



## Chapter - One

# **Pro-farmer Private Extension Approaches**

# Private Extension: Indian Way

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Importance of private extension is emphasized much in the recent past. Attempts are made to bring clarity to the concept of private extension. Literature available at present is more on international experiences rather than on Indian context. Indian experiences need to be documented, analysed and disseminated for the better understanding and implementation of private extension concept in Indian context. When the policy makers are thinking of promoting, regulating and trying new innovations in private extension, Indian context need to be adequately stressed. Through this article, attempt is made in this direction. Private extension service provider is an individual or organisation other than government who is providing single service or integrated services to the farmers. In the Indian context, following service providers are identified.

1. Unemployed Agricultural Graduates
2. Agricultural Consultants / Firms
3. Para technicians
4. Progressive Farmers
5. Farmer's Organisations / Co-operatives
6. Non-governmental Organisations (NGO's)
7. Krishi Vignana Kendras (KVK's)
8. Agri-Business Companies
9. Input Dealers
10. Newspapers

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11. Agricultural Magazines
12. Private Television Channels
13. Private Sector Banks
14. Internet
15. Donor Agencies

**Unemployed Agricultural Graduates:-** In India, through 32 Agricultural Universities and 4 deemed universities around 11,900 Agricultural Graduates are passing out every year where as only 2000 are getting employment in government sector. Rest 9900 Agricultural Graduates go unemployed or search for jobs in private sector or find avenues for self-employment. This is happening from many years in the recent past. Is it possible to utilize the potential of this large reservoir of unemployed Agriculture Graduates in private extension? The chances are very bright with the announcement of scheme on “Agri-clinics and Agri-business centers” by Government of India.

The scheme aims to provide financial assistance to unemployed Agriculture Graduate in terms of loan to launch Agri-clinics or Agri-business centers. Agri-clinics are envisaged to provide expert services and advice to farmers on cropping practices, technology dissemination, crop protection from pests and diseases, market trends and prices of various crops in the markets and also clinical services for animal health etc. which would enhance productivity of crops / animals.

Agri-business centers are envisaged to provide input supply, farm equipments on hire and other similar services.

In order to enhance variability of the ventures, Agriculture Graduates may also take up the projects in Agriculture and allied areas along with Agri-clinics/ Agri-business centers. Any Agriculture Graduate or Graduate in allied fields are eligible to avail the scheme. The project may be taken up by Agricultural Graduate individually or on joint / group basis involving five entrepreneurs maximum. The group could also involve a member who is a management graduate or person with experience in business development and management.

Projects eligible for financing under this scheme are as follows:

1. Soil and Water Quality cum input testing laboratories
2. Pest surveillance, diagnostic and control services
3. Maintenance, repairs and custom hiring of Agricultural implements and machinery including micro irrigation systems (Sprinkler and drip)
4. Agri service centers including the three activities mentioned above (group activity)
5. Seed processing units
6. Micro propagation through plant tissue culture labs and hardening units
7. Setting up of vermiculture units, production of bio-fertilizers, bio-pesticides, bio-control agents
8. Setting up of Apiaries (bee keeping) and honey and bee products processing units
9. Provision of Extension consultancy services
10. Facilitation and agency of Agricultural insurance services
11. Hatcheries and production of fish finger-lings for aquaculture
12. Provision of live stock health cover, setting up veterinary dispensaries and services including frozen semen banks and liquid nitrogen supply
13. Setting up of Information Technology kiosks in rural areas for access to various agriculture related portals.
14. Feed processing and testing units
15. Value addition centers
16. Setting up of cool chain from the farm level onwards (group activity)
17. Post harvest management centers for sorting, grading, standardization, storage and packing
18. Setting up of metallic / Non-metallic storage structures (group activity)
19. Retail marketing outlets for processed agri-products
20. Rural marketing dealerships of farm inputs and outputs

The scheme aims to cover 25,000 agricultural graduates in 5 years @ 5000 graduates per year starting from 2001-2002. Through proper implementation, this project is going to create visible impact on the extension activities in the country. This may also create healthy competition between private and public or private and private extension services providers.

**Agricultural Consultants / Firms:-** In Agriculture, Consultancy is not popular and widely practiced. Very few professionals opt consultancy as a full time profession after obtaining required degree, but majority of the consultants provide consultancy after retirement from service or besides service. Consultancy is neither practiced widely at national level in a large scale or at grass root level. But witnessed more around state capitals and where ever Agriculture University or institutes are functioning followed by few at district level. At present big farmers, farmers growing commercial crops like Coffee, Tea, Spices, Flowers, Grapes, having Big Poultry, Diary Farms and Landscaping availing the consultancy services. The payment is made mostly based on acreage, period and sometimes based on number of visits.

The consultant visit the farmer periodically, provide him information regarding the activities already undertaken or to be undertaken. Charging system brings accountability in the service provided.

Interaction with consultants and farmers of different states revealed that farmers want consultancy services on charging basis for value added services and consultants are ready to provide that. But, there is no organized effort from both the side and there is no forum where interface between consultant and farmer takes place.

To promote consultancy, there is need for national level institutes to take up training of Agriculture Graduates in Agricultural Consultancy. There need to be agency to certify the trained consultants. Certified consultants may form the professional bodies at district, state and national level in the lines of Indian Medical Council. They may workout guidelines regarding the activities of professionals and also for promotion. Thus formed professional body can

take over bigger agricultural projects reducing burden on government but working with government. Government can insist for certified consultants for assigning any work. ATMA under ITD component of NATP could serve as a right forum where the above said interface could take place.

