

JANUARY CHECK LIST

VEGETABLES

- Plan out your garden on paper to save time and money. Order seed, especially for cool weather vegetable transplants. To find seed companies, check the library or garden magazines.
- Chart out dates for transplants/planting. Request “Can I Grow That Here” from the Extension Office, to help calculate dates. Plan for rotating crops to new areas of the garden.
- During warm days, if the ground thaws, work on removing perennial weeds/leftover garden debris, make frames for raised beds, till the garden and incorporate leaves, compost, etc.
- Try your luck at growing cool season crops (lettuce, spinach, onions, etc.) in cold frames.
- Check on mulched carrots and renew mulch if weathered away.
- Check stored vegetables. Sort and eliminate any that are turning soft.

ORCHARD AND FRUITS

- If a warm spell comes and thaws out the branches of fruit trees, you can do some pruning.
- Inspect the base of fruit trees for rodent gnawing. Place a wrap of hardware cloth around base to prevent damage.
- Be sure tree wraps are in place to prevent sun scald, or put in place if needed. This is the time of year sun scald is likely to occur.

TREES AND SHRUBS

- Check young and exposed trees for wind whipping and stake if needed.
- Check for dryness of perennial plants and evergreen trees. Water when the soil is thawed.
- Recycle your Christmas tree. Boughs can be cut off and placed around perennial plants for added winter protection or shredded and used in the compost pile. In a sheltered corner of the yard. Evergreens provide a welcome shelter for birds and other wildlife. Christmas trees can even be tied to existing fence posts for an instant tree effect for birds to enjoy.

FLOWER GARDEN

- If you didn't get daffodils, tulips and other spring/summer blooming bulbs in during the fall, try to slip them in if the ground thaws.
- Check stored flower bulbs such as cannas, dahlias and gladiolus for mold. If found, increase air circulation and spread bulbs out more.
- Check mulched perennial plants like roses; to be sure mulches are still in place.

HOUSEPLANTS

- Overwintered geraniums will be tall and spindly. Cut back about half (if trying to save mother plants), or start cuttings if desired. Place in the brightest, sunny window you can.
- Give houseplants a warm winter shower to clean foliage and keep bugs down.
- Houseplants still need light fertilizing during winter months, about half as often as during summer months.
- Increasing humidity level in the winter will benefit houseplants greatly. Use a humidifier, or simply set pans of water near plants.
- If you're interested in keeping your poinsettia for next Christmas, keep the plant next to (but not touching), a sunny, draft-free window, with daytime temperatures of about 60-70 degrees at night. Water thoroughly if the soil becomes dry, soaking the root ball completely. Remove excess water from pot trays. Do not fertilize.

FEBRUARY CHECK LIST

VEGETABLES

- It's never too late to add nutrients to the garden. Add straw, hay, green manure crops, sawdust, kitchen scraps or whatever is on hand.
- Where snow still covers the ground, add your amendments, letting the spring thaw help break down the additives. Till or spade in added materials during any weather breaks.
- Start cabbage and onion seeds for early transplants.
- February is ideal cold frame weather. The sunny days sprout seeds quickly, forcing rapid growth. A dark manure tea watered in every other week, gives ample nutrients.
- Pre sprout asparagus seed. Mix seed with 20 parts sand to one part seed. Wash the mix with warm water 3-4 times a day and use folds of damp paper towels or cloth as a sprouting bin. Sprouting occurs in a week to 10 days. Transplant sprouts into temporary pots until the weather breaks.
- Work aged manure into garden pea patches. Plant peas as soon as soil thaws and is workable. Mulch rows well and water weekly during dry periods.
- Start Eggplant and Pepper.
- Check stored vegetables for rot.

ORCHARD AND FRUITS

- Continue pruning when wood is not frozen. Save apple clippings for bloom-forcing indoors.
- Prune grapes.

TREES AND SHRUBS

- Check and repair winter storm damage the first chance you can.
- As soon as wood thaws, tree and shrub pruning can be started.

LAWNS

- De-thatch old lawns if needed before feeding high nitrogen fertilizers.

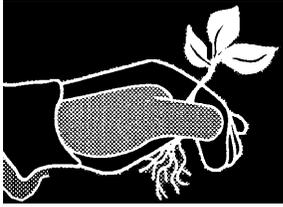
FLOWER GARDEN

- Check perennial beds for heaving from severe frosts. Repair damage if possible, or mulch with straw or evergreen boughs until soil can be worked.
- For a good supply of chrysanthemums for late-fall bloom, divide old plants, setting out new shoots. Give new plants a mulch layer for frost protection.
- Start petunia and begonia.

HOUSEPLANTS

- Force some spring bulbs for early indoor blooms. Extend life of Valentine roses by asking if they were conditioned. If they were, recut stems on a slant and place in cold water. If they haven't been conditioned, recut stems and place in hot water. The hot water opens up conducting tissue and allows for better water absorption. Once water cools add preservative provided by florist, following instructions on the packet.
- To continue poinsettia culture, water when soil becomes dry and begin to fertilize at every third watering with a balanced fertilizer. Continue this culture through March.

MARCH CHECK LIST



- Remember when moving plants (trees, shrubs and perennials), that excess irrigation can be as harmful as too little irrigation. Moisture meters can help determine the right time to irrigate.

VEGETABLE GARDEN

- Start transplants of tomatoes, peppers and eggplant where mid-May is planting time. Use short-season varieties suited to our area.
- Put seedlings of broccoli, cabbage and brussel sprouts into cold frame.
- Continue planting early peas when weather permits.
- Plant early potatoes on Good Friday, if soil is workable. Potatoes can be planted through April where growing seasons last through August. Light frost will not kill new growth. Don't plant spuds on newly tilled grassland, as wireworms abound the first summer. You can plant sprouted potatoes 6 inches deep. Break off longest sprouts.
- Clean up horseradish and rhubarb patches and mulch with aged manure or compost.
- Fertilize perennial garden plants with organic or commercial fertilizer.
- Harvest parsnips before they sprout, as they turn bitter afterwards.
- Make up manure/compost tea using 2-3 shovels of solid and enough water to fill a 5 gal. bucket, cover to prevent insects. Teas prevent transplant shock and are a real boost to growth.
- Cold frames can be started. Use fresh manures as bottom heat only and manure teas for nutrients.
- Plant all hardy crops as soon as the weather breaks from severe to milder temperatures.

