Planning Your Winter Garden

Lincoln County Master Gardener Assn.
www.orcoastmga.org

This Photo by Unknown Author is licensed under CC BY-SA

Master Gardener™

- Volunteers who are trained in science-based, sustainable gardening practices.
- We are connected to Oregon State University and use both science and local knowledge to inform our educational outreach.
- We strive to make the resources of Oregon State University accessible to all members of our community.
- These resources include horticultural research findings, and publications.

Planning Your Winter Garden – Overview

- Before Planning Your Winter Garden
  - Understanding Terminology
- Steps to Planning Your Winter Garden
  - Location, Location, Location
  - Season Extenders
- What Crops to Plant in Your Winter Garden
- Helpful Information When Planning Your Winter Garden
  - Frost Terms
  - Seed Packet Labels
  - Miscellaneous Tips & Information
- Resources & Handouts

Before Planning Your Winter Garden

Understanding Terminology

- Cool-Season Crops vs. Winter Crops
- Winter Gardening vs. Overwintering
- Advantages to Planting a Winter Garden

Understanding Terminology

Cool-Season Crops

- Grow best at temperatures between 50°F to 70°F
- Are usually tolerant of light frosts (29° to 32°F)
- May not survive all winter unless protected
- Usually planted in early spring or late summer/early fall

https://acmg.ucanr.edu/Over_the_Fence/Cool_Weather_Vegetable_Gardening/

Photo by Laura Strom

Examples of Cool-Season Crops:

- Brassicas/Cruciferous - broccoli, cabbage & cauliflower
- Other Vegetables - beets, radishes, celery & carrots
- Greens – collards, kale, lettuce, spinach & Swiss chard
- Legumes – peas & fava beans
- Herbs – cilantro, parsley, sage, oregano & thyme

10-Minute University™ Growing Winter Vegetables

Understanding Terminology

Winter Crops

- Can be harvested sporadically throughout the winter (Except for onions & garlic)
- Some crops, frost actually improves the flavor (beets & carrots)
- Are usually tolerant of moderate frosts (25° to 28°F)
- Typically planted in late summer to early fall

http://carteret.ces.ncsu.edu/2021/12/winter-garden-crops/

This Photo by Unknown Author is licensed under CC BY-SA

Examples of Winter Crops:

- Brassicas/Cruciferous - broccoli, cabbage & cauliflower
- Other Vegetables - beets, radishes, celery & carrots
- Greens – kale, lettuce, spinach & Swiss chard

10-Minute University™ Growing Winter Vegetables

Key Differences

Climate Adaptation:

- Cool-Season Crops:
  - Prefer mild temperatures
  - Sensitive to extreme cold
- Winter Crops:
  - Crops are hardy
  - Can survive harsher winter conditions

Growth Period:

- Cool-Season Crops:
  - Typically grown during transitional seasons (spring & fall)
- Winter Crops:
  - Specially grown to be harvested during the winter months

What is Winter Gardening?

This Photo by Unknown Author is licensed under CC BY-NC-ND

- Can be harvested through late fall & winter
- Plants grow very slowly & may not re-grow after harvest
- Includes both cool-season crops & winter crops

Examples of Winter Gardening Crops

- Brassicas/Cruciferous - broccoli, cabbage & cauliflower
- Other Vegetables - beets, radishes, celery & carrots
- Greens – collards, kale, lettuce, spinach & Swiss chard
- Legumes – peas & fava beans
- Herbs – cilantro, parsley, sage, oregano & thyme

West Coast Seeds – Fall and Winter Guide 2019

What is Overwintering?

