

Seed saving

From Wikipedia, the free encyclopedia

In agriculture and gardening, **seed saving** (sometimes known as **brown bagging**^[1]) is the practice of saving seeds or other reproductive material (e.g. tubers) from vegetables, grain, herbs, and flowers for use from year to year for annuals and nuts, tree fruits, and berries for perennials and trees.^[2] This is the traditional way farms and gardens were maintained for the last 12,000 years.^[3]

In recent decades, beginning in the latter part of the 20th century, there has been a major shift to purchasing seed annually from commercial seed suppliers. Much of the grassroots seed-saving activity today is the work of home gardeners.



Partially shelled popcorn seed saved for planting

Contents

- 1 Method
- 2 Open pollination
- 3 Legality
- 4 See also
- 5 References
- 6 Further reading
- 7 External links

Method

To be successful at seed saving, new skills need to be developed to ensure that desired characteristics are retained in the landraces of the plant variety. Important considerations are the separation distance needed from plants of the same species to ensure that cross-pollination with another variety does not occur, and the minimum number of plants to be grown which will preserve inherent genetic diversity. It is also necessary to recognize the preferred characteristics of the cultivar being grown so that plants that are not breeding true are selected against, and to understand the breeding of improvements to the cultivar. Diseases that are seed-borne must be recognized so that they can be eliminated. Seed storage methods must be good enough to maintain viability of the seed. Germination requirements must be known so that periodic tests can be made.

Care must be taken, as training materials regarding seed production, cleaning, storage, and maintenance often focus on making landraces more uniform, distinct and stable (usually for commercial application) which can result in the loss of valuable adaptive traits unique to local varieties.^[4]

Additionally, there is a matter of localized nature to be considered. In the upper northern hemisphere, and lower southern, one sees a seasonal change in terms of a cooler winter. Many plants go-to-seed and then go dormant. These seeds must hibernate until their respective spring season.

Open pollination

Open pollination is an important aspect of seed saving. Plants that reproduce through natural means tend to adapt to local conditions over time, and evolve as reliable performers, particularly in their localities, known as landraces or "folk varieties."

Legality

While saving seed and even exchanging seed with other farmers for biodiversity purposes has been a traditional practice, these practices have become illegal for the plant varieties that are patented or otherwise owned by some entity (often a corporation).^[2] Under Article 28 of the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement), "planting, harvesting, saving, re-planting, and exchanging seeds of patented plants, or of plants containing patented cells and genes, constitutes use" and can in some cases be prohibited by the intellectual property laws of WTO Members.^[2]

Significantly, farmers in developing countries are particularly affected by prohibitions on seed saving. There are some protections for re-use, called "farmer's privilege", in the 1991 International Union for the Protection of New Varieties of Plants (UPOV Convention), but seed exchange remains prohibited.^[2]

In the United States, the farmer's privilege to save seeds to grow subsequent crops was considered protected by the Plant Variety Protection Act of 1970. American farmers, it was thought, could sell seed up to the amount saved for replanting their own acreage.^{[5][6]}

That view came to an end in the latter part of the 20th century and early part of the 21st century, with changes in technology and law. First, in 1981 *Diamond v. Chakrabarty* established that companies may obtain patents for life-forms—originally genetically engineered unicellular bacteria.^[7] In 2002 *J.E.M. Ag Supply v. Pioneer* established that valid utility patents could be issued on sexually reproduced plants, such as seed crops (e.g., corn).^{[8][9]} In 2013 *Bowman v. Monsanto Co.* established that it was patent infringement for farmers to save crop seeds (soybeans in that case) and grow subsequent crops from them, if the seeds or plants were patented.

