

FALL PLANTING

THE SECOND GARDEN SEASON

What to plant, when to plant it, and how to use cooling weather instead of fighting it.

Fall is not the cleanup season. It is a different growing season with different math. Plant early enough for crops to establish, choose varieties that can handle cold, and use protection where it actually buys you time.

THE FIRST FROST IS A DATE. IT IS NOT A SHUTDOWN NOTICE.

01 Fall is not one season.

Early fall, mid-fall, and late fall are three different gardening jobs.

The mistake is treating everything after summer as one planting window. In reality, fall starts while the soil is still hot, moves through cooling weather and shortening days, and ends with crops either harvested, protected, or intentionally overwintered.

- Early fall: establish slower crops while warmth and daylight are still on your side. Think broccoli, cabbage, kale, carrots, beets, and longer-maturing greens.
- Mid-fall: focus on quick crops, succession sowing, salad greens, radishes, turnips, spinach, and crops already established enough to finish in cooler weather.
- Late fall: shift from chasing maturity to protecting what is already growing, planting garlic and related alliums, mulching roots, and setting up overwintering systems.
- The exact dates change by climate. The sequence does not.

PUT THIS INTO PRACTICE

NAME THE PHASE YOU ARE IN

Before buying seed, decide whether your garden is still in establishment weather, quick-crop weather, or protection-and-overwintering weather. That single decision eliminates a lot of bad late-season purchases.

02 Start with your first frost date.

Then work backward. Do not start with the seed packet and hope.

Find your local average first frost or freeze date from a trusted local weather or Extension source. Then use the packet days-to-maturity number as a starting point, not a promise. Fall crops grow into decreasing light and cooler temperatures, so they often mature more slowly than spring crops.

- For direct-sown crops such as radish, spinach, beets, and lettuce, days to maturity usually counts from seeding.
- For transplanted crops such as broccoli, cabbage, and cauliflower, days to maturity often counts from transplanting. Read the catalog description carefully.
- Add a fall buffer. A practical planning rule is about 14 extra days for shortening days and cooling temperatures, then adjust for your climate and crop.
- Crops that must form heads or pods need more margin than crops you can harvest as baby leaves or small roots.

THE FALL MATH

Desired harvest date - packet days to maturity - roughly 14 days of fall buffer = a safer planting date.
The buffer is a planning tool, not a biological law.

PUT THIS INTO PRACTICE

COUNT BACKWARD ONCE

Pick one crop you want to harvest before frost. Write the harvest date, subtract its maturity days, then subtract two more weeks. If that date already passed, switch to a faster crop or a transplant instead of pretending the calendar is negotiable.

03 Choose crops by what cold does to them.

Some crops tolerate frost. Some improve after it. Some simply stop.

GROUP	EXAMPLES	WHAT TO EXPECT
Hardy	Kale, spinach, arugula, turnips, many Asian greens	Can tolerate significant cold once established; protection can extend harvest.
Half-hardy	Carrots, beets, chard, radish, cauliflower	Usually tolerate light frost but benefit from timely harvest or protection.
Warm-season	Beans, cucumbers, basil, peppers, tomatoes	Frost ends the season; cool nights often slow them before frost arrives.

Cold tolerance also depends on plant age, acclimation, wind, soil moisture, cultivar, and duration of the cold event. A tiny seedling and a well-rooted mature kale plant are not the same thing.

PUT THIS INTO PRACTICE

DO NOT MEMORIZE ONE TEMPERATURE

Think in crop groups and plant condition. Use row cover before a cold event, keep plants hydrated but not waterlogged, and harvest vulnerable crops before a forecast becomes an experiment.

04 The fastest wins are usually leaves and roots.

Fall rewards crops that can be harvested before they reach maximum size.

A fall garden does not need every crop to reach catalog-perfect maturity. Baby leaves, small roots, thinnings, and cut-and-come-again greens turn shorter windows into useful harvests.

