlings for each acre. The Israeli technique that he has been relying on for two years has helped him double his annual farm income from ₹30 lakh in 2015 to ₹60 lakh in the coming year.

Indo-Israeli initiative

Set up under the Indo-Israel Agriculture Work Plan for exchange of advanced farming technology, the Centre of Excellence (CoE) for Protected Cultivation and Precision Farming on Vegetables at Vadrad village near Prantij in Sabarkantha district is providing the training and guidance in controlled farming techniques using net houses and seedlings developed in plug nurseries.

How is it different?

According to JK Patel, Deputy Director, Gujarat Horticulture Department, the CoE was launched in 2015 and has so far supplied about 60 lakh seedlings to about 9,000 farmers across the State and in neighbouring Rajasthan and Madhya

The app is a free download and available on Android phones. If there is no internet, the app stores the picture and releases it to the cloud when there is connectivity.

The app also has a library of images of different pests and their control measures, which the farmers can access offline.

Pradesh.

"We provide these seedlings at a token ₹1 per seedling. The purpose is to help farmers reduce the use of pesticides and fungicides by undertaking precision farming. This will also bring down the overall cost of farming. Also, timely sowing and early harvest make it commercially advantageous for them," Patel said adding that the seedlings developed at the plug nursery start to grow from the first day of planting, unlike conventional seedlings, which take 7-8 days to reach the growth stage.

The CoE also provides one-day training to farmers on best practices of net-house farming and guidance on infrastructure for developing plug nurseries.

Farmers' advantage

Till now, over 10,000 farmers have been trained at the CoE, while about 35,000 farmers have been given demonstrations.

The CoE has also helped develop three other such nurseries across Gujarat - located at Bardoli and Dediyaapada in the southern part of the State and Himmatnagar in Sabarkantha. A typical plug nursery having an area of 500 sq. m costs ₹25,000 with a capacity of 10 lakh seedlings per year.

Gujarat has about 400,000 hectares under vegetable cultivation.

Patel noted that with the help of plug nursery, the crop diversity can increase and farmers can also take-up exotic crops such as broccoli, cherry tomato, red cabbage and cucumber.

States to be ranked on the basis of Startup ecosystems

Minister for Commerce and Industry Suresh Prabhu launched the States' Startup Ranking 2018 in February at an event organised at the Pravasi Bhartiya Kendra, New Delhi.

The States Startup Ranking framework launched by the Department of Industrial Policy and Promotion is an exercise aimed at ranking States for establishing a robust ecosystem for supporting Startups. The framework will evaluate States on parameters such as a sound Startup policy and

implementation, incubation support, seed funding support, angel and venture funding support, simplified regulations, easing public procurement, awareness and outreach.

A compendium of good practices for strengthening the Startup ecosystem was also released. The handbook identifies 95 good practices implemented by Central and various State Governments.



Agriculture growth stumbles despite higher rainfall in 2017

The country, on the whole, received more rainfall in 2017, spread over the winter, pre-monsoon, monsoon and post-monsoon seasons, than in the previous year (see table). Yet, the Central Statistics Office expects agricultural growth during 2017-18 to be only 2.1%, as against last year's 4.9%. The agriculture ministry's data, too, shows a drop in crop acreages this time, both in the kharif and the ongoing rabi planting seasons.

What explains this apparent divergence between (higher) rainfall and (lower) farm sector growth? Well, the main reason is the distribution of the rainfall. The whole of Rajasthan, Uttar Pradesh (UP), Madhya Pradesh (MP), Chhattisgarh and Bihar — even Punjab-Haryana for that matter, though farmers there have access to assured irrigation — has recorded very little rainfall after July. The extended dry spell in this contiguous agricultural belt has affected the rabi crop prospects in particular.

Telangana breaks new ground in farm subsidy

Come May, every Telangana farmer would receive a subsidy of ₹ 4,000 per acre from K Chandrashekhar Rao-led state government, which is expected to meet a major part of their seed, fertiliser, pesticide and field preparation expenses. The ₹ 4,000-per-acre amount is to be distributed ahead of the 2018 kharif season from June, and will be followed by a second tranche in October prior to the rabi plantings. The total subsidy sum of ₹ 8,000 per acre, targeted to cover about 72 lakh farmers, is projected to cost the state exchequer a whopping ₹ 9,600 crore: ₹ 5,600 crore in kharif and ₹ 4,000 crore in rabi.

