Path to Seed Citizenship

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4. Seed Library
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Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
Seed-Saving: A Brief History

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
• Colonial times: seed production mainly with wealthy landowners

• They could afford to import and adapt seed for New World’s growing environment.

• Many of these landowners — Thomas Jefferson and George Washington among them — formed agricultural “societies.”
“The greatest service which can be rendered to any country is to add a useful plant to its culture.”

- Thomas Jefferson
In 1839, the commissioner of patents, Henry Ellsworth, secured funding from Congress to collect and distribute agricultural seed.

Ten years after it started, the Patent Office sent out 60,000 packages of seed annually by the U.S. Postal Service.

By 1855, the office had shipped out over 1 million seed packages.

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
1850 - Patent and Trade Office - Free Seeds

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The successor to this Patent Office free seed program was the USDA.

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When it was founded in 1862, one of the USDA’s primary purposes was the procurement, propagation and distribution of new and valuable plant varieties to farmers across America (the majority of the population at the time). Thirty percent of its budget was devoted to collecting and distributing seed.
Fifteen years after it was established, one-third of the entire USDA budget was devoted to the free seed distribution program.

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
Many seed companies began forming during this time

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Significant obstacles faced the private seed industry.

The government’s free seed program was the biggest barrier.

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At the beginning of the 20th century, the refocusing of Mendel’s work on heredity led to the hybridization of seed corn.

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With hybridization, there was some built-in protection for those who performed the research.

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Lincoln signs the Morrill Act in 1862
• 1883: American Seed Trade Association forms.

• Members were private seed companies that came together to promote their interests before Congress.

• A primary goal was to stop the government’s free seed distribution program.

• Ultimately, in 1924, they succeeded when the USDA seed program was terminated.

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Re-cap:

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• **1861** The Patent and Trade Office had annual distribution of more than 2.4 million packages of seed.

• **1866** The first commercial seed crop, cabbage seed, produced on Long Island for the U.S. wholesale market.

• **1883** American Seed Trade Association (ASTA) formed and immediately lobbied for the cessation of the government programs.

• **1897** 1.1 billion packets of seed distributed via USPS

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Copyright and Patent Laws began to change in 1923, but still, seed still belonged to all and no one could patent seed. Farmers could save and share.

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1930 - The Plant Patent Act

Asexually Reproduced Plants

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
1970 - The Plant Variety Protection Act

Seed Propagated Crops

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1980 – Diamond v. Chakrabarty
447 U.S. 303

“The fact that micro-organisms are alive is without legal significance.”

“Anything under the sun made by man can be patented.”

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
1986 – The Coordinated Framework for Regulation of Biotechnology

“...would focus on product, not process, of genetic modification

...Only regulation grounded in verifiable risks would be tolerated.”

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1986 – The Coordinated Framework for Regulation of Biotechnology

It was “expected to evolve in accord with the experiences of the industry and the agencies, and, thus, modifications may need to be made through administrative or legislative actions.”

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“...no new laws would be passed to regulate biotechnology...

“...existing statutes are sufficient to review the products...”

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2017 Update to Coordinated Framework

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
Important Legal Moments

• 1930  The Plant Patent Act – clonal

• 1970  The Plant Variety Protection Act - seed propagated crops.

• 1980  U.S. Supreme Court - allow genetics in a plant to be patented.

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Important Legal Moments cont.

• 1992 The Coordinated Framework - no new laws would be passed to regulate biotechnology.

• 2000 Utility patent protection extended to plants.

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3 companies control more than half (53%) of the global commercial market for seed. The top 10 companies account for 73% of the global market (up from 67% in 2007).


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2012: 3 Companies Control 72%

- DuPont 32%
- Monsanto 30%
- Syngenta 10%
- Bayer 6%
- Vilmorin 6%
- Other 16%

2012 Global Commercial Seed Market

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
Seed Industry Structure
1996 - 2013

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Consolidation continues:

- In July, Chemchina purchased Syngenta
- Bayer is in process of purchasing Monsanto

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
More and more, seeds are patented and can’t be legally saved.

Beth Bridgeman, Antioch College,
adapted from Bill McDorman,
Rocky Mountain Seed Alliance
The six largest agrichemical seed industry giants are also pesticide manufacturers. They have a dangerous chokehold on the global agricultural research agenda. They accounted for 76% of total private sector research and development (R&D) spending in the seed sector and 76% in the agrochemical sector in 2010.


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These companies devote, on average, at least 70 per cent of all seed and crop R&D in pursuit of biotech and genetic engineering. Why? GE seeds, particularly herbicide tolerant seeds, are the growth engine for the pesticide industry.


Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
In the US, the number of public sector breeders working on fruit and vegetable crops declined by 43 per cent from 1994 to 2001.


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In 2007, the combined agricultural R&D budgets of the “Big Six” firms was over nine times higher than the crop science R&D spending by the USDA’s Agricultural Research Service, and at least 23 times higher than the R&D spending at international crop breeding institutes under the umbrella of the Consultative Group on International Agricultural Research (CGIAR)

http://www.seedsavers.org/site/pdf/HeritageFarmCompanion_BigSix.pdf

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• Commercial world seed market: $47 billion. “line 8 ft. long”

• U.S. seed market: $12 billion. “line 2 ft. long”

• Organic and new small company Seed Sales: approx. $100 million+. “1/5 of an inch”

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
The monoculture productivist model has contributed to the loss of roughly three-fourths of plant genetic diversity since the 1900s. So today, just 12 plants and 5 animal species supply 75 percent of the world’s food, making our sustenance unnecessarily vulnerable to climate change and disease."

"What is Happening to Agrobiodiversity?" Food and Agriculture Organization, United Nations, Gender and Development Service, Sustainable Development Dept.2004 [verified 4/25/14]

Beth Bridgeman, Antioch College, adapted from Bill McDorman, Rocky Mountain Seed Alliance
Movement for Seed Sovereignty.

• Saving and sharing seed for security.
• Better adaptation for our region (not AAS)
• Community-building.
• Seed bank vs. seed sharing.
• Varietal increase.
• Open-pollinated, stable.

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• Seedsaver’s Exchange

• USDA National Center for Genetic Resource Preservation, Ft. Collins, Co

• ICARDA-Syria, others around the world

• Svaldbard Global Seed Vault

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What seed can we save?
“If it is patented, it has to say so in the catalog and on the packet. No guessing. **Everything that is not labeled is not patented.** If it is patented and says "PVP" you can still save the seeds. This is a much less restrictive level of patenting (first allowed in the 1970's.) It allows farmers to continue to save their own seeds. You just can't **sell** them without coming to an agreement with the patent holder.

Some seeds are now registered with a utility patent, a much more restrictive level of control. Almost no seeds available to the gardening public have this level of restriction YET. And no **open-pollinated** varieties I know of.

(Bill McDorman)
“This Open Source Seed pledge is intended to ensure your freedom to use the seed contained herein in any way you choose, and to make sure those freedoms are enjoyed by all subsequent users.

By opening this packet, you pledge that you will not restrict others’ use of these seeds and their derivatives by patents, licenses, or any other means.”
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