

# SeedBroadcast



agri-Culture  
Journal

Autumn 2014

# SeedBroadcast

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"The recovery of the people is tied to the recovery of food, since food itself is medicine; not only for the body, but for the soul, is the spiritual connection to history, ancestors and the land."

WINONA LADUKE IN RECOVERING THE SACRED



## 4<sup>th</sup> Edition SeedBroadcast Journal THE DEADLINE FOR SUBMISSIONS IS **FEBRUARY 2<sup>ND</sup> 2015**

Send submissions to [seedbroadcast@gmail.com](mailto:seedbroadcast@gmail.com)

We would like to thank all who generously contributed to our 3rd edition of the bi-annual SeedBroadcast agri-Culture Journal. We are building from the soil up and invite all who read this to consider contributing to the 4th edition that will be published in the Spring of 2015. This contribution could be a drawing, photograph, story, recipe, poem, or an essay, with relevance to the essence of seeds and seed saving practices. We are looking forward to hearing from you. Each of you holds a wisdom and it is this wisdom we hope to share.

Please include a short bio. Images should be at least 300 DPI 6" x 8." Send us your mailing address, as we will mail you a stack of printed copies to distribute in your own locale.

We will be on the road with the Mobile Seed Story Broadcasting Station, so look out for us. You can keep up with our travels and encounters with other seed lovers on our website [www.seedbroadcast.org](http://www.seedbroadcast.org) and follow our blog at [seedbroadcast.blogspot.com](http://seedbroadcast.blogspot.com)

We thank our fiscal sponsor LittleGlobe, the Kindle Project Fund of the Common Counsel Foundation, the McCune Charitable Foundation, Telluride Institute, our new SeedBroadcasting partners in Iowa and Cleveland and the many individuals for their continued support. Lacey Adams for graphic design, Marita Prandoni for copy editing, all of our local and national partners, and to our seeds that continue to inspire and give us hope. For a list of our partners go to: [www.SeedBroadcast.org/SeedBroadcast/SeedBroadcast\\_Roots.html](http://www.SeedBroadcast.org/SeedBroadcast/SeedBroadcast_Roots.html)

## SEED=FOOD=LIFE

**SEEDBROADCAST** holds the belief that it is a human right to be able save our seeds and share their potential, to be able to grow our own food and share this abundance, and to cultivate grassroots wisdom and share in its creativity. We seek to reveal the culture that has been lost in agriculture and believe that seeds are witnesses to our past. They have their own story to tell, and it is up to us to listen.

**SEEDBROADCAST** encourages communities to keep local food and culture alive and vibrant through working together in creative and inspiring ways. We spend time with people on their farms, in their gardens, at seed exchanges, and at community gatherings to dig deeper into the often unheard stories of local agriculture. Our traditional farmers, avid gardeners, and local organic food growers are inspired by the seeds they sow and save. They take notice of what grows and what does not, they learn from the seasonal shifts, experiment with when to plant the first pea, and when to harvest the seed for next year. This vital knowledge base of plant and human connection is what we seek to cultivate, disperse, and nurture.

At the 1st annual Seed Exchange in Anton Chico, held in the Spring of 2013, a local farmer whose family has been growing concha corn for many generations, stood with his hand clasped around a corn kernel and spoke loudly and clearly, "If we loose our seeds, we will lose our culture."

Our ancient seeds and their diverse stories are in danger of disappearing. They are our lifeline to our past, present and future. Without these ancient, creative and resilient seeds, we would lose our familial connection to the earth and its biota. So we invite you to hold a seed and listen to what stories it has to tell you. Plant a seed and share its wealth. Then share this story with your neighbor and become an inspiration for others to join this radical seed sovereignty movement.

The conversations and seed stories that have been shared with us this past year have informed and shaped our intentions for this coming SeedBroadcasting season, and we are thrilled to be adding some new creative initiatives.

We are in conversation with many new emerging community partners such as the Santa Fe Art Institute and their Food Security residency and educational program, Dancing Earth, who are creating a performance based in traditional native seed stories and many other vibrant community groups. We will be partnering with the sustainability program at Institute for American Indian Arts in the formation of a seed story library and planning our 2015 regional tour.

## MESSAGE FROM SEEDBROADCAST

Technology and seeds have long been intertwined in a complex field of relations. Throughout history plants have cycled from seed to seed and humans have interjected their desire to be a part of this process—selecting, storing, and growing out these plants year after year for millennia. This encoded technology of relations was fed with an intention towards care and resiliency to nurture not only people, but also a polyculture community of the familiar. Relatively recently, this intention has shifted towards engineering botanical processes to build mono-agricultural empires, create populations of dependent passivity, and dominate the more than human.

Since 2011, SeedBroadcast has been examining these territories through performative engagements as artists, farmers, gardeners, teachers and collective operatives, while rethinking the term agri-Culture. Project concepts and methodologies are founded in a space of the grassroots, where culture, creativity, collaboration, and agency are coupled with open source technology, seeds, agro-ecology, rhizomatic networks, and most importantly, the stories that bring these all together.

Over the last year SeedBroadcast has implemented several new projects while continuing to mobilize the Mobile Seed Story Broadcasting Station (MSSBS). New projects include SWAP, Seed Story Workshops, and the agri-Culture Journal.

The Mobile Seed Story Broadcasting Station spent another year in partnership with regional seed libraries, farmers, gardeners, schools, and at public events recording and broadcasting seed stories, sharing resources, and pollinating open-source seed networks.

You can read more about these events at the Mobile Seed Story Broadcasting Station blog: [seedbroadcast.blogspot.com](http://seedbroadcast.blogspot.com)

The 2014 regional MSSBS tour took us vertically into the high and dry Rocky Mountains with events at MountainFilm Telluride and many visits to high-altitude food producers and seed savers in Mancos, Dolores, Ridgeway and Westcliffe, Colorado. The mantra in this beautiful and yet harsh environment is to develop adaptability through encouraging creative resiliency in plant life, seed saving, and through finding passive energy systems for extending the growing season and protecting crop failure from the weathering mood of climate change.



SMUGGLING TACTICS FOR SHARING TOMATO SEEDS INTERNATIONALLY: STASH THEM INSIDE A VELLUM TABLET FOR ARCHITECTS AND SHIP VIA POSTAL SERVICE.



MOBILE SEED STORY BROADCASTING STATION EN ROUTE VIA THE ROCKY MOUNTAIN TOUR



SANTA FE PUBLIC SCHOOLS SPECIAL PLANTING DAY AT NEW MEXICO LAND OFFICE WHERE STUDENTS ARE GATHERING SEEDS IN THE MOBILE SEED STORY BROADCASTING STATION



What's happening to our seeds?

To listen to Penn Parmenter of the Westcliffe Seed Library go to: [soundcloud.com/seedbroadcast/penn-parmenter-shares-a-seed-story-about-pops-tomato](http://soundcloud.com/seedbroadcast/penn-parmenter-shares-a-seed-story-about-pops-tomato)

Finding ways to build collaborative partnerships beyond our region has led us to a new experimental platform called SWAP. The kick-off for this project occurred in the heart of corn country, in Iowa. Partnering with an organization called Exuberant Politics and directed by a local farmer and artist, SWAP shared the technological SeedBroadcast structure as an experimental "grow-kit" to be used locally to interrogate agri-Culture and local issues. Local community members used it to collect seed stories, bring awareness to issues of GMO, pesticide drift, and seed saving, and help inspire local open-source networks.

To listen to Laura Krouse talk about open pollinate corn in Iowa go to: [soundcloud.com/seedbroadcast/laura-krouse-talks-about-open](http://soundcloud.com/seedbroadcast/laura-krouse-talks-about-open)

This year we have been expanding our processes to deepen the impact and implementation of our radical seed work. One of the ways has been to offer seed story workshops to encourage people not only to develop the practice of saving seeds but also to save the cultural heritage of that seed. As we have heard many times over "If we lose our seeds we lose our culture." And as we are witnessing, in many parts of our world, if we lose connection to our culture, we lose our land-based, un-tampered-with seeds.

The stories held in each seed and the stories that each of these seeds share with us are as important to save and share as the seeds themselves. They are intertwined and inseparable.

We have held onsite seed story workshops as part of Seed School at Native Seeds/SEARCH in Tucson and at various New Mexican schools. We also have been seeding seed story practices through on line conversations and exchanges with the Hummingbird Project in Cleveland, Ohio. We are hoping to expand our online action workshop presence in the future and are in the planning stages for a series of workshops at the Institute for American Indian Arts in Santa Fe, New Mexico and at Santa Fe Art Institute as part of the Food Justice artist residency year.

(cont. next page)



To listen to Elizabeth Pantoha, intern at Native Seeds/SEARCH go to: [soundcloud.com/seedbroadcast/elizabeth-pantoha-shares-her-seed-story-of-listening-and-thanks](http://soundcloud.com/seedbroadcast/elizabeth-pantoha-shares-her-seed-story-of-listening-and-thanks)

To listen to Camillo's seed story go to: [soundcloud.com/seedbroadcast/camillo-shares-his-story-of-sunflower-seeds-and-the-wind](http://soundcloud.com/seedbroadcast/camillo-shares-his-story-of-sunflower-seeds-and-the-wind)

One of SeedBroadcast's various dispersal, broadcasting and collaborative tactics is our biannual SeedBroadcast agri-Culture Journal. The intention of this journal is to activate a forum of exchange and intensify the discourse about the necessity for a critical shift in mainstream food growing and seed manipulation practices.

For the spring 2014 edition we received many intriguing contributions from an international call out to our curious seed story network. Among these contributions were a poem and drawing called "Radish Beets" from Whitney Richardson of Pueblo Semilla in Chicago, an article about the "Seed Diaries Project, The Art of Storytelling" from Danielle Johnson and Belle Starr in Tucson, information about the film "Open Sesame: The Story of Seeds" by Sean Kaminsky of New York, a traditional New Mexican recipe for cooking quelites from 87 year old Delvina "Vina" Armijo of Las Vegas, even the words of a contemporary seed hymn, and many offerings of local wisdom from our New Mexican community.

This year's spring edition was published in March, just in time for the beginning of our busiest time of the year—the time of seed exchanges, the time of sowing and honoring our seeds for the year and so the appropriate time to spread collective seed wisdom. We printed over 4,000 copies that are distributed nationally and internationally to all of our contributors, (the furthest was to New Zealand), bundles are also placed in various local sites, such as farmers markets, local libraries, added to CSA shares and available at the Mobile Seed Story Broadcasting Station. There is a web version and agri-Culture Journal archive on our web site:

[seedbroadcast.org/SeedBroadcast/SeedBroadcast\\_agriCulture\\_Journal.html](http://seedbroadcast.org/SeedBroadcast/SeedBroadcast_agriCulture_Journal.html)

The deadline for submissions for spring edition 2015 is February 2<sup>nd</sup> 2015. We encourage you to think about sending us a proposal or contribution and if you have any questions contact us at: [seedbroadcast@gmail.com](mailto:seedbroadcast@gmail.com)

You can listen to more Seed Stories at: [soundcloud.com/seedbroadcast](http://soundcloud.com/seedbroadcast)

Stay updated on our events and projects at: [www.seedbroadcast.org](http://www.seedbroadcast.org)  
[seedbroadcast.blogspot.com](http://seedbroadcast.blogspot.com)  
[www.facebook.com/seedshare](http://www.facebook.com/seedshare)

"Seeds are the memory of life. They have their own stories and those stories have to be told every year so they do not get forgotten."  
—Isaura Andaluz.

To hear more from Isaura go to: [soundcloud.com/seedbroadcast/isaura-andaluz](http://soundcloud.com/seedbroadcast/isaura-andaluz)

SWAP GROW KIT, POPS UP AND SEED SWAPS AROUND IOWA

DRAWING AND LISTENING TO SEED STORIES INSIDE THE MOBILE SEED STORY BROADCASTING STATION

## SLOW FOOD, HERBS AND MEDICINE

CONNECTING HERB TO THE FOOD MOVEMENT.

ADRIAN WHITE

Guido Mase, in his book *The Wild Medicine Solution*, touches on this subject much better than I can and will do. The importance of eating local, organic, sustainable and ethical foods is becoming an urgent issue with time. As it grows, the burden of this urgency is placed more and more heavily on the backs of organic farmers, and those of us who garden for ourselves to ensure we are eating healthy food, for the most part.

It can be argued, then, that as we fight these days for healthy food, we fight for our rights to our medicine—the medicine we grow in our backyard, and in the wild, all around us. In fact, fighting for organic food and ethical growing methods is in itself defending our rights to our own personal medicines. "Organic food can be medicine?" you might ask. Well, yes, it can, and is. The connection between herbalism and the food movement comes together here, as it is not such a hard one to make: the herbal medicines we take need to be grown, eaten and protected, too.

Many of us grow vegetables and herbs together, without a second thought—tomatoes with basil, sage with brassicas. We eat vegetables like spinach, asparagus, and carrots to be healthy, but we eat lots of herbs, too, even though most herbs added to food these days are just for taste. A lot of us forget that culinary herbs were originally added to food because of their medicinal effects on the body—taste was certainly a plus, but back in our more ancient days when we didn't add preservatives to food, we used herbs. Herbs also helped to mask certain tastes, to digest, and to assimilate as much nutrition from our foods as possible. Rosemary (*Rosemarinus officinalis*) is commonly a meat spice not just because it pairs up with savory on the palate, but its antioxidant effects are so strong that they actually help preserve meat. Mints, like Peppermint or Spearmint (*Mentha* spp.), were added to foods to aid with digestion post-meals, thus the "after dinner" mint given to you at certain restaurants. The candied Fennel seeds you see at Indian or Mediterranean restaurants? Same thing: Fennel (*Foeniculum vulgare*) aids with the assimilation of difficult-to-digest foods. Herbs like Basil (*Ocimum* spp.) and Cinnamon (*Cinnamomum* spp.) have been used as appetite stimulants by herbalists for hundreds of years, added to foods to make them more edible when food was generally scarce.

As you can see, herbalism already has its influence in our cuisine. Herbalism is not just about tinctures, teas and supplements. Herbalism, really, is about food—the most effective herbalists will tell you that. An herb can be "prescribed" but

if a person is not eating right to better an ailment, no progress will be made. This can be confusing to both herbalists, their clients and everyone else for that matter. Nowadays we have a dichotomy of herbs and food: we associate herbs with medicine and "spices," and food with—well, food.