ORCHARD AND FRUITS

- When temperatures get above 40 degrees and freezing temperatures are not expected for 24-48 hours, apply dormant oil. Apply before buds open.
- Plant new trees as soon as the soil can be worked.
- Prune out old wood on gooseberries and currants.
- Feed strawberries and apply a light straw mulch to keep berries off the soil. A light crop with heavy foliage indicates a lack of phosphorus.
- Plant new raspberries.
- Feed all berries with aged manure and mulch well.
- If you are going to do some fruit tree grafting, this is the month to attempt it.

TREES AND SHRUBS

- Prune shrubs that have suffered winter damage. When purchasing new shrubs, consider proper placement and varieties to avoid annual pruning. Harden-off newly purchased perennials and shrubs grown in the south before planting them.
- When day temperatures get above 40 degrees and freezing temperatures are not expected for 24-48 hours, apply dormant oil. Wait till early April to apply dormant oil to evergreens. They need warmer temperatures than deciduous trees.
- Apply fertilizer, so it reaches roots before bud break.
- Plant trees and shrubs. Take advantage of bare root stalk available this time of year.
- Continue pruning.

LAWNS

- Power rake lawn if needed and not done last month. Soil should be thawed and grass not greened up too much.
- A good month to seed lawn.

FLOWER GARDEN

- Divide and replant perennial flowers.
- Spread well-rotted manure or compost around big feeders such as peonies, bleeding hearts, delphiniums, chrysanthemums and perennial geraniums. Don't smother or damage their delicate crowns.
- Powder soil around spring blooming bulbs with bone meal, letting rain wash down the nutrients. Don't remove mulch until after blooming.
- Fertilize perennial plants.

HOUSEPLANTS

- Start geraniums if you didn't start them earlier.
- Extend the life of Easter lilies by carefully removing the orange pollen sacks as soon as the flower opens. This prevents pollination and extends the blooming period of flowers. Don't get pollen sacks on clothing or other materials. It is next to impossible to get out.
- Start tuberous begonias. Those overwintered in pots, replace the top 2 in. of soil with fresh mix.

APRIL CHECK LIST

VEGETABLE GARDEN

- Plant potatoes if not done earlier.
- Till the garden when soil is like brown sugar, not mud ball wet or powdery dry.
- Add soil amendments such as commercial or organic fertilizers, gypsum, compost, sand, etc. Don't apply fresh manures in spring.
- General garden fertilizer recommendations: 10 lbs. of 15-30-15 per 1,000 square feet, or 30 lbs. of 5-10-5 per 1,000 square feet. This application will last about one month and then you will then need to follow up with side dressing or a foliage applied water soluble fertilizer.
- If you have problems with your garden soil, have a soil test done.
- If insects were a problem, incorporate DIAZINON insecticide to eliminate overwintering insects.
- Start vegetable transplants: April 1 - tomato, pepper and eggplant, if not done previously. Mid-April - cucumber, muskmelon, squash and watermelon. April 24 - hardened or conditioned cool-season transplants, and seeds of very hardy vegetables. If you don't know these, request "Planting Dates" from the Extension Office.
- Cover newly seeded root crop rows with gunny sacks to speed up germination.
- Sweet onions. Good for the north zone - sweet Spanish and sweet sandwich.
- If you buy transplants from a garden center, take two weeks in the cold frame to condition them to the outdoors before planting, unless they are outdoors at the store.
- Rotate vegetables to different areas of the garden to keep pests down.
- If severe cold weather returns be prepared to protect plants from killing frosts.
- Plant asparagus and rhubarb plants.
- Harvest asparagus spears when they get 9" tall, which keeps beds 50% more

ORCHARD AND FRUITS

- Plant new raspberries, prune old ones.
- Plant fruit trees and strawberries.
- Prune out fire blight in apples and pears.
- Spray apples and pears with streptomycin when blooms first open, repeat every 4-5 days till $\frac{3}{4}$ of petals drop.
- Apply dormant oil to fruit trees if not done last month, but prior to bud swelling.

TREES AND SHRUBS

- In early April, apply dormant oil spray to evergreens when freezing temperatures are not expected for 24 - 48 hours.
- Apply dormant oil to deciduous trees if not done last month.
- Remove tree wraps.
- Before lush growth appears, you can see where new trees or shrubs may be desirable.
- As soon as ground thaws, plant or transplant trees and shrubs.
- ARBOR DAY, the last Friday of April. Start a great tradition...plant a tree.
- If trees need fertilizer, apply as soon as possible, so it reaches the root system by the time the leaves break buds.
- Finish up heavy tree and shrub pruning by the end of April. Pruning is simpler before trees and shrubs leaf out.

LAWN

- Mid April apply pre-emergent weed control for annual grass weeds such as crabgrass.
- You can fertilize the lawn the first part of April if you want to. General lawn fertilizer recommendations: 6-7 lbs. of 24-4-4 per 1,000 square feet of lawn. Extension Horticulture Specialist Bob Gough, recommends fertilizing around these holidays: Memorial Day, Labor Day and Columbus Day.
- If power raking is needed, do before grass greens up a lot, to prevent excessive damage. Consider aerating if too green.
- Reseed bare patches, or seed a new lawn.
- Make certain your mower is serviced and ready to go, with sharp blades that cut cleanly rather than tearing tender new growth.