- Planted in late summer to early fall
- Can endure harsh winter weather
- Left in ground to "overwinter" for an early spring harvest
- May need protection below 25°F (mulch)

lee.ces.ncsu.edu/2018/10/persephone-period-for-planning-perfect-winter-produce/

Examples of Overwintering Crops:

- Brassicas/Cruciferous - cauliflower, broccoli, cabbage
- Root vegetables – onions, garlic, carrots, beets, radishes, rutabaga, turnips

Advantages to Planting a Winter Garden

- Grow more abundantly in cooler weather
- Do not bolt to seed as easily as they do during hot summer days
- Fewer pests (brassicas are less susceptible to cabbage moths when the weather is cooler)
- Less need for watering
- Fresh produce year-round, cost savings & sustainability

Steps to Planning Your Winter Garden

- Location, Location, Location
- Season Extenders
  - Garden Cloche
  - Row Covers
  - Cold Frames
  - Additional Examples of Season Extenders
- What Crops to Plant
- Dates for Planting Vegetables in Oregon (handout)

This Photo by Unknown Author is licensed under CC BY-NC-ND

Location, Location, Location

- South-facing side of the property
- Good drainage
- Raised beds work well
- Avoid areas prone to frost
- Easily accessible
- Natural barriers & windbreaks

Growing Your Own – A Practical Guide to Gardening in Oregon. OSU Catalog – EM 9027

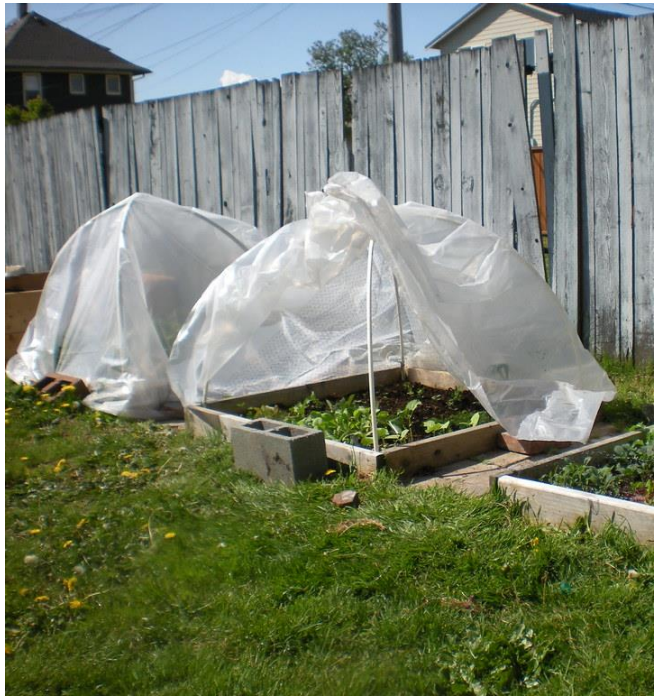
Season Extenders – Cloches, Row Covers & Cold Frames

All Photos by Unknown Author is licensed under CC BY-SA-NC

Garden Cloches

All Photos by Unknown Author is licensed under CC BY-SA

Row Covers



All Photos by Unknown Author is licensed under CC BY-NC-ND

Cold Frames

Photo Credit: Laura Strom

Photos by Unknown Author is licensed under CC BY-SA-NC

Additional Examples of Season Extenders:

- Corrugated plastic
- Plastic Jugs/Bottles
- Walls and Terraces (perfect for lettuce, spinach & tender herbs)
- Mulch (wood chips, newspaper, straw or leaves) - helps warm the soil
- Old window frames and/or doors