Truly, food, herbs and medicine run fluidly together. When you pour over the details, examining our foods and herbs and exactly what they do, the defining lines begin to blur. Let's just say that if we were building a wall that represented our most powerful natural medicines, organic food would be the bricks, and herbs would be the mortar. As many of you reading this take for granted, eating organic fruits, vegetables, and even organic/ethical eggs and meats are healthier for you. Spinach, for example, is good to eat because it is high in vitamins and minerals. Carrots are full of Vitamin A, Cucumbers are high in Vitamin E, strawberries are high in Vitamin C, and so forth. But organic foods being good for you goes way beyond that.

Brassicaceae or Cruciferae plants, such as radishes, cabbages, turnips and the like, are in the limelight of study for their health-boosting effects, and demonstrating wonderful results. Broccoli and Kale have received the most hype, being high in calcium, vitamins, minerals, and protective antioxidants. Some studies and experience claim that eating them daily works as excellent cancer or other long-term illness recovery. Black Spanish radishes, kale's distant cousin, has been used traditionally as supplementary food in fighting diseases of the bowel and thyroid. Daikon radishes are being favored currently for detoxifying purposes, a favorite addition to juicer blends. Beets are on similar footing and are being eaten for liver benefits. Sounds like medicine, doesn't it?

Then there are herbs, your rosemary, sage and thyme. Were you aware that these three essential herbs can be combined to make an upper respiratory remedy that any herbalist would recommend to you? Or that Basil is not just a tasty addition to pesto, but it has been a trusted traditional heart medicine in Africa? Or that it has been useful against menopausal cramps in traditional Hispanic medicine? Oregano is a great Italian spice, but also serves as one of the first go-to herbs for fungal infection and menopause care. Cinnamon regulates blood sugar, on top of pairing well with Pumpkin. Not many realize that ground Cayenne pepper can help ease the symptoms of a heart attack, in a pinch! (Of course, if you or a loved one are experiencing a heart attack—please, make the hospital your first choice, not the Cayenne; although the pepper

can be used to ease symptoms in the meantime). The list doesn't end there. Some of the best remedies accessible for the most basic ailments you can find right there in your kitchen cabinet or spice rack—perhaps in your refrigerator—and to think that some people lack access to health-care altogether! But, best of all, you can grow a lot of it right in your backyard, along with the fruits and vegetables you look up to for keeping you healthy. Those you can't grow, or have difficulty attaining, you can find at the local Farmers Market, supporting your farmer. Then when it comes to a bit more acute ailments, you can reach out to your local or community herbalist, or join an herbalist gathering and learn the trade yourself.

We can also extend this to the less culinary-sounding herbs that are so good for us and are catching hold in the popular conscious: such as Echinacea, Black Cohosh, St. John's Wort and Chamomile. Some popular medicinal herbs, such as Burdock root, are also eaten very commonly as vegetables. We can extend this to plants that benefit us, but which are endangered in the wild and seek protection; they may not fly off the table at a Farmers Market, but if we all learn to grow them and use them in our own homes like we use Onions or Zucchini, maybe they will catch on. Finally—although this is a step into a different frontier—we can learn to make room in our gardens for actually useful plants we normally consider weeds: Dandelion, Chickweed, Docks, Violets and the like. A lot of folks may not realize that the Stinging Nettle they voraciously yank out of their gardens each year may be more nutritious than any of the vegetables they grow! While some of these herbs are medicinal, they also make for nutritious dishes.

Realizing that medicine is truly in our own hands, it is empowering to know we can grow it and eat it ourselves; or, if you are able, to have the option to support your local herbalist or organic farmer. But the "quick-fix" American perspective on what a medicine truly is differs from this idea, unfortunately. The mainstream takes many measures that deny us access to natural food and medicine by spreading misinformation and making it harder for people to buy, grow or be educated about natural foods and medicines themselves. On top of that, companies like Monsanto manipulate our food's already perfect genetics to serve their needs, making plants less and less healthy, but more high-profit. The very source of seed for our favored foods is tampered with in a threatening way. On the other side of this fight, both organic farmers and herbalists jump through ridiculous hoops to make their product or produce available. Having been both a farmer and



# SeedBroadcast IOWA



an herbalist, I have had to take similar, overly-cautious approaches to each profession. It is so difficult to "certify" such foods, herbs and products for a market, while they must also be highly priced for a profit to be made. At that, the market is such that it drives up the prices of organic produce, herbal tinctures and other natural medicines, making them inaccessible to the poor. Poor and wealthy alike—we both have the right to good health!

So while many of us are embroiled in the Local or Slow Food movements, we have a different angle on this fight: Slow Medicine, or Food as Medicine. We have to open our eyes and see that there has been no other obvious point in history where the right to our medicines hasn't been more threatened. Most think that medicines are pills we pop that make things go away as fast as possible—not plants grown by a CSA or in our backyard. Ironically, pills and pharmaceuticals are unnatural, plagued with ridiculous-sounding adverse side effects (e.g. may increase chances of death). Doesn't sound like medicine to most of us, I'm sure. These medicines, when you think about it hard enough, are made to heal illnesses created by our lack of nutrition from foods at the start. The evidence of that is pretty much everywhere you look. Most of us don't know or value where our food comes from, what quality it is, and who may be screwed over in the process of getting it. Most of us, sadly, do not see food as medicine. It's scary to see a tradition of eating wholesome plants, which could fix the root of the problem, become more and more endangered.

Herbs, food and medicine are one and the same. The more we see this connection, and spread that idea, I do think the more motivated we may become to protect it. When you grow your own food, your own herbs, support your farmer, or look to an herbalist, you are fighting for your rights to medicine. Herbs are our food, our food is our herbs, and both are rightfully ours. It's a path we should come to know that will keep us healthy, and we can all fight to protect it.

## MEDICINAL PLANTS STEPHANY HOFFELT

The cultivation and propagation of medicinal plants is viewed by some as a measure of historical preservation and not afforded the urgency which is often directed to the development of local food systems. This frequently confuses me as our current dependence on corporate healthcare is as much an aspect of neocolonialism as our dependence on corporate food distribution. The fact that you don't know how to care for illnesses and injuries with plant-based remedies is a direct result of a corporate driven witchhunt that began in the middle Ages and continues today.

From the perspective of an activist, the practice of growing medicinal plants and proper utilization is an act of resistance to neocolonialism. Only in recreating subsistence will we create communities which fully support our ability to engage in this work. Of course, food systems are a huge part of that, but the importance of health cannot be overlooked as a means of supporting social change. Self-care is a vital and often overlooked component of preventing burnout, as well. Many people involved in social change neglect their own wellness. Often because they have an aversion to the unequal power relationships inherent in modern healthcare. Additionally, the alternative

## HERBS, VEGETABLES, AND THE HEALING THEY DO

- **ASPARAGUS:** Disease of bowels (Unani medicine)
- **ALOE:** stabilizes blood sugar, laxative
- **ANISE:** relieves flatulence and hiccups
- **ARTICHOKE:** digestive stimulant, helps liver function
- **BASIL:** mildly sedative digestive tonic
- **BEETS:** helps cleanse/detoxify liver
- **BROCCOLI:** anti-oxidant, high in vitamins/minerals
- **BURDOCK:** liver cleanser, helps with acne
- **CARAWAY:** digestive tonic, helped nursing mothers
- **CARDAMOM:** Safely lowers blood pressure over time
- **CAYENNE:** Stimulates the heart, increases blood flow
- **CELERY:** helps with gout, helps detoxify liver
- **CINNAMON:** gentle fever medicine for children
- **CLOVES:** Anti-fungal and anti-histamine
- **COLLARD GREENS:** Anticancer/Antioxidant
- **CUCUMBERS:** stabilizes blood sugars (diabetes)
- **DILL:** Good digestive aid for kids
- **EGGPLANT:** lowers cholesterol
- **FENNEL:** Calming cough/sore throat remedy
- **FENUGREEK:** helps with gout and coughs
- **GARLIC:** very antimicrobial, coughs/colds/flu/s
- **GINGER:** stimulates digestion, eases nausea
- **HORSERADISH:** antihistamine, helps with asthma
- **LEGUMES:** high in vitamins, prevent chronic disease
- **KALE:** very nutritious, anti-cancer
- **MINT:** Steadies nerves, promotes digestion
- **MUSTARD:** ground seeds for cough relief
- **ONIONS:** coughs, colds, flus
- **OREGANO/MARJORAM:** menopause support, anti-fungal
- **PARSLEY:** Allergies and menstruation
- **RADISHES:** some breeds help with thyroid function
- **RHUBARB:** effective laxative
- **ROSEMARY:** improves memory, antioxidant
- **SAGE:** calming fever reducer and cough medicine
- **SQUASH:** regulates blood sugars (summer or winter)
- **TARRAGON:** good for your teeth
- **THYME:** anti-nausea, and cough remedy

ADRIAN WHITE AND STEPHANY HOFFELT SENT US THESE ESSAYS FROM IOWA WHERE A SEEDBROADCAST SWAP HUB WAS ACTIVATED IN THE SPRING OF 2014.

STEPHANY HOFFELT IS A COMMUNITY HERBALIST IN IOWA CITY, IOWA AND STUDIES HERBALISM IN THE HAS PROGRAM AT GODDARD COLLEGE IN PLAINFIELD, VERMONT.

healthcare industry often brings to mind the problem "green washing" of consumerism and is distasteful to those whose philosophies lean towards being opposed to conspicuous consumption.

It should not be this way. As a practicing healer, I have found many of my colleagues work in underserved community and approach the practice of herbalism as their own unique form of activism. Community herbalists may practice in diverse populations and recognize that our work with clients is palliative at best until societal change addresses issues of social and environmental justice.

One group which supports this work across the country is United Plant Savers (UPS). Their mission is to protect native medicinal plants of the United States, Canada and their native habitat while ensuring an abundant renewable supply of medicinal plants for generations to come." While far from being a radical group, United Plant Savers mission includes the establishment of a network of botanical sanctuaries across the country. Requirements for membership include growing a variety of at-risk medicinal herbs and freely opening up your sanctuary to the public for educational purposes. Gaia's Peace Garden, here in Iowa City, was

the first sanctuary to be established in southeast Iowa. This is particularly exciting because it is not as common for an urban garden to be granted sanctuary status. UPS has internships available in the cultivation of medicinal plants and offers grants for community replanting projects and should be utilized as a resource by farmers wanting to get into this field.

In writing this, I attempt to bridge the gap between the herbalism and the farming communities because I see a growing need to create discourse between these two groups. Community herbalists often lack access to teaching gardens where we are able to interface with individuals with the express purpose of putting health back in the hands of the people and people back into nature. We also create a need for locally sourced herbs. Farmers are usually looking for new and unique markets. I see the connection between these two groups creating mutually beneficial relationships.



## SEED BLOSSOMS JESILYN PETERSON

In the seed rests the entire life of a plant; in the seed life comes full circle and sleeps, waiting to be born again.

The seed and the blossom represent two peaks of life. On one end, life has contracted completely into itself. It is compact, still, patient, waiting. On the other end, life has poured forth, holding nothing back, opening up and undoing itself. It dies in a beautiful and dramatic flourish, so that something new can be born again.

JESILYN PETERSON IS AN ARTIST AND FARMER. SHE HAS WORKED ON SEVERAL FARMS IN NEW MEXICO AND ABROAD. SHE LOVES TO WORK WITH CHILDREN IN THE GARDEN AND HOPES TO DO MORE IN THE FIELD OF GARDEN-BASED LEARNING IN THE FUTURE. CURRENTLY, SHE IS CREATING ART AND JEWELRY FROM SEEDS. SEE MORE OF HER WORK AT [www.seedblossomsart.com](http://www.seedblossomsart.com)



## SEED HAIKU HANIA STOCKER

A haiku  
Living breathing seeds  
Firmly planted in the ground  
Grow down to grow up

A couplet  
Hard dried stones and pits,  
hide within them living bits.

Free musings  
"Life is..."  
Life is adamant, it strives and breathes and drinks  
in the world.

Even the "life-less" is part of the living.  
The whole of things as one is one.

We are made of star bits and so are the rocks.  
An endless cycle, the depth of which is far greater  
than we can fathom.

So little changes in a human lifetime, yet everything  
is of great consequence to us.

We, too, will be folded back into the way of things.  
Information survives in the form of rocks and seeds.  
The lifeless and the living are both here.

HANIA STOCKER IS THE GARDEN MANAGER AT THE SANTA FE CHILDREN'S MUSEUM. SEED BROADCAST MET HANIA IN THE GARDENS AT THE CHILDREN'S MUSEUM. TO HEAR HANIA READ HIS POEMS GO TO: [soundcloud.com/seedbroadcast/hania-shares-his-poetry-and-story-inspired-by-a-seed](http://soundcloud.com/seedbroadcast/hania-shares-his-poetry-and-story-inspired-by-a-seed)



## SORTING PSYCHE'S SEEDS ERIN O'NEILL

The seeds were saved in September. The edible parts had been harvested and the flowers left to dry on their stalks. When they dried up into seed heads, they were cut off at the stem and put into brown paper sacks and hung to dry. Between saucing and canning, garlic planting and garden harvesting, cooking, changing diapers and all the other things that squeeze themselves into all my everyday, the seeds hung forgotten for a long, long time, gathering dust and fading from my mind.

Months later, on a sunny, quiet January day, I spotted them blowing in the wintry wind. I was making my way from the shed to the porch in my slippers, arms loaded with root cellar bounty, eager to get back inside when they caught my eye. Transported, I felt the long lull of time that had passed between that moment and summer's collecting. It seemed like both an eternity and just yesterday that I had hung them and then been busied by a million other things. In the quiet short hours of that cold day, there was finally enough space around me to take all those sacks down, dust them off, and begin the soulful task of sorting seed.

As is often true when we follow the natural rhythms of our own internal guidance, January turns out to be the perfect month for sorting seed. By June I am too busy with the upward pull of the planets, too frantic to get the baby plants in the ground. I don't have the time, attention or patience for sorting, but January, it was just right. By then the dark days had engulfed me so utterly that I had forgotten summer altogether but I could easily indulge in a colorful daydream of a garden to come. Without considering, we all begin sorting with the return of the new year's imperceptible light. Metaphorically, or actually, we take stock, going through, preserving the viable, releasing the no longer useful.

