Chapter 2.

GENESIS AND DEVELOPMENT OF AGRICULTURAL SCIENCE UNIVERSITIES IN INDIA

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Chung\(^1\) emphasizes on Agricultural Education. According to him, “… ingredient for agricultural development is educational institutions, including provision of training, extension and research. It may be said that the relative standard of education among different people, farmers in particular is a key factor in increasing agricultural productivity and in achieving higher standards of living. Accordingly, universal education for all people of all ages is essential for attainment of these ends”.

India ranks as one of the top 12 industrial countries in the world in terms of output, but it remains a predominantly agricultural country with 70 percent of the population dependent on, and 35 percent of its annual value of production from, agriculture\(^2\).

Agriculture provides a number of industries with raw materials and is important for the industrial development of the country. Growth and development of agricultural economy depend upon a number of factors. Some of the environmental factors are climate, land fertility, nature of the soils, and extent of rainfall. Besides natural environmental factors, the development of agriculture depends upon a number of institutional factors like irrigation facilities, availability of transport, quality of seeds, fertilizers, crop diseases, pesticides and so on.

To get optimum productivity from agriculture, farmers must have knowledge about these factors. For instance, it is essential to know about the different types of soils and the crops that will be cultivated on these soils, various pests and their control, weather forecasting to cultivate the land and so on. In India majority of the farmers were illiterate and following traditional (conventional) farming.

In traditional farming method, productivity of land and labourers are found lower than that of modern farming methods. Techniques of production in the agriculture sectors were quite simple and primitive. Wooden ploughs, simple
implements and bullocks were used for cultivation. The rain was the main source of water. The energy used in the sector was low and in the form of animal power. Manure was used as fertilizers. Storage Method of agricultural products was defective. Consequently, productivity of the land is also low.

Hence the need was arisen to improve and develop modern methods in agriculture. In this way, Research and developmental activities become necessary in Agriculture and related sciences. Further, education of the farmers felt necessary so as to adopt modern methods and techniques in Agriculture. It was only through the education; the output of the research will reach the farmers and indirectly improve the agricultural methods and techniques. To provide education and training for the farmers and undertaking research in agriculture and related sciences, the various Agricultural Science Universities, Colleges and Research Institutes were established in India.

2.2 Genesis and Development of Agricultural Science Universities in India

Records reveal that agricultural education in India began with the Taksasila University. The University had a curriculum which included eighteen arts, that includes Medicine, Surgery, Astronomy, Agriculture, Accountancy, Archery, Astrology and Snake Charming. This University flourished as an educational centre till the fifth century A.D., while Nalanda University was destroyed towards the end of the twelfth century.

Later in the medieval period, College and Universities established by Mohammeden rulers were not provided agricultural education. The curriculum of these institutes included Arabic and Persian Literature, Grammar, Rhetoric, Logic, Law, Geometry, Astronomy, Natural Philosophy, Metaphysics and Theology. These colleges are better known as Madrasahs.

Under British rule, several schools and colleges were founded but they are concentrated on education on law, literature and religion. At the end of 1856, the
Government of India approved the general plan for the establishment of three Universities at Calcutta (Kolkata), Madras (Chennai) and Bombay (Mumbai) from 1857. But they are aimed to cover various subject courses.

The application of chemistry to soils in 1840 and the establishment of the Roth Amsted Research Station in 1843, followed by the opening of the first agricultural college in England at Cirencester in 1845 are known landmarks of development of agricultural science and education in the Report of the Royal Commission on Agriculture in India. The first proposal for a Special Department of Agriculture in India originated from the Commission in Bengal and Orissa in 1866 and later in Uttar Pradesh.

Reviewing the conditions prevailing in India during 1920s, the Royal Commission on Agriculture in India concluded in 1928 that “however efficient an organization might be built up for demonstration and propaganda, unless it was based on the solid foundations provided by research, it was merely a house built on sand”.

A direct outcome of the work of the Royal Commission of Agriculture was the establishment of the Imperial Council of Agricultural Research in 1929 (Now known as Indian Council of Agricultural Research).

In 1936 and 1937, Sir. John Russell, Director of Rothamsted Experimental Station, visited India to review the condition of Indian agriculture and he reported that “in general, the men who actually till the soil are scarcely touched by the national programme of agricultural education”.

