

LAND BANK JOURNAL

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- 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
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LAND BANK JOURNAL (QUARTERLY)

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A wave of agricultural loan waivers is currently sweeping across the country. Ostensible objective of loan waiver is to mitigate indebtedness of farmers. However, efficacy of loan waiver to meet this objective is strongly disputed by experts. According to Prof. Ramesh Chand, Agriculture Expert in Niti Aayog, loan waiver benefits only about 5%-10% of farmers. This observation is based on National Sample Survey Office (NSSO) Data from 2012-15, showing that only 18% of farmers take bank loans, of which only defaulters are eligible for loan waiver. As per NABARD data, repayment rate of crop loan is 70%. Thus, only 30% of crop loan borrowers which constitute about 6% of farmers are the real beneficiaries of loan waivers. Moreover, a good number of them are wilful defaulters. This significantly brings down further the number of deserving farmers, who are benefited from waiver.

A major drawback of recent waiver schemes is that, they cover only crop loans which are given at low interest rates. The interest rate of crop loans varies from four percent to zero percent in various States after interest subventions by Central and State Govts. At the same time, prevailing interest rate of long term agricultural loans is in the range of 11%-14%, as these loans are not included in the interest subvention scheme of Central Govt and most of the State Govts. Naturally, farmers face more difficulties in repaying these loans. Exclusion of long term agricultural loans from the loan waiver schemes therefore, is another major factor that fails its real purpose.

Agricultural loan waiver has become a regular feature in India since 1990. There has been loan waiver atleast once in every decade during this period. These waivers and expectations of further waivers in the future have vitiated the repayment climate of farm loans to the extent of making these loans almost irrecoverable. Cooperative credit institutions are the worst sufferers of this trend. While Commercial Banks' direct agricultural loans

account for only about 10% of their total advances, it is more than 70% for cooperatives. This ratio is still higher in the case of Cooperative Agriculture & Rural Development Banks, which give mainly Long Term loans to farmers based on NABARD's refinance. Faced with almost zero recovery in their loans for over six months by now, these institutions have approached NABARD for suitable restructuring of refinance.

The NSSO data shows that 50% of farmers are indebted to informal sources at interest rates as high as 3 to 4% per month, which is the primary cause of farm debt trap. Not much have been done by Central or State governments to address this issue, so far. Further set back to repayment and recovery of farm loans due to loan waiver schemes has affected liquidity and recycling of resources in the credit system, seriously crippling the ability of lending institutions to increase their coverage to farmers who are at present not getting bank loans.

The outlay of recent loan waivers announced by Uttar Pradesh, Maharashtra and Karnataka states is around Rs.70,000 crores. The total cost of loan waivers this year is estimated to cross Rs.2.00 lakh crores when Madhya Pradesh, Punjab, Haryana as well as certain other States, which are in the process of finalising their schemes also announce the same shortly. Waiver schemes of this magnitude are not only beyond the means of State Govts but also not justified in view of the meagre benefits these schemes bring temporarily, as against the huge damage. They cause to the rural credit system on a permanent basis.

KK. Ravindran
Managing Editor



Long term effects of Cashless Economy on General Public

Dr. Arpita Sharma*

Financial inclusion is the delivery of financial services at affordable costs to vast sections of disadvantaged and low income groups. Nicholson report (1895) was the first to highlight the need to establish "land banks" as an alternative to dominance of money lenders, resulting the Cooperative Credit Societies Act, 1904 was passed to provide, amongst other things, a legal basis for cooperative credit societies. Even after 70 years of independence, a large section of Indian population still remains unbanked. This malaise has led generation of financial instability and pauperism among the lower income group who do not have access to financial products and services.

Committee on Financial Inclusion [1] Khan Commission: RBI set up in 2004 to look into financial inclusion and the recommendations of the Commission were incorporated into the mid-term review of the policy (2005–06) and urged banks to review their existing practices to align them with the objective of financial inclusion. RBI also exhorted the banks and stressed the need to make available a basic banking 'no frills' account either with 'NIL' or very minimum balances as well as charges that would make such accounts accessible to vast sections of the population of the many schemes and programmes pushed forward by RBI the following need special mention. [2] Rangarajan Committee: Total six major reasons for lack of financial inclusion [a] Inability to provide collateral security, [b] Poor credit absorption capacity, [c] Inadequate reach of the institutions, [d] Weak community network, [e] There is need to organize Urban/Peri-Urban poor people into Neighbourhood Groups (NHGs) on the same pattern as has been adopted for the rural poor, [f] Alter the emphasis somewhat from the large Bank led, public sector dominated, mandate ridden and branch-expansion-focused strategy to Micro Banks. [3] Second ARC (Administrative Reforms Commission) on Financial Inclusion: [a] Innovation is critical for financial inclusion. This would mean developing newer financial products in terms of loans, savings, insurance services etc. which are tailored to the needs of the poor. [b] Currently, most public sector Banks and micro-finance institutions have a narrow product offering, which limits the choice of the SHGs and also constrains them in terms of utilizing the loans productively. [c] Extension of the RRB network to the remaining non-financed areas would considerably speed up the process of inclusive banking and help in extending

micro-finance to local SHGs. [d] High penetration of telecom connectivity in India, together with the latest mobile technology could be used to enhance financial inclusion in the country. [e] MFIs should handle thrift/saving and money transfer only as business correspondents of Scheduled Banks, but not in their individual capacity as a micro-finance lender as it involves hard earned savings of the poorest of the society. [4] Four models of SHG-Bank Linkage: [a] SHG-Bank linkage promoted by a mentor institute (Eg: Self-Help Promotion Agencies & NGOs) – SHPAs provide the seed money. 2nd ARC believed that this is an appropriate model to be replicated on large scale. [b] SHG-Bank direct linkage – Very less frequent because of meagre initial savings of SHGs. [c] SHG-Mentor Institution linkage (indirect linkage) – SHPAs act as financial intermediaries. SHPI accepts the contractual responsibility for repayment of the loan to the Bank unlike in case 1 [d] SHG-Federation model: Cluster of SHGs forming a federation to attain economic sustainability. This federation acts as an intermediary. Some federation are even capable of accessing credit from large MFIs. [5] Nachiket mor Committee: Committee on Comprehensive Financial Services for Small Businesses and Low Income Households" was set up by the RBI in Sep 2013 under the chairmanship of Nachiket Mor, an RBI board member.

Importance of Financial Inclusion in India: The policy makers have been focusing on financial inclusion of Indian rural and semi-rural areas primarily for three most important pressing needs. [1] Creating a platform for inculcating the habit to save Money: The lower income category has been living under the constant shadow of financial duress mainly because of the absence of savings. [2] Providing formal credit avenues: So far the unbanked population has been vulnerably dependent of informal channels of credit like family, friends and moneylenders. Availability of adequate and transparent credit from formal banking channels shall allow the entrepreneurial spirit of the masses to increase outputs and prosperity in the countryside. [3] Plug gaps and leaks in public subsidies and welfare programmes: A considerable sum of money that is meant for the poorest of poor does not actually reach them. While this money meanders through large system of government bureaucracy much of it is widely believed to leak and is unable to reach the intended parties. Government is therefore, pushing for direct cash transfers to beneficiaries through their bank accounts rather than subsidizing products and making cash payments.

*Assistant Professor, GBPAA&T, Pantnagar. Uttarakhand-263145

Article Continues to page no. 5 



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(p.a.)

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Steps taken by RBI to support financial inclusion: [1]

Initiation of no-frills account: These accounts provide basic facilities of deposit and withdrawal to account holders making banking affordable by cutting down on extra frills that are no use for the lower section of the society. These accounts are expected to provide a low-cost mode to access bank account. RBI also eased KYC (Know Your customer) norms for opening of such accounts. [2] Banking service reaches homes through business correspondents: The banking systems have started to adopt the business correspondent mechanism to facilitate banking services in those areas where banks are unable to open brick and mortar branches for cost considerations. Business Correspondents provide affordability and easy accessibility to this unbanked population. Armed with suitable technology, the business correspondents help in taking the banks to the doorsteps of rural households. [3] Electronic Benefits Transfer: To plug the leakages that are present in transfer of payments through the various levels of bureaucracy, government has begun the procedure of transferring payment directly to accounts of the beneficiaries. This "human-less" transfer of payment is expected to provide better benefits and relief to the beneficiaries while reducing government's cost of transfer and monitoring. Once the benefits starts to accrue to the masses, those who remain unbanked shall start looking to enter the formal financial sector.

Steps to accrue Financial Inclusion: Financial inclusion of the unbanked masses is a critical step that requires political will, bureaucratic support and dogged persuasion by RBI. It is expected to unleash the hugely untapped potential of the bottom of pyramid section of Indian economy. Perhaps, financial inclusion can begin the next revolution of growth and prosperity. India had scored poorly on financial inclusion parameters when compared with the global average as per Reserve Bank of India in its annual report. The report quoted a World Bank study in April 2012, which had shown half of the world's population held accounts with formal financial institutions. The study said only nine per cent of the population had taken new loans from a bank, Credit Union or microfinance institution in the past year. In India, only 35 per cent have formal accounts versus an average of 41 per cent in developing economies. India also scored poorly in respect of [1] Credit Cards [2] Outstanding mortgage [3] Health Insurance, [4] Adult origination of new loans and mobile banking. Initiatives by RBI: [1] BCs: 1,10,000 business correspondents employed through the business facilitator and business correspondent (BC) models and set up goals for banks to provide access to formal banking to all 74,414 villages with population over 2000. [2] RBI also adopted the information, communication, technology-based agent bank model through BCs for door-step delivery of financial products and services since 2006. [3] Minimum infrastructure for operating small customer transactions and

supporting up to 8-10 BCs at a reasonable distance of 2-3 kms.

Financial Inclusion Strategies: [1] Lead Bank Scheme -

1969 aimed at forming a coordinated approach for providing banking facilities. To enable banks to assume their lead role in an effective and systematic manner, all districts in the country (excepting the metropolitan cities of Mumbai, Kolkata, Chennai and certain Union Territories) were allotted among Public Sector Banks and a few Private Sector Banks. The Lead bank role is to act as a consortium leader for coordinating the efforts of all credit institutions in each of the allotted districts for expansion of branch banking facilities and for meeting the credit needs of the rural economy. For the preparation of District Credit Plans and monitoring their implementation a Lead Bank Officer (LBO) now designated as Lead District Manager was appointed in 1979. [2] Local Area Banks (1996): These banks are expected to bridge the gap in credit availability and strengthen the institutional credit framework in the rural and semi-urban areas. Although the geographical area of operation of such banks will be limited, they will be allowed to perform all functions of a scheduled commercial bank. Licences are given out in under-banked or unbanked areas of the country. Some of these local area banks could eventually become full-fledged banks at some stage the local area banks are likely to have a capital adequacy ratio higher than 15 per cent to offset higher risk arising from being geographically focused. The scheduled commercial banks are required to have a capital adequacy ratio: ratio of capital fund to risk weighted assets expressed in percentage terms of 12 per cent. [3] Swabhiman: Opening of Bank accounts covering the habitations with minimum population at least through Business correspondent model providing cash services. Habitats with population more than 1600 in plain areas and 1000 in north-eastern and hilly states as per 2001 census are covered. [4] Ultra small Branches: With Bank officers offering other services, undertake field verification and follow-up banking transactions. [5] Direct Benefit Transfer: Cash transfer through Aadhar payment Bridge requires Bank accounts which leads to financial inclusion. [6] Interest subvention scheme: This scheme facilitates access to cheap credit from the banks indirectly through interest subsidies from the govt. It is a subsidy of interest given by Government to certain sectors like Textiles, Farm. For eg. Textile company borrow from Bank at 10 per cent and Government gives subvention of 2 per cent. Hence net bank takes interest from textiles companies 8 per cent. Other sectors have to pay 10 per cent to the bank. Likewise, Farm or Agriculture sectors borrows from Bank at 10 per cent and they will get 4 per cent subvention from the govt. Certain sectors are covered by the system of Differential Rate of Interest (DRI) which is less than base rate. eg: Educational loans, export credit, agriculture, credit to weaker sections. [7] Priority Sector Lending: Target of 40 per cent of Net Bank Credit to select few sectors for all

including foreign private ones. [8] Rashtriya Mahila Kosh (RMK)- To facilitate credit support to poor women for their socio-economic upliftment. [9] Dedicated bank for Women (National Bank for Women) proposed in 2013-14 budget. Objective of this bank is broadening the SHG-bank linkages.

Key Recommendations of financial inclusion committees: [a] Providing a universal bank account to all Indians above the age of 18 years by January 1, 2016. To achieve this, a vertically differentiated banking system with payments banks for deposits and payments. [b] Wholesale banks for credit outreach. These banks need to have Rs.50 crore by way of capital, which is a tenth of what is applicable for new banks that are to be licensed. [c] Aadhaar will be the prime driver towards rapid expansion in the number of bank accounts. Monitoring at the district level such as deposits and advances as a percentage of gross domestic product (GDP). [d] Adjusted 50 per cent priority sector lending target with adjustments for sectors and regions based on difficulty in lending. [e] Increase the Priority Sector Lending Mandate: The Mor committee has recommended that the priority sector lending mandate for banks should be raised from the current 40 per cent to 50 per cent. At the same time, the banks must be freed from all pricing and other restrictions. [f] Allow differentiated Licenses: The Committee has taken ahead the case of differentiated banking licences. It has proposed that three new categories of banks viz. payment, wholesale investment and wholesale consumer should be allowed. At the same time, the regulations for non-banking financial companies, or NBFCs should be streamlined. The biggest problem here would be the business viability of such banks. One example of differentiated banking license is Regional Rural Banks, which were started off with great promises but ultimately broke down. [g] Meaningful Financial Inclusion: The Nachiket Mor committee has suggested two specific district-level penetration metrics viz. the credit- GDP and life cover-GDP ratios to monitor the meaningful financial inclusion. This is a slight departure from the number of accounts formula of financial inclusion. It is a meaningful recommendation and must be taken ahead.

Cashless economy: Cashless India is an illusion. It is a distracting mirage. It may not even be a desirable goal. Vowing to carry forward the war against corruption and black money post-demonetisation, Prime Minister Narendra Modi on Sunday said the government will soon operationalise a strong law to effectively deal with 'benami' properties and this was just the beginning. Making his last monthly address this year in his "Mann ki Baat" programme, he defended the frequent changes in the rules of demonetisation, saying these have been done to reduce the people's problems and defeat such forces who are out to thwart his government's fight against black money and corruption. While on one hand, Modi noted the hardships faced by the common man due to the cash crunch, he also defended his government's move and reiterated the benefits of a cashless

economy. The Prime Minister appeared hopeful that the nation will soon adapt to the digital mode of payment. With an eye on cashless economy, Prime Minister Narendra Modi also unveiled two schemes: [1] Lucky Grahak Yojana and [2] Digi Dhan Vyapaar Yojana for customers and traders alike to promote mobile banking and e-payments. Effects of Cashless economy on society are given as follows: [1] Fright assault: The unraveling of demonetization caused panic in the government. The first sign was when the Government and RBI began to renege on their promises and changed the rules repeatedly (at last count 62 times!). The value of notes that could be exchanged was raised, then lowered, and it was stopped altogether on November 24. Indelible ink was used to mark the finger, then discarded. The withdrawal limit of Rs 24,000 per week remained only on paper and most people got paltry sums. Permissible use of old notes was abruptly stopped on December 15. The ultimate panic reaction was when the RBI ordered that one could deposit old notes only once and up to Rs 5,000 (without being asked questions) after December 19 and before December 30, putting paid to the promises of the Prime Minister and the Finance Minister. The Finance Minister offered lame clarifications. Two days later, the RBI was shamed into reversing its directive. The Prime Minister realised soon that he had been convinced or conned to buy a lemon. He had no choice but to change the narrative. He propounded the idea of a 'cashless economy'. In his speech on November 8, the Prime Minister did not once use the word 'cashless'. It was all about 'black money' (18 times) and fake currency (5 times). By November 27, the Prime Minister shifted gears and in two speeches that day he mentioned 'cashless' 24 times and 'black money' only 9 times! 'Cashless' economy is not an innocent or harmless goal. It conveys a complete lack of empathy for the poor and those who have minimal or no access to the digital world. [2] Not a cashless world: No economy has become 'cashless', not even the most developed economies. The value of dollars and euros in circulation has doubled since 2005 to \$1.48 trillion and € 1.1 trillion respectively. The US and Europe are using more cash, not less cash! World over, the necessary and desirable rule is that people must have cash in their hands and be able to carry out routine transactions using cash. It is perfectly legitimate for a government to make a law that high-value transactions shall be by cheque or any mode of digital payment examples are real-estate transactions, high-value jewellery, large contractual payments, debt repayments, payment of certain taxes etc. On the other hand, to insist that a farmer shall pay hired labour in digital mode or a homemaker shall buy vegetables by swiping a card is an unwarranted intrusion and puts an oppressive burden upon the payer and the payee. Remember, there is a cost to digital payment that will be borne by the consumer. Subject to a reasonable law concerning high-value transactions, we must have the freedom to choose the mode of payment. That is with that right. [3] A distracting mirage: Consumers may be

divided into three categories based upon the degree of access to the digital world: real access, minimal access and no access. 71 crore debit cards have been issued so far; in August 2016, these cards were used to withdraw from ATMs Rs 2,19,657 crore but were used to make payments of only Rs 18,370 crore. To put a card or a smartphone in everyone's hand, to provide real access to everyone, and to make everyone adopt the digital mode will require advocacy, education and persuasion, not coercion and without restricting the person's fundamental right to use cash.

Essential Elements of Rural Credit: [1] Credit can neither be cheap and facile nor on easy terms without regard to its use, but it should be guarded, guided and productive. [2] Credit institution should have tailor-made loan products to match the specific needs of target groups. [3] Loans must be linked to credit-worthiness of the purpose rather than to the credit-worthiness of the Person. [4] Approach, Attitude and Management style must be conducive to the genius and ethos of rural areas – Effective communication helps to deal with rural clientele and earn their confidence. [5] Financial Literacy and Credit counseling of Farmers. [6] Policy must focus on promoting recovery climate and in no case should vitiate the recovery climate.

