Agricultural Extension Challenges for Demand Driven Strategies

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PREAMBLE

Even after more than six decades of Independence of the country, the agricultural Extension Education is at the crossroads. Why? We leaned towards foreign assistance, especially the USA. Perhaps that was necessary: (i) in want of resources as well as (ii) experience in the agricultural extension system/sub-systems for sustainable agricultural and rural development. In 1990s the last extension mechanism of T & V extension system of the World Bank completed its term and we were left with a vacuum in this respect. We did not prepare for it in advance. This is why, ATMA the main extension agency of the Government is still in the infancy stage, being spread and stabilize in all the districts. Thank God, the First-line Extension System of the Indian Council of Agricultural Research (ICAR) being implemented through SAUs and the ICAR Research Institutes, is holding the extension education flag high, but it can hardly replace the State extension system, which is mainly responsible for the national extension programmes and activities. Where we miss the boat? This paper intends to examine the basic issues and discuss them for future posterity.

In all these enquiries, there are three dimensions of the challenge: first, is the structural design – organization, ATMA is the emerging one; second, the functioning of the system, where the commitment of the extension personnel and the subject-matter specialists are at stake; and third, the agricultural Extension Management, which is the missing link – a very weak area to be reckoned with. Our doing part has to be improved immensely in order to see that the system works towards the ultimate goal – raising agricultural productivity for food & nutritional security of the population with social justice – ‘UNTODAYA’ of Mahatma Gandhi has to be remembered and acted upon for the poorest of the poor. Hunger and poverty has been the bane for the nation; also for the developing countries.

We need to learn from the successful experiences of the developed countries especially the USA where the ‘Cooperative Extension Work’ has been a successfully sustained model since 1914 with the Smith Lever Act. America, being the nation of the nations, acquired matured and experienced nationals who came from different European cultures happily devoted to agriculture; educated their children who stayed on farms; and the commitment to work and agriculture was total. The German nationals contributed a lot in this endeavour; They were enterprising, adventurous and innovative – developed all facets of agriculture gradually, steadily with their hard work and engenuity.

Conceptual clarity:

There two organic aspects of agricultural extension: (i) knowing agriculture, agricultural technologies, and agricultural extension; and (ii) the application of these knowledge and technologies through extension education strategies and approaches. In order to be successful, the extension professionals including subject-mater specialists must ‘Own it as if the extension is their own part and parcel, which is devoted to the great cause of – food & nutrition security for the national; poverty alleviation; and employment generation. The following concepts, the extension system must insist upon for the field programmes and actions.

Defining Extension: The basic discipline for TOT is Extension Education which when applied to agriculture is Agricultural Extension, to Veterinary is Veterinary Extension or to Industry is Industrial Extension. Education is the keyword? all TOT efforts, no matter who does it (ICAR/SAUs/State Departments, etc.), are
educational in nature/character: education, training, demonstrations, fairs, exhibitions, use of mass-media, information technology – all are meant for education and motivation of the farmers which may lead to acceptance of recommended technologies, and then finally the adoption by the farmers as well as diffusion in the farming communities.

→ Agricultural extension services are inputs support (seeds, fertilizers, chemicals, pricing policy, crop insurance, credit policy, land reforms, state farms management, soil and water testing, etc.), are the normal responsibilities of the State Governments, in addition to the extension education function. In reality, the state functionaries are doing mostly the extension services rather than playing the educational and motivational roles.

→ Resources Distribution: As per the policy in the ICAR/SAU System, 10 percent of the total budget and 20 percent time of the scientists are expected to be spent on TOT. This is a reasonable proposition, but is this happening? If we add to this, the extension education role of the Ministry of Agriculture/State Governments (exclusive of services role), the budget, normally should be more than one-forth of the overall total agricultural budget? Are we investing that amount for the extension education programmes? There is a big gap. Some governments in its 10th Fifth Year Plan spent only 2.5 percent of its budget for agricultural extension, could you imagine?