By 1947, the development of education and research facilities in agriculture and related fields advanced rapidly as India had 17 colleges of agriculture with an annual enrolment of about 1500 students. Agricultural research was conducted largely in the fields where industry directly infringed on agriculture, such as in cotton through the activities of the Indian Central Cotton Committee and in jute, sugar, coffee, tea, rubber and tobacco. Particularly in sugar, the progress was spectacular.
and no less than 80 percent of the sugarcane grown in India by 1947 was claimed to be under improved varieties, for which sugarcane research could claim credit.

By 1947, the major institutions functioning in agricultural science education and research are Indian (formerly Imperial) Council of Agricultural Research, Indian Institute of Fruit Technology, Lyalpur (1945), the Central Agricultural Marketing Department (1934), Indian Veterinary Research Institute (1890), the Indian Dairy Research Institute (1923), the Central Rice Research Institute (1946) and various research centres like the Pusa Institute and the Sugarcane Breeding Institute, Coimbatore.

Among the colleges of Agriculture functioning by 1947, in Coimbatore (1868), near Madras (1878), College of Agriculture, Pune (1879) formed as a branch of College of Science. Later the Allahabad Agricultural Institute was founded in 1910 and was sponsored co-operatively by a number of churches and missions and currently prepares students in agriculture, agricultural engineering and dairying. Then a few colleges included courses in agronomy and biochemistry.

After the independence, the importance attached by the new nation to education is reflected in the Government of India resolution of 4th November 1948, setting up of the Indian University Education Commission under the Chairmanship of Dr. S. Radhakrishnan. Among the major recommendations, the Commission emphasized Professional Education in Agriculture. ‘The study of Agriculture in primary, secondary and higher education be given high priority in national economic planning. So far as is feasible, agricultural education be given in a rural setting’.

The developments during the half century (1900-1949) in Agricultural Science Education led to the establishment of 21 institutions for higher education in agriculture. The number of enrolments to 17 agricultural colleges rose steadily from 30 in 1924 to 1448 in 1948.
In a resolution of 24th November 1954, the Indian Ministry of Food and Agriculture as per the advice of Dr. Frank W. Parker, set up a First Joint Indo-American Study Team to provide some useful guidelines for strengthening agricultural colleges in India and for promoting Centre-State co-operation and co-ordination in the field of agricultural research. Accordingly, that resolution contained the decision of the Government of India to constitute a joint team of Indian and American specialists to make a comparative study of the institutions in the USA and India and make the recommendations. The team was headed by Mr. K.R. Damle, the then Vice-President of ICAR. The report submitted by the team in September 1955, contained 118 recommendations, which together laid the true foundation for all subsequent developments in India leading to the establishment of Agricultural Universities and enhancing the value of research work in agricultural sciences in India.

The Second Joint Indo-American Study Team on Agricultural Education, Research and Extension was constituted following a resolution dated 12th September 1959, under the chairmanship of Dr. M.S. Randhawa, the then Vice-President of ICAR. This team reviewed the progress of the work done in the preceding five years and made supplementary recommendations designed to strengthen agricultural education, research and extension. The summary of the team’s recommendations submitted on 11th July 1960 included 67 items. On Agricultural University the team recorded that there was widespread demand from many states for the establishment of agricultural universities and without any awareness of the needs of such university. The team therefore recommended that assistance to establish an agricultural university should not be granted unless there is adherence to basic principles such as (i) autonomous status (ii) location of Agricultural, Veterinary/ Animal Husbandry, Home Science, Technological and Science Colleges on the same campus (iii) integration of teaching by offering courses in any of these institutions to provide a composite course and (iv) integration of Education, Research and Extension.
Two more Committees that is High level Committee and Agricultural Research Review Team were constituted in 1963, but they were not contributed much towards the agricultural education and research.

By the beginning of 1961, as a sequel to the recommendations of the First and Second Joint Indo-American Study Teams, actively stimulated by the sustained efforts of many American Advisors, interest in establishing Agricultural Universities grew to become a movement in various states. The Government of India, therefore felt the need to appoint a Committee to examine the proposals received from the State Governments to establish Agricultural Universities from the point of view of prerequisites for the integration of teaching, research and extension and the evolution of a workable relationship between existing institutions and departments. This Committee was headed by Dr. Ralph. W. Cummings, Field Director, the Rockefeller Foundation, who was to play for many years a dominant role in shaping the course development of many agricultural universities in India. Hence the Committee widely known in India as the Cummings Committee. The Committee visited several states as per their requests and helped them to draw up their proposals and also scrutinize the draft bills prepared by them in this respect.

