

Restoring Our Seed Commons: The Need for Clarity about Intellectual Property Rights

by CR LAWN

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The seed industry has been changing rapidly. After recent mergers (Bayer/Monsanto, ChemChina/Syngenta, Dow/DuPont), just three companies dominate the global seed trade. Increasingly, giant multinationals are using intellectual property rights (IPR) to reinforce corporate power. As gardeners and farmers we are losing rights to work with our seeds, and most seed companies aren't telling us.

Our ability to save seeds, even of some heirloom varieties that have been passed down for generations, is threatened. Now, when you shop for that favorite seed variety in your preferred seed catalog or on its website you need to ask if you are buying the seed or merely renting it for a one-time use. Are you getting full rights to use the seed as you may wish or are you renting permission to use the seed only for a single purpose and for a single season?

The Open Source Seed Initiative has identified the four seed freedoms as: the freedom to save and grow seed for replanting or for any other purpose; the freedom to share, trade and sell seed to others; the freedom to trial and study it and to share and publish information about it; and finally, the freedom to select or to adapt it, make crosses with it or use it to breed new lines and varieties. These traditional freedoms that farmers have exercised since the dawn of agriculture some 10,000 years ago are now being stripped from us, for the most part without our knowledge or conscious authorization.

A contract with one of Fedco's suppliers tipped me off that many varieties now come with use restrictions that nullify those four freedoms. Subsequently I researched Fedco's 1,000+ selections, and found more than 120 varieties burdened with IPR. Though most of the restricted varieties were F-1 hybrids, a minority were open-pollinated cultivars, even including some heirlooms. IPR manifest in various forms: through Plant Variety Protection (PVP), through utility patents, in contracts from the wholesaler to the retailer, and through language on bag tags and invoices. Bag tags are literally tags on seed bags that contain restrictive language that comes into force when they are opened.

The total number of use-restricted varieties in the seed market is much larger than the 120+ sold by Fedco. Many other medium and large-sized retailers routinely buy patented and other IPR-restricted varieties from the same 9 wholesalers as Fedco as well as from others Fedco does not use. At the request of its customers, Fedco phased out Seminis varieties when Monsanto bought out Seminis in 2006, and more recently has refused to offer utility-patented varieties from any source.

Most good seed catalogs identify the PVP varieties and somewhere in small print address the limitations in use that PVP mandates. PVP does not restrict growers from saving seeds for their own use or amateur and professional breeders from conducting breeding research with them.

Utility-patented varieties are relatively new to garden seed and much more restrictive than PVPs. Johnny's Selected Seeds has set a good example by identifying these varieties among their offerings. But many other retailers have not yet followed suit. Signposting utility patents is crucial because they convey comprehensive limitations on the use of the seed, prohibiting all seed saving even for home use, breeding, or researching and publishing on the variety without permission of the patent holder.

To farmers and gardeners the least known incursion on seed rights comes through contracts and bag tags whose provisions apply to retailers but may or may not carry through to end users. A new level of IPR that is now invading even varieties for gardeners, it is invisible to those who plant the seeds. Nothing in the variety descriptions warns them that they are not buying full rights to the seed. Their seed company never tells them on its website or in its catalog that it does not own the seed but instead purchased only a license to sell its use subject to certain conditions and limitations and that as growers they are purchasing only a limited license to rent the seed for a one-time use only, not buying unlimited use.

Common language on bag tags and in contracts limits permission for use of the seeds to a single planting and strictly forbids using the seeds and any plant material from them for repeated propagation. Typical wording is: "All Intellectual Property Rights remain with x. The customer shall not use the seeds for reproduction in any manner..." Wholesalers who use bag tags to convey restrictions usually bag tag all their varieties, not just F-1 hybrids, but also OP varieties and even heirlooms in the public domain. Even small seed companies, purchasing from larger retailers may unwittingly be getting use-restricted seeds, while never even seeing the limitation-conveying bag tags.

