

**Growing Garlic, Leeks, Onions, Carrots, Beets, Potatoes and other Vegetables, Preparing and Amending Perennial and Vegetable Beds, Preserving Your Harvest, Making and Storing Sauerkraut and Kimchee, Root Cellaring, Simple Composting, Cold Frames, Hoop Beds, Greenhouse Tips, Making Crisp Dill Pickles, Gardening Ergonomics and other Things!**

January 2016 Carole Demers 235-8938 You are welcome to visit!

Altitude: 1200 feet, south slope, Hidden Hills Subdivision, North Fork Loop Rd

Recommended Books: Putting Food By -Hertzberg, Vaughn and Greene

I have gardened in Alaska since 1959 and in Homer since 1977. I am sharing information that has evolved over time and worked for me. It is by no means the only way! I am constantly looking for better ideas and more efficient ways to garden by sharing and gleaned ideas from other gardeners and constantly experimenting. Over the years, I have learned that it is better to start with something that is manageable. Being constantly overwhelmed by a garden that is more than one has time for is not what encourages us to continue! If you are able to keep up with what you have started, then adding additional beds makes sense.

**It pays to take care of our bodies when gardening by paying attention to best practices in lifting, avoiding long periods of repetitive motions and paying attention to discomfort during and after a task.** I learned this the hard way! After overdoing it on a number of large landscaping and gardening projects two summers ago, I developed tendonitis in my shoulders and arms. The following practices have helped me heal. I make time for my PT stretches, simple yoga, a myofascial roller and Miracle balls, taking walks and exercising daily. I use Bandits on my arms when I know I am going to be digging with a trowel or my hands for any length of time. I always use knee pads or a kneeling pad when I am down on my knees in the house and in the garden. I use a small garden bench when I'm picking spinach etc. to avoid any back strain. I think about how I am lifting and twisting. I don't need to carry full, heavy buckets anymore! I mix up gardening activities. I stretch and exercise before I begin and during projects and remind myself that I don't have to finish everything that day! I use the best ergonomic computer set up I could devise. I have cut down on my garden production, but still have plenty to share. As a result, I no longer have pain in my shoulders, knee and arms. I am sharing this in hopes that this will be of benefit to someone before a condition becomes chronic.

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## GROWING GARLIC, LEEKS AND ONIONS

I have been growing a variety of **hardy garlics** for about 11+ years in Homer. Initially, I ordered my seed garlic from the organic Filaree Garlic Farms in Okanagan, WA online or from their catalog. They have a wealth of information in their catalog and carry varieties of garlic from around the world. I have been using my own seed garlic for years, but still turn to them when I want to try a new variety.

I fall plant garlic usually the last week of Sept. but have planted into Oct. I like to insure at least 3-4 weeks of unfrozen ground after I plant. I work in lots of compost, chicken or rabbit manure, light wood ashes as needed for alkalinity (6.5-7.5), and  $\frac{1}{2}$  inch of fish bone meal in south-facing raised beds every fall. **Garlic, like onions and leeks, likes very rich soil.** They are heavy nitrogen feeders. It is recommended that you leave 8" between rows and 4" between cloves. After digging a trench about 4 inches deep the length of the bed, I set the cloves into the bottom of the trench lightly and cover with soil. Break apart the bulbs right before planting. I sprinkle the planted beds with kelp powder (Maxi-grow) before mulching.

**It is recommended that garlic is mulched right away after planting with at least one layer.** You can add more layers of mulch as you clean out the garden. I mulch heavily (12+ inches), first with a 4" layer of rotted hay, then a layer of fresh comfrey plants, then a layer of pea vines and carrot tops, then any garden material you have and finally with a bats of old local hay or straw, if needed for depth. If you are concerned about seeds from the hay or straw, you can put a layer of garden fabric or felted tyar under the hay. I get bales of local hay when it gets rained on and is free/cheap and store it under felted tyar for years which helps to kill seeds. I remove the mulch in early spring and store it in large garbage bags under felted tyar. I reuse the same bags and hay each year. **Mulching is critical to insure that you do not lose your seed garlic over the winter even in a covered high tunnel.**

I plant in 4'X8' wooden raised beds with PVC hoops with room for 5 rows. I plant **only** the middle 3 rows with garlic, saving the outer rows on each side for spinach, leeks, onions, beets, radishes or turnips. This helps prevent seed garlic loss especially in very cold years without snow cover. **After mulching the beds, I cover them with large sheets of cardboard, Tyvek or reinforced/ heavy duty plastic to help shed the late fall and winter rains.** Make sure the soil is moist before covering. I weigh this down with old 2X4s so it doesn't blow off. Early snow that stays and falls before the ground is frozen is ideal, but that seems rarer and rarer! I rarely lost any seed garlic when I had good early snow cover that stuck. Now I **always** cover my

beds with something that sheds the late rains to insure great results. The freeze/thaw cycles mixed with heavy rains in the late fall and winter can destroy all your hard work if your beds are not covered!