**Para technicians :-** Para technicians are the professionals possessing necessary skills required to perform one or more agricultural activities, but without professional degree. Para technicians are providing services in the area of artificial insemination, grafting etc. and charge for the service. Charging leads to accountability and responsible service. The limitation of these para technicians is that they are capable of providing services in one or few areas. But there is scope for a group of para technicians and trained technicians in different areas to cover a group of villages by providing integrated services. Para technicians are encouraged by governments in the states of UP and Rajasthan. Again there is need for training the para technicians through KVK at district level and University and respective department at state level. Also, there is necessity of an independent certifying agency to certify based on the efficiency of para technicians after training. Government should make certificate mandatory for all the para technicians before taking up service. Para technicians could provide service independently in one area or in group in many areas or could also link with public or other private extension service providers. Existing scheme on Agri-clinic could be made use by para technicians or government / PESP's could think of a new scheme to support the activities of para technicians.

**Progressive Farmers :-** Progressive farmer is one who make use of best technologies available and realize the benefits. He may be or may not be an innovative farmer but have good understanding of profit part of Agriculture. At least few progressive farmers are available in each village and are very often consulted by fellow farmers as proved by many information consultancy pattern studies. They are almost accepted as opinion leaders by farmers. It is possible to utilize them as demonstration farmer / contact farmer by public or private extension service providers. Thus for reaching every village by private extension, progressive farmers could be made use of. The case of Dr.Prafulla

Chandra, a progressive farmer of Karnataka is one such example to demonstrate the influence of a progressive farmer on other farmers.

**Farmer to Farmer Extension :-** Dr.Prafulla Chandra is a innovative farmer of Shimoga, a district headquarter in Karnataka. He has elevated the profession of Agriculture to the level of absolute art and accurate science. In his hands the farm tools have lost their roughness and have become musical instruments. The strenuous farming methods have converted into creative moments. His 40 acres farm is a kind of farm varsity, where experimentation, teaching and dissemination of information is taking place silently. He neither had any formal education in Agriculture nor trained in modern farming methods. But still he is recognized as one of the best living Agriculture scientist.

His agricultural operations are quite nature friendly and less labour consuming i.e. economical and sustainable. Instead of 50 coconut plants in one acre as pure crop, planted 1600 plants on both sides of bunds and farm roads, getting very good yield. He planted many useful trees instead of fence which not only break winds, provide shelters, green leaves for manure, besides good income as timber. He has earned international acclamation and reward for his ratooning in sugarcane which is 32 years old by getting average yield of 120-125 tonnes per hectare which is above national average. This is not only unique but cost effective in terms of saving time, labour, money and manure. He had received "World Food Day Medal" by FAO and "Krishi Samrat" award. His innovative methods in areca processing, soil fertility management, farm mechanization, inter cropping, post-harvesting technology, dairying, agro-forestry not only fetched him recognition but also many awards. He bagged five state level and eight national level prizes in crop yield competition. Besides recognition by FAO and GOI, also awarded Krishi Mitra award and honorary doctorate from university of Agricultural Sciences, Dharwad. Visit to Dr.Chandra's farm is a pilgrimage to farmers, agricultural students, academicians and policy makers not only from India, but also from foreign countries. In order to educate the fellow farmers he started "Devangi Agricultural Research and Extension Centre" at his place, through which research, extension takes place. Besides, he also

participate in Radio / TV programmes, publish articles in newspapers and magazines to benefit others (Anonymous, 1998). It is necessity of the time to utilize the services of Dr.Prafulla Chandra and thousands of similar Progressive farmers spread across the country through different forums to educate farmers. It is also observed that one farmer believes the achievements of other farmer easily than anybody else.

**Farmers Organisations/Co-operatives :-** Farmers Organisations/Co-operatives are formed by interested group of farmers to help themselves in the process of production or marketing or both. An eagle view on the functioning of co-operatives indicates that due to many social, economical, technical and political reasons, majority of the farmers organizations/co-operatives failed to fulfill the objectives for which they were formed. However successful functioning of few organizations indicates that organisations/co-operatives have very good potential to bring a change in the life of farmers. One such case is discussed briefly.

**The AMUL Story :-** The Kaira district co-operative milk producers union selected the brand name AMUL for its product range. AMUL is the live laboratory to study success of farmer co-operative today, it has a turn over of 500 crores, covering 9,70,000 farmers of one district serving with just 150 extension workers. On an average 333 people visits AMUL daily, in a year 1,21,509, out of which 543 representing 40 foreign countries. The products are milk powders, butter, cheese, ghee, chocolates and brown beverage. Popular extension approaches adopted are live contact, newsletter, grama sabha's and exposing to other institute.

In the old system of middlemen the guiding principles were: lowest possible price to the milk producer, highest possible price to the consumer, and lowest possible quality of milk and milk products for sale. The middlemen pocketed the profits. Under the Amul system the reverse held good: highest possible price to the milk producers, lowest possible price for the consumer and highest possible quality of milk and milk products for sale. The profits were used for the milk producers' welfare.

The system was a two-tier one. The village society was concerned mainly with the purchase of milk from producers; it also acted as a channel for milk production enhancement schemes. The District Union looked after policy formulation, processing and marketing of milk and provision of technical inputs to enhance milk production in animals like artificial insemination service, veterinary care, better feeds, etc. The system is same now, except for a third tier: a Federation: an apex co-operative of district unions for marketing.

**Village Society :-** The village co-operative society consists of primary milk producers. To become a member, a milk producer pays an entrance fee of Re.1 and buys at least one share of Rs.10. The members elect a managing committee and the committee elects a Chairman. Each member has only one vote, regardless of the number of shares he has. Committee works honorary and restricts to policy formulation and supervision. Salaried staff are employed for milk collection, fat-testing, clerical and accounting work, artificial insemination, etc.

Villages are served by milk collection centers, operating morning and evening. Milk delivered by a producer is measured and a sample is drawn for quality-testing. The District Union provides each center with a fat-testing machine. Societies have introduced electronic fat-testing machines. Large number of societies have installed automatic weighing cum fat testing equipment with data processing facilities. The union has plans to install village chilling units in the societies so that the quality and freshness of milk can be retained. Already 132 villages have this facility.