This Photo by Unknown Author is licensed under CC BY-NC-ND

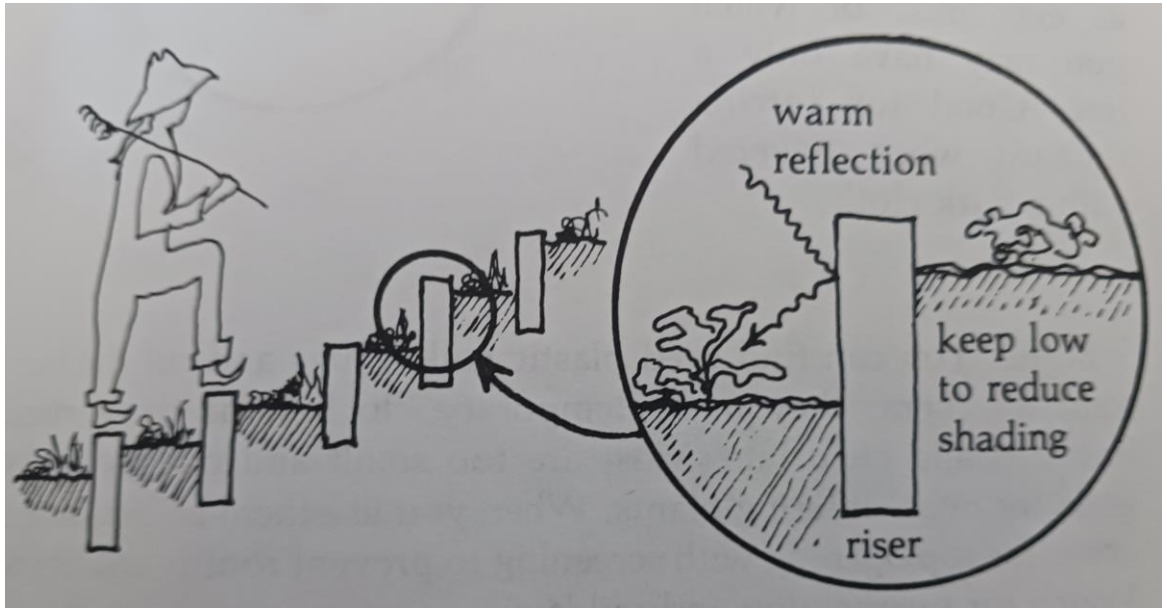


Photo from Winter Gardening in the Maritime Northwest

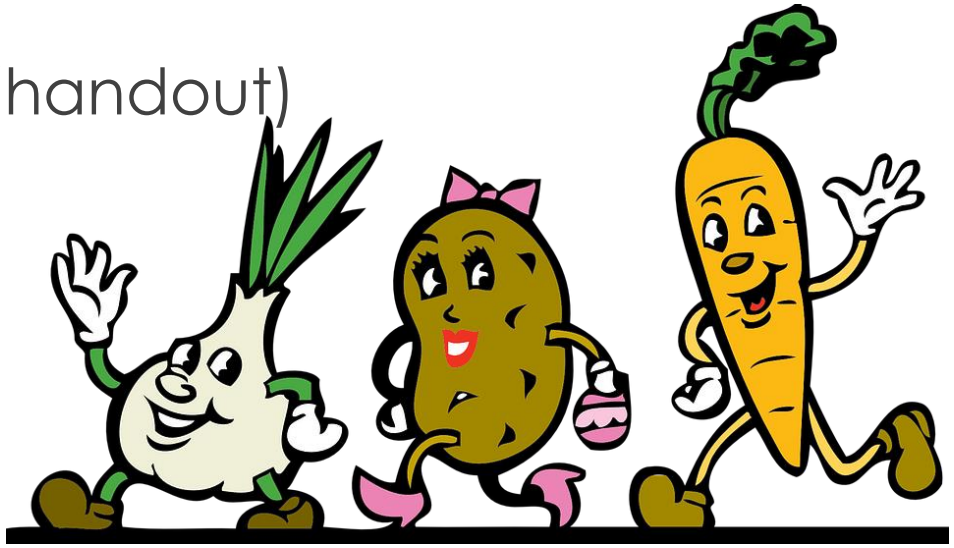
What Crops to Plant in Your Winter Garden

Cool-Season Crops & Winter Crops

- Brassica (Cruciferous)
- Other Vegetables
- Leafy Greens & Herbs
- Legumes
- Root Vegetables

Overwinter Vegetables

Dates for Planting Vegetables in Oregon (handout)



This Photo by Unknown Author is licensed under CC BY-NC-ND

Cool-Season & Winter Crops

Brassica (cruciferous), plants in the cabbage & mustard family

Broccoli

Brussels sprouts

Cabbage

Cauliflower

Kale

All Photos by Laura Strom

acmg.ucanr.edu/Over_the_Fence/Cool_Weather_Vegetable_Gardening/ (Alameda County Master Gardener)

