

into the wind with the seeds ...



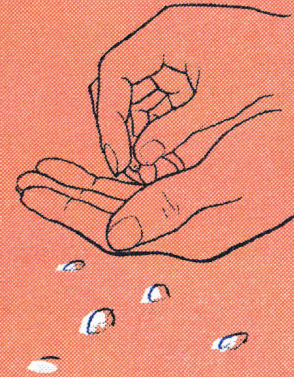
A ZINE FOR THE SEED GATHERING 2023

INTO THE WIND WITH THE SEEDS

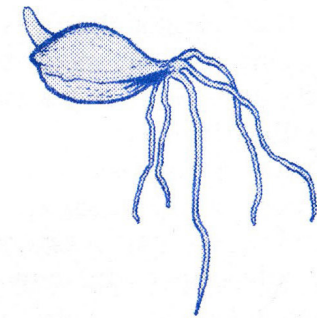
A ZINE FOR THE
SEED GATHERING
2023

Curated and edited by
Katie Hastings
(Seed Sovereignty Coordinator
for Wales)
and Custom Food Lab's
Artist Steering Group:
Alice Tatton Brown
Cherry Truluck
Hilary Powell
Sage Brice
With illustrations by Sage Brice

SOW



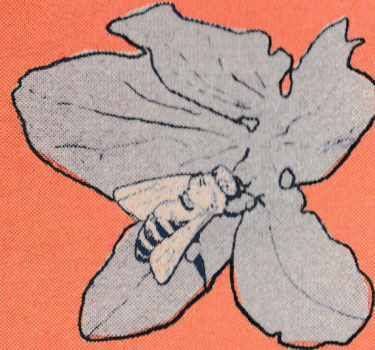
GERMINATE



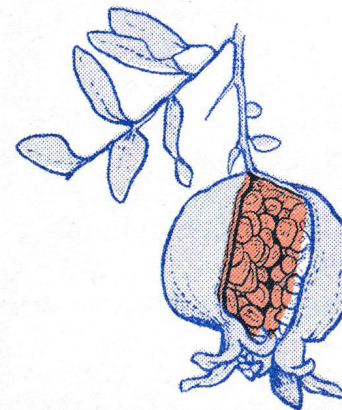
GROW



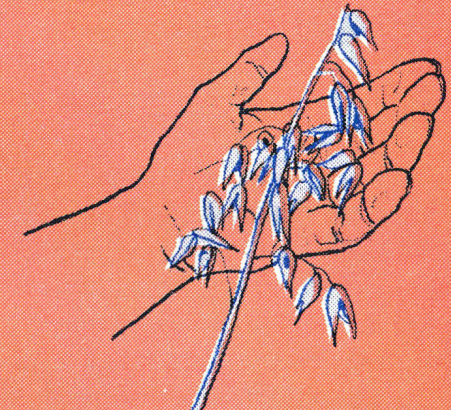
FLOWER/ POLLINATE



RIPEN



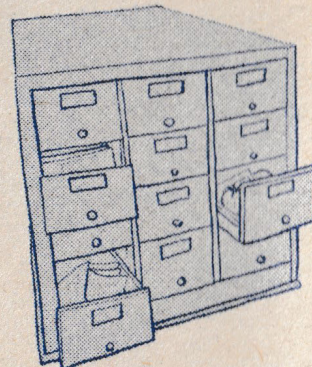
HARVEST



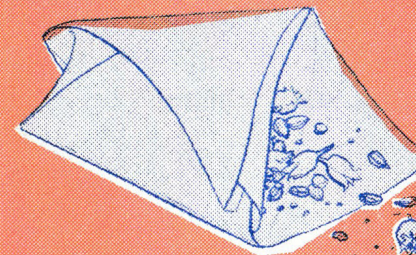
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STORE



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into the wind with the seeds ...

This zine was born out of a collaboration between The Gaia Foundation's Seed Sovereignty Programme, an organisation working to build a more resilient grassroots seed system in the UK and Ireland, and Custom Food Lab, an artist-led collective who are passionate about food and the future. It accompanies our 2023 'Seed Gathering', an online space for our seed networks to come together to share, learn, and celebrate all the incredible work going on in the Seed Sovereignty movement. The 'Seed Gathering' is a weekend for reflecting on our relationship to seeds, hearing speakers from our local and international networks and inspiring each other to keep going.

While our online gathering will be rich with heady information, virtual networking and new ideas, we know that virtual gatherings can also leave us yearning for the physical world. We wanted to give you something to hold in your hands, something tangible to remember the weekend by. We printed this zine on recycled paper, using vegetable inks, on a risograph printer at the 'Oxford Green Print Cooperative'. The cover is printed on paper made entirely from agricultural waste! We hope you can feel connected to the physical processes that made these pages, and the real people behind them.

In these pages you will find a diversity of voices, and we wouldn't have it any other way. There are as many ways to relate to

seeds as there are seeds themselves. And like seeds, we hope to spread the voices of our network far and wide; carried by creatures, shared by people and borne on the wind.

**Katie Hastings, Gaia Foundation
Seed Sovereignty Coordinator**

Custom Food Lab are thrilled to be collaborating with the Seed Sovereignty Programme on this Zine as part of our Arts Council funded project Seeding the Commons. We work with artists and growers to make work which helps us to imagine more hopeful futures for our communities and this collaboration is a wonderful way for us to explore the role of the seed in building cultural and sustainable communities. Through this Zine, we have engaged with poetic and folk expressions of seed knowledge alongside valuable practical information from within the Seed community. This has been assembled by our Artists Steering Group in the format of an almanac, following the stages of development of a seed rather than the months of the year. We hope you enjoy it!

www.seedingthecommons.org

**Cherry Truluck, Custom Food
Lab Creative Director**

Katie + Cherry
Editors



SOW

SOWING BY MOONLIGHT

**Artist, Researcher and Grower of Oats,
Cherry Truluck, gives an insight into her research**

Common to indigenous (animist) cosmovisions is a conception of time as cyclical (non-linear), layered and in equilibrium with all things. This reflects an embodied understanding of the rhythms of nature, which modern industrial farming (and plant breeding in particular) is moving increasingly further away from. These systems are instead enslaved to the capitalist narrative of accumulative/linear time (on which narratives of progress are built). Conflicting temporal ontologies (cyclical and linear) underlie the complexity of our food and farming systems.

In Anna Tsing's brilliant book *The Mushroom at the End of the World* she describes "watching the interplay of temporal rhythms" in fungi to identify "Patterns of unintentional coordination". The life of a seed is subject to these *assemblages* of intersecting temporal cycles - the circadian clock, seasonal changes, weather patterns, daylight, lunar cycles....

Just as the the gravitational pull of the moon causes the tides to rise and fall, so it effects the ebb and flow of water, not only in seas, but in rivers, streams, within the soil and even the in the vascular system of the plant itself. Knowledge of lunar cycles has been long connected to

**"All the modern things
Like cars and such
Have always existed
They've just been waiting
in a mountain
For the right moment
Listening to the irritating
noises
Of dinosaurs and people
Dabbling outside."
Björk**

understanding of growing cycles and is deeply held in indigenous communities the world over - just as it was by our ancestors - and forms the basis of biodynamic practices. It is thought that seeds will absorb more water during the full Moon and the new Moon, when more moisture is pulled to the soil surface. The logic follows that this causes seeds to swell, resulting in greater germination and better-established plants. But as we plan to sow our seeds, we must be cautious of simplification

and never dismiss that delicate rhythmic interplay that Tsing highlighted. The seed has it's own rhythm - a kind of inherited memory. The moon is just one of a multitude of 'zeitgebers' (time givers) which will interact with this internal time-keeping and unlock the seed's memory. Some of these are easy to understand (such as the length of the day) and others we can only intuit through cultural and embodied knowledge. As growers, we know that no amount of planning can fully control these vibrant rebellious seeds - we are mere collaborators, observers even, seeking out "patterns of unintentional coordination" in a much more than human world.

