

Root Crops as Food Secure Buffer during Landlocked Period in Trans-Himalaya, Ladakh

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Abstract—Ladakh, a North Eastern region of Jammu and Kashmir State of India, lies between 32°- 36° North latitude and 75°- 80° East longitude. It is located at an altitude ranging from 2300 m to 5000 m above sea level. Given its relief and climate, life is hard especially during winter. It remains land locked for half a year from the rest of the world. Food security has been an issue of concern all over the world for many years, and it is a major issue for the people of Ladakh too, mostly during the winter months. It has always been neglected in areas where there is scarcity due to hampering climatic conditions for the vegetation to grow outdoors. Vegetable species with prolonged shelf life plays an important role during scarcity, *Raphanus sativus* L. (radish), *Brassica napus napobrassica* (swede), *Brassica napus* (turnip), *Allium cepa* (onion), *Solanum tuberosum* (potato) and *Daucus carota* (carrot), root and tuberous vegetables have 6-7 months of shelf life which act as buffer during the scarcity. These vegetables are grown over generations and they form an essential component of many Ladakhi cuisines. Food security in turn means the health security of the people. Food systems have undergone drastic transitions over the past decades, due to introduction of the new crop varieties. Before the introduction of new crop varieties the people of Ladakh largely depended on the wild plants as vegetables such as *Capparis spinosa*, *Rumex patientia*, *Urtica hyperborea*, *Rhodiola imbricate*. These are sundried during the summer and are consumed during the winter. The scope of vegetable species (mentioned above), are highly adaptive to many seasonal, natural and anthropogenic changes.