See also

- Heirloom plant
- Navdanya
- Seed library
- The Seed Savers' Network
- Seedy Sunday

References

1. Bruce Hotchkiss (2012). "Monsanto: Farmers permitted to 'brown bag' seeds". American Farm Publications, Inc.
2. Kerstin Mechlem and Terry Raney (2007). "Agricultural Technology and the Right to Food". In Francesco Francioni. *Biotechnologies and International Human Rights*. Hart Publishing. p. 156. ISBN 1-84113-703-0.
3. See First agricultural revolution.
4. Jarvis, D., B. Sthapit, and L. Sears (eds.). 2000. Conserving agricultural biodiversity in situ: a scientific basis for sustainable agriculture. Proceedings of a workshop. Rome, Italy: IPGRI

5. The Crucible II Group (2001). *Seeding Solutions*. IPGRI. ISBN 92-9043-499-6.
6. The PVPA permits farmers to save seeds and grow crops from them without liability under the PVPA. But if the seeds are also protected by a utility patent, that conduct is now patent infringement. See *Bowman v. Monsanto Co.*
7. The genetically engineered bacteria ate oil, as in oil spills.
8. <http://neuro.law.cornell.edu/supct/search/display.html?terms=patent&url=/supct/html/99-1996.ZS.html>
9. In that case J.E.M. was held liable because it resold purchased corn in violation of a "label license" forbidding resale or any use except planting a corn crop.

Further reading

- Ashworth, Suzanne & Whealy, Kent; *Seed to Seed: Seed Saving Techniques for the Vegetable Gardener*, Seed Savers Exchange, 2002. ISBN 978-1-882424-58-0
- Beck, Edward; *A Packet of Seeds Saved by an Old Gardener*, 2008. ISBN 978-0-559-85468-2
- Deppe, Carol; *Breed Your Own Vegetable Varieties: The Gardener's and Farmer's Guide to Plant Breeding and Seed Saving*, Chelsea Green Publishing Company, 2000. ISBN 978-1-890132-72-9
- Fanton, Michel and Jude; "The Seed Savers' Handbook", Seed Savers' Network, 1993. ISBN 0-646-10226-5
- Mcgrath, Mike; *Save and sow seeds of your favourite vegetables*, Quirk Books (Stati Uniti), 2009. ISBN 978-1-59474-289-7
- Vellve, Renee; *Saving the seed: genetic diversity and european agriculture*, Londra, Earthscan Publications, 1992. ISBN 1-85383-150-6
- Whealy, Kent; *Garden Seed Inventory: An Inventory of Seed Catalogs Listing All Non-Hybrid Vegetable Seeds Available in the United States and Canada*, Seed Savers Exchange, 2005. ISBN 978-1-882424-60-3
- An Introduction to Seed Saving for the Home Gardener (<http://extension.umaine.edu/publications/2750e/>), University of Maine Cooperative Extension Bulletin 2750

External links

- US makes seed saving illegal in Iraq (http://www.vegsource.com/articles2/iraq_seeds.htm)
- One-hour radio broadcast on Terminator seed technology; a threat to seed saving - Kootenay Co-op Radio's Deconstructing Dinner (<http://www.cjly.net/deconstructingdinner/020906.htm>)
- Australian National - Seed Savers Network (<http://www.seedsavers.net/>)
- South Australian Seed Savers Network (<http://saseedsavers.tripod.com/>)
- International Seed Saving Institute (<http://www.seedsave.org/>)
- Seed Saving and Seed Saver Resources (<http://homepage.eircom.net/~merlyn/seedsaving.html>)
- Organic Seed Alliance - Seed Production guides US Northwest (<http://www.seedalliance.org/index.php?page=Publications>)
- Seed & Plant Sanctuary for Canada (<http://www.seedsanctuary.com/articles/seedsaving.cfm>)
- Seed Savers Exchange (<http://www.seedsavers.org/>)
- Grassroots Seed Network (<http://grassrootsseednetwork.org/>)

Retrieved from "https://en.wikipedia.org/w/index.php?title=Seed_saving&oldid=756647074"

Categories: Food sovereignty | Pollination | Seeds

- This page was last modified on 25 December 2016, at 21:24.
- Text is available under the [Creative Commons Attribution-ShareAlike License](#); additional terms may apply. By using this site, you agree to the [Terms of Use](#) and [Privacy Policy](#). Wikipedia® is a registered trademark of the [Wikimedia Foundation, Inc.](#), a non-profit organization.