"In the simple act of planting I was engaged in one of the most universal - and certainly one of the most important - of all human activities. I share the act of planting and my hope for a harvest with most of the world's population and with unnumbered previous generations. People must eat. And the chain of production processes that finally deliver food to our mouths begins everywhere with the sowing of the seed." Jack R. Kloppenburg, First the Seed

SOWING SEEDS OF LIBERATION

Em Ghassempour of Books for Change reflects on facilitating Custom Food Lab's TAKING ROOT Creative Nature Club which worked with children to explore themes including "Look after the earth and it will look after you" and "Growing food together is a radical act"

"He doesn't want to leave me, he won't settle, you'll have to call..."

As he leans down to touch the earth, salty tears drip down cheeks and land ever so softly in the soil. With a pause, we lock eyes and I smile.

Brown eyes to brown eyes: rooting, connecting, dreaming deeply about possibility. He smiles.

"I've been rushing," he says, "I'm tired." he says.

In this garden we can lay our weary bones down. Breathe out little one and breathe in all the smells of this earth we reside on.

Together, we slowly begin to sow seeds of connection.

"He might stay, he might not, he does seem more settled now."

He leans down to touch the plants, they feel like the inside of a rabbit's ears, with a pause we lock eyes and then laugh out loud.

He reaches his hand out to take mine and we slowly and steadily make our way. It feels like we are awakening.

"He won't come home now; he says he wants to sleep in the garden, under the stars and wait for the hedgehogs."

GERMINATE



MAKING MALT

Fragments of an online conversation between Artist Cherry Truluck and Richie Walsh, Seed Sovereignty Coordinator for Scotland, and a keen amateur maltster. January 2023.

Richie: "Okay, well, I suppose first let's talk about what malt is. So, malts are generally from grass species. The most common being barley, but barley, wheat, oats are all commonly malted grains. "Barley, for reasons we'll maybe get onto later, is the most commonly malted grain. But effectively, what it is, is tricking a seed into doing what it would normally do in the ground, and that's to germinate. And then stopping it in time, right there with heat, so that we can activate that again later on whether we're making beer or whiskey, or malt flour, or malt sugar for confectionery, or whatever it might be that malt is used for. So what's happening really, is the same process that happens inside every seed of every flowering plant in the world. It really is magic, just like photosynthesis, that all life depends on photosynthesis all around the world, all life depends also on the germination of seeds. And inside a seed, all you have is a little rootlet, the radical, depending on the species that are one or two little leaves, Dicotyledons and a little supply of food and some enzymes. It's those enzymes, those proteins, that when the seed gets wet, usually from a spring rain, in the case of barley, when it gets wet and comes to a certain level of moisture, that activates those enzymes to start turning the food which is in the form of starch inside the seed into sugars. The plant would use sugars as food in order to grow up and become the plants whatever it might be. But what we do, when we want to make malts is we let it germinate and we let the root come out, the root always comes first out of the seed, and just before the acrospire, which will be the first leaf coming out, then we freeze that in time with warm air. Now we've got a beautiful sweet, delicious tasting little nugget.

"I'm sure it was discovered by accident by people a long time ago in the stone age when they were probably soaking some grains, wild grains they had gathered, and they figured it was easier to eat with them to soak them in water to soften them up. And I'm sure some of them just let them soak just a little bit too much. And then ate them and said that tastes different. So instead of a starchy grain, what they had there was malt in their hands, and that's sugars, maltose is the primary sugar that's created, and it's delicious."

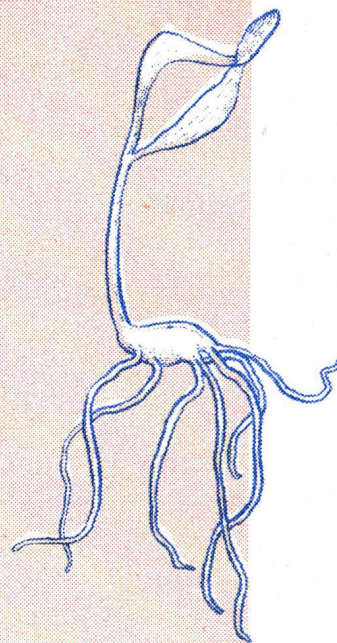
Cherry: "Wow. So you have to activate those enzymes to produce a sugar? Then when you kiln it does that caramelise the sugars?"

Richie: "The enzymes convert the starch which is in the seed into sugars. And that's what's continued later with warm water in the brew house or the confectionery factory. Then to make beer, yes you would kiln it. The sweet flavour is already there before you kiln it, but the produces the maillard reaction which gives the malty flavour needed for beer."

Cherry: "Can you malt on a domestic level?"

Richie: "So I do yes First of all, you need to wash your seed. You put it into a bucket, pour cold top water on top and all the good seed will sink to the bottom and you remove those little bits of husks or dirt or empty seed. And then you leave the seed (for barley, it's different for different grains) in cool 14-15 degree water for about 12 hours, then drain it out. Rest it in the air just wet for 12 hours then put it back into the water. You keep on doing this until you see the rootlet, then you take it out of water and you leave it to rest and they start to grow. Over a couple of days, you will see just under the skin of the barley, the first leaf starting to grow. You want to stop that in time before the acrospire comes out the top. So then it goes into the dehydrator at a low setting for many, many days... then you kiln it in the oven."

Want to know more about the malting process?
scottishcraftbrewers.org craftmaltsters.co.uk



GROW

Rise land from slumbering
Creator's grain from sleeping
Let stems grow stems
and stalks grow stalks

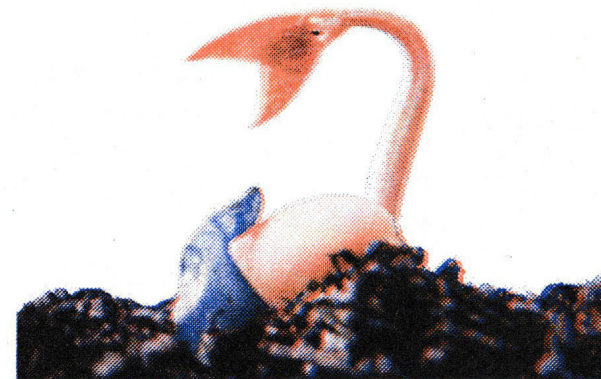
Woman living under the ground
Old ruler of the soil
Let the barley grow
Let the barley grow

Spirit living in the upper clouds
Shed rain gently down
Shed rain gently down

THE SOWING CHARM

a song by Helen Chadwick

"If seed are alive but aren't metabolising, then maybe we have to rethink our definition of what it means to be alive" attributed to Chris Walters,
American seedbank botanist,
from *The Cabaret of Plants* by Richard Mabey



GM FREEZE UPDATE

Campaign group GM Freeze brings us up to speed on the
"Genetic Technology (Precision Breeding) Bill" *

WHAT IS IT?

UK Government Legislation aims to create a new subclass of genetically modified organism (GMO) called a "precision bred organism". These are defined as GMOs that, hypothetically, "could have resulted from traditional processes or natural transformation". This approach makes no scientific sense and was roundly rejected in the Government's own 2021 consultation.