I remember that day vividly. While my cheeks soaked up the greenhouse sun, my hands rubbed and winnowed, separating the seed from the chaff. It all felt so right, so deep, so ancient. As I picked and sifted, I thought of all the human hands that have meticulously and consciously saved seed for well over ten thousand years. Without that attention and care we would not be eating any of the food we do today. All of our crops were domesticated, stewarded and cherished by our ancestors. Seeds were sewn into

the hems of skirts and carried across seas. They were stashed and stored like gold. In many cultures, seeds were never sold, only given.

As the task of selecting took over my hands, my mind wandered into a timeless space. Wondering, what was the work the seed was doing on me? I felt focused, attentive, patient, entranced by a meditation on life itself. I was working the seed and the seed was working me. I am not the first to have been worked on in this way. Every farmer, gardener and grower of any sort has been through this—nature forming us into our true selves by repetition, perseverance, sunshine and fresh air. The work and rhythm of forces beyond our comprehension creates us, through every row hoed and seed planted.

These mysteries are lost on our busy minds. Cleaning and sorting seed can be done quickly and pragmatically, but the symbolism is still hard at work on our souls. From the beginning of time we have been learning to discern as we awaken into ourselves and we are in good company. It may have begun with Psyche, the Greek goddess who was born from a dew drop meeting the earth, pure water meeting solid ground. She

was a mortal woman who became a goddess in her quest for true love, making her journey from the subconscious to the conscious. Having been subjected to marry Death, in the darkness of their love affair, she fell deeply for him. Though happy in the dark with her lover, she was coaxed by her sisters to shed light on him, which was forbidden, and in doing so lost him. In her attempt to prove her love to her husband and win him back, her mother-in-law, Aphrodite, gave her several seemingly impossible tasks, the first of which was to sort a huge pile of mixed seeds by the next morning.

Though her self doubt made the task appear impossible, she set to sifting through internal conflict and competing loyalties to sort out her own priorities. Once she released herself to greater forces, the ants, messengers of collective consciousness, came to help her, bringing the clarity of intuition. Of course with their help, the seeds were easily sorted, each in distinct piles of separate grains by morning.

Ultimately, Psyche succeeds in all her tasks, though only through cultivating perseverance, clarity and faith every step of the way. She marries her true love Cupid, and is made a goddess

by the goddess of love. However, the most exciting part of this tale to me is that Psyche's soul is transformed through trusting herself. She is metamorphosed by her heroic quest while holding steadfast to her feminine nature.

There are many layers and lessons in this story, but for me it is a reminder that this internal and external sorting, selecting and saving has been the work of women across cultures and time. This tiny repetitive work, much like knitting, weaving, beading and sewing has been the work of women; done with children in their laps, others to talk to, and often alone, to process the busyness of our minds and ease into the pace of our hearts. These calming, repetitive practices ground us in our bodies and get us out of our heads ... as any woman knows, a much needed reprieve. All the while these acts give us constant practice at discernment, working diligently until we simply let something greater take over our hands. Rapunzel did her spinning, Cinderella did her scrubbing, Psyche did her sorting. Most princesses have to do it sooner or later, and so must we.

The decisions were made. The dust, sticks and pebbles were removed by the winnowing of my

patient hands and given back to the garden from where they came. The most viable seed was placed neatly into jars, labeled, and tucked away for warmer days. The intentions were set, the course charted. I decided in January what I would plant in June. All I have to do now is take those jars down and follow through, placing every tender seed into the dark earth like a dew drop, revisiting Psyche's journey into consciousness with each seed I sow.

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ERIN O' NEILL LIVES WITH HER FAMILY IN NAMBE, NEW MEXICO. SHE HAS FOCUSED HER GROWING CAREER ON EDUCATIONAL GARDENS; TENDING THE EARTH AND IT'S CHILDREN AT THE SANTA FE CHILDREN'S MUSEUM, MONTE DEL SOL CHARTER SCHOOL AND NOW AT THE SANTA FE COMMUNITY COLLEGE. SHE ALSO WORKS AS A MENTOR FOR EARTH CARE'S SCHOOL GARDEN TEACHERS IN SANTA FE'S PUBLIC SCHOOL SYSTEM. HER LOVE OF GARDENING IS HER MOST CHERISHED GIFT FROM THE EARTH AND SHE ALWAYS DELIGHTS IN SHARING IT.

## I HAVE JUST INHERITED A GARDEN ELIZABETH SHORES

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ELIZABETH IS A RESEARCHER AND INTERMEDIA ARTIST CURRENTLY BASED IN ALBUQUERQUE, NEW MEXICO. SHE RECEIVED HER BFA AT THE UNIVERSITY OF IOWA AND IS CURRENTLY PURSUING HER MFA AT THE UNIVERSITY OF NEW MEXICO. HER PRACTICE FOCUSES ON THE INTERRELATIONSHIPS BETWEEN LAND USE IN THE AMERICAN SOUTHWEST AND ON THE PLANET MARS.

I am renting a house in the Huning Highlands district of Albuquerque, New Mexico. The former tenants planted seeds in three raised beds and then left a month later when I moved in. Every day I watered and weeded the sandy black soil, waiting to see what would emerge. Now, months later, I bring kale, random lettuces, several kinds of tomatoes, unidentified hot peppers, basil and cilantro indoors from my backyard garden. I have had to pull out some of these plants, as it is the end of the season and they have produced as much as they can. I scattered new seeds in their places: snow peas, lettuces, chard, beets...

There are several leafy things poking out from beneath the mulch now. I am unsure as to whether they are weeds or vegetables. I am waiting to find out.

## A CENTURY OF SICILIANS ZACK HRIBAR

I walk upon a hidden world that is very much alive. To plant the seed from a century of Sicilians. The sacred ground sends a vibration up through my body and back into the earth in thanks.

The earthened nest filled with tradition and love begins the process with garlic painted pink and purple by the creator himself.

The freshly spaded soil stirs up many lives. Once a tired soil, now begins to warm in the autumn light.

With clay on my hands and a cloud of smoke in the air, I'm hypnotized by the white, powdered tools and clothes from the bones of a thousand souls.

With the evergreen as my sundial, the time is right. Spots of light shines through the trees to warm my spirit as I plant the cloves from Poppop's own sweat and blood.

The Tallest Man on Earth startles the blue crested wings sharing their voice of territory. The thought of another year of harvest was the medicine I needed to heal my aching body. Now buried with the spirit of hundreds,

the tradition created by a century of Sicilians continues....

The earth now wrapped in a blanket of leaves and garlic skins is my gift to you.

For that, I thank you.

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ZACK HRIBAR GREW UP IN FAIRPORT HARBOR, OHIO WHERE HE WAS FRIENDS WITH THE PANZARELLAS. HE HAS A BACHELORS DEGREE IN WILDLIFE MANAGEMENT AND WORKED IN THE FIELD A FEW YEARS UNTIL HE FOUND HIS ROAD TURNING INTO EDUCATION. SO NOW, HE IS FINISHING UP HIS TEACHING CERTIFICATE AT NOTRE DAME COLLEGE AND STUDENT TEACHING AT WOODBURY ELEMENTARY IN SHAKER HEIGHTS. HE LEARNS MORE FROM BIRDS AND YOUNG CHILDREN THAN FROM MOST ADULTS.



**"ART AND ENVIRONMENT"**  
 IN A SUITCASE EXHIBITION  
 CATHY FRANZI

Through my ceramic work I am exploring the impact of humans on Australian flora and the environment. For millennia, plants have been a source of imagery in the ceramic medium, providing a backdrop of nature within the domestic realm. However, we now live in a time when wild undisturbed nature is coming to an end. Like those before me I am fascinated by the decorative possibilities of form and texture that plants offer, but it is not an innocent appreciation. The tension I feel is between expressing my feeling of wonder and at the same time of loss. It is this boundary that I tread.

The artwork is titled "The Ephemeral *Dampiera fusca*: Tinderry Range." I made the work in response to a trip with botanists from the Seed Bank at the Australian National Botanic Gardens to the Tinderry Range in the Monaro, NSW. We were searching for the rare and endangered plant, *Dampiera fusca* or *Kydra Dampiera*, which is only found in a few locations on the eastern edge of the Southern Tablelands. "Ephemeral" is a botanical term for plants that are short-lived when the conditions are favourable. In this case a bushfire had severely burnt the area a couple of years before, triggering the seed to germinate in large numbers. To find the plant we scrambled over granite tors and through *Acacia* and *Tea-tree* regrowth up into the highest peaks of the Tinderry Range. Everywhere were the bleached dead branches and charred trunks of the earlier forest. Hidden in secluded patches between the boulders was the *Dampiera fusca*. Its threats include goats, rabbits, lack of fire and the reduction of rainfall due to climate change.

The work is made in porcelain clay and is coated with engobe, then carved and glazed. In the making process I use the potters' wheel to throw and pull soft porcelain into a wall. It has no base so that when the wall has firmed a little I can cut it on an angle with a wire. While lifting I intentionally distort it, placing it onto a flat slab of porcelain and then proceed to join the two together. I made three to nest inside each other, thinking about the hills and contours and the journey through the landscape to find the plant.

I allow the forms to firm slowly and then coat the surface with engobe, a mixture of clay and glaze materials. When that has firmed evenly, I carve through the colored surface into the porcelain underneath referring to the photos and drawings I made during the fieldtrip. The work was fired in a kiln to 1000°C and then glazed on the inside, color applied to the flower and fired again to 1220°C.

The carving technique is called sgraffito, which means to carve through a surface color to reveal the clay body color underneath. The sgraffito approach I have developed is based on linoblock printmaking. I consider the negative and positive space, light and shadow, texture and pattern. The textural quality of the mark making provides a contrast with the smooth matt surface of the engobe.

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CATHY FRANZI USES HER BACKGROUND IN BOTANY TO INFORM HER CERAMIC VISUAL ARTWORK. SHE IS INTERESTED IN THE WAY AUSTRALIAN FLORA HAS BEEN USED IN CERAMIC DECORATION SINCE BRITISH SETTLEMENT AND HOW IT CAN PROVIDE CLUES TO THE ATTITUDE TO AND UNDERSTANDING OF THE ENVIRONMENT. CATHY IS A PHD CANDIDATE IN THE AUSTRALIAN NATIONAL UNIVERSITY SCHOOL OF ART

**"THE EPHEMERAL DAMPIERA FUSCA - TINDERRY RANGE"**

2014.  
 PORCELAIN, ENGOBE, SGRAFFITO,  
 WHEEL-THROWN.  
 PHOTO: ANDREW SIKORSKI: ART ATELIER  
 PHOTOGRAPHY

A SHORT DOCUMENTARY WAS MADE BY RICHARD SNASHALL ABOUT THE FIELDTRIP TO THE TINDERRY RANGE WITH THE BOTANISTS FROM THE AUSTRALIAN NATIONAL BOTANIC GARDENS.

[www.abc.net.au/news/2013-03-15/going-on-a-seed-hunt/4576734](http://www.abc.net.au/news/2013-03-15/going-on-a-seed-hunt/4576734)



**SEED SONGS**  
 DOMINIQUE POZO

Seed songs  
 generating chords of coherence,  
 for days to come

Offering containment of a deep earth knowing  
 passed forward from a familiar, yet mystifying  
 dreamtime

Seed sojourner, an honored guest in the palm of  
 my hand,  
 bringer of hope,

Always.....

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DOMINIQUE POZO IS CO-FOUNDER OF GAIA GARDENS, A ONE-ACRE CERTIFIED ORGANIC FARM LOCATED IN THE HEART OF SANTA FE. SHE RECENTLY GRADUATED FROM SOUTHWESTERN COLLEGE WITH AN MA IN ART THERAPY/ COUNSELING. DOMINIQUE CURRENTLY WORKS AS A PRIMARY THERAPIST AT SOLUTIONS TREATMENT CENTER, COMBINING ELEMENTS OF THE EXPRESSIVE ART THERAPIES WITH ECO-PSYCHOLOGY, TO ASSIST INDIVIDUALS IN THEIR RECOVERY. DOMINIQUE IS PASSIONATE ABOUT COLLABORATING TO BRING INTO BEING, SANCTUARIES IN WHICH A CLOSENESS WITH THE EARTH IS POSSIBLE AND CELEBRATED.

TO HEAR DOMINIQUE'S SEED STORY GO TO:  
[soundcloud.com/seedbroadcast/dominique-pozzi-shares-her](https://soundcloud.com/seedbroadcast/dominique-pozzi-shares-her)



## SAVE THE HEIRLOOMS! DANIELLE JOHNSON

Growing and saving the seeds of heirloom food crops is, in my opinion, one of the most important and beautiful acts we can engage in during our time on planet earth. Heirlooms are open-pollinated, non-hybrid crops that can be traced back a number of generations, centuries or even millennia. By nurturing these plants, we cultivate a deeper relationship with our environment and ourselves. In this short article I explore the salience of heirloom crops with examples drawn from my research with seed savers in Ireland and the US.

In 2000, the UN Food and Agriculture Organisation estimated that between the years 1900 and 2000, 75% of food crop genetic diversity was lost, and it is currently thought that between 93-96% of all food crop seeds have become extinct. In the past, humans consumed hundreds of species, and within this, thousands of different varieties of plants. The majority of us now rely on just four main crops—corn, wheat, rice and soy—for over three quarters of our nutritional intake. A high percentage of the varieties of these commonly consumed species are laboratory-created hybrids that have had their limited genetic diversity manipulated to produce predictable outcomes such as high yields.

Such an unprecedented loss of biodiversity and proliferation of crop monoculture is a tragedy for all those who call the water, air, soil, forests, fields, towns and cities of this planet home. Putting aside for a moment the widespread habitat destruction and pollution associated with the global food and agricultural system, let's consider the impact this regime has on food security. Although many of us live in a world of well stocked grocery stores, perhaps this is more of an illusion than we would like to believe. The consequence of narrowing down the crop gene pool to four main species, made up of varieties with limited genetic diversity themselves, is that our food supply is very vulnerable to collapse should it be affected by disease, pests or extreme weather events such as droughts and floods. However, if humans chose to consume from a wider selection of species and varieties, the potential for collapse is lessened, because while some species may be affected by adverse conditions, others will most likely survive.

The odds are even better if humans invest in growing heirlooms specific to their region, since these plants have evolved over many years from interactions with other crops and the changing climate of a specific locality. Heirlooms contain a wide genetic profile and

so are able to present sophisticated and elegant responses to challenges such as disease and climatic variation. While in Arizona, I heard about a variety of Hopi blue corn which was able to produce ears adapted to the amount of rainfall in any given year. During times when rainfall was scarce it grew tiny ears yet when the monsoon was abundant, it set huge, plump ears. Heirlooms, such as this corn, allow us to enjoy a more certain future for our food supply.

