

I return with great pleasure to the New York-NOFA Conference. I have an especial fondness for this conference because it was here, seventeen years ago, that I first met my beloved wife Eli Rogosa.

In those days I homesteaded on a remote back forty on a seasonal discontinued town road in Central Maine (without electricity or running water) and after living alone for nearly 30 years, considered myself the quintessential bachelor. Winters I headed to town to help manage Fedco Seeds. Back then, before internet ordering, we shut down our seed business at the end of March and I was soon back on the farm searching for new varieties to add to Fedco's next catalog.

At that fateful conference, Eli was aware of me way sooner than I became aware of her. But the next weekend at the PASA conference where I was also presenting, she was back and we were inseparable, attending one workshop after another together. I knew something had happened that was gonna change my life, though I was smart enough to wait until after the end of mud season to invite her to Maine.

I see that after this there is going to be a young farmers' mixer co-sponsored by NOFA-NY and the Young Farmers' Coalition at the City Tavern. Perhaps two or more of you will be as lucky as Eli and I were and find your lifelong partners!

The other thing I remember about that conference 17 years ago was keynoter Will Bonsall, also from rural Maine, talking about how saving and breeding seeds was all about sex on the farm, and that sex, and therefore seeds, were too important to leave to someone else to do. I will only add, as an aside, that genetically engineered seed, being all about the mechanical insertion in a laboratory (often with a gene gun) of dissimilar genes into random locations is not at all about sex.

When it comes to seeds our movement has helped build a diverse collection of cultivars of many shapes, hues and patterns. Our farms have become more diverse as well, from rooftop urban gardens to traditional rural dairy farms, from tiny plots of micro-greens to proudly standing year-round hoop-houses defying the cold and snow. Jewish farmers, Somali farmers, transgendered farmers, women farmers, apprentice farmers, wizened farmers, our diversity parallels the growing diversity of our nation. I especially admire NOFA-NY for being a prime supporter of many diverse farms and groups from Seedfolks in Rochester to Harlem Grown, from the Youth Food and Justice Network in New York City to the Youth Farm Project in Ithaca, from Hattie Carthan Gardens in Bed Stuy to Soul Fire Farm near Albany to name only a few of many. I also admire your work on the Farmer's Pledge, which adds a social dimension to organic farming that has not been promoted in Maine.

At this point I introduced Jamie Levato, Education Director of the Poughkeepsie Farm Project who works with children, teens and adults on growing and cooking healthy food. She offered some brief remarks on her work, before heading immediately to the Womens' March on Washington.

And so I am here to resume my lifelong romance of the seed. I have been planting seeds for nearly fifty years, selling them for almost forty. Now NOFA-NY is hosting the first ever Northeast Seed Conference! Thanks to those who made this possible, especially NOFA's Education Committee headed by Bethany Wallis, and Petra Page-Mann of Fruition Seeds who took on the daunting task of over-all organizing. The recognition that we have special regional seed needs here in the northeast that cannot be met by California or Oregon-centric gatherings is a major milestone, and our willingness to take

action on that is Yuge!

Now the views here are my own and not necessarily those of Fedco Seeds. Fedco is a diverse co-op built by many folks with many diverse viewpoints. I can't possibly speak for us all. Now seeds is a fairly easy business to enter (initial costs can be low, potential profits significant), perhaps explaining why there are hundreds of small seed companies), but an extremely difficult business to do well. And one of the great challenges is that as seed quality approaches the y-axis of perfection, the marginal costs of each unit of further improvement are hyperbolic to that axis. Even so, over the last decade, orders reach us much more quickly and go out faster than they used to with fewer errors. There are many more organic seed growers with better skills, too. But the availability of high-quality organic seed is not keeping pace with the increased demand for that seed and we have far more work to do.

For millennia seed crop production and improvement was in the hands of farmers. Only in the last century and a half was it removed from farm and community and brought increasingly under corporate control. This morning I attended an inspiring intensive exploring participatory models for co-operation between seed growers, seed breeders, seed companies and eaters. As we share information, it strengthens our movement. This conference is a big step to restore the seed arts on our farms and in our community, and ultimately, to wrest some of that control away from the mega-corporations. This is long and slow work, not for the impatient, not for those demanding immediate results, instead for those who understand that our foundation is built one variety at a time, one skill at a time.

