Garden Planning, Mother Earth News Online

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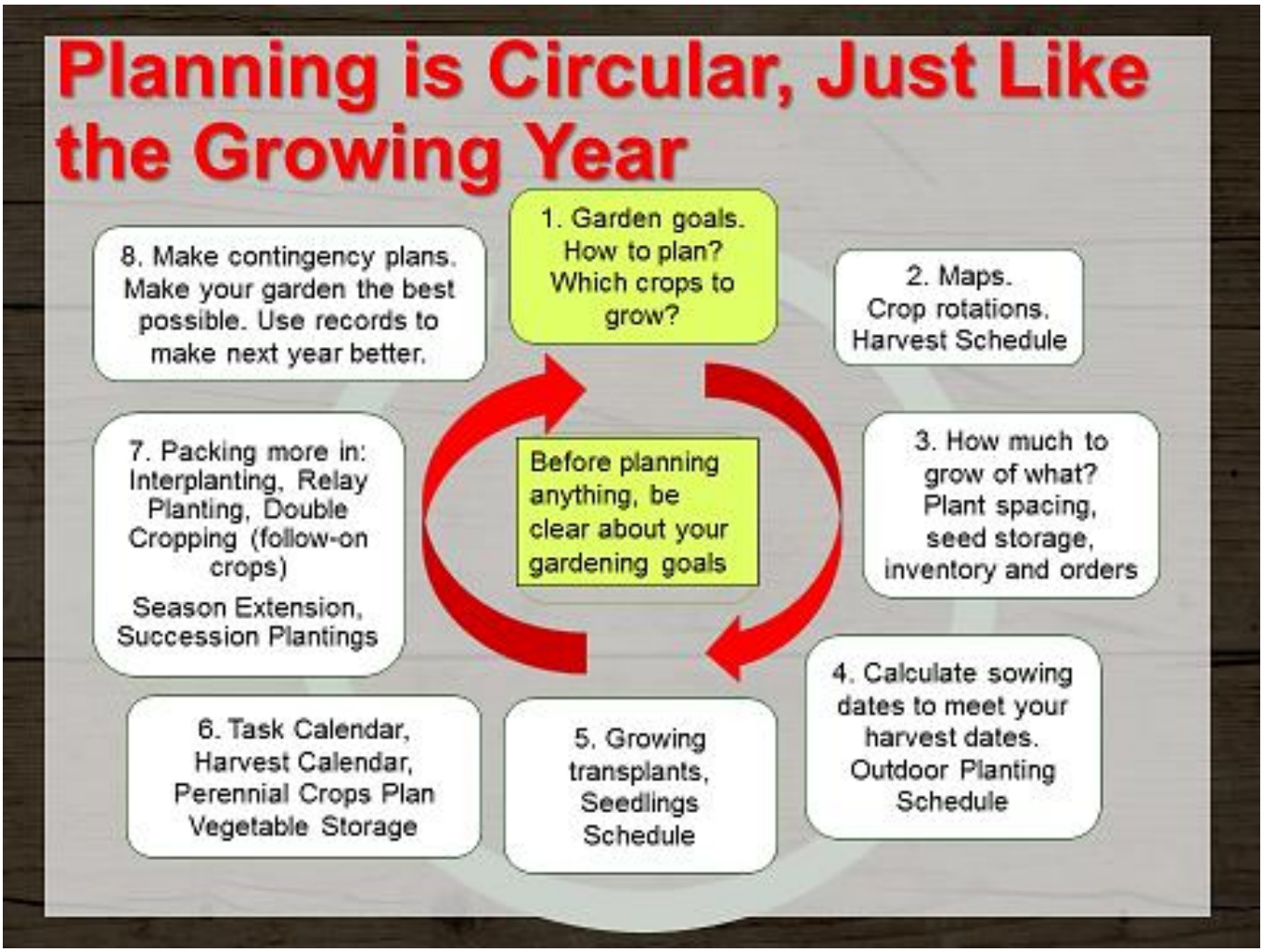
Workshop 1 – Garden goals. How to plan? Which crops to grow?