Payment is worked out on the basis of quantity and quality of the milk delivered. Farmers are paid in the evening for milk delivered in the previous morning, and the following morning for milk delivered the previous evening. Details are entered in members' pass-books and the society's records. Cash payments every day is a great boon to the farmers. Roughly a third of milk producers have no land. Milk gives them money for daily necessities. Those with land supplement their income from seasonal crops with milk sales. About

half the income from milk is estimated to be spent on feed for the animals. The balance is used for the family needs. The society earns a profit from its sale of milk to the Union. A part of this profit is distributed to its members each year as bonus, calculated on the value of milk supplied. A part of the society's profit is also channeled to schools, libraries, dispensaries and health centers, water works, drinking troughs for cattle, roads, electricity, telephone facilities, youth clubs, cattle relief and veterinary services like first aid and artificial insemination in its village.

**District Union :-** The Union is managed by a Board of Directors of which twelve are elected from among the Chairmen of village societies. The Board elects a Chairman and a Vice-Chairman and appoints a Professional Managing Director, who in turn appoints supporting professionals. The Board formulates policy; the professionals look after the day-to-day work. Village representatives are elected every three years on the board. However, the Chairman is elected every year from amongst the village representatives.

Milk from the societies is picked up by Union-hired trucks/ tankers plying at fixed timings along fixed routes. Establishment of chilling center and satellite dairies and organizing milk collection routes to terminate at these ends has resulted into improved quality of milk. Milk is graded, sampled and tested for fat and solids-not-fat (SNF) content. The society is paid three times a month on the fat and SNF content in the milk. Low-grade or sour milk fetches lower price. Milk is pasteurizes for sale or to convert into products. Milk leaves the dairy by insulated road or rail tankers. Milk products are dispatched by truck.

In the early years the Union looked after the marketing of milk and milk products. In 1974 the Gujarat Co-operative Milk Marketing Federation Limited, Anand; the apex organization of district union; was formed to perform the marketing function.

For breeding animals, Kaira Union has established semen production center at its Ode Farm, 18 km from Anand where high pedigreed buffalo, Holstein-

Friesian and crossbred bulls are maintained. Artificial Insemination sub-centres are run by 865 societies. The semen is delivered to the sub-centres where artificial insemination service is provided at nominal cost. The Union provides a pregnancy diagnosis service too. In 1999-2000 the number of artificial inseminations carried out was 659 thousand. Both buffaloes and cows are covered under the programme. By 1995 there were 43734 crossbred cows or heifers in the District. The Union runs 16 mobile veterinary dispensaries with fully qualified staff and radio telephones. All villages are visited on pre determined days twice a month. A 24-hour emergency veterinary service with 29 vehicles having radio telephones is available at a fee of Rs.35 for members and Rs.100 for non-members. Through a Group Cattle Insurance scheme the animals of the members are provided insurance coverage to mitigate any unforeseen cattle loss. First aid veterinary services have been set up by 865 societies. Each has a staff member trained by the Union. The follow-up is provided by the mobile dispensaries. Medicines are supplied by the union at 50% subsidized cost.

The Union's cattle feed plant – the only ISO-9002 feed factory of the country sells balanced feed concentrate at cost price, to ensure better nutrition for animals. In 1999-2000 the union sold 122792 tons of bypass cattle feed through the societies. In order to provide low-cost, high-energy feed, a Urea Molasses-Lick (Molu-Min) Plant has been set up. The Union is probably the first organization in the country to use the by-pass protein technology, manufacture such feed and make it available to farmers. The union assists the farmers in cultivation of green fodder also by arranging high-quality fodder seeds. The Union also supports programme to enrich poor quality paddy/wheat straw by urea treatment.

**Social Change :-** The milk co-operative in the villages of Kaira are contributing in their own way to various desirable social changes as well.

Democratic traditions are taking root with yearly elections to the Management Committee. When milk producers from diverse social and economic groups come

together twice every day at the milk collection center, old barriers of inequalities begin to break. Exposure to various modern technologies has an educational effect. Those who visit artificial insemination centers learn the facts about conceptions. Family planning messages thus become easier to grasp. At the cattle feed plant villagers learn about nutrition. Preventive vaccination of cattle has led to greater acceptance of vaccination in children. Milk co-operatives have created more jobs and incomes in Kaira villages. The beneficiaries have no pressing need to migrate to towns.

Milk income has added a new confidence and created a better status for women who look after the animals. Independent studies have shown that as high as 48 per cent of the income of the rural households in Kaira district is derived from dairying and it has made a difference in their standard of living and social status.

Amul has demonstrated that farmers' cooperatives can employ professionals, make use of modern technology, and harness market forces to serve their ends without disturbing the agro-system. To be a small producer is no more a disadvantage. In co-operative dairying there is a greater chance of rural development leading to the empowerment of the poor and the lowly.

**Education :-** The Union maintains a constant link with rural producers specially women. The Union published a newsletter twice a month which carries write-ups in simple Gujarati on animal husbandry, quality control of milk and the co-operative movement. The Union continually guides and supervises the societies so that they remain efficient, viable and strong.

**Welfare Activities :-** Two scholarships are given every year to outstanding children of members or the union staff for professional courses. Under the Group Gramin Personal Accident Policy the member and spouse are insured by the Union.

The union operates a continuous Co-operative Development programme to upgrade the knowledge of the members management committee, members of

the village cooperatives and its staff members. Regular 'Gram Sabhas' are organized in villages where the main as well as satellite villages participate. Women participation is encouraged.

The Union has also developed an Internal Consultant Group which educates the members, the management committee members and the staff at the village co-operatives in modern systems of operating rural business, maintenance of hygiene at all levels. Likewise they also established a "Sabhasad Kalyan Fund" to meet the emergent needs of the community especially at the time of natural calamities.

**A Larger Responsibility :-** The Kaira District Co-operative Milk Producers' Union is the pioneer. And it succeeded. It came to be regarded as a model. With this recognition came larger responsibilities.

When milk producers in other districts of Gujarat started their co-operatives, they turned to Kaira Union for help and guidance. They drew on Anand experience in project planning and execution.

