

Arid vegetables for farmers' prosperity

As the population is increasing and agricultural land is decreasing day-by-day due to urbanization and industrialization, meeting food requirement will be very difficult with the present scenario. Providing food security alone is not sufficient in developing countries like India where malnutrition is a major challenge, nutritional security becomes very important which can be achieved through the diversified and highly nutritive vegetables. Thus, the only option available to mitigate this challenge is to either increase the productivity of the existing crop or bring non-traditional areas under cultivation which can be made more productive by providing adequate technologies. Climate and soil conditions of arid region are conducive to grow different vegetables in different seasons of the year. Besides, adoption of improved varieties developed by the institute offers great potential not only for farmers prosperity through more income per unit area but for nutritional security as well.

VEGETABLES are rich and comparatively cheaper source of carbohydrates (leguminous vegetables, sweet potato, potato, onion, garlic and methi) proteins (peas, beans, leafy vegetables and garlic) vitamin A (carrot, tomato, drumstick, leafy vegetables), Vitamin B (peas, garlic and tomato), Vitamin C (green chilies, drumstick leaves, Cole crops, leafy vegetables and leaves of radish), minerals (leafy vegetables, drumstick pods). Vegetables provides health benefits and reduce the risk of some chronic diseases such as cancers, heart disease, obesity, type 2 diabetes and lower blood pressure. Vegetables are important source of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C. Besides, the following reasons increases value of vegetables:

- They are an important source of farm income.
- Per acre yield of vegetables is very high in comparison to other crops.
- They have high aesthetic value.
- More vegetable crops can be raised in one year, some of vegetable (i.e. potato, brinjal, spinach, pumpkin etc.) can be grown twice and even three a year, some green vegetables become ready for harvesting within 15-60 days of sowing.
- Vegetables are sold at a higher rate than other crops. It provides regular as well as good source of income in addition to the income from the agronomic crops.
- Since cultivation of vegetable crops involve intensive cultural operations starting from sowing to marketing, it provides more and regular employment opportunities in rural areas.

India is the second largest producer of vegetables in the world next only to China and the intensive research both from public and private sector in development of improved varieties has contributed a lot to the vegetable production of the country but, still there exists a gap between the

national average and potential productivity. There is an ample scope to double the productivity in coming years through adoption of improved varieties/hybrids (Table 1), production and protection technologies. Climate and soil conditions of arid region are conducive to grow different vegetables in different seasons of the year. There are many vegetables suitable for arid climate that farmers can grow throughout the year as per the crop season for earning regular and steady income to meet the daily expenditure. There are vegetables which improves soil and also provide fodder to cattles.

MATEERA

Mateera is generally known as the poor man's vegetable and common man's fruit in the desert. It is an indigenous type of drought hardy watermelon (*Citrullus lanatus*) and it is extensively grown on barren sand dunes which cover large areas of western Rajasthan. The immature green fruits at tender stage are rich in