- Fast greens: arugula, mizuna, tatsoi, baby kale, mustard greens, looseleaf lettuce, spinach when soil cools enough to germinate it.
- Fast roots: radish, salad turnips, baby beets, and carrots harvested young if the window is short.
- Herbs: cilantro and dill often perform better as temperatures ease, but still need enough time to establish.
- Use smaller harvest size as a strategy, not as a consolation prize.

PUT THIS INTO PRACTICE

PLANT A 30-DAY BED

Dedicate one small bed or container to crops you can begin harvesting in roughly a month. It gives you something reliable while slower brassicas and roots do their work.

05 Roots want time before the soil gets cold.

Carrots, beets, radishes, and turnips are not all the same fall crop.

Root crops can be excellent in fall because the edible portion is protected by soil and flavor often improves in cool weather. The trick is getting enough top growth established while days are still long enough to power root development.

- Carrots: sow earlier than you think. Germination is slow in hot, dry soil, and root bulking slows as light decreases.
- Beets: easier to establish than carrots in many gardens and useful because both roots and greens are edible.
- Radishes: ideal for repeated small sowings because many varieties mature quickly.
- Turnips: fast, cold-tolerant, and useful for both greens and roots depending on variety.
- Keep seedbeds evenly moist until germination. Fall root crops often fail during the first ten days, not the last ten.

PUT THIS INTO PRACTICE

USE A GERMINATION COVER

For tiny-seeded roots in hot weather, shade the seedbed lightly or use a board/burlap technique only until germination begins, checking daily. Remove the cover immediately when seedlings emerge.

06 Leafy greens are the backbone of fall.

They tolerate partial harvest, tighter windows, and more cold than most summer crops.

Greens are forgiving because you can harvest them at multiple stages. That makes them ideal for succession sowing and season extension.

- Lettuce: use heat-tolerant varieties for early sowings and cold-tolerant varieties for later ones. Seed germination can suffer when soil is too warm.
- Spinach: often better planted after heat breaks. It can overwinter in many climates with protection and resume growth when light returns.
- Asian greens: bok choy, tatsoi, mizuna, komatsuna, and mustard relatives can be very fast but may bolt if stressed by heat or transplant shock.
- Kale and collards: slower to establish but increasingly useful as temperatures drop.
- Harvest outer leaves or cut baby greens instead of waiting for a full-size head when time is limited.

PUT THIS INTO PRACTICE

SOW LITTLE, OFTEN

One huge lettuce sowing gives you one huge lettuce problem. Sow a short row or small patch every 7 to 14 days while your window remains open.

07 Brassicas need a head start.

Broccoli in September usually starts in summer.

Broccoli, cabbage, cauliflower, kale, collards, kohlrabi, and related crops are classic fall vegetables, but many need to be started well before the weather feels like fall. Transplants are often the difference between a harvest and a beautiful plant that runs out of calendar.

- Start transplants indoors or in a protected outdoor nursery area while summer crops are still producing.
- Broccoli, cabbage, and cauliflower need enough establishment time to form usable heads before growth becomes very slow.
- Kale and collards are more forgiving because you harvest leaves rather than waiting for one terminal head.
- Protect young brassicas from cabbage worms, flea beetles, and other pests. Cool-season does not mean pest-free.
- Do not bury a weak late transplant in fertilizer. Healthy roots, steady moisture, and time matter more.

PUT THIS INTO PRACTICE

START THE REPLACEMENT BEFORE THE VACANCY

Do not wait until tomatoes are dead to start fall brassicas. Raise the transplants while the summer crop is still there, then move them in when space opens.

08 Peas are possible. They are also annoying.

Fall peas have to outrun heat at planting and cold at flowering.

Peas like cool weather, which makes fall sound perfect. The problem is timing: hot soil can reduce establishment, while late cold can arrive before flowers and pods have enough time to mature.

- Choose fast-maturing varieties and give them excellent drainage.
- Plant early enough to allow flowering and pod fill before hard cold.
- Use inoculant only if appropriate for your soil and seed source; it does not fix bad timing.
- Provide support from the beginning so vines are not a tangled mess when weather turns.
- If your fall window is short, spend the space on greens or roots instead.