Jan DhanYojna: The fundamental layer underneath all of these layers is "JAM," an acronym coined for the trio of elements that India Stack will use. JAM stands for Jan Dhan Yojna (envisages universal access to banking facilities with at least one basic banking account for every household in India), Aadhaar (Unique Identification for all residents of India) and Mobile smartphones, all of which have seen rapid adoption in India. **[a] Cashless layer:** The Unified Payments Interface (UPI) forms the core of the cashless layer of India Stack. In April 2016, the National Payments Corporation of India (NPCI), the umbrella organization for all retail payments systems in India launched UPI as the next generation online and mobile payments solution. UPI is an advanced version of IMPS (Immediate Payment Service) that was launched in 2010 offering an instant, 24X7 tool to transfer money instantly within banks across India through mobile, internet and ATM. UPI today powers multiple bank accounts into a single mobile application of any participating bank. Mobile payments are at the core of UPI and with the massive adoption of mobile phones in India across all strata of society, this makes it most viable to achieve critical mass and succeed. UPI supports both Push (Pay request to send money using virtual address) and Pull (Collect request) financial transactions. Built on top of UPI and equipped with multiple Indian language interfaces, many new products and services have been and will be introduced in India. Here's a peek into some of the products and services: **[b] APBS and AEPS:** APBS (Aadhaar Payments Bridge System) is a system that facilitates the transfer of all welfare scheme payments to beneficiary residents' Aadhaar Enabled Bank Account

(AEBA). APBS will function as a push transaction. AEPS is a system that leverages Aadhaar online authentication and enables AEBA to be operated in anytime-anywhere banking mode by the marginalized and financially excluded segments of society through micro-ATMs. AEPS will function as a pull transaction. The success of AEPS rests on the availability of a large number of micro ATMs and ATMs equipped with biometric authentication facilities. As the banking and ATM network is limited in India, newer forms of banks and business correspondents (BCs) are expected to step into service the population. APBS and AEPS will play a huge role in disbursements of government entitlements like NREGA, handicapped, old-age pension, student scholarship, etc., of any central or state government bodies. This is a big step toward reducing corruption and ensuring intended money reaches the intended beneficiary. **[c] RuPay:** This is a new card payment system launched by the National Payments Corporation of India (NPCI), offering a domestic, multilateral system which will allow all Indian banks and financial institutions in India to participate in electronic payments. As it is a cheaper alternative to the more expensive Mastercard and Visa card networks, it is expected to be a hit with merchants, especially the smaller and medium-sized merchants. **[d] *99#:** Banking customers who do not have a smartphone or are challenged with the usage of a smartphone can avail this service by dialing *99# on their mobile phone and transact through an interactive menu displayed on the mobile screen. **[e] Bharat Bill Payment System:** (BBPS) will function as a tiered structure for operating the bill payment system in the country under a single brand. National Payments Corporation of India (NPCI) will function as the authorized body, which will be responsible for setting business standards, rules and procedures for technical and business requirements for all the participants. These are just some of the products and services coming from the India Stack that will propel India toward a less cash-dependent and a more transparent economy. Many of them have already been rolled out, and are being phased out. As the technology platform provided by India Stack is an open-data initiative and is supported by an open API policy, it paves the way for many enterprises, entrepreneurs and government bodies to collaborate for building cashless services on top of Aadhaar, Jan Dhan and mobile. This is a huge development for India and is set to change the way the country conducts its financial transactions. More critically, it will change the way India's yet untapped bottom of the pyramid will conduct its financial transactions as the adoption barriers reduce. We all are and will be consumers of this cashless layer be it as merchants, business owners, beneficiaries of welfare schemes. While the technology platform provides a vast canvas, there are other components too that are critical to making mobile payments and cashless India reach critical mass and to accelerate financial inclusion.

BHIM Mobile App: Prime Minister Modi announced a new digital payments app named BHIM [Bharat Interface for Money] after Babasaheb Dr Bhimrao Ambedkar. It is for now available only on Android so IOS and Windows mobile users are left out. The BHIM app is supposed to support Aadhaar based payments, where transactions will be possible with just a fingerprint impression, but that facility is yet to start. BHIM is a digital payments solution app based on the Unified Payments Interface (UPI) from the National Payments Corporation of India (NPCI), the umbrella organisation for all retail payments systems in India.

Advantages of going cashless for individuals: [1] Pack of cards: No need to carry bulky notes in a case. Just carrying the required cards or mobile banking will suffice. [2] More sense of safety: with a PIN protected card etc. which will work only with your own credentials. [3] No fear of being robbed: unlike carrying cash and letting everyone know that there could be something worth snatching. [4] Tracking of expenses: it becomes easier to determine how much was spent where. [5] The exact amount in small denominations can be paid. Unlike cash transactions, there is no need to pay fringe amount in case the exact amount is not available with either of the parties. [6] An important, though seemingly insignificant issue is that of hygiene of the notes.

Advantages of going cashless for businesses:
[1] Easier accounting [2] Direct payment to bank account.[3]

Easier transactions

Advantages for the economy as a whole: [1] Taxation: with lesser availability of hard cash at homes and more in banks, there is lesser scope of hiding income and evading taxation and when there are more tax payers it ultimately leads to a lesser rate of taxation for the whole country. [2] Transparency and accountability: it becomes a lot easier to track the flow of money with every transaction being recorded with the buyer, seller as well as regulatory bodies, making the system much more transparent and compliant. In the long term, it leads to better business and investment prospects for the economy as a whole. [3] More currency in bank will mean more circulation of money in the economy, leading to greater liquidity and would eventually mean lesser interest rates (according to the monetary policy of the country). [4] Reduced red tapism and bureaucracy: with cashless transactions through electronic means the wire transfers are tracked and people are accountable which in turn reduces corruption and improves service time. [5] Less availability of cash for illegal activities: When people are encouraged to go cashless, there is lesser cash available with the people and there won't be a means to invest in other activities to use the idle cash.

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Meeting PM's goal of doubling farmer income

Ajit Ranade*

Last year, Prime Minister Narendra Modi announced the government's goal of doubling the farmer's income by 2022. Simple math tells us that this would require the farmer's income to rise by around 12 percent per year on average, over the next five years. This is in nominal terms, i.e. not adjusted for inflation. It's an audacious goal if you consider the fact that agriculture growth (in real terms) has never averaged more than five percent over any continuous five-year period, in recent history. That's because of two reasons. Firstly, agricultural productivity cannot rise steeply year after year, and secondly the area under cultivation cannot expand rapidly and continuously. Some modest increase is possible, but not exponential. Besides prices may remain stable, denying any nominal rupee gains. In addition to all this are the attendant risks associated with agriculture, which are monsoon failure, pest attacks, spurious seeds, adverse weather shocks and so on, all of which contribute to making the goal truly audacious.

But if you read the Prime Minister's goal carefully, you will notice that it is to double the farmer's "income", not agricultural production per se. Hence it is possible that the farmer may have some non-agricultural sources of income. Indeed, the services sector activities in rural areas have been increasing substantially, providing livelihoods to many farmers and their families. But more importantly, what if we increased the share of the overall national income pie that accrues to the farmer? It is this approach that holds the greatest promise of increasing incomes to the farmer.

There are two aspects to the incomes associated with the food and cash crop economies. First, in case of fruits and vegetables, the difference between what the city dweller pays for the tomatoes, and what the farmer actually receives is huge. City folk typically pay four times the cost, attributable to reasons like transport, losses, entry taxes and fat margins for middlemen. Surely if some of these inefficiencies are removed, a larger share can go to the farmer. The dismantling of the provisions of the APMC Act in many states is ensuring the reduction of this gap. So also is the establishment of electronic national agriculture market. Any mechanism to connect buyers and sellers directly can potentially benefit the farmer, so long as he retains some bargaining power.

The other aspect of increasing income share to farmers, is through value added agriculture, namely agro processing. This has immense potential. The groundnut may fetch only forty rupees a kilo to the farmer, but when it becomes salted

masala coated peanuts in a fancy packaging, it fetches four hundred rupees a kilo, an increase of ten times. The same is true for oranges and orange juice, or bananas and banana chips. There is an almost infinite range of agro processing products possible, which can retain freshness, flavour and taste of produce, through a combination of technologies like nitrogen or vacuum packing, or freeze-drying. Some of the products that have become very popular in a short time are wet idli mix, instant upma and noodles, fresh juices including pomegranate and litchies, jowar chips and so on. All of these products require investment, working capital, marketing, advertising and efficient distribution. The growth of conventional consumer food companies is an indication of the great potential. But the trick is to ensure that farmers garner a disproportionate share of the increase in value and income that comes from agro processing.

This is where the Farmer Producer Organisations (FPOs) come in. These are hybrid organisations combining features of a shareholder-owned company and cooperatives. The FPO structure was formally introduced under Company Law, to enable farmers to collectively become shareholders. This ensures that they have clout and bargaining power when dealing with consumers, small or big (such as organised retail supermarket chains). If a farmer sells groundnuts to a buyer, then no sales tax, VAT or now GST is applicable. But if an FPO sells salted peanut packets then all kinds of taxes become applicable. This defeats the economic viability since profit margins are slim and overheads can be large, especially when the scale is small. It is here that policy intervention is needed to ensure healthy growth of FPOs around the country.

Not all crops and agri-products are amenable to be produced within an FPO structure. The success of FPOs depends also on them holding their own against FMCG companies, truly assessing consumer tastes and preferences, ensuring consistent quality and offering competitive pricing. But because the demand is so large, those FPOs that manage these challenges well are bound to increase the incomes of their shareholders, i.e. farmers, immensely.

For far too long the farm sector was neglected or has suffered from muddled policies and inefficient implementation. By making the goal of doubling farmer's income in five years, the PM has brought the right focus to a problem that has been neglected for long. In addition, we'll need investment in irrigation, better water management (another of the PM's slogan, "more crop per drop"), dismantling APMC-like shackles, more seamless connect between buyer

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and seller and proactive policies for FPOs to flourish.

A good monsoon last year ensured that agriculture growth would be close to nine percent in the second half this fiscal. Some states like Madhya Pradesh, Maharashtra and Andhra Pradesh are reporting even higher, double-digit growth rates. Sub sectors like horticulture, dairy, livestock,

show promise of high growth in incomes. While conventional policy push should continue and strengthen (more irrigation, credit, water, electricity) we also need a push to ensure the profits from agro processing go predominantly to the farmer. That's the only way to reach the goal of doubling his income.

VOICE OF CUSTOMERSPOINTS TO PONDER

"Incidents of theft has come down as we do not keep money in the house and use ATM whenever needed. Still I remember the thrill of my first experience of collecting cash from Machine" says Ms. Aysha Begam, appreciating the initiatives of KDC Bank. One Branch manager proudly says "Now our quality time is spent on quick disposal of loan proposals increasing our volume of business and client base".

Smt. Nirmala, a satisfied customer says, "After I came to know that digital banking is available in this cooperative bank I closed by account in a commercial bank and all of family members have account only with KDC bank now"



"The coin vending machine in KDC Bank and student card scheme have motivated me and my school mates to open bank account with KDC Bank" says 13 year old Abdul Khadar, the young customer. "We the grownups feel jealous of the children as these facilities were not there when we were of this age" says 78 years old Shri Krishnan Kutty.

The technology development in the bank has changed the life style of many people. When enquired about the post technology impact, the customers responded in the following way.

- Could enter the banks confidently. Gained social status
- Changed their accounts from Commercial banks to KDC Bank
- Availed technology products and happy with customer friendly staff of the Bank
- Could avail banking services without wasting time and money in visiting bank branch and that too the facility is for 24 hours.
- Whole family opened account individual SB accounts with the KDC Bank
- Student card with SMS facility going to parents have made wonders in our family Children started practicing safe banking in early years. They know the importance of keeping password secret and prevent fraud in digital banking.
- Many of the women beneficiaries have also started going to bank and it is the positive sign of their empowerment with improved standard of living.

These voices uniformly says one thing loud and clear that change is only permanent and a bank has to meet the customer's expectation by quickly adopting changes. All cooperative banks should try and adopt digital banking for KYC (Keeping Your Customers!).



Invigorating smart farming in india

C.L. Dadhich *

1. Introduction

Agriculture is last resort for large number of people in rural India rather than a profession. According to 2011 census still about 54.6 per cent of working population of India was engaged in agriculture. As a result there is huge disguised unemployment in Indian agriculture. Indian agriculture also suffers from various kinds of risk such as natural calamities like droughts and floods, pests and plant diseases and above all, price and market risks. These risks call for robust resilience. As compared to developed countries productivity of Indian agriculture is very low. The low productivity only varied not across the states but varied within various states or regions of the state. At times efforts initiated under various development programme(s) have resulted some side effects like green house gases, pollution, climate changes, etc. In this backdrop the importance of smart agriculture cannot be over emphasized.

2. Needs for Smart Agriculture

2.1 Rising Demand for Agricultural Commodities

Indian Population is growing faster than food production in India. This will be result in mismatch between demand and food supply in India. We have to increase our food production through higher productivity without loss of further time. This apart, higher rise in income in recent years has impacted our food consumption pattern significantly. The demand for high value agricultural commodities like fruits, vegetables, milk and milk products, egg and poultry products and fish etc., has risen in recent years. Unless production is increased, food inflation may remain unabated. The life style changes have also impacted demand for new agricultural products like low calorie food stuffs, etc.

2.2. Judicious Use of Scarce Natural Resources

There is dire need to make judicious use of scarce natural resources like arable land, scarce ground and surface water and limited fossil fuel for production of agricultural commodities in general and food production in particular. This will be possible only through the efficient use of these scarce natural resources for agricultural production

2.3 Socio-Economic Changes

Socio-economic changes also play very important role in agricultural production and productivity. Important among

these changes are improvement in literacy levels in general and women literacy in particular, urbanisation age-wise composition of population (share of senior citizens in total population) and some specified programme like MNREGA. These changes impinge the availability of labour force, necessitating the smart agriculture.

2.4 Side Effects of Agricultural Revolutions

India witnessed a number of agricultural revolution viz., green revolution, white revolution, blue revolution, golden revolution, so on and so forth. These revolutions contributed a great deal in agricultural sector yet at times brought about some unhealthy developments such as green revolution encouraged indiscriminate use of chemical fertilisers and pesticides impacting the quality of soil, excess irrigation caused water logging, green house gases pollution, climate change, etc. has not only affected climate change but has a significant effect on it in turn. The relationship between agriculture and climate change is a two way street agriculture. Similarly, market driven white revolution achieved milk production largely by increasing the number of milch animals rather than improving the yield per animal. This caused adverse impact on environment (higher production of methane gases) enhance competition between men and milch animals for food and fodder, higher water consumption for producing milk particularly in arid zone areas. According to a study (Singh et al., 2004) dairy based rural livelihoods systems are now threatening the limited water resources. Such side effects are also noticed as a result of other agricultural revolutions (blue and golden revolution). Smart agriculture is needed to mitigate such side effects.

3. Conceptual Framework of Smart Farming

According to the most popular definition, the smart agriculture is an approach for transforming and reorienting agriculture under the new realities like climate change, socio-economic changes, etc. (Lippur et al., 2014). However, most comprehensive definition of the smart agriculture was given by the UNO in 2013. Accordingly, smart agriculture substantially increases productivity, enhances resilience (adaptation), reduces (mitigation) ill impact (side effects) of various developments to achieve food security and economic development of the country. It mainly addresses climate change effectively. As a result it is also known as climate smart agriculture (CSA). The undercurrent of these definitions is transformation of the agriculture to increase production through enhanced productivity, enhance

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resilience and mitigate the ill-effects of various developments. It is a broad version of precision farming and sustainable farming with explicit focus on climate change.

4. Scope of Smart Agriculture

As we include allied and other ancillary activities under agriculture, the smart agriculture includes apart from the crop production, subsectors like live stocks horticulture and plantations, fishes, forestry it also includes whole gamut of supply chain and agri-business activities. The specific examples of smart agriculture interventions included among others. Soil management drought tolerant varieties dairy development, farming catfish, carbon finance to restore crop fields, waste reducing rice thresher, rainfall forecasting, incentive system for low carbon agriculture, so on and so forth. A typical example of smart farming intervention relates to National Dairy Plan (NDP) sponsored by NDDB. Under the NDP producer companies are encouraged to arrange village based milk procurement system that is equipped with electronic weighing and testing system to ensure transparency at all levels, with quality assurance and members payment in their respective bank accounts (members are informed through SMS). This intervention also ensured higher milk productivity through better feeding and breeding, i.e., ration balancing and quality AI services at the door step of producers using top genetic available in the country for producing superior calves with higher productivity. Advance technology is being used for milk payment processing, milk pricing and milk data transfer through general Pocket Radio Service route information with mobile technology. Call centre is in place to support field engineering services for better management of equipment and to control breakdown loss (Paayal 2015-16). In this way switch over to smart agriculture has ensured the desired results in a big way.

5. Pillars of Smart Agriculture

The smart agriculture is based on the six Es. First is economic viability. The project should be economically viable and should generate at least 15 per cent internal rate of returns (IRR). Second, it should use the resources in an efficient manner. Main resources are land, water and labour. One of the measures of the efficiency is higher per unit production. This will ensure higher productivity and production. Third, the smart agriculture project should judiciously use the energy particularly of fossil fuel like crude oil, etc. it may also encourage production of bio-gas and solar energy. Fourth, these projects should benefit all the sections of society particularly weaker sections across all the regions of the country particularly less developed regions. It should not accentuate inter and intraregional imbalances. Fifth the smart agriculture should protect environment and restore the ecological balance and sixth, it should generate employment in the country particularly for the less privileged

people.

6. Technologies of Smart Agriculture

The smart agriculture is mainly based on technologies. These technologies include sensing technologies such as remote sensing like weather forecasting, land use pattern mapping, cropping pattern mapping and forecasting, soil testing, mineral mapping of animals for feed production, mineral mixture, etc., telematics technologies, software communication, system mobile banking, direct transfer payment system (milk payment), Kisan credit cards and hardware/software system. The ultimate objective is to design a robust network of sensors to combine all the data and analyse the same to shape a farm management information system to enable farmers to take better decisions at right moment. The higher use of technologies in agriculture also upgrades it to smart agriculture and enable it to achieve the desired results. In other words, green digital revolution is smart agriculture revolution. The success of smart agriculture will depend on adoption of these technologies that will in turn depend on the availability of financial assistance.

7. Important Policy Initiatives towards Augmenting Agricultural Credit

A number of policy measures were initiated to augment flow of agricultural credit. Important among these measures included (i) enactment of co-operative societies act in 1904 to provide institutional credit to agriculture, (ii) in 1954, All India Rural Credit Committee observed that co-operative has failed but it must succeed. Accordingly, it recommended a three prolonged strategy of state participation in co-operative institutions, introduction of the crop loan system and linking of credit with marketing (RBI 1954), (iii) in 1963, Agricultural Refinance Co-operation was set up to provide refinance to banks for investment credit for agriculture. Later it was renamed as Agriculture Refinance and Development Corporation (ARDC) to focus on agricultural development, (iv) in 1969, it was realized that co-operatives will not be in position to support green revolution in the country (RBI 1969). Accordingly commercial banks were inducted in the realm of agricultural credit under multi credit agencies approach. Later 14 major commercial banks were nationalised in 1969 (v) in order to augment flow of credit to the hitherto neglected and under privileged sectors, a concept of priority sector was evolved with target lending. Ultimately banks were required to provide at least 18 per cent of their adjusted net bank credit to agriculture including 4.5 per cent indirect advances. A sub target of at least 10 per cent of ANBC was also fixed for the weaker sections of the society. Later on Rural Infrastructure Development Fund (RIDF) was set up with NABARD to accommodate short fall in priority sector advances. A minimum credit Deposit ratio of 60 per cent was fixed for rural branches to combat siphoning

off rural resources. (vi) in 1975, Regional Rural Banks were established to provide credit exclusively to weaker sections of the society, (vii) in order to give undivided attention pointed focus and forceful direction to integrated rural development National Bank for Agricultural and Rural Development (NABARD) was established by merging Agricultural Credit Department of RBI and ARDC with organic link with RBI 1982 (viii) in 1994, to purvey microfinance, especially to women, self help group bank linked programme was launched in a big way with a view to upscaling and mainstreaming micro finance, other organizations like NBFC, NGOs, etc., were allowed to provide micro finance under SHG-NBFC programme with freedom to charge higher interest. (ix) effective from 2004-05 (NABARD, 2005) banks were advised to introduce a package to double the flow of short term credit over a period of three years under subvention of the interest rate of 7 per cent with further subvention of 3 per cent on timely repayment (x) keeping in view the importance of financial inclusion. RBI advised banks to introduce ICT based business correspondent model (BC model) to provide low cost banking services at the door step of rural masses in remote villages. Banks were also advised to cover all villages having population of above 2000 in by 2012 and villages have population between 1000 and 2000 by 2013. They were further advised to open at least 25 per cent of their new branches in rural areas.

