



Growing Saskatchewan's value-added sector

Ag-West Bio
Annual Report 2019-20

President's Message

Crisis creates opportunities



Dr. Karen Churchill

In the midst of the COVID-19 pandemic, Canadians are becoming more aware of the critical role of science in our world. The impressive dedication and expertise of the team at Vaccine & Infectious Disease Organization-International Vaccine Centre (VIDO-InterVac) in its world-leading efforts to develop a vaccine against the virus has demonstrated the value of Saskatchewan technology and innovation.

This moment of cultural awareness offers a huge opportunity for Ag-West Bio to serve as an ambassador for science, showcase scientific leadership and innovation, and prompt society to embrace science. In these uncertain times, this organization's ability to accelerate innovation by forging new partnerships and supporting our members will be pivotal.


The local food supply leading to food security has become a critical issue. While businesses adapted quickly to address safety, labour shortages, transportation and border restrictions, there was a moment of uncertainty. Shortages of some items caused stress, but also opportunity. We witnessed a quick pivot by the agri-food industry to fill gaps and meet demands. Local food companies responded with creative solutions. As a result, our food shortages have been minor compared to other places. Ag-West Bio is particularly relevant in these times as we support entrepreneurs seeking advice, education and financial support to bring their creative ideas to life.

Saskatchewan is a world leader in production agriculture. Scientific advances in genomics, digital agriculture, and artificial intelligence technology underscore the

Government of Saskatchewan's 'Plan for Growth.' The next logical step is to take our abundant crops and transform them into value-added food products. Given the pandemic crisis, the goal of building the processing capacity for value-added within our province seems almost prescient, as this will anchor a resilient local food supply chain. Our bioscience community excels in building bridges between creative ideas and transformative technologies to find solutions. Ag-West Bio will continue fostering partnerships needed to make this effort a success, such as with Protein Industries Canada (PIC) and the Diverse Field Crops Cluster (DFCC).

I want to take this opportunity to thank Wilf Keller, who served as Ag-West Bio's president and CEO for the past 10 years. My first six months at Ag-West Bio have been exciting and pleasant (despite the unusual circumstances with the pandemic), partly because Wilf helped to create a culture of collaboration in this community. I also extend the warmest thank you to the Board of Directors and the staff who continue to make Ag-West Bio a tremendous organization; and the ongoing support of the Saskatchewan Ministry of Agriculture and Agriculture and Agri-Food Canada is greatly appreciated as Ag-West Bio adapts and grows to anticipate and meet the needs of the bioscience community. ■

Dr. Karen Churchill



"the goal of building the processing capacity for value-added within our province seems almost prescient"

Letter from the Chair

A time of change



Dr. Robert (Bob) Tyler

I opened my letter last year with "The past year was an extraordinary one at Ag-West Bio." Little did I (or anyone else) know how truly extraordinary the year ahead would be.

As many have said, the social, economic, and human impacts of the COVID-19 pandemic are unprecedented, comparable only to events on the scale of the 1918-20 Spanish Flu pandemic, the Great Depression, and the great wars. At the moment, things are looking up in Saskatchewan, with the number of new cases declining daily in much of the province and the economy slowly starting to re-open. The battle is far from over, however, and the effects will linger.

At Ag-West Bio, events and programs have been cancelled, postponed or moved on-line. Staff have worked from home and adjusted their daily routines. Modifications have been made to workplans. At the same time, new opportunities for Ag-West

to educate and inform, and to provide resources and advice have surfaced. Small and fledgling enterprises will need help to re-start. Entrepreneurs will need support in realizing opportunities stemming from the pandemic experience. The weak links in our 'just-in-time,' mega-scale supplier/processor supply chain have been exposed, and workshops to strategize and adapt will be needed. Our recent experience will strengthen our resolve to move further from a commodity oriented agri-food economy to a more local, value-added one.

I'll close with an official welcome to Karen Churchill, who assumed the role of president and CEO in November. I also want to extend a thank you and best wishes to Wilf Keller for his long service in the role. Thanks, too, to outgoing Board members Laurie Dmytryshyn, Tim Herrod and Kendra Mueller for their commitment and service; to our management and staff for their outstanding efforts in a time of great change; and to the Ministry of Agriculture for its continued financial support. I have one year left in my term on the Board, but my time as Chair is now over. It has been a privilege to serve the organization and I thank everyone for their confidence, guidance and support. ■

Dr. Robert (Bob) Tyler

Vision: Saskatchewan's catalyst for leading Canada's foremost bioeconomy.

Mission: Accelerating innovation and enabling companies to commercialize research.

