

Food Production at Living Energy Farm

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Our Ethics, Goals and Strategies

Our food mission: We seek to build a model of what a truly sustainable regional food system can look like. The corporate food system is under the control of an increasingly small number of people using increasingly toxic and destructive methods. We envision a future where communities both rural and urban are able to use regenerative methods to produce for themselves, and can buy from or trade with other communities in the region to provide for all their basic needs. Rural farmers using sustainable methods must be able to not only feed themselves, but produce an excess of staple crops to sell to urban centers. Unfortunately, most rural intentional communities and permaculture demonstration projects we know of are actually net importers of food.

The ethics of permaculture are summarized as “earth care, people care, fair share.” There are many ways these ethics can be interpreted. We focus on the following tangible goals:

Earth care: We aim to manage our productive land in a way that builds topsoil and organic matter over time. We use no non-organic inputs, and seek to minimize off-site organic inputs like manure and mulch.

People care: We aim to grow a full, balanced, tasty diet for ourselves and our domestic animals. We aim to produce an excess to sell or trade. We want to use methods that are labor efficient- we love our work, but love it even more if we have space in our lives for more than just work.

Fair share: We aim to leave space for wild nature by using only as much land as we really need. And while sustainable agriculture solutions are always local, we aim to use methods that communities of very meager means can also afford.

The strategies we use to work towards our goals are inspired by several agricultural philosophies, including permaculture, bio-intensive mini-farming, and large-scale (mechanized) organic farming. We aim to balance the strengths and weaknesses of each approach. Permaculture design is strong on earth care, but often does not focus on productivity or land use efficiency. Bio-intensive methods are strong on land efficiency and productivity, but are very labor intensive. Large scale, mechanized organic farming is labor efficient, but often does not meet our earth care goals. But all these philosophies, as well as what we know about indigenous farming methods, have a lot to offer a balanced approach.

The Strategies We Use to Meet our Goals

Plant based diet. While we appreciate the nutritional and culinary benefits of modest amount of animal foods (no traditional culture has been 100% vegan), eating mostly plants is the simplest way to practice the ethic of “fair share.” It's obviously much more land efficient to feed plants directly to humans than to run them through animals first. Even with optimal grazing management, seven billion people cannot eat meat and dairy based diets- there's just not enough land, and it certainly leaves no room for wild nature. As we aim to demonstrate a way of life everyone can afford, we have made a conscious decision to not include ruminants in our food system. We do fine without them.

Food from trees. Tree crops build topsoil, are labor-efficient and need little or no irrigation. We are guided by what grows wild on our land, and grow cultivated varieties of persimmons, filberts (hazelnuts) and blackberries, along with other nuts, fruits and berries.

Organic no-till when practical. The negative impact of tillage on topsoil is well known. That said, we are not 100% no-till. Most organic no-till vegetable production relies heavily on imported mulch. Another technique consists of growing a lush cover crop which can be mowed down and left in place to serve as mulch for the cash crop. This method works only with crops where the timing of planting coincides with the time when a cover crop can be successfully killed by mowing or frost. We have struggled to use this method in the past, and have learned that it does not work well to rotate no-till management with cultivation. We are in the process of establishing permanent no-till sites for crops which grow well with this method, which include wheat, beans, sweet potatoes, tomatoes and corn.

Cover crops and fallowing to build topsoil. Crops managed with cultivation are rotated with fallow periods of growing only cover crops to control weeds and add organic matter. We also use relay cropping- sowing a cover crop into an established cash crop at last cultivation- to ensure that our fields are well covered through the winter. Cover crops are such aggressive biomass producers that they can compensate for organic matter lost through cultivation.

We eat what grows easily in our climate. This seems obvious, but for most people, it is a big adjustment. Organic growers take for granted that they must battle disease and insect pressure when they take crops from New England and grow them in the south. Our diet is based on annuals and perennials that, in healthy soil with good organic matter, can grow without sprays, integrated pest management, trap crops, compost teas, or labor intensive interplanting. (We do use row cover sometimes, but hope to wean ourselves off of it eventually. Also, we are lucky enough that our fields are surrounded by wild lands which provide habitat for all manner of beneficial insects- other growers may need to provide this habitat themselves.)

Choosing seed stocks selected for organic, no-spray production in our bioregion. As seed growers, we have come to appreciate what a difference it makes to start with seeds selected for performance under our conditions. Just a few generations of selection can greatly increase disease resistance in cucurbits, for example. We are lucky to be connected to a network of seed growers in the region who are selecting every year for high-quality genetic material. (See “Resources” section.) This is indispensable work.

So What to Grow?: Our Staple Crops

Alexis' booklet goes into a lot of detail about perennials that grow easily without sprays. So I'm going to focus on annuals. Our staple crops, which store easily and provide the bulk of our calories, are corn, wheat, beans, peanuts, spring potatoes, and sweet potatoes/winter squash. Corn and wheat also provide the bulk of the calories for our ducks, which provide us with eggs.