A GOOD CROP TO SKIP

Not every crop deserves a fall attempt in every climate. Gardening gets easier when you stop treating every seed packet as a personal challenge.

PUT THIS INTO PRACTICE

KNOW YOUR OPPORTUNITY COST

If peas need eight weeks and you only have six reliable weeks, that bed may produce far more food as spinach, radishes, arugula, or transplanted kale.

09 Direct sow or transplant?

The answer is often different in fall than it is in spring.

Fall is a race against declining light. Transplants buy time because the plant can be growing somewhere else while a summer crop still occupies the bed.

- Direct sow: carrots, radishes, turnips, spinach, arugula, peas, many baby greens.
- Usually transplant: broccoli, cabbage, cauliflower, Brussels sprouts, many head lettuces.
- Either can work: kale, chard, bok choy, lettuce, beets, depending on timing and your ability to keep seedlings alive in heat.
- Harden off transplants gradually before moving them from indoor or protected conditions into full sun and wind.
- Transplant on a cloudy day or late afternoon when possible, then water deeply.

PUT THIS INTO PRACTICE

BUY TIME WITH A NURSERY TRAY

Use a tray of fall transplants as temporary garden real estate. They can grow for several weeks while beans, cucumbers, or tomatoes finish producing.

10 Fall planting begins before summer is finished.

Succession planting is how one bed becomes three seasons of food.

A productive garden is not organized by crop ownership. Beds change jobs. As spring crops finish, summer crops replace them. As summer crops decline, fall vegetables move in.

- Remove genuinely finished plants instead of protecting sentimental tomatoes that produce one sad fruit every nine days.
- Use openings immediately: sow radish after beans, transplant kale after cucumbers, plant spinach where squash came out.
- Interplant small fall seedlings near the edge of declining summer crops if light and root competition are manageable.
- Keep pathways and irrigation accessible during transitions. A bed packed with overlapping crops can become impossible to water or harvest.

PUT THIS INTO PRACTICE

MAKE A THREE-SEASON MAP

For each bed, write Spring -> Summer -> Fall. If a bed has only one crop listed for the entire year, ask whether it could safely produce another crop before or after it.

11 Hot soil is a fall-garden problem.

The calendar may say fall planting while the seedbed still feels like July.

Many fall crops are sown during late-summer heat. That creates the weird problem of trying to germinate cool-season vegetables in hot soil.

- Keep seedbeds consistently moist. Tiny seeds near the surface can dry in a single hot afternoon.
- Use temporary shade cloth or plant on the cooler side of taller crops when appropriate.
- Sow in the evening and water thoroughly to reduce immediate heat stress.
- For lettuce and spinach, high soil temperatures can suppress germination. Wait for a cooler stretch or start seed in a cooler protected location.
- Remove temporary shade once seedlings are established so they receive enough light.

PUT THIS INTO PRACTICE

PROTECT GERMINATION, NOT THE WHOLE SEASON

Your goal is to help the seedling through its most fragile stage. Shade and extra attention should be temporary tools, not permanent low-light conditions.

12 Water less often does not mean stop paying attention.

Cooler air reduces demand, but new seedlings still have tiny root systems.

Fall irrigation changes as temperatures fall, rainfall patterns shift, and established crops use water more slowly. The danger is swinging from summer overwatering habits to neglect.

- Keep newly seeded beds evenly moist through germination and early establishment.
- Water transplants deeply enough to wet the root zone, then let the surface begin to dry before watering again.
- Reduce frequency as evapotranspiration falls, but check soil rather than watering by memory.
- Morning watering is often preferable as nights become cooler because foliage has time to dry.
- Container fall gardens still dry faster than in-ground beds and may need surprisingly frequent checks on sunny, windy days.

PUT THIS INTO PRACTICE

CHANGE THE SCHEDULE, KEEP THE HABIT

Keep checking moisture on the same days you did in summer, but water only when the soil actually needs it. Fall is a season for observation, not autopilot.

13 Feed the crop you are planting, not the crop that just left.

Fall soil prep should be quick, gentle, and targeted.

