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Innovations in Agricultural Credit Market – Rationalisation of Policy Response*

P. Satish†

Agriculture is a risky economic activity. A large range of uncontrollable elements can affect output, production and price resulting in highly variable economic returns to farm households. In developing countries, farmers also lack access to modern instruments of risk management such as insurance, future contracts and guarantee funds as well as ex poste emergency government assistance. One consequence of inadequate overall financial risk management is that farmers, in general, face constrained access to formal finance. The smaller the net worth of the farm household, the greater the degree of exclusion.

Formal lenders avoid financing agriculture for a host of reasons: high cost of service delivered, information asymmetries, lack of branch networks, perception of low profitability in agriculture, lack of collateral, high levels of rural poverty or low levels of farmer education and financial literacy. But predominantly, Bank Managers around the world say that they would not finance agriculture because of the high degree of uncontrolled production and price risk that can influence the sector. The farmer can be an able and diligent manager with an excellent reputation for the repayment, guaranteed access to a market and high quality technical assistance but an unexpected drought or flood can force him/her to involuntarily default.

Most rural households lack access to reliable and affordable finance for agriculture and other livelihood activities. The recent financial crisis has made provision of credit even tighter and the need to explore innovative approaches to rural and agricultural finance even more urgent. Rural and agriculture finance innovations have significant potential to improve the livelihood and food security of the poor. In the 1980s and 1990s, the deleterious impact of limited financial access caught the attention of many academics, policy makers, donor agencies and development practioners who generated an outpouring of new thinking and new ideas. But these innovations were largely confined to non-agricultural micro enterprise finance.

Financial institutions across the world have demonstrated a lack of interest in agricultural finance due to a variety of reasons. Many agricultural households are located in remote parts of the countries and were often so widely disposed that

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†Chief General Manager, National Bank for Agriculture and Rural Development, Bandra (East), Mumbai - 400 051.

The views expressed are those of the author and not of the institution in which he is employed.

financial institutions found it challenging to provide cost-effective and affordable services. A large portion of agriculture was subject to similar weather and climate risk, making it harder for providers of financial services to hedge risks to operate profitable insurance pools. Service providers, mainly urban-based, simply did not know enough about the business of agriculture to devise profitable financial products.

Since the late 1990s, a number of organisations across the developing world have developed innovative approaches to financing agriculture. Some of them adopted microfinance concepts to the provision of agricultural finance, used good banking products and above all, drawn on knowledge of agriculture to enter and succeed in this market. Many of these approaches show great promise but no single approach works for all situations. Institutions are most successful when they are not rigid, apply comprehensive risk management strategies, have the freedom and flexibility to select their clientele, and are innovative and pragmatic.

In addition to providing conventional public goods related to the efficiency of agricultural credit markets, the state should intervene by supporting pilot experiments in rural finance, particularly those that have proven successful in other countries and could be adjusted with relatively high certainty and low adaptation costs to the country's socio-economic conditions and cultural values. The justification for such support is rooted in the externalities associated with innovations. Usually pilots entail high level of risk and the entities and individuals piloting innovations face asymmetric prospects, namely, if they succeed they would often face immediate competition, because their best clients will try to get better lending terms that are likely to be offered by a new entrant/competitor who would be eager to thrive on the information already established regarding creditworthy clients. New entrants overcome the asymmetric information issue and perform free rides compared to the pilot initiator that entered the risky market and paid exclusively for initially resolving the asymmetric information issues. This asymmetric situation and the threat of free riders-competitors are likely to generate a socially sub-optimal supply of pilot innovations. Sound governments should support pilot innovations in the light of their externalities and importance to rural development and promotion of rural financial markets, similar to support granted by responsible governments to research and development in areas that contribute to welfare and growth.

In India while the last two decades have indeed witnessed some innovations in rural financial markets, the state's responses were at best ambivalent. While some of the innovative initiatives received a positive albeit lukewarm response, the thrust required to mainstream them was absent. The state's policy response consisted of four major initiatives, viz., the programme of doubling of agricultural credit in three years (announced in 2004), the institutional reform programme for co-operatives and regional rural banks, the scheme to provide short term credit to agriculture at 7 per cent interest and the agricultural debt waiver and debt relief scheme.

Doubling of Agricultural Credit

As a part of its strategy to boost agricultural production, Government of India had announced a programme to double the flow of institutional credit to agriculture in three years starting 2004-05. The programme envisaged accelerated expansion of Kisan Credit Cards, financing of new investments, rescheduling and restructuring of loans in areas affected by natural calamities, one time settlement (OTS) for farmers in distress and redemption of loans from informal sources. The programme of doubling of agricultural credit received an enthusiastic response from the banks and the doubling happened in less than the prescribed time frame. But other aspects of the package were given a silent short shrift by the banking sector.

