

FROM SEED TO SEED

A CASE STUDY ON TRIPLE DIVIDE ORGANIC SEEDS COOPERATIVE



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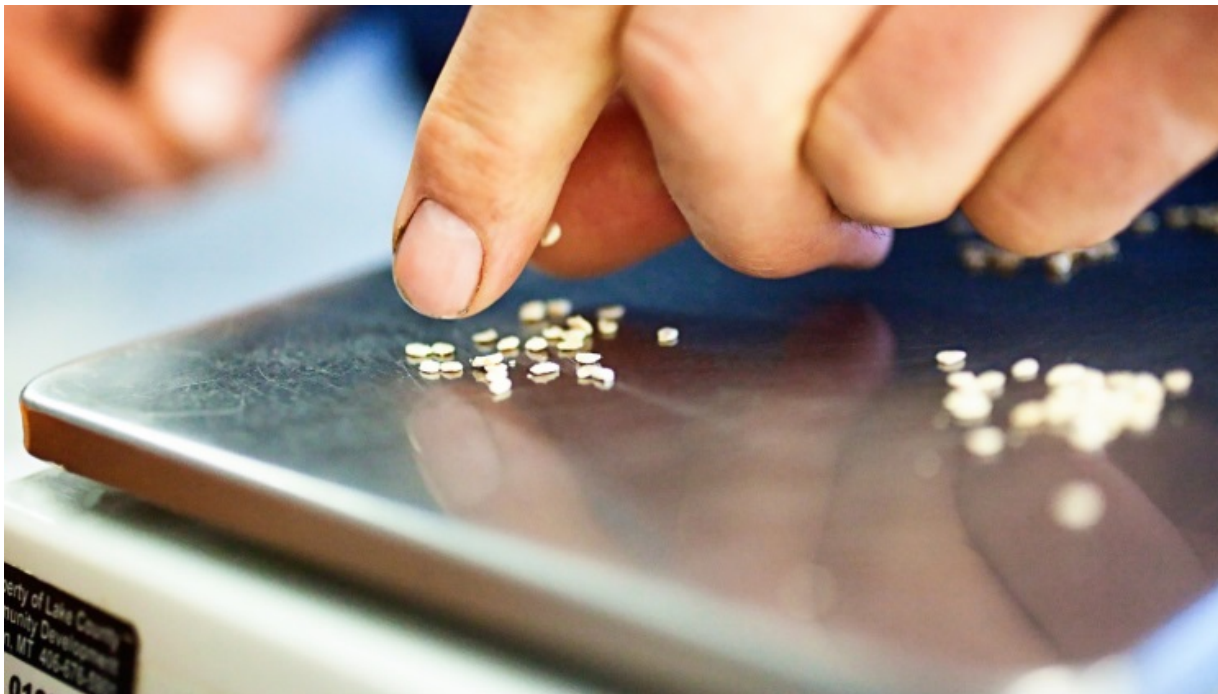
Mission West Community Development Partners (previously named Lake County Community Development Corporations) established a Cooperative Development Center in 1999 under funding from USDA-Rural Development's Rural Cooperative Development Grant (RCDG). As one of two cooperative development centers in the state of Montana, LCCDC provides resources, education and technical assistance to existing and developing cooperatives. Find more information about the Mission West Community Development Partners and the Cooperative Development Center at www.missionwestcdp.org.

Learn more about Triple Divide Organic Seeds Co-op at <https://tripledivideseeds.com/>

Photos courtesy of Nicole Tavenner

INTRODUCTION

Triple Divide Organic Seeds Cooperative develops plant varieties for Montana and other northern latitudes by improving and adapting open-pollinated, locally resilient vegetable and flower seed crops using organic practices. Their aim is to return seed ownership to the region's farmers and gardeners to build a secure local and regional food and farm system. Triple Divide's members are located across Montana, and cooperate to grow 160 seed varieties for an online catalog and seed racks in retail locations around the state. Triple Divide officially incorporated as a cooperative in 2014, but members have collaborated on seed-related activity since 2012. Initially, members focused on education and knowledge-building around seed production: they attended seed school, conferences, and workshops, and worked with Organic Seed Alliance for technical assistance on seed production and Lake County Community Development Corporation for guidance on forming a cooperative. While members continue to grow as seed producers, they have begun to shift their focus to shaping Triple Divide into a successful business. This case study explores challenges and successes for members in growing Triple Divide, as well as Triple Divide's significance and future. This report summarizes research and results of in-depth interviews with all co-op members, highlights key lessons learned in developing a seed co-op, and discusses salient next steps for Triple Divide. This report is meant to be shared with co-op members and partners, as well as others interested in establishing or growing a rural seed cooperative.



