The Government of India new agricultural policy envisages that "private sector participation will be promoted through contract farming and land leasing agreements to allow accelerated technology transfer, capital inflows and assured market for crop production, especially of oilseeds cotton and horticultural crop", following this announcements a number of innovative agribusiness models have come up. Indian corporate and rural India has entered into collaborative partnership through vertical co-ordination. The common thread among all these initiates have been integrating and tightening the supply chain. Mahindra's Shubhlabh services Tata Kisan Kendra, ITC e-Chaupal, Godrej Aadhar and DSCL Haryali have emerged as new agribusiness supply chain models.

This vertically coordinatied supply chains are supposed to eliminate the inefficiencies in agricultural marketing which arises due to multi-layer intermediaries sucking away a large chunk of the margins and leaving nothing for the farmer on the one hand and lack of basic availability of infrastructure as well as technology on the other.

These vertical coordination supply chain models are common in agriculture worldwide. In India, land ceiling laws limited such vertical coordination. Corporate farming, captive farming or contract farming were only allowed in plantations, degraded or waste lands and so on. With the government's change in heart regarding contract farming, a stage is set for such vertical coordination in Indian agriculture. This paper evaluates three such attempts by corporate India i.e. PepsiCo's contract farming in Punjab, ITC's e-Chaupal and Mahindra Shubhlabh services.
PepsiCo contract farming

Vertical co-ordination has emerged as a viable model for food processing industry as well as agri-commodity markets in India. These firms face problems of regular supplies and also face the risk of poor quality products. The new structure in agribusiness supply chain is to move away from deals to relationship. Neither buyer nor vendor can take each other for granted. Relationships are becoming mutually independent. Firms are contracting to farmers to plant the contractor’s crop on his land. Farmer harvests and delivers to the firm, a quantum of produce, based upon anticipated yield and contracted acreage. This is at a pre-agreed price. The relationship between firms can take any form, just a deal to buy the produce to one where lots of cost sharing and support are provided to the farmers. In the Indian context despite a restriction on contract farming some exception were provided to firm on case-to-case basis.

Like farmers all over the world, Indian farmers too are happy with existing contract farming arrangement in the country. Hindustan Lever Limited, Nijjer and Pepsi are involved in contracts, where tomato, potato and chillies are procured under contracts and processed into value added food products for domestic and export markets. Market fed a farmer’s co-operative in Punjab, is engaged in contract farming in mustard. Rallis and HLL are into wheat, Dynamix dairy in milk, ACE in floriculture and horticulture. Number of firms engaged in contract farming is increasing everyday.

However, the company has sold off its tomato plant to HLL since tomatoes were not fitting into Pepsi’s export oriented policies. It is still into machine intensive nursery operations. It has almost wrapped up chilies and its tomato operating is limited by the extent to which it buys from the contracted farms and open market. In fact as of now Pepsi is concentrating on Basmati and other varieties of rice.

As a part of our research we still thought of studying PepsiCo foray into contract farming which brought about a revolution in Sangrur, district of Punjab. Let’s look at the initial experiment.

PepsiCo has done a wonderful job in Sangrur, district of Punjab. Farmers are expected to harvest and deliver to the contractor, a
quantum of produce, based upon anticipated yield at an agreed price. Towards these ends, farmers may or may not supply the farmer with selected inputs. But, Pepsi went a step further and in their contract-farming model they involved farmer as a partner. Their model actually is a mix of technology transfer of an integrated spectrum of horticultural services with a focus on farmer economics and competing crops.

Pepsi collaborated with Punjab agricultural university who provided the knowledge of horticulture with special focus on Punjab. Punjab agro Industries Corporation provided the extension support and PepsiCo pooled in its international research experience and marketing and commercial skills. This partnership led towards the building block of the business. There were three component of the building block, they are, R and D activities, Technology transfer and commercialization of agriculture. A core team of scientists and research specialists were assembled. Punjab Agriculture University seconded key personnel to the project i.e. a vegetable breeder, a soil scientist, a plant pathologist, an agronomist and an entomologist. PepsiCo provided the full-time services of three overseas consultants-experts on the growing of tomato and Frito-Lay expertise on potato. Infrastructure and facilities for R and D activities were put in place. There is evaluation of varieties from sources in the world; they are then adapted to local conditions. Extension personnel are selected from among the farmers themselves. They are responsible for the contact with the farmers; they help in diffusion of technology from lab to field. They use various means of communication to disseminate knowledge and monitor crops from nursery to procurement.