The Ahmedabad Municipal Dairy (which has been taken over by the Gujarat Dairy Development Corporation), the Gujarat Government's Rajkot Dairy (which is now being managed by the District Co-operative Union) and dairies of the Mehsana District Co-operative Milk Producers' Union Limited, Baroda district Co-operative Milk Producers' Union Limited were among the projects executed with Kaira Union's technical help. The Kaira Union also started a training programme for dairy and animal husbandry personnel.

The National Dairy Development Board (NDDB) was thus set up at Anand in 1965. NDDB drew up the programme 'Operation Flood' to replicate Anand Pattern in various milk sheds of the country. Implementation of the programme started in 1970-71. Heavy reliance was placed on the expertise of the Kaira Union.

In each area NDDB deployed a spearhead team consisting of specialists who were fully conversant with the Anand Pattern. The liaison between the NDDB

spearhead teams and the workers of the project area invariably started with a training programme at Amul.

The creation of more 'Anands' was recommended under World Bank projects in Karnataka, Madhya Pradesh and Rajasthan also. In these projects as well, Kaira Union served as a "live laboratory" and NDDB as the 'multiplier'.

The Anand Pattern of co-operative dairying is now being replicated in all the States and Union Territories of India. By March 31, 1999, there were 81,668 village dairy co-operatives established in 170 milk sheds, with a total membership of 10.21 million farmers.

Similar co-operatives are being established for oilseed cultivators, fruit and vegetable farmers and for small-scale salt makers and tree growers (Anonymous, 2000).

**Farmers Organisation :-** The United Planters Association of Southern India (UPASI), the apex body of tea, coffee, rubber and cardamom in South India, has a long tradition in leadership, research and extension service in the plantation industry founded in 1893. It represents the growers interest in national and international forums. Apart from the above, it is engaged in scientific and economic research, statistical analysis, commodity affairs, industrial relations, taxation, finance, legal issues, publications and public relations and in organizing conferences, seminars, workshops and rural development programmes.

The UPASI places its prime significance on research and development. The salient features of this effort include the running of the well established UPASI Tea research foundation and seven advisory centers for transfer of technology. The UPASI established the Krishi Vignana Kendra in the year 1983 under the sponsorship of ICAR. The organization is run by the selected representatives of farmers and funded by members and some commodity boards. They have committees for each commodity to workout research, extension marketing and policy strategy. UPASI charges some of the technical and advisory services. Completing nearly 100 years of its advisory service to planting community,

the organization is one of the most effective, responsible and important farmers organization today.

**Non-Governmental Organisations :-** It is estimated that, in India, NGO's number range from fewer than 10,000 to several hundred thousand depending on the type of classification used. Some 19,000-20,000 are actively engaged in rural development (Farrington and Lewis, 1993). Proper understanding of problem and place, missionary zeal, involving local population, bottom up approach are some of the factors responsible for the success of NGO's in Rural development in general and agriculture in particular. The success of NGO's in risk prone agriculture is worth mentioning. They operate in a small area majority of the times and make very significant impact. One such example is discussed below.

**Transformation in Ralegan Siddhi and a magic called "Anna Hazare" :-** The exemplary success in the project of rural development achieved by Sri. Annasaheb Hazare in his village Relegan Siddhi against all odds has attracted worldwide attention. His approach to development of model village is unique which also includes development of agriculture. The work carried out in the field of watershed is unbelievable but fact. Twenty years ago there was scarcity of drinking water in the summer months. 15 to 20% of the villagers were unable to fulfill their food requirements. 55 to 60% of the villagers brought grain from outside the village. There was no employment still liquor shops flourished. Villagers walked four to five kilometers every day for work.

Today, the extent of land in the village is the same, the population has increased, yet the villagers are able to meet their food requirements in the village. Onions and vegetables are exported to cities and markets outside the village. It is difficult to find labour, because farmers have work in their own fields. Where income per head was Rs.200 to Rs.225, it is now Rs.2000 to Rs.2100.

Since the economic conditions have improved, they have constructed buildings worth forty to forty-five lakhs through shramdan in the village. Although there

are fluctuations in the rainfall and crop production varies, there is always water available for drinking purposes in the village. Tanked water supply does not have to be provided, even if the rainfall is only eight inches.

In the past fodder has to be brought from outside, but the ban on free grazing has increased the availability of fodder in the village, and is in fact exported to other villages.

If these changes can take place in such a severely drought prone village as Ralegan Siddhi, then why cannot such development take place in other villages as well? What is important is to understand the importance of the watershed development program, and implement it in an effective manner (Anna Hazare, 1997).

This total transformation of village took place in 15-20 years under the leadership of Sri. Anna Hazare. The issue in the present context, is it possible to multiply this example? And what kind of linkage government should have with these organizations to take benefit to all through public system?.

**Krishi Vignan Kendras :-** There are 261 KVK's in the country out of which 86 are run by NGO's. KVK's basically function as a training institute at district level. They play very important role in identifying new technologies and imparting training to farmers. Diversifying the activities of KVK's in tune with changing agricultural scenario at national and international level is need of the hour. Charging the services not only generate revenue, lessens the dependency on government but leads to responsible and accountable service. KVK could also serve as a forum where public-private extension service providers interface takes place. There are many success stories which ultimately focus on dynamic leadership, innovative approaches and responding to the needs of the clients. Think globally and act locally need to be mantra which gives good directions to KVK's.

**Agri-Business Companies :-** Agri-business sector is backbone of Agricultural development. They are the integral part of Agriculture in the post-green

revolution period and would be playing even more important role in the liberalized period. No systematic survey is conducted to determine the total number of agri-business companies. However, their blending in terms of services and distribution is inseparable from Indian Agriculture. They operate mainly in seeds, fertilizers, pesticides, machineries, information, finance, processing and trading.