WHAT WILL IT DO?

Dismantle the safety net of independent risk assessments. All forms of genetic engineering can go wrong and developers shouldn't be left to check their own homework, but that's what this bill will do.

Remove everyone's right to choose. Food made from "precision bred" GMOs will not be labeled and there are currently no plans at all to prevent contamination across the food chain.

Support the creation of GM animals. Compassion in World Farming have called the bill a significant threat for farmed animals.

Create chaos in the food trade. The law will only change in England so "precision bred organisms" will be classed as unauthorized GMOs in Scotland, Wales, Northern Ireland, the European Union, and most other parts of the world. That could impact exports and threaten the status of our organic producers.

HOW DO WE STOP IT?

As we write, in January 2023, the bill is still going through the House of Lords. GM Freeze and many others are fighting to reduce the harm that it will do. For more information on how to take action contact us, or to sign up to our mailing list, go to our website.

www.gmfreeze.org

info@gmfreeze.org

0845 217 8992

*Genetic Technology (Precision Breeding) Bill, a current version can be found at: bills.parliament.uk/bills/3167

NOTES

"Seed saving is more than just growing; it is about our past and our future, about all the diversity we've inherited from those before us and what we choose to send into the future."
Alys Fowler, The Guardian

SEEDS AND SOUNDS

The Seed Sovereignty Programme's Northern England Network gathered in September for a Beanfeast! A celebration of growing, sharing and eating pulses. The day included workshops and talks, films and swaps, and was documented with the help of Nell Catchpole, musician, sound artist and broad bean enthusiast. Catherine Howell speaks to Nell about seeds and sounds.

Nell, can you explain what's meant by a 'sound artist'?

I work with sound as a medium of expression – a bit like a sculptor works with clay. But I also invite people to listen attentively, differently to the everyday. There are lots of more complicated answers I could give!

Have to ask, what was your favourite sound on the day?!

I hope listeners will really enjoy the different sounds of people moving and shaking their seeds. I think it's beautiful. But it was the hubbub of different accents and ages, of stories being told whilst seeds were being swapped, that I thought was special.

I know you're a grower and a fellow seed saver: What inspired you to accept the Beanfeast commission?

I was intrigued. My understanding about saving seeds is very limited, but I was certain that I would feel a sense of affinity with people who grow and share seeds. I was curious to see how people's knowledge of growing and their seeds could be communicated through sound.

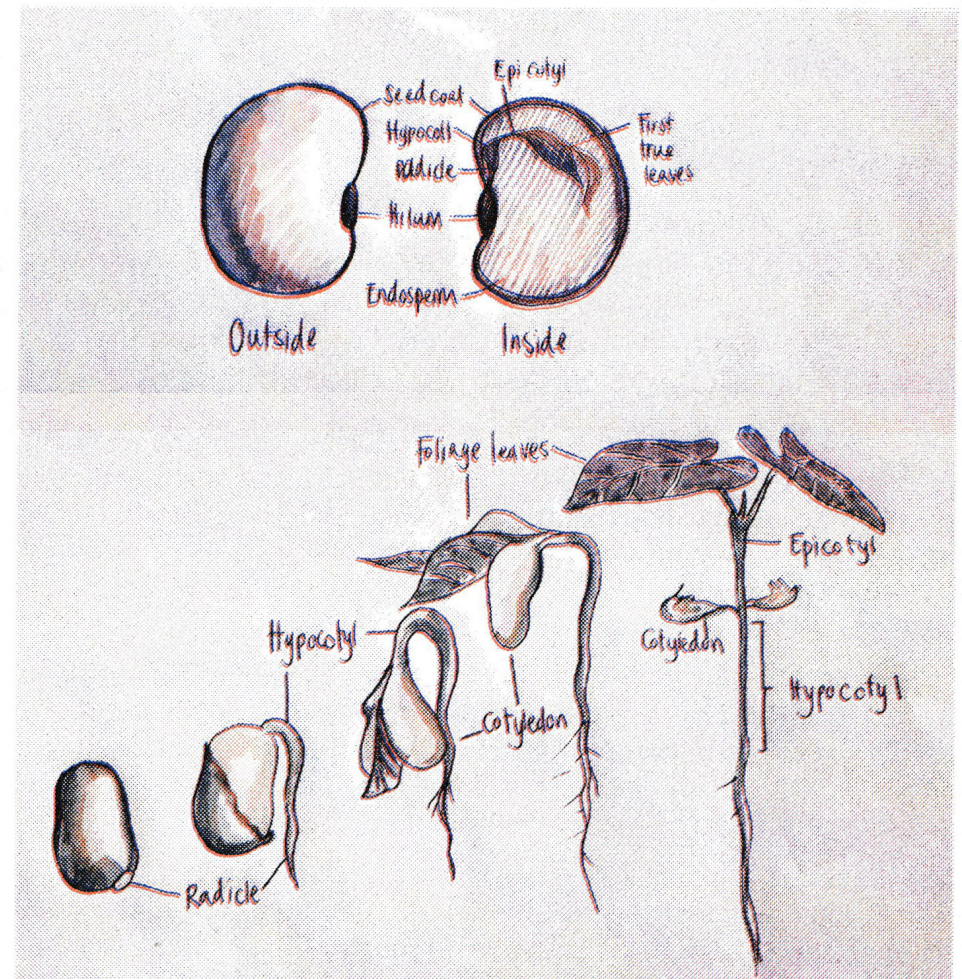
What's the role of artists such as yourself, and your work, in the seed sovereignty movement and the wider ambitions of more earth-centred living?

This is very close to my heart and it's on my mind a lot. As artists, we can create a space or experience through which people can process their feelings, empathise with and be curious about their relationships with the Earth.

I think as a sound artist the idea of amplifying the sounds and voices that wouldn't otherwise get heard is a useful and powerful contribution. Maybe most importantly, singing and music-making

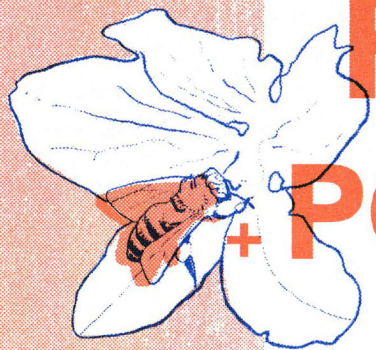
as a way of togetherness and celebration is something we all need more of, and again, we could look to those societies where food production and community are more intertwined. Maybe we need a big sing-along at the next Beanfeast. I like the idea of inventing new traditions!

www.nellcatchpole.com @nellcatchpole



"You don't have to let a few large seed companies determine what you grow"

Sue Strickland, author of Back Garden Seed Saving



THRESHING LINNAEUS, WINNOWING WORDS

K Greene of 'Hudson Valley Seed Co.' gave an inspiring talk at the 2022 'Organic Seed Alliance Conference' on 'Non-Binary Botany'. K has generously shared this with us. Here is a transcript of part of the talk, found in full on Youtube, outlining the different ways we might interact with plants.

Why do I want to give Carl Linnaeus a thrashing? Because he wrote the book *Systema Naturae* (1735 – 1758), which really set the stage for how we think about and talk about plants today. Carl used a language to talk about botany which was about marriage, about 'men and women', it was very heteronormative. He wrote about plant reproduction in a binary, in which 'male' parts of flowers interacted with 'female' parts.

Not only was he very binaried in his way of seeing botany, he was very hierarchical. Linnaeus saw the male part of flowers as dominant, and of greater taxonomic importance than the female parts. To Linnaeus, the female organs of plants were subordinate and of less importance. This language is still with us when we talk about plants.