After a heavy summer crop, the soil surface may be compacted, dry, weedy, or depleted. Reset the bed without rebuilding it from scratch.

- Cut summer plants at soil level when practical and leave healthy roots to decompose in place.
- Top-dress with a modest layer of finished compost if the bed needs organic matter.
- Correct known nutrient deficiencies based on soil testing rather than guessing.
- Avoid heavy nitrogen late in the season, especially under low-light protected conditions.
- Mulch between established plants after the soil has cooled, but keep tiny direct-sown rows visible and accessible.

PUT THIS INTO PRACTICE

RESET IN TWENTY MINUTES

Remove crop debris, pull major weeds, loosen only obvious compaction if needed, add a light compost top-dress, water the bed, and plant. Do not turn succession planting into a construction project.

14 The pests did not get the memo about fall.

Young fall plants often enter the garden when insect pressure is still high.

Cabbage worms, flea beetles, aphids, slugs, and other pests can still damage fall crops. Seedlings planted into warm late-summer weather may be especially vulnerable.

- Use insect netting or row cover immediately after planting brassicas if pests are active.
- Seal edges. A beautiful piece of row cover with gaps is expensive decoration.
- Scout the undersides of leaves and the growing point, not just the obvious top surface.
- Remove diseased or heavily infested summer crop residue before planting susceptible fall crops nearby.
- As temperatures cool, slug and snail activity can remain significant in damp mulched beds.

PUT THIS INTO PRACTICE

PROTECT ON DAY ONE

Do not wait until the first cabbage worm hole appears. If exclusion is part of your plan, put the barrier over clean plants before the pest arrives.

15 Row cover buys degrees. A tunnel buys a season.

Season extension works best when the crop is already established.

Frost cloth, floating row cover, cold frames, and low tunnels can extend harvest, protect seedlings, and help hardy crops overwinter. They do not create summer in December.

- Lightweight row cover offers modest cold protection and can also exclude insects.
- Heavier frost fabric offers more cold protection but transmits less light.
- Plastic-covered low tunnels trap more heat but require ventilation on sunny days to prevent overheating.
- Never let plastic rest directly on tender foliage during freezing weather if the material itself can transmit cold damage.
- Anchor every edge for wind. A frost cover in the neighbor's tree protects nothing.

PUT THIS INTO PRACTICE

PROTECT BEFORE SUNSET

Install covers while there is still daylight and stored soil warmth. Waiting until midnight during a freeze warning turns a simple system into emergency theater.

16 Low tunnels need ventilation, not faith.

The same structure that saves a crop at night can cook it at noon.

A sunny fall day can rapidly heat a plastic-covered tunnel. Temperature management matters even when outside air feels cool.

- Vent plastic tunnels on mild sunny days and close them before evening temperatures fall.
- Use hoops strong enough to handle wind, rain, and expected snow load.
- Keep fabric or plastic secured so abrasion does not damage leaves.
- Water before a freeze when soil is dry; moist soil can store more heat than very dry soil.
- Choose protection based on the crop. Hardy spinach may need less help than tender lettuce.

PUT THIS INTO PRACTICE

PUT A THERMOMETER UNDER THE COVER

One inexpensive min/max thermometer teaches you more about your tunnel than weeks of guessing. Compare protected and unprotected temperatures during several weather events.

17 Overwintering is about establishment, not winter growth.

Many crops survive winter by waiting, then resume when light returns.

In colder regions, very little vegetable growth occurs during the darkest part of winter. The goal is to enter that period with plants large enough to survive but not so large that they become vulnerable or exhausted.

- Common candidates include spinach, kale, arugula, mache, parsley, chicories, and some hardy Asian greens depending on climate and protection.
- Plant early enough to establish roots and leaf area before growth slows dramatically.
- Harvest lightly in deep winter. The plant cannot rapidly replace what you remove under very short days.
- Vent protection during warm spells and remove damaged leaves to reduce disease pressure.
- Expect growth to accelerate again as days lengthen, even before spring feels fully established.