A BRIEF HISTORY OF TRIPLE DIVIDE ORGANIC SEEDS COOPERATIVE

"I'm still amazed that something got started right here in MT. It's one thing to be interested in growing and saving seed, and it's another thing completely to grow a business. We have a unique setting and great resources here. It's exciting to be a part of."

-TRIPLE DIVIDE MEMBER

While Triple Divide officially incorporated as a cooperative in 2014, it began to take shape a few years before then. In 2012, six farmers around Montana, including the cooperative developer for Lake County Community Development Corporation (LCCDC) at the time, began talking together about their interest in seed. They represented a range of abilities and knowledge in seed, from beginning farmers to self-described "seed dabblers" to a few who had been producing and saving seed for decades. In order to begin conversation with other farmers about their interests and needs around seed, this core group agreed to hold "regional interest potlucks." Potlucks were held in the Flathead, Mission, and Bitterroot Valleys, and in Great Falls. Sensing keen curiosity to learn more about seed, LCCDC's cooperative developer acquired funding to bring Bill McDorman, of the Southwest-based organization Native Seeds/SEARCH, to teach "Seed School," a week-long intensive workshop on seed production, at the University of Montana. Sierra Seeds, a California-based seed co-op, was present at Seed School, and talked with interested participants about starting their own seed co-op.

Of the 30 people at Seed School, a core group emerged and began discussing starting a cooperative seed enterprise. At the time, there were no farmers specifically producing regionally adapted seed varieties to sell in Montana—a role which had been previously filled primarily by Fisher Seeds in Belgrade and the Bitterroot-based company Garden City Seeds—and many in the group saw this as a critical void in the Montana agriculture system, as well as a unique economic opportunity to diversify their revenue streams. As conversation continued around the possibility of a cooperative seed enterprise, the group clarified its first priority: developing members' knowledge of seed production. With this goal, members pursued opportunities to attend seed workshops and conferences, notably Organic Seed Alliance's (OSA) biennial "Organic Seed Growers Conference." Members discussed the significance of these early events in codifying the group through shared experience, inspiration, and learning. A Rural Cooperative Development Grant secured by LCCDC's cooperative development center, as well as scholarship money through OSA, provided key financial support for members to attend these workshops and conferences.

By 2013, the group was certain that they wanted to form a seed cooperative to produce regionally adapted seed. They held their first annual meeting that year. While members focused on important co-op-related decisions, such as the name (Triple Divide Organic Seeds Cooperative) and whether to require co-op members to be certified organic, the cooperative developer worked on the details for forming a cooperatively structured business. Wanting to transition into a more active role in the co-op as a member and seed producer, the cooperative developer left his role at LCCDC, but retained significant knowledge and skills related to cooperatives. By 2014, once it was officially a cooperative, a series of three Specialty Crop Block Grants (one secured through LCCDC and two through OSA) supported and continue to support Triple Divide’s development. (1)

Specifically, to build their skills in topics such as variety trials, germination testing, and grow-outs, members have recently participated in significant educational opportunities, including a workshop with the Northern Organic Vegetable Improvement Collaborative (NOVIC), workshops and technical assistance with OSA, and education from seed experts at the past couple Montana Organic Association’s (MOA) annual meetings.

As members have gained a baseline of knowledge, experience, and confidence in seed production, they are turning more of their attention to the business side of Triple Divide. Already, they have garnered significant interest in and support for their seeds: their sales

(1)The first Specialty Crop Block Grant supported education and market development, as well as one person’s time to organize these activities. The latter two have not provided financial support for Triple Divide staff, except to organize and write crop trial reports.



have doubled from \$9,000 to \$18,000 in three years, and they have expanded their seed catalog from 60 to 160 varieties, offered online and at 15 retail locations around Montana. Last year, they sold 9,000 seed packets. Even so, members do not yet experience significant economic benefit from Triple Divide, and many operational logistics need to be refined. As such, members are looking to continue to build a business that is economically sustainable and that offers significant economic benefit for members, in addition to the educational benefits it has so far emphasized. For the past two years, all of Triple Divide members' time doing co-op-related work (outside of seed growing and organizing variety trials) has been paid by the co-op's sales, as opposed to grant support.