**In mid-April to early May, I peel the mulch off, and often the garlic is growing above the surface of the soil.** However, some years they have not broken the surface of the soil, and one year they hadn't even sprouted! That year had a very cold fall with an early freeze. Regardless of their stage of development in the spring, I have had excellent harvests. I put the top layers of mulch (bats of local hay) into black plastic bags to reuse in the fall. I crumble the comfrey and pea vines for mulch on the garlic, once it has dried out under the **remay covered hoops**, and put it between the rows to maintain even moisture throughout the summer. Any extra mulch can go in the compost pile. **Garlic, leeks and onions prefer evenly moist soils, so I leave about 2-3" of mulch on the beds. This is especially beneficial in the dry summers that appear to be more common in Homer.**

After removing the mulch, I cover the PVC hoops that are attached permanently to the wooden raised bed boxes with agricultural remay that has been attached to 2X4s with lath (so it doesn't blow away) to protect the shoots from the frost and to warm up the soil faster. I often cover this early in the spring with reinforced plastic to heat up the soil even faster and to protect the remay from late snowfalls. I purchase remay from the Anchor Point Greenhouse off large rolls or at AK Mill and Feed because I need long lengths. I remove the remay off the hoops when the tops of the garlic touch it-usually in June. I roll it up on the 2X4s, dry it and store in a shed. It lasts for many years this way. You can plant garlic directly into a bed, but you would need to devise a way to keep the remay off the garlic plants with some kind of hoop/frame structure.

**I harvest the scaups (scapes)** which are the flower seed pods while they are still **tender**, curved over and use them as a vegetable. They snap right off. I harvest them in stages as they are ready. Blanch for 3 minutes, plunge into chilled water, drain, vacuum seal and freeze. They are great in stir fries and for stuffing chicken. I also use them in my dill pickles. Filaree recommends cutting them as it redirects the energy to the bulb.

**Approximately August 20<sup>th</sup>-25<sup>th</sup>, I harvest** all my garlic. Since seed garlic has to be **totally dry (takes a month)** this time frame gives me a good window for fall planting when it's not raining. You will notice the tops turning brown. This is normal. The bulbs should still be tight. If they are left in the ground too long the cloves will start to separate from the bulb. They do not keep as long and should be used first.

Dry the bulbs **very well** for 4 weeks before planting or storing them. I wash

them in the garden in tubs and put the muddy water back on my beds. I store them in netted bags with the tops on in a warm, dry, out of direct sunlight area with a **small fan** on them until the roots feel really dry. Label well! I have several 5' wooden stands with multiple coat hooks to hang the bags. You could hang them on a beam. **Bulbs need to be cured well in order to replant, or they will rot. The larger the clove you plant, the larger the bulb will be. I plant only my best bulbs.** Do not even bother planting small cloves, just save them for eating. I label the rows well with metal tags. I prefer varieties with large bulbs, large cloves that are easy to peel and keep well for 9-12 months.

**I dry the bulbs well with the stalks intact in large net bags in a warm area for at least a month before I store them in a cool pantry around 40-50 degrees.** I cut the dry tops off at 1" before I store or plant them. Many of these varieties keep a year in my pantry. Periodically, I pick through the small boxes I use to store the bulbs in to check for sprouting and use these cloves first.

I have had good luck planting with my own seed garlic for 9+ years now. If you order seed, do it with several friends, as the cost is less for larger quantities. Order early--February, if possible, and pick your delivery date, as they do run out of many varieties every year. You will also be given their best seed garlic if you order early. Have them send it Sept. 1. If you grow enough large bulbs, you can save your own for seed garlic.