A small survey was conducted during May, 2001 in MANAGE to understand the Private Extension Potential of Agri-business Companies. The survey among randomly selected 15 companies revealed the following :

- The Companies represented fertilizers, remote sensing, seeds, pesticides, processing, trade and Bio-technology.
- On an average they operated in 15 states.
- Average number of farmers reached by each company was 11 lakhs.
- Extension approaches adopted were road shows, seminars, intensive personal contact, village level meetings, VIP meetings, harvest days, wall paintings, crop tours, newsletters, institutional visits, participatory approaches, working through self help groups, demonstrations, field days, mass media campaign, training, exhibitions, dealers / distributors training, mailers, reminders, jeep campaigns, mass contact programmes, posters, stickers and banners.
- On an average 238 extension personnel worked with each company.
- Average turn over of companies was 331.31 crores.

The results indicate that agri-business companies cover wide areas, operate in different sectors of Agriculture, reach large number of farmers with less number of extension functionaries, adopt variety of extension approaches and have good financial turn over.

Is it possible to have effective linkage with government so that with the same less extension workers, possible to reach more farmers? Recent trend among the agri-business companies indicate that they are trying to provide integrated services to farmers. They are providing services of farmers choice instead of

concentrating on selling their products only. Thus, atmosphere is created where farmer trust agri-business companies. Few innovative approaches which are operational at present are most relevant to the context.

**Service to the door of farmer :-** Samaikya Agri-Tech is a private extension service providing organization operating in Andhra Pradesh. The company provides extension services to farmer for a fee. Technically trained agricultural graduates are positioned in villages, provided with telephone and computer based agriculture information base supported by expert group at headquarters. They not only provide information but also sell the inputs to farmers and supply at village. Here, the extension worker is available to farmers all the time.

**Farm Management Services :-** Nagarjuna Chemicals and Fertilizers started farm management services during 1995 itself with the objective of providing integrated farm services at village level for a fee. The service covers seventeen districts spread over Andhra Pradesh and Karnataka, covering 28,430 farmers, 1,76,239 acres with just 121 extension workers. They charge per acre per farmer per season. The company not only provide information, supply inputs and market the product to some extent. The service is supported by their website [ikisan.com](http://ikisan.com) where package of practices of all major crops is provided in regional language involving the photographs and voice back up. Thus, an illiterate farmer could be educated through computer.

**Farmers One Stop Shop:-** Mahindra and Mahindra, the tractor giant has started a concept of "Farmer's One Stop Shop" where farmer can purchase all his inputs including information, machineries at one place. He can also sell his product there. The quality of the inputs is assured and information is provided through technically trained experts. Different machineries are sold and also rented for a fee. The yield is assured hence the accountability is inbuilt in the concept. The demonstration plot just opposite to one stop shop compare the traditional and improved, recommended technologies and convince the farmers. At present three units are operating in Andhra Pradesh, Tamilnadu and Rajasthan and are expected to expand the activities very fast to other states.

**Private, Public and NGO Partnership in Service of Farmer :-** Agrocell-Agro-Service centers are functioning in Gujarat, Maharashtra, Haryana and Jammu through their 12 centres located in villages, each covering around 2000 farmers. These agro-service centers make all agri-inputs available to farmers at a right time, reasonable cost with all necessary technical guidance under one roof. The uniqueness of this service is about integrated crop management approach and its commitment to “Progressive, regenerative and yet sustainable Agriculture”. Technically qualified graduates are trained by an NGO i.e. Sri Vivekananda Research and Training Institute, guide the farmers free of charges, help them to maintain crop records so that buyer has a choice of producer based on the history of crop production, help the farmer to sell produce for a good price and ensuring sustainability at all stages. Excel industry who is a stake holder in Agrocel market the product i.e. T-Shirts made out of organic cotton. Thus, here a unique partnership of NGO, government and private company is demonstrated.

**Choupals:-** ITC-IBD introduced a new concept of choupals which are commodity based service centers where unique internet kiosks cum one stop shops for the farmers are created. At present ITC implemented soya choupal, aqua choupal and coffee clubs and created separate website for each sector like [www.soyachoupal.com](http://www.soyachoupal.com), [www.aquachoupal.com](http://www.aquachoupal.com) and [www.plantersnet.com](http://www.plantersnet.com) . At present, around 100 soyachoupals in Madhya Pradesh, 25 coffee kiosks in Karnataka and few aquachoupals in Andhra Pradesh are functioning. ITC is also planning to extend the concept to wheat, pulse, groundnuts, sesame, paddy and black pepper. These centers provide market information, weather report, package of practices, information on input availability etc. These initiatives are beyond business and bound to create very good farmer-company relationship.

**Kisan Kendra Creating Win-Win Situation :-** Tata Chemicals Limited, a company in agro chemicals business initiated a innovative project called TaTa Kisan Kendras during 1998. TaTa Kisan Kendras are started with a objective to provide the farmer with a package of inputs and services for optimum utilization of balanced primary nutrients, plant protection chemicals, water,

seeds, post-harvest services, and to develop a genuine partnership with the farmer. Fourteen Tata Kisan Kendras and 215 more franchisee outlets have already established. The services offered in the kendras are diagnostic services, access to credit and insurance, post-harvest management services and extension education programmes.

A private extension model is suggested here which provides multiple services under one roof through different levels by technically qualified professionals.

The model facilitate the service through teleconsultancy, through internet and by personal consultancy approach at village, taluk and district level. At one place farmer get all inputs including information but also can sell his output. At the outset it aims at a district agriculture website and Agro-e-commerce. It starts with a personal consultancy, later with the support of computerized agriculture information base and extends upto teleconsultancy and agri e-commerce. The service starts with just information, extents upto buying and selling of inputs and outputs respectively.