Nevertheless, I was taken aback by the conference title “Owning Our Seed” that was a clear attempt to conflate two different meanings of the word “ownership.” As one of the planners acknowledged, “owning” something, in modern slang means to take self or group responsibility for an action or non-action and then went on to say that a first step forward is to redefine “ownership” as stewardship. I think not. While I certainly believe that renewing seed stewardship is a good thing in and of itself, absent some form of ownership it is a subservient role lacking in sovereignty. Instead, I believe that to truly “own” the seed we must own the seed, in the literal, not slang definition of ownership. Now, in most common current parlance, ownership refers to private ownership, that is, a proprietary interest in the seed as a “product” (as many seed companies now refer their variety offerings as “so many new products”) or commodity to be sold. But there is another form of ownership, and that is ownership as a commonality, a shared ownership that benefits the whole society. It was that vision that our U.S. Department of Agriculture upheld until 1924 by distributing free seed packets of improved varieties to farmers, that eminent University of New Hampshire plant breeder Elwyn Meader upheld long after his retirement when he refused to take out any patents on his many introductions or even a penny of royalties “so long as there was even one dollar of federal or state money” used for their development. “I was working for the taxpayer and the results on my work belonged to them,” he asserted. Until 1970 our U.S. Congress upheld a similar vision by refusing to patent seeds. Even when they did pass the Plant Variety Protection Act, they limited its breadth on each protected variety by allowing farmers to save seeds and breeders unhindered use for further crop improvement. It was the U.S. Supreme Court in *Diamond vs. Chakrabarty* (1980) that permitted patents on newly created living organisms and in *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred* (2001) that allowed utility patents for conventionally bred varieties and their traits.

Utility patents protect not just the ownership rights to one variety, they extend to broad traits such as exerted heads of broccoli, downy mildew resistance in lettuce, or even “pleasant taste in melons.” As such, they have a chilling effect on crop improvement research by creating a tangled skein of restrictions that discourage or prevent breeders from working with varieties, traits and usages, locking them for 20 years mostly into the hands of huge multinational corporations. The broad comity of

cooperation among plant breeders that was common in Meader's day has all but disappeared, replaced by privatization, secrecy and extreme competition that has been shrinking the seed commons. As eminent Oregon State University plant breeder Jim Myers puts it, “ it is the collective sharing of material that improves the whole crop over time. If you're not exchanging germplasm, you're cutting your own throat.”

This year, in the interests of greater transparency, in keeping with agreements Fedco made with certain suppliers to gain license to sell the seed, and as desired by some growers, Fedco, not without internal controversy, began to identify those varieties in our catalog whose use is restricted by intellectual property agreements. These typically come in the form of contracts or bag tags that restrict the seed to a one-time use and prohibit propagation of future seed crops. At tomorrow's intellectual property intensive I will pass around some for you to see. The nature and breadth of these restrictions are not as yet entirely clear, but suppliers would likely not enforce them against home gardeners, homesteaders or small commercial farmers for fear of blowback. Still, thirty years ago no one would have anticipated Monsanto's aggressive enforcement of its bag tag provisions, and the seed world is rapidly changing from a commons to private commodities. If these sorts of restrictions are enforced, there is no possible stewardship with these seeds, and therefore you cannot own them, either in the slang meaning of the term or in its legal meaning.

The bounty of nature contrasts with the proprietary nature of humans, so it is challenging to consider what forms of relationships create lasting benefits and what ones restrict our possibilities for shared abundance. Seeds, so generously bestowed by the natural world in astounding multiples would seem to be a natural commons to be shared among all. Over countless generations across thousands of years, human farmers have co-evolved with plants for mutual benefit. Each generation stands upon the shoulders of past generations, improving our crops. Typically each new development, however much hyped, is only a small increment better than what came before. Tastes evolve across generations, too. Who heard of arugula when I was first starting in seed work? This makes the nature of improvement, itself, a somewhat slippery concept. Future generations could decide, as I now have, that supersweet corn tastes too much like candy. It strikes me therefore that designating seed varieties as private intellectual property is a form of arrogance that blithely ignores our debt to our forbears.