→ Extension Functionaries: There are two categories of staff who are directly involved in the Extension Education Programmes like the two sides of the coin: (i) Extension Education Professionals and workers; and (ii) the Subject-Matter Specialists (SMSs) – Agronomists, Horticultrists, Entomologists, Animal Scientists etc. This dimension of TOT has to be understood by both the professionals? one can not do without the other. At present, the common understanding is that TOT means the job and responsibilities of the extension professionals only or if at all, the SMSs are the light support to extension programmes without owning it as their own programmes or responsibilities. This dichotomy has to be done away with so that both feel responsible to the extension programmes and they together share the credits or otherwise accruing out of these activities. Both, in fact, should form a Cadre of Agricultural Extension in the state as a long-term strategy.

→ Specializations in Extension Education: All disciplines have specializations for developing competencies in specific areas. So far, we have not done much about it in agricultural Extension or if we have done it, they are not visible and effective. We may develop specializations, besides general extension education courses, in (i) Agricultural training including vocational and entrepreneurship development; (ii) Agricultural Extension Systems & management; (iii) Research methodologies in social sciences including a thorough knowledge of parametric statistics; (iv) Agricultural Extension Approaches and methodologies including the ICT–Information communication technologies as well as the mass-media; and (v) Women in Agriculture.

These conceptual ideologies and framework must be clearly understood by our extension agencies, the Extension Professionals as well as the Subject-Matter Specialists (SMSs), and adhered to them in practice in order to be effective in the field programmes – promotion of adoption among the farmers and diffusion in the rural/farming communities.

Why Skewed Development?

We are talking about socio-economic development in country almost like a slogan and rightly so. But what is happening on the ground? Only economic development–raising productivity, production and increasing GDP (Gross Domestic Product) –a capitalistic approach. The social dimensions of development –alleviation of poverty and hunger, social and cultural cohesiveness, social values etc. have been the missing links. The result is that, we have become self–centered and are crazy for money and accumulation of wealth even at the cost of the poor and weaker. How poverty and hunger could be eliminated from developing countries, if this is the social environment? The millennium goals of the U.N. thus have remained almost where they were. Richer are getting richer creating further gulf between rich and poor. From economic power –we are getting hold of the political power – more unchallenged money and hence a lot of money laundering scams especially by the politicians and the powerful. See the newspapers
daily in developing countries—half the papers are occupied by corruptions and scams. Unlimited wealth with people, unless socially conscious and enlightened, corrupts the richer and political power corrupts them absolutely.

The societies are disintegrating, people are getting individualistic, poor, weaker and minorities are ignored and thus the results are emergence of Naxalites, Maoists, and terrorists. One could imagine and visualize how the future of the societies would look like; we are leading towards unprecedented crisis and chaos, ultimately a civil war – the devastating destruction may be. Seeing this extremism and injustice, God is also not kind – He sends tsunami like phenomenon; climate change and global warming have started showing their heads. No doubt, we are leading towards perils and perish, a point of no return. Our Indian mythology (GEETA) says that “one should acquire only an optimal amount of wealth enough to meet their basic needs; and if this is not done, the hungry people will snatch away the wealth for their survival – it is not sin”! This has started happening here and there now.

The root cause of hunger and poverty, in some sections of our society, is due to excessive wants, desires and greed of the rich people. Rich is getting richer and poor the poorer, is the common slogan since long. This had been happening gradually in the countries like a slow poison in the twentieth century and on the on-set of the twenty first century. The aberrations of the society are getting more visible in terms of class, caste, creed, discrimination, deprivation, poverty, hunger, violence, chaos and calamities. Societies are disintegrating, whereas Baha’i rightly thinks of ‘One Soul and One Country! The King of Bhutan, (His Highness Jigme Singye Wangchuk) has launched the concept of Gross National Happiness (GNH) vis-à-vis the Gross Domestic Product (GDP). The agricultural economists and allied social scientists in the USA and elsewhere have started studying this concept and approach. This has the angle of general social well being of the people, rather than promoting an unbalanced approach to development in favour of ever multiplying wealth (Fig.1). Today, the
ratio between rich and poor is 1:74 against 1:30 as it was in 1970s. The good plants are grown on a conducive soil culture. Likewise, diffusion of technologies, may that be agriculture or industry, would take place on the foundation of conducive social order. But we want accelerated promotion of science and technology in the societies which are suffering from many social ailments and maladies – suspicion, distrust, selfishness, and the least respect for the poor and the peace. Therefore, our approach to development should be to prepare the rural or urban societies socially conducive, united, receptive and rich – a good and effective ground for absorption of technologies for sustained development, rather than wishing miracles to happen in an unconducive social order. This is a deeper issue which we have to understand and work together for the agricultural research and development; this is equally relevant to industries and other allied sectors of development and research. Human resources must be socially alive; it is our job to educate and change them, though it will be a gradual process.

