Masoor (Lentil) Cultivation Guide

Introduction Masoor (Lens culinaris), commonly known as lentil, is a highly nutritious legume crop rich in protein, fiber, and essential minerals. It is widely grown in temperate and subtropical regions and serves as an important food staple. Masoor cultivation improves soil fertility by fixing nitrogen and requires minimal inputs for sustainable farming.

Steps to Harvest/Cultivate

1. **Selection of Variety:** Choose high-yielding and disease-resistant varieties such as Pusa Vaibhav, IPL-220, Pusa Masoor-5, and L-4147 based on local climate and soil conditions.
2. **Soil Preparation:**
    - Masoor grows best in well-drained loamy or clay-loam soil with a pH of 6.0 to 7.5.
    - The field should be plowed and harrowed to ensure a fine seedbed.
    - Apply organic manure or compost to improve soil structure and fertility.
3. **Planting:**
    - Masoor is best sown during the rabi season (October-November) in most regions.
    - Seeds should be sown at a depth of 3-4 cm with a row spacing of 25-30 cm and plant spacing of 5-10 cm.
    - The recommended seed rate is 35-45 kg per hectare.
4. **Watering:**
    - Lentils require minimal irrigation and can grow well under rainfed conditions.
    - Provide light irrigation at flowering and pod formation stages for better yields.
    - Avoid excessive moisture, as it may lead to fungal diseases.
5. **Fertilization:**
    - Apply nitrogen (20-30 kg/ha), phosphorus (40-50 kg/ha), and potassium (20-30 kg/ha) as per soil test recommendations.
    - Use Rhizobium inoculation to enhance nitrogen fixation and improve soil fertility.
6. **Weed Management:**
    - Regular weeding is necessary during early growth stages to prevent competition for nutrients.
    - Mulching with organic materials helps suppress weeds and retain soil moisture.
7. **Pest and Disease Control:**
    - Common pests include aphids, pod borers, and cutworms. Use neem-based sprays or biological pesticides for effective control.
    - Diseases such as rust, wilt, and powdery mildew can be managed by using disease-resistant varieties and practicing crop rotation.
8. **Harvesting:**
    - Masoor is ready for harvest 100-120 days after sowing, depending on the variety and growing conditions.
    - Harvest when the plants turn yellow, and the pods are fully mature.
    - Plants are cut and dried before threshing to separate the seeds.
9. **Post-Harvest Processing:**
    - After harvesting, seeds should be properly dried to reduce moisture content.

- Cleaning, grading, and proper storage in moisture-free conditions prevent damage and maintain seed quality.

Conclusion Masoor cultivation is an excellent choice for sustainable farming due to its nitrogen-fixing ability and high nutritional value. By adopting best agronomic practices, proper weed management, and timely harvesting, farmers can achieve high yields and profitability. The growing demand for lentils in both domestic and international markets makes it a viable and rewarding crop for agricultural production.