I try new varieties every few years. I have planted hardneck and softneck varieties. I have had **great** luck with **Romanian Red Porcelain, Metichi, Siberian Marbled, Khabar Marbled, Georgian Crystal, Brown Rose Marbled, Polish, Music, and Great Northern White (German origins).** If you want to **spring plant**, consider using organic garlic as it is not sprayed with a growth inhibitor. One year I planted a bag of garlic from Costco. It grew well, had large bulbs, but small cloves which were not suitable for seed garlic. I have heard of people starting the cloves around May 1<sup>st</sup> in flats to plant June 1<sup>st</sup> in the garden with good results. I tried it one year and did not get very big cloves. If I were to try spring planting again, I would plant my seed garlic in May directly into the beds. I have heard that the cloves do not get large enough for seed garlic. One drawback of fall planting is when we get a rainy, hard winter with lots of ice and freeze thaw cycles, you can lose garlic if you don't mulch and cover. I have always heavily mulched and now **ALWAYS** cover the beds with old cardboard, Tyvek or plastic to shed those rains to reduce potential loss.

**Leeks:** I start **leeks** in mid-March to early April in flats with cells (1 per cell). I plant outside the beginning of May to the end of May (when soil is ready) in hoop

beds covered with remay (no need to harden off). Leeks like rich soil with lots of compost, manure, fish bone meal and even moisture. You can start to harvest when they are the size of scallions. They keep really well in the crisper. I chop the tops so the leeks are about 10-12" long and freeze the chopped tops in Ziploc bags for soups and stews (no need to blanch). I store the best leeks after cleaning them really well. I freeze anything I feel I cannot use by December. My favorite leeks have been **Tadorna** and **American Flag**. **I am going to try Megatron this year. You can cover them with remay in the fall if you want to keep them in the ground longer once it starts frosting heavily. I prepare my beds in the fall the same as garlic.**

**Onions:** I use sets I get at the Wagon Wheel. Look them over well for mold. I buy them early and store in cardboard flats in my pantry until I am ready to plant in my hoop beds in May. Discard any moldy onions. I have had success with yellow, red and white onions. My neighbor starts her onions in flats like the leeks and gets great onions as well in her high tunnel. She uses **Alisa Craig (yellow)** which has a cool weather tolerance and **Red Wings (red)** which is good for latitudes 43-65 from Johnny's Seeds. These are both long day varieties. I am going to try another long day onion from Johnny's called **Patterson** which has a very long storage life this year. A long day onion is less likely to go to seed in Alaska. **Shallots** do well too.

I plant the starts or bulbs about 2 inches apart and harvest all season, saving the largest for storage. If they send up a flower stalk, I use them first. They like rich soil with lots of compost, rabbit or chicken manure, fish bone meal and even moisture. I chop and freeze extra tops throughout the summer for soups, stir fries and stews. I harvest in early August before the torrential rains so they store better. If you are growing in a high tunnel, you can protect them from the rain and leave them in longer. I wash them in the garden so I can return the soil to my beds.

I cut the tops to about 4 inches and lay on old towels or newspaper in cardboard flats in front of the Monitor and dry for at least a month until they are totally papered before I put them in my pantry. **Do not store potatoes with either onions or apples, as they will not keep as well.** If you have good starts and not a terribly rainy summer, they will keep all winter. Watch for mold. You can chop and freeze onions and do not need to blanch, if needed. .

**Celery:** I start celery during the last two weeks of March on cells in flats (1 per cell). My favorite celery has been **Tango**. I grow celery in boxes on my deck so the slugs don't devour it. I also grow a couple of pots in the greenhouse. It likes lots of water and rich soil. I use fish bone meal, rabbit or chicken manure,

occasionally light wood ashes and compost. I cut off outside stalks to use as soon as they are ready all summer. In the fall before the frost, I cut the celery, store some in the refrigerator and chop and freeze the rest (no need to blanch).

**Peas:** I mix fish bone meal, rabbit or chicken manure, occasionally light wood ashes and compost in the fall so the soil is ready to go as soon as it thaws. I leave the well-staked pea fence in the ground. I soak and slightly sprout the seeds before planting them in flats in my cold frames approximately mid-April to give them a jump start. I clothespin remay to the fence and cover the pea starts completely in a 4-5' remay tent and plant in early May. This has made a huge difference in my harvest and protects them from the fox sparrows that will eat the pea seeds and sprouts and spring frosts. I leave the remay on until they start to bloom. I like Little Marvel and Little Frosty for shelling and Sugar Ann and Sugar Sprint for edible pod. I look for peas with a short growing season and shorter vines. They blanch and freeze well (vac. seal).