Presently, all paid activities (e.g., warehouse management, seed packing, website and catalog development, and sales and marketing) are offered to members first and then hired out when necessary, as in the case of seed packing. Members can participate on co-op committees including grow-outs, quality control, equipment, production, and variety trials. They also have the opportunity to serve on the five-person board, comprised entirely of Triple Divide members. All members are expected to attend an annual meeting and participate in phone conference calls throughout the year. They also purchase a common stock share of \$150, which entitles them to one vote per farm in the cooperative as well as the benefits of using shared equipment and selling seed. (Members have the option of



paying for common stock at the beginning of their membership or having the stock drawn from their seed sales payments.) Triple Divide owns a germination chamber for conducting germination tests. Last year, funding through a Specialty Crop Block Grant enabled Triple Divide to purchase four sets of seed cleaning screens, distributed throughout the grower regions. They also have access to a cargo trailer with seed cleaning equipment, owned by OSA, which includes an AT Ferrell Clipper and a “Winnow Wizard” that performs precise density separation of small seed lots.

Co-op members benefit from the ability to acquire seed contracts with other companies, in addition to growing for Triple Divide. This gives growers the option to scale up, and increases the economic viability for seed production to become a significant element of members’ enterprises.



PROJECT BACKGROUND

As the number of small, diversified farms increases in Montana, Triple Divide is filling a critical gap in the regional food system by growing and selling regionally adapted vegetable and flower seed. Seed is the foundation of agriculture, and in the face of corporate consolidation of the global seed industry, Triple Divide reclaims ownership of this foundation and shares it with the regional community. It is one of a vast minority of seed companies in the United States that focus on organic, open-pollinated seeds, thereby helping to meet a crucial need for organic seed in the organic agriculture industry. Triple Divide's co-op structure provides a way for regional producers to collaborate to assemble a full catalog of seed varieties, which is nearly impossible for a single farm, given the nature of seed pollination. The co-op structure moreover provides a fairly low-risk way for members to experiment with diversifying their revenue streams through seed production in a highly competitive environment for local agriculture.

Given its uniqueness and importance, the researcher spoke with each of Triple Divide's members to document the challenges and successes of building the co-op, as well as their personal experiences and lessons learned throughout Triple Divide's journey to date. Members participated in individual in-depth interviews averaging 50 minutes in length. In total, over nine hours of interviews were conducted with eleven co-op members from central and western Montana. They shared information based on a variety of questions, including: Why is Triple Divide needed? What has supported the co-op's development over time? What challenges has the co-op encountered through its growth? What are the benefits of the co-op for members? What difficulties do co-op members face in participating in Triple Divide? What are Triple Divide's biggest next steps? The following sections describe key lessons and observations learned from these interviews.



KEY LESSONS AND OBSERVATIONS

MEMBERS ARE INSPIRED AND MOTIVATED BY A VARIETY OF NEEDS

Members expressed a range of goals for the co-op, but they were unified in Triple Divide's mission and motivated by the possibility of meeting many different needs for themselves and their community. All eleven members emphasized the importance of both elements of Triple Divide's mission: cooperating to grow regionally adapted, organic, open-pollinated seed and seed sovereignty. They work towards this mission by developing the opportunity and capacity of farmers to produce seed, filling a market niche for regionally adapted seed, and cooperating as an antidote to corporate consolidation of the seed industry. One member encapsulated the importance of revitalizing farmers' knowledge of regionally adapted seeds: "There's so little history of actual production of any scale of organic vegetable seed in Montana...There are a lot of opportunities for seed but it hasn't been connected very well to new growers, [and] this is a significant opportunity."

Developing farmers' knowledge as a path to community self-reliance was discussed in terms of both agricultural sovereignty and economic independence. Members expressed that "if we don't work together to grow seeds in our own bioregion, no one else is going to do it for us," and they often connected this to the economic importance of regional seed production: "We have an excellent niche for seed growing here in Montana...Triple Divide gives people a chance to learn about and explore raising seed...and it has great potential to become economically important." Members also felt they were more generally "creating a more wonderful place to live" by cooperating to share knowledge and, in turn, meet a demand for locally grown seed: "The only meaningful agricultural knowledge is what is possessed by a community. It's not enough to have it in a single individual's mind...we all share with each other and we all really need to share that enthusiasm and experience collectively. We matter collectively."



THE CO-OP STRUCTURE SUPPORTS MEETING MANY NEEDS

The cooperative structure of Triple Divide is conducive to meeting many different needs for members, from fulfilling personal and community values to providing economic benefits. Cooperatives are designed to meet both values-based and economic needs, which other business models often struggle to balance. One member explained that this is related to the scalability that the co-op structure creates: “Cooperatives are a great way for the local and regional food movement to scale up while creating structural changes that maintain the values of the local and regional food system.” For Triple Divide, scalability was not simply an added bonus; it was essential: “Because of how a lot of vegetables are pollinated, you can’t have more than one variety of certain things like squash on the farm. With six or eight of us, we can have six or eight different varieties of squash...The co-op was a way to provide and grow a lot of different regionally adapted varieties amongst all of us.”

The cooperative structure meets economic needs for members by providing a low-risk environment for them to build skills and sell their seeds through Triple Divide and, for some members, contracts with other seed companies. Without Triple Divide, members could not individually sell seeds in Montana because it would be “nearly impossible for one farm to produce the full selection you need to have a seed company.” The co-op structure also provides another revenue stream for farmers, increasing competitiveness and economic opportunity. In this early stage, members are making “a little bit” of money from Triple Divide, though members look forward to this number growing. For some growers working with other companies on seed contracts, seeds are becoming a “significant” part of their business; all attribute this success, at least in part, to the support they have received from Triple Divide. The other key economic component for members is consistency and reliability over time. Members explained that the cooperative structure supports Triple Divide’s long-term equity and resilience: “if an individual loses interest or wants out, they’re not the owner; we’re together the owner. And then there’s room for someone new to step in.” In other words, Triple Divide will not fail simply because one member decides to leave the co-op.

The co-op structure also supports building an equitable, sustainable business model. Triple Divide hires its own members for managerial work (as opposed to contracting with an outside party) and pays an equal hourly rate for all members. Hiring within the co-op—combined with the relatively small membership of Triple Divide—means that members are engaged in a variety of activities that build skills and community: “When you look at the roles the different co-op members are playing, they’ve all been able to bring different skills to bear and develop skills. Everyone’s experienced a lot of personal development in

their own skills and capacities. And they've built really strong relationships with one another." Members emphasized that one of the most important outcomes of Triple Divide is strong friendships with co-op members, strengthened by a shared mission. One member summed this up: "I love our co-op and our co-op members...we talk and support each other, and it's nice to know there's a group of people who are working on the same mission as me, even if I don't get to talk with them on a regular basis."

THE CO-OP CHAMPION CARRIES A DOUBLE-EDGED SWORD

All members emphasized the importance of the "co-op champion," who was the LCCDC cooperative developer in the early years of conversation about seed, prior to Triple Divide's incorporation. During this time, a Rural Cooperative Development Grant funded a contractor to conduct a market study and the cooperative developer to coordinate related activities. A year before Triple Divide incorporated, he left his position at LCCDC to pursue seed production on his farm. After leaving his position as cooperative developer, he became more active in the co-op as a farmer-member. On his own time, he wrote the first Specialty Crop grant proposal and presented it to LCCDC, who took over management of the grant. Once approved, this funded his time to manage various contractors who provided education and marketing material development for Triple Divide. Later, he approached OSA with ideas for the second and third Specialty Crop grants and asked them to champion Triple Divide's work in the region, at which point OSA took over the grant proposal and application. It is important to note that throughout, there was clear separation between his two roles to avoid any conflict of interest. In Triple Divide's nascent stage, the co-op champion was a major benefit and challenge for the co-op—particularly due to his initial position as a cooperative developer. One member explained this tension: "Everything was in his brain and he was in a role that no one else could fulfill because of his position [at LCCDC]...it was frustrating to see that he was overworked but not be able to change it or help him. It was too much responsibility for one person."