At this point I introduced Scott Chaskey, of Quail Hill Farm CSA, author, poet, farmer for 35 years who read a lyrical passage from his book Seedtime

Imagine, seed and crop improvement as a commons that benefits all and is shared by all, with some fair system of incentives and rewards, rather than exclusive ownership as “intellectual property” to those who improve and create varieties. As a practical matter, we will be more motivated to generate improvements if we have a true ownership stake in them, not merely as a steward, but in some sort of shared ownership or sovereignty. There is nothing inevitable about the current dominant models of privatization, an offshoot of Reaganism. Accepted these days, and even embraced by some, they might no longer be considered moral arrangements by future generations. In that sense, the skills being taught at this conference go beyond those of stewardship; they create the greater potential of taking over the means of our own production. And the collaborations they engender, make possible new forms of sharing, such as seed growers' co-ops, seed libraries, seed CSA's, breeding clubs and other creative responses yet to be invented, including new and original forms of ownership that do not depend on slang definitions.

OSSI, the Open Source Seed Initiative is one such response. Full disclosure, I am on OSSI's Board. Modeled on open source software, OSSI aims to enlarge the seed commons through its pledge.

Breeders who pledge varieties to OSSI, and seed companies who sell OSSI-pledged varieties and seed customers who buy them agree not to restrict their use *or the use of any of their derivatives*, a built-in viral feature that holds great promise to enlarge the protected seed commons. OSSI upholds the four seed freedoms:

- 1) The freedom to save or grow seed for replanting or for any other purpose.
- 2) The freedom to share, trade or sell seed to others.
- 3) The freedom to trial and study seed and to share or publish information about it
- 4) The freedom to select or adapt the seed, make crosses with it, or use it to breed new lines and varieties.

OSSI opposes intellectual property provisions that restrict those freedoms.

My work with OSSI focuses on two questions: 1) What can I, as a farmer do, to uphold the four seed freedoms?

•Three proposed mergers, already agreed upon by their respective corporations, threaten further seed industry consolidation. Bayer is buying out Monsanto in a \$66 billion deal. State-owned ChemChina is buying out Syngenta for \$43 billion. Dow and Dupont are merging to create a \$122 billion corporation. If these go through, the resulting three mega-corporations will control 62% of the global seed trade, Bayer-Monsanto alone 29%.

So 1) Encourage transparency. Ask your seed suppliers to identify which of their varieties come from these corporations. If they refuse, choose different suppliers. Ask them to offer more information about where their seeds come from. The more information, the more intelligently & ethically you can source.

•2) Terminate your seed addictions: If it is economically feasible for you, boycott these mega-corporations. Remember that Bayer and Syngenta are also the major manufacturers of neonicotinoids that have been implicated in massive bee die-offs.

•3) If it would constitute an economic hardship on your farm to give up these corporate genetics, farm for knowledge. Devote 3-10% of your plots to trial for potential replacements. You might find some eye-opening and flavor-enhancing gems. Each year explore 1 or 2 seed sources new to you.

•4) Whenever possible give your business to small regional seed companies rather than large multinationals. Support farmer-bred varieties. Buy them and there will be more. Try them and suggest any needed improvements to your supplier.

•5) Whenever possible choose open-pollinated varieties rather than proprietary hybrids.

•6) Encourage your seed suppliers to identify all their offerings that carry intellectual property restrictions that could limit use of their seeds.

•7) Avoid purchasing such IP-protected seeds whenever possible.

•8) Encourage your seed sources to become OSSI seed company partners.

•9) Trial OSSI-pledged varieties for suitability on your farm.

Here are some bigger challenges with commensurate rewards:

•Save your own seeds. The OSA survey indicated that a majority of vegetable farmers save some of their own seeds and that on average farmers fulfill 20% of their own seed needs. I say bravo! More! Put Fedco out of business!

•Select or breed your favored varieties for greater adaptation to your climatic conditions and farming needs. Growers such as Bryan O'Hara in Connecticut and Brett Grohsgal in Maryland have improved their varieties so much for disease resistance, winter hardiness, resilience and diverse textures that these have become integral to their farms' successes.

•Consider producing organic seed for commercial use. The OSA survey showed that at least 40% of farmers want training in this area and 20% or more are seriously interested in growing seed to sell. Yet only 10% have ever tried. Lack of training, economic opportunities and seed processing facilities are the biggest barriers identified. I learned from my own experience on the SARE-funded Restoring our Seed Project that land for sufficient isolations and time are also big constraints.