First Clarify your Goals
Be clear about your goals (before choosing planning tools).

Gather Info
Gather info from last year, do a Crop Review. Gather info from Extension Service, eOrganic, ATTRA, Gather info from other gardeners. See the Resources for this workshop series.

Tools for crop planning:
Design a system you like, so you'll use it. Build in the ability to adapt the plan if conditions change.
On-line crop planning for vegetable gardens
https://gardenplanner.motherearthnews.com/
https://gardenplanner.southernexposure.com/
http://gardenplanpro.com/
GrowVeg: https://www.growveg.com/subscribeinfo.aspx, $29/year
Google Earth Pro https://www.google.com/earth/versions/ Import maps into PowerPoint, and add shapes for beds or plots and text on the map. When you have finished, convert the file to a pdf.

Create Your Own Garden Manual, from your crop maps, outdoor planting schedule, seedling schedule for greenhouse production of transplants, descriptive month-by-month Calendar, and other plans you make.

Deciding Which Crops to Grow
1. What do you like to eat?
2. Which crops suit your conditions? Check the cold-hardiness table, soil maps, shade, water.
3. Which crops are easy to grow?
4. Which months do you want to be gardening?
5. Which months do you want to eat vegetables?
6. Which vegetables can you store?

Winter Kill Temperatures of Cold-Hardy Vegetables Spring 2020 revision

Some starting numbers of **killing temperatures outdoors** (without rowcover unless otherwise stated)**.** Your own experience with your soils, microclimates and rain levels may lead you to use different temperatures. We are in zone 7a, with an average annual minimum temperature of 0-5°F (-18°C to -15°C). Note that repeated cold temperatures can kill off crops that can survive a single dip to a low temperature, and that cold winds, or cold wet weather can destroy plants quicker than simple cold.

In a double-layer hoophouse (8F/5C warmer than outside) plants can survive 14F/8C colder than outside, without extra rowcover; 21F/12C colder than outside with thick rowcover (1.25 oz Typar/Xavan). When outdoor temperatures were 14°F (-10°C) our hoophouse temperature was 10.4°F (-12°C), and our lettuce, mizuna, turnips, *Russian* kales, *Senposai*, *Tyee* spinach, tatsoi, *Yukina Savoy* survived without rowcovers. (Note that our hoophouse wasn't much warmer than outdoors that night!) When the outdoor temperature dropped to -12°F (-24°C), our rowcovered lettuce survived -2.2°F (-19°C) indoors. *Bright Lights* chard got frozen leaf stems.

35°F (2°C): Basil

32°F (0°C): beans, cauliflower curds, corn, cowpeas, cucumbers, eggplant, limas, melons, okra, peanuts, peppers, potato vines, squash vines, sweet potato vines, tomatoes

27°F (-3°C): many cabbages, *Sugarloaf* chicory (takes only light frosts)

25°F (-4°C): some cabbages, chervil, chicory roots for chicons, Chinese Napa cabbage (*Blues*), dill (*Fernleaf*), endive (hardier than lettuce, Escarole more frost-hardy than Frisée), some fava beans (*Windsor*), annual fennel, some mustards (*Red Giant*, *Southern Curled*), some Asian greens (*Maruba Santoh,* mizuna, most pak choy*, Tokyo Bekana*), onion scallions (some are much hardier), radicchio.

22°F (-6°C): some arugula (wild arugula will survive colder), large leaves of lettuce (protected hearts and small plants will survive colder temperatures), rhubarb stems and leaves.