Mandate: To provide leadership, as a catalyst, to link existing capabilities and resources in order to strengthen the bioeconomy industry in Saskatchewan.

Ag-West Bio Board of Directors

Chair: Bob Tyler – University of Saskatchewan

Vice Chair: Tim Herrod – Consultant

Laurie Dmytryshyn – PIC Investment Group Inc.

Shawn Gibson – Saskatchewan Ministry of Agriculture

Rick Green – KeyLeaf Life Sciences

Danya Kordan – Innovation Saskatchewan

Kendra Mueller – FCC Agribusiness and Agri-Food

Leah Olson-Friesen – Prairie Agricultural Machinery Institute

Kate Sanford Mitchell – UPL Ltd.

Steven Webb – Global Institute for Food Security

Lee Whittington – Four Oaks Investments, and Coaching Excellence Organization

Ag-West Bio Staff

Karen Churchill – President and CEO

Wilf Keller – Past President and CEO

Brad Bly – Director of Commercialization

Mike Cey – Director of Corporate Initiatives

Boni Dorish – Chief Financial Officer

Lana Mollard – Corporate Secretary and Executive Assistant to the President & CEO

Carol Ann Patterson – DFCC Project Manager

Patrick Pitka – Special Advisor - Corporate Strategy

Jackie Robin – Director of Communications

Allison Sigstad-Kirzinger – Events Coordinator

Bev Stangeland – Manager of Industry Development

Betty Timmons – Administrative Assistant

Pamela Warren – Administrative Assistant



Industry Overview

Years of investment in agriculture research and development has made Saskatchewan a global leader in crop production. Traditionally, the province has exported cereals, oilseeds, pulses and livestock to be processed elsewhere and then shipped back to us as food products.

But that is changing. Since 2012, the value-added industry in Saskatchewan increased by 50 per cent, with revenue climbing from \$3.5 billion to \$5.2 billion in 2018.

Karen Churchill, Ag-West Bio's president and CEO, says "We are so good at growing crops; the next logical step is to process them here as well. This is one of the most positive environments for value-added

Time for value-added in Saskatchewan



products that we've ever seen. We have an amazing hub of expertise that stretches from the science community, educational institutions and manufacturing support, to innovative businesses with great ideas."

In its *Plan for 2020-21* the Saskatchewan Ministry of Agriculture committed to supporting the value-added sector to further bolster the growth we are already seeing. Godwin Pon, Director of the Ministry's Value-Added Unit, says Saskatchewan's advantage lies in our proximity to high quality, abundant ingredients. He points out that we have safe and relatively low cost agricultural production, a well-respected science cluster, a supportive business environment and a good international reputation. "A strong food processing industry allows Saskatchewan to take advantage of the opportunities that come with an increasing demand for food, feed,

fuel and fibre and to grow our domestic and international markets.”

To meet the opportunities available in the value-added processing sector, government, industry, research and education organizations are collaborating to improve our research and development capabilities, develop funding resources and get them to the businesses who need them, and bolster the supportive infrastructure needed to fill the gaps and meet our potential.

Research and Product Development

The University of Saskatchewan’s College of Agriculture and Bioresources contributes skilled graduates as well as research in all areas of food production. Bob Tyler, Head of the Department of Animal and Poultry Science and Professor in the Department of Food and Bioproduct Sciences, says, “AgBio’s faculty members, including several research chairs, work on plant protein, lipids and carbohydrates, meat science, food safety and quality assurance. Our plant breeders are also focused on value-added traits, including proteins, protein quality and anti-nutritionals.”

Tyler says the College produces graduates that industry and government wants, and many of them go on to work in Saskatchewan’s food production industry. “Food science is a growing realm and our grads have fundamental skills in marketing, quality assurance, food safety and ingredient functionality.”

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Above: Researcher Supratim Ghosh (right) with Maja Primozic, a master’s student involved in a nanoemulsion project at the University of Saskatchewan using protein extracted from pulse crops, like peas and lentils, to coat miniscule oil droplets so they disperse evenly through liquids.

Photo credit: University of Saskatchewan College of Agriculture and Bioresources



Bill Greuel



Godwin Pon



Abdul Jalil



Shannon Hood-Niefer

Below: Food and ingredient development at the Food Centre. Sara Lui, Product Development Manager.

Photo credit: Food Centre

Some of those grads end up at the Saskatchewan Food Industry Development Centre (also known as the Food Centre) and its new facility, the Agri-Food Innovation Centre. Shannon Hood-Niefer, VP Innovation and Technology at the Centre, says, “We offer product and process development, food safety training, ingredient innovation support and manufacturing facilities that allow companies to develop

and refine their own products, scale them up and get them to market. Our clientele ranges from start-ups and small enterprises to large multi-nationals and every size in between.”

