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Monograph

## Strategic Role of State Agricultural Universities (SAUs) in Rural Development

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### Introduction

State Agricultural Universities (SAUs), in India, have adopted the U.S. land-grant model to meet its goals. They are autonomous organizations with state-wide responsibility for agricultural education, research and extension work. Through teaching, research and extension activities the 64 SAUs across 29 states of India are significantly contributing to agricultural production and productivity of their respective states directly and therefore to the rural development. Strategies adopted by SAUs for rural development includes technologies and innovations, extension and human resource development. Regional Agricultural Research Stations in various agro-climatic zones have strengthened research-extension-farmer (REF) linkages. KVKs under administrative control of SAUs serve as farm science centers of their respective districts. The green revolution, with its remarkable social and economic impact, witnessed significant contributions from the SAUs, both in terms of trained, scientific work force and the generation of new technologies. However, most of the agricultural universities in India continue to be dominated by top-down, monolithic structures that follow a limited extension mandate.

In India, the first SAU was established in 1960 at Pantnagar in Uttar Pradesh. The SAUs were given autonomous status and direct funding from the state governments. They were autonomous organizations with state-wide responsibility for agricultural research, education and training or



extension education. The establishment of the SAUs, based on a pattern similar to that of the land-grant universities in the United States, was a landmark in reorganizing and strengthening the agricultural education system in India. These universities became the branches of research under the ICAR and became the partners of the National Agricultural Research System (NARS).

Subsequently, implementation of the recommendations of the Education Commission (1964-1966) and Review Committee of Agricultural Universities (1977-1978) streamlined their functioning, and all matters related to agricultural research in the states were transferred to the universities. According to Review Committee of Agricultural Universities (1978), an essential feature of the agricultural university system is the acceptance of the philosophy of service to agriculture and to rural communities with the following mandates:

- ❖ State-wide responsibility for teaching, research and extension education.
- ❖ Integration of teaching, research and extension at all levels of the university administration.
- ❖ Multi-disciplinary teamwork in the development programs of education, research and extension. Acceptance by all concerned in the university of a philosophy of service to agriculture and the rural community and emphasis on programs that are directly and instantly related to solving social and economic problems of the countryside.
- ❖ Quick communication of new knowledge to students in classrooms, to extension personnel and to farmers.
- ❖ Programs giving specialized training to the rural youth and adult men and women who are not candidates for degrees, through departments involved in responsibility for the subject matter being taught.

### **The teaching programme**

Through the National Academy of Agricultural Research Management (NAARM), newly recruited faculty members undergo foundational courses (FOCFAU) in ‘Agricultural Scenarios’, (NARES) which consists of the basics of learning, teaching, instruction, educational technology, e-learning, research project management, transfer of technology and, administration and finance management. The faculty members of the SAUs also serve as ‘resource persons’ for the SAMETIs of the Department of Agriculture, thus, involve in training of extension personnel of their respective states. SAUs have Open and Distance learning courses (certificate and diploma), to directly teach farmers in various agricultural and allied sciences. Through Massive open online courses (MOOCs),



SAUs instruct various stakeholders through single course. Numerous ICAR initiatives implemented by SAUs such as Rural Entrepreneurship and Awareness Development Yojana (READY), Experiential Learning Programme (ELP), Rural Agricultural Work Experience (RAWE) and in-plant training are relevant. The Student READY programme has been introduced in all State Agricultural Universities as an essential prerequisite for the award of a degree in order to ensure students hands-on experience and practical training in agriculture.

### **The research programme**

Under National Agricultural Research Project (NARP), the country is divided into 127 agro-climatic zones. Directorate of Research is the nodal agency of the SAU and directs frontline research activities. Regional Agricultural Research Stations (RARSs) are established in several agro-climatic zones to provide need-based and location-specific research. Many state agriculture universities are actively involved in climate smart agriculture research and also have projects related to dry land agriculture. Zonal Research and Extension Advisory Councils (ZREACs) and Research and Extension Advisory Councils (REACs) meet annually to identify the thrust areas for research in various disciplines, identify research gaps and to also provide a framework for faculty research projects. All India Coordinated Research Projects of the Indian Council of Agricultural Research (ICAR), engaging in multi-location trials are generally based in SAUs and are also administratively controlled by the SAUs.

