



PLANTING GUIDE



Growing Regions

1. Northeast & Midwest (Zones 4-7)

- Characterized by cold winters and warm summers.
- Use greenhouses to start seeds indoors as early as February or March.
- Ideal crops: leafy greens (lettuce, spinach), brassicas (broccoli, cabbage), tomatoes, peppers, herbs.
- Extend growing into late fall by protecting sensitive plants from frost.

2. Southeast & Mid-Atlantic (Zones 7-9)

- Mild winters with hot and humid summers.
- Greenhouses support early spring starts and extend harvest into fall/winter.
- Ideal crops: tomatoes, cucumbers, okra, herbs, leafy greens.
- Use shading and ventilation in summer to prevent overheating.

3. Southwest & Southern California (Zones 8-10)

- Generally mild winters and very hot summers.
- Grow year-round with emphasis on heat-tolerant crops.
- Ideal crops: peppers, tomatoes, eggplant, melons, herbs.
- Use shade cloths and ventilation; focus on irrigation and humidity control.

4. Pacific Northwest (Zones 7-9)

- Cool, wet winters with moderate summers.
- Greenhouses help overcome short seasons and excess moisture.
- Ideal crops: leafy greens, peas, root vegetables, herbs.
- Ensure good ventilation to avoid fungal diseases.

5. Mountain & High Altitude Regions (Zones 3-7)

- Short growing seasons and cool temperatures.
- Extend season with greenhouses, focus on cold-tolerant and fast-maturing crops.
- Ideal crops: kale, chard, carrots, radishes, cold-hardy herbs.
- Use supplemental heating if possible during winter.

Crop Type	Seed Starting Inside	Transplant Outdoors	Direct Planting Outdoors (if applicable)
Leafy Greens	6-8 weeks before last frost	2-4 weeks before last frost	Early spring & fall
Tomatoes	6-8 weeks before last frost	After last frost	Not recommended for direct outdoor start
Peppers	8-10 weeks before last frost	After last frost	Not recommended for direct outdoor start
Root Vegetables	4-6 weeks before last frost	2-4 weeks before last frost	Spring & fall
Herbs	Varies (2-8 weeks)	After last frost	Spring through summer

Inside seed starting dates depend on your local last frost date, which can be found via local extension services or gardening calendars.

Greenhouse Growing Tips by Region

- **Temperature Control:** Use ventilation, shading, or heating as needed to maintain ideal temperatures for your crops.
- **Light:** Supplement natural light with grow lights during short winter days.
- **Watering:** Monitor humidity and water wisely to avoid mold and mildew.
- **Crop Rotation:** Rotate crops seasonally to maintain soil health.
- **Pests:** Watch for common pests and use organic management where possible.

Crop-Specific Greenhouse Planting Guide

Tomatoes

- **Seed Starting:** 6–8 weeks before the last expected frost date.
- **Transplanting:** After the danger of frost has passed and plants have 6–8 true leaves.
- **Temperature:** Ideal daytime 70–80°F; nighttime 60–70°F.
- **Light:** Full sun, minimum 6–8 hours.
- **Tips:** Support plants with stakes or cages; prune suckers for better airflow.

Lettuce and Leafy Greens (Spinach, Kale, Chard)

- **Seed Starting:** Can be seeded directly in greenhouse soil year-round or started 4–6 weeks before spring transplant.
- **Temperature:** Prefer cooler temps, 60–70°F daytime; avoid overheating.
- **Light:** Bright light but partial shade during hot months.
- **Tips:** Harvest leaves frequently to encourage new growth; succession plant every 2 weeks for continual harvest.

Peppers (Bell, Chili)

- **Seed Starting:** 8–10 weeks before last frost.
- **Transplanting:** When seedlings reach 4–6 inches tall and after frost risk.
- **Temperature:** Daytime 75–85°F; nighttime no lower than 60°F.
- **Light:** Full sun.
- **Tips:** Requires pollination, so hand-pollinate flowers if inside a closed greenhouse.

Cucumbers

- **Seed Starting:** 3–4 weeks before transplant.
- **Transplanting:** After frost risk ends, when soil and air warm.
- **Temperature:** 70–80°F ideal.
- **Light:** Full sun.
- **Tips:** Train vines on trellises to save space; maintain consistent moisture to avoid bitterness.

Herbs (Basil, Parsley, Cilantro, Thyme)

- **Seed Starting:** Most herbs can be started 6–8 weeks before planting or directly sowed.
- **Temperature:** Generally prefer 65–75°F; basil loves warmth.
- **Light:** Full sun, at least 6 hours daily.
- **Tips:** Harvest regularly to encourage bushier growth; avoid overwatering to prevent root rot.

Carrots and Root Vegetables (Radishes, Beets)

- **Seed Starting:** Direct sow seeds in greenhouse soil 4–6 weeks before last frost.
- **Temperature:** Prefer cooler temps, 55–75°F.
- **Light:** Full sun to partial shade.
- **Tips:** Light, well-drained soil essential; thin seedlings to prevent crowding.

Additional Notes

- Always tailor planting times based on your local frost dates and greenhouse conditions.
- Maintain humidity between 50-70% for optimal growth.
- Monitor for pests regularly, even inside greenhouses.
- Rotate crops annually to maintain soil health.