PUT THIS INTO PRACTICE

GROW THE PLANT BEFORE WINTER

If you want January spinach, the work happens in late summer and fall. Winter protection preserves an established plant; it does not manufacture one.

18 Garlic belongs to late fall for a reason.

This is planting for next year, not squeezing in one more harvest.

Garlic, shallots, and some multiplier onions are commonly planted after the main fall vegetable rush. Their job is to root before winter and resume strong growth in spring.

- Plant healthy, disease-free stock appropriate for your region.
- Prepare well-drained soil before weather makes bed work miserable.
- Plant at the depth and spacing recommended for the crop and local climate.
- Mulch after planting where winter conditions make insulation and weed suppression useful.
- Do not confuse fall-planted alliums with fast fall crops. Their payoff comes the following season.

ALREADY HAVE THE DEEP DIVE

Field Guide 009 - Plant Garlic Now, Thank Yourself Later - covers garlic selection, planting, mulch, spring care, scapes, harvest, curing, storage, and saving bulbs.

PUT THIS INTO PRACTICE

RESERVE THE BED NOW

Garlic is easiest when its space is decided before every fall bed is filled with greens. Mark the bed, prepare it, and protect that space from your own last-minute planting enthusiasm.

19 Sometimes the best fall planting is a cover crop.

If there is not enough time for vegetables, plant the soil instead.

Cover crops protect bare soil, capture nutrients, suppress weeds, add organic matter, and can support soil structure. The right species and planting window depend heavily on climate and when you need the bed again.

- Oats can provide fall growth and winter-kill in colder climates, leaving residue that is easier to manage in spring.
- Winter rye is extremely hardy and useful but can become a management problem if you let it get large without a termination plan.
- Clover and other legumes can add nitrogen over time but generally need enough establishment window to be worthwhile.
- Do not sow a cover crop just because the bag says cover crop. Know how and when you will terminate it.
- If your fall window is already closed, clean mulch can still protect bare soil until spring.

PUT THIS INTO PRACTICE

ASK ONE SPRING QUESTION

Before sowing a cover crop, answer: How am I going to stop this plant before I need the bed again? If you do not have an answer, choose a simpler soil-cover strategy.

20 Frost can improve the harvest.

Cold is not automatically damage.

Many cool-season crops tolerate light frost, and some develop sweeter flavor after exposure to cold. The gardening skill is knowing when to protect, when to harvest, and when to let the crop experience the weather.

- Carrots and some roots can remain in the soil into cold weather when beds are insulated enough to keep the soil workable.
- Kale, collards, and some brassicas often taste sweeter after cool weather.
- Spinach and hardy greens can survive temperatures that would end basil or beans immediately.
- A hard freeze is different from a brief light frost. Duration, wind, plant hydration, and acclimation matter.
- Harvest before severe weather if the crop is already mature and you have no reason to gamble with it.

PUT THIS INTO PRACTICE

HARVEST STRATEGICALLY

If a crop is ready and a serious freeze is coming, harvest what you would be upset to lose. Leave the hardier plants as an experiment. That is a much cheaper way to learn your garden.

21 Why fall gardens fail.

Most failures happen because the crop was planted too late, not because fall gardening does not work.

When a fall garden stalls, diagnose the timing and establishment before blaming the season.

SYMPTOM	LIKELY CAUSE	FIRST THING TO CHECK
Tiny plants that never size up	Planted too late; short days arrived before establishment	Count backward from intended harvest and add a fall buffer next year.
Patchy germination	Hot/dry seedbed or poor seed-soil contact	Moisture consistency, soil temperature, sowing depth.
Broccoli all leaves, no head	Timing, heat, cultivar, or insufficient maturity window	Transplant date and days to maturity.
Greens chewed immediately	Late-summer pest pressure	Use exclusion from day one.
Covered plants rot	Too much moisture and too little ventilation	Vent covers and water less often.

PUT THIS INTO PRACTICE

WRITE DOWN THE DATE

Record when you sowed or transplanted each fall crop. Next year, your own dates will be more useful than a generic planting calendar from another climate.

22 Build your fall planting calendar.

Your first frost date is the anchor. Your crops fill in the rest.