Value-Added Funding Programs and Initiatives

With the federal and provincial governments both prioritizing value-added food production, government officials are working on behalf of food companies in the province on international trade missions, investing in research to develop new uses for raw ingredients, identifying investment opportunities and offering programs and services to support agri-business.

Under the Canadian Agricultural Partnership (CAP), a five-year funding agreement between the federal government and the provinces, Saskatchewan has the following programs to support the value-added industry:

- *Product2Market* helps grow the value-added sector by providing support to small-and-medium sized agri-businesses in everything from product development through to marketing activities.
- *Saskatchewan Lean Improvements in Manufacturing (SLIM)* provides funding to agri-business and infrastructure projects that improve productivity and efficiency.
- *Food Safety for Processors Program* helps Saskatchewan production facilities

achieve food safety requirements that will increase their competitiveness, productivity, and profitability.

Abdul Jalil, Assistant Deputy Minister at Western Economic Diversification Canada (WD), says the Prairie Provinces have opportunity and potential to increase their capacity to add value to the food crops that we grow. That is why the Government of Canada has invested in Protein Industries Canada (PIC), and other federal government departments, including Agriculture and Agri-Food Canada (AAFC), National Research Council (NRC) and WD, are working together to complement those investments.

“In 2019-20, WD approved 12 Saskatchewan projects through its core and non-core programs to support the province’s value-



“We invest in people and ideas,
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growth in Canada”



added sector. It invested \$14.87 million, which leveraged an additional \$26.13 million in funding,” says Jalil.

PIC drives collaboration between industry trailblazers to help realize Canada’s agri-food potential. CEO Bill Greuel says, “We invest in people and ideas, help build capacity and promote a new approach to economic growth in Canada through enhanced collaboration between private sector companies, helping to invest more in innovation in Canada and working to build capacity within the sector.”

Greuel believes Saskatchewan will favour very well with PIC investment. He notes that Saskatchewan has great R&D capacity with the NRC, Global Institute for Food Security, the Food Centre and USask. “We also have some great anchor firms that are developing projects related to novel process technologies, and showing willingness to collaborate beyond Saskatchewan’s borders,” says Greuel. “We don’t have *all* the expertise in Saskatchewan but with our endowment of natural capital, such as land, rainfed agriculture, sustainable crop production and innovative producers, we have so much opportunity. We have everything we need to be a leader in manufacturing ingredients.”

Filling the Gaps

Saskatchewan’s relatively small population and land-locked location complicates the process of getting value-added products to global markets. “We have some big

ecosystem challenges,” says Churchill, “but we’ve seen an unprecedented willingness of multiple departments and agencies to work together to identify any gaps and take steps to alleviate them.”

The Saskatchewan Government is oriented to supporting future opportunities. “We are starting to see some convergence between the value-added sector and agri-technology. New programming and support may be needed to address this emerging sector,” says Pon.

In the current pandemic situation, the environment has become unexpectedly complex. “With the world grappling to fight COVID-19 and governments focused on keeping Canadians safe and the economy positioned for a rebound, we may face some challenges, which I am sure we can overcome,” says Jalil.

“The demand for food products is expected to remain strong, it will create more growth opportunities for agriculture value-added businesses in Western Canada. We need to keep businesses and workers afloat during this period.” Jalil says WD’s Regional Relief and Recovery Fund was put in place to help companies, organizations and communities affected by economic challenges associated with COVID-19.

Churchill believes Ag-West Bio has a unique position as a catalyst, connector, and network supporter, and can foster conversations between the sectors, take a close look at the problems and develop ideas to



overcome them. “There are many moving parts; bringing them together is where we can really shine. We also have the ability to support entrepreneurs who have great ideas but need the advice, training, connections or financial support that we can offer.”

“Saskatchewan entrepreneurs are innovative, and they are willing to work together,” says Churchill. “We set aside competitiveness in our businesses to create something better. We have the spirit to create something bigger than we can as individuals.” ■

Commercialization Report

Enabling and accelerating



Brad Bly

Director of
Commercialization

It was a milestone year for Ag-West Bio. We have now surpassed 50 total investments made in Saskatchewan start-ups since inception in 1989. This year's investments demonstrate the diversity that has characterized the companies in our portfolio since day one:

- **\$300K in Smart Earth Camelina Corp.** (Smart Earth) for scale-up and marketing of products derived from its novel camelina oilseed crop varieties developed through new plant breeding techniques, providing an agronomically and economically desirable production option to Saskatchewan producers. Smart Earth is processing this exciting new crop in



Left to right: Brad Pederson
and Jeremy Lang (Open Mind Development) and Brad Bly (AWB)

Saskatchewan and exporting new value-added products to international buyers in aquaculture feeds and other markets.