8. Main Sources of Agricultural Credit

According to All India Debt and Investment Survey 2012 commercial bank (including RRBs) ranked first with 30.7 per cent market share closely followed by co-operatives 28.9 per cent and professional money lenders 23.1 per cent for financing cultivators in rural India. In case of non-cultivators, professional money lender accounted for 30.8 per cent market share followed by co-operatives 22.9 per cent and commercial bank (including RRB) 22.3 per cent (Table 1). This reveals that measures taken to augment the flow of institutional agricultural credit have positive impact but institutional agencies have not yet replaced the professional money lenders.

9. Trends in Flow of Agricultural Credit

9.1 Market Share of Institutional Agencies

The market share of the institutional agencies in rural debt outstanding increased from 29 per cent in 1971 to 64 per cent in 1991 and then witnessed a decline of 8 percentage points in 2012 (56 per cent) in the wake of financial sector reforms. At disaggregate level, in case of cultivator it went up from 32 per cent in 1971 to 66 per cent in 1991 and then decreased to 64 per cent in 2012. However, market share of institutional agencies witnessed phenomenon rise from 11 per cent in 1971 to 55 per cent in 1991

TABLE 1. CREDIT AGENCY WISE AND TYPE OF HOUSEHOLD WISE SHARE IN RURAL LOAN OUTSTANDING AS ON 30.6.2012 (in per cent)

Credit agency	Share in rural loan outstanding		
	Cultivator	Non-cultivator	All
Government	1.3	1.1	1.2
Co-operatives	28.9	22.9	24.9
Commercial banks	30.7	22.3	25.1
Insurance	0.1	0.2	0.2
Provident fund	0	0.1	0.1
Financial Corp. Inst.	0.4	0.6	0.6
Financial Company	0.9	1.2	1.1
Self help group bank linked	1.1	2.4	1.9
Self help group NBFC	0.3	0.3	0.3
Other Institutions	0.3	0.9	0.7
All institutional agencies	64	52.1	56
Landlord	0.4	0.9	0.7
Agricultural moneylender	6.5	4.2	5
Professional moneylender	23.1	30.8	28.2
Input suppliers	0.2	0.1	0.1
Relatives and friends	4.3	9.8	8
Doc., lawyers and other prof.	0.5	0.4	0.5
others	1	1.6	1.4
Non-institutional agencies	36	47.9	44
All	100	100	100

Source: Key indicators of debt and investment in India (2014) NSSO Government of India.



**TABLE 2. PERCENTAGE SHARE OF INSTITUTIONAL AGENCIES IN OUTSTANDING CASH DEBT
FOR EACH OF OCCUPATIONAL CATEGORIES**

Occupational category	As on June 30 (in per cent)				
	1971 (26th)	1981 (37th)	1991 (48th)	2002 (59th)	2012 (70th)
Rural					
Cultivator	32	63	66	61	64
Non-cultivator	11	37	55	46	52
All	29	61	64	57	56
Urban					
Self-employed	-	58	69	67	76
Others	-	62	74	80	86
All	-	60	72	75	85

Source: NSSO, Government of India.

**TABLE 3. CREDIT AGENCY WISE AND TYPE OF HOUSEHOLD-WISE SHARE IN RURAL LOAN OUTSTANDING
AND INCIDENCE OF INDEBTEDNESS AS ON 30.6.2012.**

(in per cent)

Credit Agency	Cultivator		Non-cultivator		All	
	IOI	SRLO	IOI	SRLO	IOI	SRLO
Institutional agencies	33.8	64.0	14.2	52.1	17.2	56.0
Non-institutional agencies	21.5	36.0	18.6	47.9	19.0	44.0
All	45.9	100.0	28.9	100.0	31.4	100.0

IOI – Incidence of indebtedness SRLO– Share in rural loan outstanding

Source: Key indicators of debt and investment in India (2014) NSSO Government of India.

(declined to 52 per cent in 2012) in case of non-cultivators. However, the market share of institutional agencies in urban loans outstanding was markedly high at 85 per cent in 2012 (Table 2). This indicates that institutional agencies have higher preference for urban borrowers. Similarly in rural areas they have higher preference for cultivators as compared to non-cultivators. So far incidence of indebtedness is concerned at least 33.8 per cent cultivator household reported indebtedness of institutional sources against only 14.2 per cent non-cultivator households (Table 3). This further confirms that in rural areas institutional agencies have a higher performance for cultivator households as compared to non-cultivators households.

9.2 Asset Holding-wise Incidence of Indebtedness

Asset holding wise break-up indicated that institutional agencies covered higher proportion of household in the top asset group (32.4 per cent) as against only 7.9 percent household in the bottom asset group. In case of non-institutional agencies for bottom asset group coverage of households was 14.0 per cent as compared to 15.3 per cent household covered in the top asset bracket. This suggests that while non-institutional agencies were neutral between size of the asset, institutional agencies had a preference for the better off households (Table 4).

9.3 Higher preference for Short Term Credit

While the policy of the subvention of interest on short term has played a significant role in enlarging the flow of short term credit, it has adversely impacted the flow of credit for investment purposes. The share of term credit disbursed during the period declined from 39.3 per cent in the year 2004-05 to 24.3 per cent in the year 2014-15 (NABARD 2015). The share of term loans also suffered a setback since 1995-96 on account of growing contribution of commercial banks in Rural Infrastructure Development Fund (RIDF), set up out of the short fall in priority sector lending targets. Incidentally outstanding balance in RIDF maintained with NABARD aggregated to staggering sum of Rs. 90,000 crore, as at end March 2015 (NABARD 2015).

9.4 Shortfall in Priority Sector Advances

According to the Report on Trend and Progress of Banking in India 2014-15 (RBI 2015) both public sector banks (16.5 per cent) and private sector banks (14.8 per cent) had a short fall in advances to agriculture sector against the target of 18 per cent. Similarly, the loans and advances of RRBs also recorded deceleration in the growth to 11.7 per cent as against 15.2 per cent in the previous year. Despite the huge dilution in definition of priority sector and net bank credit as well as alternative arrangements in place to accommodate short fall in priority sector lending targets in the form of making deposits in RIDF, STCRC and STRC Fund(s) non



TABLE 4. ASSET HOLDING-WISE INCIDENCE OF INDEBTEDNESS (IOI) TO INSTITUTIONAL AND NON-INSTITUTIONAL CREDIT AGENCIES BY RURAL HOUSEHOLDS

Decile class of hh asset holding	Incidence of indebtedness (in per cent)		
	Rural		
	Institutional	Non- Institutional	All
1	7.9	14.0	19.6
2	7.4	17.1	22.3
3	10.8	19.1	27.1
4	12.4	18.2	27.5
5	13.0	21.9	30.9
6	16.9	21.6	33.0
7	19.1	19.3	32.7
8	22.2	21.6	42.6
9	29.3	22.1	42.6
10	32.6	15.3	41.3
All	17.2	19.0	31.4

Source: Key indicators of debt and investment in India (2014) NSSO Government of India.

achieving of priority sector lending targets is a matter of serious concern. Similarly, the sub target of financing to weaker section under priority sector has been conveniently forgotten by one and all. This apart, as a result of merger of all the RRBs sponsored by a particular bank in the state upgrading of pay scales at par with sponsoring bank and financing of large farmers by RRBs, the original concept of RRBs – region specific low profile bank to finance exclusively to Weaker Sections has been completely diluted. Surely, these unsavory developments are responsible for the poor coverage of bottom asset groups in rural areas and weaker sections of society.

9.5 Declining Share of Rural Branch Network

The number of rural branches of scheduled commercial banks recorded a phenomenon growth from 35134 as at end March 1991 to 48536 as at end March 2015, while share of rural branches to total branches witnessed drastic decline from 57 per cent to 37 per cent during the reference period. Similar trends were recorded in respect of accounts and amount of credit of rural vis-a-vis non rural branches (RBI 2015). This suggests that rural areas did not receive fair deal not only in terms of branch expansion but in regard to availability of credit and number of borrowers financed as compared to urban areas including Metros. Needless to add that brick and mortar branch plays a central and critical role even in financial inclusion programme. Credit deposit ratio (CD ratio), an important measure of use of local resource revealed that CD ratio of rural branches drastically declined from 76.9 in 1991 to 60.2 as against rise of average CD ratio of scheduled commercial banks from 57.7 to 76.0 during the period under review. Evidently, rural savings have been diverted towards financing of borrowers belong to non rural areas.

10. Perspectives

Despite disquieting trends the future of agricultural credit appears very bright and promising in view of recent developments and innovations.

10.1 Financial Inclusion Programme

Adoption of multi credit approach and financial inclusion programme have placed Indian banking system in advantageous position. The huge banking outlets opened under the financial inclusion plan particularly under the BC model may pay the rich dividends in the near future. Incidentally number of banking outlets in the rural areas aggregated to 5.54 lakh including 48536 branches at the end of March 2015. Similarly number of BSBDAS including Jandhan accounts reached to 441 million as at end September 2015. Transactions through these outlets under these accounts have been on a rise. Interestingly the farm sector credit outstanding aggregated to Rs. 4860 billion under 42 million accounts as on the reference date. Similarly small non-farm credit amounted to Rs. 1390 billion under 11 million accounts as on the reference date (RBI 2015). Needless to mention, that the efforts under financial inclusion will further accelerate farm lending in the near future. This apart lending for allied activities viz., dairy, poultry, Fisheries, Fruits and Vegetables etc., will go up significantly as a result of rise in demand for these high value agricultural commodities.

10.2 Revitalisation of Co-operatives

Under a package of measures suggested by the Vaidyanathan Committee (s), both the co-operative credit wings are in the process of revitalization. The revitalised co-operatives will be in a better position to regain their lost

market share in rural credit in the near future.

10.3 Kisan Credit Card Scheme

The introduction of kisan credit card (KCC) scheme has ensured uninterrupted flow of credit to farmers in rural areas. Its upgradation into Rupay Debit Card will make KCC as good as ATM card. This instrument will go a long way in augmenting to the flow of credit for smart farming.

10.4 Agri-Clinics and Agri-business Centres

This scheme relating to agri-clinics and agri-business centres was launched by the Ministry of Agriculture in April 2002 to support agricultural development by providing financial assistance and subsidy to agricultural graduates to provide extension and other services to farmers. There were as many as 1007 such clinics in the country as at end of March 2015. These units will go a long way in promoting smart agriculture in the country.

10.5 Demonitisation of Bank Notes

The demonitisation of Rs. 500 and Rs. 1000 bank notes in November 2016 on the one hand and some embargo on withdrawal of cash on the other hand have placed banks in a very comfortable liquidity position. They would be looking for new vistas for lending. In this context, lending for smart agriculture will be certainly a viable proposition. In order to further encourage banks to lend for smart agriculture, it will be desirable to treat advance to service providers of technologies a part of indirect agricultural advances under interest subvention scheme. This apart capital subsidy should be made available to them under National Agricultural Plan.

10.6 Growing Role of NABARD

Above all as one of the financially sound agricultural development bank in the world, the National Agriculture and Rural Development Bank (NABARD) with a pool of multi-disciplinary experts headed by an experienced banker belonging to farming community is in a position to whole heartily support the smart agriculture in the country in a big way. NABARD should play role of World Bank in India and support smart agriculture revolution under various schemes like RIDF, jointly with other banks directly financing, etc..

11. Summing up.

The reorientation and transformation of agriculture with the help of technology in general and green digital technology in particular is called smart agriculture: There is dire need of smart agriculture to enhance production through higher productivity increase resilience from risks and reduce side effects to ensure food security and economic development of the country. The success of smart agriculture will largely depend on availability of credit.

Despite a number of measures taken for augmenting the flow of institutional credit, the availability of credit is far from satisfactory particularly for term loans needed for smart agriculture. However, banking network developed in recent years in the form of banking outlets under BC model, PM Jandhan accounts, introduction of kisan credit cards, agri-clinic scheme, revitalization of co-operatives reorientation of lending policies by NABARD and its proactive role, etc. will go a long way in augmenting the flow of credit for smart agriculture. Needless to mention that recent innovations and developments coupled with some policy changes will ensure uninterrupted flow of credit for smart agriculture. And finally everything can wait but not the smart agriculture.

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Technology Banking in Cooperative Banks – New Strategy for Better Customer Services

Dr. P. Selvaraj*

Introduction

Financial sector in general and banking industry in particular is the largest spender and beneficiary from information technology. Gone are the days, when we used to stand in queue for getting our cheque passed for payment, through four to five desks before getting cash in our hands. Now we are doing "Banking without Banks". Banks have "all in one facility" like insurance, pension, money transfer across the world, Debit & credit cards, mobile banking, missed call banking, ATM, mobile wallets, IMPS, internet banking, Unified Payment Interface (UPI) etc. As a result, today one, especially youth, enquires about the availability of digital banking before opening an account. Banking sector in our country is at cross roads today, with the initiatives like opening up of license regime by RBI permitting new players; Knowledge banking with technology explosion in banking operations; Highly qualified new recruits; Increased expectations by customers; High level of competition in payment and settlement solutions and Digital India movement taking internet even to remote locations. While Commercial banks including Foreign Banks and Regional Rural Banks could easily adopt and implement the technology banking, it is a herculean task for cooperative banks. But it is the order of the day for their survival and sustainability.

The Beginning

Malabar District Cooperative Bank was registered and started functioning on 03rd Dec. 1917. At the time of formation of Kerala State in 1956, this was the only CCB and name was changed in 1958 as Malabar Co-operative Central Bank Ltd. (MCCB). Later when Malabar district was divided into 3 revenue districts (viz., Kozhikode, Kannur and Palakkad) separate CCBs were formed in July 1963. The Bank was again divided into three and the MCCB's area of operation has been confined to Kozhikode district. In 1985 the Bye-laws of the Bank was amended and MCCB was renamed as Kozhikode District Co-operative Bank Ltd., now popularly called KDC Bank. It has 60 branches with administrate Central Office at Kozhikode and is in profit continuously with "A" class audit classification with a work force of more than 500 employees. This glorious historical background cannot make the bank sustainable, unless otherwise the bank adopts changes in its operation and extends excellent customer services.

The Kozhikode district, in addition to KDC Bank, has good banking network comprising of 335 branches of commercial

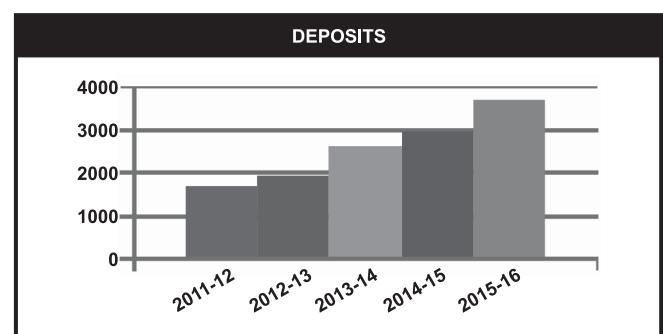
banks, 77 branches of RRB (Kerala Grameena Bank), 9 branches of 3 PCARDBs, 104 PACSSs and one branch each of KSCB & Kerala Financial Corporation. As waves of technology spread through banking business in the district, KDC Bank experienced erosion of clients, for want of modern technology banking products. It was then the CEO of the Bank with his professional pedigree, domain knowledge, aggressive leadership, dedication and no turning back attitude took initiatives for IT in the Bank and it was a revolution in Co-operative banking sector by that time. The entire staff stood with him.

Financial Achievements

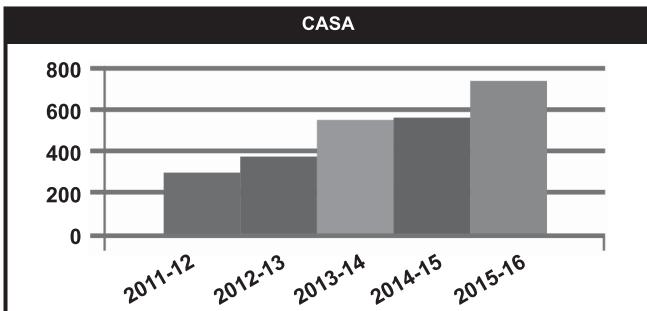
Implementation of digital banking has not only increased the customer satisfaction and client base, but also improved the overall health of Bank. The Bank has stepped into the standards of new generation banks, through the status of a commercial co-operative bank. With digital banking in place, the KDC Bank started growing in size and it is evident from the following table.

Particulars	Performance of KDC Bank (₹ in crores)				
	2011-12	2012-13	2013-14	2015-16	2017-18
Branches (Nos.)	44	47	50*	54*	60*
ATM (Nos.)	—	—	01	05	10
Deposits	1,672.76	1,932.25	2,595.55	2,973.55	3,702.25
Of which CASA	301.91	377.05	549.83	567.16	732.40
Loans	1,542.71	1,892.80	1,925.11	2,117.42	2,540.96
Total Business	3,215.48	3,825.05	4,520.66	5,090.97	6,243.21
Per Emp. Business	9.27	10.45	11.50	11.73	14.35
No. of affiliated Soc.	509	595	642	689	784
Share Capital from affiliated Societies	40.36	43.70	84.78	85.38	111.56
CRAR (%)	5.85	5.66	9.55	10.01	10.00
Net Profit	7.12	10.63	13.85	21.69	25.00
Net NPA (%)	6.23	4.03	4.90	3.76	4.34

* including one Service branch for CTS



*DGM-FM, BIRD, Mangalore



- National Payment Corporation of India (NPCI) has selected KDC Bank as the Pilot Bank for implementation of Centralized Positive Pay System (CPPS), a system that prevents Cheque fraud in CTS Clearing. CPPS system is being introduced in lines with RBI Vision document 2018.
- CCTV would be installed at all branches soon and the tender/purchase procedures have already been completed.
- Presidents and Secretaries of Service Cooperative Banks and few commercial banks in other districts visit the Bank for getting exposure.
- RBI has opened SGL Account (Subsidiary General Ledger Account) in the name of KDC Bank for conducting business in Central and State Government Securities (G-Secs). SGL was one of the criteria for direct RTGS/NEFT.
- KDC Bank, which is the only Class I Cooperative Bank in Kerala, has bagged various awards namely Banking Frontier awards for Best Youth CEO, Best IT Head, Best Recovery Performance, besides Best performance award from Cooperative Department of Govt. of Kerala.

Adoption of Technology

a. Core Banking Solution – the first step

The first step in digital banking is Core Banking Solution. With assistance from NABARD the Bank started CBS in 2011. It was not easy as the earlier system adopted was the Legacy system. Banking Software used was TBA, a local software. Branches (44 Nos.) were neither interconnected nor networked and were with non-structured cabling. Only assembled nodes were used for both Computer System Hardware and Branch Server Hardware; UPS System - 1 KVA & 2 KVA; Non IGBT; Non Active Power Factor Corrected models. As a result, there are many instances of data loss for multiple days, due to improper backup procedures. The only consolation was minimum number of transactions and minimum bills with non-centralized cheques.

There were unstable situations resulting into drop in employee confidence at work locations. The database system used was Red Hat Enterprise Linux 4.2 under the PostgreSQL DBMS. Though it was adequate to meet the requirements of Bank in those days, the instability of the Software affected the day-to-day working badly and the

hardware used for loading the Linux server was very poor creating repeated problems. Another bottleneck for the database was its version 4.2. In 2010, it was the time of RHEL 5 or 6 version, ruling the market. The latest hardware was not supporting RHEL version 4.2. Further due to non-availability of Source Code, moving into new version was just impossible. As a result, it was a cumbersome process to find out the apt hardware for loading the old version of Linux. Bank undertook a series of research to find out and implement a hardware for RHEL 4.8, with the help of giants like HP, IBM and RedHat etc., Bank had suffered data losses for a couple of days due to improper backup operations at some branches and accidental corruption of the Database. But the commitment and foresightedness of the staff made CBS possible with active support from NABARD.

Bank had established a full-fledged IT Division in Dec 2012, technically competent to cope with the challenges of tomorrow rather than today's requirements. A full-fledged Training LAB with a capacity of 25 was set up for capacity building, with financial support from NABARD under Cooperative Development Fund. Sufficient recruitment in technical cadre was done under the guidance of a technical advisor, who was a technocrat from National Institute of Technology Calicut. The CBS software from the reputed organization in BFSI domain, the INFOSYS's FINACLE was implemented through WIPRO.

Exhaustive group wise meetings were conducted at Head Office, for attitudinal changes towards shifting from Legacy to CBS, covering executives to clerk / cashiers / collection agents. In 2013, Project Monitoring Unit formed by Wipro and NABARD organized a training programme at Thiruvananthapuram. By Nov 2013 all the branches were successfully migrated to CBS. Now many branches participate in Cheque Truncation process.

The take-off of Digital Banking

After completing CBS, the bank went on to diversified and multi-faceted digital banking products like RTGS/NEFT, CTS, ATM, DBT etc.,

- Earlier years in most of banks, there was IT division helping the banking department. In recent days it is the IT department, which is guiding the banking division for business. In this transformation one needs to be clear that IT is not exploiting with huge expenditure. KDC bank has done this by developing in-house software programmes.
- An in-house software was developed for pre migration Reconciliation, CTS, ECS uploading, Aadhar enabled payments, and ATM reconciliation, FIU reporting, interest subvention etc., and hence bank is now having own software for all of these operations. This is very important to avoid dependency with technology service providers. CTS clearing are successfully running at Service branch



with in-house developed software for uploading.

- At the initial stage Bank had utilised standard e-mail facility from G mail for HO and branch operations. The bank hosted an exclusive web site www.kdcbank.com and started utilising the domain for e-mail for HO departments and branches.
- A well-formed Help Desk with a maximum seating capacity of 10 was formed, which utilized the centralized control feature of Finacle for providing live assistance to branches. Now the desk is capable enough to cope with any type of operational challenges in Finacle, including the database modifications. This was possible only with the centralized control over the database. The help desk is directly communicating to all locations for any unresolved technical issues in branches/offices.
- Reports generation were centralized for all the reporting needs of the Bank and handling various reports and confirmation became easier than ever, which was one of the bottlenecks under the earlier Legacy system.
- One section exclusively monitors the bank's financial position, evaluating weekly Profit & Loss and closely monitoring NPA cases. This helps in getting early signals, time saving, business expansion, better financial control and adopt uniform & best practices.
- The bank started RTGS/NEFT as a sub member of IDBI in Jan. 2014. Daily 150 to 200 transactions outward with a total transaction amount of Rs. 1.00 crore and 3500 inward transactions with an amount of Rs. 3.00 crore were done.
- ATM went live in NPCI on issuer basis from Sept 2014, and on acquirer basis from October 2014. RuPay was started as a joint venture with NPCI & Federal Bank and RuPay cards were issued, with standard features, at par with Commercial banks.
- With the aim of attracting "moving away youth" the Bank introduced Student's RuPay ATM cards with SMS facility to their parents. As of July 2016, the bank had issued 66,134 RuPay cards, of which 3,561 were student's RuPay cards. Further 8,061 Student's savings bank accounts were opened inculcating banking habits in the minds of youth and for the bank it was "catching them young" for business expansion.
- One section under IT Division was fully managing the Direct Benefit Transfer (DBT) procedures and processing Aadhaar enabled payments, using in-house software. By July 2016, Bank had linked Aadhaar to 1,13,558 accounts. An amount of Rs. 2.31 Crore credited through DBT only during July 2016, speaking the volume of services to the needy. The section was also dealing with Micro ATMs and e-KYC procedures.
- The Bank actively participated in PMJDY scheme and issued Jandhan cards. There were 28,000 accounts under PMJDY with a balance of Rs. 2.00 Crores.
- Bank has adopted messaging facilities under own TRAI

Sender ID for promotional and transactional SMSs. The CBS related transactional messaging system was also started creating confidence in the minds of customers. All of these messages facilitated quick communication to stakeholders.

- Auto debit in PMJJBY and PMSBY accounts towards the renewal premium has been completed successfully in CBS.
- KDC Bank got Mobile Banking License from RBI. Bank has initiated the work towards Immediate Payment Service IMPS and Mobile banking. The customers can soon avail IMPS, Instant Money Transfer (IMT) Mobile banking and e-passbook. The steps are already on, for providing internet banking in near future.

Increased Customer Base and Services

After digital banking was implemented, the client base of the KDC Bank has increased, in addition to retaining the existing customers. The bank has 10 ATMs and has plan to increase to 100 in future. The Bank could reach the people giving assurance of technology banking at par with any commercial bank, making KDC Bank a domestic name. As of March 2016, the number of affiliated Societies have increased to 734 which was only 509 in 2011-12. It includes Primary Agriculture Societies (107), Milk Societies (79), Coir Cooperatives (56) Urban Cooperatives (8) and others. Implementation of digital banking products lead to better customer satisfaction by providing easy banking. The Bank has plans to link all the customers of Societies also, under one umbrella of digital banking.

One of the major operational issue in Cooperative Banks is that "the youth is not attracted". This is evident when we see the age profile of account holders. In order to solve this issue, the KDC bank conducts deposit mobilization in Schools, open account for students and provide them RuPay card. They also educate safe banking habits. Students are encouraged to paint/draw financial literacy messages on walls for the benefit of the society at large. Safe banking is equally important when we implement technology banking.

Professional in-house Management – a bye product

When all staff became techno savvy, the management thought it fit to go for paperless office in KDC Bank HO, by adopting Online Digital Administration Filing System (ODAFS). This is a workflow based system that replaces the existing manual handling of files with a more efficient electronic system. This system involves all stages, including the digitalization of inward letters, creation of files, making noting & referencing, preparation of draft for approval, issue of letter, movement of receipts & files and finally the archival of records. With this system, the movement of receipts & files became seamless and more transparent, as each and every action taken on a file was recorded electronically. The e-files



can be easily retrieved and actions could be taken instantly. There was also a link to relevant reference files, documents, rulings and decisions, simplifying decision making process.

This has become handy for fixing responsibilities, tracking the cases and overall monitoring of the case movements. Whenever Bank get an e-mail the same was converted into a file and sent to the inward section for onward transmission to concerned dealing officer. He /She moves the files further in soft form after required action / notings till decision / orders were issued. Later it is saved in PDF format. The management could easily trace and monitor the delay and it could be done even from the mobile from home. This digitization of office works have made all staff responsible for timely disposal of cases. More than 500 inwards and 300 files created as of May 2016. Customers are happy. This paperless office not only improved the performance of staff but also saved huge quantum of paper (forestry!), with a facelift at par with corporates and contributing to Clean and Green Environment. The Bank has plans to extend this to branches also. Further the bank is in the process of digital Human Resource Management System (HRMS) for manpower planning, training, appraisal & performance, promotions, payroll process, Provident Fund, loans, online submission of leave application etc.

The outcome of Implementation of Digital Banking

- Bank has better visibility both from outside and inside.
- The client base has increased and bank is becoming a guide and partner for other Primary Cooperative Credit Societies.
- Both the bank and the customers are enjoying the benefits of digital banking, which leads to a strong social impact.
- Full time support of Help Desk reduce the drudgery of software related issues.
- Geographical independency of the Software is highly appreciable as it works for any employee from anywhere.
- Management Information System (MIS) is at fingertips due to CBS and Technology procedures. As the reports including statutory reports are generated centrally at Head Office, the Branch Managers are free from report generation, sending to HO, rectification, reconciliation etc.
- Hardware stability and Technological competence also led to improved Employee confidence which is very much essential for any progressive organisation.

- The Bank has recently brought out Newsletter focusing the digital initiatives for better dissemination of knowledge among various stake holders.
- The Bank is in profit continuously. They have launched International RuPay debit cards in June 2016, attracting overseas customers.
- The Bank is truly implementing the cooperative concept of "All for one and one for All"

Summary and Conclusion

From the above paragraphs one can easily understand

- The innovative approach adopted by one committed and visionary CEO has changed the face of the bank. This has resulted in huge business opportunity for the bank with increased customer services.
- The bank has developed in-house software to avoid dependency on the technology service providers.
- The cooperation extended by the staff is worth mentioning. It is a participatory development process.
- The bank is imparting financial literacy among students using NABARD Supported mobile van and increase their business (CASA) while catching them young.
- Change is only permanent. Any organization has to adopt change for better performance & growth and cooperative banks are no exception.

KDC bank will be celebrating centenary year in 2017. But the bank can be sustainable only when it meets the expectations of the customers. In this "WhatsApp era" the younger generation will open account only when the bank has digital banking products. So it becomes essential for all banks to adopt and implement digital banking, though it is comparatively difficult for cooperative banks. The innovative approach adopted by KDC Bank management had made this as a successful model. Their involvement in educating customers, especially young student account holders on "safe banking habits" is appreciable, when the number of cybercrimes is increasing in our country.

References

- (i) Annual report (2013-14) of KDC Bank Ltd
- (ii) Personal interview with Top Management of KDC Bank Ltd., and Customers
- (iii) KDC Bank I T Division : E-News Bulletins July to Sept 2016
- (iv) Website www.kdcbank.com



TELANGANA STATE COOPERATIVE APEX BANK LTD.

Troop Bazar, Hyderabad - 500 001, Telangana State.

BANKING PRODUCTS AND SERVICES

- Current Deposits
- Savings Bank Deposits
- No Frills Saving Deposits
- Fixed Deposits
- Recurring Deposits
- Monthly Income Deposits
- Safe Deposit Lockers & other Ancillary Services
- Crop Loans for Agriculture through KCC/ SHG/JLG Cooperatives
- Loans for Housing
- Consumer Durable Loans
- Cash Credit & Overdraft Facilities
- Loans for Education
- Mortgage Loan
- Personal loan to salary earners
- Bank Guarantee
- Term Loans for Agril. & Allied Agriculture
- Gold Loans
- Petty traders & Street Vendors finance

Key Financial Indicators of the Bank as on 31.03.2017

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



Watershed Development and Doubling of Farmers' Income

Sustainable Watershed Development – Goals



- Protect the environment
- Foster a strong community building
- Promote economic growth
- Increase income and livelihood of the watershed community
- Conserve soil and water
- Improve the quality of life in rural areas.

1. Introduction

Rainfed areas account for 2/3rd of the cropped area and support 65% of the population in the country. Production, productivity and income of the farmers in these areas are affected severely due to intense degradation of precious and critical soil and water resources in these regions. The climate change over a period of time has further deteriorated socio economic conditions of the farmers in these areas. In order to address conservation of resources and efficient use of these inputs for increased income and livelihood of the farmers, NABARD has initiated participatory Watershed Development Programme (WDP) in the country since 1990s.

The main objective of the Watershed Development Programme is to improve water conservation, irrigation facility, and land use pattern leading to increased agricultural productivity in drought prone and desert prone areas, which ultimately results in increased income of farmers.

To step ahead in accomplishing the goal of our Prime Minister i.e., 'Doubling the income of farmers by 2022, the successful implementation of watershed programmes in the country could be the base. The interventions under watershed development can enhance farmers' income through:

- 1) Soil conservation, soil fertility and productivity improvement;
- 2) Ground water recharge through construction of farm

ponds, check dams, CCTs, nala bunds, gabion structures, etc.

- 3) Enhancement of farm productivity and stability in production;
- 4) Integrated Farming System;
- 5) Skill Development, Knowledge Dissemination, Women empowerment;
- 6) Effective use of available Water Resource through sprinkler and drip irrigation;
- 7) Linkage with market through promotion of Village Watershed Committees (VWCs) as Farmers Producers Organizations (FPOs).

Doubling of Farmers' Income- PM's 7 point strategy

Doubling of farmers income require multipronged strategies. In this connection, some of the strategies suggested by the Prime Minister are:

1. Big focus on irrigation with large budget, with the aim of "Per drop more crop"
2. Promotion of ancillary activities like poultry, beekeeping and fisheries
3. Promotion of value addition through food processing
4. Introduction of a new crop insurance scheme to mitigate risks at affordable cost
5. Creation of a national farm market, removing distortions and e-platform across 585 stations.
6. Large investments in warehousing and cold chains to prevent postharvest crop losses.
7. Provision of quality seeds and nutrients based on soil

health of each field.

2. Major interventions of Watershed development that contributes to doubling of farmers' income Soil and water conservation
 - a. Increase in arable land
 - b. Culturable waste land to cultivable land
 - c. Increase in Productive capacity of land
 - d. Storage of water and Safe disposal of excess water
 - e. Increase in vegetative cover

Availability of irrigation water

- a. Increase in water storage and recharge capacity
- b. Increase in Cropping intensity
- c. Enhancing Crop productivity
- d. Water Budgeting

Improved Agricultural Practices

- a. Crop Diversification

- b. Integrated Farming System
- c. Precision Farming
- d. Micro Irrigation
- e. Collective Farming
- f. Improved Agronomic Practices

Additional livelihood opportunities

- a. Employment generation
- b. Reduce migration
- c. Institutional development
- d. Income generation activities

Credit intensification

- a. Increase in credit offtake through institutional source/ banking system
- b. Capital formation in the area.

(Source: *Watershed Development Digest, NABARD*)

जलवायु परिवर्तन और हमारी धरती



को 'प्रत्याशित मौसम' के रूप में परिभाषित किया जा सकता है। जब प्रत्याशित मौसम में परिवर्तन होता है तो हम इसे जलवायु परिवर्तन कहते हैं। इस तरह दो अलग-अलग कालखंडों में औसत मौसमी परिस्थितियों में जो फर्क होगा उसे जलवायु परिवर्तन कहेंगे।

इस समय की जलवायु में तेजी से परिवर्तन हो रहा है। पिछले लगभग १०० वर्षों (१९०१-२०००) में पृथ्वी की सतह और पृथ्वी के निकटतम वातावरण में औसतन गर्मी ०.६० सी बढ़ गई। इस अवधि के दौरान, विशेषकर ऊर्जा और परिवहन के लिए जीवाशम ईंधन के जलने एवं मनुष्य द्वारा भोजन के लिए भूमि के उपयोग की शैरी में परिवर्तन के परिणामस्वरूप वातावरण में ग्रीनहाउस गैसों की मात्रा बढ़ गई है।

जलवायु परिवर्तन के कारण

जलवायु परिवर्तन के कारणों में कुछ प्राकृतिक हैं तो कुछ मानवनिर्मित भी हैं। प्राकृतिक कारणों में से प्रमुख हैं:

महाद्वीपों का खिसकना - हम आज जिन महाद्वीपों को देख रहे हौं वे इस धरा की उत्पत्ति के साथ ही बने थे तथा समुद्र में तैरते रहने के कारण तथा वायु के प्रवाह के कारण इनका खिसकना निरंतर जारी है। इस प्रकार की हलचल से समुद्र में तरंगों व वायु प्रवाह उत्पन्न होता है। इस प्रकार के बदलावों से जलवायु में परिवर्तन होता है।

ह में गर्मी के मौसम गर्मी व सर्दी के मौसम में रण्ट लगती है। ये सब कुछ मौसम में होने वाले बदलाव के कारण होता है। मौसम को तय करने वाले मानकों में तापमान, वर्षा, सूर्य प्रकाश, हवा व नमी प्रमुख हैं। अलग-अलग भौगोलिक क्षेत्रों में वर्ष के अलग-अलग खंडों में अलग-अलग भौगोलिक क्षेत्रों में वर्ष के अलग-अलग खंडों में अलग-अलग मौसम होते हैं। लंबी समयावधि में मौसमों के समुच्चय को जलवायु कहते हैं। यदि जलवायु को परिभाषित करें तो कह सकते हैं कि जलवायु अल्पावधि मौसम की दीर्घावधि सांख्यिकीय अभिव्यक्ति है। जलवायु

Continued to page no. 26 ➤



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

Tippu Sultan Palace Road, Bangalore - 560 018.

Telephone: 080-26702024, 26702074 Fax: 080-26705035

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 31-03-2017)

Over ₹ 5471.91 Crores

No. of loan cases sanctioned as on 31-03-2017

18.29 Lakhs

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

54.98%

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.
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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. 0.50% 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

M. Shivanna, K.C.S.
Secretary

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



Always in the Fore front



Credit needs are plenty

We are catering the cross-section... Agriculture, Non-Farm, Housing, Education, Kisan Credit Card Scheme, Swarojgar Credit Card Scheme, Gold Pledge, Jewel Purchase, Traders Loan, Consumer Loan, Farm tourist ventures...

Launching shortly: Monthly Saving Scheme

Moderate and transparent interest rates • reasonable and acceptable conditions

Accepting deposits at attractive rate of interest.

