



FACEBOOK LIVE SEMINAR

Starting Your Fall Veggie Garden

As the summer gardening season comes to a close, it's the perfect time to get your fall vegetable garden growing. Garden Guru, Mike Westphal, shares all his fall gardening tips to help you fill your table with plenty of nutritional, homegrown goodness long beyond the heat of summer.

What are Cole Crops?

Cole crops are plants that belong to the mustard (Brassica) family and are all descendants of wild cabbage. These plants grow better in cool weather. The term Cole crop is the English translation of the German word for cabbage, Kohl.

ARUGULA

Arugula is high in vitamin C and A and beta carotene, and magnesium. Its peppery taste adds extra flavor to everything from salads to soups to pizza and sandwiches.

- Plant seed every 2-3 weeks directly in the garden between September 1 and November 1.
- Plant ¼-inch deep and about 1 inch apart in rows 10 inches apart.
- Seeds germinate in a few days.
- Harvest young, tender leaves in 4-5 weeks.
- Sow new seeds every 2 to 3 weeks for a continuous harvest.
- Thin seedlings to about 6 inches apart using the thinnings for salads.
- To reduce heat stress, provide some shade for warm-season plantings.

BEETS

Beets are a great source of fiber, folate (vitamin B9), manganese, potassium, iron, and vitamin C. Beets are often added to juices, salads and can be roasted or steamed.

- Plant between August 1 and September 30.
- Seed 1/2 inch deep in rows 12 inches apart.
- Harvest in October and November.
- Thin to 3 inches apart.

TIP: Use beet tops in salads.

BROCCOLI

Broccoli contains fiber, vitamin C, vitamin K, iron, and potassium. It also boasts more protein than most other vegetables. This multitude stems veggie is great in stir fry, salads or steamed as a side dish.

- Start seed in early July.
- Sow seed in small pots or trays.
- Keep outside in afternoon shade until ready to plant in the garden (ready to plant in about 4 weeks).
- Be careful when transplanting - roots do not like to be disturbed.
- Seed every 2 weeks for 3 planting (this will provide you with a long harvest time).
- May continue to produce through the winter in mild winter temperatures.
- Dust plants with Dipel Dust after each rain to keep butterfly larvae away.

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BRUSSELS SPROUTS

Brussel sprouts are packed with immunity-boosting vitamin C and cancer-fighting glucosinolates. This long-lasting crop makes a great addition to salads and can be steamed or roasted for a side dish.

- Start seeds between June 15 and July 1.
- Sow seed in small pots or trays.
- Keep outside in the afternoon shade until ready to plant in the garden (in about 4-6 weeks).
- Be careful when transplanting - roots do not like to be disturbed.
- Will grow through the winter and continue to produce until time to plant peppers and cucumbers.
- When harvesting, remove the lower leaf and twist the head. This will give you a long harvest time.
- To ripen them all at one time, cut at the top of the plant at the thickened stem.
- Dust plants with Dipel Dust after each rain to keep butterfly larvae away.

CABBAGE (*EARLY FLAT DUTCH)

Cabbage contains vitamin C, fiber, folate, potassium, magnesium, vitamins A, and K. It can be boiled, cooked, sautéed or steamed and makes a great addition in salads.

- *The Early Flat Dutch variety makes a 4-6 pound head that keeps for a long time.
- Start seeds in mid July.
- Sow seed in small pots or trays.

- Keep outside with afternoon shade until ready to plant in the garden (in about 4-6 weeks).
- Be careful when transplanting - roots do not like to be disturbed.

CARROTS

Carrots provide antioxidants and contain vitamins A, C, K as well as potassium and calcium. The sugar in carrots gives them a slightly sweet flavor, but some varieties can taste earthy or bitter. Carrots can be eaten raw or steamed, baked, roasted or added to salads.

- Plant directly in the garden as carrots do not transplant well.
- Plant between August 1 and September 30.
- Add lots of organic matter or compost to loosen the soil.
- It takes a while for carrots to come up, so be patient. Once up, thin to 2 inches apart (they do not develop good size when crowded).
- The roots will survive in the ground unless there is a very cold winter.
- Successive plantings will give you a steady harvests.