FLOWER GARDEN

- In late April plant tender summer bulbs outdoors, such as Dahlia, Gladiolus, Canna, Tuberous Begonia, Tender Anemone and Ranunculus.
- To kill overwintering thrips on glad bulbs, soak in 1 Tab. Lysol to 2 qts water ½ hour before planting.
- Pansies make an excellent ground cover for bulb beds.
- Remove mulch or other winter protection. If you've mounded soil over rose crowns, remove before new buds grow too much. They are easily knocked off.
- Cut back dead canes on T-roses.
- Start annual flower transplants: April 1 - sow impatiens seed, but don't cover with soil, as the seeds need light to germinate. Cover with plastic till germinated. April 1 - petunia, pansy, salvia, snapdragon and moss rose. April 15 - ageratum, larkspur, annual phlox, alyssum, marigold, stocks and zinnia.
- Ideal time to plant, divide, or transplant perennial flowers.

HOUSEPLANTS

- After your Easter Lily is finished blooming, plant it in the flower garden. Often these plants will bloom again in August.
- During April, let the soil of your poinsettia become drier than normal. Your plant will lose some of its leaves, but not enough that the stems wither.

MAY CHECK LIST

VEGETABLE GARDEN

- Transfer warm season vegetable seedlings (tomatoes, peppers & eggplant) to the cold frame to harden them up for planting. Be sure to raise the top during the day to keep temperatures down and check moisture needs often.
- Make a succession planting of lettuce and chard early in the month.
- Keep planting cold tolerant vegetables, such as beets, radishes and onions.
- Continue planting hardened cool season transplants (rutabagas, collards, kale, cauliflower, cabbage, brussel sprouts, kohlrabi, turnip, broccoli). Be prepared to protect from killing frosts.
- If you're interested in growing sweet potatoes, use black plastic mulch to speed growth and try vineless varieties such as Puerto Rico and Vardaman.
- Wrap leftover garden seeds in a tissue and secure with a rubber band. Place in an air tight container with two Tbsp powdered milk and store in the vegetable crisper of your refrigerator.
- Plant at least four rows of corn with four corn seeds at the end of each row for best pollination.
- To increase vegetable pollination, plant carnations or Sweet William in garden to attract bees.

ORCHARD AND FRUITS

- Widen narrow crotch angles on fruit trees by tying bags containing a handful or two of sand to vertical branches.
- To prevent mower injury to fruit trees clear grass in a 3-foot diameter circle around each trunk. This also eliminates lawn competition and is especially helpful the first 3-5 years after planting.
- Remove suckers and water sprouts as soon as they appear.
- Plant new strawberry beds if you didn't get to it last month. Remove blossoms on newly planted strawberries, mulch with straw.
- If you had scab on apples last year, begin spraying with fungicides (such as benomyl, captan, or maneb) at bloom stage. Spray every 7-14 days during cool wet weather.
- When $\frac{3}{4}$ of the blossoms drop, (or all blossoms drop if bees are still around) start spraying for codling moth and other insect pests. Continue spraying at least a minimum of six sprays at 7-10 day intervals, or up to two weeks before harvest for the most pest free apples. Renew spray applications washed off by rain or irrigation.

TREES & SHRUBS

- Spray hackberry trees in early May, with Orthene to prevent Nipple Galls.
- One of the most evasive of insects is the scale insect. Oyster shell scale, abundant on shrubby dogwoods, aspen, lilacs and euonymus, is best controlled during the "crawler stage", from early May to mid June. Malathion or Diazinon can be used in sprays about 10 days apart.

LAWN

- If crabgrass wasn't controlled with pre-emergence, use post emergence crabgrass controls such as Ortho's Crabgrass Killer, Crabgrass & Nutgrass Killer or other products labeled for crabgrass control.
- For perennial grass weed control, spot treatments with products such as Roundup are needed.

Spray only grass weed as these kill anything they touch.

- General lawn fertilizer recommendations: 6-7 lbs. of 24-4-4 per 1,000 square feet of lawn. Extension Horticulture Specialist Bob Gough, recommends fertilizing around these holidays: Memorial Day, Labor Day and Columbus Day.
- Irrigate 1" – 1 ½" at a time to deep water. Check for soil dryness 4 inches deep to determine next irrigation.
- Mow grass to a height of 2" to shade out weeds and grow a dense lawn. Mow before grass gets too tall, (about 3 inches), to remove no more than 1/3 of the lawns total length.
- To control dandelions, wait till you see bright yellow blooms. Apply herbicides such as Ortho's Weed-B-Gone after lawn has been irrigated, don't water for 48 hours afterwards.

FLOWER GARDEN

- Harden up flower transplants the first of May for planting the 15th.
- Pinch tips of leggy annuals to induce bushiness before planting.
- Divide and plant cannas the first of the month, if not done previously.
- Divide mums and other perennials in early May before growth is too far advanced.
- Stake delphiniums and tall perennials before heavy flower heads weigh the stems down.
- To get the biggest peony flowers, pinch all but the central bud from peony stalks.
- Pansies will bloom longer if you cut the faded flowers often and head back straggling stems.

HOUSEPLANTS

- Move Norfolk Island pine to a north facing window. It prefers bright but indirect light. Dry air and temperatures more than 75 will cause the lower leaves to turn brown.
- Repot poinsettias from last Christmas, into a slightly smaller pot. Loosen the root ball and place in a rich, coarse, rapid draining soil. Cut the stems back to within 4-6 inches of the soil to promote vigorous shoots for best coloring in the "flower" bracts.