Farmers find help in terms of land preparation, crop monitoring during growing period. Help in terms of harvesting, transportation and logistics. Finally, farmers are paid promptly and the agreed price. The net impact of this was dramatic; Tomato yields increased dramatically from 16 to 52 MT per hectares and 6 MT to 18 MT per hectare respectively. With increased increase in productivity prices of these cropped declined but farm incomes increased by more than 2.5 times. This happened after three years. Contract farming transformed the economy of Sangrur and exposed them to world class farming, as well as remunerative and assured market.
This was the company well thought out relationship building exercise with their suppliers. Literatures on supplier buyer relationships are proof enough that relationship centered business models bring very high incremental operating margins. PepsiCo gained by receiving uninterrupted and regular flow of quality raw materials. Protection from fluctuations in market pricing they could plan for the long run. This experiment in corporate farming led to long run commitment and hence assured Pepsi of a dedicated supplier base. PepsiCo generated good will for itself. Sadly, PepsiCo has sold off its tomato this to HLL; PepsiCo was finding Tomato contract farming

Looking critically at the model, we come to conclude that, though Pepsi’s model is a better model of contract farming as compared to HLL and Nijjer. According to a study, carried out by Sukhpal Singh which evaluated Pepsi, Nijjer and HLL contract-farming practices, farmers on the whole agree that contract farming benefits them, they were happy about the contract system. Even these firms have been beneficiary of contract-farming in terms of assured supplies. However, this study detected various operational problems in the functioning of these contract-farming practices. The farmer reported problems like poor technical assistance, delayed payments and outright cheating in dealing and manipulation of norms by the firms. HLL and Nijjer have not fulfilled their commitment of buying farms produce at agreed price and quantity. Farmers had little bargaining power with the company; both these firms pass on the risk to farmers. Both company had market specification contracts and not production management or resource provision contracts. In the event of company not meeting its fulfillment the legal protection was not available to the farmers, as contract farming is not allowed in India.

The same farmers rated PepsiCo experiments with contract farming a better model; number of farmers unhappy was marginal in case of PepsiCo as compared to Nijjer and HLL.

But in the larger sense, PepsiCo has treated farmers as their supply base and had worked only with the intention of creating sustainable supply bases. As the acreage under tomato crop increase and production too increases the open market prices is going to fall and then company bases its contract price on the basis of this open
market price. Farmers in Sangrur, as well as Ganganagar, smell foul, as Pepsi has started paying them as low a price as Rs.1.50. At times, as reported in Dainik Bhaskar (2nd September, 2000), they have also failed to fulfill their contract.

The only advice to PepsiCo is that such a wonderful agreement can go haywire if they do not learn to care for their suppliers. First PepsiCo must learn to fulfill commitments and enter into an option contracts with the farmers group, i.e. When the open market prices are higher than the contract price, they should by at open market price and vice-versa. They should learn form the experiences of HLL that contract-farming without building mutual trust with supply chain partners might be dangerous for the company itself. PepsiCo should treat farmers as partners and pass them some of the benefits to create a long-lasting and sustainable relationship for a sustainable business. No collaborative experiment of this kind can succeed unless PepsiCo start working on common interest of farmers and itself. There must be openness between farmers group and Pepsi. Pepsi also needs to share its benefits to create the right kind of trust with the farmers.

Doing things the old way, by showing natural resistance to change, resorting to betrayal for its benefit, by lying. Misleading and misrepresenting and exhibiting inconsistency in behavioral attitudes can lead the way towards the failure of collaborations. (Mentzer, et al, 2000)

Instead of trying to squeeze the farmers of some surplus, as suggested by HLL chief Banga, firms need to collaborate to reduce the facility cost of a service center which can help input firms to manage their demand and customer better and help food processing industries to source timely and quality supplies. Its time that Indian firms partner with Indian farmer to bring about an agricultural revolution which will lead to a win –win situation both for the farmers and firms.