Food security is, however, more than just ensuring we have access to enough food. That food needs to be nutritionally beneficial. We can again look to heirloom crops to provide us with this part of the puzzle. Heirlooms are far higher in trace elements, vitamins and amino acids than many of the products of our current agricultural system. Research conducted in the US has even concluded that heirlooms can be used medicinally to help prevent chronic health conditions. For example, the Tohono O'odham of the Sonoran Desert in Arizona, who have one of the highest rates of diabetes in the US, have noticed that as a result of consuming a diet rich in the heirloom crops their ancestors ate, such as brown tepary beans, Ha:l squash and 60 Day corn, the condition can be controlled and even eliminated.

In an era where phrases such as 'nature deficit disorder' are banded about, and increasing amounts of the human population spend the majority of their day wired into digital realities, growing heirloom crops in our gardens and communities presents us with the opportunity to reconnect our bodies to our environments. In 2008 I conducted research with the Irish Seed Savers Association, who maintain many heirloom crops adapted to the Irish climate. One of the foremost motivations staff gave for promoting these species was the opportunity to slow down and rekindle a relationality with the natural world. Promoting heirlooms was not just about conserving genetic diversity; it involved conserving the specific bodily knowledge that is inextricably bound up with each of these plants. Knowledge that depended on sensory awareness in the garden—the taste, smell or touch associated with a particular variety of plant or cultivation method—which, once acknowledged and practised, enabled the gardener to relate to and become a part of the landscape.

The growing and saving of heirloom seeds is also of fundamental importance due to the socio-cultural connections these crops embody. Because food crops have developed alongside

human societies, an immensely diverse body of knowledge and associations is held within these seeds. Crops and their seeds can be memorials to people, places or historical events, and are a crucial element in the cosmologies and ontologies of many indigenous cultures worldwide. Take, for example, the Navajo, or Diné people of the Southwestern United States. Heirloom varieties of corn, such as Navajo Robin's Egg, are of enormous importance to this group. Corn has nourished the peoples of the Southwest for millennia, and features heavily in the Navajo creation story and ritual cycle. It is said that the Diné were created from an ear of corn and the skin of Changing Woman, their most important deity, and corn pollen, often carried in a pouch around the neck by older generations, is used to this day in healing ceremonies and for blessings.

Finally, through engaging with the multitude of colours, shapes, sizes, smells, cultural knowledge and associations that are embodied in heirloom crops, we validate and celebrate the amazing diversity of the natural and cultural worlds that surround us. When biodiversity activist Vandana Shiva writes about the "monoculture of the mind," she describes the world as a place where diversity is crushed, due to the homogenising effects of globalisation on the human psyche. Building relationships with heirloom crops allows us to counteract this phenomena, and work towards a more abundant, accepting, positive, thoughtful and connected world.

Hopefully this brief discussion of a few of the reasons to grow and save the seeds of heirlooms will inspire and re-invigorate gardeners to continue working with these special crops. Happy growing!

DANIELLE IS AN ASPIRING SEED GUARDIAN WITH A BACKGROUND IN SOCIO-CULTURAL ANTHROPOLOGY. DURING 2013, SHE INTERNED WITH NATIVE SEEDS/SEARCH IN ARIZONA. DANIELLE SPENT TIME WORKING ON THE CONSERVATION FARM AND A COLLABORATIVE PROJECT ART CALLED SEED DIARIES, WHICH TOLD THE STORIES OF SOME OF THE SEEDS IN THE ORGANISATION'S 2000 STRONG SEED COLLECTION. SHE IS NOW LIVING IN NEW ZEALAND, WHERE SHE TEACHES SEED SAVING WORKSHOPS TO MEMBERS OF THE PUBLIC.

TO HEAR DANIELLE'S SEEDS STORY GO TO: [soundcloud.com/seedbroadcast/danielle-johnson-talks-about](https://soundcloud.com/seedbroadcast/danielle-johnson-talks-about)

## SQUASH PALACE REIGNS NATALIE ELIZABETH

Glory be the humble squash, so generous in its production and nutritional bounty. Its body so resilient, its arms so sprawling; eager to climb, fervent to clutch.

In Winnipeg, Manitoba, Canada stands my home: a community house affectionately known as Squash Palace. It is inhabited by farmers, artists, herbalists, activists/academics and provocateurs. Some of us moved into this abode last fall, signing a short lease as the house was slated for demolition. The great house squashing was imminent in a neighbourhood of low income people who reflect the world of diversity and the migrational patterns that crisscross the heart of the continent. As landlords do what ours plan to do—stack housing, raise rents and push lower income people north, the gentrification spreads. No sense of community can be built just as no seeds can establish a strong root system when they're transplanted repeatedly into exhausted soil.

Such was the case with the soil at Squash Palace. The backyard on the surface appeared to be a blank canvas: bare and grass covered, edging upon a back lane that seems to propagate city grime: cast away baby clothes, solvent containers, plastic bags, broken toys, threatening voices. The winter had concealed so much. The filthy reality of an urban throwaway culture is absolved by thick blankets of snow but this ablation only makes the slow reveal of the spring thaw more brutal. The filth on the surface was only phase one. When I first dug down into the soil this spring I hit the garbage line: an entire strata of soil saturated with the reformulations of fossil fuels (plastics of all sorts).

So began my remediation efforts. I started a compost pile: mounding organic waste from our bustling kitchen, chicken shit from the covert urban chicken operation down the street, leaves rescued from alleys, and bones from hide tanning projects.

In the ground I planted healers and soilbusters: comfrey, irises, tobacco, datura, daylilies and a tuber from one of my traditional food mentors, and sister sunroot (known to others as jerusalem artichoke) to break through compacted earth and make way for others.

In the centre of the yard I employed lasagna gardening tactics layering cardboard, manure and new soil on top. Into this I transplanted rescued vegetables from various places, some gifted, some scavenged. I also planted my most precious seeds: a melon variety from a friend who had collected them in Arizona, leafy greens gifted from a stranger at a music festival where I was selling my wares and an alien looking plant called spiky mountain gourd that I smuggled home in a bag of tea from the field of a friend in the middle hills of Nepal.

Quickly, however, I realised that our neighbourhood had primary residents, some alternative and vested interests in these mounds of soil: a mangy gang of cats that dug up my garden and pooped where they pleased, destroying any confidence I had in the eatability of my garden produce.

Then something unexpected happened. It seemed like it was overnight that squash erupted from the ground. A flood of winding vines swept across the earth, over the fence and spilled out into our alleyway. They could not be contained. The cats had to find some other place to tread lest their paws be pierced by squash spikes.

I suppose I should explain. The other reason why our home took on this persona is because of the preponderance of squash inside it. In fall we stockpiled it, filling our pantry shelves with all shapes and sizes: great oblong oranges, guatemalan blues, dappled and multicoloured turks turbans, buttercups, kabocha, knobby ones and silly little pattypanns. For us, squash represents the perfect storage food. It can simply be left on a shelf with air flow to keep it from getting squishy. It means we can afford to eat local even in the winter and it suits all of our "granola" diets (low sugar, gluten free, vegan, etc. etc.). The squash even knows when its coming time to get out of storage and bury their seeds in the ground. When we cracked their shells in February, those powerful little seeds had busted open and were shooting out leaves.

Gete okosomin squash was also growing in my yard. This squash was gifted to me by a friend who had come up to visit from White Earth

Reservation in Minnesota. It had been discovered in an archaeological dig and was given to Winona LaDuke to grow and to share. There is a seed saving project at Canadian Mennonite University where we propagate and save these seeds among other native varieties. Sometimes I spend early mornings there, observing the flowers, collecting several males from different plants to pollinate each female, tape and label, and to record in charts. We take care to preserve and proliferate the genetic heritage of these heirlooms.

In my garden there are no charts. There is no premeditation. Under the waves of greenery the squash are growing...a mishmash of genes and history all crosspollinating. Squash palace is still standing and our roots are still spreading. When the inevitable happens and we get pushed north we will take our seeds with us. Hopefully we will leave fertile soil behind.

RESOURCES:  
[anishinaabeseedlibrary.com](http://anishinaabeseedlibrary.com)

NATALIE LIVES AND PLAYS ON THE PRAIRIES OF MANITOBA. SHE IS A PROUD WORKER-OWNER OF AN EDIBLE LANDSCAPING COMPANY, A MICROBIAL EXPLORER, TRADITIONAL FOOD SKILLS SHARER, PRINTMAKER, WILDERNESS THERAPY FACILITATOR AND OCCASIONALLY A UNIVERSITY STUDENT. SHE SEEKS SIGHTS OVERLOOKED, SCENTS THAT CAN CATAPULT IMAGINATION AND THE THREADS OF MEMORY THAT WEAVE THE PRESENT INTO THE PAST.





## THE SEED

LAURA GONZALES-MEREDITH

LAURA GONZALES-MEREDITH GREW UP IN LAS VEGAS, NM WITH HER MOTHER, GRANDPARENTS AND EXTENDED FAMILY. SHE IS A HISTORY INSTRUCTOR AT LUNA COMMUNITY COLLEGE IN LAS VEGAS, AND LIVES IN SANTA FE WITH HER HUSBAND JASON AND THEIR FUR-BABY, DAISY. GROWING UP IN A TRADITIONAL HISPANIC RANCHING FAMILY, LAURA HAS A DEEP APPRECIATION FOR LAND AND HERITAGE. SHE IS CURRENTLY WORKING TO COMPLETE HER MASTER'S THESIS, AND WILL THEN FOCUS ON THE HISTORY OF THE SAN AUGUSTINE VALLEY, WHERE HER FAMILY'S LAND IS, AS HER NEXT PROJECT.

TO HEAR LAURA'S SEED STORY GO TO:  
[soundcloud.com/seedbroadcast/laura-gonzales-talks-about-growing-up-with-her-grandparents-in-northern-new-mexico](https://soundcloud.com/seedbroadcast/laura-gonzales-talks-about-growing-up-with-her-grandparents-in-northern-new-mexico)

Growing up on the outskirts of the little town of Las Vegas, NM with my mother and grandparents I learned the importance of family, tradition and culture. My grandfather is a rancher and farmer and has dedicated his life to upholding one of America's most enduring traditions. He turns seventy-eight on September 4th, and still spends his days nurturing his livestock and working the land in the same village where he was born, where our ancestors settled generations ago, the Village of San Augustine. As a child I spent summers there listening to my grandfather's stories about the old days. It was his passion and conviction for what he does and his connection to his roots what instilled in me my love for history and my desire to pass on this valuable information to younger generations as a teacher. I hope that I can inspire them to research their own stories and preserve them as my grandfather has done for me.

During a workshop with Chrissie we were asked to choose a seed from a jar, hold it, and write down anything that came to mind. I chose a beautifully patterned red and white Heirloom Bean seed, although I did not know that at the time. Instantly it reminded me of one of my favorite spots in the San Augustine Valley, the red sands. Hills of dark red earth meet the Gallinas River, separated by banks of red flagstone beneath the shadows of giant Cottonwood trees. It's a piece of heaven on earth. I understand why this land is so important to my grandfather. It's because it becomes a part of you. It's a piece of our heritage and our story. We would often sit and talk beneath the trees, eating a delicious lunch my grandmother had prepared with tree stumps as chairs, surrounded by old ruins and the peaceful feeling of nature. I feel blessed and grateful for that time.

It was amazing how this little seed could invoke such powerful memories and emotions. Holding the seed in my hand, I was also reminded of my grandfather's hands. Weathered, worn and sun-kissed. They are testament to a life of hard work. Through these hands he has provided for his family. Like the earth he works, they too are reddish-brown. Now, when I visit we sit and talk at the kitchen table, my pale cream hand in his, like the seed. Though I didn't make the connection at the time, the heirloom seed in my hand was symbolic and reminiscent of the heirlooms my grandfather has shared with me; the land, our story, his time.



## ROWEN WHITE

Laying here with my belly on the Earth,

the sacred seeds inside myself pulsating

with each in-breath,

I contemplate germination;

giving birth to myself once more.

Deeply listening,

the birds are singing the seeds awake.

Deeply listening,

the seeds are telling us to send our roots deep to survive the dry times.

Just as a seed knows when to sprout

and how to evolve from seed to shoot to seed again,

it is all here inside of us.

When we activate our deep infinite knowing,

then we germinate our pure creative potential.

Trust. Germinate. Sprout. Initiate. Generate.

Originate. Swell. Create.

Reciprocate. Multiply. Rebirth.

SUMMER 2014

ROWEN WHITE IS A SEED KEEPER FROM THE MOHAWK COMMUNITY OF AKWESASNE AND A PASSIONATE ACTIVIST FOR SEED SOVEREIGNTY. SHE IS THE DIRECTOR AND FOUNDER OF THE SIERRA SEEDS, AN INNOVATIVE ORGANIC SEED COOPERATIVE FOCUSING ON LOCAL SEED PRODUCTION AND EDUCATION, BASED IN NEVADA CITY, CA. SHE TEACHES CREATIVE SEED TRAINING IMMERSIONS AROUND THE COUNTRY WITHIN TRIBAL AND SMALL FARMING COMMUNITIES.

TO HEAR ROWEN'S SEEDS STORY GO TO:  
[soundcloud.com/seedbroadcast/rowen-white-talks-about-the-devine-teacher-that-is-held-in-each-seed](https://soundcloud.com/seedbroadcast/rowen-white-talks-about-the-devine-teacher-that-is-held-in-each-seed)



## FEED THE FUTURE GRETCHEN GROENKE

The food system goes against all our Ancestor's Wisdom. Generations of Knowledge gone unheeded lie dormant in the marrow of our bones. In the arteries of our umbilical cords still lives the Wisdom so desperately needed.

the system became fatally flawed as countries clawed their way to the top vowing Freedom and Justice in the glorious flag Grace and Purity in a sealed bag Miracles in microwave containers fried by-products superior to bruised Roots Women on assembly lines more virtuous than Women in kitchens.

money became more meaningful than meals so people left the fields and flocked to the cities and as a country we forgot the vast prosperity in Simplicity.

chemical concoctions, post-war toxins, industrial wastes needed a place, needed a use, needed a home so onto the fields they were thrown-higher yields-bigger fields-packages meals-more corn-more wheat-more soy-more business-more trade-more control-

Food is essential Nourishment fundamental no ownership of either we live on our knees and give power to the Beast who's softly humming, slowly strumming the strings of our hearts asking us to sing louder stand prouder in honor of a victorious history and rally round a destiny of superiority for Some. but not All.

