

Extension Approaches for Doubling Farmers' Income in SAARC Countries

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The SAARC, which stands for South Asian Association for Regional Cooperation is comprised of Eight South Asian member countries namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. A vast population in the region lives in rural areas and depends upon agriculture for livelihood and survival. Share of rural population in total population of this region varies between 66 per cent in Pakistan to 86 per cent in Nepal. Except for Maldives, share of agriculture in total GDP varies between 16.5 per cent to 40 per cent (Anonymous, 2017). In the past decade these South Asian countries have achieved agricultural development. But this progress has not been sufficient to lift half a billion people of this region out of poverty. On the contrary, SAARC Region is broadly classified as low-income category in global parlance. Poverty and hunger still remain major challenges for this region. Future growth of agriculture sector is critical to this region for eradication of poverty, livelihood security, reduction in hunger and promoting sustainable and inclusive growth of the regional economies.

Agricultural Challenges faced by SAARC countries

At present, agriculture in developing countries is caught in a vicious cycle of low income – low investment – low technology – low productivity – low income. Growth of agricultural output has slowed down in most of the SAARC countries and in other countries where growth is still at reasonably high level, it is becoming increasingly difficult to maintain that. The major challenges for agriculture in the region are to raise and sustain agriculture growth, ensure food and nutrition security, to face the challenge of climate change, adjust to changes in

energy scenario, maintain bio-safety and bio-security, make sustainable use of natural resources, and protect bio-diversity. Despite high potential, agricultural productivity is getting stuck at low level and increase in productivity requires increased use of inputs. This is lowering efficiency of production and squeezing profit margins. Natural resources like land, water and ecosystem are showing symptoms of degradation and causing adverse effect on sustainability and prospects of future growth. Therefore, meeting the demand of food and nutritional security for this region in future becomes a major challenge.

The region is home to 1.567 billion people (23.7% of global population). The share of the region in terms of global land and water resources is however much lower than the population share. This region's geographic coverage is mere 3.95 per cent of the global land mass. The region also has very high incidence of poverty and hunger. Around 451 million people in the region live below poverty line; and proportion of these hardcore people in the total population is 28.83 per cent. The principal reason for high incidence of poverty in the region is low per capita income and inequitable distribution of income. With 23.7 per cent share in global population, the region has only 2.62 per cent share in global income. Lowest per capita income is in Afghanistan while the highest is in Maldives. Per capita GNI in India and Pakistan is around US\$ 1,000. Low level of income is one of the primary reasons for wide prevalence of poverty and severe under-nutrition. Poverty in the region varies between 21 per cent to 53 per cent (Anonymous, 2017). Similarly, percentage of population that suffers from hunger (below minimum level of

dietary energy consumption) varies between 17 per cent in Nepal and 30 per cent in Bangladesh. In India the per capita income of very small farmers has been reported as Rs. 2,503 to Rs. 32,324 for large farmers per capita per annum. An overall average income of Rs. 10,411 per capita per annum has also been reported through NSSO (2005) data (BIRTHAL *et al.*, 2014). The consumption expenditure survey of NSSO (2011-12) in India reveals that near about one out of five rural household with self-employment in agriculture as their principal occupation were having less income than the poverty line.

Another worrisome aspect in this region is increasing dependency on land for livelihood as revealed by the increase in number of workers per hectare of land. There is excessive employment pressure on agriculture, despite a significant decline in its share in the national income. In case of India, agriculture sector engaged 52 per cent of the country's workforce in 2009-10, compared to 69 per cent in 1983, while its share in the gross domestic product (GDP) declined from 40 per cent to 15 per cent during this period. Further, farming in South Asia is dominated by small holdings i.e. average size of holding is below 0.5 hectare in Bangladesh, below 1.0 hectare in Sri Lanka and Nepal. In India, average farm size is 1.41 hectare. According to the Agriculture Census (2015), about 85 per cent of Indian farmers fall under the small and marginal category. One of the major problems for rural Bangladesh is also small and marginal landholding. Around 66 per cent of the labor force of Bangladesh makes its living from farming and more than 81 per cent of these farms are less than one and a half acres in size (Ahmed *et al.*, 2013). Rural household members are typically engaged in agricultural pursuits for which the weather-induced seasonality of the crop cycle constitutes their greatest source of variability in income flows (Hossain *et al.*, 2009). Except Pakistan, holdings below one hectare account for more than 60 per cent of total farm holdings (BIRTHAL *et al.*, 2014). Except Pakistan and Afghanistan, one hectare of arable land supports

more than one agriculture worker in all SAARC countries. Close to five workers draw their livelihood from one hectare of arable land in Bangladesh and Nepal. Therefore, we can clearly see that the present worry is not confined to increasing agricultural production in this region, rather a much deeper concern is required to resolve the complex issue of overall farmers' welfare through poverty alleviation and upliftment of their income.