The fact that he was initially being funded by the first Specialty Crop grant, which enabled him to devote significantly more time to Triple Divide's business development, set a precedent of reliance on him. As a result, many members did not necessarily understand the amount of work he had been doing. Once he was no longer grant-funded to work on Triple Divide, "it was tricky because everyone was accustomed to him doing so much work and didn't realize just how much he was doing. So that transition was, and is, a real challenge." Many members felt that because they did not "hold the bigger picture," they did not have the skills, knowledge, or time to transition into positions that would alleviate him of some responsibility. Yet, all members recognized the indispensability and magnitude of his work for Triple Divide. One member explained that, "you need that one person who is motivated and knowledgeable to be the momentum." She humorously added, "Without him, we might just be a bunch of shambling farmers."

RELATIONSHIPS AND NATURAL GROWTH SET THE CO-OP UP FOR SUCCESS

Members talked about how shared experiences, building a positive group rapport, and letting the co-op grow at a natural pace set Triple Divide up for success. Many observed how the co-op has "brought them closer together" through shared experiences and interests, such as the formative 2012 OSA conference. As one member explained, "I decided to join because I liked all the growers, and I love the whole cycle of seed growing, from seed to seed. I wanted to be able to do that more and support other growers that I really admire and like to be with." This sentiment has created commitment, buy-in, and momentum for members, who feel that they have "helped each other become better farmers and seed stewards than any of us could have been alone."

Particularly during the first few years of the co-op's formation, the co-op was not focused on creating economic gain. This gave the co-op time and freedom to find a shared mission and vision and begin moving forward with clarity and solidarity of purpose. Throughout this process, co-op members had space to present a diversity of perspectives, which was important because "being able to have different perspectives gives newer members—particularly those with less experience in business and production—new viewpoints from more knowledgeable members." Another member said that, "The more minds and the more people we have, the stronger we are."

As Triple Divide has grown, commitment to the co-op has, in many cases, strengthened as people feel a strong sense of reward for their efforts. In addition to supporting members' development as seed growers and farmers, members communicated a strong sense of efficacy in observing co-op members' successes: "It's been amazing to see how fast some of these farms have grown, from learning about growing seed to doing it on a pretty large scale, employing workers and having interns that travel from out of the area because they're really excited to learn about seed saving in Montana." By allowing Triple Divide to "incubate" while

members develop their knowledge, skills, and relationships, members feel that the co-op has built the foundation for a sustainable business. While some would like to move towards a more aggressive approach to future development, many feel that Triple Divide’s current rate of growth will result in “economic significance” for members in the future.

THE CO-OP FULFILLS DIVERSE MEMBER GOALS

Members highlighted a variety of motivations for joining Triple Divide. These ranged from learning about a topic of interest to collaborating with a group to diversifying their farm (economically and biologically) to making seeds a significant economic element of their farm. For those most interested in the educational component, Triple Divide is a relatively low-commitment way to “dip [their] toes into seed growing.” It also gives members the opportunity to support other farmers in a common mission. One member explained that, “The nature of farming is pretty isolating at times, and the ability to...support each other and answer questions for each other is wonderful. If one of us succeeds, we all succeed.”

Most members expressed a desire to benefit economically in some way, though the expectations for this differed greatly between members. While some saw production for Triple Divide as a small “supplement” to their farm income, others considered it to be an opportunity to partially or entirely transition to seed production (for Triple Divide and seed contracts with other companies) from their farm’s current activities. Many members’ expectations have evolved with the co-op’s growth, as it pivots from a purely educational organization to a business that can support growers who are scaling up their production. For these members, contracts are currently their primary economic support, as Triple Divide can only handle and sell a relatively small amount of seed. Even so, as the source of education, training, and shared equipment, Triple Divide has been many members’ primary facilitator for increased seed production. For members who are not aiming to scale up their seed production significantly, Triple Divide provides off-season income or funds for their spring expenses. It is also a source of economic sustenance for members who may be scaling down their production or evolving their farm—whether through continued seed production as they age or employment with the co-op. Economic benefit or not, all members agreed upon one final motivation for joining Triple Divide: “I’ve made a bunch of new friends! That’s pretty cool.”