Rendering services through 75 PCARD Banks all over Kerala

Solomon Alex
President

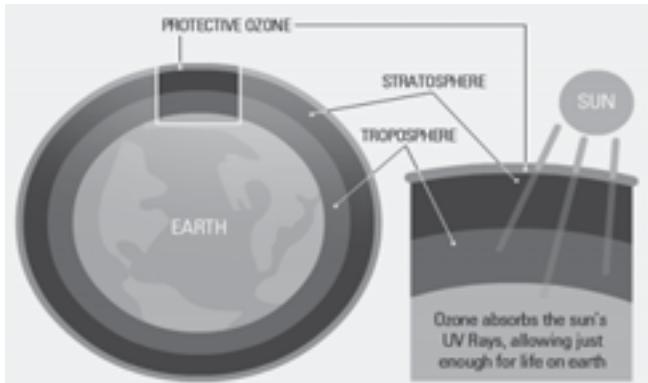
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**KERALA STATE CO-OPERATIVE AGRICULTURAL
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ज्यालमुखी - जब भी कोई ज्यालमुखी फुटता है वह वातावरण में काफी मात्रा में स्लफर डाइऑक्साइड, पानी, धूलकण और राख के कणों का उत्सर्जन करता है। भले ही ज्यालमुखी थोड़े दिनों तक ही काम करे लेकिन इस दौरान काफी ज्यादा मात्रा में निकली हुई गैसें जलवायु को लंबे समय तक प्रभावित कर सकती हैं।

पृथ्वी का झुकाव - धरती २३.५ डिग्री के कोण पर अपनी कक्ष में झुकी हुई है। इसके इस झुकाव में परिवर्तन से मौसम के क्रम में परिवर्तन होता है। अधिक झुकाव का अर्थ है अधिक गर्मी व अधिक सर्दी और कम झुकाव का अर्थ है कम गर्मी व साधारण सर्दी।

समुद्री तरंगों - समुद्र जलवायु का एक प्रमुख भाग हैं। वे पृथ्वी के ७९ प्रतिशत भाग पर फैले हुए हैं। समुद्र द्वारा पृथ्वी की सतह की अपेक्षा दुगुद्री तरंगों के माध्यम से संपूर्ण पृथ्वी पर काफी बड़ी मात्रा में ऊष्मा का प्रसार होता है।

ग्रीन हाउस गैस प्रभाव और ग्लोबल वार्मिंग - ग्लोबल वार्मिंग का अर्थ पृथ्वी के तापमान में औसत वृद्धि है जिससे जलवायु की प्रणाली में परिवर्तन हो जाता है। पृथ्वी द्वारा सूर्य से ऊर्जा ग्रहण की जाती है जिसके जलते धरती की सतह गर्म हो जाती है। जब ये ऊर्जा वातावरण से होकर गुजरती है तो कुछ मात्रा में, लगभग ३० प्रतिशत ऊर्चा का कुछ भाग धरती की सतह तथा समुद्र के जारिये परावर्तित होकर पुनः वातावरण में चल जाता है। वातावरण की कुछ गैसों द्वारा पूरी पृथ्वी पर एक परत सी बना ली जाती है वे वे इस ऊर्जा का कुछ भाग भी सोख लेते हैं। इन गैसों में शामिल होती हैं कार्बनडाइऑक्साइड, मिथेन, नाइट्रस ऑक्साइड व जल कण। इन गैसों को ग्रीन हाउस गैसों भी कहते हैं। वैश्विक वातावरण प्रणाली में उपलब्ध निवल ऊर्जा में परिवर्तन को 'रैडिएटिव फोर्सिंग' कहते हैं। यदि रैडिएटिव फोर्सिंग धनात्मक होगी तो जलवायु प्रणाली गर्म होगी और यदि यह फोर्सिंग ऋणात्मक होगी तो जलवायु प्रणाली ठंडी होगी। यदि पृथ्वी और गर्म होगी तो वर्षा की पद्धति में परिवर्तन होगा, समुद्र का जल स्तर बढ़ जाएगा एवं वनस्पतियों, जीवों एवं मनुष्यों पर इसका व्यापक प्रभाव पड़ेगा। यह फोर्सिंग प्राकृतिक अथवा मानवकृत हो सकती है।

औद्योगिक कारणों से एवं शाहरीकरण की अंधाधुध तेज गति के कारण जीवाश्म ईंधन जैसे-कोयला, तेल, प्राकृतिक गैस आदि जलने की मात्रा में भारी वृद्धि हो गई है, जिसके परिणामस्वरूप कार्बन डाइऑक्साइड का उत्सर्जन बढ़ गया है। इनकारेड रैडिएशन को सोखने में कार्बन डाइऑक्साइड और अन्य ग्रीनहाउस गैसों के प्रभाव को ग्रीनहाउस प्रभाव कहते हैं।

जलवायु परिवर्तन का प्रभाव

मौसम पर प्रभाव - गर्म मौसम होने से वर्षा का जक्र प्रभावित होता है। इससे बाढ़ या सुखे का खतरा भी हो सकता है, ध्रुविय ग्लेशियरों के पिघलने से समुद्र के स्तर में वृद्धि की भी आशंका हो सकती है। पिछले वर्ष के तूफानों व बवंदरों ने अप्रत्यक्ष रूप से इसके संकेत दे दिए हैं।

खेती पर प्रभाव - विश्व में बढ़ती जनसंख्या के कारण भोजन की मांग में भी वृद्धि हुई है। इससे प्राकृतिक संसाधनों पर दबाव बढ़ता जा रहा है। जलवायु में परिवर्तन का सीधा प्रभाव खेती पर पड़ेगा क्योंकि तापमान, वर्षा आदि में बदलाव आने से मिट्टी की क्षमता, किटानु और फैलने वाली बीमारियां अपने सामान्य तरीके से अलग प्रसारित होंगी। जलवायु परिवर्तन जैसे तापमान में वृद्धि के परिमाणस्वरूप आने वाली बाढ़ आदि से खेती का नुकसान बढ़ सकता है।

समुद्र के जल-स्तर में वृद्धि - जलवायु परिवर्तन का एक और प्रमुख परिणाम है समुद्र के जल-स्तर में वृद्धि। समुद्र के गर्म होने, ग्लेशियरों के पिघलने से यह अनुमान लगाया जा रहा है कि आने वाली आधी सदी के भीतर समुद्र के जल-स्तर में लगभग आधे मीटर की वृद्धि होगी। समुद्र के स्तर में वृद्धि होने के अनेकानेक दुष्परिणाम सामने आ सकते हैं जैसे तटीय क्षेत्रों की बर्बादी, जमीन का पानी में जाना, बाढ़, मिट्टी का अपरदन, खारे पानी के दुष्परिणाम आदि। इससे तटीप जीवन, खेती, पेय जल, मत्स्य पालन व मानव बसावट पर नकारात्मक प्रभाव पड़ सकता है।

स्वास्थ्य - वैश्विक ताप का मानवीय स्वास्थ्य पर भी सीधा असर हो सकता है। इससे गर्मी से संबंधित बीमारियां, निर्जलीकरण, संक्रामक बीमारियों का प्रसार, कृपोषण और मानव स्वास्थ्य पर बुरा प्रभाव हो सकता है।

जंगल और वन्य जीवन - प्राणी व पशु, ये प्राकृतिक वातावरण में रहने वाले हैं वे ये जलवायु परिवर्तन के प्रति काफी संवेदनशील होते हैं। यदि जलवायु में परिवर्तन का ये दौर इसी प्रकार से चलता रहा तो कई जानवर व पौधे समाप्ति की कगार पर पहुंच सकते हैं।

हम जलवायु परिवर्तन की गति को कम अपनी धरती को बचाने के लिए अपना योगदान भी कर सकते हैं। हम पेड़ों की रक्षा कर सकते हैं और भारी संख्या में नए पेड़-पौधे लगा सकते हैं, जीवाश्म ईंधन के

उपयोग में कमी ला सकते हैं, ऊर्जा के अक्षय स्रोतों जैसे सौर ऊर्जा और पवन ऊर्जा आदि का अधिकाधिक उपयोग कर सकते हैं. साथ ही, प्लास्टिक जैसे पदार्थों को अपने दैनंदिन उपयोग से बाहर कर सकते हैं.

जलवायु परिवर्तन अनुकूलन और शमन: सामान्यतया, जब हम जलवायु परिवर्तन की चुनौतियों का सामना करने की बात करते हैं तो इसके लिए दो प्रकार की रणनितियां अपनाते हैं. एक यह कि हम भविष्य में बढ़ने वाली गर्मी को रोकों (शमन) अथवा गर्म वातावरण में रहने के लिए स्वयं को उसके अनुरूप (अनुकूलन).

जलवायु परिवर्तन से अनुकूलता का तात्पर्य यह है कि हम ऐसे साधन एवं अपाय विकसित करें जिनसे जलवायु परिवर्तन का दुष्प्रभाव हमें कम से कम झेलना पड़े. उदाहरण के लिए समुद्र के जल स्तर में होने वाली वृद्धि अथवा बाद की विभिन्निका से बचने के लिए हमें समुद्र के किनारे दिवार बना देनी चाहिए अथवा ऊंचे स्थानों पर भवन निर्माण करने चाहिए.



जलवायु परिवर्तन के शमन का तात्पर्य जलवायु परिवर्तन की प्रक्रिया को धीमा करने के लिए किए जाने वाले प्रयास हैं. इस प्रक्रिया में हमें ग्रीनहाउस गैसों के स्तर को कम कर देना होगा. शमन रणनीति का एक उदाहरण है, ज्यादा से ज्यादा वृक्षारोपण जो जलवायु परिवर्तन की प्रक्रिया को धीमा करते हैं क्योंकि वृक्ष वातावरण से कार्बन डाइऑक्साइड को अवशोषित कर भंडारित करते हैं.

(सौजन्य:- सूजना)

Protected Cultivation of Horticulture Crops

Protected cultivation practices can be defined as a cropping technique wherein the micro environment surrounding the plant body is controlled partially/fully as per plant need during their period of growth to maximize the yield and resource saving. The different types of structures and technologies are used in commercial protected cultivation. The level and type of adoption of technology depends upon location, type of crops grown, type of market targeted and quality of production required.

1. Types of Protected Cultivation

Green House

Green houses are climate controlled with cooling and heating system and mainly used growing exotic varieties of vegetables, off-season growing of vegetables, floriculture, planting material acclimatization and plant breeding and varietals improvement under adverse agro climatic conditions. The degree of sophistication of greenhouses include fully automated systems with poly carbonate sheet roofing (double walled), heating and cooling system and full scale computerized with combination of various other components.

Poly House

Poly house is less sophisticated version of green house with naturally ventilated climate controlled as against the fully climate controlled green houses. Usage of poly houses are similar to green houses for growing exotic varieties of vegetables, off season vegetables, floriculture, planting material acclimatization, etc., under ideal agro climatic conditions suitable for growing these crops.

Poly Tunnel

Poly tunnels are basically naturally ventilated climate controlled. Poly tunnels have a variety of applications, the majority being, growing of vegetables, floriculture, planting material acclimatization, Poly tunnels are built of a pre-galvanized tubular structure and mainly used in hilly and temperate regions with moderate temperature.

Shade Net House

Net houses are basically naturally ventilated climate controlled structure. Net houses have a variety of applications, the majority being, growing of vegetables, floriculture and for nurseries. Net houses are built of a pre-galvanized channel - cum - tubular structure / tubular structure, wooden or bamboo structures mainly used in regions with less rainfall.

Hydroponics

Hydroponics is a method of growing plants without soil, using water enriched with balance mineral nutrients essential for plant growth and yield. The nutrients and PH level are maintained suiting to the selected crop for better growth. Hydroponics is proved to have several advantages over soil media such as:

- Suitable for vertical farming under greenhouse conditions other modified structures.
- Efficient use of plant nutrients without any fixation or leaching like in soil culture.

Continued to page no. 47 ➤



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



Cooperative Banks Not Exempted From RTI

Bombay High Court has held that cooperative credit institutions need to supply information under the RTI Act.



In a judgment delivered on 13 February, 2017, Aurangabad Bench of the Bombay High Court has held that urban cooperative banks, cooperative financial institutions and other co-operative societies are bound by the provisions of the RTI Act. The judgment was pronounced on a petition filed by the Association of Jalgaon Zilla Urban Cooperative Banks, Credit Societies and other financial institutions registered under the Maharashtra Cooperative Societies Act, 1960, seeking exemption from the RTI Act on the following grounds:

- In view of the provisions of Section 2(h) and Section 8 of the RTI Act, cooperative institutions registered under the Cooperative Societies Act cannot be treated as public authority.
- Considering the provision of Section 34A of the Banking Regulation Act, 1949, these institutions are not bound to disclose certain information which, according to them, is confidential in nature.
- These institutions are not receiving financial aid from the

Government directly or indirectly and so the provisions of the RTI Act cannot be made applicable to them.

It was the grievance of the petitioner that in spite of the aforesaid provisions, the authorities created provisions, the authorities created under the Cooperative Societies Act were insisting the institutions to pass on information in respect of the conduct of business and other things of the societies to the members or even general public under the provisions of the Act.

The petitioner urged the Court to declare that the urban cooperative banks, cooperative financial institutions, Patpedhis and other cooperative societies which are registered under the Maharashtra Cooperative Societies Act 1960, are not the public authorities within the meaning of Section 2(h) of the RTI Act, and for the purpose issue necessary orders. Additionally, or alternatively, it sought exemption for these institutions from disclosing information under the RTI Act. The petitioner also urged the Court to restrain the officers of the cooperative department and their subordinates from supplying any information to the

members or general public, which, according to the said societies, was confidential in their commercial interests.

Dismissing the petition, the bench of Justice T L Nalwade and Justice Sangittrao S. Patil denied exemption to these institutions under the RTI Act. The Court's observation was based on two major premises. One right from registration till liquidation, at every stage the cooperative institutions are controlled by the authority which is created by the same Maharashtra Cooperative Societies Act, 1960 under which

these institutions are registered. Two, certain Articles of the Constitution also show that such institutions are discharging the duty of the State.

Not relying on the earlier judgments pronounced by the same court in similar cases which ruled that the cooperatives do not fall under the ambit of the RTI Act, the High Court said such judgments were made when the judgment of the Apex Court was not there.

Observations made by the Aurangabad Bench of the Bombay High Court

- The petitioner and its members, cooperative institutions, are registered under the Maharashtra Cooperative Societies Act, 1960.
- They are bodies created by the statute. But right from the registration till the liquidation there is control over these institutions of the authority created under the same Act. The authority steps in to take decision on the rights of the members. The authority has control over the manner in which the funds are invested or the distribution of the funds is made for different purpose. Such institutions cannot act independently and the apex bodies are created for such institutions. Under Chapter V the 12 WP 1304 of 2008 possibility of State aid and even giving subsidies to such institution is kept open and that is done to protect the cooperative movement
- Even Articles 38, 39, 43 and 48 of the Directive Principle of State Policy of the Constitution of India show that to some extent such institutions are discharging duty of state.
- The provisions of the Maharashtra Cooperative Societies Act show that the authority under the Act can do the audit and inquiry into irregularities. If loss is caused to the institution by the Directors, Promoters etc., the authority can assess the damage, and the loss caused to the institution can be recovered from those persons. There is the power of suspension of managing committee and remove of members with the authority created under the Act. For all the aforesaid purposes and other purposes mentioned in the Cooperative Societies Act, the Cooperative institution is bound to supply the record to the authority.
- The provisions of the Maharashtra Cooperative Societies Act if read with the definition of information given in section 2(f) of the Act, it can be said that everything which is mentioned in the definition of information needs to be supplied by the cooperative institution to the authority created under the Cooperative Societies Act. The definition of 'Public Authority' given in section 2(h) shows that such public authority can be created by any law made by the State Legislature. It is already observed that the officers like Registrar and his subordinate officers are appointed under the Cooperative Societies Act and they have the control over the aforesaid things. In view of these circumstances, the observation made by the Apex Court in the paragraphs already quoted can be used safely when the information is sought from the authority like Registrar or his subordinates under the Cooperative Societies Act.
- Thus, the reliefs claimed in the present petition cannot be granted as the reliefs can be used 14 WP 1304 of 2008 directly or indirectly by the cooperative institutions to deny the supply of the information. The circumstances that the other matters were allowed by this Court, other Bench of this Court, cannot come in the way of giving present decision by this Court as the decision of the Supreme Court was not there when other matters were decided by this Court. This Court holds that no relief which is claimed in the present petition can be given to the petitioner.
- The previous interpretation made by this Court is not correct interpretation in view of the law laid down by the Apex Court. In the result, the petition stands dismissed. Rule is discharged.



Banking services soon in local languages

To help overcome language barriers migrant workers face while conducting banking transactions in other states, two engineers from Mumbai are creating a banking service platform for making banking services available in all local languages. A customer can walk into a bank and interact with the machine in any given language. The system, using artificial intelligence and machine language, will then provide information to the customer in the preferred language.

The first phase of the ₹100-crore National Initiative of Developing and Harnessing Innovations (NIDHI) was flagged off this January. Under the first NIDHI scheme, Promotion and Acceleration of Young and Aspiring Innovators and Start-ups (PRAYAS), 100 budding entrepreneurs will be provided technical as well as financial support this year. Across the country, ten PRAYAS centres have been established to help aspiring entrepreneurs.

UP planning ₹2,000 cr soft loan to sugar mills to clear dues

The UP government will be negotiating ₹2,000 crore soft loan with banks for sugar mills that failed to clear cane dues over past three seasons by standing guarantor for the loan. A proposal submitted by the UP Cane Commissioner's office says that only 46 out of 91 private sugar factories in the State had cash credit limit (CCL), while remaining 45 sugar factories have been refused CCLs by banks due to their negative net worth. Consequently, these mills were unable to pay off the farmers' cane dues. As on March 27, cane dues for 2014-15, 2015-16 and 2016-17 stood at ₹43.74 crore, ₹223.30 crore, and ₹7,101.40 crore respectively.

BUDGET

State's total budget: ₹2.57 lakh cr; total committed budget:

₹1.77 lakh cr Benefit for small and marginal farmers only.

Crop Loan and Budget Allocation - Maharashtra

Farmers enrolled with district cooperative Banks: ₹1.36 cr

Farmers who have taken crop loans: ₹1.08 cr

Total amount of crop loan: ₹1.14 lakhs cr.

- Of the total 1.36 crore farmers, SF/MFs are 66.64 (49%) and 40.80 (30%), respectively and others are 28.56 (21%).
- If waiver is confined to distress districts where maximum suicides had taken place, it would cover 8.2 lakh farmers with total loans of ₹11,200 crore. If waiver is only for SF/MF, the amount would be ₹23,837 crore, benefitting 4.92 lakh farmers.

Farm loan waiver undermines honest credit culture: RBI Govt. Urjit Patel

Dr. Urjit Patel, RBI Governor criticised the farm loan waiver scheme of the Uttar Pradesh government, saying it "undermines an honest credit" and could "affect the national balance sheet". He was critical of the announcement saying "... I think it undermines an honest credit culture. It impacts credit discipline. It plugs incentives for future borrowers to repay. In other words, waivers engender a moral hazard." Dr Patel also highlighted other risks that could arise as loans are written off. "I think we need to create a consensus such that loan waiver promises are eschewed. Otherwise, some sovereign fiscal challenges in this context could eventually affect the national balance sheet."

Dr. Patel said that waivers can lead to high government borrowings, which can impact yields on government bonds.

"It (loan waiver) also entails, at the end of the day, transfer from tax payers to borrowers. If on account of this, overall government borrowing goes up, yields on government bonds are also impacted." he said.

Omnibus loan waivers create a "moral hazard" and they should be targeted only at the needy, said Dr. Harsh Kumar Bhanwala, Chairman, NABARD. "Loan waivers are not viewed favourably by banks and NABARD is no exception to that....but if you look at history, we have seen loan waivers right from 1989 onwards at some stage or the other, partly emanating from the stress being faced by farmers and may be partly on account of expediency," explained Bhanwala.

Fasal Bima Yojana needs fine-tuning

Kharif 2016 season resulting in lower claims has helped private insurers in particular rake in good profits from the Pradhan Mantri Fasal Bima Yojana (PMFBY). However, the short tenure of the policy defeats the very purpose for which

the scheme was launched. Insurers collected a total premium of around ₹ 16,130 crore under the PMFBY in the 2016 kharif season.

A risk- or loss-sharing mechanism that ensures robust participation by all players in every season will go a long way in achieving the Centre's objective of providing more efficient insurance support to farmers. The liability of the

Maha Govt needs over ₹60,000 crore for 420 irrigation projects

Maharashtra Govt's irrigation policy comes with a new focus on completing existing projects rather than launching new ones. It needs to raise over ₹60,000 crore in order to complete 420 unfinished irrigation projects across the State. The State has already spent nearly ₹50,000 crore on these irrigation projects, among them 57 irrigation projects which were started more than 30 years ago and are still incomplete. Another 81 projects are lying unfinished for more than 20 years. Currently, the revised cost of all the unfinished projects is ₹1.11 lakh crore.

The State government has decided to shift from the

Irrigation potential of 49.21 lakh hectares by June

Surpassing its own higher record of 42.51 lakh hectares of irrigation potential, the Ministry of Water Resources projected 49.21 lakh ha. by June, 2017. The irrigation potential is worked out on the land that can be brought

farmers under PMFBY is limited to 2% of the sum issued (1.5% in the case of rabi crops) with the balance being paid by the government with the centre and state making an equal contribution.

Maha Govt needs over ₹60,000 crore for 420 irrigation projects

conventional flood irrigation method to scientific micro-irrigation encompassing 40,913 villages across Maharashtra in three phases. The target is to create additional water storage of 4000 mm³. Additional dry land to be covered by agriculture is pegged at 7.5 lakh ha. The State Vision Document-2030 unveils the long-term plans of the State government to adopt micro-irrigation for effective water management and higher farm production across villages to make agriculture sustainable in the long run with higher income for farmers.

Irrigation potential of 49.21 lakh hectares by June

under agriculture within the irrigation command areas covering dams across state. The highest irrigation potential in command area in past was 32.46 lakh ha. during 2013-14.