Cool-Season & Winter Crops

Leafy Greens & Herbs

Spinach

Lettuce

Arugula

Swiss chard

Chives

Cilantro

Parsley

Sage

Oregano

Thyme

This Photo by Unknown Author is licensed under CC BY

acmg.ucanr.edu/Over_the_Fence/Cool_Weather_Vegetable_Gardening/ (Alameda County Master Gardener)

Cool-Season & Winter Crops

Other Vegetables

Beets

Celery

Kale

Radish

Rhubarb

Rutabaga

Legumes

Peas

Fava Bean

All Photos by Unknown Author is licensed under CC BY-NC

Tips on Cool-Season/Winter Vegetables

- Choose varieties suited for fall & winter harvest
- Young plants may wilt if planted too early
- Too mature to hold well into the winter if planted too early
- Stagger planting times for continuous harvest
    - Plant beets, carrots, peas in early spring = summer harvest
    - AND plant in late summer/early fall = late fall – early winter harvest

Growing Your Own – A Practical Guide to Gardening in Oregon. OSU Catalog – EM 9027

Overwintering Crops

Beets

Broccoli

Cabbage

Carrots

Cauliflower

Kohlrabi

Garlic

Onions

Bunching Onions

Shallots

Turnips

All Photos by Unknown Author is licensed under CC BY

Overwinter Crops

Onions & Garlic

Both bulb and green onions:

- Can be planted in fall for a late spring or early summer harvest
- In winter for a late summer or fall harvest next year

If you want more in-depth information on Garlic and other bulbs, attend the MG class on October 11th at OCCC main campus in Newport.

All Photos by Unknown Author is licensed under CC BY

acmg.ucanr.edu/Over_the_Fence/Cool_Weather_Vegetable_Gardening/ (Alameda County Master Gardener)

Tips on Overwinter Crops

- When expecting a frost, uncover the beds & let the frost sweeten the leaves & kill some of the insects

https://carteret.ces.ncsu.edu/2021/12/winter-garden-crops/

- At the end of Daylight Savings (Late October/early November-ish), overwinter crops should be around 75% mature in order to harvest them the following year.

- Overwinter crops should be closer to 100% mature if you want to harvest them during the winter

acmg.ucanr.edu/Over_the_Fence/Cool_Weather_Vegetable_Gardening/ (Alameda County Master Gardener)

Helpful Information to Know When Planning Your Winter Garden

- Frost Terms
- USDA Hardiness Zones & Microclimates
- Seed Packet Labels
- Miscellaneous Tips
- Resources & Handouts

Photo by Unknown Author is licensed under CC BY-NC-ND

Frost Terms

- **Frost Date:** Average date of the last light freeze in spring, or the first light freeze in fall
- **Light freeze:** 29° to 32°F (-1.7° to 0°C)—tender plants are killed
- **Moderate freeze:** 25° to 28°F (-3.9° to -2.2°C)—widely destructive to most vegetation
- **Severe freeze:** 24°F (-4.4°C) and colder—heavy damage to most garden plants

  - Only an estimate based on historical climate data and are not set in stone
- The probability of a frost occurring after the spring frost date or before the fall frost date is 30%
  - Always still a chance of frost occurring before or after the given dates

https://www.almanac.com/gardening/frostdates

Hardy vs. Semi-Hardy

HARDY

- Cold weather doesn't kill
- Can withstand heavy frost (below 28°F)
  - spinach, onions, garlic, leeks, rhubarb, rutabaga, broccoli, kohlrabi, kale, cabbage, collards, Brussels sprouts, corn salad, arugula, fava beans, radish, mustard greens, & turnip
- Root vegetables (turnips, beets and carrots) are sweeter after a frost
- Lettuce and other salad greens can be hardy to 20° F with some protection

extension.oregonstate.edu/news/these-cold-hardy-vegetables-may-stick-it-out-through-winter

Hardy vs. Semi-Hardy

SEMI-HARDY

- Cold weather doesn't kill
- Can withstand light frost (Between 28°F to 32°F)
  - beets, carrots, parsnip, lettuce, chard, garden pea (before flowering), Chinese cabbage, endive, radicchio, cauliflower, parsley and celery
- For beets, carrots and parsnips, the tops will die but the roots will tolerate lower temperatures
- For head crops (radicchio & other chicories) the outer leaves may die under colder temperatures, but these can be peeled away to obtain an undamaged head within

extension.oregonstate.edu/news/these-cold-hardy-vegetables-may-stick-it-out-through-winter

