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Editorial

LAND GRANT UNIVERSITIES IN INDIA: EPICENTRES OF TRANSLATIONAL RESEARCH

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Education, especially in the context of rural development, continues to share a significant part of the intellectual, academic and political discourse in the country at both state and national levels. The recently formulated National Education Policy 2020 (Govt. of India, 2020a) proposes, inter alia, rural education solutions through award of merit scholarships, creating library facilities and handholding rural youth in admission and recruitment examinations to engage shortage of teachers in rural areas and social and economic inequities. The New Educational Policy also devotes one chapter to catalyzing quality academic research and another chapter to re-imagining vocational education. Likewise, the upcoming Science, Technology and Innovation Policy, 2020 (Govt. of India, 2020b) places emphasis on a broader vision with respect to creating an ecosystem of Research and Development (R&D), setting up research and academic institutions and innovation clusters in rural and remote areas. Elsewhere, challenges in rural development are addressed by providing mega budgetary support to a variety of schemes.

Amidst this maze of policy measures and narratives, light needs to be shed on an important game changer model – Land Grant Universities – that we had borrowed from the USA. The USA provided liberal assistance to India in setting up seven agricultural universities with the Land Grant orientation (Propp, 1968). Thereafter, other state agricultural universities were modelled upon this system. All these state and central agricultural institutes continue to respond to the challenges and opportunities to the agriculture in their respective command areas.

The University Education Commission, set under the guidance of Dr. S. Radhakrishnan, had flagged the issue of establishing rural universities. It was this ambience under which the Land Grant replication in India began with the formation of the First Joint Indo-American Team on Agricultural Research and Education in 1955. Concomitantly, another facilitating development in the US was signing of a contract between Technical Cooperation Mission and five Land Grant universities for assisting in the upgradation of agricultural and veterinary education throughout India. This contract was known as the Agricultural Education and Research Project. However, in 1961 this programme was tweaked to restrict its focus only to those states that had established or were in the process of establishing universities on the Land Grant pattern.

Initially established under the Morrill Act of 1862 (amended from time to time thereafter), the Land Grant institutes in the USA evolved towards convergence of research, teaching and extension. Establishment of Agricultural Experiment Stations under the Hatch Act of 1887 and of Cooperative Agricultural Extension Service in 1914 under the Smith-Lever Act also facilitated this integration. As a result, an important hallmark of this model is the classic triad of research, teaching and extension. In India also, prior to the introduction of the Land Grant model, these three concepts continued to be focussed in disparate - both geographically and institutionally – ways. Teaching staff would rarely undertake research activities and a research faculty would not teach any class. It was state departments (of Agriculture and of Animal Husbandry) which were mandated to undertake research and extension activities. The research output lacked practical utility and extension work, in general, aimed exclusively at the timely delivery of the requisite inputs and services.

The First Joint Team was composed of five Indians and three Americans. The Team, in its recommendations, endorsed the need of establishing rural universities and identified potential states for this purpose. It further recommended that postgraduate programmes in agricultural sciences be started at the Indian Agricultural Research Institute and Indian Veterinary Research Institute. The First Joint Team made recommendations towards aligning the mandate of these rural universities with the Land Grant institutes, even though the exercise involved overwriting some recommendations made by the Commission set up under the leadership of Dr. S. Radhakrishnan (Propp, 1968). Another factor in this cohort was the entry of Rockefeller Foundation during 1956. The Foundation played a major role in developing postgraduate school at the IARI. Another assignment taken up by the Foundation was to help formulate national research programmes in cereal crops. The leadership provided by Mr. Ralph Cummings deserves mention in this regard.

To give shape to the Land Grant model in India, the country was divided into five zones. The Zone I including Uttar Pradesh and Madhya Pradesh was assigned to the University of Illinois. The present Govind Ballabh

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Pant University of Agriculture and Technology, Pant Nagar (Uttarakhand) is the product of this partnership. Region II with states of Punjab and Rajasthan was the responsibility of the Ohio State University. Punjab Agricultural University, Ludhiana (subsequently branched off towards Haryana Agricultural University, Himachal Pradesh Krishi Vishwavidyalaya, and Guru Angad Dev Veterinary and Animal Sciences University), ICAR-National Dairy Research Institute, Karnal, and Maharana Pratap University of Agriculture and Technology were provided handholding in this region. Dr. T. Scott Sutton from the Ohio State University was the key expert who provided valuable help to the Punjab government in giving a concrete shape to the proposal. He was followed in the relay by Drs. Russell Olson and Raymond Cray. Institutes identified in Region III (Odisha, West Bengal, Assam and Bihar) were allotted to the University of Missouri. Region IV included Andhra Pradesh, Gujarat and Maharashtra. The Region V - comprising Karnataka, Tamil Nadu and Kerala – lay with the University of Tennessee.

The three-pronged mandate of these universities assures that the research is oriented towards addressing regional challenges. The research-extension linkage infuses dynamism in the research agenda. Farmer-scientist linkages have been remarkably strengthened under this system, especially in areas where farmers have been receptive to the technology. Punjab and *Terai* (now mainly in Uttarakhand) regions typify the success of this model. Ideas continue to be exchanged across many interfaces. Biannual Kisan Melas are the largest of these interfaces. Technology recommendations and subsequent dissemination are a unique feature of this system. These translational research outcomes have a major societal impact. Besides, the other research output in the form of research papers and patents - characteristic of a conventional university – generally continues to pace up .

Impact of the Land Grant model, especially of its translational research output, has been quite visible over the years at least in regions like Punjab, Haryana and *Terai* regions of Uttarakhand where rapid uptake of the technology continued to drive research in the institutes set up under the model. It goes without saying that Punjab Agricultural University not only remained a catalytic force behind the Green Revolution in the region but also kept on pacing its research with consequential challenges like groundwater depletion and crop residue management.

Political will, particularly at the state level, played a substantial role in adoption of the Land Grant model. Two examples of this visionary leadership are: Sardar Partap Singh Kairon and Gobind Ballabh Pant. The current political leadership should focus on expanding such models for embracing all the actors along the value chain, which may lead to multi-layered academia-public-private partnerships. It should also encourage scouting for result-oriented models. Modern era of globalization provides an enabling environment in this regard.

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