JUNE CHECK LIST

VEGETABLE GARDEN

- To extend your garden season with fall crops of cabbage, brussel sprouts, broccoli and cauliflower, direct seed or start transplants for mid-July planting, the beginning of June. It's been proven that direct seeded broccoli produces quicker than transplants.
- Remove weeds and thin vegetable seedlings.
- If some of your crops failed to come up, you can still plant short seasoned varieties.
- To eliminate cabbage worms from cabbage, broccoli and cauliflower, cover plants with a shade cloth type material like old sheer curtains. If the butterflies can't get to them to lay eggs, you won't get worms.
- If you do get cabbage worms, you can use Sevin, Malathion or Diazinon insecticides. For a safer, biological insecticide, use Bt kurstaki (*Bacillus thuringiensis*).
- If Colorado Potato Beetles show up, use Sevin or Methoxychlor for control, sprinkle plants with corn meal (the larvae will kill themselves gorging on it), use a biological insecticide called Bt san diego, or you can hand pick them.
- Keep an eye out for flea beetles. They can make plants look like a shot gun shoot out in no time. Spray with Sevin or Malathion.
- To eliminate morning glory or thistle by clipping, allow weeds to grow two weeks before cutting back. This forces the plants to use up its food reserve.
- When watering flower/vegetable gardens, try to water deeply (1-2 inches a time), once a week. Avoid light daily sprinklings which cause shallow roots.
- If you have limited irrigation water try:
 - Providing wind protection such as snow fence or corn planted on south and west sides.
 - Be sure to properly thin vegetables to decrease competition.
 - Remove all moisture robbing weeds as they sprout.
 - Cultivate soil shallowly with rake, hoe, or tiller to provide a dust mulch. Hard, cracked soil allows moisture to escape.
 - Mulch around plants and between rows with straw, hay, grass clippings, plastic or compost.
- For fall broccoli, direct seed into the garden the beginning of June. Direct seeding of broccoli has been proven to produce quicker than transplant plants.

ORCHARD AND FRUITS

- Pick up and bury dropped apples. This helps kill codling moth and other larvae, preventing them from reinfesting trees later.
- If after a natural drop, the apple crop is still thick, thin apples to one per cluster, 4-6 in. apart.
- Continue insect control every 7-10 days, renewing after washing rains.

TREES AND SHRUBS

- If lilacs have set seed, clip them off to concentrate energy to foliage and roots.
- Trim shrubs and hedges so that they are wider at the base than at the top. This encourages a nice dense growth habit at the base.
- If you've planted young trees recently, try to eliminate grass growth at least 3 ft around trunks for best effect. Maintain at least five years for optimum effect.
- Water trees and shrubs when needed, an extra inch, after the lawn's been watered its inch.
- If tent caterpillars start chomping away at trees, use Diazinon, Sevin, Malathion, systemic insecticides, or Bt kurstaki.

LAWN

- The best mosquito repellents contain as much DEET (N,N-diethyl-meta-toluamide), as possible. The stronger the DEET the longer it lasts.
- Water lawns at least one inch at a time. Then check soil moisture to see when irrigation is needed again.
- Don't use grass clippings in the garden that have been treated with herbicide for two full mowings.
- If quackgrass is a problem, use spot spray applications of Roundup.
- If crab grass, or other annual grass weeds are a problem, use lawn wide applications of products like Ortho's Crabgrass Killer, or Crabgrass and Nutgrass Killer.
- If broadleaf weeds are a problem, use products containing 2,4-D such as Weed-B-Gone.
- Apply herbicides to lawns after irrigation and 24-48 hours before mowing to give weeds time to absorb the chemical with as much foliage as possible.

FLOWER GARDEN

- Pinch mums after each four inches of growth. Stop pinching on July 4.
- Eliminate weeds.
- When removing bloomed out roses or when cutting roses for bouquets, cut back to a five-leaflet leaf to encourage blossom buds.

JULY CHECK LIST

- This is the month for maximum plant growth. Enhance growth with fertilizer. Use high phosphate fertilizers, such as 15-30-15 for flowering or fruiting plants. If high nitrogen is used on these plants, you will over stimulate vegetation and decrease flowering. Be sure to follow label directions, don't apply more often than recommended. Organic fertilizers are slower acting, and generally lower in total available minerals, but also are less likely to burn.
- This is the most active time of year for aphids and mites. Check the yard at least every other day to keep up with invasions.

VEGETABLE GARDEN

- Remove seed stalks from onions and garlic.
- Keep up with weeds, especially before they drop their seeds. Often it's a weed or two that got by you last year that makes the weedy patch the next year and for years to come.
- As you harvest, keep track of what varieties are doing well for you, especially if you are growing more than one variety of a certain vegetable. Write results down on index cards and store by year in a recipe box. You will know exactly what varieties to try new next year, against the best performers you've discovered so far.
- If you are having problems with tomatoes, squash or other plants, not setting on fruits, you can give them a hand by using a water paint brush to pick up pollen from male flowers and spread it to female flowers. With squash, you can pick the male flower, take off the petals to expose the pollen, then rub noses with female flowers. Female squash flowers always have miniature fruits right behind the bloom. Male flowers just have a straight straw like base, attaching them to the squash plant.
- Harvest broccoli when heads are fully developed, but before they start to bloom. If they bloom you can still eat them, but you'll have missed the optimum quality harvest. Slice off the stem about 5 inches behind the head and watch for smaller side shoots to start producing.
- If you haven't already, consider mulching your garden to cut down on weed growth, moisture evaporation and soil heat. If using grass clippings, be sure they haven't been treated with herbicide. If so, wait till after the 3rd mowing to use in the garden.
- Slugs feed mostly at night, leaving a slimy trail as evidence. To control use products like Sevin or baits that contain Metaldehyde (usable around Fruits and vegetables) or Mesurool (use only around ornamentals). Be sure you have the right bait for the plants you are treating. Organically you can scatter diatomaceous earth around plants being attacked.
- When garden plants are through producing, remove plants and replant with a quick maturing variety.
- Plant lettuce in shady areas of the yard, like the north side of the house, or somewhere in the garden, like in the shade of the corn patch, for fall harvests.
- For fall peas, plant the heat resistant Wando variety.
- Mid-July plant transplants of cabbage, brussels sprouts, broccoli and cauliflower for fall harvests.

ORCHARD AND FRUITS

- Continue spraying fruit trees for codling moths, curculio worms, etc. every 7-10 days.

