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PROMISING TECHNOLOGIES

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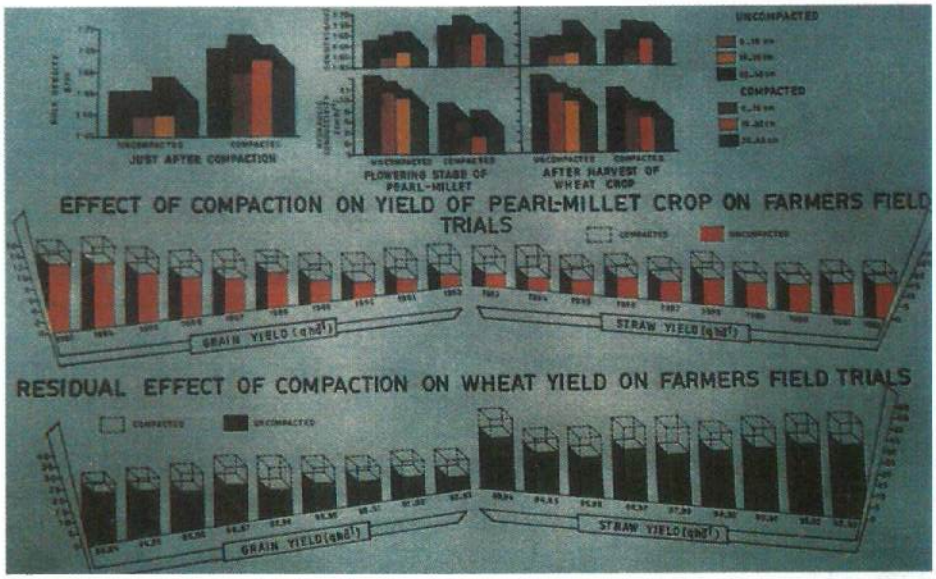
Sub-surface Compaction Technology for Coarse Textured Soils



Effect of Compaction Technology on change in soil physical properties and yield of pearlmillet-wheat crop rotation on large number of farmers' field trials in Typic Ustipsamment

In Rajasthan an area of 85,750 km^2 is arid desert receiving an annual rainfall of 10 to 25 cm and 1,34,677 km^2 is semi-arid receiving an annual rainfall of 10 to 25 cm and 1,34,677 km^2 is semi-arid receiving an annual rainfall of 25 to 50 cm. Two-third soils of Rajasthan occurring in arid and semi-arid regions of the state are light in texture having sandy to loamy sand. The soils of arid and semi-arid region are excessively permeable owing to their coarse texture and looseness. The moisture retentive capacity of these soils is very low and due to high porosity most of the applied water received either through rain or other sources gets lost due to percolation. Frequent irrigation is required by these soils for successful crop production. These soils possess low organic

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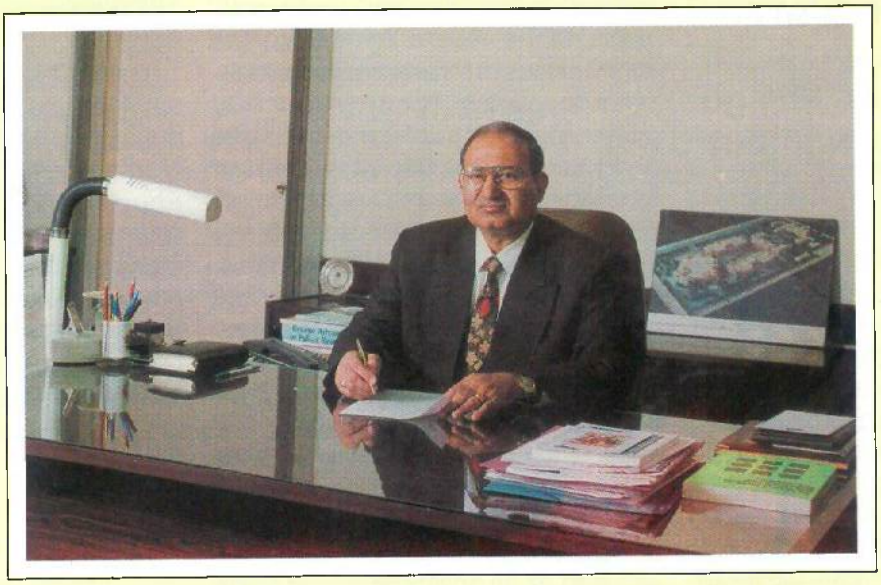
INDIAN agriculture is constantly under the process of change. Agricultural education system has to discern the direction which would entail a major qualitative change. With a view to reorganize the education system, in general, and agricultural education, in particular, the Government of India had appointed an Education Commission in 1948, Joint India-American Teams in 1955 and 1959, and an Agricultural University Committee in 1960. Based on their recommendations, today, we have 30 SAUs, one CAU and 4 national institutes having deemed university status.

The time has now come for an introspection as well as detailed review of the Land Grant System to address the second generation problems of the agricultural education. The major concerns relate to revision of agricultural education so as to make it more relevant to the needs of changing clientele for overcoming problems of inbreeding, slow pace of faculty development etc. If the agricultural teaching/learning process is not tuned to the current and future realities, the whole agricultural sector will be adversely affected, despite the large investments made in the institutional infrastructure.

The ICAR Committee under the Chairmanship of Dr M.S. Swaminathan constituted to examine the agricultural education system in India, has observed that "the agricultural education has to get out of its mould of a formal, organized, rigid framework and has to take a role of continuing education where education process is adjusted to the needs of illiterate, unskilled farmers and farm households."

The unversities will have to develop and strengthen both formal degree and non-formal training programmes, bring academic excellence and also impart education relevant to our future needs.



Dr R.S. Paroda, Director-General, ICAR

There is also a need to bring flexibility in the existing course curricula. There is scope to enhance efficiency of instructional delivery systems by reducing unnecessary replications and allowing universities to develop more in-depth specialized areas such as agri-business, export, diversification, IPNs, IPM, biotechnology, GIS, computer application, environmental science, biotechnology etc. Besides, there is a need to introduce specialized courses in agri-exports, quality control, market intelligence, WTO, IPR etc.

With all the challenges, the agricultural education system should provide knowledge of cutting-edge science to our agricultural graduates and make them locally relevant and globally competitive so that at the completion of their formal education programme, they become job providers rather than job seekers. The World Bank funded Agricultural Human Resource Development Project (AHRDP) implemented by the ICAR has brought out important changes in policy and institutional management processes including quality and relevance of our agricultural education. These efforts have to be strengthened, refined and extended during the process of further reorientation of the agricultural education system while preparing for the second phase of the AHRD Project. Some key elements for consideration include, improving the quality of UG and PG programmes, greater thrust on practical orientation, distance education, vocationalization, information and communication technology (ICT).

The new agricultural education system has not only to consolidate gains of the past but has to effectively address the future challenges, generating competent manpower. Hence, the process of reforms in agricultural education must be accelerated with all sincerity and supported by all concerned.

(R.S. Paroda)