**Carrots:** I start these in my cold frames as soon as the soil is thawed (April-beg. May). I fertilize the beds in the fall with fish bone meal, rabbit or chicken manure, occasionally wood ashes and compost. I add sand to the beds to keep the soil loose. My favorite carrot is **Scarlet Nantes**. They store really well and keep their sweetness. The cold frame protects them into early October. I have tried many methods of storing carrots. The easiest and most reliable method is to clean the carrots very well, cut off the top growth area, layer with clean damp towels in a cooler in a root cellar. I use several large blue ices on the top of the last towel layer and change them out each week until my quasi root cellar cools down enough in the fall. I keep the towel damp by sprinkling water on the top layer periodically as needed. I have been able to keep carrots well until the new ones are ready to eat in the summer.

**Spinach:** I only grow **Melody**, as it is the slowest to bolt. Once again I prepare/fertilize my soil in the fall like peas so it is ready to go as soon as it has thawed in the spring. I plant the seeds in hoop beds under remay between April 15 and the 1<sup>st</sup> week in May, depending on the weather. I keep it under the remay until I start to harvest in early June. I harvest often and pick off any signs of bolting as it appears. Spinach likes water! Spinach freezes well after being blanched. I get my Melody seeds from 2BSeeds.com.

**Swedish Black Currants:** I initially got my starts at the Wagon Wheel. They

are easy to layer to start more. They produce heavily in ANY kind of summer. The moose, the birds and porcupines have rarely touched them. They are higher in anti-oxidants than blueberries and taste great when they are ripe. They freeze well. We use them frozen in cereal and oatmeal all winter. They make a nice jam or pie, especially when you mix them with strawberries. Great for muffins and pancakes too! I have been trying short hardy blueberries, but they have not produced well yet. These need to be caged as moose and rabbits love them.

**Strawberries:** I grow them under felted typar to keep the weeds down. They freeze well. Use lots of manure, fish bone meal, compost, wood ashes when you first plant. Make a raised bed and cover with the felted typar. Cut slits where you want to plant your berries. Do not crowd or they are difficult to pick, weed, etc. I grow Quinalts with success and the old Homer homestead variety.

**Comfrey:** It is very easy to grow, spreads, gets huge and is great for mulching and composting. The bees love it! Think ahead about where you place it in the garden!

## GARDEN

I initially tilled and furrowed my garden into raised rows about 2 feet wide. I put compost and fish bone meal down in the fall. After battling chickweed, and other weeds for years, I purchased FELTED typar from Spenard in lengths to run my entire garden. I fertilize the soil with wood ashes or lime as needed (NOT on your potato rows), fish bone meal, compost, chicken and rabbit manure and till it in before I cover with the felted typar. I till to loosen the compaction from the winter snow.

We lay the typar over the raised rows and paths in the spring weighted down with a few old 2X4s and old carpet along the edges. I cut slits in the shape of an X in the fabric only large enough to slip in a sprouted potato or start. I plant my garden and cover everything except the potatoes with long lengths of remay. I weight the remay down with old 2X4's from a construction site. The remay is wide enough that the cabbages, broccoli, Brussel sprouts, savoy cabbage, Romanesque, and kohlrabi push it up as they grow. The remay protects them from root maggots, and I do not have to harden off my starts. I remove it after the 1<sup>st</sup> week in July and have had very little trouble with root maggots or cutworms. When I plant my starts I make a dilute solution of fish emulsion and Maxi-grow kelp powder.

At this point, I weed around the plants well and usually don't have to weed

again. I pull the remay up on a dry day, roll it up, and dry it in a shed before I store it in plastic bags to reuse year after year. After the garden is harvested, we fold up the felted typar, dry it, tie it and store it for the winter. I try and pull it up on a sunny day and it dries very quickly. We put it back down each spring. I plant in the same area each year, as I try and keep the potato soil acidic to prevent scab. If you are having trouble with scab, try acidifying the soil with a good amount of peat moss or alder/nettle soil that is acidic.

I gather **wood ashes** from our sauna and anytime we burn brush piles. I collect the ash while it still has embers that will remain as chunks of charcoal, put it in metal buckets and store them to use as needed. The charcoal in the ashes is very beneficial for your soil. If you don't have wood ashes, lime will neutralize your soil.

## GREENHOUSE

I have a 13" decagon greenhouse made in Ninilchik(Knox Construction). I start early greens and lettuces for salads in large rectangular tubs around the 1<sup>st</sup> to the 15th of March, depending on the weather on top of the tubs I use for later starts. When I am ready to plant my other starts, I move the tubs under an open covered deck and harvest lettuce from the tubs for another 6-8 weeks. I harden it off with remay when I pull it from the greenhouse.