TREES AND SHRUBS

- Maples may be showing signs of iron deficiency such as yellow leaves with green veins. As symptoms progress, the tree will decline in vigor and the section will die out. Treat with chelated iron products, preferably those with 10% or more iron. These are often foliar or deep soil applied.

- Remember to water trees and shrubs separately from lawn watering. They have a much deeper and larger root system, and need more water than what lawn irrigation provides.
- No high nitrogen fertilizer should be applied after the end of July. This will promote succulent growth which is more susceptible to winter injury. Allow trees to slow down and proceed with a buildup of needed carbohydrates for winter. You can fall fertilize after trees go dormant, or wait till first thing in spring for best results.

INSECT ALERT

- Elm leaf beetles will also be evident now, causing considerable damage on elms. Apply Carbaryl (Sevin) when caterpillars are evident or the organic product Bt kurstaki. Repeat as needed as they will reproduce all summer.

LAWN

- If you are finding dead patches in your lawn that don't seem to be insect or disease related, then you may want to check your thatch thickness. If it's much over ½ inch, your lawn is probably suffocating out. Alkaline soils don't break down organic matter well, and this buildup is a common problem in our area. Aerating and power raking are two ways to physically fight back, but when the thatch is over ½ inch, it's next to impossible to pull out the thatch from under the grass without pulling out the grass as well. Torro's Thatch Attack and Judd Ringer's Lawn Restore both contain natural enzymes and complex nitrogens that aid in the natural composting process, encouraging thatch break down. Otherwise it's often best to simply remove thatch thick areas and rework and condition the soil for replanting.
- Mosquitos breed and lay eggs in anything that holds water, even a pop can raise a big family. Eliminate any sources of standing water. For slow-moving water or standing ponds, there are biological mosquito control products that contain Bt Israelensis, like Mosquito Dunks. For outdoor picnics, etc, spray lawn with products such as malathion, diazinon or sevin, several hours before. These last 1-2 days at most. A product which claims eight day mosquito control is Bonide's Mosquito Beater, which is not harmful to people, pets or plants. Other organic products, very low in toxicity, would be those containing Neem. For personal protection use products containing DEET. The higher the percentage of DEET the longer it lasts.

FLOWER GARDEN

- Remove spent flowers from plants, to encourage more blossoms or to divert energy to roots rather than seed production, unless you are naturalizing a variety.
- Don't pinch mums after mid-July, as it will delay blooms.

HOUSEPLANTS

- General purpose houseplant insecticide:
 - 1 Tbls liquid dishwashing detergent (not for automatic dishwashers)
 - 3 pints rubbing alcohol (most are 70% grade)
 - 2 qts. water

Alcohol is a desiccant, sucking water out of living insect tissues, interfering with nerve conductivity. White flies, mealybugs, aphids and spider mites all succumb to this treatment after only a short time. Test on a few leaves to be sure no harm is done to sensitive plants. Use a spritzer or mister for spraying. Repeat in six days.

- To encourage denseness in your poinsettia, pinch the terminal inch of each stem the first of July and again the end of August. You may grow your poinsettia outside in semi-shade during warmer months, using extra care to maintain your watering and fertilizing schedule.

AUGUST CHECK LIST

- Trees, shrubs and garden perennials are busy packing away food energy (carbohydrates) for winter survival. It is best to withhold pruning and nitrogen fertilizers, since doing so will help prevent the stimulation of late shoot development at the expense of stored energy.
- To encourage hardening up for winter, avoid frequent watering, which tends to encourage growth, except for newly planted trees and shrubs, which should be watered regularly till dormancy.

VEGETABLE GARDEN

- For general disease control a great product to have on hand is Ortho's "Multi-Purpose Fungicide". It is not only labeled for vegetables, but also lawns, fruit trees, ornamentals and flowering plants.
- August is prime harvesting month. Be sure to monitor moisture needs in the garden during production time. Mulching will help soils hold moisture longer during the dog days of summer.
- Cut the tip ends off cucumber, pumpkin and squash runners to force late fruiting.
- Keep potatoes well hilled to prevent sunburn.
- Pull soil away from onions for larger bulbs. Do not bend over onion tops. This does not speed up growth, but slows it down as the tissue is pinched off to the bulbs. When onions naturally fall over, it's a sign that they are finished growing.
- In early August you can still plant fall peas, spinach and lettuce.
- Water compost pile and new materials as added. Moisture is critical during hot days to keep the compost pile working.
- Keep fighting weeds. The ones that get away will haunt you for years to come.
- Practice your sweet corn harvesting skills. The goal is to be able to tell when corn is ready, without pulling back the shucks. The silks must first be dried and brown. Feel the ends of cobs to determine if kernels have filled out then feel if the cobs have filled the shucks completely. Check yourself as you like, by peeling back the shuck and checking. A final test is to pop a tip corn kernel with your fingernail. If it's watery and clear, it's too young. If it's watery and milky it's ready. If milky and thick, it's overripe.
- In late August garlic tops will have dried up. Harvest the garlic, separate cloves and replant.

ORCHARD AND FRUIT

- Keep watering apples while fruits are enlarging. Moisture is very critical during this time.
- Continue spraying fruit trees for codling moths, curculio worms, etc.

TREES AND SHRUBS

- By mid to late August, trees will have stored about 90% of the nutrient reserves they need for winter. Insect control after this point would be of little help. Spray only if damage is extremely severe. The best treatment to offset effects of insect damage is to provide deep irrigation.
- Be careful when trimming around trees. Grass and weed trimmers can damage young trees, even girdle them.

LAWN

- Extension Horticulture Specialist, Bob Gough, recommends fertilizing around these holidays: Memorial Day, Labor Day and Columbus Day. General lawn fertilizer recommendations: 6-7 lbs. of 24-4-4 per 1,000 square feet of lawn.

- Don't mow grass too short. Set mower blades to a height of 2 ½ inches. At this height weed seeds will be shaded out and lawn will grow more vigorously.
- Mow before grass gets out of hand. A good rule to follow is to mow so you remove about 1/3 of the grass blades. This allows remaining grass plants plenty of leaf surface for fast recovery.
- Keep fighting perennial weeds.
- From Aug. 15 - Sept. 15 is one of the best times for lawn grass seeding.

FLOWER GARDEN

- Continue removing spent blooms to encourage more blossoms.
- Between Aug. 15 & Sept. 15, all perennial flowering plants should be divided and transplanted, or new ones should be planted. This allows roots to establish before winter.
- This is also the best time to lift, divide, and replant perennial bulbs such as irises, tulips, daffodils, grape hyacinths, etc. Also, dust the cut surfaces of irises with a fungicide powder to help prevent infection of the cut surfaces. If severe winter conditions should occur shortly after transplanting, a mulch should be applied to prevent immediate freezing of the soil, allowing time for the roots to form in unfrozen soil. The plants should be well watered to prevent winter desiccation.

HOUSEPLANTS

- To encourage denseness in your poinsettia, pinch the terminal inch of each stem at the end of August. Be sure to return the plant to a warm window before nights become chilly.

SEPTEMBER CHECK LIST

- If you don't have a compost pile, this is a great time to start and use one.
- September 22nd is the average first frost date. Killing frost to tender plants occurs when temperatures reach 26-30 degrees.
- If frost catches your garden, don't rush to harvest frozen produce. It will only cause unnecessary bruising damage. Let produce and soil warm before harvesting. If produce turns black it was already beyond salvage.
- Apples, chokecherries, plums, gooseberries and currants all continue to ripen after a frost, and actually contain more sugar.
- For root crops, let the ground warm a few days to allow slow thawing. Potatoes & onions store better after frosts kill back the tops.
- If possible, cover tender plants to protect them from frost, in the hopes that an Indian summer will extend the growing season. Try to keep covers off foliage, as frost will pass through them and into any foliage that they touch. Always remove covers by mid morning. Otherwise, plants may become burned as heat builds up.
- If a light frost sneaks up on you, sprinkle down the garden to prevent a fast thaw. This is best done before the sun hits the foliage.

VEGETABLE GARDEN

- Harvest potatoes after the vines have died to the ground, often following the first killing frost. After digging, allow tubers to cure out of direct sun for a day or so. This allows the skins to toughen and reduce bruising. Wash in running water. Avoid using a brush, as this will break the skin and invite decay. It helps to store potato tubers at 60-70 degrees for 2-3 weeks, prior to winter storage. Then store at temperatures between 35-38 degrees, with moderate humidity.
- When onion tops naturally fall over, they are through growing. After digging, allow bulbs to lie in the sun for several days to mature the outer scales to a papery state. Onions with thicker necks should be used first, as they will not store as well as thinner necked onions. Twist tops off of bulbs rather than cutting. This helps seal the bulb from fungus. Store at 50-55 degrees in a dry location.
- Other root crops like carrots and rutabagas should be handled carefully to avoid bruising. Cut the tops about an inch from the roots and do not scrub to remove soil. Store at 32-34 degrees, with moderate humidity, in the dark. Parsnips and carrots are often harvested later (October) or mulched in the garden, as they develop higher sugar levels with the cold temperatures of fall.
- Cabbage, broccoli, cauliflower, etc. can take temperatures down to 25 degrees.
- After harvest is finished, add organic materials (gypsum, etc.) and till soil to expose overwintering insects and get a jump on gardening next spring.
- Harvest pumpkins and winter squash after light frost, but before a heavy freeze. Cut fruit from the vine with about a 3-inch portion of the stem attached. Cure by placing in a heated, ventilated area at 75-80 degrees for two weeks. This hardens the shell for storage. (Do not cure acorn squash). Store pumpkin and squash at 40-50 degrees after curing.

ORCHARD AND FRUITS

- Don't remove fire blighted apple wood until dormancy.
- Remove bearing canes of raspberries after last picking. Also, remove weak shoots.
- Try to harvest apples if temperatures are expected to get below 25 degrees.

TREES AND SHRUBS

- Refrain from watering established trees and shrubs from mid September to mid November (or when trees start turning their fall color). This helps encourage dormancy. Heavy irrigation, nitrogen fertilizers and pruning (except for dead wood) can cause trees to break dormancy and begin new growth, making them susceptible to winter injury. If however the fall turns out to be long, hot, and dry, irrigation may be needed again. Continue irrigating newly transplanted trees and shrubs (up to three years after being planted) as usual.
- Put tree wraps on tender, dark barked trees, to prevent sun scorch.

LAWN

- Aug. 15 - Sept. 15 is one of the best times for lawn grass seeding. If you need to do some re seeding, try to get to it before mid September.
- Continue watering lawns throughout the autumn season. Fall, with its long cool evenings, favors the dense, vigorous growth of Kentucky Bluegrass.
- Continue mowing right up till winter sets in. Long, matted grass invites winter disease problems.
- Rake leaves off of grass. If left on the lawn over winter, these may suffocate the grass.
- Extension Horticulture Specialist, Bob Gough, recommends fertilizing around these holidays: Memorial Day, Labor Day and Columbus Day. General lawn fertilizer recommendations: 6-7 lbs. of 24-4-4 per 1,000 square feet of lawn.