Role of agriculture in poverty alleviation and income upliftment

Some studies on poverty in India have shown that it would be hard to restore India's momentum in poverty reduction without higher and more stable agricultural growth. The relationship between poverty and growth rates in the agricultural and non-agricultural sectors for 17 major states of India show that the correlation between the rate of reduction in poverty and agricultural growth was 0.52; non-agricultural growth shows a correlation of -0.13 (Chand, 2010). A paper by Devkota, (2013) also provides a clear quantitative link between agricultural productivity and poverty among rural households in Nepal using Sen's poverty index (1973). They have empirically found that growth in agricultural productivity substantially helps in poverty reduction. Another paper by Alam (2007) examined the pattern of economic growth during 1991 to 2005 in order to assess the role of agriculture in promoting equitable growth in Bangladesh. The paper examined the strength of the channel through which agricultural growth benefits the poor by increasing their income and identified the measures that could bring a more pro-poor agricultural growth in the country. It is now abundantly clear that future growth of agricultural sector and farming community holds the key to livelihood security, eradication of poverty, reduction in hunger, inclusive growth and sustainable progress of economy of each of the nations.

Policy initiatives in SAARC countries to enhance

farmers' income

Realising the role of holistic development of agriculture sector in national economy, respective Governments of several SAARC countries have taken major policy initiatives with extensive focus on upliftment of farmers' income. The Royal Government of Bhutan (RGoB) and the World Bank has launched a \$8million Food Security and Agriculture Productivity Project (FSAPP) in the year 2017 to support efforts to reduce rural poverty, food insecurity, and malnutrition to benefit the Bhutanese people. The FSAPP is a five-year project (2017-2022) funded through a grant under the Global Agriculture and Food Security Programme (GAFSP). The project is designed to reduce the country's reliance on food imports and help combat malnutrition in children while improving the productivity of agriculture sector, which employs 60 per cent of Bhutan's people. This project is expected to benefit over 10,000 households. More than 30 percent of beneficiaries are women. The project also aims to improve homegrown school feeding programs for 3,000 school children in 16 schools located in 11 project gewogs. The Government of Sri Lanka has also initiated "Agriculture development programme to enhance farmers income" to enable the farmers to enhance their income. Under this programme, the farmers are being encouraged to ensure and prioritize the qualitative character of their farming, storing and marketing practices. The present focus of Indian agriculture has also shifted from production to farmers' welfare through improving their livelihood and income. Along the same line, doubling farmers' income within next five years has recently become one of the priority missions of the Government of India. The Government of India has constituted a Doubling Farmers' Income committee as well. The Committee has adopted a basic equation of Economics to draw up its strategy, which says that net return is a function of gross return minus the cost of production. This throws up three variables, namely, productivity gains,

reduction in cost of cultivation and remunerative price, on which the Committee has worked its strategy. In consequence, the strategy platform is built by four concerns, namely, sustainability of production, monetisation of farmers' produce, re-strengthening of extension services recognizing agriculture as an enterprise and enabling it to operate as such, by addressing various structural weaknesses. The Government has formulated a 7 point agenda to meet this goal includes focus on irrigation, provision of quality seeds and nutrients based on soil health of each field, large investments in warehousing and cold chains to prevent post-harvest crop losses, promotion of value addition through food processing, creation of a national e-market, introduction of a new crop insurance scheme to mitigate risks at affordable cost and promotion of ancillary activities like poultry, beekeeping and fisheries (Anonymous, 2007). The committee has also suggested six sources of doubling farmers' income, namely enhancing agricultural productivity, increasing total factor productivity, diversification towards high value crops, improving crop intensity, reaping the benefits of terms of trade, and promoting non-farm employment opportunities.

