ADVANCES IN AGRIONICS

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Agriculture is the backbone of the Indian economy which contributes around 32 % of national income providing more than 70% employment. During the sixties, the farmers did not have technological inputs apart from factors such as agricultural implements etc which led to agrarian and economic crisis in the country. CSIR-CSIO realizing its social responsibilities focused on agriculture and agro based industries through the S&T intervention and introducing instrumentation at various stages. Range of instruments for measurement and analysis of soil, environment and plant activity like crop growth were developed and extensively tested.

In the beginning, CSIR-CSIO developed a wide range of instruments like specific Ion analyzer for detecting ion levels in soil, storage houses, digital multigrain moisture meter, digital electromagnetic soil salinity tester, field usable pH meter, automation system for post harvest storage of potato under controlled environmental, electro-optical system for sorting and grading of fruits and vegetables specially for the apple growers in classifying their produce according to its quality, microprocessor based soil analyzer, etc.

In the present scenario, CSIR-CSIO, a leading research organization in India is concentrating on agro instruments which are cost effective, farmer friendly and eco-friendly. The laboratory is currently pursuing research work leading to technology development in the broad areas such as agro-climatic measurements (soil parameters, crop health and pesticide estimation); quantification of quality for agri-produce with focus on beverages like tea and honey; environment controlled manufacturing of tea, electrostatic nozzle for controlled release of pesticides; food storage technologies; etc.

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