FLOWER GARDEN

- Divide crowded peonies, replant top buds 2 in. deep.
- September through early October is the time to plant spring flowering bulbs. In our higher elevation, it is recommended that bulbs be planted approximately 2 in. deeper than suggested on most bulb planting guides.
- Dig gladiolus bulbs after the first frost, cutting off tops just above the corm. Cure by spreading out in a dry, frost-free location for 2-3 weeks. Remove old shriveled corms by snapping off cleanly. These will be attached to the bottom of the new corms which have developed on top of the older ones. Dust with an all-purpose, rose dust, store loosely in open trays, in a dark place at temperatures of 40-50 degrees.
- Dig dahlias after frost, by lifting the clump of tubers with a spading fork. Avoid damaging the necks of the bulbs, since this is where vital growth buds are located. Shake off loose soil, cut tops a couple inches above ground level. Don't divide till spring. Dry the clump well, but don't allow roots to shrivel. Place in plastic bags with lightly dampened peatmoss or vermiculite to prevent shriveling. Store in cool, frost-free area at about 40 degrees. Inspect often for mold, opening bags to allow drying if needed.

OCTOBER CHECK LIST

The biggest cause of winter kill is drought rather than cold. Give garden perennials, trees and shrubs a good deep soaking, providing the ground has not already frozen.

VEGETABLE GARDEN

- Clean up garden plants as soon as they are finished producing, or freeze. Can use a lawn mower to chop plants up for more even mixing with the soil.
- Fight seed bearing weeds this time of year. A single foxtail plant can produce 34,000 seeds and lots of future headaches, so catch them before they drop.
- If you had disease problems, be sure not to compost refuse, but dispose of it.
- This is a good time to spread compost, rotted manure, leaves, grass clippings, etc. over the garden, before fall tilling. Fall till if at all possible, to help kill overwintering insects.
- Oil wooden garden tool handles with a generous portion of linseed oil to condition before storing.
- If you are having a problem with perennial weeds such as thistles, make some fall applications of Roundup to start fighting back.

ORCHARD AND FRUITS

- Can prune dead wood, diseased or broken limbs.
- Cover strawberries with clean straw about 6 in. deep, or with a heavy row cover, about a month after the first frost (end of October).

TREES AND SHRUBS

- Plant containerized fruit trees, and ornamentals.
- Save fallen leaves to add to garden directly or to compost.
- Don't be alarmed if the inside needles of your evergreens turn bright yellow and drop off. This is a natural needle drop.
- Can remove broken, diseased, or dead wood in trees and shrubs.
- The best time for transplants is spring, just before bud break. It is possible to accomplish in fall if certain precautions are taken. Wait till the leaves have colored or fallen. Do not use the bare-root method. Use bare-root seedlings only in spring. Be certain to water thoroughly after planting to avoid winter desiccation, especially in evergreens. Place extra mulch around the base to help maintain soil moisture and delay soil freeze, allowing the plant to continue root replacement until soil temperatures reach below 40 degrees.

LAWN

- Continue watering lawn when needed.
- If you have perennial weeds in the lawn, such as dandelion, bindweed, clover or thistle, fall is a very effective time to use products containing 2,4-D, such as Weed-B-Gone.
- It doesn't pay to treat annual weeds like crabgrass, this time of year.
- If you want to do fall lawn seeding, it should be delayed until the soil freezes to insure the seed does not germinate until spring. The ideal seeding time is between Aug. 15 and September 15, during which the plant has sufficient time to establish before the ground freezes.

FLOWER GARDEN

- Fall planted pansies are in vogue now. They survive even fairly hard frosts to give late color, and if kept from dehydration in winter, will provide a showy border of color next spring.

- Cut back iris and other perennial flowers after frost kills vegetation.
- Continue planting spring bulbs. Renew old bulb beds by digging up and discarding weaker bulbs and replanting stronger, larger ones.
- Lift and store gladiolus corms and tuberous begonias after frost kills vegetation.
- Roses will benefit by not pruning them until next spring. They need four or more weeks to adjust for winter. Death of rose bushes is not always due to severe winters, but to the undormant conditions they are in when winter comes.
- Annual flowers such as petunias and marigolds, should be removed after a killing freeze. Amend soil and till up, for a head start on next spring.
- Cut off and discard peony tops to prevent disease once they freeze.
- Leave tops of chrysanthemums. These will catch snow, providing added winter protection and moisture.
- Is your garden a bit dull this time of year? Consider planting calendula, ornamental cabbage and kale, pansy, stock, dianthus, snapdragon and viola for next years fall color.

HOUSEPLANTS

- If moving houseplants indoors after a summer outdoors, check for and treat any insect pests.
- If you're interested in forcing tulip bulbs indoors following potting, they need 10-12 weeks of cold treatment. To accomplish this, place pot in the refrigerator at about 40 degrees. You may need to lightly water once a week to maintain moisture. Once cold treatment time is finished, place pot in a bright, sunny window in a cool room and enjoy.
- To produce blooms in poinsettias, start Oct. 1, covering plant with a light proof box, from 5:00 p.m. to 7:00-8:00 am. at which time box is removed. Continue covering plant each evening till December 1, then move to showy bright area to enjoy.

NOVEMBER CHECK LIST

- Order garden seed in November to ensure that you receive all the seed you ordered and get prompt delivery.
- Water all perennial plants, including trees and shrubs, heavily before the ground freezes to prevent winter drought damage.

VEGETABLE GARDEN

- Add compost or rotted manure to asparagus patches for fatter spears.
- Water perennials such as raspberries, strawberries, rhubarb, deeply before ground freezes.
- Continue to fight seed bearing weeds.
- Parsnips will be sweeter if placed in refrigerator and held at 32 degrees. Doing this for one week can make a big difference. They can also be left in the ground for winter harvesting, by mulching with 3 inches of straw, a layer of plastic, and several inches of soil.
- To slow down green tomato ripening, place tomatoes in plastic sacks containing paper towels moistened in rubbing alcohol for a few hours. This can delay ripening as much as seven days, with no loss of quality.
- To speed up green tomato ripening, place tomatoes in brown paper sack with a few apples. Check daily as they will ripen quickly and spoil if not used.