**I do not heat my greenhouse.** I am usually harvesting my 1<sup>st</sup> salads around the 1<sup>st</sup> week of April. If it is really a cold spring, I will start the seeds under grow lights in the house in March and transplant when I feel it's safe in the greenhouse. I plant bean starts (self-pollinating **Fortex Pole beans** from Johnny's or Territorial Seeds) May 1<sup>st</sup> and transplant into the greenhouse around the middle of May. I put 5-6 bean starts in each large pot with cage staking. They are incredibly productive. Place them in the back of your greenhouse with a large cage or trellis as they can get huge! I put my herbs in the middle of May.

I don't put out the pepper, cucumbers, basil (**Italian Large Leaf**) or tomato starts until the middle to the last week of May, as they like it warmer. I start my basil at the beginning of April. The middle of May, I plant a smaller second batch of starts to plant in the same containers after I have repeatedly cut back the first crop that eventually goes to seed. Cucumbers seem to be the most sensitive to cold temperatures.

I use tomatoes that set at lower temperatures and have had good results with **Swedish Glaciers, Bush Early Girl, Ukrainian Purple(get huge), and Sun Golds.**

Once the tomatoes are blooming, I shake them gently each day to pollinate them. Tomatoes love the color red and will produce and set more tomatoes when they have red tomato plastic around their base. It's available from gardening supply catalogs. I use tomato cages and soft polyester ties for support for tomatoes and cucumbers. Keep your air circulation good to prevent mold in long rainy periods in the fall. I have a small fan I use when my large thermostatically controlled fan set at 80 degrees doesn't come on much. Keeping your plants trimmed of any dead leaves helps to reduce your chances of getting mold.

The peppers I have had really good success with are **Fresno Chili, Mucho Nacho Jalapeño, Jefe, Anchoes and Anaheims** which can be purchased from local greenhouses. I like to bring a couple of nice pepper plants in pots and keep them in a south window in the fall, so they can produce hot peppers all winter. If you have the room, all the greenhouse starts are easy to start. Start them early, except the cucumbers and zucchini. I have a screen door to reduce the chance of getting aphids. I have kept ladybugs in a cooler on blue ice and released about 15-20 in the greenhouse all summer as a preventative measure.

In the fall after the plants are removed, I add fish bone meal, kelp powder (Maxi-grow) and rabbit manure and mix it into the top layer of the old soil in Rubbermaid tubs and large pots. I like to use large pots and tubs so I can easily remove a plant, if needed. Initially, I used soil and leaf litter from under the alders mixed with wood ashes, fish bone meal, kelp powder and rabbit manure. I do not use any liquid fertilizer at all, only rain water. When I run out, I use well/spring water. I save every quart to gallon sized plastic jugs (transparent) and fill them 7/8 full of water and tuck them everywhere I can around the pots and tubs. They help keep the greenhouse warmer at night, and the cucumbers and tomatoes set much better.

## **COLD FRAMES AND HOOP BEDS**

The design for Greg's cold frames and raised hoop beds is at the back of this handout. I use the **cold frames** for carrots, zucchini, and early lettuce (May 1<sup>st</sup>), I plant **zucchini** starts about the 3rd week in May as they are tender. I start them around the 1<sup>st</sup> of May in 4 inch pots. I like **Raven and Jade Bar (need to be hand pollinated if insects cannot get to the flowers)**. I also like **Partenon** from Johnny's because does not need to be hand pollinated and is well suited to cold frames, hoop houses and greenhouses. They need even moisture and good soil amendments.

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## **DECK BOXES AND CONTAINERS**

I have used these more and more for plants that are slug magnets--late succession lettuces, Swiss chard (Rainbow Blend or Bright Lights), Napa cabbage, herbs, and celery. I have PVC hoops on the boxes or tomato cages for large pots and use clothes pins to secure the remay in the spring. I use remay to plant earlier and it protects starts from the frost. I plant my dill, cilantro, parsley and other hardy herbs on the deck. I do some herbs in pots in the greenhouse as well. I grow rosemary and bring it into the house each winter, oregano, thyme, basil, savory and lemon balm. I fertilize the old soil in the containers with rabbit manure, fish bone meal, kelp powder and compost in the fall and stack them on the deck so they are ready to go in the spring. I do not harden off any starts if I plant them under remay.

