

Information of Lettuce Farming

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Lettuce belongs to the Compositae (sunflower or daisy family) *Lactuca sativa* L. (Asteraceae), Common name; Tshilai, Lettuce and Local Names; Salad Ke Patte (Hindi).

Lettuce is the most popular of the salad crops. First-time Lettuce cultivation in ancient Egypt. Earlier, Europe and North America were the leading producers of lettuce; however, since the late 20th century, lettuce's production and consumption had spread throughout the world. In present-day China is the leading producer of lettuce in the World followed by the USA.

India's 3rd rank in commercial production of lettuce, occupying four per cent of the World's total production. The Nilgiri mountain of South India is emerging as an Iceberg lettuce production hub for the multinational food giant McDonald's. Ooty Farms and Orchards joined the McDonald's family and became one of the three suppliers of Iceberg lettuce to McDonald's India.

Climate:- Lettuce is cool season crop and require monthly average temperature about 15 °C for proper growth and development. This crop does not suitable in hot weathers. However, among four types of lettuce, the leafy types mature quickly and are more suited for warm climates. Lettuce can be grown round the clock and requires shade especially in warm climatic conditions. Usually, lettuce grows best in the spring and fall seasons.

Soil:- Lettuce growing in good fertile (rich in organic matter) friable loamy soils having high water holding capacity and good drainage is ideal for lettuce production. Lettuce crop is very sensitive to acidic nature, so avoid growing lettuce in high acidic soils. The best suitable soil pH rang 5 – 6.5 for lettuce cultivation. Uniformly distributed moisture will result in good yield and quality of leaf. Commercial growers should go for soil test before starting the crop.

Varieties:- Basically, Lettuce classification four classes.

- Head lettuce (*Lactuca sativa* var. capitata),
- Leafy lettuce (*Lactuca sativa* var. crispa),
- Cos or Romanian lettuce (*Lactuca sativa* var. longifolia)
- Stem lettuce (*Lactuca sativa* var. aspergina).

Field Preparation:- Field should be prepared to get into soil fertility and soil texture. This can be done by giving 3 to 4 deep ploughing with a country plough or tractor. If the crop is grown on large scale, soil testing is recommended to find out the nutrient deficiencies in soil.

Propagation:- Lettuce propagation by seeds. Lettuce leaf varieties are mostly grown, they can be sown directly in the field and



raised on nursery beds (seedlings of 3 to 5 weeks can be transplanted). Usually germination of lettuce seeds depends on temperature. The ideal temperature is required for lettuce is about 20 °C to 22 °C. The lettuce grown on nursery beds can be transplanted in the main field. When it comes to sowing distance, lettuce seeds can be sown in rows 15 to 25 cm. Generally, one hectare land requires 800gm to 1kg of seeds (seed rate). Number of plants 50,000 – 60,000 plants per hectare.

Irrigation:- Moisture is very important for proper plant growth and development. Irrigation should be carried out once in 4 to 5 days. Large scale heavy rain and excess water, drain in the field.

Manures and Fertilizers:- Lettuce crop manures and fertilizers very important to apply these in time. When it comes to manure and fertilizer requirement, 15 to 20 tonnes of well decomposed farm yard manure (FYM), 90 kg N and 60 to 65 kg each of Potash and Phosphorus per hectare should be applied for better growth and yield of lettuce leaf.

Intercultural operations for proper plant growth and yield, hoeing and weeding operations should be carried out. Shallow cultivations should be done as part of the intercultural operation as the root system of lettuce is not deep rooted.

Lettuce Pests and Diseases:- In any crop, pest and disease control play major role for getting quality produce and higher yields.

Aphids: They are one of the most common enemies of leaf vegetables. Adults and nymphs feed on plant juices and also attack stem, flowers and leaves.

Control: Use granular insecticides and foliar insecticides as necessary. Do not second crop lettuce unless an insecticide is banded. Also, root aphid can be partly controlled by irrigation. Spray Dimecron (0.05%) and malathion (0.05%).

Cutworms: wilting; severed stems of seedlings and transplanting just above or below soil line; whole seedlings disappear.

Control/Prevention: handpick; in spring before planting, cultivation soil to reduce larvae.

White Mold: It is a fungal disease, also known as sclerotinia. It affects a large variety of plant species, including lettuce. We can identify it by looking at the stems. Stems appear to be discolored and wilted.

Control: Destroy infected plants; ensure good air circulation; water in morning; weed; destroy crop reduce; rotating crops on five year or longer cycle any help.

Bottom_rot: It is a fungal disease that mostly attacks mature plants. It is caused by *Rhizoctonia solani*.

Downy_mildew: It is a disease caused by *Bremia lactucae*, causing yellow necrotic spots on older leaves.

Control Measures: For controlling above mentioned pests, contact local horticulture department for solutions.

Harvesting:- Harvesting of lettuce depends on the variety (cultivar). Leaf lettuce varieties can be harvested when the leaves are tender and immature for fresh consumption. Generally, first harvesting should take 40 to 60 days after sown in the field.

Harvest as a body green by picking individual young leaves or harvesting the entire immature plant. Selectively harvest outer leaves from loose-leaf or heading varieties as the plant grow. Harvest the entire head by slicing it off about an inch above the soil. Harvest early in the morning, if possible and keep cool until marketed.

Yield:- Yield of any vegetable crop depends on many factors like soil type, cultivar (variety), irrigation, climate and other farm management practices. On an average, one can obtain head lettuce about 11,000 to 12,000 kg per 1 hectare land. Generally, leaf type lettuce give comparatively higher yields.

Health Benefits of Lettuce

- Lettuce has low calorie content and zero fat.
- Lettuce is good source of vitamins, minerals, fibers and cellulose.
- Lettuce helps in weight loss, sleep disorder, prevents the cancer cell growth
- Lettuce helps with insomnia.
- Lettuce has good antioxidant properties.
- Lettuce lowers blood cholesterol levels.
- Low glycaemic Index, hence good for diabetic and heart patients and skin.