CAULIFLOWER

Cauliflower is high in vitamin C and a good source of folate. It's fat free and cholesterol free and also is low in sodium. Eat it raw, cooked, roasted, baked into a pizza crust, or cooked and mashed as a substitute for mashed potatoes or rice.

continued on next page

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- Start seed in July.
- Transplant in late August.
- Use row covers to provide light shade and protection from bugs.
- Dipel Dust is also effective in controlling butterfly and moth larvae.
- Fertilize regularly and do not let the plants get too dry.
- Cauliflower does not like heat and is more challenging to grow.

CELERY

Celery is a good source of vitamin K, vitamin A, potassium, folate, and fiber. Great in stews, stir fries, soups, and salads.

- For fall, soak seed over night in late July and early August.
- Plant in small containers, so young plants can be relocated into shade during the summer heat.
- Plant in the garden in October.
- Place milk cartons around the plants 2 weeks before harvest to blanch stems.
- Harvest all winter into spring.

TIP: Celery stalks can be frozen. Cut the stalks into half-inch pieces and store in freezer-grade bags.

CHARD SWISS

Chard Swiss is an excellent source of vitamins K, A, and C, as well as a good source of magnesium, potassium, iron, and dietary fiber. A real treat in salads or served as a side dish.

TWO GROUPS OF CHARD

Bright Lights Mix provides a variety of colorful stems in yellow, red, purple, and white.

Swiss Ford Hook (white steamed) variety that produces more foliage and tender stems. Harvest stems as they mature.

- Plant seeds from late July through September.

COLLARDS

Collard greens are rich in folate, calcium, dietary fiber, and vitamins E, A, K, and C. Harvest the young outer leaves for salads and lightly steamed or fresh-picked, mature leaves for slow cooking southern style.

- Plant March through September.
- For fall planting, start seed in late July through early August.
- The best flavor is achieved after the first hard frost in the fall.

KALE

Kale contains fiber, antioxidants, calcium, vitamins C, and K, and iron. Ideal in soups, and perfect for salads or simply steamed as a side dish.

continued on next page

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- Start seeds in July and August or transplants in September through October 15.
- Use Dipel Dust after every rain to keep the worms away.

LEEEKS

Leeks are high in vitamin A, vitamin C, vitamin K, and vitamin B6, as well as iron, and manganese. Add to soups, stews, and slow-cooked recipes.

- Easy to grow.
- Take a little more time to mature.
- Space approximately 6 inches apart when planting in the garden.
- Grow through the winter.
- No insect issues.

LETTUCE

Lettuces are high in minerals, such as calcium, phosphorous, magnesium, and potassium. Romaine lettuce is packed with vitamin C, vitamin K, folate, and is good source of beta carotene. Use in salads, wraps, sandwiches, and as a garnish.

- Extremely easy to grow.
- Seed needs light to germinate, so cover very lightly.
- Vermiculite makes a good cover for the fine seed.
- Keep soil moist for a week after the plants come up.
- Protect new seed beds from driving hard rain until plants are established (a screen or shade cloth works well).

TIP: Sprinkle a little Vermiculite over top of seed. After a hard rain, you'll be able to see if the vermiculite has shifted. If so, you can move your seed back where it needs to be.

MUSTARD TENDERGREEN

Mustard greens are a delicious source of calcium, magnesium, folic acid and vitamin K, important for bone health. Raw mustard greens have a peppery bite, but you can mellow it by cooking them. Perfect in salads or as a side dish.

- Sprout quickly and mature in approximately 30 days.
- Can be grown through the winter in milder temperatures.
- Plant as an ornamental in the garden.
- Make a great companion plant with pansies.
- Flowers are edible.
- Once they seed, use the seed to season with or to make mustard.