ORCHARD AND FRUITS

- If your apples had scab, rake and dispose of infected leaves and fruits, to prevent reinfestation.
- Wrap trunks of smooth, dark barked trees to prevent sun scald. A light colored, interior, water based, latex paint can be painted on trunks to reflect the sun. Also, wooden laths or boards may be placed on the south-west side of trees. This protection is especially important for young apple and cherry trees. Provide wind protection if trees are in area of strong winter winds.
- To protect trees from rodent damage, wrap tree trunks with wire mesh or hardware cloth and eliminate brush, weeds, etc., from around the base.
- In November, after the soil has frozen, mulch the strawberry bed. Apply a 4-6 in. layer of straw.
- Continue planting containerized fruit trees as long as the soil can be worked.

TREES AND SHRUBS

- Put tree wraps on young, dark barked ornamental trees. Aspen and birch don't need wraps as their bark naturally reflects sun.
- Even though the surface of the soil may be moistened by occasional showers, continue deep watering woody ornamentals, when needed, before ground freezes. With our dry winters, moisture in the root system might otherwise become depleted and result in dieback.
- In November, small evergreens can be covered with burlap bags to prevent sun scald. Support bags with sticks. Don't use plastic or paper bags as they don't breathe.
- Continue planting containerized trees and shrubs as long as the soil can be worked.

LAWN

- Raise mowing heights to three inches for lawns that traditionally do not have snow cover. Lower mowing height to two inches for lawns that usually have heavy snow cover, to prevent matting.

FLOWER GARDEN

- The first of the month, before the ground freezes, cover crowns of grafted T-roses with 12 inches of soil (about a 5 gal. bucket). This is the best material to protect graft buds, as well as a good segment of the canes for big bushes next year.
- If you had black leaf spot on roses, be sure to rake and dispose of leaves after they fall, to prevent reinfestation.
- Leaves and sawdust are not recommended as mulches as they are hard to take off, tend to compact and can smother the plant. Leaves do not insulate well and can cause mold.
- Mulch newly planted perennials for their first winter.
- If you've planted bulbs this fall, also mulch for winter, to prevent the bulbs from sprouting too early in spring, when frost damage could occur.

HOUSEPLANTS

- To safely transport houseplants in cold weather: 1) Prewarm the car. 2) Fully cover the plant before transporting, a plastic bag works best. 3) Blow warm air into the bag to create a bubble around the plant. 4) Put the plant in the passenger area, never in trunk. 5) At home, allow plant to remain in the bag for about 15 minutes for gradual adjustment to room temperature.
- To grow herbs inside this winter choose those that grow easily from seed such as: dill, fennel, marjoram, lemon balm, basil, parsley and anise. If you would like to grow the following they are best bought started: chives, sweet bay, lemon-verbena, mints, scented geraniums, sage, savory, thyme, and tarragon. Grow in brightest windows.
- Humidity is lower in winter due to heating systems. Compensate for low humidity by installing a humidifier of some type near plants, or place plants on shallow trays containing moist coarse gravel. Grouping plants together also helps, so that transpiration becomes of mutual benefit.

DECEMBER CHECK LIST

VEGETABLE GARDEN

- Keep an eye on stored winter squash, cabbage, fruits and root vegetables. If they're not storing well, use immediately. Note and correct needed changes in the storage area.
- Try to do your soil building. Add sulfur, gypsum, leaves, compost, etc. to improve next years garden. A soil test may help if you are struggling with soil problems.
- Sheet compost in the garden with straw, alfalfa, chips, sawdust, residues from the kitchen, or any organic materials available to you. The freezing-thawing action of the soil will help break down the humus.
- A blanket of shredded cornstalks, hay, straw or manure will keep garden soil warm and bring worms closer to the upper soil. Melting snow and rains will saturate the soil, raising the water table instead of running off frozen soil. Six to twelve inches of garden mulch is not too much.
- Short season vegetables and cold weather crops can still be started in protected cold frames. Keep protection materials handy for severe drops in temperature.
- Winter is the time to remember and record last season's failures and successes, to improve crop production next season.
- Study maturity times for vegetables you may want for next year's garden. Plan for a continuous harvest, instead of harvesting all at once.
- Add needed garden tools and supplies to your Christmas list.

ORCHARD AND FRUITS

- After the ground freezes, apply a 4-6 in. mulch of compost or aged animal manure, well back from the trunks. This is good for both orchard and berry patches, to protect tender roots and to supply an early feeding when spring thaws and rains wash nutrients into the soil. This is especially helpful for young and newly transplanted plants.
- If you haven't mulched the strawberry bed, it's time to apply a 4-6 in. layer of straw.

TREES AND SHRUBS

- Watch shrubs for signs of stress due to lack of moisture or windburn. Water when ground isn't frozen, for deep moisture penetration. Be especially mindful of evergreens and newly planted trees and shrubs.
- Brush snow off shrubs and young trees, to prevent the weight from breaking or bending branches, or splitting tree trunks.
- Be sure all plants that need winter mulch are protected.
- As soon as the ground thaws, or if a chinook moves in, plant potted Christmas trees.
- When selecting Christmas trees, remember spruce trees lose their needles more readily than fir, pine or Douglas varieties.

HOUSEPLANTS

- Keep potted Christmas trees watered and cool till holiday use. Set outdoors as soon as possible after holiday use.
- Water poinsettia when soil is dry, and grow in bright window. Move to room with night temperatures of 60 degrees or less.
- Ohio State University has disproved the theory that poinsettia plants are poisonous. The plant is not intended for human/animal consumption, but a 50 lb. child would need to eat 500 bracts to equal or surpass experimental doses, at which no toxicity occurs.
- Try growing citrus seeds for a fun winter project. These will need bright light, and night

temperatures of 40-50 degrees.

- Don't become alarmed if your houseplant leaves begin to yellow and drop. This isn't lack of water or fertilizer, but the plant's natural rest period. Problems may result if plants are overwatered or overfertilized. Cut back fertilization to once a month, and be careful with watering. It's easy to overdo it with winter's shorter, cooler days. Moisture meters are helpful in checking soil moisture, and humidifiers are helpful to counteract winter home dryness.