As for the 2nd question: How can we, at the same time we free the seed, provide adequate mechanisms to reward those who improve our crop varieties? Fedco identifies farmer-bred varieties in the catalog and pays voluntary royalties to independent breeders when one of our growers grows their varieties for us to sell. That's a good first step but we need more. I learned 17 years ago that things are never what they seem. I learned to remain open to new possibilities and new forms both in our individual and collective lives. No one had ever heard of CSA when I founded Fedco in 1978! Nor was there any such thing as a hybrid worker-consumer seed co-op in the States at that time. I hope some of you will birth new and liberating forms of social and ownership relationships for the seed.

Our movement began with the realization that the reductionist system of NPK chemical farming was starving our soils. As we enriched our understanding, we enriched our soils. As we examine the complex interrelationships of life in our soils, so must we consider the complex of social and political interactions in our society. Just as our soils were depleted and endangered, our society is now imperiled by the unchecked individualism of Ayn Rand and the unlimited pursuit of the profit motive that result in as barren an environment for societal growth as nozzlehead farming once did for our soils. As organic farmers we do not live in a vacuum. We cannot do it all ourselves. If we believe that our agriculture is healthier for our bodies, our soils and our planet, then we deserve societal support and we must cultivate it as diligently as we cultivate our fields.

I cannot ignore the coincidence that today exactly 412 miles south a very different individual delivered a very different message. When he campaigned on the slogan "Make America Great Again," I asked as many others did: Just when was America great? Was it great when its founders counted each African-American slave as three-fifths of a person in order to give the slaveholder states disproportionate representation? Was it great when it displaced Native American populations, stole their land, and consigned them to reservations? Was it great when it limited the vote to property-holding white males? I concluded that it was great when it recovered from its worst-ever economic depression, it was great when it fought and defeated fascism in World War II, it was great when it integrated its public schools and fully extended the vote to African-Americans, sadly now again jeopardized, and, yes, it was great when our pioneer generation of organic farmers refused to be marginalized and built a broad movement. Long live those farmers, indeed!

It is no coincidence that during the greatest period of economic prosperity in American history, roughly the same years as America was great, the marginal tax rate for the highest income bracket was 94% during the World War II, and remained 91% from 1946-1963, even during Dwight David Eisenhower's presidency. Until Ronald Reagan in 1981, the rate remained high at 70%. Now those tax rates didn't seem to discourage investment, economic growth, or halt a huge extended surge in the stock market! Nor is it a coincidence that the Great Depression followed the years from 1925-1931, when it bottomed out at 25%, and just before the Great Recession it was again very low at 35%. The lesson of the past 100 years is that lowering taxes for the 1% does not bring economic prosperity, instead it impoverishes the rest of us. As Justice Brandeis once said, "We must make our choice. We may have democracy, or we may have wealth concentrated in the hands of the few, but we can't have both."

NOFA-NY works closely with the National Organic Coalition which has made a series of proposals for expanding organic production in the United States. Of these my #1 priority is providing \$50 million in research funding for public cultivar and breed development including training the next generation of public plant and animal breeders, and providing protections to ensure farmers' rights to save those seeds and breeders' rights to share and improve those seeds and animal breeds. We have an estimated 12,000 organic farmers who use seed and without public support this program alone would cost more than \$4,000 per farmer. Add to that our urgent needs for more research on seed-borne diseases, training

for would-be organic seed growers, organic trials for greenhouse varieties, training in stock seed maintenance and improvement, fair compensation mechanisms for organic farmers economically damaged by transgenic contamination, subsidies and incentives to encourage farmers to integrate organic seed production into organic farm plans, support for harvesting, cleaning facilities and seed storage, addressing problems of seed market concentration, student loan forgiveness for young people to enter farming, and tax credits for land for beginning organic farmers, just my priorities among the many ideas that have been offered, and we have a lot of seed work to do and it is going to be expensive.

There are only 3 ways that it can be paid for. One is to bear all the costs ourselves as farmers. Whether passed through our certifiers, seed companies or whomever, in the end it is absorbed by farmers. At a time when farmers are struggling to make a living wage, and therefore struggling to pay their employees a living wage, they can ill-afford these added costs. Passing them on is not sustainable: farmers are already overworked and underpaid by our society.

A second way is through philanthropic support. What's not to like about enlightened philanthropy? However, depending on it not only is uncertain, but also reinforces the dominant societal paradigm that the wealth of the few rather than the needs of the many shall determine what is funded and what not.