After discussing with the Planning Commission, the Government of India decided, however, that during the Second Five Year Plan only one Agricultural University be established (in Uttar Pradesh) as an experimental measure, but in view of the widespread demand from many states for such universities, the Government of India accepted in 1961 the need for setting up a few more such universities during the Third Plan period.

In 1966, seven institutions were attempting to establish new Agricultural Universities in various states. The Government of India set up another body known as the Education Commission through a resolution dated 14th July 1964, which was headed by Dr. D.S. Kothari, Chairman of the University Grants Commission. The Commission covered the entire field of education in India and devoted one chapter of 20 pages to 'Education for Agriculture'. Specifically, the Commission supported the
establishment of at least one agricultural university in each state. The Commission desired that these universities should have the following features:9

1. Their concern with all aspects of increasing, disseminating and supplying knowledge related to agriculture, including basic and applied research;
2. Their primary emphasis on teaching and research directly and immediately related to the solution of the social and economic problems of the countryside;
3. Their readiness to develop and teach the wide range of applied sciences and technologies needed to build up the rural economy;
4. Their readiness, not only to teach undergraduates, post-graduates and research students but also to give specialized technical training to young people who are not candidates for degrees; and
5. Their emphasis on adult and continuing education side by side with teaching regularly enrolled students.

Department of Agricultural Research and Education setup in 1973, in Ministry of Agriculture, is responsible for coordinating research and educational activities in agriculture, animal husbandry and fisheries. Besides it helps to bring about inter-departmental and inter-institutional collaboration with national and international agencies engaged in the same and allied fields. The Department provides Government support, service and linkage to Indian Council of Agricultural Research.10

At present, there are 27 Agricultural Science Universities in India, besides the various deemed universities and institutes numbering to 9. Majority of the Agricultural Science Universities are established by the respective State Governments popularly known as State Agricultural Universities (SAUs).

SAUs work under the control of state administration. They are funded upto 90 percent by the ICAR and rest of their budget is met by State Government. Since
agricultural research, education and extension is the primary responsibility of States, the growth of SAUs has been faster\textsuperscript{11}.

On Organization and Coordination of agricultural science universities the National Commission on Agriculture recommended "... agricultural education programme could best be ensured by an apex body consisting of representatives of the ICAR, Directorate of Extension, NCERT, Ministry of Education and Social Welfare should, after careful study of the pros and cons, develop programmes for middle level training"\textsuperscript{12}.

Each Agricultural Science University in India is headed by the Vice-Chancellor. The term of Vice-Chancellor varies from 3 to 5 years in different agricultural science universities. The highest executive body is commonly known as the Executive Council / Committee (This is also called as the Board of Management, Board of Regents and Governing Body in different Universities). The membership of the Council ranges from 12 to 38. In some universities there is a body, called Court of General Council, which delegates’ administrative power to the Executive Council/Committee. The Executive Council meets as often as necessary, as it has to give guidance and directive to the academic and other bodies entrusted with the management of the university. The Executive Council is generally presided over by the Vice-Chancellor.

The Deans, Directors and Heads of Departments are specifically entrusted, somewhat differently in different universities, with the administration of academic programmes. They receive directions from the Academic Council, which is a subordinate body of the Executive Council. Each of the officials of a university has his/her own areas of administration but coordinated on top by the Deans. Academic Councils of different universities mostly consists of Deans of various faculties and Post Graduate Studies, Directors of Research, Extension, Instruction and Student Affairs, Heads of departments and in some cases all the teachers up to the rank of Associate Professor or Reader. The Vice-Chancellor is the Chairman of the Academic Council. It works through Committees in all facets of the academic life of
the institution. The faculty of the various departments and colleges receives
directives from the Academic Council and the department / college is administered by
the Dean as its Chairman.

2.3 References:

1. Chung, Nam Kyu: Institutional aspects of Agricultural Growth: Role of Farmers’
Organizations and Rural Institutions. Proceedings of the Regional Seminar on


branch of Government of India, Central (as referred by K.C. Naik and A.
Sankaram in A History of Agricultural Universities)


5. Aggarwal, JC: Progress of Education in Free India. New Delhi: Arya Book

6. Report of the Joint Indo-American Study Team on Agricultural Research and
Education. New Delhi: ICAR, 1955. (as referred by K.C. Naik and A. Sankaram
in A History of Agricultural Universities).

7. Report of the Second Joint Indo-American Study Team on Agricultural
Education, Research and Extension. New Delhi: ICAR, 1960. (as referred by
Naik and Sankaram in A History of Agricultural Universities).

8. Naik, KC and Sankaram, A: A History of Agricultural Universities. New Delhi:

