

# Seed Production Contract Guidelines 2023

**Presented by Seed Worker Organizing (SWO)** - A self-organizing group of seed growers investing in mutual aid, knowledge sharing, advocacy for fair seed prices and contracts, better seed ethics practices, and agrobiodiversity conservation.

***This document was developed by the SWO Seed Contract Working Group:***

Lindsay Klaunig - Seed Grower at Trouvaille Farm in Athens, Ohio USA

Reiley Carney - Seed Worker at Snake River Seed Cooperative, Idaho USA

Craig Boychuk - No Coast Seeds, Calder, Saskatchewan Canada

Edmund Frost - Common Wealth Seed Growers and Twin Oaks Seed Farm, Louisa, Virginia USA

Heron Breen - Seed Grower in Saint Albans, Maine USA

This document articulates our recommendations for fair, mutually equitable contracts and working relationships between seed producers and seed sellers, as part of quality seed systems. We intend this to be an evolving document, and welcome feedback from others in the seed community. We recognize that it may be lengthy for those seeking a simple reference document, so we plan to also prepare a more concise summary of our recommendations and to create presentations in other media formats.

**Our recommendations are structured into seven sections:**

- 1. Introduction**
- 2. Compensation and Risk Sharing**
- 3. Communication and Information Exchange**
- 4. Pricing Considerations**
- 5. Stock Seed Considerations**
- 6. Understanding and Advocating for Good Seed Quality**
- 7. Seed Source Transparency and Attribution**

## **1. Introduction**

As seed growers we want to be paid fairly, to have good contract terms, and to be able to make a living. We take pride in doing quality work, and in being part of a movement that aims to democratize and improve the ways people relate to seeds and plants.

Our need for fairness and our desire for quality are intertwined. In the long run it is only possible for growers to sustain quality work when we're compensated for it. And it is only possible to maintain quality seed systems when there is good communication between seed growers and seed companies, as well as an atmosphere of mutual empowerment.

The current state of things however, even and maybe especially in the organic seed movement, is that seed growers often are not able to adequately advocate for themselves and to command the pay and terms they need to do quality work.

One way that Seed Worker Organizing aims to improve the current situation is through mutual advocacy. In this document we present specific recommendations for how growers can better approach contracts and other seed work, and for how seed companies can interact with growers to build respectful and mutually beneficial partnerships.

Skilled work beyond bulk seed production is essential for quality seeds. We need seed systems that reward growers for doing the valuable work of roguing, stockseed selection, variety stewardship, disease monitoring, and plant breeding. We are recommending changes to incentive structures so that this skilled work is specially valued and paid for, and alternatives to compensation by weight are considered. We also simply recommend higher pay across the board for growers, and contract structures that shift some or all of the carrying capital outlay associated with seed production (which can last over a year) away from growers.

The last section of this document covers seed source transparency and attribution. Without transparency our work becomes invisible to the end user of the seed, and in this context it is hard to advocate for our needs. Conversely, with transparency in a seed system, end users are able to make better choices about what seeds will work for them, and growers stand to be sought out and rewarded for doing quality work. We see cooperative and collective transparency as essential groundwork for creating fair compensation and good working conditions for all seed growers, no matter where they live and work.

This document is largely focused on contract seed growing, but we want to recognize that many commercial seed growers have chosen to focus on direct sales rather than contract sales (or to do both). They have done so, at least in part, as a strategy for empowerment and financial viability in the face of a difficult contract seed growing landscape. Some have also chosen to form cooperatives. These approaches have been successful for some growers, but also require intense commitment and a broad skill set that includes marketing, social media and graphic design. The part of this paper that may be the most relevant for these growers is the section on Seed Source Transparency and Attribution – indeed many such projects have promoted seed source transparency as a central value. They stand to be important partners in the work of advocating for it in the future.

Lastly, we are aware that some of the ideas we're sharing and practices we're calling for are not common in the organic seed movement at present. We hope that you will approach them with an open mind and consider incorporating some of them, and we look forward to broader discussion of these themes.

## **2. Compensation and Risk Sharing**

We recommend all parties become familiar with the most common existing seed contract models, and be willing to imagine new forms. Some common seed contract models are as follows:

- **Balloon Payment:** Any and all payment to the seed grower is made after delivery of seed and quality assessment. The seed grower extends their land base, infrastructure costs, capital, and labor expenditures for a prolonged term. This model can be paired or unpaired with risk assurances like guaranteed minimum payments, and quality incentives.
- **Segmented Payment:** Utilizes partial payments through the seed crop cycle to offset seed grower land base, infrastructure costs, capital, and labor expenditures. Example:  $\frac{1}{3}$  payments made through the seed crop cycle, tied to assessments of planting/establishment, seed crop grown to harvest, and seed crops cleaned/dried/conditioned and delivered to spec. Biennial seed contracts can benefit from this model. This model can be paired or unpaired with risk assurances like guaranteed minimum payments, as well as quality based incentives.
- **Fully Guaranteed Payment (AKA Per-Project Compensation):** Payment is not linked to yield or quality outcomes. These types of contracts are useful for supporting beginner growers, as well as rewarding experienced seed growers fulfilling seed productions such as pilot productions, hybrid seed production, inbred line increases, proprietary varieties, flowers and herbs or other difficult and risky crop types and varieties, or research-related productions.
- **Consignment or Retail Price Sharing:** The seed grower and seed company agree to compensation based upon a percentage of the retail price of a seed packet. 25% to 50% of a retail packet price are compensation rates we know of in use. This arrangement is predicated upon the seed grower extending their capital outlay and any return of full compensation over potentially multiple years until the seed lot packets are fully sold OR until the legal germination falls below saleable level for the seed lot. The potential compensation could be greater than normal contract, but is spread out over time with payments made yearly. The seed company usually keeps track of packet sales and reports these to the seed grower at the end of each season.

Hybrid models can exist across the contract and compensation models named above, and of course other kinds not listed. For example, a seed company and seed grower (or seed steward or plant breeder) might agree that a seed volume-based compensation will be paid as well as a commission based on retail packet sales.

Segmented and fully guaranteed payment models are often contingent upon excellent communication and record keeping from the seed grower. Soil tests, crop plan, reporting and recording crop benchmarks, and phone, email, text access and response may be required by the Seed Buyer.

All of the above seed contract models could be **Exclusive**, **Non-Exclusive**, or a **First Refusal Mixed Model**:

- An **Exclusive Contract** means that the variety and seed volume grown can only be sold to one specific seed company.
  - We recommend these Exclusive agreements be fully guaranteed. The seed company should agree to purchase the entire seed crop, which is predicated upon the *Adjusted Plant Population*. (see *Section 3: Communication and Information Exchange*)
- A **Non-Exclusive Contract** means that a seed grower is growing a variety for multiple seed companies, and that the target seed volume is a combined total of separate contracts.
  - We recommend letting each company involved know of this intent, and getting contract agreements from each potential buyer/company.
  - We recommend getting explicit permission from the seed company providing the stockseed if that stockseed will result in a seed harvest that will benefit other seed companies. In some cases, each seed company may want their own stockseed to be used, even if the same variety is being grown. In other cases the seed grower may be providing stockseed. (see *Section 5: Stockseed Considerations for more detail on this topic*)
  - We recommend that the percentage of the crop that each company is intended to receive be used as the guide for how much they should receive if the seed harvest is lower OR higher than the target volume. We also recommend ensuring a priority in percentage to the seed company that provided the stock seed for such a shared production, if that was the case.

- **A First Refusal Mixed Model Contract** means that the seed grower and seed company have agreed upon a target seed volume (ideally based upon an *Adjusted Plant Population*), and that the seed company agrees to purchase a certain amount of overage beyond the target seed volume. The overage purchases are often graduated in price. For example, an agreement may detail the purchase of 125% of target seed volume at full price, with an additional 25% beyond target seed volume purchased at 75% of the regular pound price. A seed grower can sell overage that is not claimed by the original contracted seed buyer to any other seed company at any price the seed grower negotiates with that third party.
  - We recommend that all seed volume harvested from an agreed upon *Adjusted Plant Population* be purchased at full contract price. Graduated pricing linked to a seed yield from a larger plant population than agreed upon is acceptable and understandable.
  - We also recommend consideration of graduated pricing when some instances of under productions occur. Good growers can encounter a poor crop and lose money due to no fault of their own. “Breaking even” is a bare metric which keeps seed growers working long term, and using innovation to learn how to grow difficult varieties. If under production occurs due to weather, or the under performance of the variety even when given good culture, graduated pricing could be applied in the following type of equation: *if the target volume was X with price of \$Y per pound, under production that is reduced below X minus 25% would be paid at the rate of \$Y plus 25%. And so on....*

## **Contract Variations and Considerations**

- Agreements between seed growers and seed buyers are not always in a formatted contract with signatures. Many agreements have been verbal or via email, and these have been honored as often as formatted contracts. Whether or not agreements are discussed verbally or via written letter or via email, we recommend a final email or written exchange that details the overall and understood terms. Each party should affirm in writing that they concur and consent with these terms. If further negotiations occur, remember to capture those thoughts in another written exchange.
- Varieties bred and also grown for a seed crop by a breeder/seed grower, OR that have been stewarded over multiple years by a farmer/seed grower, are often sold with a royalty-type agreement based upon gross packet sales per year of that seed lot in addition to an initial price per pound or seed. A 10% royalty-type compensation is common, but greater or lesser percentages are also used. The original breeder or steward in some cases may continue to receive such payments even as other seed growers continue to grow that variety for a seed company.

- If growing on Consignment or in Retail Price Sharing, we encourage the following considerations:
  - If the seed grower still has equity/ownership in the seed lot during consignment sales, we recommend that the terms and retail price for the packet be created and agreed upon by both parties, including any future price changes.
  - This consignment arrangement is not widely used but appears to be gaining in popularity, and we expect there will be several issues to work out - for example, how to address multiple packet sizes. In learning about the specifics of various consignment models, we found the BC Eco Seed Co-op shares 75% of the retail price with the seed grower when selling “farmer” packet sizes of seed in their consignment structure.

### **Contract Recommendations and Values**

- As a broad concept, risk should not be disproportionate between parties. eg: carrying capital, weather events, cost of production, seed quality thresholds, meeting key timing points (receipt of stockseed, delivery of seed crop, payment schedule).
- Seed Contract Final Payment should be submitted to the seed grower no later than 60 days from receipt of seed by the seed company/buyer.
- Seed contract models could incorporate a guaranteed minimum payment reflecting the capital outlay and risks undertaken by the seed grower. Guaranteed minimum payment models in current practice use a range between 25% to 33% of the assumed full/final contract value. Some payment models (eg. segmented payment model and fully guaranteed payment model) already provide for this.
- Contracting parties should incorporate at least a baseline of a guaranteed minimum payment to the seed grower whenever a **Pilot Production** is under negotiation. These productions carry numerous variables, many of them unknown to both the seed company/buyer and seed grower, and compensation should reflect this high risk. (A Pilot Production is a seed production of a variety or crop type that has never been produced by or for the seed company/buyer in a wholesale volume; or a variety or crop type that has not been grown previously by the seed grower.)
- Very few seed productions meet the intended seed volume exactly. Overage, under productions, and total crop failures are part of seed growing even when *Adjusted Plant Populations* are determined and skilled seed growing is applied. It is important to work through all these eventualities with a seed buyer, and to name clearly how each will be addressed. Don't assume it will all work out!

- We recommend that contracted seed productions that lack data or are based upon inaccurate data in regards to stockseed health, true-to-typeness, accurate stockseed germination, variety habit, disease resistance and special cultural needs, crop seed yield and other crucial information should be offset by higher compensation rates and/or fully guaranteed compensation.
- Sharing all known crop data is best practice for both parties (how to best grow the crop, normal seed yield, disease resistance/susceptibility, unique crop traits/lifecycle, etc). If this data does not exist, we recommend that additional compensation be written into the contract for the grower to collect and submit data on the crop they are growing.
- Specialized, skilled tasks such as crop selection, stockseed selection and production, roguing, large-scale hand pollination, breeding work, restrictive isolation requirements, hyper-specific growing requirements should be a contract premium outside of normal seed volume compensation.

### **3. Communication and Information Exchange**

- Contracts should be developed by both parties, with each participant having leverage in negotiation of terms. Contracts should be seen as documents where amendments and terms can be proposed by either the seed company or the grower before an agreement is finalized.
- Seed companies/buyers should make initial contact with potential seed growers in November/December for seed production beginning in the following year. This initial contact should establish which specific crop type(s) and/or specific varieties are agreed to be grown. Exact volume or target plant population details can evolve through mid-Winter. This timing of initial contact allows the seed grower to plan healthy crop rotations and required isolations. We recommend that most contracts be finalized in February, with the understanding that occasionally some grow-out needs aren't apparent until later.
- Both parties should determine and agree on the variety-specific **Adjusted Plant Population** required to result in a successful contract seed production. The Adjusted Plant Population is an estimate of the number of plants needed to produce the desired amount of seed, usually with 10-20% extra as a buffer (hence the term *adjusted*). We recommend that the contracting party agree to buy the entire resulting seed crop at full price (not including seed from any additional plants the seed grower may have decided to grow for whatever reason). For some crops it may be more appropriate to agree on area planted rather than number of plants, but the same principles apply.

- Regular seed crop status check-ins are highly recommended.
- The grower should immediately notify the seed company of adverse conditions or events that could negatively impact the seed crop.
- Reciprocation of communication and sharing of all relevant crop data should be an expectation held by all parties involved in seed contract negotiations, and in fulfilling an agreed upon seed contract. This includes growing data from previous years from the seed company and data from the current year from the grower.
- We recommend against any and all contracts that restrict the sharing of crop data and experiential learning between seed growers. Public sharing of seed growing experiences and data by seed companies and seed growers is a recommended best practice, supporting ongoing skill growth in the seed growing community. We acknowledge situations where special breeding work or proprietary breeding lines may require limited privacy agreements.
- We recommend that contracts do not restrict the sharing of their content, such as terms and pricing. This freedom to share allows seed growers to educate and organize against unfair and unethical conditions, and to refer other growers to preferred seed buyers with proven good practices.

#### **4. Pricing Considerations**

- Good profitable and long-term collaborations between seed growers and seed buyers are based upon transparency and ethical intent by both parties.
- Profitability is often predicated upon long-term trusting business relationships. Short-range exchanges and contracts are often not as beneficial to either party. Familiarity with varieties and mutual capacities allows for better mutual decision making.
- Prices for Contract Seed should consider Cost of Production, Cost of Living increases, Inflationary Conditions, as well as a reasonable profit for the seed grower.
- The comparative ratio of the retail seller price (across different sizes) versus wholesale compensation to the seed grower should be transparently communicated and considered. ie: what percentage of seed sales revenue goes to the grower.



## **5. Stockseed Considerations**

This section deals both with issues of grower compensation related to stockseed quality (especially in the event of problems), and with strategies for successfully managing and compensating labor done selecting and working with stockseed.

*A note on the definitions of “seed stocks” and “stockseed”: Stockseed refers to the seeds that reflect a grower’s best selections, (or sometimes more loosely - whatever seeds a seed company sends you to plant a grow-out), while Seed Stocks represent distinct stewardship efforts for the same variety.*

### **Risks Related to Stockseed Supplied to Growers**

We recommend the following practices regarding stockseed supplied to growers by a seed company for contract grow-outs. Some of these may not be necessary if using a Fully Guaranteed Payment model.

- The seed company supplying the stockseed for the seed production should provide information in writing about the health, true-to-type-ness, average expected seed yield (per area or per plant), and an accurate germination rate.
- The seed company supplying the stockseed should agree to bear responsibility and to compensate the grower for negative outcomes related to stockseed quality/condition. eg: undesirable off-type traits in resultant crop, seedborne disease, poor germination. We recommend paying the grower 50-100% of the contract value if the crop is planted but not harvested due to such problems, depending on the timing and the particulars of the crop.
- When the growout is harvested but needs roguing, growers should be compensated for the percentage of the seed crop that is rogued (recognizing that roguing directly decreases weight-based compensation), at a rate agreed upon by both parties. If the roguing takes more work and attention than it would have taken to harvest the seed, the grower should be compensated accordingly.
- There are often situations where a seed grower could supply seed to multiple companies from a single seed production. These usually occur when multiple companies communicate with a seed grower separately, and overlap is discovered as discussions unfold. If the stockseed used for such a multi-recipient production is from one company, be sure that company has granted permission for their stockseed to be the source for the other recipient companies. Moreover, the company supplying the stockseed can only be expected to assume responsibility for the outcomes on their portion of the production. We recommend getting clear affirmation from other recipient companies that they are willing to assume responsibility for negative outcomes that could arise due to stockseed problems.

- If the stockseed for such a production is supplied by the seed grower, discussion will need to be had with recipient seed companies regarding any shared stockseed risk and responsibility. Usually, self-supplied stockseed means risk is assumed fully by the seed grower, but it should also result in a higher price for the seed or unique compensation for the value of the stockseed used.
- Sometimes multiple companies approach a seed grower to produce seed for them all, in a combined contract. If stockseed is supplied by this combined buyer group, a seed grower must make very clear who out of the various seed companies will be financially responsible for stockseed risks.

***A brief explanation of the difference between stockseed selection and roguing:***

Roguing takes out the worst plants, while stockseed selection picks out the best. There are often plants in a third middle category that produce seeds that are suitable for sale but not to use as stockseed. Where there is no middle category, roguing and stockseed selection may be one and the same.

**Compensation for Stockseed Management**

Here we offer thoughts on how to approach stockseed work as a contract seed grower. Some companies may manage most of their stockseed in house or separately from production of seed for sale, some may rely more on contract growers for stockseed management, and some may just not have robust stockseed management programs.

The following are recommendations for different stockseed management scenarios. These could apply to intensive roguing work as well as stockseed work.

*A seed company asks you to do stockseed selection while you're doing a production grow-out.*

The seed company should recognize and compensate for the work, as well as provide guidance about the particular selection needs for the variety (or in any case engage in detailed discussion with the grower about selection).

Payment should not be tied to stockseed weight - it should either be a flat fee based on the time, thought and expertise going into the stockseed selection, or the entire contract should follow the Fully Guaranteed Payment model. Keep in mind that it may not be until the second year of growing a variety that you have enough information to do in-depth selection at the right time. We recommend that the work be seen as a multi-year process where the seed company pays the grower for each year of stockseed selection.

The seed company should continue to assume the risks related to stockseed quality, based on thorough information from and communication with the grower. It is also important to reach an agreement about use and ownership of the stockseed selections. The company may want exclusive rights to the stockseed moving forward, or they may agree to share the rights with the grower. Compensation should be higher in the first case. We recommend the second case when possible because it creates more empowerment for the seed grower moving forward.

*In the course of a contract seed grow-out it becomes clear that stockseed work is needed or is desirable for the variety, even though the seed company didn't ask for your help.*

Ask the seed company if they want to work with and compensate you for doing stockseed work; hopefully they do. If they don't, you may want to embark on selection work anyway, with the goal of developing an improved strain of the variety. If you grow that variety again for the same seed company, it will be necessary to reach agreement about stockseed risk and responsibility in subsequent years.

If the seed company is not willing to assume risks related to stockseed quality, we recommend either not growing for that company or charging a higher baseline price. Doing this work has the potential to create a return for your investment of work over time, as you become known and respected for doing quality selection and stewardship. This may take quite a while however, and may be difficult to achieve without having a seed sales and outreach platform of your own.

*You've bred a new variety from a cross between two or more parents, and you're engaging with a seed company that wants to offer it.*

In our experience, seed companies tend to recognize and reward this kind of new plant breeding work when they choose to offer such varieties. You will probably be able to set your price, and not worry too much about the seed company taking the variety without your blessing. That being said, we recommend all royalty and propagation/production agreements be formalized in written, signed contracts.

You should decide whether you want to do the seed production for the variety or whether you'd rather someone else does it, with you receiving a royalty (10% has become a standard in the movement). If you're doing seed production you could cover your costs with the price you set, or cover it with a combination of a price plus a royalty. You'll also want to consider how the variety will be maintained and selected moving forward if you're not doing it yourself.

*You've stewarded a variety for several years, improving and adapting it to your conditions, perhaps cleaning up and eliminating off-types. Now you want to offer it for sale through a seed company.*

This can be an important and fruitful way to do plant breeding, but it is also much more of a gray area compared to new varieties bred from a cross.

We recommend being clear with the seed company that you are entering into a working relationship around the variety in question whereby you fully participate in setting the terms, and are able to withdraw at which point they will stop selling the variety. The agreement could include royalties, or it could be focused on a negotiation of price for the special seeds you produce.

Seed companies should expect to pay more for this kind of seed than the going seed production contract rates. These arrangements may fall outside of normal seed contract procedures, and it may be important to ask for a special contract that commits the seed company to buying the seeds you grow for them.

## **6. Understanding and Advocating for Good Seed Quality**

All engaged in seed work have an opportunity and a choice to actively pursue good seed quality as a goal, as well as to educate gardeners and farmers about the factors that contribute to seed quality. There are also common misconceptions around seed quality that we can have a role in dispelling.

For example, contrary to public perception, the age of seed is not always a reflection of better or lesser quality. New seed lots can be of poor quality, while an older seed lot can have higher germination and overall better quality. Handled and stored correctly, a good quality seed lot can have a multi-year usage life, but some customers are adamant that “new” or “fresh” seed is all they want.

Customers may also find certain seed quality attributes can be overemphasized in the marketplace, without speaking to a host of other quality elements. For instance, seed that is certified organic or high germination could be poorly selected and stewarded, not regionally evaluated or adapted, not seed source transparent, not disease free, and not stored well.

A holistic way of assessing seed quality is to look at all of the systems the seeds are part of - including trials, selection, stockseed work, regional adaptation efforts, and relationships between seed growers and seed sellers. These elements can be obscured if we just think about individual seed lots instead of the systems that surround them.

We've named key seed quality factors below, but we do not claim this list is complete. If our seed community has shared understandings around good seed quality, we can work together to further scale-appropriate research and best practices. If one seed producer or seller has a seed quality problem, it can impact the market trust that we all rely upon for our livelihoods. Supporting each other when problems arise, as well as understanding the responsibilities inherent in seed work, is a collective and individual commitment.

- Well-selected and/or well-stewarded varieties resulting in true-to-type phenotypes and genotypes, as well as regionally adapted varieties.
- Seed production and handling without crossing, contamination or mixing with what are commonly understood in agriculture as “Genetically Modified Organisms”. Testing is recommended for seed productions of “at risk” crop types.
- Seed source transparency and attribution, as described in Section 7.
- The presence and availability of research and information that assesses the variety's performance in conditions of intended use.
- Evolving and applying best practices to produce and process seed free of known diseases, with testing as needed by crop type/species.
- Storing seed lots in appropriate containers/bags in a climate controlled area with temperature and humidity conditions ideal for seeds long term viability.
- Cyclical seed germination testing of varieties offered for sale, with vigor and other types of testing as needed.
- Familiarity with and application of the best practices, seed laws, rules and regulations that apply to each seed workers' area, region, or country. We must also be willing to advocate for scale-appropriate regulations that support seed worker livelihoods while ensuring good quality seed in the marketplace.

## **7. Seed Source Transparency and Attribution**

In the interest of both fairness and quality, we strongly recommend that seed sellers and distributors of any scale take immediate efforts to become transparent regarding the sources of the seeds they sell and the origins of the varieties and seed stocks. This will improve the utility and quality of seeds for end users, and is conducive to better recognition and fairer treatment of the seed growers, farming communities, and plant breeders worldwide who are the origins of the seed supply.

In the seed industry (small regional-focused organic seed companies included) it is common to source seeds grown all over the world, often from places with lower labor costs. It is also often the case that customers aren't aware of this. Country of origin labels on seeds are not common currently, and marketing may focus on regionality while effectively obscuring the prevalent global sourcing model.