As a further source of ambiguity, the wholesalers offering IPR varieties are not consistent about whether these limitations on their direct customers carry through to third-party end users. When I posed that question to six different suppliers I got mixed results. While one answered "no," another responded that growers and home gardeners were not restricted and only large-scale commercial propagation was prohibited. Three others said "yes," one of who went on to ask, "If you are repackaging the seed, do you have any restrictive language on your packaging?" One of the larger suppliers was the only one to include an affirmative duty clause in its contract with Fedco to convey these restrictions to third-party users and a companion clause making Fedco potentially liable if a third-party user failed to comply.

These ambiguities can trouble end users in at least three ways: 1) IPR may inhibit new would-be seed savers. To be sure, many users may not care. Only a minority of home gardeners save seeds for replanting, and then only for certain crops. Even fewer select to try to improve varieties or use them as breeding material. Then too, most of the restricted varieties are F-1 hybrids that would not come true in the next generation and would require a number of seasons of selection to stabilize into a desired cultivar. 2) For commercial growers, IPR limitations present more serious issues. They may prevent growers who wish to from saving seed, as well as from adapting, selecting and improving these varieties. A majority of growers responding in the latest Organic Seed Alliance survey saved at least some of their own seeds and on average fulfilled at least 20% of their own seed needs. They are among the heaviest seed users. Many said that they would like to learn the seed arts and would consider becoming commercial seed growers. 3) Growers could unknowingly be violating IPR, and in the worst-case scenario find themselves in legal trouble as did those who allegedly violated Monsanto's bag tag restrictions on farm seed.

The lack of clarity about whether each IPR agreement extends to third-party users may be even more troubling to retail seed houses. Furthermore, acting on an affirmative obligation to convey the restrictions to end-users not only might add to overhead expenses, but also could depress retail sales on

the restricted varieties. Retailers lack the inclination and the resources to police their customers and may be at risk if their obligation to wholesalers explicitly or implicitly conveys such responsibilities. Wholesalers' use of overly broad language on their documents may have a chilling effect on seed-savers who are aware of the issues challenging the seed trade. Even when they have no intentions of enforcing IPR on small-scale seed savers, wholesalers may therefore be trying to have the best of both worlds, using excessively broad language to discourage seed saving while at the same time not wishing to risk consumer backlash.

Why have so many seed retailers accepted use-restricted varieties? Because they could not otherwise obtain permission to sell these varieties often considered indispensable by market growers. Trialing for alternatives is lengthy, costly and carries no guarantee of success, and refusing to sell varieties essential to growers risks heavy loss of sales. Retailers are caught in a real bind from which generally only those small more ideologically driven companies who rely solely on their own seed productions/growers and eschew wholesalers have been able to escape. Nor is the organic industry immune from IPR, as three large-scale international wholesalers, Bejo, Sakata and Enza Zaden (doing business as Vitalis) prominently feature restricted varieties.

I learned early in my career that my best customers were my most knowledgeable ones. They appreciated knowing just what they were getting from their seed company. They wanted clear variety descriptions including honest acknowledgments of weaknesses. Many wished to know more about the sources of their seed: Local or international? Large multinational corporation or small-scale farmer? As the Fedco catalog included more and more such information, our business grew. I call this transparency: providing clarity in just what is being offered and why. To these traditional forms of transparency a new one needs to be added in light of changes in the industry. The lack of transparency about seed-use restrictions is a huge issue. I understand why the seed industry might prefer to ignore it and pretend there is no problem. But given the growing intrusiveness of IPR and the sad history of farmers who came up against Monsanto, this would be very shortsighted. Instead, greater transparency both between wholesalers and retailers and retailers and their customers could enhance good will all across the trade. People have a right to know whether they are really buying or actually renting seed, and what obligations any agreements they make convey.

If you are a wholesaler, what can you do? Use clear language on your bag-tags and contracts. Do they restrict all third-party users, some third-party users or no third-party users? Say what you mean, mean what you say, and don't ask for restrictions that you don't need.

If you are a retailer, attempt to negotiate away unreasonable contract provisions. Don't sign agreements asking you to perform what you are not capable of or inclined to. Identify the restricted varieties on your website and in your catalog and the nature of those restrictions that apply to third-party users. Surely sharing any license or bag-tag restrictions on seed use is as important in a variety description as sharing agronomic strengths and weaknesses. This should be easy and a major selling point for those who offer few or no use-restricted varieties and clearly identify those they do. It will be harder and require the support of your customer service reps for those who offer more. But I can't think of a better way to build loyal customers than to educate them.