PARSNIP

Parsnips are rich in vitamins and minerals including magnesium, calcium, iron, potassium, vitamin C, folate, choline, and vitamin E. Prepare parsnips with or in place of other veggies like potatoes, sweet potatoes and cauliflower.

continued on next page

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Starting Your Fall Veggie Garden

- Grow anywhere you have deep, loose soil (need about 8-10 inch depth to grow)
- 100 days to maturity.
- This root crop, like carrots, can be planted in September.
- Be patient, it may take 3 weeks for the seed to come up.
- Harvest after 3 or 4 frost in November and for the rest of the winter as needed.

PEAS

Peas have potassium, iron, magnesium, manganese, folate, and B vitamins. Serve them steamed, puréed to make dips, or use in soups and stews. Pea leaves can also be used in salads.

- Easy to grow.
- Grow in the spring or fall.
- Peas are climbers and prefer some sort of trellis or netting system to grow on.
- Plant your favorite pea variety in August for a fall harvest or November to get a jump on spring.
- Peas are more difficult to germinate. Try soaking the seed over night in water. Wrap in damp paper towels in a plastic bag until the roots begin to emerge.

TIP: Use a tomato cage as a trellis for peas to grow on in the garden.

RADISHES

Radishes are packed with Vitamins E, A, C, B6, and K. Plus it's high in antioxidants, fiber, zinc, potassium, phosphorous, magnesium, copper, calcium, iron, and manganese. Ideal in salads or used as a colorful garnish.

- Easy to grow.
- Mature in approximately 30 days.
- Plant small quantities every 2-3 weeks August through October.
- Raised beds are perfect for an easy winter harvest.

SPINACH

Spinach is rich in vitamins A, C and K, magnesium, iron, and manganese. Use in salads, dips, soups, or steamed as a delicious side dish.

- Easy to germinate seed or grow in the garden or.
- Plant spinach in late September and October and harvest for 6 months.
- Matures in approximately 40 days.
- Spinach does best in soil pH of 6.5 (check to see if your garden needs lime).
- Mulch to keep weeds down and the leaves clean.
- Raised beds are perfect for an easy winter harvest.
- Use Biotone Starter Plus and/or Garden-Tone liberally to keep pH levels up.

TIP: Want a longer spinach harvest during the winter? Make a tunnel with hoops and cover with plastic during the colder winter months.

TURNIP

Turnips are a good source of fiber, minerals, iron, copper, potassium, manganese and vitamins C, A, K and B-6. Tasty in salads or cook with a little ginger and cilantro for a great side dish.

continued on next page

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Starting Your Fall Veggie Garden

- Plant as an early spring and fall crop.
- Matures in approximately 2 months.
- Bulbs are best when they are small and tender, around 2 or 3 inches in diameter (older turnips can get tough or pithy).
- Fall planted turnips can be left in the ground and harvested into the winter, since they are no longer actively growing.
- Harvest the mid-white roots at 3-4 inches in diameter while the leaves are still tender.

TIP: Did you know turnips make great Jack-O-Lanterns? For a twist on Halloween, carve a turnip in place of the usual pumpkin.

FALL HERBS

Fall is a great time for growing cool-weather herbs like parsley, sage, rosemary, thyme, oregano and chives. These may be planted from seed or herb plants can be transplanted into the garden.

BEST PRACTICES GUIDELINES

Refer to the back of the seed packet for pertinent information about how and when to plant and grow.

AMEND YOUR SOIL

Compost is extremely important to help loosen up the soil for fall veggie planting (especially root vegetables). Use compost to amend your soil when planting in the ground or in raised beds.

Use **Potting soil** when planting in pots/containers. We recommend our **McDonald Potting Soil** available in both traditional and organic formulas.

HARVESTING

"Use them or lose them"

Once your vegetables are growing, be sure to harvest and pick your veggies often.

MULCH

Mulching around your garden vegetables prevents weeds, keeps the soil cool (or warm in the cooler months), and helps retain moisture in the ground around your plants.

WATER

Make sure your cole crops stay moist and receive a steady supply of water. They need about one inch of water per week.

If you have clay soil that retains moisture or if it rains hard every week or so, you may not have to water much. But, if you have light, sandy, quick-draining soil, you may have to water more often.

You can monitor rainfall with a rain gauge, or you can check the soil for dryness by doing the finger test. Insert your finger into the soil up to your first knuckle. If the soil is dry it's time to water.