### **The extension programme**

The core agenda of SAUs extension programmes is to reach farming community through state extension advisory services. Directorate of Extension is the nodal agency of SAUs and they promote agricultural development through fast transfer of technology programmes by providing timely information, consultancy and training to the extension personnel of line departments. SAUs not only provide technical support to line departments but also have convergence programmes with line departments and NGOs. The multi-disciplinary team of scientists at various extension centers coordinates the activities with the department of agriculture and other allied departments of agriculture. All SAUs supports All India Radio, print media and electronic media for dissemination of agricultural and allied sciences information.

### **Agricultural extension for rural development**

Extension is an informal educational process directed towards the welfare and development



of rural populations. This process offers advice and information to help them solve their problems. Rural family is the fundamental unit of various SAUs agricultural extension programmes. Agricultural extension also aims to enhance the efficiency of the 'farm family', increase production and generally increase the standard of living of the farm family.

The major stress of agricultural extension is on conducting front line extension activities viz., testing and the introduction of new technologies in the farmers' fields, dissemination of technical information, imparting training to the extension personnel, rural youth and farmers, developing innovative extension methods and strategies. SAUs also prepare crop contingency plans for both *Kharif* and *Rabi* seasons.

The agricultural extension wing of SAUs provides updated timely information on weather forecasts, prices of major crops for *Kharif* and *Rabi* seasons, bulletins, pest and disease outbreak forecasts, market intelligence, etc. All SAUs have agro-meteorology centers to forecast weather and release weather-related advisory bulletins to the farmers of their state. Directorates of Extension in SAUs encourage literacy in rural communities and ensure provision of vocational training to rural youth through KVKs. Vocational training helps in creating employment opportunities in the long run for rural youth. KVKs and Research stations adopt villages for at least three years for a range of transfer of technology (ToT) programs.

### **Major schemes operating through KVKs for rural development**

- ❖ Cluster frontline demonstrations on pulses and oilseeds.
- ❖ National Innovations on Climate Resilient Agriculture (NICRA).
- ❖ Attracting and retaining rural youth in agriculture (ARYA).
- ❖ Tribal sub plan.
- ❖ Seed hubs for pulses.
- ❖ Skill development and vocational training courses.
- ❖ E-extension services - advisory services on farmers cell phone, mobile apps development in regional language, Annapurna Krishi Prasar Sewa, etc.
- ❖ Important government schemes and programmes in convergence with allied departments are Soil Health Card Scheme, Rashtriya Krishi Vikas Yojana, National Food Security Mission, National Mission for Sustainable Agriculture, Pradhanmantri Fasal Bhima Yojana, Pradhanmantri Krishi Sinchai Yojana, Grameen Krishi Mausam Sewa, Krishi Kalyan



Abhiyaan, National Agriculture Market (e-NAM), Micro Irrigation Fund, Agriculture Contingency Plan, National Watershed Development Project, Rainfed Area Development Programme (RADP), etc.

### **The way forward for SAUs for strategic rural development**

- ❖ At present, SAUs are adopting few villages every three years and focusing on transfer of technology in agricultural and allied sciences. Furthermore, SAUs can also assist to convert the adopted villages into smart villages by focusing on integrated rural development and thus, increasing standard of living of the rural population.
- ❖ SAUs should inculcate spirit of agripreneurship among rural youth by nurturing the new ideas in agri-incubation centers.
- ❖ Gender mainstreaming in agriculture should be given priority because women constitute 70 per cent of the rural population.
- ❖ SAUs should engage more directly and more effectively in rural development and partnership with line departments and non-government organizations.

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