The programme also posed a number of questions with regard to the quality and equitability of the credit flow. First, a substantial part of it has been in the form of indirect advances, that is, not to individual farmers but to institutions and organisations serving the interest of farmers and the rural population directly or indirectly; growth in these has appeared in an erratic fashion. Within farm credit, a growing proportion has been in favour of large-size loans, which is evident from the fact that while the number of loan accounts under direct finance has risen by meagre percentages, the loan amounts have risen quite significantly. In March 1997, only 16.7 per cent of agriculture loans (or Rs. 4,556 crore) were of above Rs. 2 lakh but by March 2005, this proportion had doubled to 33.3 per cent (or Rs. 31,550 crore), that is, within a period of 8 years. As against Rs. 1,131 crore in March 1997, there were Rs. 7,104 crore worth of loans for Rupee 1 crore and above in March 2005. The proportion of small loans of Rs. 25,000 or less has dwindled from 54 per cent to 23 per cent in the total farm loan. As NSSO field data reveal, the small and marginal farmers have suffered rather badly in the absence of institutional credit availability (Shetty, 2009).

The targets of farm credit for each financial year are being easily achieved. During the period 2004-09 ground level credit flow increased with an average annual compounding rate of 23 per cent. For the year 2010-11, the total target of agricultural credit by the banking system was Rs.3.75 lakh crore, which was easily surpassed with a 119.14 per cent achievement at Rs. 4.47 lakh crore. The share of commercial banks in agricultural lending registered a sharp increase reaching a level of 74 per cent compared with 35.9 per cent in 1983-84, whereas the share of co-operatives fell from 56 per cent in 1983-84 to 16 per cent in 2010-11. Despite these achievements, the problems of reaching to small farmers and backward regions still remain. With rising incomes, there will be diversification of crops, investment needs for the production of high income-elastic agricultural products such as dairying and livestock, horticulture, agro-processing would rise much faster now. But the main problem is that with the focus on quantitative targets the policymakers seem to be insensitive to the distributive aspects of farm credit. They are silent on the issues such as regional disparities and access to credit by small and marginal farmers.

Institutional Reform Packages for Co-operatives and RRBs

The revival package under Vaidyanathan Committee's recommendations is aimed at reviving the Short Term Co-operative Credit Structure (STCCS) and making it a well managed and vibrant medium to serve credit needs of rural India especially the small and marginal farmers. It seeks to introduce legal and institutional reforms necessary for the democratic, self reliant and efficient functioning, take measures to improve the quality of governance and management and provide financial assistance to bring the system to an acceptable level of financial health. Financial assistance under the package includes technical assistance to cover computerisation, installation of standard accounting system and MIS, training and capacity building, in addition to covering accumulated losses in the STCCS. The legal, regulatory and institutional reforms as envisaged under the revival package would set the ground for efficient functioning of rural co-operatives (Government of India, 2005). Twenty five states have signed the MoU with Government of India and NABARD and twenty one states have amended their co-operative societies Acts. An assessment of World Bank in four states commented positively on the implementation of the reform package in terms of amendments to the Acts, elections to three tiers, toning up the accounting systems and a massive training effort. In terms of credit growth, in these states short term co-operatives witnessed a 120 per cent growth in aggregate since the reform process started and an overall improvement in recovery levels (NABARD, 2011).

The Vaidyanathan Committee for the Long-Term Co-operative Credit Structure (LTCCS) envisages reforms similar to the STCCS package. The key recommendations on institutional restructuring include allowing PCARDBs to access certain types of deposits from members, to provide all types of loans to its members and to allow them to borrow from any regulated financial institution including federal units of the STCCS. The task force had recommended a financial package similar to that of STCCS.The report is yet to be accepted by central and state governments and the process of implementation is yet to start.

The central government, state government, NABARD and RBI have invested huge amount of financial and human resources into the reform process of the STCCS. Similar investments may take place for the LTCCS also. With a strict oversight of the implementing agencies, all the stages envisaged in the reform package, i.e., legal reforms, reforming the accounting systems and MIS, training of human resources may be implemented and the financial package may wipe out the accumulated losses and the structures may reach the envisaged capital adequacy level. But it has to be realised that in India, co-operative democracy is closely enmeshed into political economy and finality of decision making on loan administration, staff recruitment and financial management is with the democratically elected boards rather than with professional management. Thus the future of the co-operative credit institutions would largely depend on the manner in which their democratically elected boards conduct their affairs.

With the onset of banking sector reforms, for RRBs, which were in a financially unviable shape, various options were examined. Considering the important role played by RRBs in dispensation of credit in rural areas, especially to the weaker sections of society, the continuance of the RRBs was found to be relevant. The Government decided to recapitalise the weak RRBs to improve their financial health. Under the financial package, a sum of Rs. 2,188 crore was provided by the stakeholders of RRBs in the proportion of their equity holding during the period 1994-2000 for cleansing the balance sheet of 187 RRBs. Later, the Vyas Committee recommended the amalgamation of RRBs into State level institutions as it felt that the process of amalgamation would lead to significant reduction in cost of administration and economies of scale (RBI, 2004). Based on these recommendations, Government of India allowed RRBs sponsored by the same bank within the same State to be amalgamated in a phased exercise. The process of amalgamation is more or less complete, state-wise sponsor bank-wise. The total number of RRBs after the amalgamation process is now 82.