“₹4,000/acre is what our farmers spend on an average towards purchase of inputs and field preparation for various crops. This, along with our recent free 24-hour power supply scheme (for the state's 23 lakh-plus agricultural pumpsets), should take a huge burden off farmers' shoulders. They would now only have to bear the expenses on hiring farm labour,” claimed Pocharam Srinivas Reddy, Telangana's agriculture minister. The new 'farmer investment support scheme', as it is being called, and free power for agricultural pumps will together entail an annual expenditure of ₹16,000-16,500 crore. This is more than a tenth of the Telangana government's budgeted expenditures of ₹1,49,646 crore and over 14 per cent of its revenue receipts (including share of central taxes and grants-in-aid) of ₹ 1,13,083 crore for 2017-18.

The subsidy will be applicable on the entire 1.62 crore acres cultivable land of the state, while assuming that only 85-86

Lack of adequate soil and subsoil moisture has led to a reduction in wheat sowing area by 14.46 lakh hectares (Lh) this year compared to 2016-17. Much of it is accounted for by MP (down 8.64 Lh), UP (2.12 Lh), Maharashtra (1.65 Lh) and Rajasthan (1.49 Lh). The other major rabi crop, rapeseed-mustard, has also registered significant acreage decline of 3.52 Lh, led by Rajasthan (7.09 Lh) even while partially made up through higher plantings in other states such as UP and MP.

2016, by contrast, saw more uniform rainfall distribution throughout India, barring the deep south. The stretch covering the old Mysore region and coastal Karnataka, Tamil Nadu and Kerala experienced rainfall deficiency during the 2016 southwest monsoon as well as post-monsoon (i.e. northeast monsoon) seasons. Moreover, the deep south has had good rains since July, helping it recover somewhat from the severe drought of 2016-17.

per cent of it is farmed during kharif and 60-61% in the rabi season. Srinivas clarified that the flat per-acre subsidy will be extended to all farmers and without any cap on holding size. Thus, even a farmer having 100 acres would be entitled to an annual payment of ₹8 lakh.

“The survey conducted by the revenue department last October-December showed our total number of farmers at 72 lakh. 98% of them own less than 10 acres, about 1.75% between 10 and 25 acres, and only the rest 0.25% more than 25 acres. So, the scheme will largely benefit small farmers, even while not leaving out anybody who has land to cultivate,” said Reddy. The Telangana government will soon distribute land ownership passbooks to all the 72 lakh farmers identified as per the revenue department's survey. “The passbook will have the farmer's name, land survey number, holding size in acres, Aadhaar ID, mobile phone and other relevant details. It would serve as proof of land ownership, making the farmer eligible for any such subsidy/transfer scheme.

The ₹ 8,000-per-acre subsidy will not be in the form of direct benefit transfers to the bank accounts of farmers. Instead, the beneficiaries are to be handed out pink-coloured cheques. The decision to make payments in cheques would allow farmers to deposit these in the banks of their choice. Also, the state government apparently does not want a situation where the subsidy transferred into accounts is used by banks to recover outstanding loans owed by farmers.

The Telangana scheme comes even as Shivraj Singh Chauhan-led BJP government in Madhya Pradesh (MP) has, from the 2017-18 kharif season, been implementing a Bhavantar Bhugtan Yojana. This, too, is an income support scheme for farmers, wherein they are paid the difference between the official minimum support price and the average mandi rate for crops during the marketing season.

The MP government has already spent ₹ 1,540 crore as price deficiency payments on about 28.5 lakh tonnes of produce sold during October-December and expects to shell out another ₹ 400 crore on two lakh tonnes of kharif maize and tur (pigeon-pea) to be marketed over January-March. Besides, it has announced the scheme's extension to the current year's rabi chana (chickpea), masur (lentil) and

mustard crops as well.

The schemes of both the states are unique, as they do not involve any physical procurement and stocking of grains from farmers. Instead, farmers are being given income support through direct government payments. What makes the Telangana scheme really different, however, is that it is totally "decoupled" from production: Farmers are getting a flat ₹ 4,000 per acre, irrespective of which crop they grow and how much quantity gets sold and at whatever the price. As regards the fiscal cost of over ₹ 16,000 crore on both the subsidy and free power schemes, the Telangana government's defence is simple: they will dispense with the need for any costlier farm loan waivers in future!