Post note ban, NABARD sanctions ₹20,000 cr more to cooperative banks, societies

Post demonetisation, NABARD has sanctioned ₹20,000 crore to cooperative banks and societies, to provide farmers with better access to loans. Out of this, an amount of ₹17,774 crore has been disbursed to cooperative banks- ensured availability of credit at concessional rates during 2016-17 rabi season.

To address the cash flow problems of farmers due to

demonetisation, interest for two months (November-December 2016) on ST crop loans sanctioned and disbursed by cooperative banks during kharif 2016 was waived. An amount of ₹458.28 crore has been credited to the accounts of 154,07,473 farmers as on 31 March 2017, according to NABARD Chairman Dr Harsh Kumar Bhanwala.

Maharashtra's sugar output at 10 – year low

Maharashtra's sugar output has fallen more than half in 2016-17 from a year ago to 41.86 lakh tonnes. About 150 sugar mills crushed 372 lakh tonnes of sugarcane during the year, less than half the 743 lakh tonnes crushed last year. As

a result, sugar production too declined from 84.15 lakh tonnes last year. The no. of sugar mills in operation came down from 177 last year as 27 mills could not operate for want of sugarcane.

Centre to facilitate cheaper loans to socially backward artisans, weavers

A Memorandum of Understanding (MoU) was signed between the Development Commissioner (Handlooms) and the National Scheduled Caste Finance and Development Corporation to facilitate loans at concessional interest rates to schedule caste artisans and weavers.

Support to include capacity building like skill upgradation and economic development of SC weavers and their families

and organising exhibitions and fairs. The production and marketing of high quality handloom products to be promoted at block level clusters in Gujarat, Rajasthan, Maharashtra and Odisha. Extending quality education to backward communities, SC artisans and weavers are being provided 75% subsidy on taking courses from IGNOU and National Institute of Open Studies.

Telangana government completes ₹16,374-crore loan waiver scheme

The Telangana government has waived loans of ₹16,374 crore benefiting over 3.5 million farmers. The State's 5.5 million farmers use some 2.5 million tonnes of fertilisers.

They will be given ₹ 4,000 per acre by the government to procure fertilisers.



Maharashtra's scheme to increase farmers' income

The Maharashtra government's 'Advanced Farming – Enriched Farmer' scheme aimed at growing farm incomes by increasing output and cutting production costs to be launched in the kharif season with each tehsil as an unit where planning will be done for agri-development. Key tasks include raising production of major crops to the level of the genetic yield potential of each crop, diversification of crops, introducing marketing techniques, uniting farmers through farm producers' companies and making them financially stable. Each tehsil, under the scheme, will be given a

production target for crops. The target would be planned so that farmers, after selling their produce, receive more money than the loan they have taken. For farmers who are already receiving more money than the loan obtained, the target is 20 per cent more than their present production.

The State government will also spend 60% of funds available for mechanisation of farming: on tractors, power tillers, transplanters and machines for polishing, grading, and packing the produce. The grants will be deposited in farmers' bank accounts linked to the Aadhar scheme.

A women's cooperative leads a farm revolt in Telangana

The Intideepam Women Producer Mutually Aided Cooperative Societies Federation headed by Ms. Neeradi Bojabai, has helped Telangana farmers overcome difficulties with loans taken from money lenders. With guidance from Gram Abhyudaya Mandali (GRAM), a non-profit, the women formed the Intideepam Federation two years ago. The Federation got reports that the districts of Nirmal, Adilabad, Kamareddy and Nizamabad had bumper soya yields, and decided to market the crop. The women turned a surplus on a ₹4.14 crore soya crop, and gave back ₹15.25 lakh to

farmers.

Brokers' demands cut: Intideepam's mentor and founder of GRAM, N. Samson, said marketing has been a big challenge for farmers, as they have to transport their produce and end up getting low prices in return. Intideepam moved to sell directly to processors after weighing the produce in the village and paying the market price. Ms. Bojabai's group sold 1,666 tonnes of kharif crop to Maharashtra mills, from 1,213 farmers.

Groundwater level dips in 60% tehsils of Maharashtra

The groundwater level in 60 per cent of Maharashtra's tehsils has depleted by a minimum of one metre. "Of the 353 tehsils in Maharashtra, 218 have shown groundwater level depletion by at least one metre.

A total of 2,130 villages in 72 tehsils, where there was a rainfall deficit in the range of 0-20 per cent in 2016, have

shown groundwater depletion of more than one metre. Similarly, 1,854 villages in 113 tehsils, which received excess rainfall during the monsoon, have reported nearly a metre's depletion. Moreover, in 325 villages, the water table has depleted more than three metres, while in 857 villages, the depletion is between two and three metres.

State's vision document 2030 lays stress on solar power for farmers

In order to bring down the subsidies provided to farmers for electricity connections, the Maharashtra government is exploring various options, including solar energy. The vision document 2030 indicated the electricity connections for agriculture pumps would rise sharply from current 40 lakh to 60 lakh in the next ten years. As a result, the total

expenditure on power subsidy for agriculture sector in the next 10 years would cross ₹65,000 crore. At present, the State provides electricity to farmers for agriculture pumps at 0.85 paise per unit; however, the actual cost of power falls between ₹4.50 and ₹5 per unit.

India Post Payment Bank to open 650 branches this year

In a major expansion exercise, India Post Payment Bank (IPPB) plans to open 650 branches this year. The first two branches of IPPB have been opened in January 2017 in Ranchi and Raipur. It is intended to open at least one branch per district across the country. Each branch will be networked with about 1,200 to 1,500 post offices in a district. The IPPB will primarily focus on financial inclusion, direct benefit transfer and door-step banking, particularly the last theme as a survey conducted by the department had showed a "huge" potential for this facility. By December 2017, the Deptt will integrate core system software, including core banking, postal operations and saving bank.

Dr. K G Karmakar, former MD and CEO of NABARD, has been appointed by the Union Cabinet as an independent director of the Indian Post Payment Bank. Dr. Karmakar's administrative experience has been varied - commercial banking, central banking and development banking as also turnaround strategies of rural banks/co-operatives, micro-finance and rural development.

PASSPORT - Post office passport sevakendras will be opened at all 811 head post offices across the country by March 2018. As of now, the service is available in 42 post offices. Since post offices started issuing passports in January, 31,500 documents have been issued.



Model APMC Act defines state as single unified market area

The Agriculture ministry unveiled a model Agricultural Produce Market Committee (APMC) Act which defines each state/UT as a single unified market area. The move will curb the role of APMC mandis.

The State/UT Agricultural Produce and Livestocks Marketing (Promotion and Facilitation) Act, 2017 allows existing APMC mandis to enforce regulation only in their market yard which would allow private sector players to set up mandis.

With the exception of Bihar, all other states/UTs have agreed to adopt the model Act.

As per the proposed legislation, the respective state government has to appoint an independent entity 'director

of agricultural marketing' who would be the sole authority to grant licence for establishment of a new market yard within the state. The new Act also proposes to cap mandi taxes at 1% for foodgrain and 2% for fruits and vegetables while pegging arthia or commission agent's levy at 2% of the total transaction cost. Meanwhile, about 400-odd AMPCs across 13 states integrated to the electronic National Agriculture Market (eNAM) launched around two years ago. Around 38 lakh farmers of an estimated 14 crore in the country have registered with e-NAM so far. More than 87,000 traders and 43,000 commission agents have also been registered. India's total trade in agricultural commodities is worth more than ` 6 lakh crore annually.

e-National Agriculture Market (e-NAM)

A total of 417 markets from 13 states have been integrated with e-National Agriculture Market (e-NAM) against the set target of 400 markets by March 2017.

State-wise number of mandis integrated with e-NAM is given in Table as on 3rd April 2017.

As per the approved e-NAM Scheme, 585 regulated mandis across the country are to be integrated with the portal by March, 2018.

So far 39.75 lakh farmers and 88,474 traders have registered and trade of ₹15,009 crores has taken through the e-NAM portal.

		As on 13 April 2017
S. No.	State	Total number of mandis integrated with e-NAM
1.	ANDHRA PRADESH	22
2.	CHHATTISGARH	14
3.	GUJARAT	40
4.	HARYANA	54
5.	HIMACHAL PRADESH	17
6.	JHARKHAND	19
7.	MADHYA PRADESH	58
8.	MAHARASHTRA	44
9.	ODISHA	9
10.	RAJASTHAN	25
11.	TELANGANA	44
12.	UTTAR PRADESH	66
13.	UTTARAKHAND	5
Total		417

To stop youth turning away from farming, ARYA sows the seeds of agrarian change

One of the major challenges that confronts agriculture in India today is that the children of farmers, by and large, are not interested in their familial occupation.

The Programme, Attracting and Retaining Youth in Agriculture (ARYA), is aimed at attracting and empowering the youth in rural areas. "It will cover both the youth with some land holding and landless youth," said AK Singh, Deputy Director-General of the Indian Council of Agricultural Research (ICAR).

ARYA aims to create a replicable model. The youth will be

agents of change and spread the word in the neighbourhood. ARYA was taken up as a pilot last year with 25 KVks (Krishi Vigyan Kendras) in 25 States. The initiative looks to establish 200-300 "change agents" in each district. The response has been good. We would like to increase the coverage of ARYA programme to at least 100 KVks. The ARYA programme will also demonstrate functional linkages with different institutions and stakeholders that will bring value to the fledgling business enterprises set up by the youth.



Drought-hit belts take lead in fish farming

Pisciculture or fish farming is likely to bring relief for some of the State's drought-prone regions with parts of Vidarbha and Marathwada taking a lead in such activities. Buoyed by a good monsoon in 2016-17, the Maharashtra government has been encouraging pisciculture farmers to take up cultivation of fresh water fish found in water reservoirs. On October 17, 2016, the State's Fisheries department brought out a resolution to promote the so-called "cage culture" in water reservoirs to boost fresh water fishing. "Cage culture" is the practice of cultivating fish from fingerlings in a controlled environment, where water quality and fish food is constantly monitored.

The cage culture method of inland breeding involves a cage made of nets, which is supported on a floating frame that is submerged in water, at least 6 metres deep, and

thousands of fingerlings are released in the net. Two species of fish — red tilapia and basa — have been found to be the most suitable for this method of cultivation. "Each 'cage' can generate direct employment for 10 people. A project of 1,000 cages can generate 10,000 jobs and provide indirect employment to another 15,000 people." About 211 projects have been sanctioned in the past six months. Nagpur, has bagged the highest number of projects at 51 while other Vidarbha belts, including Yavatmal, Wardha, Chandrapur, and Buldhana also figure prominently on the list of places where pisciculture has been introduced. About 41 projects have been taken up in the catchment of the Pavana dam in Western Maharashtra's Pune. In North Maharashtra, projects have been sanctioned in Jalgaon district.

Over 800 crore person days of jobs generated in the last three years in rural schemes

The Ministry of Rural Development has created employment opportunities of more than 813 crore person days during the last three year period from 2014 to 2017 under three key schemes of the government –MGNREGA, Pradhan Mantri Aawas Yojna – Grameen (PMAY-G) and Pradhan Mantri Gram SadakYojna (PMGSY). Union Minister for Rural Development, Drinking Water & Sanitation and Panchayati Raj, Narendra Singh Tomar, said that during the last three years, over 635 crore person days were generated under MGNEREGA, about 78 crore person days under PMGSY and 99 crore person days under PMAY. Apart from this, under the DeenDayalUpadhyay-Grameen Kaushal Yojana (DDY-GKY), 86,120 candidates were trained in the year 2014-15 and 54,196 got jobs. In 2015-16, about 1,35,000 candidates were placed after skills training was imparted to them while in 2016-17, the number of candidates getting

placement was 84,900.

In the current year, the Ministry of Rural Development proposes to train five lakh candidates with an assured placement of over 70 per cent of these youth in Wage and Self Help employment programmes. He said that Rural Self Employment Training Institute (RSETIs) trained four lakh rural youth in 2016-17 for self-employment.

In line with the government's stated objective of "Housing for All" by 2022, government intends to provide houses to 1 crore poor people by 2019 in rural areas. A total of 34.82 lakh houses were constructed during 2014-15 to 2015-16, against a target of 45.98 lakh houses under the erstwhile scheme of Indira Awaas Yojana (IAY). During 2016-17, a total of 32.14 lakh houses have been completed with an expenditure of ` 16,074 crore under the revamped scheme PMAY-G.

Women members of SHGs received ₹35,000 crore in 2016-17 under the National Rural Livelihood Mission (NRLM)

According to the Ministry for Rural development, women members of SHGs have accessed ₹1.06 lakh crore as Bank credit since the inception of the Deen Dayal Antyodaya Yojana–National Rural Livelihood Mission (DAY-NRLM) programme in 2011. From ₹20,000 crore bank linkage in 2014-15, SHGs got more than ₹30,000 crore as credit in 2015-16. Till February 2017 over ₹29,000 crore had been

disbursed.

Analysis of Bank linkage in 2016-17 shows remarkable increase in credit linkage in Assam, Bihar, Odisha, Rajasthan and West Bengal. Bank linkage as SHGs become vibrant and stronger institutions of the poor in many northern Indian States while they are strong and vibrant in southern India.

A record 47,350 kms of PMGSY road constructed in 2016-17

A record 47,350 km of PMGSY road was constructed during 2016-17. This is the highest construction of PMGSY roads in a single year, in the last 7 years, according to the Ministry for Rural Development. While, 25,316 kms. of PMGSY roads were constructed in 2013-14, road

construction in 2014-15 was 36,337 kms and 36,449 kms. in 2015-16. In 2011-14, the average rate of construction of PMGSY roads was 73 km per day, which increased to 100 km per day during 2014-15 and 2015-16. For the year 2016-17, a record of 130 kms per day was achieved.

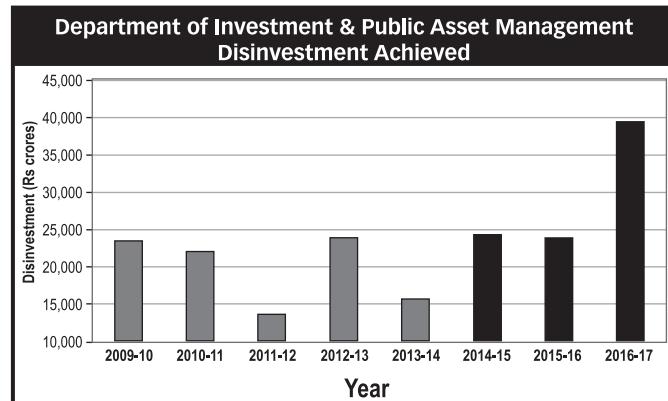


India's disinvestment performance

The total disinvestment achieved in the last three years (2014-15 to 2016-2017) was ₹87,714 crore as against ₹53,670 crore in the previous three-year period, according to the Department of Investment and Public Asset Management (DIPAM) under the Ministry of Finance. The average yearly realisation of ₹29,238 crores during the period between 2014-15 to 2016-17 (last three years) vis-à-vis ₹19,873 crore for the period between 2009-10 to 2013-14 (five years) represents an increase of 47%, the department has said.

A system of rolling plan has been brought-in, replacing earlier system of annual plans, wherein shares are readily available for transactions, to take advantage of the market conditions without any loss of time and with an element of surprise for the market players. This helps in minimising the

price hammering during disinvestment of Central Public Sector Enterprises.



Banking Regulation (Amendment) Ordinance, 2017

The Banking Regulation (Amendment) Ordinance, 2017 was promulgated by the government to help in effective resolution of stressed assets, particularly in consortium or multiple banking arrangements. The Ordinance enables the Union Government to authorise the RBI to direct banking

companies to resolve specific stressed assets. The RBI has also been empowered to issue other directions for resolution, and appoint or approve for appointment, authorities or committees to advise banking companies for resolution of stressed assets.

Over ₹60,000 crore in Jan Dhan accounts

The deposit base of the Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts has expanded over time. As on April 05, 2017, the deposit balance in PMJDY accounts was ₹63,971 crore in 28.23 crore accounts. The average deposit per account has more than doubled from ₹1,064 in March 2015 to ₹2,235 in March 2017. Over 22.14 crore RuPay cards have

been issued under PMJDY. The average number of transactions per Bank Mitra, on the Aadhaar-enabled payment system operated by Bank Mitras, has risen by over eighty-fold, from 52 transactions in 2014-15 to 4,291 transactions in 2016-17.

Pradhan Mantri Mudra Yojana

Loans extended under the Pradhan Mantri Mudra Yojana (PMMY) during 2016-17 have crossed the target of ₹1,80,000 crore for 2016-17. Sanctions currently stand at ₹1,80,528 crore. Of this amount, about ₹1,23,000 crore was lent by banks while non-banking institutions lent about ₹57,000

crore. Data compiled so far indicates that the number of borrowers this year were about four crore, of which over 70% were women borrowers. About 18% of the borrowers were from the SC Category, 4.5% from the ST Category, while OBC accounted for almost 34% of the borrowers.

International Workshop highlights path for India to reach development goals

The International Food Policy Research Institute (IFPRI), the Trust for Advancement of Agricultural Sciences, and the Indian Council of Agricultural Research in May led a two-day international conference in New Delhi on achieving the Sustainable Development Goals (SDGs) through agriculture in India.

While India met several of the Millennium Development

Goals – the precursor to the SDGs – much of the country continues to suffer from poverty and food insecurity. More than 300 million people in South Asia live in poverty, with up to 71% of them living in India. Improving the country's agricultural sector presents an opportunity to address both urban and rural development needs.

"Quality Mark" Award Scheme for dairy cooperatives initiated by NDDB

As part of the innovative initiatives under the "White Revolution" umbrella schemes, the Department of Animal

Husbandry, Dairying and Fisheries has supported the National Dairy Development Board (NDDB) developed

initiative of "Quality Mark" award scheme for dairy cooperatives to promote and encourage enhancement of safety, quality and hygiene of milk and milk products manufactured by dairy cooperatives.

The scheme is aimed at bringing about process improvement in the entire value chain from producer to the consumer to ensure availability of safe and quality of milk

DAC&FW in consultation with NITI Aayog, identifies marketing reforms in APMC, will draft a model Contract Farming Act

A national consultation to review the progress of adoption of reforms and other initiatives in the agri-marketing sector aimed at enhancing farmers' income was held in April under the Chairmanship of Dr. Ramesh Chand, Member, NITI Aayog.

DAC&FW has, in consultation with NITI Aayog identified a set of nine marketing reforms to be made in Agriculture Produce Marketing Committee (APMC) Acts of the States/UTs. These include three mandatory reforms enabling

and products both for the domestic and foreign markets. The quality mark award scheme for dairy cooperatives in the country has been initiated to instil confidence in the consumers for the quality of milk being marketed by them by ensuring availability of safe and good quality milk and milk products. The quality mark scheme was rolled out on January 06 last year.

introduction to e-NAM, viz. provision for e-trading, unified trading license and a single point levy of market fee, as well as setting up markets in the private sector, direct marketing, etc. all aimed at reducing the intermediaries between producer and buyer so as to ensure remunerative prices to the farmer. The States were also advised to relax the felling and transit rules for trees being grown by farmers on their own lands so as to encourage agroforestry, which has a huge potential for supplementing the income from agriculture.

Geo-tagging of agriculture assets created under Rashtriya Krishi Vikas Yojana (RKVY)

A MoU was signed in April 2016 between Rashtriya Krishi Vikas Yojana (RKVY) and National Remote Sensing Centre (NRSC) for geotagging of agriculture land.

Rashtriya Krishi Vikas Yojana (RKVY) works for the development of Agriculture & allied sectors by motivating the states. More than 1.5 lakh assets have been created/developed under this scheme in agriculture, horticulture, livestock, fisheries and dairy sectors. It is imperative to formulate a national index of the assets to understand systemise them and to reduce the gap between demand and supply.

