



## Bhindi Cultivation in Poly House

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Cultivating bhindi (okra or ladyfinger) in a poly house, also known as a greenhouse, can provide a controlled environment that allows you to extend the growing season, protect your plants from adverse weather conditions, and optimize the growing conditions for better yields. Here are some steps to consider when cultivating bhindi in a poly house:

- 1. Site Selection:** Choose an appropriate location for your poly house. It should receive ample sunlight throughout the day and be accessible for watering and maintenance.
- 2. Poly House Construction:** Construct the poly house with a sturdy frame and a UV-protected polyethylene cover. Make sure it has proper ventilation to regulate temperature and humidity. The design and size of the poly house will depend on your specific requirements.
- 3. Soil Preparation:** Prepare the soil by testing it for pH and nutrient levels. Bhindi grows well in well-draining soil with a slightly acidic to neutral pH. You can use a good-quality potting mix or a soil mixture that's rich in organic matter.
- 4. Planting:** Bhindi can be grown from seeds or transplants. If using seeds, plant them in rows or raised beds. Space the plants about 12-18 inches apart to allow for growth.
- 5. Watering:** Provide consistent and adequate watering to keep the soil evenly moist. Drip irrigation systems can be beneficial for controlling water distribution.
- 6. Temperature and Humidity:** Maintain the temperature inside the poly house within the optimal range for bhindi, which is typically between 75-90°F (24-32°C). Keep humidity levels around 50-60% for best results.
- 7. Fertilization:** Bhindi plants benefit from regular feeding. Use a balanced, slow-release fertilizer or organic compost to supply essential nutrients to the soil.
- 8. Pest and Disease Management:** Check your plants regularly for signs of pests or diseases. The controlled environment of a poly house can help reduce these issues, but it's still important to be vigilant. Consider using organic or chemical treatments as needed.
- 9. Pruning and Training:** Prune the bhindi plants to encourage better air circulation and higher yields. You can also provide support structures to prevent the plants from falling over as they grow.
- 10. Harvesting:** Bhindi is usually ready to harvest in about 50-60 days from planting. Harvest the pods when they are still tender and about 3-4 inches long. Frequent harvesting encourages continuous production.
- 11. Crop Rotation:** After harvesting, it's essential to practice crop rotation in your poly house to prevent soil depletion and reduce the risk of diseases.
- 12. Record Keeping:** Maintain records of your planting dates, fertilization schedules, and pest control measures. This will help you improve your bhindi cultivation in subsequent seasons.

Cultivating bhindi in a poly house can be a rewarding endeavor, as it allows you to grow this warm-season vegetable in a controlled and protected environment. With proper

care and management, you can enjoy a more extended growing season and higher yields compared to open-field cultivation.

### **How can I set up a poly house for bhindi cultivation?**

Setting up a poly house for bhindi (okra) cultivation involves several steps. Here's a guide on how to establish a poly house for growing bhindi:

#### **1. Site Selection:**

- Choose a location that receives maximum sunlight throughout the day, as bhindi requires plenty of sunlight for optimal growth.
- Ensure the site is easily accessible for daily monitoring, maintenance, and watering.

#### **2. Poly House Design and Construction:**

- Decide on the size and design of your poly house based on the available space and the scale of cultivation. Common types of poly houses include tunnel or hoop houses and gutter-connected houses.
- Build a sturdy frame using materials like galvanized steel or aluminum. The frame should be securely anchored to the ground.
- Cover the frame with UV-protected polyethylene plastic. Use a double layer for better insulation and durability.
- Ensure proper ventilation with side vents, roof vents, and fans for temperature and humidity control.

#### **3. Site Preparation:**

- Clear the area inside the poly house of any debris or vegetation.
- Level the ground and prepare the soil for planting. Test the soil to determine its pH and nutrient levels, and amend it as necessary.

#### **4. Planting Material:**

- Decide whether you want to grow bhindi from seeds or transplants. Bhindi seeds can be sown directly in the poly house or started in trays for later transplanting.

#### **5. Planting and Spacing:**

- If using seeds, plant them at the recommended depth and spacing. Generally, bhindi plants should be spaced 12-18 inches apart in rows.
- For transplants, set them in prepared planting beds or containers according to the same spacing guidelines.

#### **6. Irrigation and Water Management:**

- Install a drip irrigation system or a soaker hose to provide consistent and efficient watering. Watering is crucial for bhindi, so maintain even soil moisture.
- Use a timer to automate watering, ensuring that the plants receive adequate hydration.

#### **7. Temperature and Humidity Control:**

- Install temperature and humidity monitoring equipment, such as thermostats and hygrometers.
- Use heating and cooling systems, like heaters or fans, to regulate temperature and humidity within the poly house.

#### **8. Fertilization:**

- Provide regular fertilization to the bhindi plants. Use a balanced, slow-release fertilizer or organic compost to maintain soil fertility.

#### **9. Pest and Disease Management:**

- Monitor the plants for signs of pests and diseases regularly. The controlled environment of a poly house can reduce such issues, but you must still be vigilant.
- Implement pest control measures, which may include organic or chemical treatments, when necessary.