## **COMPOST**

My compost method is easy. I have a large wooden structure constructed out of old rough cut 2X12's around a large pit which is deep enough to have a compact dirt bottom (about 3 feet). I line the pit with old hay or straw or leaves and dump in my compost buckets all year long. I mark the corners with tall sticks, so it is easy to find in the winter. I keep a 5 gallon bucket on the deck and fill it from the compost bucket by the sink. I periodically add a layer of fresh or old chicken manure mixed with bedding, as well as garden refuse, soil and the house compost. If I can get it, chopped and washed kelp is a great addition. I do this year round. In the summer, it is filled with earthworms. I typically dig compost out in the fall and put it on my entire garden. I usually have 30 five gallon buckets to spread. I don't worry about the stage of decomposition it is in, if I need it, I use it, and it hasn't affected my gardening results.

## **PREPARING AND PLANTING PERENNIAL BEDS**

The soil where I garden had fireweed, nettles, alders and grass initially. It is very acidic, but rich in nitrogen and humus. When preparing a new bed now, I throw large pieces of old carpet over it for 6-12 month to kill everything. Then I till it up and add large quantities of wood ashes or lime, fish bone meal, compost and chicken or rabbit manure and till it again. I have used bagged steer manure in flower beds as

well. I keep the soil where I plant my rhododendrons in as acidic as possible. I grow many of my perennials under felted tyvar to keep the weeds more manageable. I use it under all my paths and rock edges as well. I use a lot of gravel and rocks on top.

When I put in a plant, I cut a small X so I can slip the plant into the soil. As the plants get larger each year, I cut the fabric to accommodate it as needed. About every five years or so, I make a concoction of equal amounts of fish bone meal and manure and add about 1/2-2 cups of it around the base of the shrubs and plants in the beds in the fall. When putting in perennial beds, you can keep costs down by purchasing the smaller packs from the greenhouses, growing your own starts, getting babies from another gardener, the HG Club sale each spring and looking for sales. The greenhouses also carry mature plants, but they are more expensive. If you are patient and amend your soil well, the smaller plants catch up them in a few years. I have found that plants rated Zones 2-3 are the hardiest and most reliable for our area. I do grow some Zone 4 plants in sheltered areas of my garden.

Visit some local gardens for ideas or take a design class before you design and plant your garden. If a particular combination of plants you chose doesn't work for you, don't be afraid to move them. Look online for preferred times to transplant perennials as they vary. Experiment!

I use a variety of **caging methods** for my flowers. I use tomato cages, stakes, gathering rings, garden supports and place them early, as it's less likely to damage the emerging plants. I cut 2"strips of polyester fabric and use them to gather tall perennials and in my greenhouse for cucumbers and tomatoes as needed. I find it's much easier to support early in the season, rather than coming out after a heavy rain to attempt to prop up plants 2-8 feet tall.

I leave the dead plants in place all winter as I feel it helps them survive. I do dead head as soon as the plants are done blooming, unless I am saving seed or it's a plant that doesn't produce many babies. Plants that produce very viable seeds can easily take over your garden. Columbine, monkshood, trollius, ladies mantle and daisies are a few that you need to deadhead unless you are trying to propagate more. I always leave all my biennials to reseed. These include Canterbury Bells, Sweet William and foxgloves.

## **STORING AND PRESERVING YOUR HARVEST**

**Modified Quasai Root Cellar:** My handy root cellar is under the porch, dug 1/3 down into the ground, and lined with tyvar and gravel. It is insulated with 4" of

blue board and has a small opening to my pantry in the basement. I use a fan in front of the pantry vent as needed to keep it from freezing in extremely windy and cold weather. Ideally I like it 34-40 degrees. I store carrots in a cooler, beets in tubs (covered with a damp towel), and potatoes in boxes on the floor. I also winter my fuchsias, begonias, geraniums and force bulbs on shelves on one wall. The door opens to the outside under the deck so it remains clear of snow for easy access. **The deeper you build a root cellar into the ground, the more effective it will be.** Make sure that any spring runoff or rain is directed away from the root cellar, so it doesn't accumulate water. My door is under the deck so snow from the roof doesn't block my access! A real root cellar requires less monitoring than mine.

**Sauerkraut:** Keeps well all winter and summer in the refrigerator. I shred the sauerkraut in my Cuisinart (I like the 2mm blade). You can use a wooden kraut shredder too. I use 3 T of sea salt/ 5 lbs. of shredded cabbage. Mix well and pack  $\frac{3}{4}$  full into clean gallon or half gallon glass jars with a potato masher. Don't overfill or they will bubble over and you will lose liquid. Seal the top with a **heavy duty Ziploc quart bag**  $\frac{1}{2}$  filled with water after you have placed a gallon Ziploc in the jar mouth and over the sides so no air touches the sauerkraut.

