LACTOFERMENTATION CHEAT-SHEET

1. FERMENTATION CONTAINERS:
   EURO-STYLE CLAMP-LID JARS with rubber gaskets (Fido, Le Parfait, etc.) are the best for preventing unwanted yeast or mold growth in your ferments. They’re not very expensive and are available in a wide variety of sizes at Wegmans or online from Crate & Barrel.
   NIPPLE-TYPE LIDS have the advantage of being usable on any size ordinary Mason jar, but not as good at preventing undesirable types of fermentation.

2. PRODUCE TO FERMENT: You’ll get the best (yeast- and mold-free) results and keeping quality by using at least 1/2 cabbage-family vegetables (any type of cabbage, cauliflower, turnips, rutabaga, radishes….) – 2/3 is even safer. Figure a total of about 2 lbs. of produce for each quart/liter of jar volume. Suitable items you may find in your Winter CSA share include:
   ■ CABBAGE (green, red, or napa), KOHLRABI: These are the most neutral-tasting and go well with any seasoning you might add (but don’t you want to save them for coleslaw?) Napa makes a softer kraut than cabbage or kohlrabi.
   ■ RUTABAGAS are also fairly neutral-flavored. They’re yellow-fleshed, firmer and starchier than the other cabbage-family roots, so it may take more effort to get them to yield enough liquid. They’re especially good with citrus but also work well with traditional sauerkraut seasonings. (Try them roasted, like baked potatoes, before you decide you need to use them up in a lactoferment!)
   ■ WINTER RADISHES are zippy when fresh but milder, soft, and very juicy when fermented. The long carrot-shaped winter radishes come in white (daikon, mu), purple-skinned (purple mu) and green (green meat); big round ones include the black-skinned Round Black Spanish (the black skin color doesn’t bleed into the ferment, so you get flecks of black) and red-fleshed “watermelon” radishes. Winter radishes go especially well with Asian flavors – kimchi spices, ginger, sesame seeds.
   ■ TURNIPS come in white, white-and-purple, “golden” (actually just pale yellow) and red-skinned (“scarlet”). Their flavor is very distinctive (mustardy) and doesn’t change much during fermenting.

3. STARTER: Using a vegetable STARTER CULTURE (several brands are available from www.culturesforhealth.com) is optional – it’s expensive! – but recommended if you ferment includes significant amounts of sweeter types of produce (carrots, beets, sweet or hot peppers, fruit) or if you’re especially concerned about preventing yeast growth in your ferment. Instead of starter, you can also use some brine (maybe ¼ cup) left over from a previous batch (you want the white sediment on the bottom) but – like yogurt starter – it may eventually go “off.”

4. SALT: Use at least 1 TABLESPOON of SALT for each half-gallon (2 liters) of jar volume if you’re using a starter culture. If you’re not, you can use up to double that amount of salt (add the salt to taste as you massage your kraut) and/or add some acid (lemon juice or brine, see above; NOT vinegar – it’s an acetic acid ferment that may interfere with lactofermentation) to make sure the good bugs get off to a fast start.

5. TEXTURE: Lactofermentation is an anaerobic process. Excluding air is done by chopping/slicing/shredding the produce thinly enough so that massaging it with salt draws out
enough liquid to submerge it. Mince or chop finely for “relish” texture, shred or grate for “kraut” texture, or slice thinly for a “chopped salad” effect.

6. DEVELOPING BRINE: Massage the salt/culture into the shreds until liquid starts to pool in the bottom of the bowl. Unless you’re aiming for a softer texture, don’t add more liquid when you pack the shreds into jars.

7. FLAVORFUL ADDITIONS: Virtually anything goes! (If you end up with a flavor combination you don’t especially like initially, try it again after it’s been in the fridge for a couple weeks – the flavors will continue to merge and refine.)
   - Caraway or juniper berries = classic European sauerkraut
   - Onion + oregano + chile peppers = Latin American curtido
   - Garlic + ginger + chiles = Korean kimchi
   - Try adding a little fruit: citrus (including peel), apples, cranberries….The fruit’s distinctive flavor survives the fermentation but the sweetness doesn’t. For a sweet-tart relish or chutney, include some dried fruit in the ferment OR add sweetener once the fermentation is finished (but don’t expect either of these to keep as long). Alternatively, stevia will stay sweet during fermentation and doesn’t affect storage life.
   - Use the spice combination (minus the vinegar!) from any vinegar pickle recipe.
   - ONION is a subtly tasty addition to any savory flavor combination.

8. COLORFUL ADDITIONS: Green cabbages tend to turn tan during fermentation, and kohlrabi and white radishes stay white. You can add specks of color by adding shredded or sliced carrots (the orange color doesn’t bleed into the other vegetables). For all-over color, add some red cabbage or beets, which will tint everything. Watermelon radishes and scarlet turnips also leak their color, but it’s not as strong.

9. FILLING THE JARS: PACK in firmly to eliminate air bubbles, using your fist or a wooden tamper. Jars with gaskets don’t need to be filled beyond the shoulder. You can fill them fuller, but be prepared for overflow (always possible even with under-filled jars!), especially during the first week of fermentation, so set your jar in a dish as a precaution.

10. FERMENTATION AND STORAGE: Ferment at room temperature out of direct sunlight. You can stop or at least slow the fermentation (by refrigerating) whenever it’s as sour as you like it, but for best keeping quality a month of fermentation is good. Store your finished ferment in the fridge. You may want to transfer it to a US-style mason jar (plastic storage lids are available and won’t get corroded by the acid) so you can use your gasket-lid jar or nipple lid for a new batch.

11. HOW TO TELL IF YOUR FERMENT GOES BAD:
   - Clouding of the brine and light-colored sediment that sinks to the bottom are normal and desirable – they’re the lactobacteria that do the fermenting.
   - FUNGAL CONTAMINATION: YEAST looks like tiny white specks that float and form a film on top of the brine. MOLD is more substantial dots that may eventually spread into a solid layer on top of your ferment. You’ll probably want to peel off mold because of the yuck factor, but actually most people can eat both mold and yeast (think blue cheese and fresh bread!) without ill effects. Anyone with a known intolerance to yeast or mold should avoid fungus-containing fermented products, though. Ferments contaminated with fungi may be more likely to go fizzy in the fridge, so watch out for overflow or keep them in clamp-lid jars.
   - Your ferment is probably only unfit to eat if it turns out so slimy and stinky you wouldn’t want to eat it anyway!