Centre estimates record foodgrain production

Backed by higher production of winter-grown crops, India's foodgrains output is estimated to reach a record 277.49 million tonne in 2017-18 while the crucial wheat harvest may see a marginal decline. According to the second advance estimate released by the agriculture ministry on Tuesday, wheat production may slip to 97.11 million tonne in 2017-18 crop year (July-June) compared with 98.51 million tonne in the previous year. The fall in wheat production is mainly due to 4.27% drop in acreage at 30.42 million hectare this season as many farmers in Madhya Pradesh shifted to chana crop. The foodgrains production in rabi season is seen at an all time high of 139.02 million tonne and kharif grown cereals and pulses at 138.46 million tonne this year. Last year, the country had produced a total 275.11 million tonne foodgrains comprising rice, wheat, pulses and coarse cereals. Rice production is estimated at record 111.01 million tonne, including 96.48 million tonne in kharif and 14.53 million tonne in rabi, as against 109.70 million tonne during 2016-17. The kharif (summer) crops are harvested from October while rabi (winter) crops have already started arriving in mandis and arrival will increase from April onwards.

Pulses production is pegged at a record 23.95 million tonne this year, up from 23.13 million tonne last year, the data showed. The government has forecast chana outout to be 11.10 million tonne as against 9.38 million tonne in 2016-17. Urad production, which is grown in both rabi and kharif, is

estimated to be 3.23 million tonne, up from 2.83 million tonne last year. The production of tur is seen at 4.02 million tonne, down from 4.87 million tonne in 2016-17. The moong output is likely to be 1.74 million tonne compared with 2.17 million tonne. Production of coarse cereals such as maize, jowar, bajra and barley is estimated at record 45.42 million tonne this year as against 43.77 million tonne in 2016-17. The maize output may be highest ever, 27.14 million tonne, up from 25.90 million tonne.

Due to lower acreage, the country's oilseeds production may fall to 29.88 million tonne in 2017-18 as against 31.28 million tonne during 2016-17. Soyabean output is likely to decline to 11.39 million tonne this year from 13.16 million tonne in 2016-17, while groundnut output is pegged at 8.22 million tonne as against 7.46 million tonne last year. Cotton output is pegged higher at 33.92 million bales (of 170 kg each) as against 32.58 million bales last year, while sugarcane harvest is estimated to increase significantly to 353.23 million tonne in 2017-18 from 306.07 million tonne last year.

Hon'ble Finance Minister has allocated ₹ 10,000 crore for fishery, agriculture and animal husbandry sectors in the budget 2018-19. This will help create adequate infrastructure in these sectors. Besides, there is extension of Kisan Credit Card facilities to the fishery and animal husbandry farmers which will help them to secure concessional loans. These are welcome measures.

Fishermen Friendly Budget

Fishery cooperative societies play a pivotal role in the upliftment of fishermen and fisherwomen in the country. FISHCOPFED is executing various welfare schemes for fishermen/fisherwomen have been enrolled as members of

20,374 primary fisherman/fisherwomen cooperative societies. 144 regional/district fishery cooperative federations and 21 state cooperative federations are functioning in the country.



Budget Highlights 2018-19

Agriculture & Rural Economy

In a major boost to the agrarian sector the Minimum Support Price (MSP) for notified kharif crops will be 1.5 times the input cost and stepped up the institutional credit for the sector to ₹ 11 lakh crore.

Allocation of Gross Budgetary Support (GBS) of ₹15000 crore for Interest Subsidy for Short Term Credit to farmers.

Allocation of ₹4000 crore for Pradhan Mantri Krishi Sinchayee Yojana

Allocation of ₹1500 crore for National Food Security Mission

Coverage of e-NAM to 585 APMCs by March 2018. Proposal to setup Agri-Market Infrastructure Fund with a corpus of ₹2000 crore for developing 2200 grams and 585 APMCS.

Launching of '**Operation Greens**' to address price volatility of perishable commodities like potatoes, tomatoes and onions, at an outlay of ₹ 500 crore. 'Operation Greens', on the lines of 'Operation Flood', will promote Farmer Producers Organisations (FPOs), agri-logistics, processing facilities and professional management in the sector. Jaitley also announced **100% deduction in respect of profits to Farmer Producer Companies (FPCs)**, having turnover of up

to ₹100 crore, for a period of five years from FY 2018-19, in order to encourage professionalism in post-harvest value addition in agriculture.

Extension of the facility of Kisan Credit Card to fisheries and animal husbandry farmers.

