

## The Jewel of Herbs: Parsley

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### SUMMARY

Parsley (*Petroselinum crispum* L.) a member of the Apiaceae family, is renowned for its culinary and medicinal uses. Rich in essential oils and phenolic compounds, it offers various health benefits including anti-inflammatory and antimicrobial properties. Cultivated in temperate and tropical regions, parsley requires specific climatic and soil conditions for optimal growth. Various varieties cater to diverse preferences. Effective management practices including nutrient application and pest control are essential for high yields. Despite being infested from diseases and pests, parsley cultivation combines traditional methods with modern techniques to meet global demand while ensuring plant health and productivity.

### INTRODUCTION

Parsley (*Petroselinum crispum* L.) belongs to the family Apiaceae is cultivated in Europe and Middle east and it is an annual herb in tropical and subtropical regions. The word Petroselinum is derived from the Greek word mean “stone”; it refers to plants habit of growing in rocky places. It is a hardy bright green biennial herb and it leaves have a great demand in the world for garnishing.



**Uses :** *Petroselinum crispum* has aromatic odour because of the existence of essential oil or volatile oil, which is largely confined in seeds. Leaves and roots of parsley also possess the essential oil. Parsley has anti-inflammatory, antimicrobial, diuretic and hypoglycaemic properties due to its content of essential oil and phenolic compounds.

**Climate and Soil :** Parsley is a cool season crop. It grows better in the temperature of 10-15°C. Soil should be loamy with rich organic matter having a pH of 5.5-7. Best germination obtained at 12-15°C (Marthe, 2020).

**Varieties :** Hamburg, Plain leaved, Double curled, Moss curled, Banquet, Champion Moss Curled, Evergreen, Italian Flat Leaf, Pagoda, Plains Italian and Triple Curl.

**Land Preparation :** Field should be ploughed 2-3 times, till a soil becomes fine tilth during last ploughing 10t/ha of FYM should be incorporated.

**Seed rate:** For transplanting 250-300 g/ha and for direct sowing 3-3.5 kg/ha

**Sowing and Transplanting :** The seeds are sown in drills or broadcasted. For a continuous supply, three sowings can be done in early February, April or early May and in July and early August. Transplanting can be done after 45 days of sowing.

**Spacing :** Seedlings are planted at 30-45cm between rows and 10-15cm between plants.

**Manures and Fertilizers :** Manures and fertilizers promote healthy growth and abundant yield. Well rotten FYM at 10-15 t/ha is applied as basal dose at the time of land preparation and N – 65 kg/ha, P – 40 kg/ha, K - 25 kg/ha is required. Half dose of N and Full dose of P and K is applied at the time of land preparation. Remaining half dose is at 40 and 60 days after sowing.

**Intercultural Operations :** Weeding:- Pre-emergence application of Basalin 1 l/ha is effective. Hand-weeding should be done 15days after transplanting.

**Irrigation:** Parsley is a shallow rooted crop that require regular irrigation after transplanting. irrigations should be given 8-10days interval depending on weather and moisture level of the soil. Proper drainage should be maintained.

**Harvesting and Yield:** Harvesting will be done by cutting outer and large leaves, by making them into bunches. Parsley must be cut at least 1 to 1 1/4 inches above the crown of the plant for multiple cuttings. It can be done after 40 - 45days after transplanting. It is produced throughout the growing period for many weeks. Average yield is 10-12 t/ha.

**Post-Harvest Management:** Harvested bunches are packed in perforated Polyethylene bags. To maintain crispness and freshness it should be hydrocooled. It can be stored at 0°C and relative humidity at 90 % for over a period of 2 months. Parsley is normally stored in warehouses with forced air cooling.

### Plant Protection Measures

**Powdery mildew:** Powdery mildew is a fungal infection that manifests as a powdery white or gray growth on the surfaces of leaves, stems, and flowers. The affected leaves may become yellow or chlorotic, and severe infections can lead to distorted growth of flowers.

#### Control measures:-

1. Plant tolerant varieties.
2. Avoid the usage of excess fertilization.
3. Application of Sulphur can be used if infection occurs in early season.



**Leaf Blight:** The blight of parsley caused by *Septoria petroselini* is a very serious disease. The symptoms of the disease are small foliar lesions, somewhat angular and greyish brown, with a definite dark cinnamon-brown margin, and often contained dark pycnidia on the upper side of the foliage (Cerkauskas and Uyenaka, 1990). Hot water treatment proved effective against the investigated pathogens at 50° C for 30 minutes.



**Cercospora Leaf Blight:** Small, necrotic flecks on leaves which develop a chlorotic halo and brown necrotic spots, lesions coalesce and cause leaves to wilt, curl and die. Plant only pathogen-free seed, implementing crop rotation practices, and applying suitable fungicide sprays as preventive measure.



**Damping Off:** soft, rotting seeds, seedling death prior to emergence and collapse due to water-soaked reddish lesions girdling the stem at the soil line. Avoid planting parsley in soil with poor drainage, cool or excessively wet conditions. planting in raised beds will help with soil drainage. ensure to use high-quality seeds that germinate quickly, treat them with fungicide before planting to eradicate fungal pathogens.



**Aphids:** They feed on sap of the leaves it will cause damage to the plant. Spraying of Malathion 50 EC @400ml/acre at the interval of 15 days is done to get rid of aphids. This helps in effectively eliminating aphids and preventing further damage to the plants.



## CONCLUSION

Parsley, a versatile herb with various culinary and medicinal uses, thrives in cool climates and loamy soil. Its cultivation requires to detail and effective pest and disease management to ensure a successful harvest of this widely used herb. Harvesting and post-harvest management are crucial for optimal yield. With proper care and management, parsley can be a lucrative crop for farmers.

## REFERENCES

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