20°F (-7°C): some beets (*Bulls Blood, Chioggia*), broccoli heads (maybe OK to 15F, Brussels sprouts, some cabbages, celeriac, celtuce (stem lettuce), some head lettuce, some Asian greens (*Tendergreen*, *Tyfon Holland* greens), flat leaf parsley, radishes (*Cherry Belle*), most turnips.
Large oat plants will get serious cold damage. Oats seedlings die at 17°F (-8°C)
Canadian (spring) field peas are hardy to 10-20°F (-12 to -7°C).

15°F (-9.5°C): some beets (*Albina Verduna, Lutz Winterkeeper*), beet leaves, some broccoli, some cabbage (*Kaitlin, Tendersweet, Tribute*), celery (*Ventura* with rowcover), red chard, cilantro, endive, fava beans (*Aquadulce Claudia*), *Red Russian* and *White Russian* kales, kohlrabi, some lettuce, especially medium-sized plants with 4-10 leaves (*Marvel of Four Seasons, Olga, Rouge d'hiver, Tango, Winter Density*), curly leaf parsley, rutabagas (*American Purple Top Yellow, Laurentian*), broad leaf sorrel, turnip leaves, most turnips if mulched (*Noir d'Hiver* is the most cold-tolerant variety). winter cress

12°F (-11°C): some beets (*Cylindra,*), broccoli, Brussels sprouts, some cabbage (*Gunma, January King*, Savoy types), carrots (*Danvers, Oxheart*), most collards, garlic tops if fairly large, most fall leeks (*Lincoln, King Richard*), large tops of potato onions, covered rutabagas, *Senposai* leaves (the core of the plant may survive 10°F, -12°C), some turnips (*Purple Top*)

10°F (-12°C): covered beets , *Purple Sprouting* broccoli for spring harvest, a few cabbages (*Chieftain, Deadon, Early Flat Dutch, January King, Late Flat Dutch*), chard (green chard is hardier than multi-colored types), some collards (*Morris Heading* can survive at least one night at 10F), *Belle Isle* upland cress, some endive (*Perfect, President*), young stalks of *Bronze fennel*, *Blue Ridge* kale, *Komatsuna*, some leeks (*American Flag, Jaune du Poiteau*), some covered head lettuce (*Pirat, Red Salad Bowl, Salad Bowl, Sylvesta, Winter Marvel*), some winter radishes (Daikon, *China Rose*, *Shunkyo Semi-Long*), large leaves of savoyed spinach (more hardy than flat leafed varieties), tatsoi*, Yukina Savoy*
Oats cover crop of a medium size die around 10°F (-12°C**)**. Large oat plants will die completely at 6°F (-17°C) or even milder than that.

5°F (-15°C): garlic tops even if still small, some kale (*Beedy's Camden, Winterbor, Westland Winter*), some leeks (*Bulgarian Giant, Laura*), some bulb onions, potato onions and other multiplier onions, smaller leaves of savoyed spinach and broad leaf sorrel. Many Even'Star Ice Bred greens varieties

are hardy down to 6°F (-14°C), a few unprotected lettuces if still small (*Winter Marvel, Tango, North Pole, Green Forest*)

0°F (-18°C): chives, some collards (*Blue Max, Morris Heading, Winner*), corn salad (mâche), garlic, horseradish, Jerusalem artichokes, a few leeks (*Alaska, Bandit, Durabel, Tadorna*); some bulb onions, yellow potato onions, some onion scallions, (*Evergreen Winter Hardy White, White Lisbon*), parsnips (probably even colder), salad burnet, salsify, some spinach (*Bloomsdale Savoy, Olympia*). *Walla Walla* onions sown in late summer are said to be hardy down to -10°F (-23°C), but I don't trust below 0°F (-18°C)
Crimson clover is hardy down to 0°F (-18°C) or slightly colder

Even Colder: *Vates* kale survives 0°F (-18°C), although some leaves may be too damaged to use. Killed at -5°F (-19°C). Leaves of overwintering varieties of cauliflower are hardy down to -5°F (-19°C). *Walla Walla* onions sown in late summer are said to be hardy down to -10°F (-23°C), but I don't trust below 0°F (-18°C) Narrow leaf sorrel, Claytonia and some cabbage (*January King*?) are *said* to be hardy in zone 3, -30°F to -40°F (-34°C to -40°C).
Austrian Winter Field Peas and Crimson clover (used as cover crops) are hardy down to -10°F (-23°C)
Hairy vetch is hardy to -15°F (-26°C), some say down to -30°F (-34°C)
Dutch White clover cover crops are hardy down to -20°F (-29°C) or even -30°F (-34°C)
Winter wheat and winter rye (cover crops) are hardy to -40°F (-40°C).