RRBs were set up with the intention of taking banking services to the villages to cover such categories of rural masses, which hitherto were considered unbankable by other institutions specially the commercial banks. Although there has been substantial growth in lending of RRBs, their share is not commensurate with their network and manpower. With the existing network, RRBs have the potential to achieve a 25 per cent share of the ground level credit to agriculture as against the 10 per cent now. The main reason for the stunted growth of RRBs as a structure was the narrow vision of their sponsor banks that did not allow them to expand their operations. The time has come for the RRBs to come upon their own and play a greater role in agricultural credit. To ensure this the umbilical cord to their sponsor banks has to be severed. In principle no business should be owned (or managed) by its competitor; if it happens so, the result is either cannibalisation or stunted growth. RRBs have to emerge as independent institutions and expand their operations and step-in into areas where other institutions are reluctant or unable to operate. For that their branch presence needs to be doubled to nearly 30,000. This requires a vast increase in their staff strength. With the older staff superannuating in the next three years, there would be an accretion of younger and modern skilled human resources to these banks who can be moulded to deal with the changing needs of agricultural credit. Along with this, a scheme of commercial banks voluntarily relinquishing their branches to RRBs may be introduced. With this programme there would be an addition of another 8-10,000 branches to RRB system. With these additions RRBs would be poised to take a major stake in agricultural credit - a role in tune with their original mandate. To enable RRBs to take on their new role as the main purveyors of agricultural credit they require a forward looking mentor and guide who is experienced in the area of agricultural credit. This role can be provided by none other than the apex bank for agricultural credit - NABARD. With an eventual equity stake, NABARD should have

a decisive say in the policies of these institutions, especially those related to agricultural credit (Satish, 2010).

Interest Subvention and Debt Waiver

In order that a farmer has cheaper finance from the banking system, particularly small and marginal farmers, in 2006-07 Government of India announced a scheme of providing short term credit upto Rs. 3 lakhs to farmers at 7 per cent interest rate. To enable the banks to provide credit at these rates it announced the methodology of subvention to banks, low refinance rates from NABARD to co-operatives and RRBs and subvention to NABARD to enable it to provide such concessional refinance rates. With a view to inculcating the habit of prompt payment and to motivate those who repay before the due date, an incentive by way of 1 per cent rebate on interest rate was offered from 2009-10, which was further raised to 2 per cent in 2010-11. Thus the interest cost to borrowers will effectively be as low as 5 per cent. Many state governments have come forward to provide additional relief to the farmers on interest paid on crop loans. In some states like Maharashtra with additional interest relief/subvention farmers pay zero percent interest on loans upto Rs. 50,000. Further in 2008 the Government of India announced a scheme for agricultural debt waiver and debt relief to open up the choked lines of credit to farmers who were in default to banks. The scheme aimed at providing relief to small and marginal farmers indebted to formal agencies by writing off their farm loans taken between 1997 and 2007, which were overdue by end of 2007. The scheme also offered a one time settlement (OTS) of the debt of other farmers with similar overdue loans through a 25 per cent relief if the farmer repaid the balance of 75 per cent. The scheme covering both the waiver and relief components, benefited an estimated 3.68 crore farmers amounting to over Rs. 65,000 crore. While both these schemes have no doubt been beneficial to a large numbers of farmers, they have an element of negative incentives and the issue of moral hazard is inherent in them. And at no level can these be construed as an innovative policy response from the state.

In India, the innovations in agricultural credit markets have largely been the forte of the apex bank for agriculture – the National Bank for Agriculture and Rural Development (NABARD). Its innovations cover the realms of product innovations, process innovations and institutional innovations.

Product Innovation

The foremost amongst product innovations was the Kisan Credit Card (KCC), which was designed by NABARD in 1998-99. The card was a step to provide farmers with adequate and timely credit support from banking system in a flexible and cost effective manner. The scope of the scheme was enhanced in 2004-05 to include investment credit and some consumption requirement. The entire production

credit requirements of the farmer for a full year plus credit needs for allied activities related to agriculture, as also consumption purposes are incorporated in the same card. Revolving cash credit facility involving any number of withdrawals and repayment within the sanctioned credit limit is available to the farmer.