The service center provide information initially and extends to service later in the following areas:

## **I. Information**

- ❖ Prices of different commodities in different markets of district.
- ❖ Names, addresses and contact phone numbers of buyers, nurseries, Input dealers in seeds, fertilizers, pesticides and machineries and stock position.
- ❖ Information on credit, sources and formalities.
- ❖ Information on all aspects of cultivation of all crops of the area including soil management, water management, weed management, pest and disease management, post harvesting operations, crop diversification.
- ❖ Solutions to specific problems of farmers.
- ❖ Teleconferencing with eminent persons.

- ❖ Access to Internet information.
- ❖ District agricultural website.
- ❖ Scope for Agri-e-commerce.
- ❖ Provides all information of importance to farmers like health education, shopping etc.
- ❖ It has got every scope to grow as “Farmer’s super market” where farmers can sell his produce, buy the inputs, get agricultural and other information.
- ❖ Video Film Production
- ❖ Publishing Agriculture Magazine / Agriculture Reporting.
- ❖ Organising Agricultural Exhibitions
- ❖ Demonstration through cost sharing - Extension service provider provides inputs, credit and technology and the farmer puts his labour. Crops is proportionately shared. The plot serves as demonstration farm
- ❖ Group based extension provided to Panchayats, co-ops, NGOs on yearly basis. The charge depends on kind of service and frequency
- ❖ Training on important areas : Government, Panchayat, NGOs, Co-operative, could sponsor farmers
- ❖ Farmers quiz programme with the help of sponsored companies
- ❖ Organising study tours
- ❖ Arranging film shows on Agriculture
- ❖ Information on benefits provided by Government

## **II. Consultancy**

- ❖ Project Planning and implementation for individual farmer or groups or organizations

### III. Inputs Supply

- ❖ Seeds,
- ❖ Seedlings
- ❖ Fertilizers
- ❖ Pesticides
- ❖ Weedicides
- ❖ Credit
- ❖ Labour

### IV. Infrastructure

- ❖ Transport
- ❖ Cold Storage
- ❖ Storehouses
- ❖ Machineries - Rent and Repair
- ❖ Processing
- ❖ Packing

### V. Technical Service

- ❖ Soil Testing and Advisory

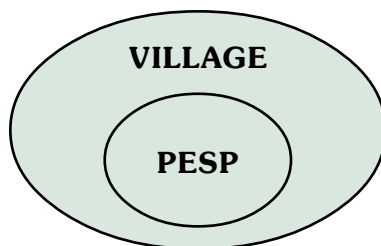
### VI. Marketing Service - Buying and Selling Agents

### VII. Other Service - Crop, Livestock and Life Insurance Agent

### VIII. Enterprises

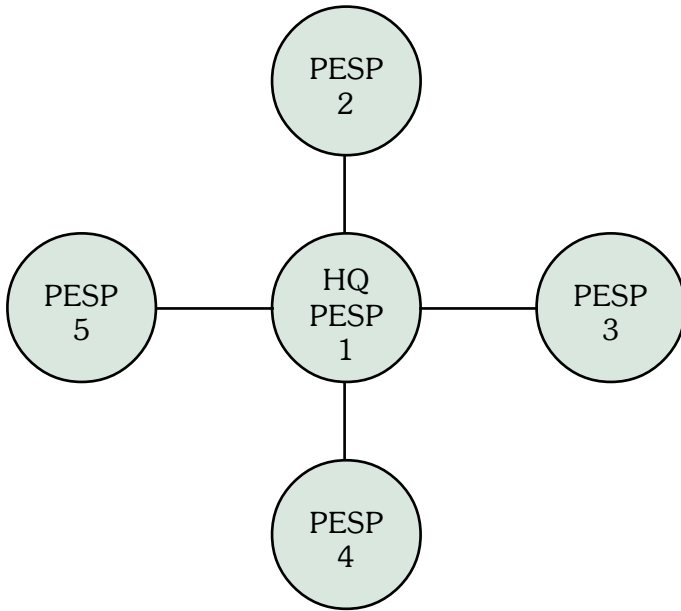
- ❖ Contract Farming
- ❖ Seed production, procurement, processing, packing and marketing
- ❖ Organic farming-production and marketing

#### PROPOSED MODELS

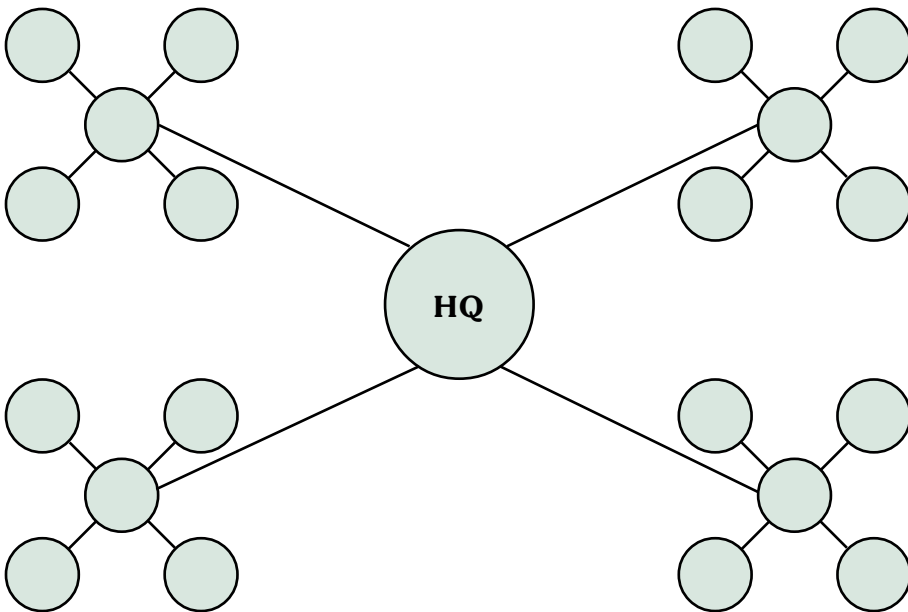


**One Person Operated Project**

### Small Group Operated Project



### Big Group Operated Project



**Input dealers :-** Many information consultancy pattern studies indicated that input dealers are consulted by farmers more frequent than other sources. The reasons as reported by farmers are

- a. Difficulty in meeting VLW's when they need information.
- b. Long waiting time to meet VLW.
- c. Difficulty in getting VLW for field visit, if it is far.
- d. Input dealers say due to his credit supply ability and his knowledge out of experience.