**Mahindra Shubhlabh**

A wholly-owned subsidiary of tractor major Mahindra Shubhlabh came into existence to provide total farm solution to the Indian
farmers. There were two aspects to the business, one was the commodity trading and second one was to provide one stop shop to the farmers for all his needs. This is like providing total solution to almost all the problems of Indian farmers. The constituent of the Shubhlabh model was to provide: (1) Arrange all agri-inputs such as seeds, fertilizers, and pesticides and so on to farmer, (2) Rent out farm machinery like tractors, transplanters and other special machinery that helps to reduce the cost to the farmer, (3) Provides commercial agricultural extension by bi-weekly visits to the farms, (4) Offer crop spraying, harvesting and post harvesting services, and (5) Provide commodity trading in final produce of the farmers. Initially these both aspect of business were supposed to be highly IT driven. Based on a white paper by a leading consulting giant, Mahindra and Mahindra identified provision of total farm solution to Indian farmers a great opportunity. Both commodity and farm solution were supposed to be highly Information technology driven models.

In order to increase its reach to remote off villages, it adopted a hub and spoke model.

The first total farm solution shop was opened by MSSI in Madurai. Tamil Nadu was favored to other states as spill over effects in case of a problem were expected to be less. It was also an ideal selection because MSSL wanted to begin its work in paddy. Mammoth investments were made at Madurai (the first center). The super market for farmers should have a good area, a place in the outskirt of Madurai was identified, some material placed. Tie-up with the input companies was not difficult on account of the Mahindra brand name and the fact that this was an experiment. Investment in IT was also made.

Initially, hub and the spokes were to be operated with the help of franchises. Franchises were expected to make huge investments, and pay a non-refundable sign up fees. Franchises were to reach the villages. The initials model’s project was approximately 1 crore rupees. This included almost everything, the cost of property equipments land for carrying out agri R&D, computers, tractors, other implements office space and working capital required. The sign-up fees were rupees 5 lakhs. This fee was non refundable. Mahindra also had had to invest to set up systems and procedures. Mahindra
expected a lot up sign up by prospective dealers (franchises), the belief was that the franchises was getting (1) definite sale through registered farmers, and also the products recommended by Mahindra's for farming. They were obviously of high quality and had relatively better margins. (2) Money will be made through farm consultancy fee that the farmers will pay. (3) The franchises were getting the distributorship of sorts of various companies in one shot without paying deposits. (4) He would earn money through equipment rental.

Theoretically, this sounds fine, such models of total farm solution operating in western economies ignore the ground realities of the Indian agricultural economy. The non-refundable sign-up fees came as a major stumbling block, most dealers in agri-input industry have to give only security deposits against which they either get a fixed deposit interest or get materials worth that amount immediately. Many of the dealers, which had the capability to invest, were already one-stop shop themselves dealing with a whole host of input companies as distributors, giving farmers advice informally from their shops and doing farming themselves. They also had field assistants and contract employees from companies like BASF, Bayer and other agrochemical majors who do field trials demonstration too.

The input industry is a highly credit driven industry. The credit given in this industry is quite high and often span from 90 days to 180 days. The dealers rotate five lakhs and can do a business worth a crore. Any new business model should provide that opportunity. MSSL seems to be adamant and their belief that they were creating value for the franchises played havoc with their business model. Instead of educating and developing dealers they relied on their brand equity and were taken aback when there was not a single sign up in the first phase. In just eight months the sign up fees was brought down to 47 lakhs, though the sign up fees was maintained at Rs 5 lacks. During the same period IT model was abandoned, as they realized that franchises viewed it as a useless investment. The new young and dynamic team recruited by MSSL could not make this model work. After two years MSSL was at around 5 to 8 percent of its projected revenue. Only five centers were operational against the projected forty.
In the third year of its existence, the e-agri the commodity trading where nothing was going right was shut down. Employees adjusted in one stop shop. Even the separate offices were shut down and the staff was told to share the offices of Mahindra and Mahindra tractors. With the lowering of the project costs at the end of the third year there were around 12 centers operating. Four of them were joint ventures in Kota, Madurai, Miralguda and one more. There were around 8 sign-ups in all and turnover was around Rs.6 crores. It had a total manpower of 65.