Use this simple sequence for each crop. The goal is not one universal fall calendar. The goal is a repeatable way to make your own.

- 1. Find the local average first frost/freeze date.
- 2. Choose the date you actually want to begin harvesting.
- 3. Find the variety-specific days to maturity.
- 4. Confirm whether that number starts from seeding or transplanting.
- 5. Add roughly 14 days as a fall slowdown buffer, then adjust for local guidance.
- 6. Decide whether the crop must fully mature or can be harvested young.
- 7. Decide whether you will use row cover, a tunnel, or no protection.
- 8. Put the planting date on a calendar now - not when the summer garden starts looking tired.

PUT THIS INTO PRACTICE

DO THE MATH FOR THREE CROPS

Choose one root, one green, and one brassica. Calculate their planting dates tonight. That gives you a real fall plan instead of a seed-shopping list.

23 A simple fall workflow.

Different climates shift the dates. The order of operations remains surprisingly consistent.

PHASE	WHAT TO DO	CROPS / SYSTEMS
Late summer	Start transplants; direct-sow slower roots; prepare succession space	Broccoli, cabbage, kale, carrots, beets
Early fall	Transplant brassicas; sow greens and roots in waves	Lettuce, arugula, radish, turnip, spinach as heat breaks
Mid-fall	Shift toward fast crops; install pest/cold protection	Baby greens, radish, spinach, Asian greens
Late fall	Protect, mulch, overwinter, plant next-year crops	Garlic, roots under mulch, tunnels, hardy greens
Winter	Harvest lightly, vent protection, observe	Spinach, kale, mache, protected greens depending on climate

PUT THIS INTO PRACTICE

PUT THE INFRASTRUCTURE AWAY LAST

Do not pack away hoops, row cover, clips, irrigation fittings, or mulch supplies just because tomatoes are finished. Fall gardening uses a different tool kit, not no tool kit.

24 The fall planting checklist.

If these are answered, you are not guessing anymore.

- I know my average first frost/freeze date.
- I calculated planting dates from variety-specific maturity times.
- I added extra time for shorter days and cooler temperatures.
- I know which crops I am direct-sowing and which I am transplanting.
- I have a plan for hot-soil germination and early seedling moisture.
- I am replacing finished summer crops instead of waiting for empty beds.
- I know which pests are still active on the crops I am planting.
- I have row cover, frost cloth, or low-tunnel materials before I need them.
- I know which crops I plan to overwinter and which I plan to finish before winter.
- I have reserved space for garlic or cover crops if they are part of the plan.
- I wrote down planting dates so next year gets easier.

PUT THIS INTO PRACTICE

THEN PLANT SOMETHING

A fall plan does not need twenty crops. Three well-timed plantings will teach you more than fifteen packets sown too late.

25 Sources worth keeping.

Use local Extension guidance for your climate, frost dates, cultivars, and protection methods.

University of Maryland Extension - Fall Vegetable Gardening

Current guidance on hardy and half-hardy fall crops, planting-date math, row cover, overwintering, and the effect of shorter days.

extension.umd.edu/resource/fall-vegetable-gardening

University of Maryland Extension - Vegetable Succession and Companion Planting

Planning beds through spring, summer, and fall; succession intervals; transplants; and replacing finished crops.

extension.umd.edu/resource/vegetable-succession-and-companion-planting

University of Maryland Extension - Planting Vegetable Transplants

Current guidance on transplanting and hardening off vegetable seedlings.

extension.umd.edu/resource/planting-vegetable-transplants

Penn State Extension - Season Extenders and Growing Fall Vegetables

Low tunnels, cold frames, season extension, fall planting, and soil testing.

extension.psu.edu/season-extendors-and-growing-fall-vegetables

Your local Cooperative Extension

Use local planting calendars and frost guidance to convert the principles in this guide into dates that make sense where you garden.

extension.org/find-cooperative-extension-in-your-state

**THE SUMMER GARDEN ENDS.
THE GARDEN DOES NOT.**

BE KIND. GROW YOUR OWN FOOD.