Get the Biggest Bang for Your Sweat with Smart Garden Practices

Meipo Martin

Montgomery County (Maryland) Master Gardener Speakers Bureau

Meipo Martin was born in Hong Kong, where she started growing houseplants and herbs on the windowsill of her 36th floor apartment. In 1998, she moved to the United States and got her own house. In her new garden, Meipo's love for plants came into full bloom. She became a Montgomery County Master Gardener in 2015. Meipo believes gardening should be accessible to all, and it does not have to be expensive or hard. To share her knowledge, Meipo gives a variety of presentations on gardening methods for the Master Gardener organization. When she is not gardening, Meipo is a wife, an Aikido instructor, a woodcarver, a blogger and a sewist.

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Montgomery County Master Gardener Program

A non-profit volunteer program of the University of Maryland Extension (UME)

We support the UME mission by educating residents about safe, effective, and sustainable horticultural practices that build healthy gardens, landscapes, and communities

We offer services and events throughout the year:

- Presentations to Community Groups and Conferences
- Plant Clinics
- Horticultural Help Line
- Sample Drop-Off for ID and/or Diagnosis
- Therapeutic Horticulture
- Demonstration Gardens
- Urban Gardening Conferences

There is no charge for Master Gardener services within Montgomery County, however, we do accept and greatly appreciate donations to support our programs and activities.

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Planting

- Right plant, right place – match plant requirements with USDA Hardiness Zone (7a for Montgomery County, MD), site characteristics (soil type, moisture, light, wind, etc)
- Choose pest and disease resistant plants that suit climate. Be aware of pest and disease history of area. Avoid planting susceptible plants. Consider native plants.
- Be realistic about what can grow at your site. Plants can only adapt to certain extent.
- When planting, plant big plants first before planting little things to avoid having to move them, or kill them (like bulbs).
- Native shrubs that are hosts for beneficials can enhance IPM.
- Dense planting, understory planting, groundcover help suppress weed.
- Proper spacing: open soil invites weed; overplanting creates excessive competition, reduces air flow, invites diseases, needs more watering, frequent divisions, pruning for size . . .
- Plan for mature size of plants. If you have to repeatedly trim your plants to fit the space, the plants are not right for the space.
- Interplanting (planting a mixture of crops together) using beds reduces overall area that needs work and supplies, increases productivity and suppresses weed
- Planting timing: best time for perennials, shrubs and trees is fall. Soil temp is warmer in fall than in spring with the same air temp.
- Sow seeds that require stratification in the fall or winter. Mark area so you do not forget them.
- Tilling destroys soil structure, microbial and fungal lives in soil, brings weed seed bank to light.
- Tilled soil does not get wet as easily and drainage is worse. Tilling increases nutrient runoff, soil erosion, release of greenhouse gases into the atmosphere. Natural lumpy soil is more stable: more resistant to soil compaction and erosion, retains more organic matter
- Soil Health Lessons in a Minute: Benefits of No-Till Farming
- https://www.youtube.com/watch?v=Rpl09XP_f-w
- Soil Health Lessons in a Minute: Soil Stability Test
- https://www.youtube.com/watch?v=9_ItEhCrLoQ
- Water in soil is in a tug of war – soil particles want to hold water up; gravity wants to pull it down. When the two forces balances, water stops flowing out of pot. The resulting column of water at bottom of pot is called “Perched Water Table”. Adding gravels at bottom of pot or planting hole elevates perched water table near root zone, creating soggy planting bed and optimal conditions for soil-borne diseases.
- In ground planting: Different textures of potting mix and native soil means planting hole can be flooded when it rains. When plant uses up the moisture in the soil mix on hot days, soil mix can get too dry but cannot draw water from surrounding native soil. Compost mixed into soil decomposes and leads to plant settling down too far. Roots can suffocate. Instead, backfill with native soil. Don’t mix soil amendments into planting hole. Maintain a consistent soil texture throughout.
- Practice root washing. Gently disturb root ball to encourage fibrous root growth. Flare out fibrous roots like spokes in cartwheel. Plant with root flare showing for correct depth.

Put plenty of mulch on top and water deeply when done. Any soil amendment can be just spread on top of soil. Minimize soil disturbance.

- Raised beds: With soilless mix, you need to replenish the lost volume periodically. To avoid having layers of soil of different textures, you need to mix the old and the new material very thoroughly. But the tilling work also creates soil disturbance and destroys your soil structure. Use natural soil rather than soilless media because natural soil does not decompose and settle with time.