When I started teaching about plant botany, I was listening to myself use words about plant reproduction that didn't resonate with me or the way that my identity interacts with plants. I thought, "There have got to be other ways of thinking about this!" I wanted to contemplate what it might mean to 'queer' botany.

I want to recognise that I am talking about issues with the way that western botanical science talks about plants. There are so many other ways to think about plants, across time and cultures, including traditional ecological knowledge, eastern sciences, spiritual approaches and personal approaches.

So, for me, queer botany is a way of recognising that there is no one way to talk about and understand plants. There are a multitude of ways.

I've been encountering different perspectives on queer botany; I've been reading and talking about non-binary botany. One approach looks at plants that have become symbols of queerness. Whether they are insults or reclamations of insults, pansies, carnations and lavender all come with stories related to the queer experience.

Another approach is to look at plants which don't fit into the binary classification system. Dungowan bush tomato, primroses, dandelions and Kentucky bluegrass, they all reproduce in ways that just do not fit into a binary understanding. The literature around these plants often describes them as 'insane' and 'weird'. Titles such as 'Really Weird Sex in the Garden' and 'Weird World: Plants that Keep Switching Sex are First to be Named Gender Fluid'. These kinds of words have been used against me too. Why are we applying words such as 'weird' to people and plants, when these people and plants are actually expressing themselves in a very 'normal' way?

We have plants that we think fit into the binary classification system, like figs, squash, peas and beans. But do they really? These plants rely on pollinators. They do not have a one-to-one relationship between a 'male' and a 'female' plant. There are many different ways that plants share pollen. Some plants are self-pollinating, containing everything they need within themselves. So why do we separate their parts rather than seeing them as whole?

We have queer people involved in agriculture and plant breeding. We need to look at what it means to be queer and non-binary in the plant world right now. There are plant and human relationships which can support the health and wellbeing of the LGBTQIA+ community, whether this is queer herbalism, or something like the 'Queer Ecology Hanky Project'. There are many ways that plants support the physical, mental and spiritual health of LGBTQIA+ and non-binary communities. That has to be part of what we think of when we think of 'queer botany'.

I want to leave you with some questions:

What language can we use to describe plant lives that shed the binary, sexist, anthropocentric paradigm in botany? How do we share these essential perspectives out in ways that can transform the human language of plants, and deepen our relationship to plants and ourselves?

Follow the non-binary botany movement @nonbinarybotany

POLLINATING MECHANISMS AND SYSTEMS IN COMMON VEGETABLE CROPS

Crop Common Name	Crop Species	Primary Pollinating Mechanism(s)	Pollinating system	Wild Crossable Species
Onion	<i>Allium cepa</i>	insects	cross	N
Garlic	<i>Allium sativum</i>	insects	most are sterile	N
Garden Chives/ Garlic Chives	<i>Allium schoenoprasum/tuberosum</i>	insects	cross	N
Dill	<i>Anethum graveolens</i>	insects	cross	N
Celery	<i>Apium graveolens</i>	insects	cross	Y
Beetroot/ Swiss Chard	<i>Beta vulgaris</i>	wind	cross	Y
Mustard	<i>Brassica juncea</i>	insects	cross	Y
Kale	<i>Brassica napus</i>	insects	cross	Y
Broccoli, Cauliflower	<i>Brassica oleracea</i>	insects	cross	N
Brussels Sprouts, Cabbage, Kale	<i>Brassica oleracea</i>	insects	cross	N
Chinese Cabbage/ Mustard	<i>Brassica rapa</i>	insects	cross	N
Turnip	<i>Brassica rapa</i>	insects	cross	Y
Pepper	<i>Capsicum annuum</i>	self	self #3	N
Lambsquarters	<i>Chenopodium album</i>	wind	cross	Y
Escarole/ Endive	<i>Cichorium endivia</i>	self	self #2	N
Radichio/ Belgian Endive	<i>Cichorium intybus</i>	insects	cross	Y
Watermelon	<i>Citrullus lanatus</i>	insects	cross	N
Coriander	<i>Coriandrum sativum</i>	insects	cross	N
Armenian Cucumber	<i>Cucumis melo</i>	insects	cross	N
Cantaloupe/Honeydew/Musk Melon	<i>Cucumis melo</i>	insects	cross	N
Cucumber	<i>Cucumis sativus</i>	insects	cross	N
Pumpkin, Summer & Autumn Squash	<i>Cucurbita pepo</i>	insects	cross	Y
Winter Squash	<i>Cucurbita moshata</i>	insects	cross	Y
Carrot	<i>Daucus carota</i>	insects	cross	Y
Rocket	<i>Eruca sativa</i>	insects	cross	N
Fennel	<i>Foeniculum vulgare</i>	insects	cross	N
Lettuce	<i>Lactuca sativa</i>	self	self #1	Y
Gourds	<i>Lagenaria siceraria</i>	insects	cross	N
Tomato	<i>Solanum esculentum</i>	self	self #1/#2	N
Basil	<i>Ocimum basilicum</i>	insects	cross	N
Parsley	<i>Petroselinum crispum</i>	insects	cross	N
Lima Bean (Butter Bean)	<i>Phaseolus lanatus</i>	self	self #2	N
French Bean	<i>Phaseolus vulgaris</i>	self	self #1	N
Pea	<i>Pisum sativum</i>	self	self #1	N
Radish	<i>Raphanus sativus</i>	insects	cross	Y
Turkish Aubergine	<i>Solanum gilo</i>	self	self #2	N
Aubergine	<i>Solanum melongena</i>	self	self #2	N
Spinach	<i>Spinacea oleracea</i>	wind	cross	N
Broad Bean/ Fava Bean	<i>Vicia faba</i>	self	self #2	N
Cowpea	<i>Vigna unguiculata</i>	self	self #2	N
Corn	<i>Zea mays</i>	wind	cross	N