Corn is an amazing gift from ancient American farmers. We grow it for seed as well as human and duck food, so we grow different varieties every year, usually southern heirloom dent varieties. We recommend Tennessee Red Cob, Kentucky Rainbow, and Florianni Red Flint. (The Florianni makes exceptional grits.) We mostly grind it dry and eat it as grits or cornbread.

Wheat is the easiest small grain for us to grow. We also eat rice and oats, and would like to grow them one day, but these grains are more difficult to grow, and need special dehulling equipment. We don't have enough experience to recommend specific varieties of wheat, but there is not nearly as much genetic diversity among different wheats as there is with corn- in other words, it probably doesn't matter too much. There are heirloom wheats (and spelt) available for folks who want a lower-gluten option, although these don't produce as well. Harvesting is most of the work of growing wheat. After struggling with harvesting and cleaning by hand, we have imported a small combine from China.

Beans are generally easy to grow but labor intensive to pick. We are working on setting up a more mechanized way to pick and process beans. The beans that grow most easily in our climate are lima beans and cowpeas, which are not affected by bean beetles. The deer go nuts over cowpeas, though. You'll need to protect your cowpeas, or eat venison, or do both.

Peanuts. We are at the northern limit of where it is commercially viable to grow peanuts. Choose a variety that matures in 120 days or less. We like Carwile's Virginia and Schronces Deep Black from SESE. Protect them from the deer. We are working on more labor efficient ways to pick, roast and shell peanuts.

Spring potatoes, are also called white potatoes (although some sweet potatoes are white) and Irish potatoes (although they are from South America). The easiest time to grow them is to plant in mid-March and harvest in July. They don't need a long season, but they like cool soils. With a lot of mulch, you can also plant them in June and harvest in October. They require cool, damp storage- underground or in a refrigerator. Spring potatoes are our staple crop exception to the "we grow what the bugs don't eat" rule. To get taters, you need to pick the colorado potato beetles. University breeding programs have been coming out with varieties that are supposed to be potato beetle resistant; we tried them, and they still get beetles. Just pick them off (or spray them if you want). Get the kids involved, it's kind of fun.

Sweet potatoes and winter squash have a similar storage requirements and culinary niches. They grow through the summer for fall harvest, and store easily indoors at room temperature. Sweet potatoes are amazingly productive in good soil (provided they are protected from the deer), with no insect or disease problems, and also provide tasty summer greens. The best winter squashes to grow for storage in the southeast are disease resistant varieties of the moschata species. We recommend Seminole and a new variety from a breeder in Louisa called South Anna Butternut, which is a cross between Seminole and Waltham Butternut. Both are available from Common Wealth Seed Growers and SESE. SESE is also a good source for sweet potato slips.

Vegetables for the Lazy Grower

We eat a whole lot of vegetables. But we mostly eat vegetables that are easy to grow. As for vegetables that have more insect or disease challenges, we grow them at the time of year when they are easiest to grow. We don't have a greenhouse, or much refrigerator space. So we mostly grow vegetables that can be direct seeded, and prefer to grow those which have an extended season where they can be picked fresh from the garden.

There are three main planting seasons in Virginia: early spring, late spring, and late summer.

We plant our early spring crops in early March, and they mostly mature in June and July (greens and green onions can be picked earlier). Our favorites to grow this time of year are: Vates kale, semposai (a hybrid very similar to collards), danvers 126 carrots, cylindra beets, Sugar Ann snap peas, onions, lettuce, annual herbs like cilantro and dill. Vates kale is very resistant to bolting and will sit in the garden and make leaves for us to eat until the harlequin beetles get so bad that I pull them up (usually in August). I have found that spring carrots do just fine sitting in the ground after they are mature, so we leave them there and harvest them as we need them. Beets store well packed in sand in a barn or other outdoor storage.

A note about alliums: like most people who love to cook, we consider alliums to be an indispensable part of every meal. Garlic is pretty easy to grow in our climate, and stores easily at room temperature. Onions are more challenging. In our climate they are planted in the early spring (or late fall for multiplier varieties) and mature in mid-summer. We eat lots of homegrown onions in spring, summer and early fall, but have had trouble with varieties that store into the winter. One answer to this is to grow more leeks. Leeks are slow growing, planted in the spring and growing through the summer and maturing in late fall and winter. They are super cold hardy and can sit in the garden all winter waiting to be harvested (provided the ground isn't frozen too hard to dig them up).