The third way is through taxes. We need government to do more than protect the private property of the rich. Seeds are sexy but in order to have a really sexy seed system we have to make paying taxes sexy again. As FDR said during the 1936 election campaign in Worcester, MA, "Taxes are the dues we pay for the privileges of membership in an organized society," and then enumerated the services paid for by taxes that most of us take for granted: paved and lighted streets, town sewers and water supply, fire and police departments, public high schools and libraries, parks and playgrounds. And he might well have added, the national gene banks and the classical plant breeding that thrived at that time at our land grant universities. Lincoln said, "the legitimate object of government is to do for the people what needs to be done but *which they cannot do by individual effort.*" and FDR concluded, "Here is my principle: According to ability to pay shall taxes be levied. *That is the only American principle.*" There is a word for someone who thinks it's smart to evade taxes, and that word is "antisocial."

We may be entering a time when shared economic resources will be scarce. If we are truly going to honor the title of this conference: "Long Live the Farmer" then we must put the needs of our farmers first. So when Organic Seed Alliance's State of Organic Seed report regards organic farmers as only one of a long list of stakeholders including certifiers, the seed industry, food industry, policy advocates, researchers, etc. I give pause. All too often, farmers have been left with the short end of the stick. And so whenever a policy is proposed, or a one-dimensional bromide offered (example, stricter standards are always better)—only sometimes true—ask not how it will benefit seed companies or the "industry", ask how it will benefit farmers. Seed companies can take care of themselves if they use good business practices. And so I appeal to the OSA to put less spin on its survey results and listen more closely to what its farmers are saying. As regards seeds, they are speaking quite clearly. First, they have good intentions. Even absent greater enforcement of the seed rule by certifiers, they are using a higher and higher percentage of organic seeds because most believe in it and want to. But they are also telling us honestly what the barriers are to even greater use. Just as in the survey 5 years ago, though to a lesser degree, organic seed still has more quality problems than conventional seed. And these are a barrier to greater use. Even greater barriers are limitations of varietal choice, insufficient available quantities of some varieties, and yes, costs. Our overwhelming need is for more, better trained and more highly skilled organic seed growers. Stricter enforcement of the seed rule won't bring them. It will only raise prices to farmers still more by making them a more captive audience, and raise costs to certifiers to

gain the kind of seed expertise they will require. (It takes several of us at Fedco a lot of time just to keep up with the available varieties). Then, too farmers would risk losing such cultivars as Raven zucchini, Bright Lights chard and Sungold tomato because organic seed is not available for any of them. And don't talk to me of equivalence. I've seen enough variety trials to know that there is no such thing as equivalent varieties. Even subtle differences play out as significant in different soils, different microclimates and with different practices. And if you've ever trialed different strains of the same variety from different seed companies, you know how much variation there can be. As well as how much seed companies, themselves, vary in many features. Long live variation, long live choice! Organic farmers gave up a significant degree of seed sovereignty when they chose certification. Let's honor their remaining seed sovereignty at least until the diversity and quality of organic supply is as good as in conventional seed. Let's work patiently for the long haul and eschew the siren song of the quick fix, and let's put our resources where they will do the most good to uplift our farmers rather than burdening them and their customers with added costs. We have seen the enormous costs of insufficient education and excessive enforcement in our society's bloated courts and prison system. Let's not emulate our society in that, instead, let's prioritize. Put our precious dollars into more training, more education, more infrastructure rather than into expensive and problematic enforcement.

Though we enter a time of great uncertainty and likely instability, stand perhaps on untrodden ground and may be buffeted by high winds, let us rededicate ourselves to a long struggle. We must be strong, we must be smart. We must be able to recognize greed, cruelty, bigotry, idiocy and willful ignorance for what they are, and stand ready to resist, and if necessary, defy them. As for the real hope? No Obama, no Elizabeth Warren, not even Bernie (bless him!) can provide enough realistic hope. We must do that ourselves, my friends, we must find the audacity and the courage to go with it and the long long steadfastness to carry it through. If anyone knows how to bounce back from disappointments we farmers and gardeners, ever resilient, do. May your gardens and farms be enveloped in a glorious celebration of colors all across your horizons. May your seeds and ours be metaphors for a better time to come. May we color our work with social justice.

I sing to my plants. And I do so at the top of my lungs, with the forbearance of my good neighbors who sometimes claim to enjoy it. I sing a medley from popular songs to classical themes. I think the plants like it, as long as I am not dissonant. And now I would like to introduce poet, writer, musician and yoga teacher Megan Chaskey and Petra Page-Mann the awesome organizer of our seed conference, to lead us in song. **And they did.**