Approaches for doubling farmers' income

To commensurate with these policy interventions, some innovations in agricultural extension system are required. Given the present need of the hour, the roles of extension are multifaceted today. Besides the traditional roles of technology transfer, communication and diffusion of innovation, presently, extension system needs to build its capacity in areas such as collaboration, partnership building, entrepreneurship development, ICT applications, gender mainstreaming etc. A lot of modifications are required in the existing extension approaches and models to keep pace with the fast-changing scenario of SAARC economy. There need to be more dynamic and situation specific mechanisms to constantly meet up the demand of farmers and other

stakeholders in the system. As we are explicitly focusing on the issue of enhancing farmers' income, the extension mechanisms should also be directed towards linking farmers to markets in a more efficient way by giving them a business orientation. Agriculture today has to be viewed as agri-business and farmers as agri-preneurs. On this note, some extension approaches have been discussed below which are in tune with India's seven-point agenda for increasing income of farm households in a holistic way.

Improving Total Factor Productivity (TFP): Improving total factor productivity required decrease in cost of cultivation alongside increase in gross production. High cost of cultivation is one of the major reasons for low return of farmers from agriculture. Efficient and judicious use of inputs is therefore imperative for pushing the income of farmers upward and also, to prevent environmental degradation due to agriculture. Several policy initiatives of the Government of India in the form of a number of programmes with explicit focus on agricultural input use efficiency are being implemented to combat these challenges. For example, the Soil Health Card and Neem Coated Urea scheme are taking care of the soil health status and fertilizer use efficiency of individual farms. Schemes like Per Drop More Crop, and KrishiSinchayeeYojana are working towards increasing water use efficiency and resolving the problem of water availability for farmers. Similarly, ParamparagatKrishiVikashYojana is designed in order to promote organic agriculture so that use of chemical inputs can be kept under control. Further, policy implications are required to promote use of alternative energy like solar energy, tidal energy etc. to conserve the existing resource base. Such policy interventions are required at a larger scale in all SAARC countries to increase their resource use efficiency which in turn will result in reduced cost of cultivation, thus better income for farmers.

Provision of Quality seeds: Quality seed is another primary determinant of productivity. Harnessing

benefit of technology requires well-developed system for sales and distribution of seeds and plant propagation material. In almost all SAARC countries, supply of seed and plant propagation material is highly inadequate to meet the emerging and growing demand. The advantage of this is being taken by unscrupulous private trade. Development of a competitive and regulated seed industry, by involving private sector in seed production and distribution, is a critical imperative.

Utilization of digital means to enhance farm productivity and income: Rapid spread of Information and communication technology (ICTs) in semi-urban and rural areas, especially the mobile telephony in recent times, coupled with continuing cost reduction in real terms, provides an unprecedented opportunity to utilize ICTs in serving farming community. In future, SAARC countries should focus on new ICT-mediated engagements in Research-Education-Extension continuum that promote greater ease of technology exchange among relevant entities and with farmers while improving farmers' opportunities for improved income and livelihood security. Expert systems and Decision Support Systems can be used for solving farmers' problems and responding to farmers' query as well at much faster rate and pace. Though e-commerce is now an established mode of trade in many spheres day to day life, trading of agricultural commodities over cyber space is not yet very popular. Exploring the scopes of e-commerce in transaction of agri-inputs, and as well as agricultural produce will help farmers gaining prompt return and will also increase their share in consumers' rupee by eliminating unwanted middle man intervention. The e-National Agricultural Market (e-NAM) initiative of Government of India in 2015 provided a uniform platform for farmers and agricultural traders where all stakeholders could come under the same umbrella for transparent and effective transaction of their produce. Such e-commerce and e-governance use in agriculture can be very effective in areas of crop

insurance, agricultural credit, efficient transaction of commodities across all the SAARC nations.

Digital means have also potential scope in enhancing productivity with the help of application of artificial intelligence and drones in agriculture. The Indian government has launched a collaborative research project involving use of drone technology in farming sector for assessing quality of soil and compensation for losses due to flood, the Ministry of Agriculture. The project aims to implement [Hyperspectral Remote Sensing](#) using drone systems and developing a locally researched prototype for soil health monitoring and integrating it with satellites for large scale agricultural applications in the future. Therefore, using digital media is a smart option in the present context to enhance agricultural productivity and farmers' income. But for effective implementation of these means at grassroots level, policy efforts are required to increase e-literacy and digital penetration in the remotest parts of the country. Skill building and awareness building among farming communities to utilise digital media is imperative to exploit its highest potential.