Frost Temperatures & Harvesting Tips

- Harvest only in temperatures above freezing.
- Even frost-tolerant crops will be limp with frost damage
- Allow them to warm up on the plant first
- A frozen leaf can only recover while still on the plant
- If harvested while frozen, it will remain limp from frost damage

https://lee.ces.ncsu.edu/2018/10/persephone-period-for-planning-perfect-winter-produce/

USDA Hardiness Zones – Microclimates

- For gardeners & growers
- Determines which plants are most likely to thrive in a specific location
- The zones are numbered from 1 (coldest) to 13 (warmest)

Consider Microclimates:

Local factors create microclimates that might differ slightly from the general zone:

- Elevation
- Urban heat
- Proximity to bodies of water

USDA Hardiness Zones – Microclimates

The U.S. Department of Agriculture (USDA) classifies the Oregon coast into three hardiness zones:

Zone 8B: Astoria to Florence

Zone 9A: Florence to Cape Blanco State Park

Zone 9B: Cape Blanco State Park to Brookings

Seed Packet Labels

MESCLUN
Mix

4028

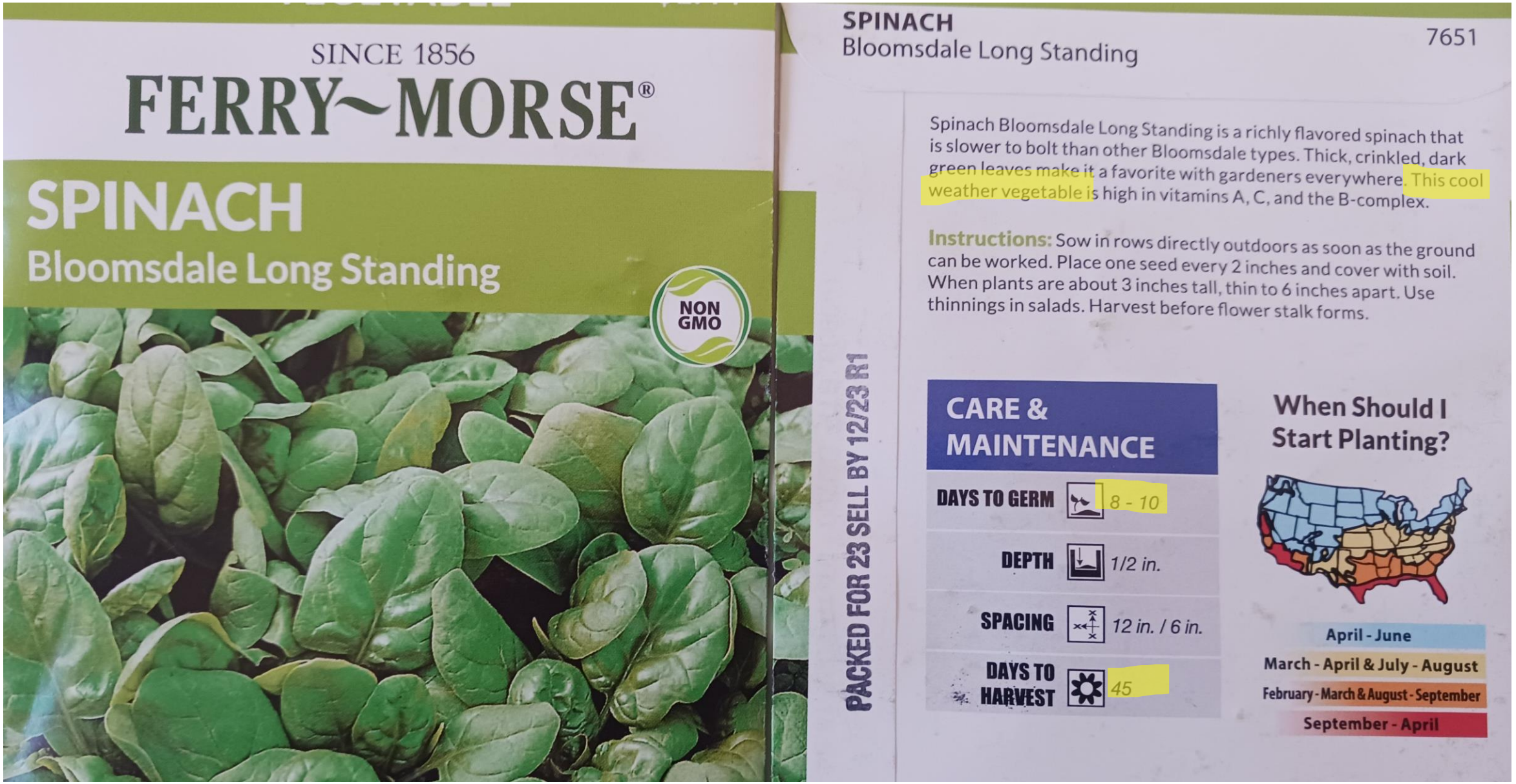
Grow seven different salad greens from just one packet of seed with this special mix. Enjoy the complementary flavors and textures of arugula, endive, red kale, red and green romaine, Salad Bowl and Lolla Rossa lettuce. Beautiful in the garden and on the plate!