Proposal to purchase surplus solar power from farmers at reasonable remunerative rates.

Setting up Long Term Irrigation Fund (LTIF) in NABARD.

Allocation of ₹2600 crore for Ground water Irrigation Scheme under Prime Minister Krishi Sinchai Yojana.

Setting up of a Fisheries and Aquaculture Infrastructure Development Fund (FAIDF) for the fisheries sector and an Animal Husbandry Infrastructure Development Fund (AHIDF) to funds the infrastructure requirements of the animal husbandry sector. The total corpus allocated for these two new funds is ₹ 10,000 crore.

Calling Bamboo 'Green Gold', launch of the ₹1290 crore **Restructured National Bamboo Mission in the Budget**. This is centred around a cluster based approach to address the complete bamboo value chain and promote the bamboo sector in a holistic manner.

Economic Survey 2017-18 – Highlights of Agriculture & Food Management

Doubling Farmers' Income by 2022

Several initiatives that encompass activities from seed to marketing, viz. Soil Health Card, Input Management, Per Drop More Crop in Pradhan Mantri Krishi Sinchai Yojana (PMKSY), PMFBY, e- NAM, etc., have been undertaken;

Credit from institutional sources will complement all such government initiatives;

e-NAM aims at integrating the dispersed APMCs through an electronic platform, and enabling price discovery in a competitive manner, to the advantage of farmers;

Farmers should also avail post-harvest loans by storing their produce in the accredited warehouses.

Pricing & Food Management

Higher MSP announced to incentivize production - enhance availability of food items – and help moderate prices.

Price Stabilization Fund (PSF) being implemented to control price volatility of agricultural commodities - pulses, onion etc.

Government approved enhancement in buffer stock of pulses from 1.5 lakh MT to 20 lakh MT to enable effective market intervention for moderation of retail prices.

Agricultural Research

209 new varieties/hybrids tolerant to various biotic and abiotic stresses with enhanced quality developed for Cereals (117), Pulses (32), Oilseeds (28), commercial (24) and Forage crops (8) for cultivation in different agro-ecologies of the country.

What is a Plug Nursery?

A plug nursery is an Israeli farming technique, wherein seedlings for different crops are nurtured under controlled environment in a net house.

The net house must have open space around it, and get six-eight hours of sunlight during the day.

The plug nursery predominantly uses media made from a

mixture of coco peat, vermiculite, perlite and nutrients in a proportion of 8:1:1.

The seeds supplied by farmers will be sown in a tray of 10x10 pockets for seedlings. These seedlings are then supplied to farmers who use them in a net house.



THE KARNATAKA STATE CO-OPERATIVE AGRICULTURE AND RURAL DEVELOPMENT BANK LTD.

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e-mail: kscardbank@yahoo.com

**RECIPIENT OF FIRST EVER INDIRA PRIYADARSHINI VRIKSHA MITRA AWARD PROUDLY
ANNOUNCES JUST A FEW OF ITS RESPLENDENT ACHIEVEMENTS**

Advances (From inception to 31-12-2017)

Over ₹ 5607.47 Crores

No. of loan cases sanctioned as on 31-12-2017

18.12 Lakhs

Share of Small & Marginal Farmers in Bank's financial assistance.

55.49%

STRIKINGLY INNOVATIVE PROGRAMMES INTRODUCED BY THE BANK

<ul style="list-style-type: none">● Non-Farming Rural Enterprises, Rural Housing, S.R.T.O.● Sericulture, Integrated Horticulture / Floriculture, Medicinal Plant● Individual Dairy Development and Sheep / Goat rearing / Poultry / Piggery / Rabbit Rearing / Fisheries and Fishing Boat● Big and Small Lift Irrigation Schemes.● Rural Godowns / Agri Clinic & Agri Business Centres● Purchase of Agriculture Lands● Solar Lights / Solar Pumps● Purchase of Two Wheelers	<ul style="list-style-type: none">● Rain Water Harvesting Structures● Vermi Compost Units● Bio-digester● Farm Mechanisation● Combined Harvester● JCB/Dozers● Coffee curing, Drying yards (Paddy, Areca, Coffee etc.)● Agricultural Implements● Short term crop loan● Gold Loan, Salary Loans etc.
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BANK ACCEPTS FIXED DEPOSITS

1. 91 days - 7.00%
2. 181 days - 8.00%
3. One year and upto two years - 9.40%
4. Two years and above - 9.50%
5. 0.25% of additional Interest to Senior Citizens
6. Bank advances Gold, Vehicle Loan, Salary, House Mortgage Loans etc. at attractive rate of interest.