There was no doubt that the issue of KCCs has gone up across states but still 100 per cent coverage has not been achieved. There were farmers who had more than one card and most of these farmers were resourceful farmers. There was a cost involved in getting a KCC. Intermediaries were involved in getting a card especially for small and marginal farmers. Most farmers make a single transaction and they lack the awareness on whether a KCC can be used for consumption loan or not. Very few of the farmers were aware of the multipurpose use of KCC for availing all types of credit and flexibility in operations as envisaged. On an average the borrowers made 3-4 visits to the banks for opening KCC accounts. As the end of March 2011 the cumulative KCCs issued by all banks totalled to 100.93 million. But a 2010 study points out discrepancies in MIS of KCC that include multiple cards, renewed/reissued cards being treated as fresh cards etc. Adjustments for these distortions brought down the number of KCCs to 47.27 million, which constituted 50.63 per cent of the operational holdings. The states with the highest coverage of KCCs were Punjab (77.53 per cent) and Haryana (74.21 per cent) and the lowest were Himachal Pradesh (28 per cent) and Assam (13.42 per cent) (Samantra, 2010). Kisan Credit Card (KCC) scheme aimed at providing adequate and timely support to the farmers from the banking system in a flexible and cost-effective manner has shown such inherent weaknesses. These have to be rectified and the Card should be transformed to Smart Card that can be used at all points of sale. KCC limits may be fixed for five years, based on the bankers assessment of credit needs of the farmers for a full year, and the limits be operated by the borrower as and when needed with no sub limits for *kharif* or *rabi* or for stages of cultivation. There should be an automatic renewal of and annual increase in credit limit linked to inflation (Government of India, 2010).

Process Innovation

The Self-Help Group- Bank Linkage Programme stands out amongst the process innovations. This initiative of NABARD was a supplementary credit delivery mechanism for the sections of a population who have been left out of the purview of formal financial institutions and who have been considered as non-bankable. SHG Bank Linkage programme which started off as a pilot project limited to 500 groups in 1992 has now reached a stage where 6.53 million groups have been linked to the banking sector and through these groups, nearly 95 million households have been linked to the banks as on 31.3.2011. When it was later realised that SHGs were unable to fully factor in the requirements of mainstream of agricultural finance, NABARD has started exploring other innovative alternatives. In this effort, the Joint

Liability Group (JLG) approach pioneered by a Bank, Agriculture and Agricultural Co-operatives (BAAC) in Thailand was viewed as a viable approach. The JLG model too was taken up on a pilot basis in 2005-06 and it was later introduced as a mainstream banking process in 2008-09.

Indian agriculture is increasingly becoming 'small farmer' agriculture. The small and marginal farmers together constitute nearly 80 per cent of the total cultivators, cultivating fragmented land holdings averaging around 1.14 ha. Further, these categories of farmers are the most excluded groups. As per the Rural Financial Access Survey (2003), 87 per cent of the marginal farmers and 69.2 per cent of the small farmers have no loan accounts with formal financial institutions. For these groups of farmers, agriculture is not merely an economic activity, but a livelihood issue. For the growth initiatives which are on the anvil, empowering these categories of farmers and finding solutions and innovations, which would enable them to be mainstreamed in the overall credit delivery system, needs to be a focus area to ensure inclusive growth. The formal rural credit product is mainly designed for meeting agriculture project finance requirements and in a way, assuming that all rural people are entrepreneurs, obviously, there is a strong mismatch between products offered by formal institutional suppliers and the most important needs of the majority of the customers.

This dichotomy is expected to be tackled through the Joint Liability Group (JLG) approach. A JLG is an informal group comprising 5 to 10 individuals coming together for the process of availing bank loan, either singly or through group mechanism, against a mutual guarantee. The JLG may be formed by small and marginal farmers, tenant farmers, oral lessees and sharecroppers. The members normally live in the same neighbourhood, covering the same village and are from the same socio-economic background and environment. The members may be mostly engaged in the same productive activities, and are expected to know and trust each other well. The JLG members offer an undertaking to the bank that enables them to jointly receive such amounts, as deemed eligible by the bank, for pursuing any individual or joint activities, as found suitable by the group. The main principle of the JLG is to facilitate mutual loan guaranteeing and execution of JLG agreement, making them 'severally and jointly' liable for payment of interest and repayment of loan obtained from the bank. JLG lending is expected to substantially reduce the costs of handling a large number of borrowers at different stages, and taps the local information system effectively to transfer part of the screening, monitoring, enforcing costs normally incurred by bankers on to borrowers/JLG leaders.

The JLG concept offers opportunities to the yet unbanked and landless farmers and also encourages and includes like-minded entrepreneurs, and offers a level of sustainability through economies of scale. JLGs can be successful provided that these financial services are set up in a viable and sustainable manner. It is important to highlight the fact that the JLG, as a credit delivery innovation, needs to be recognised in its very nature, as a 'joint liability' mechanism which acts as an effective collateral

substitute. Consequently, this mechanism will achieve acceptance among bankers as a 'low cost' delivery model. Thus, the JLG concept is a mechanism to further promote financial inclusion and diversify banks' exposure to agricultural credit in a sustainable manner. With the mainstreaming of the JLG concept, the total number of JLGs linked to bank branches has risen to 1.41 lakh as on 31 March 2011. But to reach the required scale, this programme has to be implemented in a 'mission' mode nationwide, with NABARD's guidance.

