

Underutilized arid vegetables for income

Dryland horticulture has enormous scope in providing nutrition rich food, social security and eco-restoration to the inhabitants of desert and tribal areas. While assessing distinctness of hot arid and semi-arid agroclimate of Rajasthan, it is accomplished that non-availability of apposite crop-genotypes and production techniques are two prime limitations in success of vegetable culture. Traditionally, kachri (*Cucumis melo* var. *callosus* / *agrestis*), kakadia / snap melon (*Cucumis melo* var. *momordica*), mateera (*Citrullus lanatus*), tinda (*Praecitrullus fistulosus*) and guar (*Cyamopsis tetragonoloba*) are grown. Besides, khejri (*Prosopis cineraria*) is playing a vital role in long-established farming, and its tender pods are used for vegetable purpose. With the establishment of national centre in 1993 at Bikaner, systematic research was started for germplasm conservation and utilization in native crop-plants having vegetable potentialities. The crop-genotype studies over 45 vegetables at Central Institute of Arid Horticulture, demonstrated that there is a breathtaking scope in getting quality marketable yield adopting production site management concept (HBCPSMA), provided trait specific genotypes. With khejri models, higher yield in prioritized vegetable and income @ ₹75,000–2,25,000 ha/year was obtained in comparison to the traditional cropping (₹23,000–42,000). Thus, technological advancement in under-scored arid vegetables is a boon towards better income and nutrition in resource constrained environment.

Vegetable production with under-scored/native crop-plant is pre-dominantly found to be most appropriate and stable. At present, exploitation of under-scored crops and native tree-plants of vegetable significance is negligible, unorganized and productivity and quality of produce is marginal. This is primarily because of unavailability of desirable crop-genotypes suited to prevailing climatic situations and/or environmentally stressed production sites, unavailability of quality seed / planting material of the recommended crop-genotypes and lack of apposite techniques. Therefore, there are essentially two complementary requirements i.e. improvement in genetic make-up as provisions for desirable crop-genotypes and creation of favourable micro-climate at production site of targeted zone to minimize the ill-effects of adversity.

UNDERUTILIZED ARID VEGETABLES

In the vast spread arid farm-lands, cultivation of pearl millet,

cluster bean, moth bean, sesame, kachri, snap melon, mateera, tinda and tumba is done as component crops between natural plantations of khejri, besides native crop-plants (jharber, bordi, lasora, pilu, ker, kumat, phog, khimp, sewan, etc.) forming traditional farming systems. With



Drip technology in cucurbit cultivation