STRENGTHEN THE FARMERS' BANK

FOR DETAILS, PLEASE CONTACT US OR OUR BRANCH OFFICES OR ANY PRIMARY CO-OPERATIVE AGRICULTURE AND RURAL DEVELOPMENT BANK IN THE STATE.

K. Shadakshari, MLA
President

Poornima .S, K.C.S.
Secretary I/C

A. C. Diwakara, K.C.S.
Managing Director



Union Budget 2018-19 Highlights

Minimum Support Price (MSP) to be at least 50% more than the cost of produce.

To develop and upgrade existing 22,000 rural haats into Gramin Agricultural Markets (GRAMs). GRAMs to be electronically linked to e-NAM and exempted from regulations of APMCs.

Agri-Market Infrastructure Fund with a corpus of ₹ 2000 crore will be set up for developing and upgrading agricultural marketing infrastructure in the 22,000 GRAMs and 585 APMCs.

Prime Minister Gram Sadak Yojana Phase III to include major link routes which connect habitations to GRAMs.

Ministry of Agriculture & Farmers' Welfare to promote cluster based development of agri-commodities and regions in partnership with the Ministries of Food Processing, Commerce and other allied Ministries.

Organic farming by Farmer Producer Organizations (FPOs) and Village Producers' Organizations (VPOs) in large clusters, preferably of 1000 hectares each, will be encouraged.

Women SHGs to be encouraged to take up organic agriculture in clusters under NRLM.

Support to organized cultivation of medicinal plants and associated industry. Allocation of ₹ 200 crore.

Government will promote establishment of specialized agro-processing financial institutions.

Launching of "Operation Greens" for tomato, onion and potato, on the lines of "Operation Flood". It will promote FPOs, agri-logistics, processing facilities & professional management.

Liberalization of exports of agri-commodities. Setting up of state-of-the-art testing facilities in all 42 Mega Food Parks.

Extension of KCC facilities to fisheries & animal husbandry farmers.

Launching of Restructured National Bamboo Mission with outlay of ₹ 1290 crore.

Scope of LTIF to be expanded to cover specified command area development projects.

Setting up of Fisheries & Aquaculture Infrastructure Development Fund & Animal husbandry Infrastructure Development Fund with a total corpus of ₹ 10,000 crore.

Target for institutional credit for agriculture sector to be raised from ₹ 10 lakh crore in 2017-18 to ₹ 11 lakh crore in 2018-19.

100% tax deduction on profits to Farmer Producer Companies having annual turnover up to ₹ 100 cr.

Flow of Agricultural Credit

The plan target and actual flow of agriculture credit during the last ten years i.e. the year 2005-06 to 2016-17 and the

target for the year 2017-18 & 2018-19 is given below:

(₹ crores)

YEAR	TARGET	ACHIEVEMENT
2005-06	1,41,500 (34.76%)	1,80,486 (44.03%)
2006-07	1,75,000 (23.67%)	2,29,401 (27.10%)
2007-08	2,25,000 (28.57%)	2,50,000 (8.98%)
2008-09	2,80,000 (24.44%)	3,02,908 (20.76%)
2010-11	3,75,000 (15.38%)	4,68,291 (21.79%)
2011-12	4,75,000 (26.66%)	5,11,029 (9.13%)
2012-13	5,75,000 (21.05%)	6,07,375 (18.85%)
2013-14	7,00,000 (21.74%)	7,30,765 (20.31%)
2014-15	8,00,000 (14.28%)	8,45,328 (15.68%)
2015-16	8,50,000 (6.25%)	8,80,000 (15.68%)
2016-17	9,00,000 (5.88%)	9,59,825 (9.07%)*
2017-18	10,00,000 (11.11%)	NA
2018-19	11,00,000 (10%)	--

Note: Figures in parentheses indicate percentage change over previous year

Source: Budget document & Economic Surveys of GoI (2005-06 to 2016-17) & NABARD Annual Reports (2005-06 to 2013-14). *Fig.17: Agriculture Credit, Pp.157 (Economic Survey 2016-17, GoI). (Source The Cooperator – February 2018 Issue)



Loans to Self Help Groups (SHGs) of women increased to about ₹ 42,500 crore in 2016-17, growing 37% over previous year. Will increase to ₹ 75,000 crore by March, 2019.