If you are a grower for whom the four seed freedoms matter, ask your retailers whether you are buying full rights to the seeds, or only renting them for a restricted one-time use. If they can't or won't answer look elsewhere and support those who are more transparent. If seeds that allow you to exercise any of the seed freedoms you wish are more valuable to you than seeds you are renting for a one-time use spend your purchase dollars accordingly. If a supplier is offering a variety with restricted use, perhaps

you can find the same variety offered unrestricted elsewhere, or a nearly equivalent unrestricted variety.

Since the dawn of agriculture we farmers controlled the seed. Each generation stood on the shoulders of former generations, observing, selecting and enhancing seed varieties in a shared commons of freely circulated knowledge and seeds. The loss of seed rights is the great enclosure of our commons that is happening in our lifetime. This commons is now in jeopardy of being utterly destroyed. It is up to us to fight back to expand a supply of freed seeds that we control and to restore our fundamental age-old right.

Sources of the Intellectual Property Restrictions (IPR):

PVP Plant variety Protection restricts propagation for sales. Brown bag exemption permits seed saving for personal use but prohibits donating or selling those seeds. Breeders' rights exemption permits variety to be used for selection and breeding.

IPR Mechanisms and Policies by Supplier

Bejo Contract contains clear language with comprehensive IPR prohibiting seed saving, propagating and using for breeding, also an explicit responsibility on the part of retailer to take affirmative action to ensure that third party end-users adhere to these terms.

Cornell University license Allows retailer licensee to contract with its own seed growers to multiply and produce seed for these crops in exchange for a 10% royalty on retail sales. The license also establishes that the varieties are Cornell's intellectual property and restricts retailers from doing further selection or breeding work on them.

Crookham Contract restricts purchaser to growing a single crop from the seeds. It does not allow the purchaser or any third party user to produce additional seed from the Crookham varieties.

Floranova Bag tag prohibits customers from using seeds for reproduction in any manner without the prior written consent of Floranova. Floranova holds its customers to these terms, but does not restrict third party users from saving the seeds from their planting.

Sakata Bag tag restricts customer use to the production of a single crop. Prohibition against propagation for seed saving applies to third party users.

Syngenta Bag tag limits permissible use of the seed to the production of a single commercial crop. I infer that this limitation applies to all third-party users. (see below).

Syngenta Flowers Bag tag limits permissible use of the seed to the production of a single commercial crop. Confirmed by email that the restriction applies to *whomever* opens and plants (or otherwise uses) the seed. It is only to be used for a single commercial crop and may not be saved. Restrictions apply to all third party end-users.

HM Clause/Tezier Reverse side of invoices as well as bag tags contain IPR restrictions against saving and propagating seed and using it for breeding purposes.

Genesis Bag tag grants permission to use the seeds only for a single planting. Follow-up with Genesis indicated the restriction is limited to commercial large-scale propagation and does not apply to growers and home users saving seeds for personal usage.

Listing of IPR Varieties by Crop and Supplier:

The list below was taken from Fedco's 2017 catalog selection of nearly 1,050 varieties from which I unearthed 126 potentially restricted varieties. It represents only the tip of the iceberg of IPR varieties

offered to the trade by these and other suppliers.

Varieties are indicated as either F-1 hybrids and open-pollinated (OP) varieties. OP varieties are often available from multiple suppliers, some of whom likely do not restrict them. *OP heirlooms are in italic.*