Mulching

- Benefits of mulching – suppress weed, moderate soil temp, retain moisture, protect topsoil from erosion and compaction, provide nutrients
- Qualities of good mulch – economical, readily available, easily applied & removed, stays in place, supplies organic matter to soil, free of weeds, insects and diseases
- Landscaping fabric does not work and can become a problem with time.
- Spread arborist wood chips in fall and spring – mulch and enriches soil, encourages beneficial microbial and fungal growth, does not require removal
- Sheet mulching: Can use paper or unwaxed cardboard. Be mindful of site condition (e.g. overly compacted soil) to avoid nutrient runoff
- Mulch around trees – no need to mow under tree, avoid equipment damage to base of trees

Weeding

- Deadheading self-sowing plants: reduce weed, may rebloom, perennials preserve energy for next season's growth
- Deep mulch (6" – 12") to kill lawn or weeds for planting: Exhaust weed's reserve instead of tilling, pulling, spraying
- Property too large to mulch: cut weed at base or mow over. Control and manage weeds by weakening and exhaustion. May eventually be eliminated if run out of reserve.
- ID weeds to decide best strategy. Pulling annuals after seeding is too late. Tackle weeds before they go to seed. Biennials grow vegetative body (tend to be a rosette close to ground) in first year, and then send up flower stalk and seed in second year.
- Tackle perennial weeds by targeting propagation method: tree of heaven, locust send out runner. Pulling them can trigger more sprouts. Some plants resprout from broken pieces e.g. field bindweed, Japanese knotweed, wisteria.

Watering

- Watering often but not deep enough is waste of time and water. Encourages shallow roots and weakens plant. Constant wet soil can rot root of some houseplants
- Avoid overhead watering – waste of water, promotes diseases
- Water in morning, otherwise, late afternoon. Avoid watering in evening.
- Consider installing soaker hose/ drip irrigation system or high efficiency sprinkler heads (rotating heads, bigger droplets, longer running time) and timer
- Mulching material & depth and watering system have to complement each other. Thick wood chip/ bark mulch would work better with drip hose laid down underneath mulch. Water from overhead sprinkler may not ever reach soil below thick mulch

Fertilizing

- Soil test: unless result indicates so, or there are signs of deficiency, do not routinely add fertilizers (including compost) to soil. Rather than wild guessing, refer to soil test results for what plants need.
- It is actually possible to have too much organic matter in your garden soil, particularly in raised bed built with soilless medium. Excessive fertilizing is a waste of effort and money, weakens plants and can lead to pollution by way of nutrient runoff into waterways.
- Food is removed from vegetable garden regularly, so generally ok to add 0.5”-1” of compost every year to amend soil, but not 2”-4”. Use manure compost sparingly with caution. Easy to burn plants and build up excess phosphorous.
- Beds made of all compost can have excessive organic matter. Can burn and kill plants.
- Weedless compost: Spread compost out on tarp or bed early in season. Cover with plastic sheeting if needed to aid germination. Hoe down seedlings once they germinate. Repeat to eradicate seeds before applying to garden.
- https://extension.umn.edu/yard-and-garden-news/compost-and-soil-organic-matter-more-merrier
- https://today.oregonstate.edu/news/study-shows-some-urban-gardens-contain-too-much-organic-matter

Lawn Care

- Avoid sun and shade grass seed mix: spend more money, more resowing, less coverage. Better to use regional mix for the right sun exposure.
- Cut frequently during growing season. Don’t cut grass too short – weakens grass, exposes soil (hotter, drier soil and invites weed). Let grass grow taller (like 4”) to shade soil and to do more photosynthesis.
- Practice Grasscycling – leave grass clippings on lawn. Don’t apply fertilizers unless directed by soil test.
- Skip watering in summer, let grass go dormant. Frequent watering promotes growth which means more mowing. Soft, moist soil attracts Japanese beetles to lay eggs in lawn. Grubs will tear your lawn up next spring.
- Skip raking and bagging leaves for removal: Mow leaves on lawn using mulching mode. Rake leaves onto the nearby beds as mulch over winter. Put leaves into big trash barrel and run string trimmer to shred them. Compost or use as mulch or bag them for use in spring when you have plenty of green but not enough brown in compost pile.
- Skip fall cleanup, leave leaves as mulch, dry herbaceous perennial stalks and seed heads as wildlife shelter and food. Birds and beneficial insects become part of your IPM

Other advice:

- Keep garden log to track, weather, actions taken in in previous seasons and incidents
- Keep record of veggie garden – for crop rotation, diseases in plants, varieties to get/ avoid
- Take pictures of garden to remember what is what, when and where they are planted
- Have plant markers in the ground to avoid accidentally digging into bulbs or smother plants that cannot take a thick layer of mulch.
- Be more careful about accepting gift plants or allowing plants that just show up to grow. “Think twice before planting”. If planting “fast-growers”, be prepared they may become

aggressive or overgrow with time. With good measures in place (like landscape edging to serve as barrier), there still will be maintenance work, but it is infrequent and minimal.

THE TAKEAWAY:

- ✧ Look at the garden as one integrated system and that all actions have consequences. If you are not careful, an action can also create more troubles down the road. But a well-thought-through action may achieve multiple goals.
- ✧ Do the right things at the right time