The input dealer is basically a businessman; need not be a technically qualified service provider. In order to over come the possible negative effects, it is necessary to think in the following areas.

- ❖ It is necessary to make technical qualification in agriculture, mandatory for issuing dealership license to sell agricultural inputs.
- ❖ Input dealers functioning at present may be trained gradually with respect to required technical knowledge and skill by competent institutes.

**Agriculture needs attention of Mass-media :-** It is very difficult to attend all the problems of all the farmers all the time by extension personnel due to wide ratio between extension worker and farmer. The search for cost effective and efficient support system, in the present context, points towards all powerful tool called mass-media. Mass media consists of newspapers, magazines, traditional media, radio, TV and information technology are proved to be most powerful opinion makers in this information age. Mass media covers more people in less time and less cost. As on December, 1997, the total number of newspapers and periodicals was 41,705 in the country. The total circulation of Indian press was 10,57,08,191 copies (India, 1999). Around 465 Agricultural magazines are published in different languages. Traditional media like drama, dance, songs, harikatha, yakshagana etc. are effective but diminishing. Radio covers 97.3 per cent population with 90 per cent geographical area of the country. Television is emerging as most powerful medium of the present time. TV covers

87 per cent of population. Computers are the greatest discovery of 20<sup>th</sup> century. But, when all the fields are surging ahead to use Information Technology, Agricultural Extension is yet to device proper ways and means to utilize IT for the benefit of farmers. Some of the issues which need to be considered in effective utilization of mass media in Agricultural extension are

1. Shifting from individual to group approach.
2. Education getting adequate space and time along with information and entertainment in mass media.
3. Professional approach through agricultural journalism in media production.
4. Mass media co-ordination committees at each district level and expert committee at each mass media level.
5. Good network of trained reporters.
6. Trying innovations in reporting
7. Keeping farmers in view while producing agriculture programmes.
8. Motivating extension functionaries for using mass media in agriculture extension.

Some of the innovative approaches in mass media based extension are

**Agriculture magazine by farmers, for farmers and through farmers :-** Adike patrike is a agricultural magazine in Karnataka which is written by farmers, edited by farmers, sold by farmers and read by farmers. Hence, this participatory agricultural journalism which is also called self help journalism turned out to be most credible source of information to the farmers. Through workshops the group trained farmers to write and verify the reports thoroughly before publishing the information.

News papers may not cover agricultural information regularly by keeping a page in a week for agriculture news. Still, the space meant for agriculture is less as revealed by many studies. Hence, mass media co-ordination committees at district level and expert group for each media ensure right news at right time through right way.

General view on the TV coverage of agriculture programme indicate that time and quality is inadequate, professionalism need to be developed in this area. Innovative programmes like dial up, farmers quiz etc. need to be encouraged.

**Agricultural information dissemination through IT** is cost effective, time saving and the speed of communication is very high, Classified information is available and information storing capacity is enormous. Thus, extension through IT is getting popular now-a-days. Few experiences are encouraging and open a great space for IT application in agricultural extension. Some of the cases are

- ❖ M.S.Swaminathan's "info villages" around Pondicherry have information kiosks which provide all required information to the villagers including agriculture. The centers are located in villages and managed by trained village boys and girls.
- ❖ Warna wired village project in Maharashtra where group of villages are linked through computer network through which all agriculture related transactions are made. The network is managed by farmers cooperative.
- ❖ Kerala fishermen using cell phones on the sea to find better market for their catch among different fish markets located on the shore.
- ❖ Samaikya, a private extension service provider in Andhra Pradesh providing computerized agriculture information service at villages.
- ❖ Agriculture websites like [ikisan.com](http://ikisan.com), [krishivihar.com](http://krishivihar.com) providing information to farmers and [agriwatch.com](http://agriwatch.com), [commodityindia.com](http://commodityindia.com) providing market intelligence reports and preparing the ground for agri-e-commerce.
- ❖ Commodity based information services like aqua-choupal, coffee clubs and soya choupals of ITC company.

Still, geographically we are yet to cover significant areas and much scope is there for e-extension. Private sector banks provide information support and monitoring service besides loans and donor agencies play mostly or indirect role in private extension.

Government of India stand on private extension is quite encouraging as stated in national policy on agriculture. National seminar on private extension organized by MANAGE is the first organized academic exercise in which academicians, practitioners and policy makers discussed on following themes and made useful recommendations.

**Themes were**

1. Extension approaches, strengths and weaknesses of private extension services.
2. Linkages between private and public extension systems and models of private and public extension co-operation.
3. Policy guidelines for private extension.
4. Role of private extension in the millennium and
5. Innovations in private extension

**The recommendations are**

1. Considering the strengths and weaknesses of Private Extension, it is felt appropriate to develop proper linkage strategy between Private and Public Extension systems.
2. The Extension Services provided by Small Scale Agri-business agencies are to be streamlined and monitored by proper legislation.
3. Women, small and marginal farmers and dry land Agriculture are to be given emphasis by Private Extension or Private Extension supported by Public Extension.
4. The Participants in the session endorsed the view to introduce privatization of extension services in phased manner.
5. Newspapers and other Mass Media are to be utilized as effective channels for transfer of Agricultural technology even by Private Extension.
6. Private Extension in the area of post harvest technology and food processing has to be prioritized.