States to be ranked on the basis of Startup ecosystems

Minister for Commerce and Industry Suresh Prabhu launched the States' Startup Ranking 2018 in February at an event organised at the Pravasi Bhartiya Kendra, New Delhi.

The States Startup Ranking framework launched by the Department of Industrial Policy and Promotion is an exercise

aimed at ranking States for establishing a robust ecosystem for supporting Startups. The framework will evaluate States on parameters such as a sound Startup policy and implementation, incubation support, seed funding support, angel and venture funding support, simplified regulations, easing public procurement, awareness and outreach.

A compendium of good practices for strengthening the Startup ecosystem was also released. The handbook identifies 95 good practices implemented by Central and various State Governments.

Celebrating Centenary Year of Long Term Cooperative Credit Structure - Circular issued to SCARDBs

Establishment of a Cooperative Land Mortgage Bank in Jhang, district in Punjab (now in Pakistan) in the year 1920 marked the beginning of Long Term Rural Cooperative Credit Structure in India. The LTCCS in India which presently consists of Cooperative Agriculture & Rural Development Banks at primary and state levels, therefore, will be completing 100 years in 2020. Land mortgage banking system in initial years consisted of institutions working independently without any uniform pattern, size or structure. The three main common features at that time were (1) the long term tenure of loans given (2) purpose of loan confined to redemption of prior debts of farmers and (3) security of loan as registered mortgage of land. The restructuring of long term credit structure in its present form consisting of state level institutions operating either through branches or affiliated primaries with expanded mandate to give developmental loans took place in late 50s and early 60s based on the recommendations of All India Rural Credit Survey Committee. 2020, therefore, also is the Diamond Jubilee Year for the re-organised structure of ARDBs as it exists today.

Completion of 100 years itself is a rare achievement for any organisation/movement. However, this journey was not smooth and seamless all the time. When the structure completes 100 years, these challenges are even more serious than in any other time. However, the inherent strengths of cooperative enterprises and the resilience shown by the structure in facing crises in the past give us confidence in facing the present challenges also successfully.

The Board on the above background resolved that the structure needs to celebrate the historic occasion of Centenary Year of Long Term Cooperative Credit Structure from September 2020 to August 2021 and the Federation as well as SCARDBs should make the following preparations for the same.

- 1] Showcasing success stories/achievements.
- 2] Special action plan for next two years to address structural and operational issues and take the movement to a path of sustainable growth by 2020.
- 3] To plan in advance, State level and National level Conferences.

The Board also resolved that as part of the preparations, the Board of Directors of SCARDBs should constitute special teams to finalise and implement action plans with specific time bound targets in the following areas.

- (i) Recovery and NPA reduction
- (ii) Deposit mobilisation
- (iii) Business expansion and introduction of short term products like supplementary credit limit to long term borrowers, jewel loan scheme etc.
- (iv) Documenting success stories in financing projects and special achievements by the bank.

It was further suggested that each of these special teams at State level will be headed by a senior officer and by the officer-in-charge of region/district at the regional/district level. The performance of the teams at the State level will be supervised and reviewed on a monthly basis by a Committee consisting of Chairman and Managing Director and 2-3 members of the Board and at Regional level by a Committee consisting of Managing Director and local Directors concerned. It was further resolved that the constitution of Special Teams and Supervisory-cum-Review Committees and preparation of action plans should be completed before 28th February 2018 and the same should be reported to the Federation for consideration in the next Board Meeting of the Federation.



श्री मुकुट बिहारी वर्मा
मा सहकारिता मंत्री



उत्तर प्रदेश सहकारी ग्राम विकास बैंक लि,
प्रधान कार्यालय: 10, माल एवेन्यू, लखनऊ-226001



श्री शिवपाल सिंह यादव
सभापति

अपने उत्कृष्ट कार्यों के लिए राष्ट्रीय स्तर पर
एन.सी.ए.आर.डी.बी. फेडरेशन मुम्बई तथा भारत
सरकार द्वारा 21 बार पुरस्कृत बैंक।

30प्र० को उत्तम प्रदेश बनाने हेतु पूरे प्रदेश में तहसील एवं कंतिपय
विकास खण्ड स्तर पर कार्यरत अपनी 323 शाखाओं के माध्यम से
समग्र ग्रामीण विकास कार्यों हेतु दीर्घकालीन वित्तीय ऋण सुविधा
उपलब्ध कराने वाली शीर्षस्थ सहकारी संस्था।