Artichoke

Imperial Star, open-pollinated, Genesis

Basil, sweet

Round Midnight Basil, F-1 hybrid, HM Clause/Tezier

Sweet Basil conventional, open-pollinated, Sakata

Sweet Basil organic, open-pollinated, Sakata

Sweet Dani Lemon Basil, open-pollinated, PVP

Beans

Masai, open-pollinated, Syngenta

Beets

Boldor, open-pollinated, Bejo

Bull's Blood conventional, open-pollinated heirloom, Sakata

Bull's Blood OG, open-pollinated heirloom, Sakata

Chioggia, open-pollinated heirloom, Sakata

Red Ace, F-1 hybrid, Sakata

Robin, F-1 hybrid, Sakata

Touchstone, open-pollinated, Sakata

Broccoli

Arcadia, F-1 hybrid, Sakata

Bay Meadows, F-1 hybrid, Syngenta

Fiesta, F-1 hybrid, Bejo

Green Valiant, F-1 hybrid, Sakata

Gypsy, F-1 hybrid, Sakata

Broccoli, Romanesco Veronica, F-1 hybrid, Bejo

Brussels Sprouts

Diablo, F-1 hybrid, Bejo

Gustus, F-1 hybrid, Syngenta

Hestia, F-1 hybrid, Bejo

Cabbage

Bartolo, F-1 hybrid, Bejo

Deadon, F-1 hybrid, Bejo

Gonzales, F-1 hybrid

Gunma, F-1 hybrid, Bejo

Melissa savoy, F-1 hybrid

Super Red 80, F-1 hybrid, Sakata

Wirosa, F-1 hybrid, Bejo

Calendula

Maya Orange, open-pollinated, Genesis

Carrots

Mokum, F-1 hybrid, Bejo

Napoli, F-1 hybrid, Bejo

Over the Rainbow has elements of Bejo's Rainbow Mix in it, a mix with F-1 hybrids