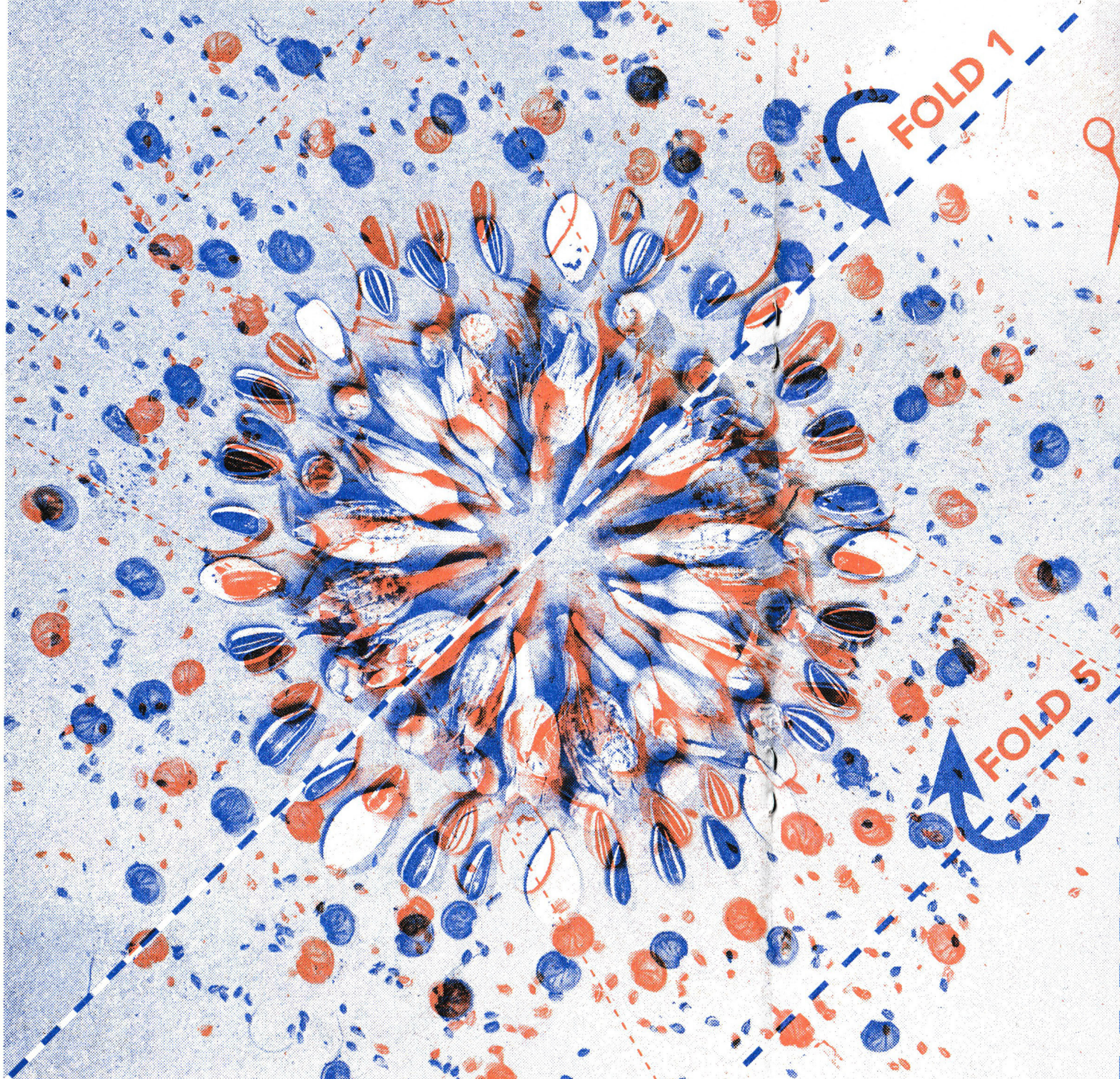
Self #1: self pollinating species, outcrossing is usually < 1%

Self #2: self-pollinating species that often outcross between 2-5%

Self #3: self-pollinating species that may cross at rates > 5%

from the Organic Seed Resource Guide by Micaela Colley, Laurie McKenzie, Alex Stone, Linda Brewer, Brian Baker - <https://eorganic.org/node/378>





SEED GATHERING READING LIST BOOKMARK



PRACTICAL GUIDES

Back Garden Seed Saving
Sue Stickland

**The Organic Seed Grower:
A Farmer's Guide to Vegetable
Seed Production**
John Navazio

Seed to Seed
by Suzanne Ashworth

NOVELS

Down the Garden Path
Beverley Nichols

The Seed Keeper
Diane Wilson

MEMOIRS

Garden Notebook
Beth Chatto

Modern Nature
Derek Jarman

**Gathering:
Memoir of a Seed Saver**
Diane Ott Whealy



OTHER NON-FICTION

The Cabaret of Plants
Richard Mabey

First the Seed
Jack R. Kloppenburg

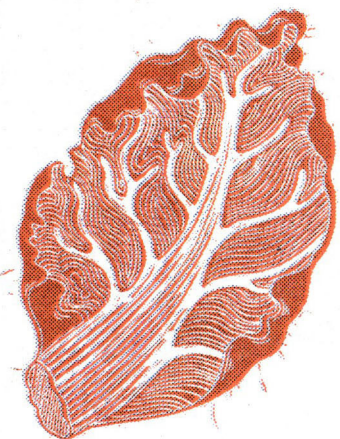
The Carrier Bag of Fiction
Ursula Le Guin

The Mushroom at the End of the World
Anna Lowenhaupt Tsing

**Sacred Seeds (New World Plants
in Early Modern English Literature)**
Edward McLean Test

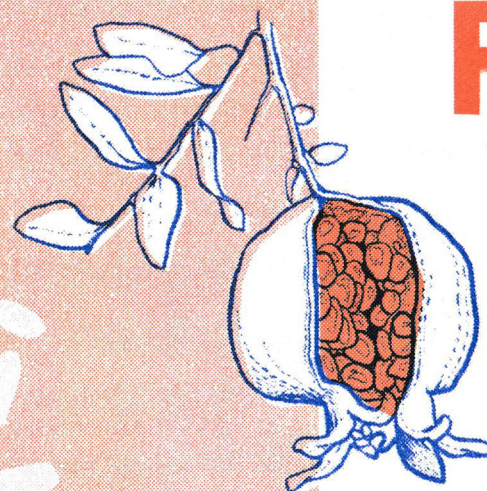
**The Globalization of Wheat
A Critical History of the Green
Revolution**
By Marci Baranski

**You can find more suggestions,
inspiration and e-books here:**
seedingthecommons.org/readinglist



seed name

RIPEN



ONLY A SHADOW
by Carmen Giménez Smith

My daughter gathers the seeds she finds in our desert, calls them spirits — *the spirits are us*, she says when I worry those orbs in my fingers to conjure her birth. The wind's first thought is to craft those seeds: vessels when the tree worries she's not enough of a multiplicity, that she will burn into the cosmos. The cosmos is no thought, no worry, more than us, but less than wind, and the wind is only the infinite, not the body's death, which is, after all, only a particle, but time formless as space. This is only if the wind worries at all. The seed doesn't think — she is the doubling ambition of a vessel. In the wind, the idea of the copy is translated by time. We were once that idea. My daughter collects me in a box marked for spirits where I unsettle the other seeds begging for wind so that my sound will echo a thousand miles away.

My daughter was the pulse I toss **into the wind with the seeds**. Particles of us pass over like whispers from the cosmos, the clatter the wind makes. I worry birds will take her into themselves, that she'll become a fleck of their transience, but this is how we furrow ourselves into the cosmos, the twine of our breaths into wind, into carbon, into the tree's colossal fingers reaching back from under the earth.

CARRIER BAG THEORY OF SEEDS

Former Southeast England Seed Sovereignty Coordinator, Helene Schulze, reflects on the practice of seed collection and how the invention of containers can be seen to change the story of human evolution...

"It is a human thing to do to put something you want, because it's useful, edible, or beautiful, into a bag, or a basket, or a bit of rolled bark or leaf, or a net woven of your own hair, or what have you, and then take it home with you"

Ursula K. Le Guin, Carrier Bag Theory of Fiction

In the 'Carrier Bag Theory of Fiction', science-fiction writer Ursula K. Le Guin explores a theory by Elisabeth Fisher that human's first cultural device was likely some sort of container, a sling or net. It is a feminist challenge to the commonly-held belief that the invention of tools (specifically tools for maiming, killing, dismembering) was the primary catalyst for human evolution and human success. Instead the container, to collect and store berries, seeds, fruits, roots, nuts and leaves, was likely at least equally essential for these early hominids. How else would they have brought the foraged goods home to feed their young or save for later?

Le Guin sees this as a fundamental and brilliant challenge to a story of human history that has consistently prioritised the experiences of men. Fisher posits that the carrier bag was likely invented by women (and the honing of these containers remained

women's domain for thousands of years following in basketry, pottery and weaving). It is likely this which made it less likely to be taken seriously in research on human evolution.