We recommend using a watering wand to help you get directly to the root when watering. We use **Dramm Watering Wand** watering all our plants.

continued on next page

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FEED

Cole crops require careful nutrient management to obtain good quality and maximum yields. They are sensitive to several micro-nutrient deficiencies and require nitrogen throughout the growing season.

We recommend the following products for feeding:

McDonald Greenleaf (traditional or organic formulas) - 12-4-8 slow release formula that gives an excellent initial feed you will see within days and continues to feed for 1-3 months depending on plant needs. All plant food has macro-nutrients, Nitrogen-Phosphorus-Potassium, but Greenleaf has micro nutrients, including boron, copper, iron, magnesium, zinc and molybdenum to help increase the nutrients that soil naturally lacks.

Espoma Garden Tone - is a premium plant food formulated specifically for herb and vegetable gardens. It is made from natural and organic plant food ingredients and contains no sludges or fillers. The organics in Garden-tone break down gradually to provide a safe, long lasting food reservoir for plants and flowers throughout the growing season. We also add Bio-tone a proprietary blend of microbes that biologically enhances our organic fertilizer to ensure superior plant growth.

Bio-Tone Starter Plus - is an all natural plant food enhanced with bio-stimulants, beneficial bacteria, and mycorrhizae. Bio-Tone works naturally within the soil to help plants establish quickly, withstand environmental stress, promote deeper root systems, encourage better blooms, and improve soil structure.

CORRECTING pH LEVELS

Some cole crops are sensitive to nutrient deficiencies and low pH. We recommend using these products for correcting pH levels:

Espoma Organic Garden Lime - an all natural plant supplement formulated to raise soil pH.

MAG-I-CAL® - a highly soluble form of calcium that helps to rapidly raise soil's pH.

SOLUTIONS FOR PEST AND DISEASE CONTROL

Be proactive when it comes to disease and insect prevention. Use these products recommended below to help reduce and treat insects and diseases in the veggie garden.

Dust plants with **Dipel Dust** after each rain to keep moth larvae away.

TIP: Dipel is a bacterial that only affects larvae.

Natural Guard Caterpillar Killer Spray with Bt previously known as Thuricide Concentrate, is a biological insecticide with *Bacillus thuringiensis* (Bt) for use on fruits, vegetables, shade trees, and ornamentals plants to treat a variety of leaf-feeding worms. Pests treated include bag worms, tent caterpillars, gypsy moths, cabbage loopers, and tomato horn worms.

continued on next page

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Natural Guard Spinosad Soap (organic) - for aphids and other insects. Suffocates insects and diseases (good for treating scale). The combination of potassium salts of fatty acid and spinosad effectively control foliage-feeding pests.

Bonide Neem Oil - for smaller insects as well as fungus (powdery milder). An all purpose insecticide, miticide, fungicide for organic gardening. Derived from the Neem seed. Use on roses, flowers, vegetables, herbs, spices, houseplants, trees, turf and shrubs. Kills all stages of insects - eggs, larvae and adults. Makes a great dormant spray.

Fertilome Triple Action Spray - (insecticide/fungicide/miticide). An effective fungicide for the prevention and control of various fungal diseases including Powdery Mildew, Aphids and more.

Fertilome Broad Spectrum Insecticide - (traditional) - For use on lawns, ornamentals, listed garden vegetables, & fruit trees. Provides 4 month control of insects indoors and up to 6 weeks of control of insects outdoors. Kills insects and pests that damage roses, flowers, shrubs, fruit trees, vegetable gardens, and lawns. Insects Controlled: ants, army worms, crickets, mosquitoes, ticks, and many more listed on the label.

Fertilome Website (fertilome.com) is a great resource for finding solutions to insect and disease issues. Fertilome products are also available in our year-round and Market locations.

Other online resource include university/edu horticultural websites (Virginia Tech, Clemson, NC State, etc.).

REFERENCE WEBSITES

- Fertilome/Natural Guard - fertilome.com •
- Espoma - espoma.com •
- Bonide - bonide.com •
- Jonathan Green - jonathangreen.com

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