Agriculture Minister informed that the space technology needs to be developed in the areas such as land resource mapping, pesticides management, soil health mapping, crop yield estimation as well as the identification and assessment of floods like calamities, inland fisheries, animal species identification and sheep rearing and when the technology is developed, the farmers can enjoy quick and instant benefits.

Geotagging of assets created under RKVY

What is geo tagging?

- **Geotagging** is the process of adding geographical identification like latitude and longitude to various media such as a photo or video. Geotagging can help users find a wide variety of location-specific information from a device. Geotagging provides users the location of

the content of a given picture.

- **Geomapping** is a visual representation of the geographical location of geotagged assets layered on top of map or satellite imagery

Why is geotagging important? Under RKVY, states have been utilising substantial amount of funds for creation of infrastructure/assets in agriculture and allied sectors such as soil testing labs, pesticide testing labs, bio fertiliser setting units, custom hiring centres, vaccine production units, veterinary diagnosis labs, dispensaries, milk collection centres, fish production units, godowns, cold storage, shade nets, pandals for vegetable cultivation etc.

Geotagging for monitoring of assets is already started in Ministry of Rural Development for MGNREGA and Department of Land Resources for monitoring of watershed activities in the states. Postal department has also geotagged the post offices using NRSC Bhuvan Platform.

Who does it? The National Remote Sensing Agency (NRSA), ISRO, at Hyderabad does geotagging using a software platform, Bhuvan, that allows users to explore a 2D/3D representation of the surface of the earth. It also acts as a platform for hosting government data. Bhuvan Application Services that are diversified and relevant for many ministries were released.

Prime Minister lays the foundation stone of an Indian Agricultural Research Institute in Goghmukh, Assam

Prime Minister Narendra Modi in May laid the foundation stone of the Indian Agricultural Research Institute (IARI) at Goghmukh in Assam, which will be India's third IARI. IARI-

Assam would work on the agrarian challenges and complexities of North Eastern India in tandem with all existing Central and State government R&D institutions and



private sector enterprises.

The Prime Minister stressed on the need of modern agriculture and technological interventions, keeping in mind the specific needs of the region. The Prime Minister spoke of his vision of doubling farmers' income by 2022, the 75th anniversary of independence.

The key achievements of IARI and Ministry of Agriculture and Farmers Welfare are as follows:

The journey of IARI started in PUSA, Darbhanga (Samastipur) district of North Bihar in 1905. At that time it was called the Agricultural Research Institute.

Afterwards it was renamed as Imperial Institute of Agricultural Research in 1911 and as Imperial Agricultural Research Institute in 1919.

Cooperative Movement in India is the Biggest with over 8 Lakh Cooperative Societies

While inaugurating the Inter-state Cooperative Investment Summit & Exhibition in Dehradun, Uttarakhand Union Minister for Agriculture and Farmers Welfare Radha Mohan Singh said modern cooperatives have attained a comprehensive shape during the 112-year journey. Indian cooperative movement is one of the biggest cooperative movements in the world. There are eight lakh cooperative societies in India, which includes the cooperative organisation at the village and national levels. The membership of cooperative societies in the country is more

The institute was transferred to Delhi on 29 July 1936.

After Independence it was rechristened as Indian Agricultural Research Institute and it was given the status of Deemed University in 1958.

This institute is the harbinger of the Green revolution. The new technologies and high yielding varieties developed at this institute and their demonstrations at farmers' farm led to the Green Revolution.

There is a web of higher education institutes like IITs, IIMs etc., in the country. On the similar pattern government has planned to establish agricultural research institutes like IARI, New Delhi, to promote higher agricultural education.

In this series one IARI was established in Jharkhand and now another is being established in Assam.

e-Krishi Samvad is launched

e-Krishi Samvad, an internet-based interface and a unique platform that will provide direct and effective solutions to the problems faced by farmers and stakeholders in the agriculture sector, was launched by the Government in May.

People can directly connect to the ICAR website <http://icar.org.in> and get the appropriate solutions from the

than 274 million and it includes 95% villages and 71% rural families.

In Uttarakhand alone, there are 4,381 societies in the state, which are associated with various professions. As many as 759 PACS are operational and their membership is 12 lakh and it is also appreciable that hundred percent villages are covered under these PACS.

Uttarakhand can develop tourism, transport, handloom, fruits and vegetable farming, cultivation of medicinal plants, flower farming etc. through cooperatives.

subject matter specialists and institutes through web or SMS. Stakeholders can upload photographs related to diseases of the crops, animals or fishes for diagnostics and remedial measures instantly from the specialists.

e-Krishi Samvad is useful to get information pertaining to welfare and development of agricultural stakeholders.



A new wheat variety for soaring March temperatures

Scientists at the Indian Agricultural Research Institute's (IARI) Division of Genetics are grooming wheat for India's sizzling summers - a new variety called HDCSW-18. This new form of wheat can manage with a minimum low winter temperature and face the soaring summer heat.

The new wheat variety HDCSW-18, which has a mild "vernalisation requirement" or the need for a certain minimum period of low winter temperature to initiate flowering has been specifically bred for conservation agriculture. IARI has already supplied the seeds of HDCSW-18 to select farmers for planting in the current rabi season.

Given the increasing unpredictability of March temperatures and the transition to summer happening sooner than later, the future for wheat in India lies in advancing plantings to late-October or even earlier. But that's easier said than done, for three reasons.

First, wheat sowing takes place only after the harvesting of paddy in early to mid-October. In between, there is a period of field preparation that involves at least a couple of disc harrow, cultivator and planking operations. Further, the

field has to be irrigated once and left for about ten days, so that the seed bed has optimal moisture to allow sowing. All this makes October planting rather difficult.

Second, even if the farmer manages to sow in October, the germination and crop stand establishment tends to be poor, as the relatively high temperatures during this time causes moisture depletion in the upper soil layer where the seed is planted.

Third, the wheat sown in October has a tendency to "come to heading" — i.e. for the earheads to emerge fully from the tillers — much earlier than desired. This transition from the vegetative to the next reproductive phase — when flowering and pollination starts — may happen in 55-65 days, as opposed to 80-90 days if sowing had been in mid-November. Early flowering, which cuts short the period of tillering and vegetative growth ultimately affecting yields, has to again do with high temperatures. These average over 25 degrees in October, while being only 20 degrees or so in mid-November, rendering it the most favoured time for planting wheat.

Framing a model contract farming law

A new model contract farming law by revamping the system of firm farm linkages in the Indian agriculture sector is currently being prepared by NITI Aayog - aims at assuring procurement from farmers at remunerative prices, mitigating risks arising due to price fluctuations, especially of perishable commodities.

Global experience shows that contract farming reduces costs of accessing information, services and marketing. Through interlinked arrangements, contract farming reduces production and marketing risks. The increase in farmer's income is brought about through marketing efficiency gains due to the reduced number of marketing functionaries, and control over retail prices.

The Model Marketing Act in 2003 had clear provisions for contract farming, which allowed buyers and sellers to transact without routing their wares through mandis or trading hubs for agricultural produce. Yet, contract farming which involves agricultural production based on agreements between a buyer and farmers, has not become popular due to insufficient promotion.

The roadblocks here relate to both the demand and supply sides of the market. On the supply side, the most important constraint has been the scale of farm produce. Most Indian farmers are marginal and small (86% holdings are less than two hectares). All States, except Punjab, have farms averaging sizes less than one hectare. The average size of holdings in Bihar is only 0.3 hectare, and this is the situation of 97% of the holdings in the state. With such small

holdings, the marketable surplus of the individual farmer has turned out to be extremely small. Another problem is the regularity in supply of farm produce requiring buyers to contract with numerous suppliers, increasing transactions costs and creating viability issues. The solution might lie in the formation of Farmer Producer Organisations (FPOs) which could be federated to maintain the supply of farm produce on a larger scale and with regularity.

To promote FPOs, the Government has constituted the Small Farmers' Agribusiness Consortium (SFAC) under the Ministry of Agriculture & Farmers Welfare. It also supports FPOs through schemes like the Equity Grant and Credit Guarantee Fund Scheme. Although the government had declared 2014 as the international year of FPOs, by January 31, 2017, only 580 were registered and another 120 FPOs are still in the process of registration. More than 40% of the FPOs are concentrated in Madhya Pradesh, Maharashtra and West Bengal States. To expedite the registration of FPOs, it is suggested that SFAC may be made an independent body like, say, the National Dairy Development Board or National Horticulture Development Board to help sensitise farmers, facilitate the formation of FPOs, evolve mechanisms to federate them, and improve capacities in marketing and financial matters.

On the demand side also, there are several conditions for the success of contract farming. Earlier studies by the International Food Policy Research Institute and National Institute of Agricultural Economics & Policy Research show

that an agribusiness entrepreneur must be engaged in one or more of the following businesses: (1) organised retailing; (2) agro-processing; (3) branding products; (4) exporting farm or processed commodities; and (5) marketing niche commodities. In such cases, spot transactions are not able to

Drought wrecked 50% of plantation crops in Kerala, says Central team

Drought has wrecked more than half of the plantation crops in Kerala, according to the Central delegation deputed by an inter-ministerial committee to study the ground situation. Kerala has been going through the worst drought in the last 115 years. Since the State has sought Central

deliver because of safety and quality issues. To make contract farming successful, constraints faced at the front-end need to be corrected. Hence, the model contract has to be made business-friendly by consolidating farmers for production and marketing.

Drought wrecked 50% of plantation crops in Kerala, says Central team

drought relief assistance beyond its mandate of ₹991 crore, the delegation has asked for specific reports and supporting documents to justify the plea. This would be taken into account before making final recommendations regarding relief assistance.

Sub-committee to reach out to farmers not covered under institutional credit crop loan

In NABARD status paper for 2017-18 Crop loan allocations have been enhanced to ₹58,862.19 crores in 2017-18 against ₹54,352.04 crores in 2016-17. A high power sub-committee with representatives from the Maharashtra government, NABARD and RBI is to be constituted to make a sustainable financial agriculture model to reach out to 32 lakhs farmers who are not covered under the institutional credit crop loan. Of the total 1.37 crore farmers across the

State, almost 32 lakh small and marginal farmers, especially, in the Vidarbha and Marathwada regions, have been left out of the institutional crop loan credit plan.

The sub-committee will include State Additional Chief Secretary Finance and Planning, the Chief General Manager, NABARD, a senior RBI officer and the Secretary, Department of Cooperation and Agriculture.

Government hopes for record foodgrain production in 2017-18

Expecting a 'normal' monsoon this year, the government hopes to achieve a record foodgrain production of 273 million tonne (MT) for the 2017-18 crop year (July-June). As

per the second advance estimate released by the Agriculture Ministry for 2016-17, foodgrain production is pegged at 273 MT.

Onion growers cheer as centre extends MEIS benefits for exports

Onion growers in Nashik, the hub of the trade in Maharashtra, India's largest onion growing state, welcomed the decision of the Director General of Foreign Trade (DGFT) to extend the Merchandise Exports from India Scheme (MEIS) incentive on exports for three months ending June 30 at 5% FOB. The Maharashtra government had urged the Finance Minister to increase the grant for onion exports to 15% from the existing 5%. The State Government had also sought a three-month extension of the scheme ending on March 31 following requests from the Lasalgaon Agriculture Produce Market Committee (APMC).

The centre introduced the MEIS of 5% to export onions, fresh or chilled, with three-month validity, in August last year. The Ministry of Commerce & Industry and the office of the DGFT had extended the scheme to increase onion exports and stabilise the prices of onions in the market till March 31, following demands from exporters and Lasalgaon APMC. The major onion storing states include Maharashtra, Gujarat, Madhya Pradesh, Rajasthan and Bihar. Maharashtra produces 25-30% onion of the total production of the country and contributes above 80-85% in the total onion export.

Drops of water green this farm

In the Northern reaches of Karnataka, where land has turned arid after frequent droughts and floods, it is little drops of water through micro irrigation that have helped Basavraj Patil Bardabad's farm in Bidar district remain green.

In the face of unprecedented water stress – 13 major reservoirs have 16% less water than during last year's drought – government policy has supported drip irrigation. In Bagalakot district, a network of pipes is being installed to facilitate drip irrigation across 24,000 hectares of farmland by diverting 5.84 TMC of water from the Narayanapura Reservoir on River Krishna. The Ramthal (Marol) Lift Irrigation

Scheme – claiming to be the largest micro-irrigation project in Asia – is slated to be launched shortly and over 15,000 farmers are expected to benefit from it.

"Precision agriculture" may be the only way to reduce agrarian water dependency, says the University of Agricultural Sciences, Bengaluru which has demonstrated that water-intensive sugarcane can be cultivated using 40-50% less water through drip irrigation. UAS-B will be testing these technologies, including sub-surface irrigation, on the fields of about 400 farmers for four years. Initial results show that yields have gone up by around 40%.



More farm credit is meaningless

Increased farm credit at ₹10 lakh crore, against ₹9 lakh crore in FY17 announced in Budget (2017-18) presented in February, aims at fulfilling the Government's objective of doubling farm income by 2022. This enhanced farm credit allocation is supposed to help farmers invest more and earn higher profits, but farmers' organisations have expressed dissatisfaction over the announcement.

Large numbers of small and marginal farmers are displeased with the move as their main demand is for the right price for produce. The right price, not an increase in farm credit, forms the core part of every agitation. A study by the Planning Commission indicates that except for enhanced credit, all other farm-related parameters have not grown proportionately. When credit is just a sub-component of inputs it cannot alone boost farm income or output, is the argument also made by the Radhakrishna Committee on Agricultural Indebtedness (2007) and the National Commission on Farmers (2006).

High cultivation costs seem to be a major reason for poor farm earnings. Recent studies including that of the Commission for Agricultural Costs and Prices have stated that the cost of cultivation escalated almost four times during the first half of the current decade. To tackle this, the Government has been providing direct institutional credit to

agriculture and allied sectors since 1970.

Although data from the RBI's Handbook of Statistics of the Indian Economy shows that direct institutional credit to agriculture and allied sectors rose from ₹818 crore in 1970-71 to ₹4.5 lakh crore in 2011-12, a higher amount of the credit has been supplied as indirect credit in recent years. The Rangarajan Committee on Financial Inclusion (2008) observed that about 66% of the marginal farmers preferred rural moneylenders over banks as the latter charge numerous fees, the cost of which often cancels whatever benefit they get on account of interest subsidy. The Report of the Task Force on Credit-Related Issues of Farmers (2009), also stated that the hegemony of moneylenders has been continuing even after the doubling of farm credit policy.

Farmers are not able to derive sufficient income to pay even the cost incurred on crop cultivation. Farmers can benefit only when income from agriculture takes care of input costs for which they take loans. Enhanced farm credit is needed to boost farm productivity, but only if coupled with affordable farm inputs and viable minimum support prices.

A prudent mix of required farm inputs especially through investing and popularising modern methods of irrigation (drip and sprinkler) can cut cultivation costs and boost productivity.

Maharashtra's incentive for group farming

The Maharashtra government has offered to provide financial incentives through integrated schemes amounting to ₹ 50 lakh to promote group farming aiming at making agriculture economical and doubling the farm income. Urging small and marginal farmers to join the model, the

Chief Minister said: "In every village, at least 20 farmers with a cumulative total land holding of 100 acres should come together for farming..." The government's group farming model aims to minimise losses incurred by small and marginal farmers holding less than two hectares of land.

Cabinet approves measures to increase oil palm area and production in India

The Union Cabinet has approved following measures to increase oil palm area and production in India.

i. Relaxation of land ceiling limit for oil palm cultivation under NMOOP (National Mission on Oilseeds and Oil Palm)

The Cabinet approved relaxation in restrictions for providing assistance to more than 25 ha. area also under NMOOP to attract corporate bodies towards oil palm and derive maximum benefit of 100% FDI.

ii. Revision of norms of assistance under Mini Mission-II of NMOOP

The Cabinet gave its approval to revise the norms of assistance mainly for planting materials, maintenance cost, inter-cropping cost and bore-well to make oil palm plantations attractive.

The measures will yield following results:

To encourage oil palm plantation on large scale by corporate bodies and to utilise wastelands. By relaxing restrictions under NMOOP, private entrepreneurs/cooperative bodies/joint ventures will

show their interest in investment in oil palm plantation and availing the NMOOP support.

To encourage farmers for oil palm cultivation. The revision of cost norms will motivate farmers for oil palm plantation.

At present, the programme is being implemented in 12 States, viz., Andhra Pradesh, Karnataka, Tamil Nadu, Mizoram, Odisha, Kerala, Telangana, Chhattisgarh, Gujarat, Arunachal Pradesh, Nagaland & Assam. Nearly 133 districts are under oil palm cultivation in these 12 states, However, all the potential states of Oil palm are covered under NMOOP.

The year-wise physical & financial progress for the 12th five year plan is given in table overleaf.

The total production of edible oil in the country is about 9 million MT. while the domestic requirement is around 25 million MT. The gap between demand and supply is being met through imports, which amounted to ₹ 68,000 crores in 2015-16 (Prov.). Palm oil contributes 70% of vegetable oil import and is one of the cheapest oil due to high productivity per hectare.

Oil Palm is one of the world's most efficient crop in terms of yield of vegetable oil per ha and today it is largest source of vegetable oil in the world. Malaysia, Indonesia, Nigeria, Thailand and Columbia are the major oil palm producing countries. An average oil yield of 4-5 tonnes/hectare has been recorded with oil palm against the highest oil yield of 1.3 tonnes/hectare from rapeseed.

GoI is promoting oil palm by implementing several programmes since 1986-87 and from 2014-15 through

NMOOP which aims to bring an additional area of 1.25 lakh ha. under oil palm cultivation by the end of 2016-17. The developmental efforts have resulted in area expansion under oil palm from 8,585 ha. in-1991-92 to around 3 lakh ha. by the end of 2015-16. Similarly, production of fresh fruit bunches (FFBs) and crude palm oil (CPO) have increased from 21,233 ton and 1,134 ton (1992-93) to 11,50,000 ton and 1,98,000 ton respectively during the year 2014-15.-

Year	Name of Scheme	Oil Palm Area Expansion (ha)		Amount (₹ in lakhs)	
		Target	Target achievement	Allocation	Release
2012-13	ISOPOM* & OPAE**	49932	26300	22705.74	6412.62
2013-14	ISOPOM & OPAE	41347	23183	19776.19	11849.09
2014-15	NMOOP	28146	17143	7290.58	4112.47
2015-16	NMOOP	27337	14425	6683.8	3823.49
2016-17***	NMOOP	30061	9968	8038.68	4241.57

*Integrated Scheme for Development of Oilseeds, Oil Palm and Maize

** Oil Palm Area Expansion

***up to December, 2016

MSP Recommendations

Recommendations of minimum support price for kharif crops (2017-18) (₹/quintal)

The Commission for Agricultural Costs and Prices (CACP) has recommended a hike in the minimum support price (MSP) for tur and moong dal (green gram) by ₹200 & ₹475 a quintal, respectively, for the 2017-18 kharif season - increases of around 4 and 9% for tur & moong, respectively, to ₹5,250 a quintal & ₹5,700 a quintal. The CACP has also recommended a moderate increase in the MSP for paddy, cotton & soya bean.