Confusing contradictions: as a child the robot pledge I was fed vowed Freedom and Justice for All. not just Some. as a Child, I believed what I was taught but reality didn't quite fit in that pot and so begins this path I've got this poem I've got this Hope I've got.

the Flaw is fatal when food falls in the realm of system and not in the realm of kitchen.

When Wonder Bread, Cool Aid and Blue Drink are considered fit for consumption and some operate on this unspoken assumption that this food this mine, and it doesn't matter how it arrived or from where and honestly I just don't really care...

...a pandemically fatal flaw...

when we cannot shake the hand of the Child, Woman, or Man that picked the fruit and know if they got their's too.

There's too much abundance for that. Too much humanity for that, Listen to the insanity of that:

we cannot know if the hand that picked the fruit when home hungry, just fed, or actually nourished.

to those folks who come with courage -A la Gente Valiente- and risk everything they had to sneak through a Desert Land to pick the fruits and the vegetables that sit in warehouses on countertops and in restaurants and go bad, -A La Gente Valiente- I'd like to shake your hands and 'scuze me as my hands are shaking because my heart is breaking as i welcome you to this Broken Promise Land.

a fatal Flaw, or maybe a few or just far too many to construe Fatal Flaws have come into view and the People are growing who know the food system's fucked.

and everywhere I've been I've met these people, scattered about, like the Goddess sat before her Earthly dish and shook the chili flakes all over to spice it up a bit, She spilled the seeds on the soil and Cast her spell, made her wish, said her prayer that those little flakes of Fire would never tire always toil see the truth in the soil bring the water to a boil

bring the fire to roar that the madness would continue no more.

Friends of Fire, (if you consider yourself a friend of Fire) we cultivate the marrow in our bones we hold an umbilical cord that continues to pulse and in a future unknown we press on surfacing any wrongs in our hearts treating any wounds reluctant to heal recreating the safety to heal because everyone has their Story, their Horror, their Glory, and everyone's a piece of the puzzle because everyone's life is connected to another.

as We press on the banners wave for Life Liberty and Food Justice for All.

no general, no sergeant, no captain to tell us how it'll happen. no government, no priest, no agency to determine our prosperity...

...so what to do when the whole world's depending on you??

Grow Good Food Teach The Youth

Grow Good Food Teach The Youth the sugar coating is killing us tell 'em the truth- to listen to the marrow in their bones to nourish their very own homes and that we cannot do it alone. If one goes hungry it's all our job to listen and share, not the job of USDA commodities to fill fridges, fill futures, fill families.

Grow Good Food Teach The Youth

From one porch tomato to a field of potatoes Know Your Food Teach The Youth that Food comes from the Earth that Freedom is found in the Dirt that Freedom is found in your Fist hold tightly to this handle carefully, do not drop it. Justice is in your palm. walk gentle, walk calm Freedom is fragile, Justice is too and they thrive inside of you in the marrow of your bones In the palms of your hands in your heart, in your eyes, in your ears, listen and share share and listen as the dry Winds whisper Grow Good Food Teach The Youth Know your food live in Truth You are the Answer. You are the Hope. keep your fists closed until the Soil's ready Plant your Dreams grow your Strength Everything, Everything, Everything is at stake.

GRETCHEN IS PASSIONATE ABOUT ALL THINGS SEED AND FOOD RELATED. SHE LIVES NEAR THE FOUR CORNERS, WHERE MAJESTIC MOUNTAINS GIVE WAY TO SPACIOUS DESERTS. SPOKEN WORD IS AN AVENUE FOR HER TO STOKE THE CONSCIOUSNESS IN DIVERSE AUDIENCES AND SHARE HER DREAMS AND PRAYERS WITH THE WORLD.

TO HEAR GRETCHEN'S SEED STORY GO TO: [soundcloud.com/seedbroadcast/gretchen-groenke-shares-a-story-why-open-pollinated-seeds-need-to-be-in-the-hands-of-the-people](https://soundcloud.com/seedbroadcast/gretchen-groenke-shares-a-story-why-open-pollinated-seeds-need-to-be-in-the-hands-of-the-people)



## ON PERMACULTURE PETER CALLEN

Permaculture makes a lot of assumptions, some necessary, but it pays to recognize them. One of them is that permaculture assumes we're going to be around to enjoy it. Another is that these principles are going to work, and if they don't, well then what? Besides assumptions there are things not well discussed, like failure. Natural systems don't go unscathed, they fail all the time, but what we see, what we want to see when we pick or buy a book on permaculture, is success. Who could sell a book on failure? But failure is what natural systems, and hence permaculture, are most well adapted for. It's that old question—"what is it that you want?" and when that proves to be something you're not going to get, well then what is it that you've got? The principles of permaculture as applied to agriculture or gardening is what most people think of, but as we know, these principles can be applied to all the multi-facets of life: community building, education, financial structure, manufacturing, yes really!

The three ethics that permaculture is based on, care for Soil, care for People, and living within our Limits to find Abundance, or a more poetic view:

Good Soil leads to Our Happiness and shows the Limits of our Abundance

The principles we must get right as a foundation of implementing this ethos are the ones that implore us to Observe what we have, See the Patterns of nature, and to be able to See the Changes (the ones we want as well as don't want) coming. But all of the principles are important, so much so that to fail to understand and act upon one of them is enough to sink the whole ship. This makes the whole endeavor rather challenging for any human. We're like the DNA in the middle of a cell, the decision maker/shaper in the center of our home, our yard, our acre, our farm, our life. And just as DNA is affected by the environment, so too that we are shaped and "turned on" or "turned off" by our gardens and yards.

The perma-principles are great, but they must be acted upon, just as dancing may be stimulating to watch, but to do it, you've got to move your feet. People are attracted to the idea of

permaculture - "hey, free food for life, and I don't have to do anything!" That's the subtext under the picture of successful harvests in no-fill gardens. Like the cover of a seed catalogue, it all looks easy, but the reality of gardening or farming as we know can be daunting. There can be catastrophic failures, whole plants gone missing to pocket gophers, hail damage, wilt, no rain, too much rain, and after all that comes the harvesting and storing—more work. Will it ever be eaten (by people)? Will it ever be enjoyed as intended?

From the beginning, I think there has to be an understanding of who needs to benefit first and foremost from this perma-endeavor. For myself, my first concern was for the birds and insects (bees) and other wildlife who live here, after all, I can just go to the store and buy food. But after building the soil here and starting to realize some harvests for myself and other people, I realized that not going to the store to buy food was also helping birds, bees and other wildlife. So for me, it was first "benefit others," then maybe I will benefit too, if I do a good job. A lot of the perma-principles resonate strongly with me, like slow and steady wins the day—things I do on a daily basis add up to much more than I could ever do on a big push of project days. There is a time to do something: to plant, to pick, to preserve, and when that time comes, its time to act, because that time will pass, usually very soon, and then it will be time to do something else. So acting on the principles is something that tends to get left out. Its assumed that people will act when they know what to do, but that has proven to not be true. You can be trained into discipline, told what to do constantly (nagged), paid to do it, or driven by guilt, fear, or love. Getting paid is one of the principles, but that doesn't come around every day, at least in the "cash crop" meaning of the term.

Getting back to failure, it's happening all the time in nature. If every seed sprouted and grew, every insect hatched and lived out its life, every snake, every frog, then how would one live? Interesting that for one to live, so many must die, must be eaten; 99% recycled so that 1% may live. Every month, with every turn of the weather, no rain, some rain, heavy rain, consequences flow forth and interact with ever other factor limiting and accelerating life. This year, lots of hawk

moths, last year, lots of whip-tail lizards, some acorns, but not a lot, will have effects all along the line into the following year, which was predicated on the previous year. So what we consider a failure or loss is no more than the every day balance of feeding and growing, living and dying. Of course permaculture is permaculture for us, not for some race of insects, but the big lesson here is that for us to survive, we must focus not so much on ourselves, but on the dance going on around us—and ask if we may cut in and perform a few of our own steps, and gracefully sit down when the music is over.

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PETER CALLEN IS AN AVID SEED SAVER/ BROADCASTER, AND AFTER 40+ YEARS OF GARDENING, PETER IS RAPIDLY APPROACHING "BEGINNER" STATUS. THIS YEAR HE'S HELPING WITH A HALF DOZEN OR SO OTHER GARDENS, TO NO DETRIMENT OF HIS OWN. "THE MORE SERIOUS I BECOME ABOUT MY OWN GARDEN, THE BETTER OTHER PEOPLE'S LOOK TO ME."

[pathwayswc.wordpress.com/](https://pathwayswc.wordpress.com/)

HADLEY PERKINS



## PLANT A SEED

Plant a seed

plant a soul in a body of land

let the body feel the rush of water

the freshness of expression

the acceptance of the Earth

let the soil understand through your anger,

your sadness, your love and your hope.

let it soak

let it grow

let it sway side to side with the  
ever-changing winds,

with the questioning breeze

let it understand

and not know

let it be and become

a being

a part

a place

a land

let it be and not know

let it wonder and believe

let it teach as it is

a seed

a cell

a beginning

## CATCH

There is no camera deep enough to capture the  
depth of beauty held within the pure nature of  
this place

The innocence of its untouched bush raped by  
our ignorance and greed

I wonder what it has to say before it grows bitter  
of our existence

I believe she still loves us unconditionally

Cradling us in her arms

Blindly loving us while we poke and prod her

Complacent of the home she has created for us

Maybe one day we will recognise her  
innocence,

her wisdom and begin to move at a similar pace

Where we become the parents of nature

Acknowledging the chaos with love and an  
embrace

Seeing sharp edges as soft places

And cold as warm

Letting it all in with a different perception

Transforming untruth by seeing the nature of  
things and falling in love

For here the nature is clear, pure and innocent.

It still has the ability to forgive.

Hadley Perkins is a poet, an artist and an adventurer with a rural background and a strong philosophy stemming from Gandhi. She lives from process to process on the way to my true potential, my great contribution. Hadley lives in Australia and heard about SeedBroadcast through our Cleveland partners Hummingbird Project and The Cleveland Seed Bank

[www.hummingbirdproject.org](http://www.hummingbirdproject.org)

[www.clevelandseedbank.org](http://www.clevelandseedbank.org)

"Though I do not believe that a plant will spring up  
where no seed has been, I have great faith in a seed.  
Convince me that you have a seed there, and I am  
prepared to expect wonders.

—Henry David Thoreau

## FAITH IN A SEED

A GMO CONUNDRUM - ORGANIC MUTAGENIC/CELL FUSION  
HYBRID SEEDS ARE GENETICALLY ENGINEERED.

BY DONALD SUTHERLAND

It is spring planting time for farms, and if hybrid seeds are being planted chances are some might be genetically engineered and technically genetically modified organisms (GMOs) according to a growing movement in the organic agricultural field.

High Mowing Organic Seeds, a premier organic seed company based in Wolcott, Vermont bans the sale of hybrid seeds produced by a commonly used industry method, called cell fusion, to manipulate plant DNA because the seeds are viewed as genetically modified organisms (GMOs).

[www.highmowingseeds.com](http://www.highmowingseeds.com)

"We do not support or sell cisgenic (within the same plant family) cms cell fusion seeds as we believe the process is the same as GMO", says Tom Furber, general manager of High Mowing Organic Seeds.

Other organic seed companies who have similarly adopted a policy of banning cell fusion created F1 hybrid seeds, because company owners view the process as genetic engineering are challenging the current USDA National Organic Program, which permits cisgenic cell fusion hybrid seed in organic production.

"We've been committed to non-GMO and organic since our inception and always will be. We need to educate the market regardless of a USDA classification," said Furber.

In organic farming transgenic (between different biological families) genetic engineering (GE) is banned, but cisgenic (within the same species family) GE used in the cell fusion process is permitted under USDA organic regulations.

By international organic certification standards cell fusion is classified as genetic engineering, but these standards established by The International Federation of Organic Agricultural Movements (IFOAM) are being ignored by the United States, Europe and other countries.

In April 2014 the Organic Consumers Association (OCA) representing over 850,000 members including several thousand businesses in the natural foods and organic marketplace, launched a consumer campaign to ban cell fusion mutagenesis in the USDA NOP organic production standards.

[salsa3.salsalabs.com/o/50865/p/dia/action3/common/public/?action\\_KEY=13727&track=FB&tag=FB](http://salsa3.salsalabs.com/o/50865/p/dia/action3/common/public/?action_KEY=13727&track=FB&tag=FB)  
[www.organicconsumers.org/aboutus.cfm](http://www.organicconsumers.org/aboutus.cfm)

"Like genetic engineering, mutagenesis can cause dramatic shifts in genetically determined traits, producing unknown toxins or allergens. Wheat Belly author Dr. William Davis blames mutagenesis, which is used to produce modern wheat—including organically grown wheat—for increases in wheat allergies and intolerances," states the Organic Consumers Association.

Cisgenic cell fusion is a biotechnical process of mutagenesis where the nucleus is removed from a plant cell and replaced by a nucleus from a different plant within the same botanical family. Chemicals and radiation are used in the process to create a hybrid plant with mixed genetics containing the mitochondrial and chloroplast DNA from one cell and the nuclear DNA from a different one.

Cell fusion is also called protoplast or somatic fusion and can involve a mutant gene with the purpose of creating cytoplasmic male sterility (CMS), which allows classified F1 hybrids to avoid inbreeding. It also prevents the seed from recreating the variety because it results in sterile or no pollen.

While natural CMS plant lines do occur, it is rare, so cell fusion is used to transfer a single wild mutant CMS gene on a mass scale from one species to another cisgenically as in a radish to cabbage or sunflower to chicory.

"Cell-fusion is a controversial topic and IFOAM would like to ban it from organics completely, as they consider it a form of GM. But many of us in the organic community know that that would seriously compromise the ability of organic farmers to grow commercial crops of several brassicas," said John Navazio, Senior Scientist with Organic Seed Alliance and Washington State University Extension Specialist in Organic Seed.

"Several of the large production research seed companies that produce organic seed are not talking when asked which of their hybrids are produced using cell fusion mediated CMS. By the way there is also "naturally occurring CMS" which we have used in hybrid carrots, onions, and beets for many years and SHOULD NOT be included in this debate," said Navazio.

Not all F1 hybrids are developed using CMS GE cell fusion.

In the world of seed breeding there are open-pollinated, hybrid, heirloom, transgenic genetically modified organisms (GMOs), and cisgenic genetically engineered (GE) mutagenic seeds.