A study, Limit of Growth (1970s), commissioned to Massachusetts Institute of Technology and Boston University, USA, stated: “Social problems apparently

![Balancing Socio–Economic Development](image-url)

**Fig.2: Emphasis on More Economy than Social Concerns**
created by technology cannot be solved by the application of yet more technology; social problems in terms of social value systems and values have to change fundamentally for the problems to be solved” (ICSSR, 2001). The social core issues recognized by the U.N. system are (i) poverty reduction, (ii) human rights, (iii) peace and security, and (iv) the advancement of women. The eight millennium development goals of the UN were framed around these basic issues.

“Nobel laureate Amartya Sen has so definitively demonstrated that empowerment leads to entitlements and entitlements lead to enrichment. The skewed distribution of the fruits of the impressive progress the country has made requires immediate course correction because economic progress in itself cannot be our national goal.”

Why skewed development may be seen in our educational systems, both general or professional? Because social Sciences have been ignored in favour of basic Sciences – the job & package oriented education. Education is a Social Science as per the knowledge classification (Social Sciences) of the Dewey Decimal Classification Scheme (21 Edition), U.S.A, 1996, which is basic for personality development including social values, morality, commitment and character ethics. A drastic change in educational system is due. This must start now, for education has a long gestation period. A balance education must be promoted in our educational systems; this is in short supply Fig. 2 explains. What could be the role of extension professional in this respect, we must ponder on this?

**Training as the fourth pillar**

We recite Teaching, Research and Extension – the three pillars almost like a slogan. Now time has come to recognize the 4th Pillar – the Training. Training conceptually is the practical education – skill and job-oriented; one of the devices for TOT. By adding a modest School of Training/Directorate of training in SAUs and deemed universities of the ICAR with only a half-a-dozen core faculty members, and recognizing all the faculty-members of the SAUs and deemed universities as trainers, we can contribute tremendously to the HRD sectors in agriculture – pre-service, in-service, vocational and entrepreneurial – a factory for job creation by offering hundreds of technical courses in all agricultural disciplines including certificate and Diploma Courses. The Mentor Group of Bihar recent Agricultural University, Sabour, bhagalpur headed by Dr. R.B. Singh has recognized this fourth pillar on its merit. This is being implemented in the newly created BAU.

We are excited about having established nearly 600 KVKs, but in view of our mere size of population – agriculture and non-agricultural, we are far behind the required numbers; quality of training is another factor. The National Commission on Agriculture (1975) recommended for at least three KVKs per district in view of the size of the district both areas and population-wise. We have just started the second KVKs in the larger districts only. Let us look at a few international examples in this context:

- Germany, population 86 million, has 100,000 Vocational Training Institutes for a work-force of 42 million and nearly 500,000 companies are involved in practical training as well as handling of apprentices. About 200,000 professional experts from different sectors of the economy are registered and are used for imparting theory and practical hands-on-training on about 3,000,000 people per year.

- Even a small country like Austria, population 8.5 million, has 5000 centers, training 300,000 people per year and 38,000 companies provide practical training. No wonder that they have the lowest unemployment rates and one of the highest labor productivity in the EU.

- In the USA and the EU nearly all Vocational Education & Training is in the PPP (Public-Private-Partnership) mode. About 70% financed by the private sector or employer’s organizations/local community and 30% by the Central and State Governments.

- China has 500,000 vocational institutes, out of which nearly 70% are in rural areas. The total number of people trained within China is about 60,000,000 people per year. It is, therefore, not surprising to note that China with arable land much less than India produce’s nearly 100% more foodgrains, although, it has very harsh climate.