High Value Agriculture: Agricultural diversification towards high-value agricultural commodities like fruits, vegetables and dairy products is seen to hold vast potential to accelerate growth and improve farm income in all the SAARC countries. Harnessing full benefit of agricultural diversification requires new institutional and contractual arrangements for production and marketing, ensuring that smallholders are not excluded from the process. The vision should throw light on how networks of farmers, agribusiness and public agencies operate and what are the conditions and policies that facilitate integration of smallholders (Chand, 2010). A study by Togbay (2005) states that while the developments in the agricultural sector in Bhutan have created diversification opportunities, there are constraints that can hamper the ability of farmers; especially that majority of Bhutanese farmers are poor and

marginal farmers. Lack of adequate infrastructure, limited access to information, credit, and other assets (land, water, and technological know-how), can severely constrain the scope of diversification initiatives. These barriers, information gaps, and capacity limitations present not only an opportunity, but also a need for authorities' concerned (Ministries, agencies, donors) to provide support and assistance to build the capacity for pro-poor diversification activities.

Processing and value addition: The importance of post-harvest technology can hardly be overemphasized in the present context of high agricultural production. Production technology alone cannot serve ultimate objective unless it is supplemented by processing, distribution, marketing and consumption technologies. Despite its strong agricultural production base, a significant amount of food produce gets wasted in India due to inadequate infrastructure such as packaging facilities, storage, transportation, cold chain, and low levels of processing. According to the Ministry of Food Processing Industry (MoFPI), post-harvest losses account for US\$1.5 billion (Rs 92,000 crores) annually. Overall, less than 10 per cent of the total food produced is processed into value added products in India in comparison to the US and China which process 65 per cent and 23 per cent of their produce, respectively. Similarly, other developing countries such as Thailand, Philippines, and Brazil process as high as 30, 78, and 70 per cent of their produce, respectively. SAARC countries, of course have made significant contributions in agricultural research as a whole but there are still such areas which need more attention and priority. Cost effective post-harvest technology is one of them. In practice, even the accepted technologies are not being utilized due to various reasons.

Improving terms of trade: SAARC region has a rich topographic and climatic endowments and variations, where a wide variety of agricultural crops such as wheat, rice, cotton, sugarcane, maize, vegetables, fruits, roots and tubers, ornamentals,

medicinal and aromatic plants, plantation crops, spices and others are grown. A significant increase has been observed in the export earnings from the agricultural crops during the recent years in the SAARC countries. This sector has the potential to provide opportunities to increase income and alleviation of hunger and poverty and curve down socio-economic problems of the region. For this potential to materialize more attention needs to be given on meeting the international food safety and quality measures. Consumer preferences for quality, variety and safety are rising rapidly. Modern trade and retail asks for conformity to specified standards and their enforcement, as these help in segregating product distribution to suit requirement of suppliers and consumers; and help ensure public food-safety. SAARC countries would need to upgrade and enforce standards in line with changing consumer and trade demand. This would eventually help in better Sanitary and Phyto Sanitary (SPS) compliance and export promotion. Bio-diversity, Intellectual Properties (IPs).

Promoting off-farm income opportunities:

Supplementing on-farm sources of income with off-farm employment opportunities is proven way of increasing household income in many studies. A study by Mishra *et al.* (2015) suggests that the impacts of off-farm income in Bangladesh are uniformly positive across the unconditional quantile regression and significantly increase food consumption expenditures for all quantiles. There is mounting evidence that rural nonfarm income in Bangladesh (i.e., income derived in this sector from wage-paying activities and self-employment in commerce, manufacturing, and other services) is important to farm and other rural households, including the landless poor as well as rural town residents (Reardon, 1997). Reardon (1997) further noted that rural nonfarm income is an important factor in food security because it allows greater access to food. Rural households and farm households, in poor countries, can increase their food consumption or increase food security through

engagement in off-farm work. Aside from increasing employment, rural nonfarm labour may discourage rural-to-urban migration, revive traditional crafts, and build small industries using local resources. With these advantages, it may follow that nonfarm employment meets the following objectives of policymakers in developing economies: alleviating poverty, reducing income inequality, decreasing unemployment, and building local industry. Policies aimed at increasing human capital and training programs that increase the likelihood of securing off-farm employment should be put forth or at least given serious consideration by policymakers.

Frontline extension interventions in India for enhancing farmers' income

Effective Convergence

The KVKs are actually working as link between research institutions and different development departments for fostering the lab to land process and its feedback. KVKs are working as an umbrella for all agricultural related schemes at district level for technology backstopping. ATMA, Department of Agriculture, Horticulture and other line departments, National Horticulture Mission, RKVY all are running at the district level with the technical support of KVKs.

KVKs assisted in preparation of Comprehensive District Agriculture Plan (CDAP) of 615 districts contributing analysis of trends in agricultural growth and food grain production, changes in the land use pattern, land holding pattern, cropping pattern, production, productivity, gaps in productivity, technology, institutional support (extension, research, credit, marketing and risk mitigation) and infrastructure, quality seed production/availability, gaps in input and other support services, extent of farm mechanization and its spread, need and problems in crop diversification.

A convergence platform of 12 different

departments/ organizations under the leadership of KVKs in the state of Madhya Pradesh involved 5000 farmers from each district. During 2013-14, the programme covered 26551 villages, and 11.35 lakh farmers. The major activities covered deep ploughing, soil testing, seed treatment, etc. The Govt. of Madhya Pradesh has appreciated the efforts of KVKs and recognized the role of KVKs by conferring KrishiKramana Award. Groundwater recharging, apiculture, value addition to ginger, safedmusli, fennel processing, water harvesting are some successful convergence models in Rajasthan.

Empowering tribal farmers

About 125 KVKs are working in Tribal districts facilitating technology support and related inputs to the tribal farmers located in remotest places and have proved to be the nearest to the farming community for technical know-how and do how on crop, livestock and enterprise-based livelihood related activities. Total 7.28 lakh tribal farmers benefited from technology demonstration, skill development, visit to exhibitions and exposure visits,

Twenty-three seed societies of tribal farmers have been formed with the initiative of KVK Jhabua, Madhya Pradesh in 6 blocks which have produced 557.51 tons of seed during last three years. It has also helped in minimizing migration, increased crop intensity and in overall socio-economic development of tribal farmers.

Production to Marketing - value chain development

National Commission on Farmers (NCF) indicated that farmer-to-farmer learning and technology transfer is most frequent and is found to be reliable. Farm schools at the farms operated by farmer-achievers should be established in large number in different agro-climatic zones and farming system regimes. Farm School and Farmer Field School can be effective tools in farmer led extension. It has become an absolute necessity to

shift extension focus from production-orientation to market-led extension resulting in increasing farm income by adopting end-to-end approach. Market-led extension help the farmers to minimize the production costs, improve the quality of farm produce, increase the product value and marketability resulting in increasing of income to the farmers. The integration of Research, Extension, Farmer and Market linkages, need to be addressed by undertaking research and extension activities through the participatory technology development mode, creating a Research-Extension-Farmer and Market coordination committee at state level to take necessary policy initiatives to enable and establish linkages. The success story of Col. Deswal of Bulandshahr district of Uttar Pradesh in collective farming and marketing may be replicated in other regions.

Marketing support by the Public Sector

The State Governments are supporting smallholder farmers to transport their produce to the distant markets for fetching better price. Himachal Government is allowing 40 kg produce (fruits and vegetables) of each farmer to send it to Delhi by state roadways bus with a fee of Rs. 3 per Kg. With this mechanism small farmer are able to sell their produce in Delhi market every day. The Department of Agriculture Cooperation and Farmers Welfare (DAC&FW) is also promoting farm gate processing and value addition through several development projects.

Electronic National Agricultural Market (eNAM)

National Agricultural Market is broadly a concept to unify all the nationwide agricultural markets by creating a central online platform for agricultural commodity price discovery. It is envisaged as a pan-India electronic trading platform that endeavors the integration of Agricultural Produce Marketing Committees (APMC) market yards, submarket yards, private markets and other unregulated markets to create a unified national market for all agricultural

commodities. NAM is a virtual market that has many physical markets at the core of it. These physical markets will be provided with technological infrastructure and trained professionals to update the arrival of new produce and sale from the stocks. The web platform will allow online auction and bidding and will eliminate the need for physical presence at the point of sale by letting traders trade electronically. Traders can view price differences across markets and can trade accordingly after considering the transportation costs. The NAM scheme will be implemented over a period of 3yrs from 2015-16 to 2017-18. It will cover a total of 535 regulated market yards in this three-year period. A total amount of Rs. 200 crores have been earmarked for the scheme for supplying customized software and subsidizing necessary infrastructure.