Purple Haze, F-1 hybrid, Bejo

White Satin, F-1 hybrid, Bejo

Yaya, F-1 hybrid, Bejo

Yellowstone, open-pollinated, Bejo

Cauliflower

Candid Charm, F-1 hybrid, Sakata

Graffiti, F-1 hybrid, Syngenta

Snow Bowl, F-1 hybrid, Sakata

Symphony, F-1 hybrid, Syngenta

Celery

Tango celery, open-pollinated, Bejo

Celery, cutting

Afina, open-pollinated, Bejo

Coriander

Caribe, open-pollinated, Bejo

Corn

Ambrosia sweet corn, F-1 hybrid, Crookham

Bodacious R/M sweet corn, F-1 hybrid, Crookham

Honey Select sweet corn, F-1 hybrid, Syngenta

Incredible R/M sweet corn, F-1 hybrid, Crookham

Kandy Korn sweet corn, F-1 hybrid, Syngenta

Robust 98114W popcorn, F-1 hybrid, Crookham

Serendipity sweet corn, F-1 hybrid, Syngenta

Silver Queen sweet corn, F-1 hybrid, Syngenta

Sugar Buns sweet corn, F-1 hybrid, Crookham

Cosmos

Cranberries Double Click, open-pollinated, HM Clause/Tezier

Double Click Mix, open-pollinated, HM Clause/Tezier

Double Click Rose Bonbon, open-pollinated, HM Clause/Tezier

Cucumber

Ministro, F-1 hybrid, Sakata

Silver Slicer, open-pollinated, Cornell University

Dahlia

Harlequin Mix, open-pollinated, Syngenta Flowers

Endive

Olesh Tres Fine Maraichere, open-pollinated, Genesis

Kale

Darkibor kale, F-1 hybrid, Bejo

Redbor kale, F-1 hybrid, Bejo

Winterbor kale, F-1 hybrid, Bejo

Kohlrabi

Kolibri, F-1 hybrid, Bejo

Leeks

Lancelot, open-pollinated, Bejo

Lincoln, open-pollinated, Bejo

Marigolds

Inca II, open-pollinated, Syngenta Flowers

Melon

Arava melon, F-1 hybrid, Genesis

Athena muskmelon, F-1 hybrid, Syngenta

Mustard

Osaka Purple, open-pollinated, Genesis

Onions

Ailsa Craig, open-pollinated heirloom, Bejo

Expression, F-1 hybrid, Bejo

Patterson, F-1 hybrid, Bejo

Prince, F-1 hybrid, Bejo

Red Bull, F-1 hybrid, Bejo

Red Marble, F-1 hybrid, Bejo

Redwing, F-1 hybrid, Bejo

Talon, F-1 hybrid, Bejo

White Wing, F-1 hybrid, Bejo

Oregano

Zaatar, open-pollinated, Genesis

Pac Choi

Joi Choi, F-1 hybrid, Sakata

Parsley

Krausa, open-pollinated, Bejo

Plain Leaf, open-pollinated, Sakata

Root parsley

Arat, open-pollinated, Bejo

Peas, Sugarsnap

Sugar Heart, open-pollinated, Syngenta

Super Sugarsnap, open-pollinated, also PVP, Syngenta

Peppers

Flavorburst, F-1 hybrid, Bejo

Gilboa, F-1 hybrid, Genesis

Peacework, open-pollinated, Cornell University

Tiburon, F-1 hybrid, Sakata

Pumpkins

Diablo, F-1 hybrid, Sakata

Wee-B-Little, open-pollinated, also PVP

Radicchio

Fiero, F-1 hybrid, Bejo

Indigo, F-1 hybrid, Bejo

Radishes

Cheriette, F-1 hybrid, Sakata

Cherry Belle, open-pollinated, Sakata

Easter Egg, open-pollinated, Sakata

French Breakfast, open-pollinated heirloom, Sakata

Gloriette radish, F-1 hybrid, Sakata

White Icicle, open-pollinated, Sakata

Shallots

Camelot shallot, F-1 hybrid, Bejo

Salpiglossis

Royale Mix, open-pollinated, Floranova

Salvia

Seascape Mix, F-1 hybrid, Floranova and Syngenta Flowers

Sea Oats

Sea Oats, open-pollinated, Genesis

Spinach

Avon, F-1 hybrid, Sakata
Olympia, F-1 hybrid, Sakata
Space, F-1 hybrid, Bejo

Summer Squash and Zucchini

Gentry summer squash, F-1 hybrid, Syngenta
Raven zucchini, F-1 hybrid, Syngenta
Spineless Beauty zucchini, F-1 hybrid, Syngenta
Sunburst Patty Pan, F-1 hybrid, Syngenta
Y-Star Summer squash, F-1 hybrid, Genesis

Swiss Chard

Fordhook Giant, open-pollinated, Sakata
Rhubarb conventional, open-pollinated heirloom, Sakata
Rhubarb OG, open-pollinated heirloom, Sakata

Tomatoes

Bobcat, F-1 hybrid, Syngenta
Esterina cherry tomato, F-1 hybrid, Genesis
Magic Mountain, F-1 hybrid, Bejo
Super Sweet 100, F-1 hybrid, Syngenta
Sweet Treats cherry tomato, F-1 hybrid, Sakata

Watermelon

Quetzali, open-pollinated, also PVP, Syngenta
Sangria, F-1 hybrid, Syngenta
Sweet Favorite, F-1 hybrid, Sakata

RESOURCES

Seeds: For descriptions and photos of all OSSI-pledged varieties with links to the seed companies that sell each variety, visit the SEED page at: osseeds.org/seeds

Books: Deppe, Carol. *Breed Your Own Vegetable Varieties: The Gardener's and Farmer's Guide to Plant Breeding and Seed Saving* 2nd ed. (Chelsea Green, 2000).

Deppe, Carol. *The Resilient Gardener: Food Production and Self-Reliance in Uncertain Times* (Chelsea Green, 2010). (includes breeding for a number of corn, bean and squash varieties.)

Deppe, Carol *The Tao of Vegetable Gardening: Cultivating Greens, Peas, Beans, Squash, Joy, and Serenity* (Chelsea Green, 2015). (includes breeding for organic systems, rejuvenating heirloom varieties, dehybridizing hybrids and tomato genetics and breeding.)

Kloppenborg, Jack *First the Seed: The Political Economy of Plant Biotechnology, 1492-2000* (2nd ed.), (University of Wisconsin Press, 2005). (The definitive book on control of seed in U.S.A. by Jack Kloppenborg, Professor Emeritus of Community and Environmental Sociology, University of Wisconsin-Madison. Jack is one of the founders of OSSI and a member of the board of directors.)

Articles: *Open Source Success: Grow Varieties for Organic Systems* by Carol Deppe, *Acres USA*, January 2017.

Join the Open Source Seed Movement: Growing, Breeding & Sharing Crop Varieties by Carol Deppe, *Acres USA*, January 2016.

Websites: Open Source Seed Initiative: osseeds.org

Carol Deppe (books, articles and seeds): caroldeppe.com

CR Lawn (articles and keynotes): www.fedcoseeds.com/Seeds/CR_index.htm