Open-Pollinated (OP) varieties, grown in isolation from cross-pollinating with different same species, are designed to produce seed offspring very similar to the original parent population. OP seeds will grow "true-to-type" generation after generation.

Heirloom seeds have been open-pollinated, produced and handed down by seed savers for at least 60 years.

Hybrids in general are the first generation of offspring plants created by a cross of two genetically different parent varieties, usually from the same species. Seeds from the second generation will not grow "true-to-type" so the buyer has to return for each planting of that crop.

Naturally occurring hybridization in the wild involves the crossing of compatible varieties, and since the beginning of agriculture, plant breeders have experimented with this process to control the outcome.

A modern natural hybridization method of controlled crossing to create F1 seed was devised by Charles Darwin and Gregor Mendel in the mid-19th century and is used by plant breeders to grow two parent lines in the field each year, designate the male and female parents, carry out pollination under controlled conditions — such as hand-pollination under row cover — and then harvest seed from the females.

High Mowing Organic Seeds uses a natural method with no laboratory steps called self-incompatibility (SI).

Overall, plant breeders prefer F1 hybrid seed because it's faster and easier than breeding new open-pollinated seeds, and they can cull the bad traits from the parents while stacking their good traits (ie. disease resistance) in the F1 offspring.

Seed companies also like F1 hybrids because the second generation will not grow "true-to-type" so the F1 hybrid buyer has to buy new seeds for each planting. Another reason big and more recently smaller seed companies prefer the hybrid process is because it gives them proprietary ownership of each new F1 variety.

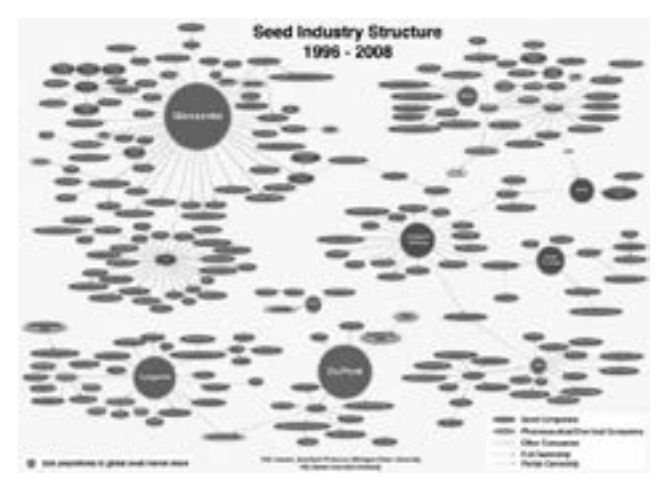
[www.motherearthnews.com/real-food/hybrid-seeds-vs-gmos-zb0z1301zsor.aspx#ixzz2yukMeML](http://www.motherearthnews.com/real-food/hybrid-seeds-vs-gmos-zb0z1301zsor.aspx#ixzz2yukMeML)

Cell fusion F1 hybrid seeds were first developed with induced mutagenesis in the early 20th century to process disease resistance and growing features to increase yields. Since the 1950s cell

fusion hybrid techniques have evolved from a random chemical/electrical/radiation blending to a site direct mutagenesis process targeting specific genes with marker assisted breeding (ie. zinc fingers).

Targeted mutation, known as genome editing, is a tool which use complex protein structures called zinc fingers or meganucleases, and can also selectively insert or silence genes in crop species, shortening years off development time.

[www.eenews.net/stories/1059942163/print](http://www.eenews.net/stories/1059942163/print)



According to a 11/21/2013 news report by *Business Week* industry experts say over the past five years breeding and biotechnology have improved on prior haphazard methods of cell fusion mutagenesis by using molecular markers and sequenced genomes of crops to site direct crossbreeding, making conventional breeding more like genetic engineering. The article quotes Paul Schickler, president of DuPont's Pioneer seed unit as saying "There is not a black line between biotechnology and nonbiotechnology; it's a continuum."

[www.businessweek.com/articles/2013-11-21/monsanto-vs-dot-mutant-crop-developers-in-global-seed-market](http://www.businessweek.com/articles/2013-11-21/monsanto-vs-dot-mutant-crop-developers-in-global-seed-market)

BASF, the world's biggest chemical company, developed its Clearfield wheat and other crops through chemical mutagenesis, which alters the crops' DNA by dousing seeds with chemicals such as ethyl methanesulfonate and sodium azide, according to company filings in Canada and reported by *Bloomberg News* in a 11/13/2013 article.

"This has been a technique used for many decades without issue, without concern." Jonathan Bryant, a BASF vice president was quoted as saying in a *Bloomberg* news report.

[www.bloomberg.com/news/2013-11-13/mutant-crops-drive-basf-sales-where-monsanto-denied-commodities.html](http://www.bloomberg.com/news/2013-11-13/mutant-crops-drive-basf-sales-where-monsanto-denied-commodities.html)

BASF enlists the help of 40 seed companies, including DuPont Co. and Dow Chemical Co. in the U.S. and Switzerland's Syngenta AG to sell Clearfield wheat, rice, lentils, sunflowers and canola crops in markets that reject GMOs without regulatory review, according to the same *Bloomberg* story.

[www.bloomberg.com/news/2013-11-13/mutant-crops-drive-basf-sales-where-monsanto-denied-commodities.html](http://www.bloomberg.com/news/2013-11-13/mutant-crops-drive-basf-sales-where-monsanto-denied-commodities.html)

For many environmental and organic consumer groups they see a continuum of genetic engineered crops hiding as substantially equivalent to "traditional" and therefore natural methods of seed production. These groups are concerned the unregulated grey area of genetic engineering of cell fusion and site-directed mutagenesis is being used by BASF and the major agri-biotech companies to sidestep a GMO labeling of their seed products.

Monsanto in the 1990s lobbied the USDA to agree GMOs are substantially equivalent to natural forming plants.

[www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/labeling-nutrition/ucm059098.htm](http://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/labeling-nutrition/ucm059098.htm)

The majority of the world's food seeds are owned by six companies, Monsanto, Bayer, Syngenta, BASF, DuPont, and Dow. The top 3 companies (Monsanto, DuPont, and Syngenta) together account for 47% of the worldwide proprietary seed market.

[www.gmwatch.org/gm-firms/10558-the-worlds-top-ten-seed-companies-who-owns-nature](http://www.gmwatch.org/gm-firms/10558-the-worlds-top-ten-seed-companies-who-owns-nature)  
[www.msu.edu/~howardp/seedindustry.html](http://www.msu.edu/~howardp/seedindustry.html)

These firms are expanding their operations by buying other seed companies and controlling the pricing and use of seeds through proprietary patents.

In 2005 Monsanto became the world's largest seed and GMO company with its purchase of Seminis which was the largest developer, grower and marketer of fruit and vegetable seed. Seminis 3,500 seed varieties are sold to farm/garden seed companies globally.

[www.monsanto.com/products/pages/vegetable-seeds.aspx](http://www.monsanto.com/products/pages/vegetable-seeds.aspx)

Monsanto's newly developed proprietary lines of fruits and vegetables currently sold in supermarkets uses a technique called genetic marking.

A news story in January 2014 by *Wired Magazine*

cites Monsanto's genetic marking technique with potentially producing a new method for organic seed production.

[www.wired.com/2014/01/new-monsanto-vegetables/](http://www.wired.com/2014/01/new-monsanto-vegetables/)

[www.monsanto.com/products/pages/vegetable-seeds-science.aspx](http://www.monsanto.com/products/pages/vegetable-seeds-science.aspx)

After mapping targeted genes, researchers identify and crossbreed plants with traits they like without genetic engineering, and then run millions of samples from the hybrid through a machine that can read more than 200,000 samples per week and map all the genes in a particular region of the plant's chromosomes, reports *Wired Magazine* in the article.

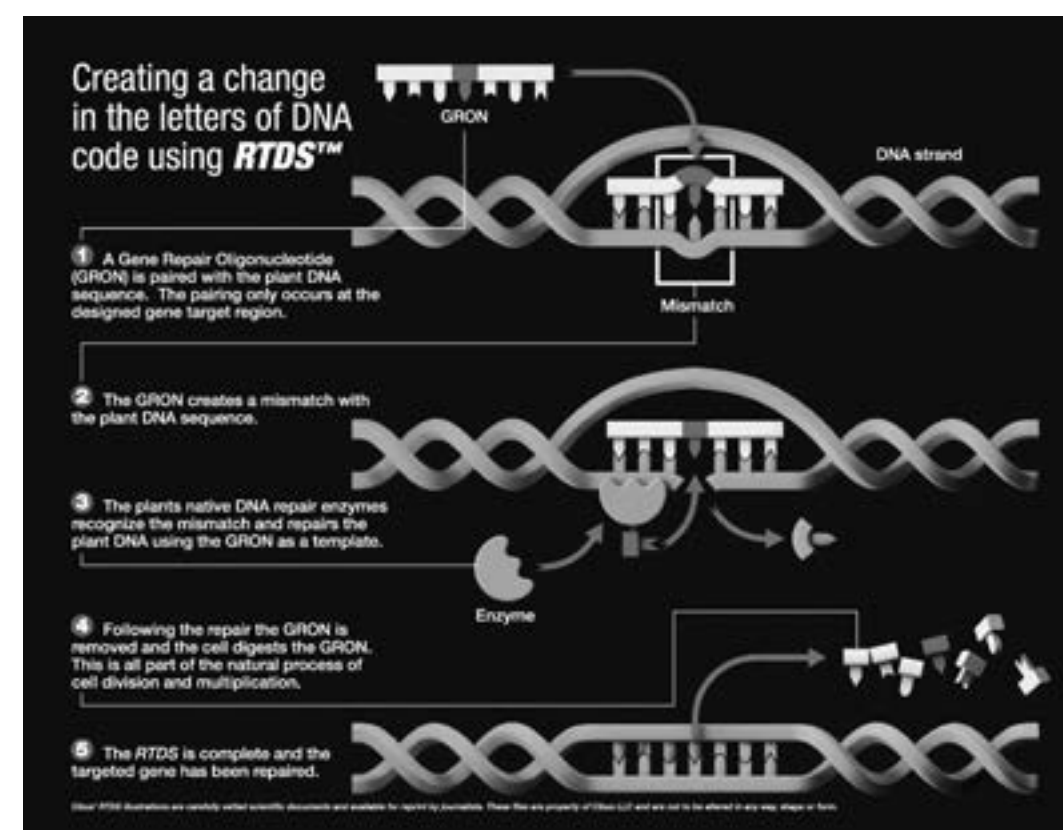
Monsanto's crossbreeding technique also uses a seed chipper to enable breeders to scan genetic variations to predict inheritance patterns without having to go through multiple planting trials to figure out if they'll result in plants desired traits. Patented crops created with this method of gene stacking with multiple characteristics doesn't require government safety testing because it is viewed as natural by the FDA.

"We do know that Monsanto/Seminis are getting into the 'organic' seed line. Which is precisely why OSA advises caution at this point in demanding that farmers use only organic seed -- if the requirement to use absolutely only organic seed were made in stone right now, we would find a narrowing of the organic seed line, and a virtual takeover of the organic seed industry by the big boys," said Liana Hoodes, director of the National Organic Coalition and National Organic Action Plan.

"Organic has a long way to go to clarify the GE (Excluded Methods) definition, and if the USDA doesn't get working with the true organic seed industry, we will indeed see organic seed production consolidated into the big GE guys (Monsanto/Seminis and more)," she said.

The classification of conventional and organic cisgenic cell fusion CMS seeds as GMOs by High Mowing Organic Seeds and other seed companies joins a European movement banning such seeds from organic production.

European and USDA agricultural and food safety government bodies only identify transgenic (between different species) cell fusion hybrid seeds as genetically engineered and GMOs, excluding cisgenic cell fusion as a "traditional method" and not genetic engineering/modification.



Organic seed breeders and environmental organizations are concerned the unregulated grey area of genetic engineering of site-directed mutagenesis is being used by the major agri-biotech companies to side step a GMO labeling.

In Germany (Europe's largest organic consumer) and France organic agricultural organizations are endorsing IFOAM's classification of laboratory cell fusion techniques used in the production of hybrid seeds as genetic engineering (GE).

[www.ifoam.org/en/about-us-1](http://www.ifoam.org/en/about-us-1)

[www.eco-pb.org/fileadmin/ecopb/documents/Proceedings\\_Paris\\_090427.pdf](http://www.eco-pb.org/fileadmin/ecopb/documents/Proceedings_Paris_090427.pdf)

"In the private organic farming sector as outlined in the IFOAM standards a process oriented approach prevails, therefore, the use of genetic engineering lab techniques is not in compliance with principals of organic farming," said Klaus-Peter Wilbois, head of the agriculture division at the German office of The Research Institute of Organic Agriculture FiBL.

[www.fibl.org/en/about-us.html](http://www.fibl.org/en/about-us.html)

Politically in Europe and the US the debate of whether the process of using cell fusion in seed production is genetic engineering comes down to looking at the issue in a product oriented or process oriented perspective.

Legally, current USDA and EU directives are product oriented, and if cell fusion is used within the same botanical family it is not GE and those seeds are not judged GMOs.

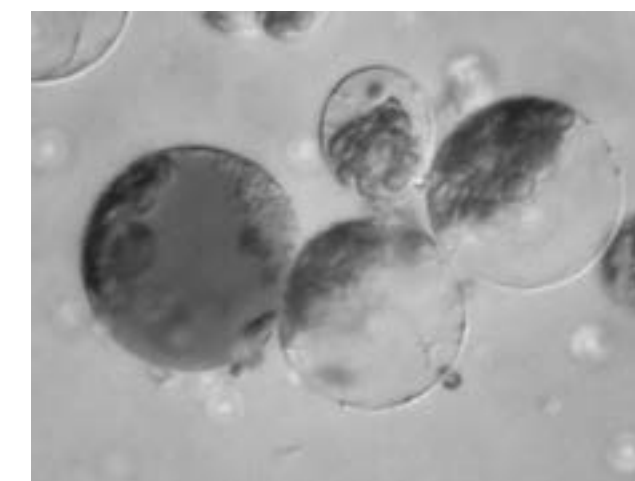
"For instance, cell fusion techniques which are used to convey cytoplasmic male sterility (CMS) in cabbage or chicory crops to produce hybrids are regarded as genetic engineering in the organic sector but would not lead to a GMO in legal sense, since the crops (japanese radish as CMS donor) belongs to the same brassica family as cabbages like cauliflower or broccoli - the same is true for sunflower and chicory (both asteraceae)", said Wilbois.