At the end of the third year, the business model was redefined once again. MSSL brought down the sign up fee from Rs.5 lakhs to Rs.3 lakhs. Project cost was brought down from 47 lakhs to 27 lakhs; with an inbuilt flexibility of it being brought down further to facilitate new sign-ups.

Having shut e-agri, the fund released was used for business development of MSSL. The company expanded again to other territories viz., Gujarat, Madhya Pradesh, Maharashtra and Chattisgarh. While these sign-ups were taking place the old centers with higher investments were expecting high services and were getting impatient. This led to many legal cases and closures of centers. The model was tinkered once again and the sign-up fees were brought down to Rs.1 lakh and that, too, it was refundable. The sub franchises were given only one tehsil as against one district earlier. The number increases on one hand closures too increase on another.

In the meantime, the IFC funding of 11 crores has come at the right time. This funding with its well-laid conditions may not be sufficient. Mahindra Subhlabh is now trying to rework both operational and strategic intent of the model so that Farmer’s appreciation of farm solution and the entire process improves.

**ITC e-Chaupal**

ITC started its ambitious e-Chaupal project with an intention of enhancing the global competitiveness of Indian agriculture and raising the standard of living in Indian villages. It intends to leverage information technology to reduce aggregate cost of its supply chain
and to extract value through a near disinter-mediation of the supply chain. It is a well-known fact that the sheer number of intermediaries in food and agricultural supply chain are too many making chain uncompetitive as well as these intermediaries block market information making transaction cost unfavorable to the Indian farmer. With this e-initiative ITC hopes to disinter-mediate the supply chain through virtual integration.

ITC is of the firm belief that intermediaries who yield substantial socio-political power in their belt cannot be totally eliminated. But they could be disassociated from the intermediation of the information flows. Taking this understanding as the basis they have structured the e-Chaupal initiative.

How does the e-Chaupal operate? Across various villages in interior Madhya Pradesh, Karnataka, Uttar Pradesh and Andhra Pradesh ITC’s e-Chaupal’s holding Internet-enabled Pentium desktops and printers display the itcibd.com portal. These Internet kiosks are manned by a lead farmer of the village, called the Sanchlaks. The Sanchalak is trained to operate the computer. These Sanchalaks, with the help of Internet kiosks are suppose to perform three distinct activities; (1) Information and knowledge dissemination: These kiosks display real-time data on market price prevailing in the Mandis across States. They also carry information on weather and have a knowledge bank of best scientific practices. (2) Virtual aggregation of demand and supply: By aggregating both buyers and sellers ITC intends to reduce the aggregate cost by providing a kind of commodity exchange which disassociates intermediaries from intermediation of information flow making the chain more competitive. (3) Allowing retailing of agri-inputs as well as other products and services.

The e-Chaupals provide ITC with the opportunity to directly purchase soya, rice and other crop from the farmers. This has, no doubt, provided the farmers with alternative route to Mandi through online access and transaction across remote locations. This has reduced transaction cost pre- and post-Chaupal experiment. Farmers incur transaction cost, which arose due to trolley freight to Mandi, labour cost, cost of labour khadi karnai and handling cost. Process incurs commission to agents, cost of gunny bags, and loading cost of labour
freight and transit loss cost. Both farmer and process transaction cost works against the interest of farmers and the company. With the help of e-Chaupal, ITC has been able to reduce this transaction cost drastically claiming a win–win situation for both farmers as well as itself. The coverage of e-Chaupal is currently around 3,50,000 farmers growing soyabean, coffee, wheat, rice, pulses and shrimp in around 3,50,000 villages through 650 kiosks across four States. (ET).