Many states, in which the JLGs were first introduced on a pilot basis, have shown considerable promise and success. In one of these states-Kerala- the bankers were of the view that JLGs are an effective channel to reach the unbanked small and marginal farmers, tenant farmers, sharecroppers and microentrepreneurs. Thus financing through JLGs has a potential to further financial inclusion. Wherever they had the support of JLG promoting institutions like NGOs, farmers club, village councils their performance was better than those without such support. When they have been carved out of their SHGs, they are cohesive and stable and the bankers seem to prefer lending to women JLGs. The view of the bankers was that NABARD should provide continuous capacity building support for the JLGs stake holders and conceptual clarity on the JLG concept has to be ensured for the banks forming the JLGs (Jeyaseelan *et al.,* 2008).

Institutional Innovation

Agricultural credit requires not only a financial component for it to be successful, but it should also have a non-financial component. This would basically mean technology support in respect of input and marketing. During Green Revolution small farmers dramatically increased their productivity by adopting high-yielding varieties of rice and wheat and using complementary inputs of irrigation and fertiliser. More generally, new technologies have more than doubled global crop yields over the last four decades. Between 1965 and 2000, productivity gains in output per hectare of cereal crops averaged 71 per cent globally (Pardey and Beintema, 2001).

Due to the dwindling financial health of state governments as well as state agricultural universities, extension services have not been receiving the support at the levels that they had during the Green Revolution period. This is reflected in the lackadaisical nature of extension services available at the grassroots level in most of the states. As extension services are delivered by a governmental agency and credit services by a banking institution there is a visible dichotomy. To overcome this dichotomy a base level institution which can converge both these services is needed. This convergence is possible only through community-owned organisations in which all the members share their responsibilities. Further, at the level of bank branches, a support system is required for overcoming information asymmetries as also acting as a bridge between the banking outlet and the community at large.

In the early 1980s, at the time the National Bank for Agriculture and Rural Development (NABARD) was formed, no such institution existed. The concept of bringing the farmers together in a voluntary group was initiated in 1982 through the Farmers' Club programme, which was then started with the philosophy of 'Development through Credit'. This philosophy laid emphasis on propagating the five principles, viz., proper credit usage, enforcing strict credit discipline, adoption of proper production technologies, proper savings and prompt repayment. This institutional innovation has received a renewed focus from 2007-08 onwards. Over the years, the role of the Farmers' Club has undergone many changes and currently, the role has been enlarged and expanded as 'the main vehicle of technology transfer and marketing support to the farmers'. With these two essential inputs, the farmers are in a position to better utilise the agricultural credit and also service it. The Farmers' Clubs are also evolving into acting as business facilitators/banking correspondents for banks and formation of Self-Help Groups, Joint Liability Groups and Producers' Groups/Companies. Their main role is in strengthening agricultural extension services, facilitating transfer of technology, undertaking collective purchase of inputs, production and marketing. The new policy focus on the Farmers' Club looks at three aspects; viz., (i) link them with technology transfer and market access; (ii) ensure sustainability of the clubs over a period of 3 to 5 years and (iii) convert them into Producers' Groups/Companies/Federation of Farmers' Clubs.

The Farmers' Club is basically attached to a rural branch of a bank. Along with the linked bank branch, there is also a role for a sponsoring agency, which takes on the responsibility of organising the farmers and bringing them into these groups. These sponsoring agencies are basically non-government organisations (NGOs). or Krishi Vigyan Kendras (KVKs) The routine activities which are undertaken by all the clubs include preparing the agricultural and credit plans of the village, conducting awareness and orientation meets based on the crop profiles of the villages, maintenance of village profile and data, identification of borrowers and other support to the bank branch. The non-routine activities of the clubs include PRA training/ exercise, skill training, exposure visits, taking up special projects and programmes, transfer and adoption of technology, publication materials, SHG formation and capacity building, marketing related activities, access to IT services through kiosks, etc. For the non-routine activities of the clubs, NABARD has evolved a separate funding mechanism by creating the Farmers' Technology Transfer Fund with a corpus of Rs. 50 crore.

The new policy with regard to the Farmers' Clubs lays stress on the programme content and quality, and its impact on the lives of the farming community. The sustainability of the clubs is sought to be achieved through token membership fee, monthly savings, commission/incentive for selling insurance products, commission for acting as BC/BF etc. As at the end of March 2011, the total number of Farmers' Clubs reached a level of 76,000. NABARD expects to reach a level of 100,000 clubs by the end of March 2012. The activities of technology transfer, credit facilitation

and counselling, market advocacy, market support and input facilitation have been taken up by a large number of Farmers' Clubs across the country, across various agro-climatic zones and across various regions and communities. This proves the fact that it is an institutional innovation, which can be mainstreamed, irrespective of the specific nature of an area or the profile of the members (Satish, 2011).

Innovations-Other Areas

The other innovations in agricultural credit markets include the inventory/warehouse receipt financing, supply/value chain financing, leasing, contract farming and producer companies.