Place the jars in a warm (65-75) area for a week in a plastic tote lined with newspaper just in case it bubbles over. Cover with a towel. Taste each day after 5 days until you get the desired sourness that you like. The warmer it is, the faster it ferments. Remove the bag of water, and add sauerkraut from other jars to fill to 1" from the top and compact well with a stainless steel spoon or potato masher. Put the lids on and keep in the refrigerator. Use a clean utensil to remove the sauerkraut as needed. We often eat it raw, so as not to kill the probiotics and Vitamin C. You can freeze it too.

My favorite cabbages to grown are **Danish Ballhead, Golden Acre** and **Copenhagen Market**. **I grow savoy cabbages as well, but don't use them for sauerkraut.** I like cabbages that make a dense compact head, as they store better than others. If you have cabbages that suddenly split after heavy rain, you can use them ASAP.

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**Kimchee:** I make it exactly like my sauerkraut, but add additional vegetables such as Napa cabbage, turnips, daikon radishes, jalapeños or dried hot chilies, garlic, onions, kohlrabi and carrots. It will keep refrigerated all winter.

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**Crisp Dill Pickles (can be used for pickled jalapeño slices too):** I grow Sweet Success for eating and Cool Breeze for pickling. I start them May 1<sup>st</sup> in the house. You can also get these at the local greenhouses or start them yourself about May 1. They will self-pollinate when the temperature is warm enough in the greenhouse. They are not as sensitive as English cucumbers. I make up brine in  $\frac{1}{2}$  gallon jars ahead of time, as I harvest every few days and pickle as soon as they are the right size, even if I only have enough for a quart.

**Brine:** 4 quarts of water, 2 quarts of white vinegar, and 1 1/2 cups sea salt. Stir to dissolve. After picking the small cucumbers, I chill the cucumbers in ice water along with peeled garlic (2-3 cloves per quart or to taste), extra green beans, fresh dill and Fresno or jalapeño chilies (1 per quart--or to taste) for an  $\frac{1}{2}$  hour or so. I have used dried red chilies too. You can pick the night before and refrigerate, but I still put them in ice water regardless. This makes a crisper pickle. I use only small mouth quarts or pints. They will seal without a water bath well. I heat the brine to boiling then turn to low.

I pack the **WHOLE** pickles, garlic, chilies, dill, garlic scapes and a few green beans if I have them, **WEDGED TIGHT** into a hot jar that has been filled with hot water. I pack only 1 jar at a time. I have the rings and lids in hot water too. I pour the hot brine into the packed jar to  $\frac{1}{4}$  inch, wipe the rim and quickly put on the lid and ring and tighten. It may take from 5-20 min to seal. I repeat this process until I am out of pickles. I have not had any problems sealing the pickles and storing them all year using the boiling brine. If a jar does not seal, refrigerate it. They are ready in 7-14 days.

**Drying foods—** I use a dehydrator with stackable trays. I dehydrate herbs, kale, nettles, and parsley. I store them in my pantry in recycled jars and use them in soups, casseroles, stews, enchiladas, etc. These greens are very mild when dehydrated and easy to incorporate into recipes. They are a great source of calcium and minerals. This is also a good way to dehydrate mint, yarrow, raspberry leaves or anything you might like for tea. My favorite kale is the **Russian Red**. It continually grows until winter and is tender.

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**Pickled beets:** I substitute wine vinegar and honey or organic sugar to taste in a conventional recipe. Do not overcook before slipping the skins off and slicing. I reduce the sugar by at least 1/3-1/2. After sealing in a water bath, they will keep for

years in a pantry.

**Beets:** Store well in a root cellar, refrigerator or in a cooler with blue ice in a pantry. I cut the tops off, wash well and cover with an old damp towel to keep the humidity fairly high. They also freeze well vacuum sealed and cooked until you can slip off the skins and slice). I like **Detroit Dark Red, Touchtone Golden beets and Cylindra**. The golden beets have a milder flavor.

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**Red /White Cabbage:** Stores until spring for me in large coolers with blue ice changed weekly when it's too warm in my root cellar or pantry. The reds are the longest storing variety. I separate the heads with a clean towel. My favorite red cabbage is **Red Acre** as it seems to keep for a really long time and grows well. I check them often. **Red Express** is earlier, but not quite as good a keeper. I also shred white cabbage and carrots mixed with a Cuisinart (2-4mm) and blanch in organic chicken stock. I pull the blanching basket, dump it into a large bowl out and blanch in the same stock over and over. When it is cool, I pack into plastic containers covered with broth and freeze for soups, stews, chowders and stir fries. It keeps really well.