Next is the late summer planting block, May and early June. These crops are not frost tolerant and love (or tolerate) the hot weather. We grow several different kinds of cucurbits (cucumber, melon and squash family), nightshades (tomatoes, peppers, eggplant), and okra. A lot of gardeners and farmers struggle with cucurbits. The bugs eat them when they are small, and they get fungal blights when they are big. To start, make sure you're planting a disease resistant variety. CWSG specializes in disease resistant cucurbits and it the best choice for cucurbit seeds in this area. I also recommend covering most cucurbits with row cover (remay) from before emergence until they start to make flowers. The only ones we don't cover are watermelons and moschata type squash. Some cucurbits, like pepo type squash and muskmelon, are going to have disease issues even with the best varieties. It helps to grow them as early in the summer as you can, as the disease pressure usually gets worse as the summer progresses.

As for tomatoes and peppers, there are so many varieties just grow what you like to eat. A tomato with some disease resistance will give you a longer picking season, but all tomatoes blight out eventually. I recommend doing an early and a late planting to extend the fresh tomato season.

Early August is the latest we can plant many frost tender vegetables and still get a crop. We always do a late planting of green beans and sweet corn. Sweet corn we can't plant early because we have to time isolate it from our main seed corn patch. We love sweet corn so we plant several varieties for an extended season, and grow extra for canning. We grow green beans late because I have found that late planted green beans don't get bean beetles. I don't know why this is. I like green beans, but not enough to battle the bean beetles all summer, so I just plant them late and grow extra for fermenting and drying.

August and September is also a very important time to get crops established for late fall/early winter harvest and beyond. It's unfortunate because this is also when harvest of the main season crops is at its peak, plus it's so hot its hard to get anything to germinate. But it's worth it! In August we plant our winter carrot patch (Danvers 126 again), diakon radishes, beets, and several different greens for fall picking. These crops are cold hardy enough to be harvested until the solstice, sometimes beyond, depending on the severity of the winter. In early September we plant super cold-hardy vegetables that will be harvested later in the winter. These are Vates kale (again!), Even Star collards, and Gilfeather turnip, which is a rutabaga/turnip cross. These three crops, along with our leeks, made it through two weeks of a super hard freeze this past winter which killed off everything else.

The last things we plant are our multiplier onions (yellow potato onion) in mid-October and garlic in early November.

Food Processing

Of course the easiest, and best, method of “food processing” is to extend the fresh picking season in the garden as long as possible. After doing this, our favorite food processing methods are fermenting, canning and drying.

Fermenting is kind of like season extension, it doesn't put the food in suspended animation to be stored indefinitely like canning does. But it is easy and so very tasty. If you have a root cellar or extra refrigerator space, it can store for several months. Our favorite foods to ferment are cucumbers, green beans, winter radishes, and carrots. Cabbage of course is excellent fermented, but it's a lot of work to grow so we mostly don't grow it.

Canning: We do boiling water bath canning for high acid foods, and pressure canning for low acid foods. The foods we pressure can are sweet corn and meat (usually venison). For boiling water bath canning, we do a whole lot of tomatoes and fruit (pear sauce and peaches mostly). We don't do much with vinegar based pickles because we don't like the flavor.

Drying: We have a lot of capacity to dry food as a side benefit of our solar hot air-based heating system. The first year we had our dryer I tried drying everything we grow. I learned that a lot of vegetables don't retain much flavor when dried. Now I am more discerning. My favorite vegetables to dry are peppers, eggplant, okra, and green beans. Tomatoes of course are very tasty but also difficult to dry with a solar dryer, as they mold easily overnight. Almost all fruits dry easily and are delicious, especially persimmons and pears. Berries can be made into fruit leather and dried. Paw paws are an exception, they don't dry well.

Resources

We are very fortunate to have three local gurus of sustainable food production, who have decades of experience growing food in central Virginia, and have all written books on the topic. These women are Ira Wallace ([Vegetable Growing in the Southeast](#)), Cindy Conner ([Growing a Sustainable Diet](#)), and Pam Dawling ([Sustainable Market Growing](#)). Pam's book is an especially useful reference because it contains details down to planting dates and varieties best suited for our region.

In the world of perennials, an excellent local resource is Michael McConkey and his nursery Edible Landscaping (www.ediblelandscaping.com), which specializes in low-care perennials for the mid-Atlantic. Alexis' booklet, [Perennial Food](#), is super useful as well and available at <http://covev.org/fruitbook9.pdf>.

For sourcing seeds, we recommend Common Wealth Seed Growers (<https://www.seedwise.com/farmers/18/common-wealth-seed-growers>) and Southern Exposure Seed Exchange (www.southernexposure.com). SESE also has organic planting stock like alliums, white potatoes, and sweet potato slips. If you're not certified organic, you can get planting stock from a local farmer's cooperative like Southern States, and it is much cheaper.

Of course there are piles of other books about organic food production out there. My favorite books by

non-regional growers are The Resilient Gardener by Carol Deppe and The New Organic Grower by Elliot Coleman. I especially like section in Coleman's book on farm-grown fertility. Carol Deppe's book is focused on the northwest, but I find it especially useful on the topics of seed selection and breeding. Her book is also excellent for understanding all the different kinds of dry corn (flour, flint and dent) and the best ways to cook them.