Similarly, for millennia seed keeping has been women's work. Vandana Shiva has called the corporate consolidation of the seed regime and the proliferation of an industrial agricultural model the 'masculinization of agriculture' ¹ a transition from farming as a nurturing practice to one of violence and control. I think it's important to go beyond essentialist understandings of 'women' and instead focus on the qualities or philosophies embedded in these practices, but perhaps her point stands nonetheless.

If we follow Fisher's idea that the container was the first cultural device (or at the very least among the first), then perhaps it follows that seed saving was one of our first cultural

practices. That is, the collection of seeds for exchanging or sowing, rather than the immediate consumption of seeds. Archaeobotanical research² in Ohalo II looks at a 23,000-year-old hunter-gatherers' sedentary camp on the shore of the Sea of Galilee (Israel), showing evidence of plant cultivation. That's about 12,000 years before the Neolithic Revolution or the start of agriculture. This would indicate that humans collected and saved seeds of plants they wanted to cultivate significantly earlier than initially thought.

As part of the collective behind the London Freedom Seed Bank, I find this a very exciting prospect. When we collect seeds, we are tapping into an ancient lineage. It is something we have done for tens of thousands of years. This collection of seeds is deeply entangled with our development as civilisations, cultivating and breeding plant varieties most conducive to our health, growing conditions and appetites. The relationship between humans and seeds is old and essential. I find recognising this, and our role in keeping this practice alive, deeply empowering. It is an invitation to learn from all who came before us and recognise the monumental contribution seed savers have played for millennia in building food systems which nourish us now.

Acknowledging the specific role of women (and collectives of women in particular) in our seed history (and that of carrier bags) can also serve as an invitation for re-valuing this work and women's work more generally. I see seed saving as care work: care for ourselves, for our communities and for more-than-human others. Seed saving teaches abundance; often we are left with far too much seed than we can feasibly use alone. So it is gifted. Seed saving builds more diverse and delicious food futures. It can provide access to culturally significant, healthy food to populations otherwise struggling to access it. Seed saving can work in harmony with the earth, to help us adapt to increasingly tricky and uncertain climatic conditions.

Re-examining human evolution through a lens of care-full cohabitation and entanglement with seeds opens opportunities for rethinking the mess we find ourselves in now. The Food and Agriculture Organization (FAO) estimates that we've lost 75% of crop diversity since 1900 ³. Centering the importance of seeds in our history and our continued flourishing may help rally more into the global seed sovereignty movement, a movement you are in as soon as you begin collecting (and sharing) seeds of your own.
www.londonfreedomseedbank.org/

1. Shiva (1999) 'Monocultures, Monopolies, Myths and the Masculinization of Agriculture'

2. Snir A. et al. (2015) 'The Origin of Cultivation and Proto-Weeds'

3. <https://www.fao.org/news/story/en/item/46803/icode/>

HARVEST

GREEN HARVEST

Irish seed farmer Richard Murphy of Robin's Glen, County Kilkenny, reflects on a Green Harvest

In the last forty years, we have rapidly changed our scale and system of farming. When we switched focus away from livestock in our rotation, our yields fell through the floor. Choosing to mimic nature as much as possible, aiming to produce a green harvest, has been our guiding star.

A green harvest is achieved when the main crop, for example barley and peas, is undersown with lower-growing plants such as chicory or red clover. When the main crop is ripe and ready to harvest, the remaining plants are still green. These plants cover and protect the soil from the scorching summer sun and their roots extend deep into the soil, feeding it and driving more diverse biology below the surface.

In the future new technologies that can measure the nutrient density of food, will tell the consumer how well that food was produced. Organizations like Talamh Beo (the Irish branch of the La Via Campesina movement) have been a great help to us in this last year. Together with 15 other likeminded farms, Robin's Glen are members of an EIP (European Innovation Partnership) group looking specifically at soil biodiversity, trialling new and innovative practices, and sharing experiences together.

2022 was the hottest year on record. Walking through our crop at the end of August, when most farmers were rushing to harvest because grain moisture reached single figures, I put my hand down into the crop and still found the soil moist. I scooped up a handful and found a worm in it.

"It was not till I experimented with seeds plucked straight from a growing plant that I had my first success...the first thrill of creation...the first taste of blood"

Beverley Nichols, Down the Garden Path

WILD HARVEST

Guidelines for gathering wild flower seed

The Wildlife and Countryside Act 1981 protects wild plants, making it a criminal offence to "intentionally pick, uproot or destroy any wild plant"¹ but carefully collecting seed from wild plants does little damage and is simple to do. So why would you want to do this?

Native wildflowers provide ideal pollinator habitat whether in a garden or on the farm, whilst also supporting natural pest control by sustaining predators of crop pests, protecting soil from erosion and improving filter runoff from fields. Native seed mixes are available but can be costly, so why not gather your seed in the wild and establish native plant areas which will become a readily available source for additional seed in future?

As with most seed saving, the trick is to emulate nature as much as possible:

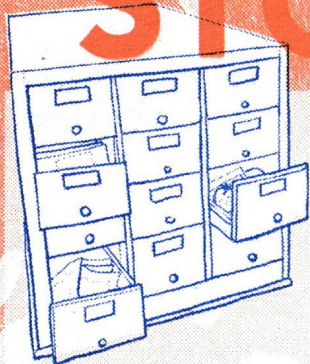
- Get to know your foraging spots, identify the plants you want to keep seed from - e.g. are there particular wildflowers, herbs or grasses that have grown well on your land or been especially attractive to pollinators?
- Observe the plants and collect your seeds just before the plant is about to shed them - this might be earlier than a cultivated plant and the seeds will still be ripening so place a paper bag carefully over the flower head and cut the plant stem before inverting and tying the bag shut. Hang to store whilst they dry.
- Only harvest seed from abundant species. Don't risk depleting a rare plant in the wild. Abundant plants are also more likely to be successful for you when you plant them on your own land.
- Always leave the plant with more seed than you take to ensure the continuation of the species in the original location and provide sustenance for other wildlife. A good rule of thumb is not to harvest more than 20% of the available seed.

Find more resources at growwild.kew.org and plantlife.org.uk

<https://robinsglen.ie/> <https://talamhbeo.ie/>

1. <https://www.legislation.gov.uk/ukpga/1981/69/section/13>

STORE/REST



*"On colder days as a boy I would
spend hours in the nursery
daydreaming among the seed packets
piled on top of each other, like an
old-fashioned hanging at the Academy"*
- Derek Jarman, Modern Nature

NOTES

CocinaCoLaboratorio(CoLaboratoryKitchen)isatransdisciplinary project that gathers creatives, farmer communities, scientists and cooks around the kitchen table to exchange knowledge, design and take action towards sustainable food futures. the Biocultural Living Archives (BLA) initiative was conceived as a mobile and organic community archive



Seeds are carriers of biological and cultural information that trigger a network of relationships that connect with the different components of the food system. Seeds contain the metaphor of life: they are wandering and memory, inheritance and dispersion, they are death and potential life. We collect, care for, store and sow them to claim different ways of knowing the world through local agrobiodiversity.

www.archivo.bio

SEED/LEMNISCATE

by Zoe Palmer

lemniscate. / (ˈlemnɪskɪt) / noun.

a closed plane curve consisting of two symmetrical loops meeting at a node.

i
and when our ancestral grandmothers wove lineages of relationship
with seed they braided tight into the crowns of their daughters
black rice okra sorghum that they would remember how to
breathe that their hands would silently tend to freedom their
bodies fugitive know the medicine and we their descendants
agreed from the constellated sky the wet-wide eyes of the oxen
black haw and cotton root bark from acorn crane's bill opium
we agreed waterlily honeybee mycelium bacteria algae
quartz soil crab wind bird mammal fish fire rock water tree we
agreed to seek through and with each other our dream of rest
regeneration encoded but unlived by us in them and them in us
never afforded by the system but/

ii
in the half light of a cold winter moon I drape my body brown over
the long warm hive
close my eyes
what are we doing to this world? I ask without speaking
then rest listen breathe in the dreaming
an opening

the bees might choose to move through
on their songs of ivy gorse in ribbons of 8
by their truth I want to be stung
but our allies don't answer not today

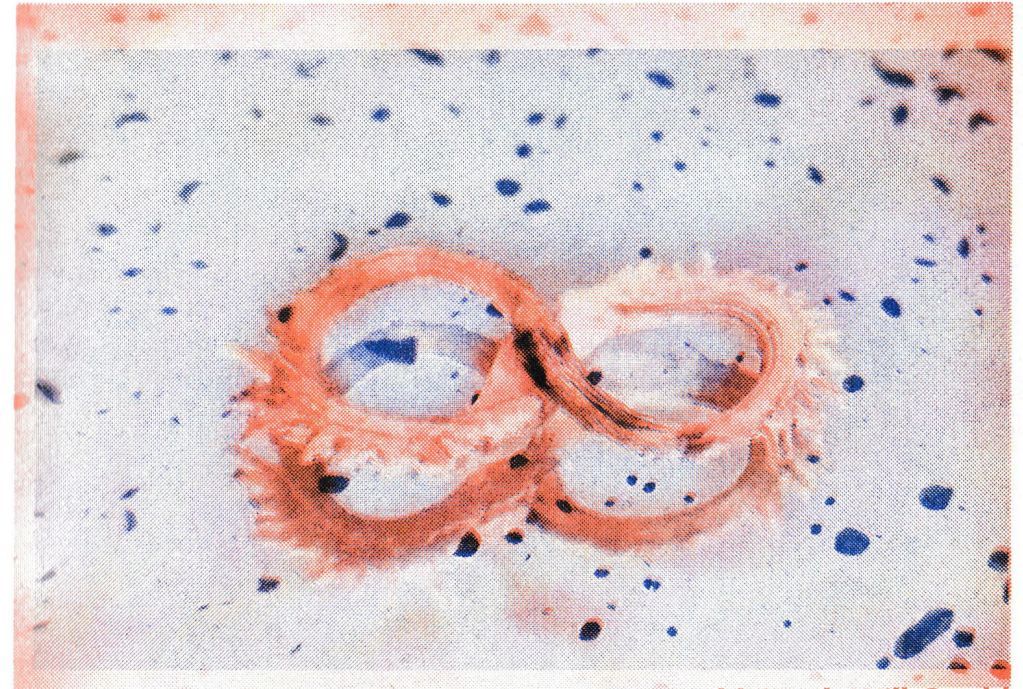
iii

seed as lemniscate
infinite cycles holding true
under the earth's deep weight

wherever you are from a resting space
whatever is yet to become

stay with the seed

wait

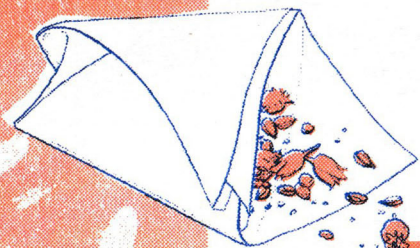


Marigold Seed: Will Gould

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Zoë Palmer is a writer, facilitator + herbalist whose work spans
performance, installation, text + participatory events. Her regenerative
practice explores our relationship with the more than human world.
A natural beekeeper for 15 years, she's currently growing a British
African herbal garden.

Will Gould is an artist gardener working across the UK.
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SHARING



FESTIVAL OF NATIVE AND ANCESTRAL TOMATOES

Charlie Gray, former Northern England Seed Sovereignty Coordinator, was invited by Dr Gabriela Toledo Ortiz to a veritable tomato feast in Oaxaca, Mexico.

As the steam, wood smoke and aroma of ancestral maize rose in the air, hundreds of people gathered in a beautiful family restaurant, Mi Tierra Linda, serving traditional Oaxacan food from a wood fired kitchen. In September this year, I was invited to la Feria del Jitomate Nativo y Ancestral, the Festival of Native and Ancestral Tomatoes.

There were talks, tasters, a photographic exhibition and a veritable feast of Oaxacan food and stalls selling local tomatoes. Everyone exchanged recipes, stories of success and failure, and shared concerns and inspiration for the future. The event finali was a traditional Oaxacan brass band and Guelaguetza (a traditional dance).

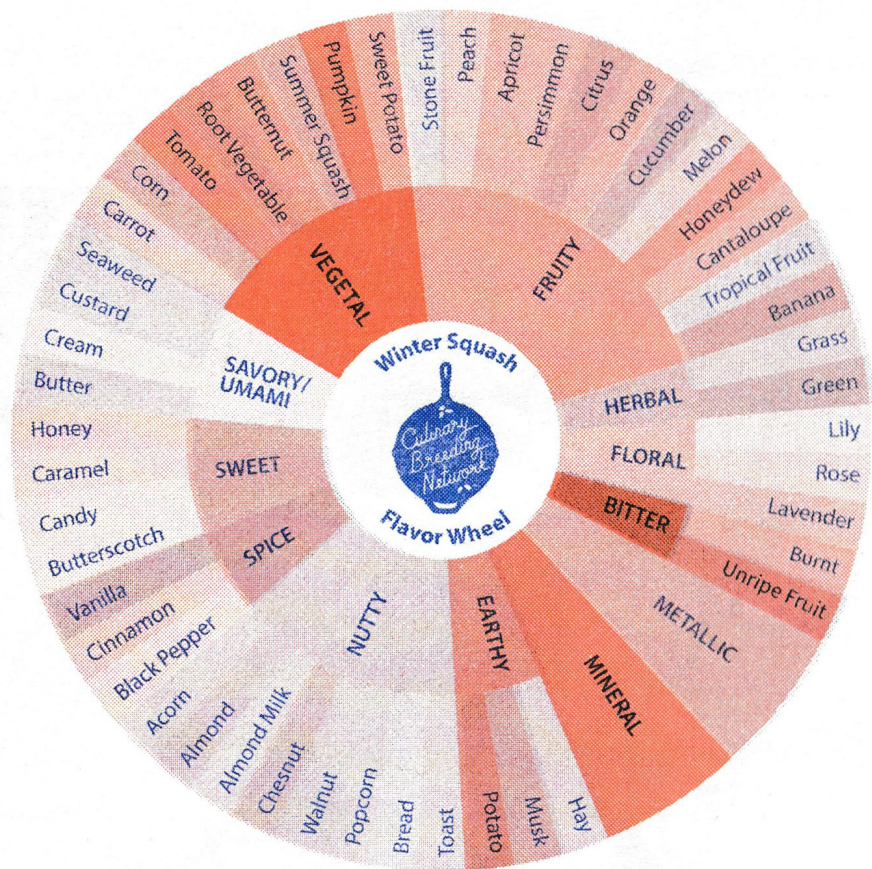
Salsas are the mainstay of Mexican food. Oaxaca has more than its fair share, with the cuisine recognised as patrimonio cultural (cultural heritage) by UNESCO. Local chefs prepared demonstrations and delicious taster plates of renowned recipes, highlighting the role of ancestral tomatoes as a basic ingredient of local cuisine.

We owe gratitude to Mexico specifically the domestication and diversification of tomatoes. We may also be grateful for the potential that Mexican, and particularly, Oaxacan tomatoes hold for future adaptation of the cultivar, due to their wide range of habitats and associated adaptations.