The organic farming industry and their organizations are conflicted and struggling with the conundrum that organic production relies on CMS F1 hybrid seeds. These hybrids are developed with unregulated biotechnological DNA mutagenic techniques which might be non-GMO in the legal framework, but are process viewed as against the organic farming background and principals banning the use of genetic engineering.

[www.eco-pb.org/fileadmin/ecopb/documents/Proceedings\\_Paris\\_090427.pdf](http://www.eco-pb.org/fileadmin/ecopb/documents/Proceedings_Paris_090427.pdf)  
[en.wikipedia.org/wiki/Cisgenesis](http://en.wikipedia.org/wiki/Cisgenesis)

In the International Federation of Organic Agricultural Movements (IFOAM) the product/process argument has come to one conclusion - cisgenic cell fusion in seed production is GE and should be banned.

IFOAM, comprising 800 Affiliates in 118 countries, mandates all genetically engineered (GE)



seeds to be banned from organic production (both transgenic and cisgenic) and cited the process of cell fusion as GE. This ruling defines seeds produced with cell fusion a genetically engineered/modified organism, a classification that should technically ban it from EU and USDA NOP organic production.

[www.abca.com.au/coexistence/wp-content/uploads/2014/02/IFOAM-GE-Position.pdf](http://www.abca.com.au/coexistence/wp-content/uploads/2014/02/IFOAM-GE-Position.pdf)

[www.ifoam.org/sites/default/files/page/files/ifoamstandarddraftv1.1\\_forconsultation\\_clean\\_new.doc](http://www.ifoam.org/sites/default/files/page/files/ifoamstandarddraftv1.1_forconsultation_clean_new.doc)

The IFOAM GE cell fusion ban for hybrid seed production has broad international implications for all farming operations who use the biotech technique of mutating DNA to make hybrid seeds in both conventional and organic crop production - particularly in countries where governments mandate the labeling of genetically engineered organisms.

In over 64 countries the labeling of GMO seeds made with GE is government mandated, but that is only for transgenic genetic engineering using DNA technology to insert genes from unrelated species.

Currently, GE cell fusion F1 hybrid seeds are only privately banned in European organic production

(mostly German), but not under government EU directives for genetically modified organisms. There are no CMS hybrid seed safety or disclosure requirements for Europe or the US, but lists of acceptable F1 hybrids are being disclosed to the public by German organic farming organizations.

[www.organic-market.info/web/Know\\_How/hybrids/219/0/0/14600.html](http://www.organic-market.info/web/Know_How/hybrids/219/0/0/14600.html)

The European Food Safety Authority (EFSA) has ruled that cisgenic cell fusion is excluded from genetic engineering classification as it is based on traditional methods.

[www.efsa.europa.eu/en/contact/askefsa.htm](http://www.efsa.europa.eu/en/contact/askefsa.htm)

EFSA's role is to provide independent scientific advice on matters linked to food and feed safety in Europe. EFSA's risk assessments provide risk managers (i.e. European Commission, European Parliament and Member States) with scientific advice to help them in legislative or regulatory decisions required to ensure European food is safe for consumers.

"For your information, at the time of developing the legislative framework for GMOs in the EU, regulators specifically excluded from this category techniques/methods of genetic modification as long as they do not involve the use of recombinant DNA (see Annex IB of Directive 2001/18/EC, at [eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:106:0001:0038:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:106:0001:0038:EN:PDF)).

One of these techniques is mutagenesis. This means that a new organism/crop/variety obtained through mutagenesis, giving that it does not involve the use of recombinant DNA, is not considered a GMO (legally speaking in the EU) and hence is not subject to the entire approval process (e.g. pre-marketing risk assessment) laid down in EU legislation," says Sylvie Mestdag, a spokeswoman for the EFSA GMO unit.

In 2013 the USDA National Organic Program (NOP) ruled similarly.

"However, the NOP further concludes that cell fusion (including protoplast fusion) is not considered an excluded method when the donor cells/protoplasts fall within the same taxonomic plant family, and when donor or recipient organisms are not derived using techniques of recombinant DNA technology."

[www.ams.usda.gov/AMsv1.0/getfile?dDocName=STELPRDC5102380](http://www.ams.usda.gov/AMsv1.0/getfile?dDocName=STELPRDC5102380)

How is it that a cisgenic cell fusion process using

Driebergen, the Netherlands.

[www.louisbolk.org](http://www.louisbolk.org)

[www.eco-pb.org](http://www.eco-pb.org)

"Induced mutations are knockouts of functioning genes, and one is not likely to run into a dangerous situation when a gene loses function and stops making a protein," said Myers.

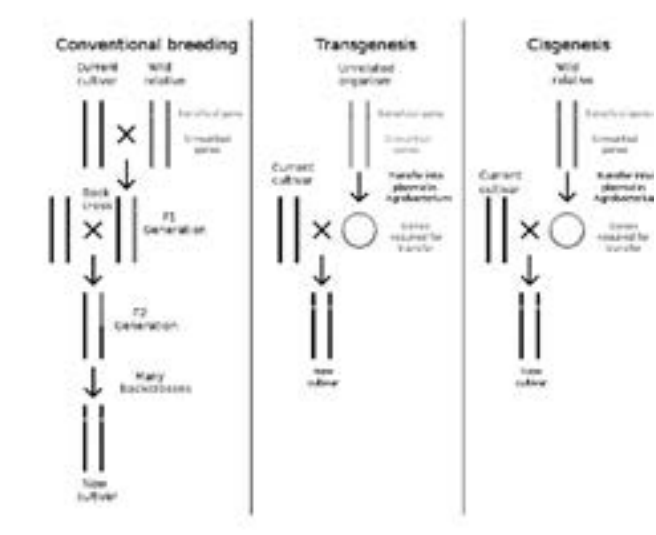
Frank Morton an organic plant breeder/seed grower and founder of Wild Garden Seed in Oregon opposes any use of CMS hybrids in organic production.

"CMS hybrids depend upon patented techniques and patented germplasm. The process creates hybrids that produce offspring what have sterile pollen or none at all, and this trait is persistent and irreversible, making the genetics unavailable to anyone besides the patent holder. The patent holders ARE the GMO industry, so only that industry can make use of this breeding technique. If they aren't GMOs, they sure have all the socio-pathic traits of GMOs," said Morton.

[www.highmowingseeds.com/blog/seed-grower-profile-frank-morton-an-agent-of-change/](http://www.highmowingseeds.com/blog/seed-grower-profile-frank-morton-an-agent-of-change/)

Farmers wanting to avoid genetically engineered seed and protect their crop's organic integrity have no way of knowing if their seeds are cisgenically processed GMOs without a government cisgenic GE labeling requirement.

Without a government cisgenic GE labeling requirement or a ban on cell fusion and biotechnological mutagenesis, there is no way of knowing if seeds and their crops are cisgenically created GMOs—unless there is a CMS marker.



German genetic identification companies working in coordination with the private organic sector have developed a testing procedure to identify GE CMS seeds and are posting lists of CMS vegetable hybrids to be avoided.

[www.genetic-id.de/downloads/cms/Genetic-ID\\_CMS\\_Fact\\_Sheet\\_1.0\\_en.pdf](http://www.genetic-id.de/downloads/cms/Genetic-ID_CMS_Fact_Sheet_1.0_en.pdf)

Organic farmers and food markets in Germany wanting to avoid genetically engineered CMS cell fusion seed and their crops have recently been weeding out identified GE CMS vegetables from their inventories according to European news reports.

[www.organic-market.info/web/Know\\_How/hybrids/219/0/0/14600.html](http://www.organic-market.info/web/Know_How/hybrids/219/0/0/14600.html)

[www.saveourseeds.org/en/dossiers/cms-hybrids.html](http://www.saveourseeds.org/en/dossiers/cms-hybrids.html)

John Navasio believes for now both a ban on mutagenesis and the continued use of cell fusion in organic seed production are a dead end.

"Without high quality commercial alternatives in the form of organically bred and developed crop varieties it will be very difficult for the NOSB of the USDA or even IFOAM in Europe to ban this

technology that crept into organics while everyone was taking a nap and relying on the Big Boys in the seed industry to take care of our seed needs," he said.

Open pollinating (OP) crops are a natural alternative to the sterile pollen CMS hybrid conundrum according to Navasio.

"The major reason we do not have commercially acceptable OPs in many crops is because there are very few breeders working on OPs (the structure of the seed industry relies on hybrids). We are training a new generation of seed growers and seed companies in hopes of changing this to some degree."

If the campaign to ban genetically engineered seeds in organic production, currently being promoted by OCA and organic seed breeders (High Mowing Seeds, Wild Garden Seed, Baker Creek Heirloom Seed Company, Adaptive Seeds, etc.), converges with state GMO labeling campaigns, there is going to be a flurry in the open pollinating and natural hybrid seed market.

@Donald Sutherland 2014

DONALD SUTHERLAND, HIS WIFE LAURA DAVIS, AND TWO DAUGHTERS ARE USDA ORGANIC CERTIFIED FARMERS IN HOPKINTON, MA. DONALD IS A FREELANCE WRITER AND A MEMBER OF THE NORTHEAST ORGANIC FARMERS ASSOCIATION.

[www.longlifefarm.com](http://www.longlifefarm.com)



## MY REGIONAL SEED SOLUTION MODEL

BILL MCDORMAN, ROCKY MOUNTAIN SEED ALLIANCE



BILL MCDORMAN IS A SEED SAVER, WRITER AND EDUCATOR BASED IN CORNVILLE, ARIZONA. HE LOVES TO GROW TOMATILLOS AND RACE HIS BICYCLE. HE IS CO-FOUNDER OF THE DOWN HOME PROJECT, GARDEN CITY SEEDS, SEEDS TRUST, HIGH ALTITUDE GARDENS, THE SAWTOOTH BOTANICAL GARDENS, SEED SCHOOL AND THE ROCKY MOUNTAIN SEED ALLIANCE. HE IS AUTHOR OF THE BOOK *BASIC SEED SAVING*. BILL IS THE FORMER EXECUTIVE DIRECTOR OF NATIVE SEEDS/SEARCH.

TO HEAR BILL'S SEEDS STORY GO TO:  
[soundcloud.com/seedbroadcast/bill-mcdorman-shares-his-seed](https://soundcloud.com/seedbroadcast/bill-mcdorman-shares-his-seed)

for a local food economy. All depended on someone else to do it.

As I look at the range of choices I have to exercise my need to help protect and expand the diversity of locally available seeds, I see some of the same patterns. Organizers are organizing. Social activists are petitioning for new initiatives. Web-based organizations are proposing new web-based solutions like the new "Noah's Ark" of seeds website. Conference organizers are organizing conferences. The webinar savvy put on webinars. Social media mavens cultivate Facebook likes. Many propose some version of a "one-size-fits-all" solution we can all get behind.

All this makes me wonder who is going to make the real difference. I think the answer is simple. We need more people actually growing some of their own food and saving their own seeds, no matter where they live. I have believed this since I traveled behind the Iron Curtain in 1989 to Siberia. I journeyed to find new, cold-tolerant tomato varieties for my little cold-climate seed company, High Altitude Gardens. The citizens of Novosibirsk, a modern Siberian city with more than a million people and 8 major universities and a subway system, all grew gardens and all saved seeds. These educated people were as modern and busy as any urban folks, yet all remained grounded in the most grounding of activities, gardening and seed saving. A walk through their "dacha" gardens was a beautiful thing to behold.

We should focus our resources first on developing our own regional seed sheds. Every penny spent on seeds outside our own region should be questioned. No region will ever produce all its own seeds, or should, but, right now, very few seeds are produced in the region where they are planted. Saving seeds from plants that do best for us will also generally produce the best seeds for our neighbors. Any strategy, political, economic, internet or practical should focus on taking advantage of this biological fact. Strong regional seeds systems offer the best building blocks for a truly resilient agriculture.

Wendell Berry, in his interview with Bill Moyers, went on to promote what he calls "leadership from below." This, he says, "consists of people doing the right thing simply because they see that it needs to be done." I want to do the right thing. I want to do the most important things first. I will no longer contribute to political organizations or seed conservation organizations that do not use their resources to grow and save and share seeds or teach and inspire others to do so. I am going to stay at home from the marches, no matter how important, if they take place thousands of miles away. I will not spend hours promoting or raising money for initiatives to label things. I will sign petitions. I will vote. I will also vote with my dollars for the agricultural system I believe in when I buy food. And I will continue to grow, save and share seeds and teach and inspire others to rejoin this joyous, abundant and important ritual.

"The threat to precious things will be our advantage. It clarifies our duty." Wendell Berry in an interview with Bill Moyers, September 4, 2013.

What exactly is our duty? We know we have lost access to the vast majority of seeds for varieties and landraces that once comprised our great agriculture. We know we will need as much diversity as possible to weather the coming storms of climate change, resource depletion and population growth. But, how do we do this best as individuals, as communities? What do we work on first?

I ask this question because the options for action are sometimes staggering. A brief look at my email or the twitterverse brings a multitude of new "calls to action." Political organizations as diverse as The Center for Food Safety and Avaaz.org are now asking for donations to fight battles in the corporate seed wars or develop new websites that will save us. Statewide initiatives seek petition signers and activists to help raise millions of dollars to go head to head in the battle to label GMO's. I see now I am being called to use any carbon credits I might have earned in my life to fly or drive to Washington D.C. for the world's largest climate march, September 21<sup>st</sup>.

All this is good. I welcome the opposite of apathy. All is necessary on some level. But I ask again, what do we do first? What is our most important priority? I ask because of an experience I had living in northern Arizona. I attended the first few meetings of a newly formed regional food security committee. I was so excited to see this kind of consciousness come to our little community. I went to the meeting to talk about connecting local food to local seeds. Seeds always seemed to me to be the foundation of any real food security. No seeds, no food. Most seeds today, even for local farmer's markets and CSA's, come from thousands of miles away, especially the certified organic hybrid seeds produced by large corporations. I came to ask, "How secure is our food system if we don't have our own seeds?"