	2015-16	2016-17	2017-18*
Paddy	1,410	1,470	1,550
Maize	1,275	1,330	1,390
Tur (arhar) dal	4,625	5,050	5,250
Moong dal	4,850	5,225	5,700
Cotton	3,800	3,860	4,020
Soyabean	2,600	2,775	2,850
Groundnut	4,030	4,220	4,220

*Recommended MSP

Cabinet approves MSP for Raw Jute for 2017-18

The Cabinet Committee on Economic Affairs (CCEA) has increased the Minimum Support Price (MSP) to a level of ₹3500/- per quintal for 2017-18 season which indicates an increase of ₹300/- (9.4%) over the previous year. During last three years (2015-16, 2016-17 & 2017-18), government has increased the MSP for jute from ₹2700/- to ₹3500/- (29.6%) as compared to increase from ₹2200/- to ₹2400/- (9.1%) in the preceding three years (2012-13, 2013-14 & 2014-15).

The increase in MSP would benefit the jute industry which supports the livelihood of around 40 lakh farm families and provides direct employment to 3.7 lakh workers in

organised mills and in diversified units including tertiary sector and allied activities are mainly concentrated in West Bengal, Bihar and Assam, which together account for over 95% of the area as well as jute production in the country.

New varieties of jute viz., JRO-204, JBO-2003, JRS-517, JRC-532 and JRO-2407 are being promoted by providing support for seeds production under National Food Security Mission (NFSM)-Commercial Crops. National Seeds Corporation Limited has entered into agreement for promotion of new varieties of jute seeds in the jute growing States.

Government seeks to boost fish production under a restructured scheme for a "Blue Revolution"

A restructured scheme on "Blue Revolution", which provides for integrated development and management of fisheries is being implemented in consultation with all States & UTs. A detailed National Fisheries Action Plan-2020 (NFAP) for the next five years with an aim of enhancing fish production and productivity and to achieve the concept of Blue Revolution has been readied by the government.

Under the scheme, it has been targeted to enhance fish production from 107.95 lakh tonnes in 2015-16 to about 150 lakh tonnes by 2019-20. It is also expected to augment export earnings with a focus on increased benefit flow to the fishers and fish farmers to attain the target of doubling their income.

Ministry approves procurement of one lakh metric ton potatoes from farmers under Market Intervention Scheme (MIS)

The Ministry of Agriculture and Farmers Welfare has approved the procurement of potato under the Market Intervention Scheme (MIS) in Uttar Pradesh for crop season 2016-17. A maximum quantity of 1,00,000 MT of potato may be procured under the scheme by the State agency. The purchase will be made at ₹4,870/- per MT. The Ministry will provide an additional ₹1217.50/- per MT or actual (whichever

is less) for overhead expenses, such as transportation charges, mandi tax, and godown charges.

Payment to farmers as far as possible will be made through non-cash transaction and receipts for sales must be through banking channel only, preferably through demand draft.

How 'Soil Health Card' helps in enhancing productivity?

On February 19, 2015, Prime Minister inaugurated as a revolutionary scheme for farmers called the Soil Health Card. In a review issued in June 2017, the government said the scheme has made a huge difference to farming and farm produce by increasing productivity and reducing cost of production. Soil Health Card provides information to farmers on the nature of soil and its nutrient status along with recommendations on appropriate dosage of nutrients for improving soil health and fertility. Farmers use fertilisers and other chemicals based on recommendations provided on the basis of the soil data and its analysis.

In the first two-year (2015-17) of the Soil Health Card scheme, 2.53 million samples were collected of which 93%

samples have been tested. About 14 crore Soil Health Cards are being created by the State Governments. Over 57% of them have been distributed as of May 31, 2017.

The response from farmers of 136 districts of 16 states is as follows:

Consumption of nitrogen fertilisers has decreased and consumption of phosphorus potash and micronutrients has increased.

16 to 25% reduction in the cost of paddy farming and 10 to 15% reduction in pulses and oilseeds farming.

10 to 25 per cent increase in the production of paddy, 10 to 15% in coarse cereals, 10 to 30% in pulses, and 35 to 66% in oilseeds.

India needs to triple investment in agricultural research: IFPRI

India needs to double or triple its investment in agricultural research if it has to reach anywhere close to China's achievement on the farm front, the head of a Washington DC-based International Food Policy Research Institute said on an India visit in May.

Shenggen Fan, Director General of the Washington DC-

based International Food Policy Research Institute (IFPRI) felt that India's investment in agricultural research is still "very low" in comparison. According to Fan, agriculture is key to meeting half of the 17 Sustainable Development Goals set for 2030. The targets include eliminating poverty and hunger and reducing inequalities.

National Conference on Agriculture for Kharif campaign-2017

The National Conference on Agriculture for Kharif Campaign – 2017 organised in end-April, 2017 at New Delhi. Union Minister Radha Mmohan Singh applauded efforts of Central and State Governments in attaining an estimated record production of about 272 million MTs in foodgrains and 33.6 million tons oilseeds. He referred to the expected quantum jump in pulses production, which is at a record breaking 22.14 million MTs as per the second Advance Estimates. A roadmap has been prepared to scale up pulses production to 24 MMTs by 2021. The Minister reiterated the need to introduce marketing reforms in agriculture sector to enable farmers a better price realisation.

Under this new scheme, comprehensive risk coverage from pre-sowing to post-harvest losses has been provided. Minister of State Rupala exhorted the States to leverage technology in the implementation of the scheme and achieve the targets for insurance coverage of 40% and 50% of the total cropped area/farmers during 2017-18 and 2019-20 respectively.

Eight Groups have been formed for in depth discussion on following topics:

- I. Market reforms – introduction of contract farming, effective role of e-NAM and inter-market trading on e-NAM platform.
- II. Sustainability of pulses production in the coming season.
- III. Best Mechanisation practices to avoid burning of straw.
- IV. Utilisation of corpus fund under PMKSY.
- V. Doubling of farmers' income based on paper circulated by Prof. Ramesh Chand, Member, NITI Aayog.
- VI. Making North-East and the Himalayan States power houses of horticultural development – organic farming.
- VII. Issues related to Horticulture.
- VIII. Pradhan Mantri Fasal Bima Yojana (PMFBY)

The groups will be expected to come up with recommendations on each of the topics in the plenary on the concluding day of the conference.



Bountiful rains forecast this year

India will likely receive higher monsoon rainfall, the India Meteorological Department has said. In April, IMD said its forecast showed this year's monsoon rains at 98 per cent of the long term average, up from its earlier forecast of 96 percent.

The following are the highlights issued by IMD:

Rainfall over the country as a whole for the 2017 southwest monsoon season (June to September) is most likely to be NORMAL (96% to 104% of long period average (LPA).

Quantitatively, monsoon season rainfall for the country as a whole is likely to be 98% of the LPA with a model error of $\pm 4\%$.

Region wise, the season rainfall is likely to be 96% of LPA over North-West India, 100% of LPA over Central India, 99% of LPA over South Peninsula and 96% of LPA over North-East India all with a model error of $\pm 8\%$.

The monthly rainfall over the country as whole is likely to be 96% of its LPA during July and 99% of LPA during August both with a model error of $\pm 9\%$

Production of horticulture crops in 2016-17 estimated at 295 million tonnes, up 3.2%

Following table summarizes the Second Advance Estimates of area and Production of horticulture crops for the year 2016-17 along with First Advance Estimates for 2016-17 and Final Estimates for 2015-16.

Highlights of the "Second Advance Estimates" for 2016-17:

- The production of horticulture crops during 2016-17 is estimated to be more than 295 million tonnes, which is 3.2% higher as compared to the 2015-16 estimates.
- Area under horticulture crops increased from 245 lakh ha to 249 lakh ha in 2016-17, an increase of 1.9% over previous year.
- Production of Plantation crops is to be around 17 million tonnes - 1.3% higher than the previous year.
- Production of spices is to be around 7.1 million tonnes - 1.3% higher than the previous year.
- Fruits production is estimated to be 93 million tonnes, which is 2.9% higher than the previous year.
- Production of vegetables is to be around 175 million

tonnes- 3.5% higher than the previous year.

- With 21.6 million tonnes estimated onion production (+3% over the previous year. Major onion producing States are Maharashtra, Karnataka, Madhya Pradesh, Bihar and Gujarat.
- Potato production has increased from 43.4 million tonnes to 46.5 million tonnes in the current year - 7.2% higher than the previous year. Major Potato growing States are Uttar Pradesh, West Bengal, Bihar, Gu-jarat, Madhya Pradesh and Punjab.
- Tomato production is to be around 19.7 million tonnes - 5.1% higher than the previous year. Major tomato growing States - Madhya Pradesh, Andhra Pradesh, Karnataka, Odisha and Gujarat etc.
- Production of flowers to be around 2.2 million tonnes which is 2.9% higher than the previous year.
- Production of Aromatics & Medicinal Plants is to be around 1.03 million tonnes which is 0.8% higher over the previous year.

Total Horticulture	2016-17 (Second Advance Estimate)	2016-17 (First Advance Estimate)	2015-16 (Final)	% change of 2016-17 (Second Adv. Est.) with respect to:	
				2016-17 (First Adv. Est.)	2015-16 (Final Est.)
Area (Ha.)	24925	24369	24472	2.3	1.9
Production (MT.)	295164	287323	286188	2.7	3.1

Total Foodgrains Production Estimates at record 273.38 mt

The estimated production of major crops during 2016-17 is as under:

Foodgrains – 273.38 million tonnes higher by 8.34 MT (3.15% over last year at 265.04 MT.) Current year's production is higher by 16.37 MT (6.37%) than the previous five years' (2011-12 to 2015-16) average.

Rice – Total Production 109.15 million tonnes is higher by

2.50 MT and 4.74 MT (2.34% and 4.54%) than 106.65 MT and 104.41 MT achieved during 2013-14 and 2015-16 respectively. Also higher by 3.73 MT (3.54%) over the five years' average of 105.42 MTs.

Wheat – 97.44 million tonnes which is higher by 1.66% and 5.58% over 95.85 MT and 92.29 MT during 2013-14 and 2015-16 respectively. Also higher by 4.83 MT (5.21%) than the average wheat production.

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152nd Board of Management Meeting and Annual General Body



152nd Board of Management Meeting and Annual General Body held on 21st July 2017 in Mumbai



152nd Meeting of Board of Management on 21st July 2017 in Mumbai

Seen on Dias (L-R) – Dr. Bijender Singh, President Delhi SCB, Shri Sukhdarshan Singh Mrar, Chairman, NCARDB Federation, Shri R. Amalorpavanathan, Dy. Managing Director, NABARD and Shri K.K. Ravindran, Managing Director, NCARDB Federation



Address of Shri R. Amalorpavanathan, Dy. Managing Director, NABARD on 152nd Board Meeting of NCARDB Federation on 21st July 2017 in Mumbai.



Group Photo of Delegates at 152nd Board Meeting of NCARDB Federation on 21st July 2017 in Mumbai.

Coarse Cereals – 44.39 million tonnes is higher than the average production by 3.04 MT (7.36%). Current year's production is higher by 5.87 MT (15.23%) as compared to 38.52 MT during 2015-16.

Pulses – 22.40 million tonnes - Due to increase in area coverage and productivity of all major pulses, total production during 2016-17 is estimated at 22.40 MT which is higher by 3.15 MT (16.37%) than 19.25 MT achieved during 2013-14. Current year's production is higher by 6.05 MT (37.03%) than the previous year's production of 16.35 MT. Production of Pulses during 2016-17 is also higher by 4.77 MT (27.03%) than the Five years' average production.

Oilseeds:- Total oilseeds production is estimated at 32.52 MT - an increase of 7.27 MT (28.80%) over the previous year,

The production of Oilseeds during 2016-17 is also higher by 3.27 MT (11.17%) than the five years' average production. Soyabean – 14.01 ,Groundnut 7.65 and Castor seed accounted for 1.55 million tonnes respectively.

Sugarcane – 306.03 million tonnes is lower by 42.42 MT (-2.17%) than the last year's production of 348.45 MT.

Cotton – 32.58 million bales (of 170 kg each) - Despite lower area coverage during 2016-17, higher productivity of cotton has resulted into higher production of 32.58 million bales (of 170 kg each), i.e. an increase of 8.57%, as compared to 30.01 million bales during 2015-16.

Production of jute & mesta estimated at 10.27 million bales (of 180 kg each) is marginally lower (-2.39%) than their production of 10.52 million bales during the last year.

India as a global leader in milk production

India is a world leader in milk production for the past 15 years and this achievement is primarily due to the contribution of smallholder dairy farmers, milk producers, milk processing and marketing organisations and various other stakeholders involved.

During 2014-17, milk production increased by 16.9% to 465.5 million tonnes as compared to 398 million tonnes during 2011-14. Similarly, income of farmers increased by 13.79% to ₹33 per litre as compared to ₹29 per litre during 2011-14.

In order to increase productivity of indigenous cattle, allocation for preservation and development of indigenous breeds has been increased manifold. For the first time in the country, an initiative called Rashtriya Gokul Mission has been taken with an objective to preserve and develop indigenous bovine. Major objectives of the mission are establishment of Gokul Gram, field performance recording, awarding farmers and institutes involved in the scientific rearing of indigenous animals, strengthening bull mother farms, and inducting high

genetic merit bulls of indigenous breed into semen stations. Further, two national Kamdhenu breeding centres are being established as centres of excellence for preservation and development of indigenous breeds in a scientific way. Besides being a storehouse of indigenous germplasm, National Kamdhenu Breeding Centres would also be a source of proven genetics.

An amount of ₹25 crore has been released for each centre in Madhya Pradesh in North region and Andhra Pradesh in South region for the establishment of National Kamdhenu Breeding Centre.

The government has approved a new scheme - National Mission for Bovine Productivity - and allocated ₹825 crore for the same. For the first time in the country, E-Pashu Haat portal has been established under Rashtriya Gokul Mission. The portal would play a vital role in making available quality bovine germplasm by linking farmers with livestock rearers to enable farmers to sell and purchase cattle and buffaloes of indigenous breeds.

- Maintains right PH, Oxygen levels for improved growth and productivity
- Less incidence of pest and diseases, especially non-incidence of soil borne diseases.

Aeroponics

Aeroponics is the process of growing plants in an air or mist environment without the use of soil or an aggregate medium. Aeroponics is proved to have several advantages over soil based gardening and hydroponics:

- As aeroponics is conducted in air combined with micro-droplets of water helps in faster and better growth of plants with a plentiful supply of oxygen, water and nutrients.
- Plants in a true aeroponic conditions have 100% access to the CO₂ concentrations for photosynthesis.
- Aeroponics can limit disease transmission since plant-to-plant contact is reduced and each spray pulse can be sterile. In the case of soil, aggregate, or other media, disease can spread throughout the growth.

2. Components of Protected Cultivation Structures

Depending upon the type of covering structure like green house, poly house, poly tunnels and shade net and type of crops proposed for growing and the level of control of atmosphere required, the components varies from structure to structure and location to location. The broad list of components of the protected structures and advantages of protected cultivation technologies are given below:

Green House/ Poly House Components

- Pre galvanised Iron / wooden and bamboo structure
- UV stabilized covering materials of Polyethylene / Polycarbonate/Acrylic

- Heating system in cold climate
- Cooling pad and Fan System
- Shading / Thermal Net
- Trellising system for vegetable
- Trestles system for flowers
- Side wall roll up curtains
- Micro Irrigation System
- Fertigation System
- Misting System
- CO₂ Generator
- Control System /Weather Station
- Planting material, artificial growing media
- Hydroponics/aeroponics.

Advantages of technology

- Off season production
- Production exotic varieties with high quality standards
- Yield is 5 - 15 times more than open cultivation
- Less chances of disease attack, thus reduction in disease control cost
- Higher Efficiency of Water & Fertilizer Use
- Cultivation in problematic topography, soil conditions and climate conditions
- Can be fully automated requiring very less labour and manual intervention.

The major states having area under protected cultivation and major crops/plants and commercial use of protected cultivation are indicated below:

Major States	Major crops/purpose
<ul style="list-style-type: none">• Karnataka• Tamilnadu• Andhra Pradesh• Kerala• Telangana• Maharashtra• Gujarat• Haryana• Punjab• Himachal Pradesh• West Bengal• North Eastern States	<p>Vegetables : Colored Capsicum, English Cherry Tomato, Tomato, Pole beans, coloured Cabbage, Bottle gourd, Broccoli and other off season vegetables</p> <ul style="list-style-type: none">• Flowers: Rose, Gerbera, Carnation, Tiger lilies, Anthurium, Orchids• Others: Lettuce, parsley, celery, chives, Vanilla• Fruits: Cantaloupe, Water Melon, Strawberry• Nursery: Hybrid vegetable seedlings, hardening of tissue culture plants, micro tubers of potato. Exotic flowers nursery

(Source: Rural Pulse, NABARD)



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 रत्तर पर कार्यरत अपनी 323 शाखाओं के माध्यम से
समग्र भारतीय विकास कार्यों हेतु धीर्घकालीन वित्तीय कृपा सुविधा
उपलब्ध कराने वाली शीर्षस्थ सहकारी संस्था।

उद्देश्य-

- लघु सिंचाई योजना:- ट्रॉफ्रैट, पम्पसेट, ट्रिप, स्प्रिंकल्टर आदि।
- कृषि यंत्रीकरण:- ट्रैक्टर, हार्वेस्टर, थ्रेशर, रोटावेटर आदि।
- विविधीकरण योजनाएँ:- डेयरी, पशुपालन, मुर्गी पालन, भूस्य पालन आदि।
- आंदोलनिक विकास:- आम, अंगूर, आंवला, पान, केला, ग्रेडियोलाई, गुलाब, औषधीय पौधों की खेती एवं बनीकरण।
- अकृषि क्षेत्र:- ग्रामीण कुटीर एवं लघु उद्योग परम्परागत उद्योग, तेलघानी, धान गिर, कोल्हू, आटा चक्की, रक्कटर, मोटरसाईकिल रिपेयरिंग सेटर, बैटी चार्जिंग, टेलीविजन, रेडियो, टेलिकाईर एवं भोवाईल रिपेयरिंग, हेयर कटिंग सेंटर्स, कम्प्यूटर टाईपिंग एवं साइबर कैफे, वायरमैन एवं मोटर वाइंडिंग, माडर्न लाप्टॉप, जल-पान गृह, बैकरी उद्योग, 22 हार्स पावर की क्षमता के जनरेटर सेट, आफ रोट प्रिन्टिंग प्रेस आदि।
- भूमि क्रय।
- लघु सड़क परिवहन।

नवीन संचालित योजनाएँ-

- ग्रामीण महिलाओं हेतु डेयरी योजना।
- नेशनल बैंकवड क्लासेज फाइनेंस एण्ड डेवलपमेन्ट 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 कृष्ण सुविधा उपलब्ध।
- सौर चलित अल्प सिंचाई की योजनाओं में कृष्ण उपलब्ध, जिसमें 50% तक का अनुदान नाबांड के सहयोग से वित्त पोषण।
- सोलर लाइटिंग सिस्टम में वित्त पोषण।
- ई-रिवास योजना में वित्त पोषण।

विशेष सुविधाएँ-

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

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

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



हमारा उद्देश्य - समृद्ध किसान

दूरभाल:- 0522-3056370, 3056439, 3056423, 2238844, फैक्स:- 0522-2239806

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

छोटे किसानों का बड़ा बैंक



बैंक मुख्यालय

57 वर्ष

हमारा प्रयास - सल्त विकास



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Commercial Dairy	: 11.30 %

Nominal Loan Fee

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For one year & above but less than two years	7.10%
For two years & above but less than three years	6.60%
For three years to five years	6.35%

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

THE PUNJAB STATE COOPERATIVE AGRICULTURAL DEVELOPMENT BANK LIMITED

S.C.O. 51-54, Bank Square, Sector 17-B, Chandigarh.

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