**10. Pruning and Training:**

- Prune the bhindi plants to encourage better air circulation and higher yields.
- Use stakes or trellises to support the plants and prevent them from falling over as they grow.

**11. Harvesting:**

- Bhindi is typically ready for harvest in about 50-60 days from planting. Harvest the pods when they are still tender and about 3-4 inches long.
- Frequent harvesting encourages continuous production.

**12. Record Keeping:**

- Maintain detailed records of planting dates, fertilization schedules, and pest control measures to track the progress of your bhindi cultivation.

Establishing a poly house for bhindi cultivation requires careful planning and ongoing maintenance, but it can significantly improve your yield and protect your crop from adverse weather conditions and pests.

**Common pests of Okra**

Bhindi, also known as okra or ladyfinger, is susceptible to various pests. Common pests that can affect bhindi plants include:

1. **Aphids (Aphidoidea):** Aphids are small, soft-bodied insects that feed on the sap of bhindi plants. They can cause yellowing of leaves, stunted growth, and the transmission of plant viruses.
2. **Whiteflies (Aleyrodidae):** Whiteflies are tiny insects that feed on the undersides of bhindi leaves. They can lead to leaf yellowing, sooty mold growth, and the transmission of plant diseases.
3. **Spider Mites (Tetranychidae):** Spider mites are tiny arachnids that suck the sap from bhindi leaves. They can cause stippling on leaves, discoloration, and webbing on the plant.
4. **Fruit Borers (Earias spp.):** Bhindi fruit borers are caterpillars that infest the fruit, tunneling inside and causing damage. They can be particularly damaging to the bhindi pods.
5. **Leafhoppers (Cicadellidae):** Leafhoppers are small insects that feed on plant sap and transmit plant diseases. They can cause stippling and yellowing of leaves.
6. **Cutworms:** Cutworms are the larvae of various moth species. They feed on young bhindi seedlings by cutting them off at the soil level, leading to plant loss.
7. **Root-Knot Nematodes (Meloidogyne spp.):** These microscopic roundworms infest the root system of bhindi, causing root galling, stunted growth, and reduced fruit production.
8. **Mealybugs (Pseudococcidae):** Mealybugs are soft-bodied insects that feed on plant sap and produce a white, waxy substance. They can cause yellowing and weakening of bhindi plants.
9. **Thrips (Thysanoptera):** Thrips are tiny, slender insects that feed on bhindi leaves and flowers, leaving behind silvered streaks and causing distortion.
10. **Caterpillars:** Various caterpillar species can feed on bhindi leaves and pods, leading to defoliation and reduced fruit production.

**To manage and control these pests, consider implementing integrated pest management (IPM) strategies.**

1. **Monitoring:** Regularly inspect your bhindi plants for signs of pest infestations.
2. **Cultural Practices:** Implement good agricultural practices, such as proper spacing, crop rotation, and keeping the growing area clean.

3. **Biological Control:** Introduce natural predators or parasites of the pests to help control their populations.
4. **Mechanical Control:** Handpick and destroy pests when feasible. Use physical barriers like row covers for protection.
5. **Chemical Control:** As a last resort, use chemical pesticides, but always follow label instructions and use them sparingly to minimize environmental impact.
6. **Companion Planting:** Some plants, such as marigolds, can be interplanted with bhindi to deter certain pests.

By practicing these pest management techniques, you can help protect your bhindi plants and promote healthy growth and a higher yield.

### Variety of okra

Okra, also known as bhindi or ladyfinger, comes in various varieties, each with slightly different characteristics, including size, color, and flavor. Here are some common varieties of okra:

1. **Clemson Spineless:** This is one of the most popular okra varieties. It is known for its tender, spineless pods and high yields. The pods are green and ribbed, and they are excellent for use in stews, gumbo, or fried dishes.
2. **Emerald:** The Emerald variety produces dark green, spineless pods. It is prized for its disease resistance and high productivity. The pods are tender and delicious when cooked.
3. **Annie Oakley II:** This variety features small, green, and spineless pods. It is a compact plant, making it suitable for smaller gardens or containers.
4. **Louisiana Green Velvet:** As the name suggests, this variety produces dark green, velvety-textured pods. The pods are typically spineless and well-suited for culinary use.
5. **Red Burgundy:** Unlike most okra varieties with green pods, Red Burgundy produces deep burgundy or red pods. These pods turn green when cooked and are known for their attractive appearance.
6. **Jambalaya:** This variety produces red and green mottled pods. The pods are tender and add a unique color and flavor to dishes.
7. **Candle Fire:** Candle Fire is another red okra variety that produces striking red pods. These pods turn green when cooked and offer a colorful addition to meals.
8. **Burmese:** Burmese okra is a distinct variety with slender, dark green pods that are often eaten when young and tender. It has a mild, delicate flavor.
9. **Hill Country Red:** This variety features red pods that mature to a dark green color. It is known for its heat tolerance and adaptability to various growing conditions.
10. **Perkins Long Pod:** Perkins Long Pod okra produces long, slender, and spineless green pods. It is well-suited for slicing and pickling.

These are just a few examples of the many okra varieties available. When selecting a variety for your garden, consider factors like the growing conditions in your region, the culinary uses you have in mind, and your personal preferences for pod size and texture.