उद्देश्य-

1. लघु सिंचाई योजना:- ट्यूबवेल, पम्पसेट, ड्रिप, स्प्रिंकलर आदि।
2. कृषि यंत्रीकरण:- ट्रैक्टर, हार्डस्टर, थ्रेशर, रोटावेटर आदि।
3. विविधीकरण योजनायें डेयरी, पशुपालन, मुर्गी पालन, मत्स्य पालन आदि।
4. औद्योगिक विकास:- आग, अंगूर, आंवला, पान, केला, ग्लेडियोलाई, गुलाब, औषधीय पौधों की खेती एवं बनीकरण।
5. अकृषि क्षेत्र:- ग्रामीण कुटीर एवं लघु उद्योग परम्परागत उद्योग, तेलघाजी, धान मिल, कोल्हू, आटा चक्की, स्कूटर, मोटरसाइकिल रिपेयरिंग सेंटर, बैट्री चार्जिंग, टेलीविजन, रेडियो, टेपरिकार्डर एवं मोबाइल रिपेयरिंग, हेयर कटिंग सैलून, कम्प्यूटर टाईपिंग एवं साइबर कैफे, वायरमैन एवं मोटर वाइडिंग, मार्डन लाण्ड्री, जल-पान गृह, बैकरी उद्योग, 22 हार्स पावर की क्षमता के जनरेटर सेट, आफ सेट प्रिन्टिंग प्रेस आदि।
6. भूमि क्रय।
7. लघु सड़क परिवहन।

नवीन संचालित योजनायें-

1. ग्रामीण महिलाओं हेतु डेयरी योजना।
2. नेशनल बैंकवर्ड क्लारेज फाइनेंस एण्ड डेवलपमेंट कार्पोरेशन के सहयोग से दोहरी गरीबी रेखा के नीचे जीवन-यापन करने वाले पिछडे वर्ग के सदस्यों को रियायती ब्याज दर पर रोजगार सृजन हेतु ऋण सुविधा उपलब्ध।
3. सौर चलित अल्प सिंचाई की योजनाओं में ऋण उपलब्ध, जिसमें 50% तक का अनुदान नाबांड के सहयोग से वित्त पोषण।
4. सोलर लाईटिंग सिस्टम में वित्त पोषण।
5. ई-रिक्सा योजना में वित्त पोषण।

विशेष सुविधाएं-

1. किसानों को दीर्घकालीन कृषि ऋण न्यूनतम ब्याज दर पर उपलब्ध कराना।
2. समय पर ऋण अदायगी करने वाले किसान भाइयों को ब्याज में 1 प्रतिशत की अतिरिक्त छूट।
3. पिछडे वर्ग की महिलाओं के आर्थिक उत्थान एवं सशक्तीकरण बनाने के उद्देश्य से विभिन्न रोजगार परक योजनाओं में न्यूनतम ब्याज दर पर ऋण उपलब्ध कराना।

आकर्षक मासिक आय जमा, दोहरा लाभ जमा/सावधि जमा योजना-

आकर्षक ब्याज दर पर मासिक आय, दोहरा लाभ व सावधि जमा योजना में 7.00 % तक वार्षिक ब्याज के सापेक्ष सदस्यों से सोत पर आयकर कटौती नहीं, वरिष्ठ नागरिकों को 0.25 % अधिक ब्याज। उक्त योजनाओं तर्फ से जमाकर्ताओं को मूल जमा धनराशि पर 75% तक (बैंक कर्मचारियों को 90% की सीमा तक) ऋण लेने की सुविधा।



हमारा उद्देश्य - समृद्ध किसान

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वेब साइट:- <http://upgramvikasbank.up.in>, Email: upsgvb@yahoo.in

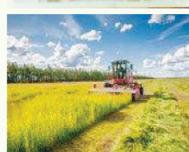
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बैंक मुख्यालय

57 वर्ष

हमारा प्रयास - सत्तं विकास



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Above Rs. 50,001/-	: 12.10%
Commercial Dairy	: 11.60%

Nominal Loan Fee

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For one year upto two years	6.75%
Above two years upto three years	6.50%
Above three years	6.50%

Senior citizens will be paid interest of 0.50% more than the above described rates of interest.



For more information please contact your nearby PADB

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