What about Information and knowledge dissemination? What is the advantage of these kiosks? A study done by us on strategic assessments of information portals in agriculture brings out the fact that these portals were very poor in terms both reach and richness. The trade off between richness and reach determines the ability to tap strategic gains. Reach simply means the number of people at home or at work exchanging information. Richness is defined by three aspects of the information. The first is the bandwidth, or the amount of information that can be moved from sender to receiver in a given time. The second aspect is degree to which the information can be customized. The third aspect is interactivity, dialogue is possible for a small group, but to reach millions of people the message must be a monologue. The communication of the information to a large audience has acquired compromises in bandwidth, customization and interactivity. When companies conduct business with each another, the number of parties they deal with is inversely proportional to the richness of the information they need to exchange.

Reach is critical for any Internet based alternative to work in a diversified agricultural economy in India. Has ITC been able to connect these diversifies agroclimatic zones with kiosks? ITC experiment is truly held by many as Information technology revolution connecting remote villages of this country.

In order to make a first-hand assessment of these portals we took MP as a case study. In order to provide all the services ITC has invested close to around Rs.2.5 to 3 lakhs at each Chaupal where VSAT is required and an investment of Rs.75,000 to Rs.1,00,000 at other places. They have done extensive work on data connectivity from the existing telephone exchanges and have worked with BSNL to upgrade their exchanges. Approx. 500 nodes have been set up across MP of which 100 are connected with VSATs. The It
investment is being seen to serve two purpose, one to provide information to farmers and two, to provide infrastructure for the transaction processing system which will capture expected and actual sales, stocks, customer orders on input side and the produce information on the output side.

ITC has done a commendable job of connecting the remote of villages with the help of Internet kiosks. Reach is commendable. But the richness of this initiative comes under some shadow of doubts. They do not provide any other information for the farmers expects weather information, which they get by collaborating with the IMD. As far as Mandi prices in nearby Mandi are concerned, it is quite useful and farmers know much before moving out of his village what price is he going to get and which Mandi should he sell in. Sanchalaks do the grading for the farmers and also provide this information. But do all Sanchalaks and all Chaupals provide this information? Of the four Chaupals we visited, two were active and were doing business both on soya purchase and retail sales as well as information dissemination. Of the other two, third one was soya purchase but did not appear very active on information dissemination front and the fourth one was never operationalised.

While examining these portals, we found that the portal did not have the requisite richness for it to become information and knowledge dissemination kiosk. The information as regards to best practices, integrated crop production, inputs fertilizer and seeds were of poor quality. Information was not customized to the farming needs of these agro climatic regions. It seems ITC was only interested in procuring supply for its International business division needs. It has not been able to enhance the richness of its portal and serve its customer better. In all these villages the only information disseminated was the prices and weather conditions. As regards to selling pesticides and fertilizers and seeds to farmers in the villages via Sanchalaks was and is in doubt as it clearly is in conflict with the traditional channels which is purely based on a push system. ITC has not taken care to see that there is an amicable acceptability of input trading by its Chaupals. Most decision to trade input of another company does not take local socioeconomic and business reality into account. The partnerships between these companies are almost absent. Most farmers did not agree with ITC claim that farmers have been getting better prices for their produce is also countered by some of the
farmers who believe except for minor benefits like de-bagging expenses etc. Farmers also said that the company does not pay the price agreed by the Sanchalaks. Sometimes, grading is downgraded and hence the net farmers realization. The significant advantage which farmer has gained is right weight, which was a major worry in traditional Mandi.