ACCOUNTABILITY AND COMMUNICATION ARE DIFFICULT, BUT ESSENTIAL

To continue to support members' goals, communication and accountability are essential. This has proven challenging for Triple Divide: members are busy, hard to reach, and "spread out across the state," there are no systems to ensure accountability, and members feel insufficiently compensated for co-op-related work. Communication is particularly difficult because, as farmers, "we're only really mentally available for a very short period of time in the winter, and in the rest of the year, we scatter to our fields and never hear from each other because we're working endlessly outside and never coming in to our computers and telephones." Even when members are mentally available, they have other obligations to fulfill. This is compounded by the sense that "members are supporting Triple Divide with their time" and that "the relationship between us putting in work with the co-op and receiving income for it is not always apparent."

These communication challenges are exacerbated by a lack of accountability for co-op activities: "Putting together five or six or ten farmers who are all super busy—that's a tall order. Some details just don't happen. And who's responsibility is it? No one's. But everyone's." Without systems to hold people accountable, follow-through has been a challenge, and members have struggled to stick to decisions: "Every year, we revisit decisions we made the previous year that we didn't deliver on. We go back and say they didn't work, but they didn't work because we didn't implement them." While members "want to continue to work based on our own honesty and self-accountability," most felt that a structure for accountability would help them stay on track with timelines, spread the co-op's workload among members, and develop the co-op as a business.

All members felt that meeting more frequently would address some accountability issues. As one member put it, "We could have a really amazing thing if we could all get together and dedicate a little more time to it." In addition to helping with accountability, getting together more frequently could help address the fact that it is difficult to "keep people's commitment and enthusiasm during the building phase of something that we're hoping will have more fruition in the future. To have a tangible sense of working together—that's part of the glue that makes people feel they're working as a group," which is important for the long-term sustainability of Triple Divide.



NEXT STEPS

Key next steps for Triple Divide emerged from the researcher's synthesis of interview results.

- Developing the business side: While some members felt that Triple Divide should continue to focus on education and skill-building, many expressed the desire to develop the co-op's business capacity. So far, this has been hindered by the fact that members have struggled to balance priorities and take on extra responsibility for Triple Divide when their time is already consumed by their personal enterprises. Furthermore, members have shied away from responsibility because they may not feel they have the knowledge or experience to help with business development, which many perceive as requiring a different skill set than farming. Continued education and training for members on building the business side of Triple Divide will be essential in strengthening the co-op's capacity to build economic power and significance, enabling members to grow not only through the co-op but also on contract as they gain efficiency and scale. A few members also suggested that adding select new growers who were interested in pursuing seed production as their primary enterprise might be helpful in ensuring future leadership and economic development of the co-op.



NEXT STEPS

- Making key decisions: As Triple Divide grows, it is essential for members to continue to make decisions and answer key questions as a group. Members spoke about a number of questions that are important for the co-op to tackle together so they can move forward in solidarity with a clear, shared strategy. These questions include:
 - i. Should Triple Divide prioritize adding new varieties, or focus on stewarding varieties that are already in the catalog?
 - ii. Who is Triple Divide growing for—gardeners, small farmers, or both? Who does Triple Divide envision growing for in the future, and what is the path to achieving this?
 - iii. What is Triple Divide’s membership policy? Is Triple Divide accepting new members? What is their strategy for membership in coming years?

Members also discussed the need to develop and refine Triple Divide’s co-op policies, or “work out the kinks,” as one member put it. This includes ironing out details such as: how to fairly divide varieties and quantities, hierarchy policies, sales projection accuracy (to determine how much seed to pack, grow, and hold out for the following year), and quality management activities (including grow-outs, variety checks, and establishing how much time should be allotted to developing new varieties before they are put into the catalog). Members stressed the importance of discussing and shaping these co-op policies as a group.

- Ensuring leadership, accountability, and fair distribution of responsibilities: Building a sustainable cooperative and business requires assurance of leadership, fair distribution of responsibilities, and organizational accountability to fulfill those responsibilities. Members pointed out that in the past, many decisions and tasks have been pushed off to the annual meeting, putting unrealistically high pressure on a single event to address important co-op affairs. As a result, the annual meeting can be stressful and insufficient for doing everything necessary—an unproductive and unsustainable approach to running Triple Divide.