**Brussel sprouts** keep for several months in the refrigerator. I like **Jade Cross**.

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**Carrots:** I keep a gallon Ziploc bag lined with paper or cloth towel with a few holes punched to allow moisture to escape in the refrigerator. **I clean them well, cut the tops off and sort.** I put the largest ones on the bottom layer and eat the small ones first. I store most of them in my root cellar in a large cooler. I separate layers of carrots with clean moist towels which I periodically remoisten by sprinkling water on top. I prefer this to sand or sawdust as they are less likely to develop roots. In the spring, I transfer what is left them to the refrigerator for the summer or put large blue ice on them once a week and leave them in the root cellar. I generally lose very few carrots this way.

**Freezing Brussel sprouts, broccoli, Romanesque(veronica), Russian red kale(chop/pick often to keep it tender), spinach, beet greens or Swiss chard (chop):** I freeze my excess broccoli, Brussel sprouts and Romanesque, etc. carefully. I use uniform pieces, blanch for 3 minutes, plunge in ice water for 3 minutes, and vacuum seal. I freeze them upright in the bags for about 6 hours, then vacuum seal. I freeze kale, Swiss chard, beet greens in quart freezer bags after they have been blanched in some of their liquid. I vacuum seal beans and peas after blanching 3 minutes and

freezing in the bags for 6 hours. I prefer to thaw all frozen vegetables in the refrigerator for a day before using because they cook quickly and taste much fresher. I like the Super Blend Giant Hybrids like Packman. I also like Waltham--an old variety. I start all my cole crops the 1<sup>st</sup> week in April under grow lights and in south facing window so they don't get spindly. I raise the grow lights as the starts grow.

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**Applesauce:** I use cored, unpeeled, chopped, local apples to make applesauce. I sweeten with a little honey or organic sugar, and add ground cinnamon, cloves, allspice, ginger and nutmeg. I cook until they are soft and blend well in my Cuisinart. I pack into pint jars and water bath according to Putting Food By. This keeps well in a pantry. It freezes well too.

**Apple Juice:** I use whole local apples and run them through my Champion Juicer. I freeze them in pint recycled containers. It is very flavorful!

**Potatoes:** I store these in my root cellar. They keep through the summer, but I have to watch for sprouting starting in late March since I do not have a true root cellar. I am diligent about this and have potatoes all year long. I pull seed potatoes out of the root cellar the last week in April and put them one layer deep in flats in the basement to develop sturdy sprouts before planting. I plant them as deep as possible through the slit in the tyrap.

After harvesting, I wash my potatoes in the garden to insure I am leaving most of the soil behind, especially if the soil is damp when we harvest. I cure them on old sheets and cover them with old sheets for a week before storing. I sort them well by size and variety. I pick out good seed potatoes for next year. If a potato has green which is caused by sunlight near the surface on it, and is big enough, I save them for seed potatoes regardless of how large it is. I prefer a medium-sized potato for a seed potato. Potatoes keep longer if the tops have been frosted for at least a week before you dig them because it toughens the skins. You can dig new potatoes as soon as they are large enough. I grow bakers, Yukon Golds and two varieties of red potatoes. There are many others to choose from!

**Pesto:** I make pesto with basil, olive oil, sea salt, garlic, walnuts, almond or pecans in the Cuisinart. Pine nuts are wonderful, but expensive. I cut the basil often as it will keep sending up new side shoots. I freeze it in muffin tins, pop out and wrap them in saran wrap and they will keep in the freezer for a year in a gallon

Ziploc bag. I also buy larger blocks of feta, cut, wrap and freeze as well. I make a salmon/halibut topping as well as pasta and cabbage dishes with the pesto, a bit of mayonnaise and feta.

I also make **Nesto (nettles)** the same way. Blanch the nettles first for three minutes. I have used  $\frac{1}{2}$  blanched Swiss chard and  $\frac{1}{2}$  fresh basil too. I make pesto from cilantro, basil, parsley, sea salt, and olive oil and freeze it. It's great in curry and Mexican dishes.

**Storing seeds:** I store extra seeds in large glass or plastic containers with a tight seal. I sort them by planting times. I save all the desiccants I get in vitamins and clothing, dry them well and add them to the jars of seeds. I store the jars in my cool pantry, and they keep for years. I buy seeds locally and from catalogs. I collect flower seeds from my garden.

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