In addressing these issues we take a nuanced approach of both embracing international collaboration around seeds and seed work, and challenging commodity-based models that simply seek workers who will produce seeds for less pay. Sourcing in seeds mirrors dynamics that are present in many other industries, where companies seek cheaper labor to lower costs. In seeds however, there is the added issue of the role regional adaptation and regional feedback loops play in seed quality. The act of sourcing seeds from other parts of the world in and of itself affects the suitability of seeds for a given region. Additionally, many international sourcing models run counter to the values of communication between seed companies and seed growers about variety stewardship, stockseed management, and fair compensation. Moreover, it is a seed system quality issue when end users are not able to maintain or verify consistent origin sourcing. Where transparency is not standard, it may not even be possible to know that two seed lots from the same industry source share stockseed lineage.

On the other hand, there are good reasons to sustain collaboration between seed workers in different parts of the world and to source seeds internationally. Especially in this time of climate change, and when global trade patterns readily spread plant pests and diseases, it can be important or essential to seek pest, disease and climate adaptation across regions, to trial and adopt seed stocks from other parts of the world, and for there to be all kinds of international exchanges and collaboration. Potential problems around regional adaptation of seeds grown far away can be mitigated by robust trialing programs that test many seed stocks for performance in the region of the target market.

We've identified price pressure from seeds grown in places where workers are paid less as having a major impact on compensation rates for U.S. and Canadian seed growers, and on our collective capacity to maintain and grow a robust seed system here. We would like to be in touch with seed growers from other countries to better understand how they are affected by such dynamics, and to work towards a culture and practice of international mutual support and celebration of seed work.

Seed Source Transparency values and supports the growth of relationships around seeds, and the quality elements that go along with these relationships. We want to help create a culture and an expectation around seed source transparency that supports this. In contrast, many current models treat seeds more like commodities, at the expense of seed system quality, grower empowerment, and mutually beneficial relationships.

**We offer the following recommendations for Seed Source Transparency:**

- Seed Source Transparency should be defined as clearly and visibly naming the grower of a seed lot, and the region and country where it was produced. If the name of the grower and region is not known, at minimum the country of origin should be stated.
- The statement should be visible at the point of sale. This could be a website, a printed catalog variety description, or individual seed packets.
- We encourage all seed growers who have websites, social media etc. to list the varieties they grow and have grown for seed, and to which specific companies that seed is/was sold to.

**In addition to transparency in seed production, we recommend attribution for skilled seed work. This can include plant breeding, stockseed work, or variety stewardship over time, and should recognize the following:**

- The grower and their location if they have contributed ongoing or multiple years of selection (or provided the selected stockseed) for a given seed lot.
- The plant breeder(s) and their location if they have bred the variety for sale. This could be an individual, a group, a community, or a combination of these.
- Be mindful that in some cases, there are original breeders, an ongoing steward, AND a "bulk" or "increase" production seed grower. All should receive mention.

It is our intention that these recommendations around seed source transparency and attribution apply not only to seed companies, but also to seed growers and plant breeders as well. Seed growers and breeders should adhere to the same model of attribution, recognizing from whom and where their seed comes from. Acknowledging who has selected, stewarded, or iterated before us is what gives our immediate requests for attribution validity. To ask but not also offer would undermine the ethics and validity of attribution.

We are working to promote the overall understanding and acknowledgement that we as seed growers, plant breeders and variety stewards are the current links in long, long chains of seed stewards. Even when we breed an innovative new variety or spend years adapting a seed stock to our region, the bulk of the work such a variety represents is still creditable to the many generations of peasant and indigenous farmers and communities that grew the ancestors of the seeds we save today. It is an honor to be a part of this chain, and something to be proud of and take seriously, because if the work isn't done in the present the chain can end. We believe that it is more fulfilling to understand ourselves as part of work that unfolds over millennia and over these many generations, rather than to take disproportionate credit as individual inventors.

Finally, we also recommend a practice of acknowledging origins that go back further, to the extent that origins are known - even if details are few. This could include recognizing place origins of parent varieties or foundation seed stocks, and recognizing individuals or communities that worked on them.

## **Some closing remarks...**

This document is the first iteration of an ongoing conversation. We encourage and welcome all kinds of input. Our goal is that this document will become an important guide to best practices that reflects the diversity in our seed growing community, and will support everyone involved in growing the highest quality seed possible.

Although this document has been created by seed growers, we also desire the perspective of seed sellers. We will host discussions between seed companies and seed growers to share ideas and opinions on these recommendations.