**Social Education – The Weakest Link**

The human resources development in any country is a crucial and critical issue. A good education means developing a balanced personality combining social parameters as well as the economic dimensions. Today this lopsided in most of the Asian countries including
money and wealth as a primary goal, devoid of social justice. It is money, money and more money and power, more power and absolute power. It seems there is no end to desires and wants, whereas Mahatma Gandhi (India) advised us to have control over excess wants and unnecessary desires.

Education is one of the social sciences according to Dewey Decimal Classification of the USA (2001); social sciences deal with ‘man’ and ‘society’. Education is basic to ‘personality development’ including ‘social’ and ‘economic’ traits. To make substantial contributions to society, these traits must be balanced and judiciously used in the interest of the society at large. But ‘skewed development’ has been the order of the day globally – more economic than social, leaving one-fourth of the population in developing counties under hunger and poverty. The West has followed the path of ‘capitalistic’ pattern of society mostly devoid of thrust on social

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**Table-1: Vocational Training Institutions (VTIS) in Advanced Countries**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Germany</th>
<th>Austria</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (Million)</td>
<td>86</td>
<td>8.5</td>
<td>1400</td>
</tr>
<tr>
<td>Vocational Institutions</td>
<td>100,000</td>
<td>5000</td>
<td>500,000</td>
</tr>
<tr>
<td>(Work-Force 42 Million)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Experts</td>
<td>200,000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Companies for Apprentices</td>
<td>500,000</td>
<td>38,000</td>
<td>NA</td>
</tr>
<tr>
<td>Annual Turnover</td>
<td>3,000,000</td>
<td>300,000</td>
<td>60,000,000</td>
</tr>
</tbody>
</table>

(In the USA and EU, VTIs are on PPP mode; Government contribution only 30%; 70% VTIs in China are in rural areas)

*Source:* CII Skills Task Force–2007-08

India; it is more ‘economic’ than ‘social.’ Hence, perhaps, inadvertently we are preparing people for

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**Fig. 3: Informal & Formal Education for Morality and Commitment –**

- Community-Environment (2)
- School-Schooling & Teachers (3)
- Colleges – Wider Exposures (4)
- Specializations, Governance Commitment (5)
- University- Narrow specialization (5)
- Work-Experiences (6)
- Foreign Exposures (7)

**Family Social Values (SANSKAR) (1)**

**Advanced Trainings (8)**
values and the East is crazy copying the West ignoring the ‘socialistic’ pattern of society. Thus rich are getting richer creating gulf and divide between rich and poor; latter in share frustration are being converted into Traitors, Naxalites, Maoists, Decoits, and Kidnapers – a danger to the Society. In Indian mythology, Bhagwat Gita stated: ‘One is entitled to only that amount of wealth which is enough for ones upkeep; the rest has to be shared and if one does not do so the same can be taken away’. Thus, are we not leading towards a volcanic social eruptions between the two divides? While several approaches and methods could be adopted to contain this baffling problem, the educational system must change for the better with balanced doze of social sciences vis-à-vis basic sciences producing socially concerned and technically committed human beings (Fig:3).

Education has a long gestation period, almost 20 years upto highest education of these years in the first half, social sciences should be amply focused together with the art or science education; the other half becomes the professional courses, more and more specialized. But initial social sciences input in socially constructive education will last for ever; a balanced education for balanced personality development will remain balanced all through producing a good human beings, good citizens the ultimate goal of life and living (Fig.3).

Extension education is out of school education, informal or non-formal education – a more difficult education indeed. This is why, we have to put in a lot of efforts to realize this educational needs and prepare farmers as enlightened, progressive and innovative farmers. The farmers should be encouraged to educate their children and retain them on far as best as possible. Farming today are more paying and more dignified than menial jobs in cities.