"Sorting my seeds often feels more exciting than opening Christmas presents because I have exactly what I want! Every screwed-up bag is a pleasant surprise, sometimes bringing a sigh of relief because we harvested something badly needed, or something which rarely sets seed". Beth Chatto, Garden Notebook



A WORLD OF FLAVOUR



www.culinarybreedingnetwork.com

www.eatwintersquash.com

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The Seed Sovereignty Movement has been working to re-expand crop diversity, and as we do so, we open up to a world of new flavours. In the search for ways to describe new and unique flavours of novel vegetables, we have looked to the US-based Culinary Breeding Network.

The Culinary Breeding Network connects farmers, plant breeders and chefs together, using creative techniques to alert people to the tastes that are possible when we reinvigorate crop diversity. As well as artistic posters, vegetable sagre (festivals) and variety showcases, they have devised a squash Flavour Wheel. It is the first of its kind to showcase the diversity of taste in one vegetable crop. This can be used to help chefs and food lovers distinguish between the unique tastes of squash varieties.

Lane Selman, founder of the Network explains: "Flavour wheels can facilitate marketing of diverse and novel vegetables, like winter squash and tomatoes, to consumers by providing a lexicon for describing flavour differences. The process to create a flavour wheel should include a literature review of past and current flavour research on the chosen vegetable (or fruit or grain) to create a preliminary word bank and formalizing a flavour wheel draft to be tested then refined."

Lane's guide to building the lexicon:

- Choose your vegetable, then acquire 8-10 different varieties to have a wide range of flavours represented
 - Recruit minimum 10 professionals to develop the lexicon (flavour vocabulary).
 - Taste each sample simply – raw is preferred if possible. Make sure each sample is treated the same – same amount of oil, salt, etc.
 - Ensure the evaluation setting is clean, streamlined, and attractive with as little variation between samples as possible.
 - Provide water and unsalted crackers as a palate cleanser between samples.
 - Disguise names of the varieties you are evaluating to prevent name bias.
 - Try samples in a random order. People often have stronger reactions to the first variety they taste than to subsequent varieties.
 - Minimise distractions - e.g. noise, ambient temperature, strong aromas.
- Ask the right questions. To avoid getting generic adjectives such as "sweet", ask "What does this remind you of?" and "What else does it taste like?"

CEIRCH DU: BLACK OATS

Katie Hastings, The Seed Sovereignty Programme's Coordinator for Wales, tells us about a monumental feast at which a group of farmers and growers tasted black oats for the first time...

One October afternoon, we set the places for a feast. Enamel plates punctuated a long table under festoon lights strung from the rafters. Wind whistled off the Irish sea. At first glance, it may have appeared a standard farm to fork meal, a wholesome sharing of local produce and company, but this feast was different.

Before tucking in there was a pause that was longer than usual. A current of excitement ran the length of the straw bale barn. This was the first time we would eat Ceirch Du (black oats) in our collective living memory.

What led us to this moment? A history of oat-growing in Wales, spanning many hundreds of years. More recently, only two farmers – Iwan Evans and Gerald Miles – were left growing Ceirch Du in isolation, fearing that the crop would disappear altogether. Connecting Iwan and Gerald with each other was an important moment in the process. A group

formed of enthusiasts, keen to work collectively to revive oat diversity in Wales. With time, we built and shared knowledge on the lineage of these seeds. Alongside the quest to resurrect the black oats, we were gifted a multitude of rare oat seeds from a plant breeding centre. Growing these seeds on multiple farms, we got to know them, learning about their unique shapes, characteristics and strengths. And after all that, we had still just begun to resurrect these near-forgotten seeds.

The chapters that followed found us researching oat processing and discovering a lack of accessible, small-scale oat processing equipment in Wales. We found ourselves searching for engineers to develop the necessary small-scale technology. In 2021, engineer/crofter/baker Adam Veitch launched the 'Tiny Oat Collider' that could dehull the black oats we

so badly wanted to taste. We were getting ever closer to tasting them, now we finally had these oats free of their hulls.

We had no idea if the Ceirch Du would taste different to other oat varieties, but we needed to find out. We gathered around a picnic bench, four plain oat biscuits sat on plates, made with Gerald's Ceirch Du, Iwan's Ceirch Du, Maldwyn oats and a commercially available white oat. Unsure if the oats would even taste of anything at all, we took our first bite. Astonishingly, they did, each sample tasted significantly unique. The Ceirch Du was described as 'nutty', 'mushroomy', 'delicious', 'creamy', like 'flowers' or 'hay'. Laughter erupted from the farmers, an outburst of amazement that they could finally taste their oats.

With the controlled taste testing complete, it was time to really celebrate the Ceirch Du oats in all their complexity. We had found

the perfect chef for this last piece of the puzzle, Jacqueline Morgan is a fierce advocate of local ingredients and heritage dishes. Samples of Ceirch Du were posted in advance and Jacqueline experimented with different winnowing, cooking and presentation ideas. Inspired by the traditional dishes of Wales, she devised a menu both humble and exquisite, perfectly fitting for an oat so remarkable and yet so down to earth.

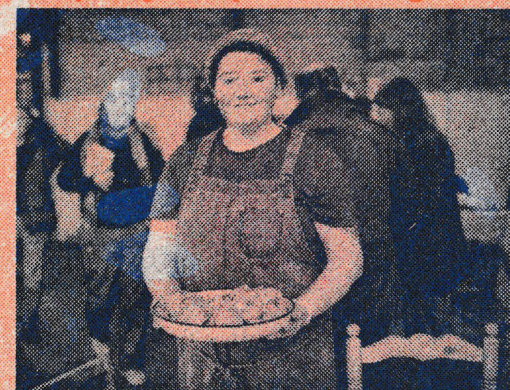
Jacqueline dried Ceirch Du for eight hours in an oven to mimic the kiln drying of old. She fermented oats with yeast for 24 hours to make a sour black oatmeal and barley bread. And at last we feasted. We ate traditional Cawl (Welsh stew) with Ceirch Du, Jacqueline used laverbread (seaweed) with Ceirch Du to make dumplings, followed by sweet Welshcakes made with Ceirch Du, of course. And as if this wasn't enough, our dessert was a Ceirch Du, acorn and apple tart.

To say this food was 'exquisite' wouldn't do it justice. It was more than tasty; it changed our relationship to the land it was grown on, the farmers who grew it, and the future of our food diversity.

#llafurni

BLACK OAT + LAVERBREAD DUMPLINGS

Ceirch Du a Bara Lawr Twplenni
Recipe by Jacqueline Morgan



150g Oat Flour or Oatmeal
75g Suet, Lard or Butter
55g Laverbread
1 tsp Bicarbonate of Soda
A small bunch of Parsley, finely chopped
½ tsp of Salt + Black Pepper

- Weigh the flour into a bowl, add the salt, pepper + bicarb
- Rub in the suet, lard or butter
- Add the laverbread and mix to form a dough
- Divide into equal sized balls and roll in oatmeal
- Chill or keep in a sealed container until needed
- To cook, either simmer in a broth or stew for 20 minutes or place on a lined tray in a preheated oven at 180°C/ gas mark 4 for 15 minutes



Photos by Jason Taylor


THE SEED GATHERING HAS BEEN CREATED BY:



Seed
SOVEREIGNTY

THE GAIA FOUNDATION

UK GRAIN LAB

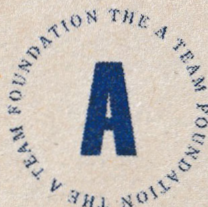
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