In sum……
The three experiments we have reviewed here can bring out helpful learning’s for future agri-business vertical coordination. Both market makers like ITC Chaupal and Mahindra sublah services limited have a lot to learn from an integrated vertical coordination experiment like PepsiCo. Firms need to understand that the use of any one method of contract and coordination arises due to variety of reasons. There can be enormous amount of diversity due to the type of the firms, nature of contracts and the socioeconomic environment. Socioeconomic environment as well as regulatory and technological environment shapes the way for the type of the vertical coordination. Firms cannot ignore these drivers, which facilitate their growth. MSSL have been following a business model, which does not take into account the socio-political reality of rural India. Whether be it the reach model or the richness of the model, the company did not do its homework properly and had to revise its model a number of times. The E-agri trading was unplanned and had no complimentarity with the farm solutions model. The channel conflict was quite natural as inputs trading in India Most Input companies are operating with huge credit offerings and the channel is highly push oriented. Any other model should take these realities into account and then an alternate distribution channel should be designed. ITC e- chaupal has also done the same mistake of creating channel conflicts with the existing traditional channels. Their role as information provider and knowledge dissemination felt short of what is required to make an e-model successful. ITC has no doubt brought transparency in the trading processes and farmers too are happy about the same. The transaction cost is also being reduced and farmers are realizing a better return. PepsiCo’s contract farming Model seems to have done pretty well. There are few learning’s here too for making any form of vertical
coordination workable and feasible in agriculture. To be successful the model should collaborate with other agencies as in the case of PepsiCo. This resource provision contract had in built production management contract as well as market specification contract. Indian agriculture unlike the developed agriculture does not enjoy the level of development as well as infrastructure to make market specification, production management contract as well as resource provision contract to work independently. The business model of both Mahindra subh labh and to some extent ITC are not in line with what could work in an underdeveloped agriculture like India. A cost benefit ratio can go haywire and so will the business model, leading to panic and haphazard experiments in searching right revenue stream.

The way ahead...
Agri- initiatives taken by Indian corporates will play an important role in dissemination of right information as well as knowledge, Provide total farm solution and act as buyer of agri-produce as well as provide the resource for producing these agri-produce. As suggested by MR Banga, the chairman of Hindustan lever limited these firms have to strive hard to create a win-win situation both for themselves as well as the farmer. A well thought out collaborative model could help firms share facility and infrastructure cost on one hand and increase complemantarity in their marketing efforts enhancing customer satisfaction through a partnered customer relationship management approach.

The Three firms can use their resources and can very well form a collaborative agri-service center. The proposed model has collaboration and partnership as the basis. This partnership culminates into formation of farmer service center. Farmer service center would be run as a private enterprise between the food processor and a number of other input providers such as bank, agrochemical/seed/fertilizer, farm equipment manufacturers, and so, on. Either the agri- input provider or food processor can take the lead in establishing this model. The benefit of this model is very significant. Agri-input would be made available to the farmer directly to the farmer at cheaper rates. Credit and insurance would be available to the farmer. The farmer service center would provide extension services. The food processor would access the farm producer directly. Specialized grain-handling equipment, transport and vertical
storage would be installed reducing both costs spillage losses to pests. Such a model will drive down the cost of agricultural produce. The farmer's efficiencies would result in increased production and increased off take, and increase his incomes, despite lower prices. Indeed a win -win situation for both farmers and consumers.

But looking at the uneven development of rural economy, it is important that these businesses build trust and relationship and manage them. This is true because the Indian farmer like his other counterparts is becoming aware and has begin to demand better service. The old push system of input selling will not work in future. Firms need to take up initiative to educate farmers extensively about precision farming and may be help them to practice it. This will help agribusinesses life food processing units like HLL, Nijjerand PepsiCo to manage their supply reducing both supply and quality risk, whereas agri in put companies can use it purely to enhance value for their business through better farmer contact programmes. Agriinput companies who are facing a severe crisis as farmers in most part of the country have lost faith in them, can leverage on the farmer service center along with internet to mange their customers better by providing them right kind of support and information about total farm solution which adds sustainability to the agricultural processes.