<u>Which Crops Are Easy?</u> (My own list, you may have a different list!)

- **Easy:** kale, collards, okra, lettuce, cabbage, endives, chicories, non-heading Asian greens, spinach, Irish potatoes, sweet potatoes, all cucurbits, beets, chard, sweet corn, all legumes, scallions, tomatoes, arugula, parsley, carrots, radishes, kohlrabi, turnips, Chinese cabbage,
- **Harder to Grow:** eggplant, peppers, parsnips, broccoli, rutabagas, mustards, potato onions, garlic, leeks, asparagus,
- **Difficult:** bulb onions, celery, celeriac, cauliflower, Brussels sprouts, cantaloupe.

<u>Fast and Slow Crops</u>
McCrate and Halm, in *High Yield Vegetable Gardening*, distinguish between

- **Fast Growing Crops (25-60 days from sowing or transplanting)**

Direct sown arugula, baby lettuce mix, mustard greens, some Asian greens, radishes, spinach, turnips;
Transplanted head lettuce, endive, heading Asian greens.

- **Half Season Crops (50-90 days from sowing or transplanting)**

Direct sown snap beans, lima beans, beets, carrots, corn salad, snap peas, snow peas, shelling peas, scallions;
Transplanted broccoli, cabbage, cauliflower, collards, chard, cucumbers, eggplant, kale, kohlrabi, okra, radicchio, summer squash, zucchini, tomatoes.

- **Long Season Crops (70-120 days from sowing or transplanting)**

Direct sown edamame, fava beans, shell beans, sweet corn, parsnips, peanuts, rutabagas, potatoes, winter squash, pumpkins; Transplanted Brussels sprouts, celeriac, celery, bulb fennel, garlic (longer), leeks, cantaloupe, other melons, bulb onions, peppers, sweet potatoes, watermelon.

Crop Value Rating

1. **Shorter days to maturity** (fast crops = chance to plant more; give a point for 60 days or less)
2. **High yield** per linear foot (best value from the space; a point for 1/2 pound/linear foot or more)
3. **Long harvest period** (a point for 4 months or longer)
4. **Popularity**
5. **Higher price** per pound (if you are selling produce, other factors being equal, higher price = more income; a point for $4 or more/pound)

DIY Crop Value Rating

Loosely speaking, there are 4 categories (plus income, if you are selling produce):

A. Time involved: Labor-efficient? Weed control? High-yielding?
B. Yield: for the space, for the time? Multiple harvest? Bulk storage?
C. Likely demand: Popular? Staple? Stores well? Available when other crops are not? Diversity?
D. Strategic importance: Insurance crop? Crop rotation? Your alternative to growing this? Nutritionally dense?

DECIDING WHICH CROPS TO GROW

Nov-16

Areas/Garden/Planning/How to Decide Which Crops to Grow Chart.xlsx

(examples of possible factors)	Labor efficient	Fast maturing	High yielding	Bulk harvests	Popular	Dirty Dozen	Expensive to replace	Staple	Available Off-Season	Easy or Fun	Points
Beans, asparagus	1	1				1				1	4
Beans, bush		1	1		1	1		1		1	6
Beet greens}											
Beets, fall}	1	1	1	1	1			1	1	1	8
Beets, spring}											
Blueberries					1	1	1			1	4

Also see the Resources Handout for this course.

Happy growing,
Pam