Instead, members suggested planning in advance to build in more time throughout the year to meet with other members. Some proposed requiring participation in these meetings to address accountability issues—though all felt conflicted in suggesting more requirements for members. Members also described feeling unfulfilled by conference calls, and all emphasized that in-person meetings, while more difficult to arrange, were more effective, inspiring, and rewarding. One member suggested hiring a staff person—possibly not a fulltime farmer—to coordinate task distribution and help with administration, particularly for activities that need to occur in a timely manner. Discussing better communication strategies and other meetings planned in advance is an important step for the co-op in terms of ensuring that co-op members feel inspired, informed, accountable to fellow members, and actively involved in moving the co-op forward.

NEXT STEPS

- Building the co-op's reputation: Building Triple Divide's reputation is a key aspect of growing its economic impact. The co-op has already begun to establish a reputation through their seed packets, which have already experienced "significant public interest" at retail locations around the state and online. This year, a rebranding project, including a new seed packet design, will hopefully contribute to "a more glossy presentation," a more eye-catching presence on seed racks, and increased sales. In addition to presentation, establishing reliability through details such as timeliness in getting their catalog online in the winter and ensuring superior, true-to-type seed is crucial "so that we consistently demonstrate a high quality that people can rely on." (The specifics of the quality management activities, which are currently being developed, are discussed in the second bullet point, Making Key Decisions.) Building a reputation of quality and consistency will help Triple Divide begin to sell seed to more small farmers regionally, who some members currently suspect "don't trust us to know what we're doing yet." In addition to sell to small farmers, a solid reputation will help members acquire desirable seed contracts with other seed companies. As the co-op builds its business in the coming years, establishing their reputation will be vital to their success.



APPENDIX: SUMMARY OF RESULTS

Table 1. The following table distills the key benefits that Triple Divide members experienced.

Type of Benefit	Specific Benefit
Growing seed with co-op	
	Fun and different from vegetable production
	Biological benefit for pollinators and farm
	Good growing conditions in MT (dry autumns, isolation, cold winters)
	Ability to grow more involved crops:
	...biennial seeds
	...small seed (e.g., carrot seed)
	Learn skills from other members
	Gain experience
	Shared seed cleaning equipment (increases efficiency)
Group support	
	Enthusiasm to help other members: "Cooperating feels good!"
	Each member contributes different skills

	Friendship
Community Empowerment	
	Shortening and localizing food chain
	Fulfilling personal values
	Co-op structure enables sale of regionally adapted seed in MT
	Low-stakes learning environment encourages beginning farmers to participate
Economic	
	Ability to grow with other companies on contract
	Hiring selves as employees for co-op work outside seed growing
	Keeping money in local community
	Off-season income
	Diversifying production/revenue streams
	Increasing economic opportunity (sales are growing annually)
	Building reputation (e.g., with new design for seed packets)
	Website, online catalog
Sense of efficacy	
	Ability to grow own plants from own seed

	9,000 packets sold in 2017—lots of Triple Divide seed being planted regionally
	Opportunity to learn many and varied skills as members

Table 2. The following table distills the key challenges that Triple Divide members experienced.

Type of Challenge	Specific Challenge
Need to develop new knowledge, skills	Seed growing
	Seed cleaning
Time and prioritization	Harvesting, germination testing are very timing-oriented
	Seed cleaning during off-season can be time-consuming
	Difficult to prioritize seeds over more urgent farm tasks
	Difficult to manage time with other obligations
	...off-farm jobs
	...parenting
	Seeds add time and complexity to winter/spring planning
Seasonality/ weather	General unpredictability

	...spring fluxes (uncertainty when to plant, can cause early or late bolting)
	...smoke (can cause unexpected maturation behavior, low pollination)
	Short autumn ripening and drying window
	High wind (esp. in central and eastern MT)
Predation	
	Deer, antelope
	Rodents (raccoons, skunks)
	Insects (weevils)
Distance	
	Difficult to access shared equipment
	Difficult to schedule and attend in-person co-op meetings
	Central members have more responsibility in day-to-day co-op activities
Lack of open-pollinated/ organic seed	
	Difficult to find new, potentially successful varieties
Economic	
	Labor vs. time payoff can be minimal
	Limited potential to sell through co-op due to small scale

	One-year payment lag for seeds (payment based on sales, not contracts)
	Unpredictable income source
	Inefficiency due to small scale (esp. in seed cleaning)
	Difficult to acquire desirable contracts without established reputation