**Demand-Drive Extension Education :**

ATMA as Field Extension Design: ATMA (Agricultural Technology Management Agency) was a product of the NATP, which was designed to the Integrate all extension agencies at the district level in order to strengthen the field extension work. Nevertheless, in absence of T & V extension system, it was lately assigned this role of Field Extension Education/ Services by ATMA through the mechanism of Farm Schools on the farm of the progressive farmers recommended by the National Commission on farmers (2005). The concept of running ‘Farm Schools’ through ATMA was an innovative mechanism, no doubt, but it suffers on two major accounts: (i) such farms have not been developed on a Farming System Mode (FSM) and (ii) the farming is not based on a study and analysis of the natural resources of the Farms. – Perhaps they have been taken on the face value because they are relatively better than the others. Whether they are effectively functioning or not is another story. The Farming System Mode will be that farming which is based on the potentiality of the natural resources (soils, water, rainfall, climate etc), the right combinations of crops, horticulture, livestock, fisheries and agro-forestry recommended and practiced, which could be always better productive than only one crop or two in the kharif & Rabi seasons.

Model Farms & Innovative Farmers: The ideal and the most potential proposition will be to identify certain potential farms (marginal, small, semi-medium, medium, high) strategically centrally located, on the proportionate basis according to the numbers of operational farm holdings. And a certain proportion of these farms may be scientifically studied by a Team of Farm Scientists (Agronomy, Soils, Horticulture, Livestock, Fisheries, Agro – forestry & Extension) and then develop a most feasible combination of crops, animals & allied enterprises for the specific farmers which could give more dividends. They would be thoroughly studied on social as well as economic parameters in the interest of the similar neighboring farmers. Such farms, then, could be a perfect Farm Schools to be called Innovative Farms, and the host farmers and his spouses, will be thoroughly involved in the total planning & prioritization process plus additional training in order to make them the Model Farmers (husband & spouse – two on one farm). These scientifically model farms and vocationally trained Innovative Farmers could be the hub of all extension activities at the grass-root level.

Besides trained two farmers as Innovative Farmers on each farm, a Para–Extension Agent (PEA) – a local educated and trained farm youth, may be identified in the area for recording all the events of the model farms for further analysis for realizing the worth–and potentiality of this approach as well as for extension education efforts for those who came on the respective farms for visits and acquiring knowledge and information. He should be moderately a paid worker as
a change agent. The Knowledge Centres should be established at the Panchayat level, Charcha Mandals at the village level; ATIC Centres at the Block level; and the science Centres as the KVKs.

**Agricultural Extension Management:**

‘I have a vision of an India free of poverty, illiteracy and homelessness – free of regional, social and gender disparities- with modern physical and social infrastructure and a healthy and sustainable environment” declared the then Hon’ble Prime Minister of India, Mr. Atal Bihari Vajpayee(2002)’. In order to achieve this, he felt, ‘The improvement in the quality of Governance forms the essential ingredient’. The Planning Commission Tenth Plan document (vol.I, 2002-07) on Governance and Implementation asserts: “The issue of governance has in the recent times emerged at the fore front of the development agenda. Good governance is one of the most crucial factors required if the targets of the Tenth Plan are to be achieved. It is also this factor, or rather lack of it, which could be the cause of immense disappointment and missed development opportunities’.

Management is a universal and omnipresent discipline – all of us are using it every where, consciously or unconsciously, either individually or collectively. Unwittingly though, management has been treated mostly by the professionals only in the context of an organization or institution.

Management is a new frontier in agriculture. Agricultural extension management is one important aspect of it. Management is a social process of working with people or tackling people in an organization most efficiently, economically and sustainably. It creates a conducive working environment in an institution for greater participation, team work and production through synergistic effects. Agricultural development systems represent a complex organization including research, education, extension and training functions and varied clientele groups. The multiplicity of institutions and agencies serving agricultural sector and sub-sectors with heavy investments demand an efficient management system.

Fig. 4 gives a broad dimension of Agricultural Extension Management System. There are five functional areas — research, education, extension and training in extension discipline and two clientele systems where extension management has to contribute. For instance, in research in extension system we are concerned about (i) generation of appropriate technologies (AT) by the subject-matter research scientists in association with extension system and (ii) research in Transfer of Technology (TOT) by the extension and social science professionals; in Education for providing qualified and quality extension specialists (ES) as well as well trained subject-matter specialists (SMS); in extension working with two extension systems : (a) First-line Extension System (FLES) and (b) the General Extension System (GES); in training with two important areas like professional training (PT) (In-service) and vocational training (VT); and the clientele system should include not only rural areas, but also urban extension where agro-industries and corporate sectors in agricultural development are important. In addition, technology transfer in developing countries now take an important place in the scheme of globalization of
agriculture, and the creation of World Trade organization (WTO) with its world wide mandates.

A student does the time budgeting in his study, sports, and leisure-time activities. A saint manages to live in a detached manner from the worldly allurements and keep on organizing himself to serve the cause of God. A husband manages his family, the football Captain his team, the Principal his college, the Vice-chancellor his university, and an Executive his corporate body. Whether one is a manager or the one is being managed in both the cases an understanding of and insight into the principles and practices of management and administration would help. An incumbent of an institution with such background and experience would know how to contribute to and work with a team of employees in the total management milieu and maintain his working relationship with the superiors.

Today, the promotion or use of partnership and participatory approach has become rightly a slogan of our time. But it has been a rare commodity in most situations, because of the absence of management interest, education and training among the people. Therefore, the time has now come to promote management education as a continuum (management continuum concept or say an universal theory), like any other educational area and not in the organizational or institutional context alone as has been normally the case. We must build a management culture for the optimization of resources both men and material, in all situations every where. Hulse (1977) refers to the concept of management even in the one-to-one employer–employee relation, though he states, “there was no great need for an elaborate management structure’ then (early 18th Century).

The complexity and intensity of management in a given situation always vary in proportion to one’s needs and resources, or say, in economic terms, demand and supply. Need is contagious; it is created and has a natural tendency of being gradually enlarged and multiplied. Need is too dynamic a concept which, depending upon the circumstances, either promotes professional excellence or breeds contempt when it comes to greediness. Management, therefore, plays a balancing role between the demand and the supply for sustained productivity in any given situation or context.

Management Process: While this brief paper does not intend to treat management elaborately, the process of management and a few practical theories are touched upon here, for they are so important in our implementation of the programmes.

The acronym ‘POSDCROB’ was first used by Gulick and Urwick to explain the seven processes of administration/management: planning, organizing, staffing, directing, coordinating, reporting and budgeting. Finding them not comprehensive enough Prasad (1993) promulgated seven more of them under acronym POSDCORB+MEDHLiCS.
MEDHLiCS: Monitoring, Evaluation, Decision-making, Human relation, Linkage, (Li), Communication and Supervision. These 14 processes, when studied can explain the total working or management conditions of an institution/organization (Fig-5). A well trained manager is bound to perform better vis-à-vis untrained managers. We need to study thoroughly.

Fusion Theory of Management: This is a practical theory, which the managers must understand and act upon. It is relatively easy conceptually, but is very difficult in application. But all the same, there is no way the good managers can do without it. This theory is commonly found in operation in private organizations. This theory has a basic assumption, viz., the developmental processes and goals of the individual and his organization are, at crucial points, fundamentally different and antagonistic (Argyris, 1953, Bakke, 1952). In other words, the normal tendency of the incumbents is not to work as much as desired by the organization, but get the best out the organization; and the organization also wants to get the best work done by the incumbents with least investment. This is an antagonistic reality. The fusion theory postulates that the incumbents have their own goals and objectives which they want to get fulfilled (salary, promotion, status, and so on), whereas the organization has its own goals and objectives (higher productivity, production and profit), which also must be fulfilled. Therefore, the fusion of the two goals (of the incumbents and the organization) is necessary. The fusion process is said to have occurred when the individual obtains the maximum expression of his personality that is possible and, simultaneously, the organization has its demand fulfilled at the highest possible level. As managers, we are faced almost a very day with such situations and interaction, and we are resolving them also somehow, but perhaps without the knowledge of this theory. Hence, many times, we are not able to decide where both the interests can converge. The unwillingness to work and the common agitations and strikes are the manifestations of decision-making where both the points of views are not deliberately considered (Fig. 6).

Need For an Autonomous Council

In spite of over five decades of Agricultural Extension System in the country, we are still not sure of the extension education viability and sustainability of the extension system. The main reason was that we enjoyed the foreign projects, support and experiences and in that process we did not prepare ourselves for our model extension to be with the result today we are on the cross-road. There are a lot of reports, suggestions and guidance by the high level Communities and Commission –NCA, NCR etc. but nothing seems to be working. The reason is obvious; we have lost the track of being sincere and committed to our tasks and responsibilities. Agricultural development demands committed field–workers to be helped and guided duly committed by leaders both professional as well as political. But how are these working, one can obviously see which is not encouraging.

Then what could be done under these circumstances? We need very committed and aggressive leadership and management set-ups. At present we have two sub–ordinate offices for extension –one in the Union Ministry of Agriculture, the Directorate of Extension headed by a Joint Secretary (IAS) under the additional Secretary/Secretary and in the ICAR, the Division of Extension is headed by the Dy. Director General, under the Secretary, (DARE)
Fig. 7 AUTONOMOUS COUNCIL FOR AGRICULTURAL TECHNOLOGY TRANSFER—ILLUSTATIVE

President
Union Minister of Agriculture

Governing Body
Executive Committee

Director General
(NCEA)

DDG (KVK)
ADG
(VT & WE)
(ED)

DDG (FAS)
ADG
(IT & MC)
(FLD & FPDs)

DDG (HRD)
ADG
(ST)
(MT)

DDG (MER)
ADG (ADG)
(MER)
(DB-DP)

Addl. Secretary (Adm.)
(Director)
(Personnel)

Legends:
- FAS — Farm Advisory Services
- MER — Monitoring, Evaluation & Research
- VT & WE — Vocational Training & Women Empowerment
- ED — Entrepreneurship Development
- IT & MC — Information Technology & Mass-Communication
- FLD & FPD — Front-line Demonstration & Farmers Participatory Demonstrations
- ST — Staff Training/In-service Training/Advanced Training Centres
- MT — Management Training
- DB & DP — Data-base, Documentation & Publication
- Est — Establishments
and D.G. ICAR. We need an autonomous Council for Technology Transfer in Agriculture headed by a D.G. in the rank of Secretary, Agriculture.

We have a lot of work on research and technologies; they are not the limiting factors today. Our farm scientists have done exceedingly well, but on the TOT side we are extremely weak. Of the two arms of extension education in the country, the ICAR has done very well, but there role and scope, as per design and policy, are limited. The ICAR is devoted to only for the First line Extension efforts, that is, demonstrations and advisory services on the latest agricultural technologies and methodology. The major responsibilities of the extension work rest with the State Extension Systems where we have the basic problems. The State Extension System, to a great extent, are functioning as the service providers and not as the Extension Educators. The ATAMA, the new design for the field work, is still at its infancy stage. And added to that, the sincerity and commitment are almost a missing link. While the Government of India is putting a lot of resources for the State, but they are not going for the right causes as usual. This is why, it is imperative to develop a dynamic and strong extension leadership at the Centre by way of an autonomous Extension Education Council in the Ministry of agriculture headed by a D.G. of the rank of Secretary, who will have direct access to the Union minister of agriculture and higher ups. In absence of such a central leadership, we are not utilizing the available resources, both men and material, for the targeted population and goals. For the field work, perhaps, only 20% resources are being utilized as stated earlier by our beloved Hon’rable late Prime-minister, Shri Rajiv Gandhi. What a frustrating situation? Mr. Anna Hazare is rightly fighting for this very cause; no doubt, it is becoming a movement in the right direction for the country.

Areas of Concern and Challenges

1. The U.S.A. demonstrated, to the world, the best productive agriculture, which was the contribution of the so called European refugees – educated and enterprising (1620-1647). The Germans were the most progressive farmers, who considered farming most dignified and honorable. They settled on small farms free from any feudal restrictions. However, since 1975, they promoted big commercial farms, 100 ha or more, an evil start they said. They had the support of the Government inputs, prices and the promotion of the Land-Grant Colleges for education, research and extension – an integrated innovation; this influenced the Indian agriculture by way of State Agricultural Universities (SAUs). Their (USA) commitment to agriculture was total; in Asian Countries the commitment is short supply.

2. In India we have followed the American systems, but the total commitment like the USA is missing; the latter (development of commitment) has a long gestation period, we must start working on this now. It should be one of our priority areas this is a crying need.

3. Feudalism on farms in India has continued in several states in spite of the Ceiling restrictions; the farms are not consolidated in many States; and 146.82 mha remains yet degraded (NBSS &LUSP, 2005).

4. Extension Education, applied to agriculture as Agricultural Extension Education is not fully and deeply understood by the subject–matter specialist groups and extension professionals, though specialized, have not demonstrated this in their field–work. Doing Part is far from satisfactory; they should have demonstrated their specialized nature, if specializations had not been lacking. Extension professionals have not earned the respect they deserved from the agricultural professionals due their weak field work and activities; Extension professionals and the subject –matter specialists must be treated two sides of the coin – both needed proper understanding and the deeper aspects of this linkage and relationship.

5. Skewed Development has resulted into lopsided contributions; a substantial section of the rural population has been ignored, left behind and backward. Generally people have grown as self–centered, individualistic and societies are disintegrating; capitalistic pattern of development has taken over the socialistic pattern of growth. Our education has been weak – individuals are running for money, wealth and packages. The concept of Bhutan King, the happiness of the nation vis-à-vis the GDP has deeper implications; the earth as ONE Country approach and mankind its citizens of Baha’i (2009) has a far reaching implications for the nations.

6. The recommendation of using the farms of
progressive framers as farm school for demonstrations and training has far reaching implications no doubt if they are implementing well. Nevertheless, the Model Farms and the Innovative Farmers concept (Prasad, C. 2009) will be an improvement over the concept of NCF as explained in the text.

7. The KVK (Farm Science Centre) is an innovation, the root being the National Commission on Education (1964) and the shoot being, the ICAR. The total concept of the KVK has yet to be put into practice due to so many reasons. We must insist on those approaches for skill-oriented quality vocational training and entrepreneurship development, and demonstrations of the latest technologies. This grass-root level institution, the KVK could as well be adopted by the developing nations. In order to hasten the process of KVK faster spread among the districts for taking full advantage of this innovative approach, the Union Ministry of Agriculture, should seek the support of the UNDP/FAO or the World Bank to establish them as soon as possible. This will be a real good project, the World Bank should be interested for its larger implications for the developing countries.

8. Agricultural Management is the weakest link in the agricultural development process, agricultural extension management, in India is no exception; perhaps, developing nations are suffering from some maladies. The Planning Commission, Govt. of India is rightly very vocal about it. We should also learn from the Industrial Management of the country (which is far better managed, efficient and effective). To augment this sub-sector of management in agricultural extension, which is a crying need, the Union Government should establish an independent autonomous Council of Agricultural Technology Transfer (CATT) to be headed by a Secretary rank management professional or a technocrat with wider and deeper field extension experiences and management acumen. The re-organization on this line should follow at the state levels then. A High Level Committee of Extension Scientists and Subject–Matter Specialists may go into this policy issue on an emergency basis. The empire building habit of authorities must be sacrificed in the national interest.

9. Extension discipline is made out of several disciplines. Therefore, the extension professionals unfortunately are not very deep in each case of the contributing disciplines – Education, Sociology/Rural Sociology, Educational Psychology, Farm Technology, adult on the base of agricultural education and the agricultural Communication Technology (ICT). Realizing this weakness, we should promote continuing learning – Adult Education on those disciplines for improving our commitment and efficiency. We must realize this basic truth.

10. The extension professionals and the subject–matter specialists, at present somehow, are not tuned together like the two sides of the same coin. This area needs improvement in the interest of the field extension work and activities; in its absence we are not cutting much ice in our field work; this is extremely important.

11. Management is an omnipresent concept and in that sense a basic critical requirement everywhere; Maximum attention to this is the crying need of the day.

12. As a long-term extension strategy, the subject–matter specialists and the extension professionals should be made into a cadre with the Time Scale so that their valuable experiences are not lost. This is crucial indeed.

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