

In Leh district, out of net cropped area of 10,920 ha. Vegetables are grown only in an area of 80ha. The annual vegetable production is far behind meeting the genuine requirement of the district. To meet out its annual consumption, Leh imports vegetables worth lakhs of rupees from other parts of the state. Also, because of harsh geographical conditions, much time and money is involved in transportation and exorbitant prices from the market. Augmenting vegetable production in the area therefore assumes special significance so as to make vegetables available round the year fresh and at affordable cost. Traditionally, owing to nature of climatic conditions, people grow vegetables in a limited period of the year (i.e. May to October).

Ladakh is endowed with natural gift of abundant sunlight available for longer period of the year, which can congenially be tapped for vegetable production. Looking forward to the tremendous scope of increasing vegetable production throughout the year and marketing, the KVK has evolved an area specific technology known as Trench Off-season Vegetable Production Technology (TVPT) for making Leh and surroundings self sufficient in vegetable production fully utilizing all the conducive factors. This technology, besides giving boost to vegetable production, provides ample opportunities to unemployed rural youths for self-employment and income generation ventures.

Trench Design and Layout:

The ideal size of a trench has been worked out with dimension of 10 feet in length, 6 feet in breadth and 1½ feet in depth. The land available should preferably be divided into trenches of equal size. Each unit consists of four standard trenches. In a unit, 2 feet inter trenches spacing are advisable to facilitate inter cultural operations like hoeing, weeding and irrigation etc.

Trench Preparation for Cultivation:

While digging the trench, the top layer 6" should be kept separate. Spade the soil in the trench till fine tilled. Level the trench with six inches layer of top soil and 15-20 kg well rotten mixture. If desired, the soil may be treated with formalin as precautionary measure to check soil born diseases. The trench should be covered with black alkathene film till sowing. This will help in prevention of soil moisture loss by evaporation.



Cropping schedule:

Depending upon the varying climatic conditions, the following cropping schedule has been recommended.

S. No	Sowing/Transplanting time	Crops to be grown	Maturity Time
1	3 rd week of March (21 st – 23 rd March)	Nursery sowing of Cabbage, Cauliflower, Knol-khol, Karm Sag, Tomato, Capsicum, Brinjal and seed sowing of Cucumber and other Cucurbits in polybags.	Ready for transplantation in 1 st week of May
2	1 st week of May	Transplantation of above mentioned crops	Ready to harvest in last week of June to 1 st week of July (Some vegetables like early maturing cabbage)
3.	2 nd week of July	Transplantation of cabbage (Golden Acre) and others for which nursery is raised separately 25 th to 30 th June	2 nd week of October (10 th to 15 th October)
4.	3 rd week of October	Transplantation of Mongol from open field and sowing of other leafy vegetables (Beet Palak)	2 nd week of Dec. first flush 2 nd week of Feb. to 3 rd week of March three to five successive flushes.

Transplanting and Spacing:

For nursery sowing line to line distance of 3-4" is maintained with convenient spacing among the seeds at a depth of half inches. Cover the seed lightly with soil or sand. The polythene sheet should be removed gradually i.e. a week before transplanting. The nursery should be kept open for first three days only during the day time and for last four days of the week during day and night. This will induce hardiness in seedlings. At the time of transplanting spacing should be 45X30 cms for spreading vegetables and 20X12cms for Mongol. After transplantation, cover trench with alkathene sheet for 10 to 12 days. However, trenches should be kept open during daytime if weather is hot. Further after three to four days of transplanting, gap filling should be done.



Fertilization:

In addition to compost 725gram of urea, 400gram of DAP, 200gram of MOP per unit should be incorporated

into the soil. 1/3rd of urea, full dose DAP and MOP should be applied at the time of transplanting. Left over urea can be applied into two split doses at an interval of one month. For nursery fertilization, half of the above recommended doses should be applied.



Irrigation:

Irrigation should be applied, depending upon prevailing weather conditions and personnel assessment.

Inter-Cultural Operations:

Manual hoeing is advisable to maintain soil aeration and weeding is done to keep the trench weed free to avoid competition with the main crop.

Diseases and Insect-pest Management:

To keep trenches free from infestation of diseases and insect pests, it is advisable to follow integrated disease and pest management schedule.

TRENCH OFF-SEASON VEGETABLE PRODUCTION TECHNOLOGY



**Krishi Vigyan Kendra,
Regional Agricultural Research Station
Leh**

**Directorate of Extension Education
S.K.Univeristy of Agricultural Sciences & Technology (K)**