

EDITORIAL

The long history of irrigation has recorded severe deterioration of land resources due to salinisation and water logging. It is well known that excessive irrigation over an extended period results in rising of water table and salts to plants rootzone and upto ground surface, and leads to problems of water logging as well as salinity and alkalinity of soils with serious effect on agricultural production. There are large areas of such water logged and salt affected lands in our country which were once fertile, and are now unfit for agricultural production/cultivation due to intensive and extensive irrigation with poor drainage. Both water and land are the most crucial elements in developmental planning. As the country prepares to enter the twentyfirst century, efforts to develop, conserve, utilise and manage these important resources have to be given due attention guided by national perspective. The country's population which is over 780 million at present is expected to reach a level of around 1000 million by the turn of the century. While irrigation facilities are being developed to meet increasing demands of our population, the vital area of drainage has also to be given due attention.

Irrigation and drainage are essentially complementary processes, one supplying the needs of the other, and both together assist nature and help to create soil moisture conditions appropriate for optimum agricultural operations. Drainage problems of humid and arid regions are different due to difference due to differences in rainfall, soils and salts. In arid regions drainage follows irrigation while in humid regions it may have to precede agricultural development. Both preventive and curative drainage measures have to be adopted to the extent these are needed for specific situations. These and other related issues have received attention of planners and decision makers. Command area development activities form important component of major irrigation projects. Conjunctive use of surface and groundwater has helped in preventing some of the harmful effects of excessive irrigation. Still much remains to be done, particularly in area where the water logging and salinity problem has reached chronic stage.

This issue of 'Jal Vigyan Sameeksha' is devoted to the theme of 'Drainage'. Important aspects covering modelling soil water dynamics, drainage problems in India and in heavy soils, salinity control measures and drainage systems and their performance etc. have been covered in the papers published in this issue. These would provide useful ideas and information for all dealing with irrigation and drainage.