(i) *Inventory Financing and Warehouse Receipts Financing*

In developed countries inventory credit plays an important role in providing access to credit to agricultural producers and it serves effectively in overcoming credit constraints. Credit extended against commodities stored in bonded warehouses is a mainstay in developed countries where the prerequisites for facilitating such financial transaction (legal, enforcement, skill requirements and the like) are met. Appropriate inventory finance contributes not only directly to an increase in access to credit of producers but also indirectly to reduce the instability of inter-seasonal commodity prices. Warehouse receipts constitute an effective instrument in ensuring loan security and consequently could add to credit enhancement and transforming of poor and low- income farming households from non-creditworthy to creditworthy ones.

The role of the state with respect to inventory finance is limited to creating an enabling environment mainly through ensuring that the legal and enforcement systems facilitate the delivery of inventory credit as well as the trading in warehouse receipts. Promoting market information should also be shouldered by the state. However price control and restrictions with respect to movement of crops stored should be avoided. Also, when the state provides adequately other public goods and monetary and fiscal policies ensure relatively stable economy and domestic interest rates, the efficiency of the inventory credit and the demand for and supply of warehouse finance will play an increasingly important role in assisting the rural sector.

There are several alternatives in implementing inventory credit. These include: warehouse that operates jointly by the bank and the borrower under a predetermined arrangement; warehouses that are operated by individual borrowers under the supervision and monitoring of a third party; centralised warehouses run by a storekeeper who is also a trader; and independent centralised warehouses operated on behalf of banks that provide credit to individuals borrowers that store commodities in the warehouses. The establishment of inventory finance requires, a profound

understanding of the legal and enforcement framework, based on which reforming the legal system can take place so as to ensure that the interests of the parties involved are well considered. Reliable operating warehouses are essential for inventory finance, and promoting efficient, timely market information is also a necessity (Coulter and Shepherd, 1995).

Many banks in India have introduced the "Scheme for financing against warehouse receipts". Under the scheme banks stipulate margins as well as collaterals. The collaterals are expected to cover the unrealised portion of the advance even after selling the commodity pledged, in case of steep price decrease. In the model adopted by some banks the service provider is appointed for marketing under this scheme. They are similar to the business facilitators. Banks also engage collateral management agencies as they are not proficient in valuating and managing physical commodities and they do not track prices on an ongoing basis. These agencies ensure the quality, quantity and weight controls of the commodities, their insurance and protection of marketable value.

(ii) *Supply/Value Chain Financing*

A joint product of credit and other products could be instrumental in mitigating the issues of high transaction costs of small value denominated loans and the credit risk of lack of effective collateral of small farmers. The supply chain can be described as interrelated links that include production, input use, transportation, storage, processing, marketing in domestic markets and exporting to foreign markets, finally reaching the ultimate consumers. Finance can be delivered directly by financial institutions to each link in the supply chain or indirectly by one link to another that participates in the supply chain. The supply chain therefore encompasses the use of inputs such as land, labour, seeds, fertilisers and pesticides, part of which can be purchased with credit extended by other participants in the supply chain (e.g., input traders) or by credit extended by pure creditors like banks.

The Drum Net project in Kenya is an example as to how lending becomes increasingly feasible in a supply chain approach in which the farmers are connected to a formal network of buyers, retailers and financiers. The project employs proven microfinance principles and a supply chain approach to promote agricultural lending. The project establishes relationships with key actors along a supply chain - a buyer, a bank, and several farm input retailers - and links them to small farmers through a dedicated transaction platform and a fully integrated finance, production, delivery, and payment process. The targeted use of information and communication technologies (ICT) across the platform makes the process efficient, cost-effective and practical. By bundling services at various stages in the supply chain one can enhance efficiency and build trust between actors in the chain (Gine, 2005).

BASIX, which terms itself as a livelihoods promotion institution, provides services to farmers growing nine types of crops and two livestock products. Non-

farm business development services are also provided under the aegis of its Agricultural, Livestock and Enterprise Development (AGLED) services. AGLED provides soil testing, integrated pest management, integrated nutrient management, field surveillance services. It connects customers to markets for inputs and outputs. Weather based crop insurance service was also provided to section of the farmers. For livestock the services included animal health check up camps, vaccination, deworming, training in feed and fodder and better dairying. Linkages to milk marketing chains of co-operatives were also established. In 2009 BASIX had nearly half a million customers for its AGLED services who pay Rs. 450 per annum to avail these services. These are in addition to the financial services which provides to its clients. To oversee its programmes it has field executives supervising livelihood service advisors (LSAs) at its branches. These LSAs originate credit, sell insurance and collect repayments. They also sell AGLED services. The extension support is provided by Livelihood Service Providers (LSPs) who are para-extension workers. The bundling of financial and non-financial services helps BASIX attain a low level of loan delinquency and high level of institutional financial viability (Mahajan and Vasumathi, 2010).