7. Accountability and quality service are to be ensured by Private Extension.
8. An atmosphere has to be created to maintain healthy competition between all individuals and organizations providing Agricultural Extension Services.
9. Multi - disciplinary and competent consultancy units needs encouragement from government.
10. Public Extension system should consider introducing partial cost recovery for extension services with reference to specialized and demand driven technologies.
11. Strengthening of information services to self-help groups of farmers may be prioritized by Private Extension.
12. Promotion of linkage between various stakeholders for effective delivery of extension services.
13. Opportunities for diversification of Private Extension has to be found out and education oriented Private Extension services have to be supported to promote social equity.
14. Registration of all private consultancy activity may be made compulsory.
15. Panchayats may be encouraged to involve Private Extension Services.
16. Agriculture Education may be modified / restructured to build capacity among students to take up Private Extension instead of just searching for government jobs.
17. Private Extension should have access to information / technologies developed by public organizations.
18. Promoting skill based advanced training programmes to the farm youth (Ex. Artificial inseminating grafting) can strengthen the Public Extension Services. Private Extension can take up this activity.
19. Absence of linkages of any sub - system with any other sub-system leads to isolation, which in turn leads to low production. Ways and means of increasing the linkages by having right perception of various system members about the roles and functions of other systems have to be devised and strengthened.

20. The Extension Services in the next millennium shall be proactive, pro-poor and pro-women. The development efforts through public extension had resulted in widening the gap between rich and poor and marginalisation of women, which should be avoided through rational and judicious blending of Public and Private Service.
21. Group Extension model which promotes partnership of Public and Private Extension services is considered as ideal, which can be tried by our development agencies, irrespective of whether it is Public or Private.
22. Marketing intervention by Public Extension is a strong, desirable move, which found to be very weak in actual situation. The area has to be focused by Private Extension.
23. Results of NARP studies have proved that Private Industries are highly competitive. There shall be strong linkage between Public R & D Institutions and Private Input Industry.
24. There are many lessons that one can learn from the analysis of functioning of various farmer associations. The innovative initiatives of many associations had been accepted and adopted by the Public Extension System. Such initiatives had found to be more sustainable. Hence that such initiatives are identified and promoted. Detailed studies on such initiatives may be attempted.
25. Private Extension System has to be introduced with great caution keeping in mind the problems and constraints of rural development efforts by the Public Extension System. Emphasis shall be on development of human resources for Private Extension Service.
26. Private Extension Service should be demand driven and farmers should control extension system. Credit, marketing and agro-processing should be well integrated for providing value oriented extension service for farmers.
27. Privatization has to be done first on experimental basis and tried in areas where Public Extension has failed.
28. Subsidy should be withdrawn gradually and incentives may be introduced to the farmers.

29. Cost recovery should be emphasized while Privatizing Extension.
30. Audio/Video cassettes have to be produced on new technology to provide to farmers on rental basis through Public Extension System.
31. Farm Clinics may be developed.
32. Contract farming system needs encouragement.
33. Methods may be evolved for effective monitoring of extension.
34. Both Central and State Governments should come out with explicit policy guidelines specifying the role of private agencies in Agricultural Development.
35. As the Law of survival will operate, let there be healthy competition between Public and Private Extension, so that the rural people and farming community can avail the benefit of both.
36. Farmers in general and Commodity groups in particular like "Grape Growers Association" "Flower Growers Association" may be promoted among the client groups. Such groups associations can deal with the different agencies whoever does good to them on a competitive manner. Further, both systems can co- exist and have complementary and supplementary roles.
37. Government should have proper regulatory mechanism to Work out modalities and cost aspects and safeguard the farming community from possible exploitations.
38. Policy makers and practitioners have to consider the global issues of economic liberalization, food security and sustainability when framing policies for privatization of extension in Indian context.
39. Government may encourage the efforts of NGO's in educating the farmers regarding government policies, rules and regulations and their privileges and rights so that there can be better awakening among farming community.
40. Private Extension should be monitored by a statutory body, which should have representatives from Academicians, farmers Organizations, Private Social Organizations, Private Extension, State and Central Government.
41. Public sector Agricultural Extension service needs external assessment in each state.

MANAGE, Hyderabad took lead in establishing linkage between public and private extension resulted in a workshop on “Private extension Potential in Madhya Pradesh” during August, 2001. The workshop obtained very good response from both government and private sector and the recommendations made in the broad three areas were

## **I. Promotion of Private Extension**

1. Government should support Private Extension Service Provider till break even point or else interest free credit.
2. Government should encourage group or Cooperative type farming.
3. Corporate input manufacturing companies providing extension now can shift to charge for technical support when membership level reach permissible level.
4. Income tax etc. shall be exempted till private extension sustains.
5. Sales Tax should be exempted for the supply made to NGO's, Co-operatives and farmers involving in extension activities for some time at least.
6. Local infrastructure such as sanitation, electricity etc. may be provided locally by the Government.

## **II. Regulation of Private Extension**

1. Extension activity to be promoted linking the employment for unemployed Graduate, PG as well as retired experience personnel from department of Agriculture, Agro Input Industry, provision for Registration and Financial backup. Agriculture Graduation may be made mandatory.
2. Extension technique duly approved by agriculture Department only will be allowed.
3. Reasonable rates must be charged to the farmers.
4. Agriculture extension system must conserve the Natural resource system and preserve ecological balance.
5. Both Central and State Government should come out explicit policy guidelines specifying the role of private agencies in Agriculture.

### III. Innovation in Private Extension

1. Private Extension Service Provider (PESP) may be provided access to public research information.
2. Each Agriculture Business Company can specialized in one extension activity i.e. soil testing, renting agriculture machineries etc.
3. Farmers supermarket.
4. Contract farming may be popularized by Agri-Business Companies.
5. There need to be a forum where innovation in Private Extension may be documented and shared among Agri-Business Companies.
6. Tele Consultancy.
7. Forum may be created for sharing public information for benefit of Agri-Business Companies.
8. Private Extension through Mobile Video Conferencing.
9. Company can adopt Village to provide Extension Services.

The impact of workshop might be direct or indirect involvement of private sector in Agricultural extension activity which may end up with at least doubled extension impact in the field, ultimately benefiting the farmer. Many more initiatives in this direction in different states is need of the hour.

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