What I discovered left me asking even more questions. Administrators on the committee from the local community college wanted to administer programs for local food. Teachers wanted to teach about it. Activists wanted more action and policies for local food. Landowners wanted their land used for local food production. The only category absent on the committee was the one representing people who actually grew something. The exceptions were the new boutique winery owners who had hired someone else to grow and care for their grapes. Everyone saw the necessity



## THE SIEBOLD GARDEN, AN ENVIRONMENTAL ART PROJECT ON HONJIMA, JAPAN

KARIN VAN DER MOLEN AND PAT VAN BOECKEL

The Siebold Garden was designed as an environmental art project within the Setouchi Triennial (2013) by the Dutch artists Pat van Boeckel and Karin van der Molen. In a former orchard and university dormitory they created a story with video, environmental sculpture and landart around the Dutch botanist Von Siebold, who brought most of the nowadays garden plants from Japan to Europe.

### VON SIEBOLD

Philipp Franz von Siebold was a Dutch/German physician and scientist who stayed on the Dutch trading post Deshima (Nagasaki) in Japan from 1823 until 1830. While working as a doctor, he was also an extremely enthusiastic botanist. He collected and documented thousands of plants and seeds in Japan with the help of assistants, students and patients. He shipped his collection to Belgium and the Netherlands. Upon his return to Europe his botanical collection was opened to the public through the Dutch National Herbarium and Naturalis, the natural history museum. He published the beautifully illustrated Flora Japonica in 1835. Some species, although already cultivated in Japan for centuries, got the sieboldii extension, because Von Siebold was the first to describe them in a scientific system.

Von Siebold and his society introduced and cultivated Japanese plants in The Netherlands.

His enormous collection lives on in almost every garden in The Netherlands and were exported to and cultivated in most other European countries thereafter.

### SEEDS, PLANTS AND VIDEO

Siebold's heritage is food for thought about nature and science, about nature and ownership, about the botanical link between Japan and Europe and about cultural and economical globalism. These themes underlay the Siebold Garden on Honjima.

With video, installation and environmental sculpture Van Boeckel and Van der Molen wove a new world around this story of historical botanical relations between the Netherlands and Japan. Together with garden-artists Naito and Kawaguchi they changed the overgrown orchard into a wild garden full of plants that Von Siebold had collected. The concrete house was covered in traditional blackened wood and from the front window a landslide with plants came down, flowing into the garden.

The landslide, or wave, symbolized the movement of history, bringing a wealth of plants to Europe (and an opening towards foreign knowledge for Japan, because Von Siebold introduced western medicine and operations in Japan). The landart piece was also an invitation to come inside the house, where bits of the Siebold history are woven into the world of imagination in 5 video installations, while seed-sculptures were placed in the garden, house and entrance road.

Karin van der Molen: "We share a deep interest in nature with Von Siebold, but with a different point of view. As his interest was mainly scientific, our way is the arts as a way to re-imagine nature. Usually we work on the exhibition site and incorporate the direct environment in our art project. We worked with plants that we found on the island of Honjima, which Von Siebold visited in 1826 on his way to the Court In Edo. Inhabitants of the island appear in the video installations. And many volunteers helped us to reshape the house into a Siebold experience. Art, history, and place cannot be seen separate from one another. They interact, and likewise we like to make use of different art forms to highlight separate aspects of the Siebold story. The design of the garden and our concept of the renovated house with the landslide, are as much part of our communal project as the video installations and the environmental sculptures. They are meant to touch each other and touch all senses of the visitor."

You can watch an impression of the whole project on Youtube:

[www.youtube.com/watch?v=FZR24oMH-hc](http://www.youtube.com/watch?v=FZR24oMH-hc)

KARIN IS AN ENVIRONMENTAL ARTIST WHO USES A VARIETY OF DIFFERENT MEDIA. KARIN'S WORK CHALLENGES US TO LOOK AT NATURE IN A NEW WAY. PAT IS A DOCUMENTARY FILM MAKER, DIRECTOR AND VIDEO ARTIST. HE EXAMINES THE REALTION OF MAN TO NAURE ANMD CONTEMPOARY MODES OF MESANING AIMIMG TOWARDSNEW PERSPECTIVES FROM PHILOSOPHY OF INDIGENOUS PEOPLES, AND RELIGION. THEY BOTH LIVE ON A SAML L FARM NORTH OF AMSTERDAM IN HOLLAND,

[www.karinvandermolen.nl](http://www.karinvandermolen.nl)

[patvanboeckel.nl](http://patvanboeckel.nl)



## EDIBLE ORIGINAL JEANETTE HART-MANN

The state of food today is arguably the most complex and problematic in the history of human life on earth. Population growth, food safety, food shortages, environmental disasters effecting food systems, malnutrition and nutritional diseases, depletion of ecological resources such as healthy soils, water and open-pollinated seed, genetic engineering of agricultural organisms, use of billions of tons of herbicides and pesticides, the globalization of industrial monoculture, and the proprietary nature of industry and capital to challenge the independent food rights of people world-wide is making food, food production, and our edible environments into the critical issue of our century.

This crisis is ironic, for in this complex problematic is bound a pervasive paradigm, which normalizes the idea and practice of simplification and total control over nature through making it homogenized, mechanized and efficient. This way of thinking and acting commodifies food, soils, plants, animals and people, while formulating them as predictable cogs within the industrial furrow of production and consumption. This is conventional agriculture as it has been constructed in the twentieth century with the end objective of producing more, faster, and with greater profit margins. And this is the most popular indictment for our future, laying claim to the only viable way

to feed billions and rising in the face of climate change and eminent disaster. Specialists, politicians, and no-surprise-corporations say there is no other choice, only another green revolution will save us. This is their propaganda.

Yet, there is a growing revolution responding to these claims. Globally, a grassroots movement of individuals and communities are reclaiming agricultural knowledge from the past and creatively working with the vital resiliency of nature and ecology to invigorate alternative food production processes. From urban aquaponics to rural polyculture farms, from wildcrafters to gleaners and locavores, from community gardens to edible suburban front yards, people are relocating sustenance in their everyday lives and demanding a new agricultural process in which to participate.

This activity is not being organized and orchestrated by government agencies or influenced by pop culture icons or spiritual gurus, but by and through many hard working, dedicated and passionate individuals who want to cultivate an intimate and active relationship with food, landscapes, biota, healthy communities and a sense of agency. These individuals are from many backgrounds, many cultures, and many professions. They are living and working in many diverse niches and

foodsheds around the globe. This emphasis on "many" enunciates biodiversity, it engages environmental and cultural resiliency as a spectrum instead of the homogeneous sameness proposed by industrial agriculture. It is this viable solution to the global food crisis that is coming from many lands and hands, exciting agency, creativity and adaptability over the passivity of consumption.

Food is radical. It is rooted to our primal need for sustenance and it binds us to a fundamental daily relationship with the biological world, with ecology, nature, the earth and each other. This is a commitment to cultivate not just a field for food but also food for thought and our deepest articulation of life. When individuals and communities globally take up this shift in food practices and make it a part of their daily lives or value the local foodshed, its plants, animals, soils and farmers, they are reasserting the culture in agri-Culture. Empowering the intellectual and the creative in the daily labor of love digging in the dirt, honoring the food touched by hands and mouths, taking time to listen to the stories of seeds, or growing stories by planting a seed, these processes are not created by rock stars, the mass media or government policies. People cultivate these agri-Cultural processes—many people globally who are writing a creative and powerful future of diversity, resiliency, adaptability, agency and empathy.

JEANETTE HART-MANN IS A FARMER, ARTIST, TEACHER, AND COLLECTIVE COHORT OF SEEDBROADCAST, FODDER PROJECT COLLABORATIVE RESEARCH FARM, AND LAND ARTS OF THE AMERICAN WEST. SHE LIVES IN ANTON CHICO, NM



## SEED PACKET KIM-JIMI LEONARD

This seed packet was created in the 2014 Academy for the Love of Learning's Teacher Renewal Summer Institute:  
[www.aloveoflearning.org](http://www.aloveoflearning.org)

KIM-JIMI LEONARD IS AN ARTIST AND ART EDUCATOR IN SANTA FE, NM. SHE HAS PARTICIPATED IN NUMEROUS PROGRAMS WITH THE ACADEMY FOR THE LOVE OF LEARNING IN SANTA FE FOR PROFESSIONAL AND PERSONAL DEVELOPMENT AND GROWTH. FOR THE PAST 4 YEARS, MS. LEONARD HAS WORKED COLLABORATIVELY WITH TEACHING ARTISTS FROM THE EL OTRO LADO IN THE SCHOOLS PROGRAM, ONE OF THE ACADEMY'S PROGRAMS FOR PUBLIC SCHOOL STUDENTS AND TEACHERS. IN 2001, AFTER WORKING WITH JUDY CHICAGO AND OTHER ARTS EDUCATORS AT THE DINNER PARTY INSTITUTE AT KUTZTOWN UNIVERSITY IN 2011, SHE DECIDED TO WORK ON HER MASTER'S IN ART EDUCATION AT KUTZTOWN. CURRENTLY, SHE IS USING RESEARCH FROM HER WORK WITH THE EL OTRO LADO IN THE SCHOOLS PROGRAM FOR HER MASTER'S THESIS AT KUTZTOWN. SHE PLANS ON GRADUATING IN THE SUMMER OF 2015.



## THREE SISTERS

MELANIE SAINZ

MELANIE SAINZ (HO-CHUNK NATION OF WISCONSIN) IS A VISUAL AND PERFORMING ARTIST, CULTURAL ARTS PRESENTER, AND SOCIAL JUSTICE ADVOCATE. SHE CURRENTLY HOLDS THE TITLE OF FOUNDING DIRECTOR OF LITTLE EAGLE ARTS FOUNDATION, AN INCUBATOR FOR NEW AND EMERGING NATIVE ARTISTS THAT PROMOTES THE ARTS, CREATIVITY, AND COMMUNITY. MELANIE IS MARRIED TO JAZZ BASSIST FELIX SAINZ, JR. AND MOTHER TO THEIR TWO ADULT CHILDREN, AMADO AND FELISA SAINZ. HER WORK IS DEDICATED TO THE HUMAN VIRTUES OF PHYSICAL, MENTAL, SPIRITUAL AND EMOTIONAL BALANCE AND ENCOURAGES OTHERS LIVE IN HARMONY WITH ALL LIVING THINGS.

[www.facebook.com/littleeaglearts](http://www.facebook.com/littleeaglearts)

## HIP VEGGIES

MONIKA WOOLSEY

MONIKA WOOLSEY, A REGISTERED DIETITIAN AND EXERCISE PHYSIOLOGIST, IS THE CHIEF DESIGN OFFICER FOR HIP VEGGIES.

TO HEAR MONIKA'S SEED STORY GO TO:  
[soundcloud.com/seedbroadcast/monika-woolsey-talks-about-the](https://soundcloud.com/seedbroadcast/monika-woolsey-talks-about-the)

Hip Veggies partners with local artists in Arizona to create art depicting native and locally grown produce. A portion of the sales from items bearing each design is donated to the hunger-related organization of the artist's choice.

Hip Veggies works closely with local food producers, restaurateurs, and event planners to increase the demand for eating opportunities with a mission of supporting sustainability. Hip Veggies has been profiled in Edible Phoenix magazine, and in its first year of operation was nominated for a Stylos Award, which recognized her contribution to health awareness in the Latino community.

Hip Veggies also partners with local artists in Arizona to create art depicting native and locally grown produce. A portion of the sales from items bearing each design is donated to the hunger-related organization of the artist's choice.

## RECIPES JANET GABRIEL

We just harvested about 150 heads of garlic. They are now curing in the shed. The tomatoes have green tomatoes. Last year we only grew yellow tomatoes. I still have 1 package of frozen yellow tomatoes for Gazpacho. I have been saving seeds, mostly for flowers: Indian Blanket, Poppies and Chamomile. Here are some recipes that I like to make from foods harvested from my garden.



## CREAM OF CARROT WITH GINGER

### INGREDIENTS

- 2Tbs. butter
- 2c. chopped onions
- 5c. sliced carrots
- ½ c. shredded ginger
- 5c. chicken stock (Better Than Bouillon)
- 2 cans of organic coconut milk

### DIRECTIONS

Melt the butter in 3-quart saucepan. Cook onions low until translucent 15 minutes.

Add carrots cook covered, medium-low heat 20 minutes.

Add heated stock and cook 20 minutes until carrots are tender.

Add 2 cans of coconut milk. Season with salt & pepper.

Cool for a few minutes. Blend small batches.

## PINK MARINATED SALAD

### PREPARE THE DRESSING

- 2/3 c. lemon juice
- ¼ t. dill
- ¼ t. "old bay" or paprika
- ¼ t. oregano
- 1 large clove of garlic, minced
- ¼ t. pepper
- 1 t. fresh ginger, minced

### DIRECTIONS

Simmer over low heat, covered for 5 minutes. Let stand to cool.

Add ½ c. grape seed or other oil.

### VEGETABLES

*slightly steam and cool*

- 1 stalk of broccoli
- 1/4 lb green beans
- 1lb. firm organic tofu
- 1 stalk celery
- 2 c. grated beets
- 2 c. chard
- 1 cup sweet onion
- ½ c. jicama
- ½ c. carrot
- 1 c. sunflower sprouts

### DIRECTIONS

Gently mix all vegetables and tofu. Gradually mix in the cool dressing. Cover with a weighted lid so the ingredients are packed together. Refrigerate over night.

## GAZPACHO A LA UNCLE JOHN

### INGREDIENTS

- 46 oz of tomato juice
- 3 tomatoes chopped
- 4-6 green onions, minced
- ½ cucumber chopped
- 2t. Rocky's Hot Sauce
- 1 bouillon cube (or 1 t. "Better than Bouillon")
- 3 T. garlic, minced
- 2 T. fresh basil, minced
- 2 T. fresh dill, minced
- 1/3 c. cider vinegar
- ¼ c. olive oil

### DIRECTIONS

1 substitute the juice and the tomatoes with tomato sauce that Peter makes from the tomatoes that we grow.

Heat 1 cup of tomato juice. Dissolve the bouillon in it. Put all ingredients together. Let flavors marry in the refrigerator.

Serve with small pieces of avocado on top.

JANET WAS A TEACHER FOR 34 YEARS. SHE IS NOW RETIRED AND WITH HER HUSBAND RUNS A FARM IN ARROYO HONDO, NEW MEXICO. SHE SPENDS TIME TAKING CARE OF THE GARDEN AND HER 4-YEAR-OLD GODDAUGHTER WHO IS LEARNING TO BE A FARMER AND SCHOLAR.



**“For a seed to achieve its greatest expression, it must come completely undone. The shell cracks, its insides come out and everything changes. To someone that does not understand growth it would look like destruction.”**

*CYNTHIA OCCELLI*