(iii) *Leasing*

Leasing could be promoted as a substitute when absence or severe scarcity of long-term credit exists - as is typically the case in most developing countries, where long-term saving is scarce and consequently long-term credit is not offered by banks. Rural areas are particularly characterised by meagre supply of long-term finance and also leasing usually takes root in urban areas before it penetrates into rural areas. Leasing is almost always practiced in respect to standard machinery and equipment that allows easy and convenient terms of the leased equipment to other lessees upon default on the leasing terms. In countries where repossession of collateralised property is complex, lengthy and expensive and therefore results in uncertain final outcomes, leasing may be preferred if the leased equipment, machinery and farm related machinery can be easily taken away from a defaulted lessee at reduced prices. However the appropriate approach for the state under such scenarios is to actually ensure creditors' rights and improve all the aspects of repossession in case of loan default rather than relying heavily on leasing arrangements as a second best solution in light of legal, judicial and enforcement systems. A level playing field as related to property, creditors' and leasers' rights should be introduced and maintained to ensure optimal resource allocation as well as optimal choice and use of financial instruments. Leasing however while being instrumental for medium and large farmers mitigating the severe problem of lack of access to term finance, can hardly be seen as an instrument that would bring about a major improvement with respect to ease accessibility to well managed and financially disciplined co-operatives.

A 2006 World Bank case study of three profitable providers of leasing showed that in all the cases the rural portfolios were as profitable as urban portfolios. Arrendadora John Deere, the largest provider of farm machinery leases in Mexico, had nearly $ 63 million in farm equipment leases. DFCU Leasing, the largest provider of leases in Uganda had a $ 5 million lease portfolio in rural areas. Network Leasing, a leading micro-leasing provider in Pakistan had a lease portfolio of more than $ 2.4 million in rural areas. Low lease losses, strong client demand for asset financing and a favourable legal and policy environment made rural leasing a profitable business for these companies. For clients, access to finance at a reasonable cost, low or no collateral requirements, quick processing and easy access to the provider appear to have significant benefits (Nair and Kloeppinger-Todd, 2006).

(iv) *Contract Farming*

With an increasing demand for value-added and high quality products and the need for increase of full value chain, funds have been directed by some of the corporates to adopt contract-farming mechanism. The Contract Farming presupposes three basic agreements: (i) market (ii) resources and (iii) management provisions. Under market provisions, growers and buyers agree to terms and conditions for future sale and purchase of crop/agri-products. Under the resource provisions, the buyer agrees to supply selected inputs and technical advice. Under the management provision, the grower agrees to follow recommended production methodology, inputs, cultivation and harvesting specifications. Contract Farming encouraged market-led production of crops and generates steady income for individual farmers. It generates gainful employment in rural communities particularly for small farmers, medium farmers and the landless and promotes self-reliance in general by cornering legally valuable resources and expertise to meet new challenges. It also benefits the buyer in terms of assured flow of raw materials, long-term commitment for supply at pre-determined prices and earns a goal for the farmer. The earliest attempt at contract farming in India has been that of HLL building linkages with agriculture through dairying in the 1960’s in Etah District of Uttar Pradesh. The National Agriculture Policy also stressed the need for accelerating the participation of private sector through contract farming and land lease agreements to permit accelerated technology transfer, capital flow and assured market for crop production. The initial response to contract farming, though slow, has been increasing steadily with various models emerging. What makes the PepsiCo model very different is the provision of extension services including inputs that not only adds to productivity but also ensures quality. The other efforts include input dealers like Mahindra Shublabh Services Ltd. that besides getting a stronger footing in the agri-input market provides extension services at a fee with guaranteed better yields for farmers. Rallis has also used an integrated multipartite model wherein the company promoted Kisan Kendra supplies the necessary inputs to the farmers with market tie up arrangements with other corporates

and also finance provider Amul and NDDB for milk procurement; sugarcane co-operatives in Maharashtra are also some more success stories of contract farming (Suran and Satish, 2009). Banks and other financial institutions have an important role to play in providing finance at various stages of value chain under contract farming. They also provide production credit farmers and act as payment channels for companies providing crop insurance products to farmers. They also offer various banking products like warehouse receipt financing and commodity-based financing for their clients/farmers.

(v) *Producer Companies*

Agri-business enterprises with high capital investment are increasingly looking for direct tie-up with farmers to ensure consistent, continuous and adequate supplies. As it is not practical to deal with individual farmers, agri-business enterprises are looking for aggregators or intermediary institutions. Producer companies which combine positives of co-operative enterprise and efficiency of the company mode of operation meet the expectations of agri-business enterprises.

The concept of producer companies was introduced in 2002 by incorporating a new Part IXA into the Companies Act. In a `Producer Company', only persons engaged in an activity connected with, or related to, primary produce can participate in the ownership. The members have necessarily to be `primary producers. Any ten or more individuals, each being a producer, that is, any person engaged in any activity connected with primary produce, any two or more producer institutions, that is, producer companies or any other institution having only producers or producer companies as its members or a combination of ten or more individuals and producer institutions, can get incorporated as a producer company.

The benefits that a producer could have by being member of a producer company include pooling of produce that would enable producer-members to have a volume with which they can bargain from a position of strength in the market, by-passing intermediaries and thus, save on costs and enhance their returns, helping develop greater command over domain knowledge in the produce dealt with and thus, enhance quality, productivity and returns, ability to aggregate demand for inputs of producer-members and thus, enable them arrange for bulk purchase/discount etc.

The World Bank has reported that in India, the formation of producer companies has stimulated introduction of horticultural crops like tomato, spinach and chilli and has helped farmers to raise their incomes substantially. Local level value addition has provided 30 to 40 per cent higher realisations on agricultural produce to participating farmers. It is reported that agricultural income level of participating farmers increased by 66 per cent and savings of households have gone up by 183 per cent. It has also enabled farmers to talk with companies like Reliance Fresh and ITC to do dedicated farming.

Indian Organic Farmers Producer Company Ltd., Kerala producing certified organic products, Vanilla India Producer Company Ltd. in Kerala with members growing and marketing vanilla are some of the producer companies. Government of Madhya Pradesh under the District Poverty Initiative Programme has promoted a large number of producer companies in the State. The state government has also been supporting these companies through policy initiatives and financial support. The NGO Pradan has promoted Masuta Producer Company Ltd. comprising a group of 2000 tasar yarn weavers and spinners in Jharkhand. Fab India, a company which exclusively markets produce of rural artisans and craftsmen through a chain of retail outlets spread across the country, has decided to promote 35 private limited companies (on the lines of producer companies, in that majority holding will be with the artisans) in different states covering about 20000 weavers almost entirely from Muslim, Dalit and other backward classes to enable them to aggregate their fragmented production and increase volumes and returns. One interesting experience is that of Bank of Maharashtra which has financed Panchakoshi Pashusamvardhan Produce Company Limited in Satara District for stall-fed goat rearing by small farmers. In this project, bank finance of Rs. 50,000 per farmer is directly extended to 100 farmers who are members of the producer company. The producer company has been promoted by two reputed NGOs with long years of field experience in the sector.

Most of the producer companies are still in a nascent stage and operating as providers of service know-how and facilitating marketing. There has not been significant demand for bank finance by these companies. As producer companies take stronger roots, they will require resources from the banking system which will be a major challenge for banks as the producer companies may not have much else than the producer member equity to leverage borrowings. Unconventional approaches would be required where credibility and reputation and the principles on which the company operates may be the only tangible security and not physical assets. Similarly, guarantees and undertakings from the promoter institutions and purchase orders/agreements which indicate future cash flows have to be relied upon to extend finance. The model is evolving and financial institutions can tap the opportunity right from their incubation. The producer companies in various commodities segments may be evolved into different formats: aggregator, input provider; intermediary intermediating with corporate entities and with owned processing facility, brand and market channels. These will help in making farming more remunerative and opening up opportunities for bank finance (Murray, 2008).

NABARD has created ‘Producers Organisation Development Fund’ with an initial corpus of Rs. 50 crores to comprehensively support all types of producers’ organisation including producer companies. Through the medium of this fund NABARD would lend directly to producer organisations for term loans or composite loans. It would also support in capacity building activities in the form of organisation and skill building exercises and guide business planning and support technological

extension. The fund would also support marketing linkages, including setting up of infrastructure facilities. The fund would certainly give a fillip to this nascent innovative business form of agricultural production.

CONCLUSION

In addition to the innovations discussed there are a number of small innovations taking place across the spectrum of agricultural credit markets. For example the Banking Correspondent (BC) and Business Facilitators (BFs) model which has been introduced as an instrument for accelerating financial inclusion can also play a part as an additional instrument for agricultural credit delivery, but has not yet been tapped by the banking sector to that extent. However on account of replicability and acceptability the innovations discussed can be mainstreamed with a rationalised policy response. Any innovation in credit markets, including agricultural credit market to be replicated in a large scale and mainstreamed requires the support of the Reserve Bank of India. For instance, the mainstreaming of SHG-Bank linkage programme was facilitated by the policy support extended by RBI at various stages. The quantitative growth occurred due to the involvement of state governments and central ministries in the programme, albeit in their own fashion. Similar policy support for some of the innovations discussed above would certainly propel them into the trajectory of financial sector mainstream.

The above initiatives are based on the premise that there is a supportive policy environment that allows innovations to flourish. The greatest risks to sustainable financing for agriculture often arise not from inherent business risks or the inability of financial institutions to design profitable financial products for the rural population, but rather from interventions such as subsidised interest rates and lack of or non-enforcement of appropriate rules and regulations. Conversely, an enabling environment and legal framework, enforcement of regulations, and a supportive rural infrastructure would eventually lead to lower but sustainable interest rates by reducing transaction costs and risks and increasing competition.

Innovations in agricultural credit markets should be designed in a manner that would not distort the market by providing at below market related cost, services to any link in the supply chain. Subsidies should be directed to building capacity that would serve a much larger clientele that would benefit from pilot innovations, which are successfully implemented. In particular, such subsidised interventions should try to push the envelope and service poorer and remoter farmers to achieve an expanded outreach. The criteria for such intervention is whether it promises implementation lessons that would allow dissemination of new, more efficient linkage arrangements to a larger clientele. All these would eventually contribute to making sustainable access to finance for agriculture a reality.

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