

Exploring potential of semi-arid regions for human welfare

A SEMI-ARID region receives precipitation below potential evapotranspiration, but not as low as a desert climate. There are different kinds of agro-climate in semi-arid regions, depending on variables such as temperature, soil, humidity and wind velocity, and they give rise to different biomes. The semi-arid horticulture encompasses a gamut of low volume and high value crops such as aonla, bael, jamun, custard apple, tamarind, khirni, chironji, karonda, wood apple, gonda, mulberry, mahua, phalsa, manila tamarind, palmyra palm, timru, cucurbits, legumes, solanaceous vegetables, spices, flowers crops, and medicinal and aromatic plants. Since most of them are tolerant to abiotic stresses, they can be cultivated commercially by adopting site-specific production technologies. Some of these fruits have gained popularity in past few decades but majority are still not cultivated commercially.

The major bottleneck in development of semi-arid horticulture industry is poor availability of quality seed and planting material. These are most precious input to increase production of horticultural crops in such regions. Thus, production of quality seed and planting material and their availability to the farmers at affordable price will enhance the production potential in such regions. The expansion in area under such crops and yield potential has increased manifold owing to development of new varieties and application of advance agro-techniques. Semi-arid horticulture also provides an opportunity for introduction of newer crops. Development of cropping models and orchard floor management for optimum utilization of natural resources; value addition, development of cottage industry can be adopted for generation of employment for rural masses in semi-arid region for better livelihood. Simultaneously, these fruits and vegetables are rich in antioxidants, nutraceuticals, vitamins and bioactive compounds which can be used for formulation of various ayurvedic medicines.

There is a tremendous scope of expansion of area under horticultural crops in semi-arid region with vast potential under changing climatic scenario of horticultural production of our country. The need of the hour is to create awareness among the growers with the latest technological advancement including improved varieties and their cultivation practices, abiotic and biotic measures so that export quality of horticultural produce can be achieved for better livelihood and economic security to dwellers in such regions.

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