Skill development in Agriculture

Agriculture and allied activities accounts for about 15.7 % of country's GDP and is estimated to employ about 124.7 million people as cultivators and 106.8 million as agricultural labour (Census 2001). Besides this agriculture industry employs a large number of people in the organized and the unorganized sector. Based on the assumptions of food grain production and manpower required to handle the total produced, the same is derived at (0.20 Million) for organized and (1.95 Million) for unorganized sector. Considering the above factors, Agriculture Skill Council of India was set up in January 2013 as a Section 25 company under Companies Act of Ministry of Company Affairs. The endeavour of ASCI is to work towards building capacity in the agriculture industry and bridge the gap between laboratories and farms. ASCI envisions to touch/ upgrade skills of cultivators, agricultural labour and direct and indirect labour engaged in organised and unorganized agriculture and allied industry. KVKs are organizing 200 hours duration of skill training for the farmers and rural youth. ASCI provides skill training certificates exposing the trainees to a host of skill based employment opportunities. During 2017-18, 254

KVKs, 42 ICAR institutes and 38 SAUs organized about 900 skill training programmes in 70 job sectors covering 18000 rural youth.

Farmer Producer Organization (FPO)

A Producer Organization (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen. A PO can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members. In some forms like producer companies, institutions of primary producers can also become member of PO. Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs. PO is a generic name for an organization of producers of any produce, e.g., agricultural, non-farm products, artisan products, etc.

There are some successful cases and one such FPO is Perundurai Groundnut Farmers Producers Company, Erode District, Tamil Nadu which was mentored by KrishiVigyan Kendra, Erode. The company was registered in 2015 under Company Act and has current membership – 540 (420 men and 120 women), current share capital mobilized from members – Rs.34.20 lakh. The capital received from NABARD was Rs.4.20 lakh and an additional budget of Rs.8.76 lakh has been sanctioned by NABARD for three years. The FPO has leased in 5 acres of land and set up a state of the art oil expelling machine. Oil is extracted from the groundnut aggregated from its Members and branded for bulk as well as retail sale. Groundnut cake is prepared and distributed among Members on cost basis as cattle feed. Groundnut shell is briquetted and used as fuel for boilers.

Off-farm income generation

KVKs of Punjab played a key role in achieving 10,000 tons of honey production and skill enhancement of 25000 beekeepers. KVKs trained 7199 farmers/farm women/rural youth in 343 training programmes on various facets of

beekeeping including handling of bee colonies, extraction of honey/wax, winter packing in honey bee colonies, control of mites, union and division of colonies, method of application of sulphur in bee boxes, giving artificial feed to the colonies, etc.,

Crop Diversification

KVK Ahmednagar, Maharashtra in collaboration with the State Department of Agriculture, conducted large-scale training and demonstrations on drumstick cultivation. A monetary benefit of Rs. 55,000 to Rs. 61,000 per ha in 31 districts of Maharashtra and 3 neighbouring states have been realized by the farmers.

CONCLUSION

Low income of farming community, especially that of the small and marginal farmers is a common challenge in all SAARC countries. But to combat this challenge, new opportunities are also arising in agriculture sector in account of choice of technology, change in demand patterns, surge in

value chains and supermarkets, revolution in Information & Communication Technology, institutional innovations, and globalization. Trade based on comparative advantage is also offering many opportunities. Agriculture is fast becoming more knowledge-intensive, market-oriented and demand-driven. Extension is thus required in a systemic perspective: from production to consumption in a value chain mode. Conventional systems of technology-transfer are inadequate in the fast-evolving agriculture. At present, the role of extension is much beyond mere transfer of technology as the focus has shifted from production to commercialization of agriculture. To commensurate with this goal the extension system has to come up with innovative measures to facilitate per capita income of farmers. Such approaches have been discussed in the above paragraphs. These opportunities are to be reaped by the new generation extension system to match the pace with current priority of enhancing farmers' income in SAARC countries.

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