Planting Instructions:
Sow directly in garden as early as soil can be made fine and loose. Cool weather vegetable. Plant seeds every 2 inches, covering firmly with soil. Thin plants to 6 inches apart when they display 2 or 3 leaves. As plants begin to crowd, pick individual leaves regularly for use.

Suggestions:
Mesclun needs plenty of moisture. Also, fall crops may have to be started indoors since it may have a difficult time even germinating in hot weather. Transplant with care.

Days to Germination	Planting Depth	Days to Harvest	Spacing Row / Plant
7-10	1/4"	40-80	18" / 6"

Seed Packet Labels



Miscellaneous Tips

- Young plants need extra care if planted when it's hot and sunny
- Water transplants daily – as much as up to 2x a day
- Keep the soil moist – don't let them dry out
- Protect young plants from the sun with temporary shade(Boards & umbrellas)
- Use season extenders when cold weather approaches

LCMGA Plant Clinic

Lincoln County Master Gardener™ Association

Join us at any or all of the forums listed below to be immersed in a culture of learning about sustainable green gardening on the Oregon Coast!

Website: www.orcoastmga.org OR https://extension.oregonstate.edu/mg/lincoln
Keep up with the latest information about gardening, classes and roundtables. These sites are treasure troves of information for gardening aficionados!

Facebook: https://www.facebook.com/OSULincolnCountyMG
Like us on Facebook - and keep coming back to learn about Oregon Coast gardening!

Plant Clinic: ***Tuesday and Thursday, 9AM-Noon (In Person - April through October; may be answered remotely - November through March).*** Master Gardeners are on hand to provide research-based answers to all of your horticultural questions, with an emphasis on sustainable coastal gardening. Contact us anytime with your questions via phone or email - or drop by in person! We love talking gardening!

Address: **OSU Extension Office | Lincoln County**
1211 SE Bay Boulevard
Newport, OR 97365

Phone: 541-574-6534 ext. 57414

Email: lincolnmg@oregonstate.edu

Oregon State University Extension Service Master Gardener™

OSU Extension Service prohibits discrimination in all its programs, services, activities and materials.