In the present day of privatization spree, privatization of farm extension also assumes great significance. The private extension started as a joint effort of Agri industry like seeds, fertilizer, irrigation system, bio-tech, farm equipment’s and agro-chemical industry as well as food processing operating from farmer service center which are networked with the help of internet kiosk will make rural reach an revolutionary approach and can further enhance the inherent value steams for partners in collaborations. The question which these businesses should try to address is "How best to assemble and deploy the key resources, i.e. human, technological and financial for succeeding in the rural agricultural
economy. Traditional companies need these resources to leverage on the opportunity provided by the net. It must be realized that strategies for dot.com world are based on the pattern and timing of resource deployment. Assembling of resources from multiple sources and managing them, as a dynamic basis is the need of the hour. Agri-firms can put resources together not only to create Internet kiosk but also the basic helpline centers merged with this internet based operation.

Given the rates of literacy, both general and the computer literacy, it is but evident that internet-based information kiosk can play an effective role in future only when backed up by good helpline centres which can use the information critically.

This will pave way for a new model of agriculture extension where all the parties in the business of agriculture will be a partner once the internet-based information kiosk is in place.

Being a private venture, the new extension system should focus attention on providing all the information needs of the forming community, which have not been addressed by the present system. A committed and systematic approach to organize farmers' groups and assembling various technologies could prove to be rewarding. The extension personnel should act as a two-way channel for communicating with the farmers and getting their feedback.

These extension professionals should help farmers with all the necessary information, regarding timely inputs, marketing, and their entitlement to various governmental programmes and benefits. The private extension should aim at filling all the gaps found in the present system. An extension officer and two field assistants should be able to cater to the needs of about 10 villages or an active group of 1000 farmers who will pay a monthly subscription. The farmers should be convinced that they are paying for efficient and productive services and supplies.

The extension staff should visit the villages or group of member farmers at a specified time on fixed days of the week. The staff should have sound knowledge of the various farming enterprises in the region. They should also have hands-on experience in dealing
with field problems such as enhancing production from the farm, value-addition to the farm produce, post-harvest technology and marketing facilities. Good exposure to the concepts of Integrated Intensive Farming Systems (IIFS) and recycling of farm residues will prove advantageous.

The extension personnel should be able to co-ordinate the efforts of farmers and tie up with an efficient transport and marketing network and provide solutions to field problems. To retain the youth in farming, agriculture has to be not only economically rewarding but also intellectually stimulating and challenging. The educated youth crave for information, which will enrich their knowledge and fetch more dividends. The challenge before the private extensions lies in constantly feeding useful information of economic value. The concept of "precision farming", which is backed by "knowledge-intensive" farming practices will provide an ideal platform for launching the private extension. Once the farmers realize that they are able to reap more from their farms because of timely information or a new technology, they would appreciate the efforts of the private extension and support it. The private extension service will then become an integral component of the farming communities. However, it is not easy to set in motion a proactive private extension machinery to complement the efforts of the present extension system. The task is to win the confidence of the farmers through regular interaction and liberal exchange of information on technologies and markets. The farmers should become partners in this effort, and they may be encouraged to actively participate and contribute with conviction.

The subscription should not be taken as initial payment at the time of enrolling members. Instead, it should follow the "use now and pay later" concept. It has been a general experience that farmers do not hesitate to pay a fee for any additional returns they get at the time of harvest. For, it is always "harvesting is believing" for them. A blueprint of such private extension system, underscoring, the economic returns from such a venture, has established a good linkage between various on farm and non-farming enterprises at the village level.

The private extension should not be misconstrued as competitors to Government extension programme. It should be taken as a
complementary effort. With the private extension in place, the governmental agency will naturally be fine-tuned to meet the supply and services demand of the enlightened farming community. This healthy trend will facilitate free information flow in rural areas, and make agriculture more productive and profitable.

Once farming becomes a paying proposition, there will be more and more educated youth getting into active participation. The spin-off of this process will generate more jobs in a healthy environment and also contribute to reversing the trend of rural-urban migration. A private agricultural extension will become a focal point and active platform to promote rural marketing of various consumer products. It can also effectively serve as a forum for consumer protection and redressal. Rural marketing and advertising is emerging as a new thrust area for several commercial firms in the country. If properly designed and run, the private agricultural extension can also take advantage of the opportunities springing from rural marketing and advertising efforts making these helpline centers financially viable in the future.

It remains to be seen whether Indian firms understand the power of collaboration and put their act together.