In Closing

- Cool-season & winter crops are almost interchangeable with a few exceptions
- Overwintering crops are mostly grown to be harvested the following year in the spring
- Decide where to plant your winter garden
- Are you going to use season extenders?
- Choose in late July, August and early September which winter crops to grow and begin planting
- Watch the weather for drops in nighttime temperatures – Frost & freeze warnings
- Know your hardiness zone & be aware of microclimates
- Don't be afraid to ask for help – LCMGA Plant Clinic & certified Master Gardeners are here to answer your questions

Resources

OSU Extension Service Resources

Get these publications online at: **https://catalog.extension.oregonstate.edu**

- Fall and Winter Vegetable Gardening in the Pacific Northwest PNW 548
- Constructing Cold frames and Hotbeds FS 246-E
- How to Build Your Own Raised-Bed Cloche EC 1627
- Growing Your Own – A Practical Guide to Gardening in Oregon. EM 9027
- extension.oregonstate.edu/news/these-cold-hardy-vegetables-may-stick-it-out-through-winter

10-Minute University™

www.cmastergardeners.org (Clackamas County Master Gardners)

- Growing Winter Vegetables
- Fall Gardening in the Vegetable Patch

Resources

Other Online Resources & Handouts

- www.carteret.ces.ncsu.edu
  - /2021/12/winter-garden-crops/
- www.almanac.com
  - gardening/frostdates
- www.lee.ces.ncsu.edu
  - /2018/10/persephone-period-for-planning-perfect-winter-produce/
- www.acmg.ucanr.edu
  - /Over_the_Fence/Cool_Weather_Vegetable_Gardening/ (Alameda County Master Gardener)
- www.WestCoastSeeds.com
  - /blogs/wcs-academy/winter-gardening
  - /blogs/wcs-academy/overwintering

Books

- Winter Gardening in the Maritime Northwest

  Cool Season Crops for the Year-Round Gardener by Binda Colebrook

Thank you

Lincoln County Master Gardener Association
lincolnmg@oregonstate.edu
www.orcoastmga.org

Photos by Unknown Author is licensed under CC BY-SA

Understanding Frost Dates

The formula below will help you determine when to plant:

1. Number of days from seeding or transplanting outdoors to harvest
2. Number of days from seed to transplant (if you grow your own transplants)
3. Fall factor* = Number of days to count back from first frost date

*Fall factor is about two weeks to account for the fact that plants grow more slowly in the cool, short days of autumn

Growing Your Own – A Practical Guide to Gardening in Oregon. OSU Catalog – EM 9027

A **frost date** is the average date of the last light freeze in spring or the first light freeze in fall.

The classification of freeze temperatures is based on their effect on plants:

- **Light freeze:** 29° to 32°F (-1.7° to 0°C)—tender plants are killed.
- **Moderate freeze:** 25° to 28°F (-3.9° to -2.2°C)—widely destructive to most vegetation.
- **Severe freeze:** 24°F (-4.4°C) and colder—heavy damage to most garden plants.

Frost dates are only an estimate based on historical climate data and are not set in stone. The probability of a frost occurring after the spring frost date or before the fall frost date is 30%, which means there is still a chance of frost occurring before or after the given dates!

https://www.almanac.com/gardening/frostdates

Coastal Regions: Typically, no "hard or killing freezes" – but that is changing with the new climate anomalies we are currently witnessing throughout the Pacific Northwest. Weather, topography, and microclimates may also cause considerable variations in the occurrence of frost in your garden

Understanding Frost Dates – Hardy vs. Semi-Hardy

Cold weather doesn't kill hardy plants; it simply slows their growth rate. For every rise of 18 degrees, plant growth rate doubles, but that guideline is only applicable for an air temperature range of 40 to 98 degrees.

The hardiest vegetables that can withstand heavy frost of air temperatures below 28 include spinach, onions, garlic, leeks, rhubarb, rutabaga, broccoli, kohlrabi, kale, cabbage, collards, Brussels sprouts, corn salad, arugula, fava beans, radish, mustard greens, Austrian winter pea and turnip.

Semi-hardy vegetables that can withstand light frost of air temperatures in the range of 28 to 32 degrees include beets, carrots, parsnip, lettuce, chard, garden pea (before flowering), Chinese cabbage, endive, radicchio, cauliflower, parsley and celery.

For beets, carrots and parsnips, the tops will die but the roots will tolerate lower temperatures. For crops that form a head, such as radicchio and other chicories, the outer leaves may die under colder temperatures, but these can be peeled away to obtain an undamaged head within.

extension.oregonstate.edu/news/these-cold-hardy-vegetables-may-stick-it-out-through-winter