- **\$300K in Intelliconn Communication Solutions Inc.** for development and launch of VeriGrain™, an automated grain sampling and data management system. The system obtains an accurate, representative grain sample, which is digitized in real-time, and can send related information to the cloud. The technology can increase grower revenue, while providing the sector with better decision-making tools to enhance efficiencies and foster system-wide transparency and traceability.

Through these investments, Ag-West Bio supported the creation of innovative technology solutions, and the commercialization of leading-edge products and services. At the same time, we worked to ensure the business environment supports new investment in the sector, by helping build commercial partnerships and leveraging additional funding:

- **\$600K new Ag-West Bio investments** were leveraged with more than \$1.5 million in Saskatchewan private capital investment and \$2.1 million in federal and provincial funding programs.

We continue to help innovative businesses commercialize their technologies. This past year, Ag-West Bio provided input to over 80 companies and assisted more than 30 with investment readiness and commercialization

acceleration services, providing a helpful role in the achievement of milestones by these exciting firms. Examples include:

- **New food brands:** the launch of novel, healthy, functional foods and ingredients made from pulses and flax crops, locally grown and processed.
- **Value-added processing:** new oilseed varieties developed in Saskatchewan and processed into high-value products for aquaculture and other export markets.
- **Enhanced water management:** commercial operation and expansion of a novel waste-water recovery system, designed for recovering water for agricultural irrigation.
- **Plant based bioproducts:** a Sask-grown company that manufactures 100 per cent compostable products made with flax shive was listed in the top 20 of Canada's fastest growing companies.
- **Biological crop protection:** a Saskatchewan company with a biofertilizer, biopesticide and other products for high-value crops became publicly traded on the Canadian Securities Exchange (CSE) and raised over \$5 million.

I want to acknowledge the helpful relationships developed with other leading ag-tech accelerators across North America: Thrive/SVG Ventures, District Ventures, and The Yield Lab. Saskatchewan companies referred to these programs for augmented

acceleration have benefitted from the assistance, networking and market exposure they provided. We also want to highlight the impressive work of Saskatchewan's own Co.Labs and Cultivator, providing tremendous benefit to companies in the digital tech space.

Ag-West Bio continues to provide accurate and timely information and resources and is an ambassador for Saskatchewan's biosciences cluster. We promote Saskatchewan's vibrant sector in all our activities:

- This past year we hosted more than 40 meetings, events and seminars, with over 2000 participants from more than 10 different countries.

Ag-West Bio will continue the momentum of the important activities highlighted in this report. However, with a growing demand for our commercialization services, we look forward to increasing the scope of our acceleration activity by expanding our focus on commercialization education and training, meeting the demand for topical business and technical knowledge and resources for Saskatchewan's growing bioscience sector.

I will conclude by commending the resiliency of all those in our sector, correctly categorized as "essential goods and service providers" in a time of difficulty. A spotlight was shone on the importance of agriculture, food, and health sciences in an ever-changing world. Our entire sector rose to the challenge to keep our health, food, and economy secure—with inspirational spirit. ■

To Market to Market:

Led by Bev Stangeland, Ag-West Bio's Manager of Industry Development, the **Agri-Value Training Program** was a five-month process from recruitment to wrap-up. Building on a 'pilot' edition in March 2019, this program consisted of two workshops, online training, coaching, and provision of resources. It was designed to help companies build sustainable businesses and expand their retail markets. The participants learned about marketing skills, access to markets, packaging, costing and pricing for retail, and finance. The goal was to provide information and guidance that will assist these company representatives to make better business

decisions and reap sustainable profits.

What participants said:

"Gayle and Mary Ellen were awesome!! So much knowledge between them and in an organized format. It was refreshing and they are just so good!"

"It truly has been the "Bang for our Buck" in terms of programming we have done... fantastic experience."

"I just wanted to personally thank each one of you for doing such a terrific job. I am truly blessed to have such great leadership spokespersons as yourself to have mentored me."

Diverse crops: good for producers, good for consumers



The Diverse Field Crops Cluster (DFCC) is an agri-science cluster led by Ag-West Bio, with funding from Agriculture and Agri-Food Canada's Canadian Agricultural Partnership program and industry partners. The five-year project is now entering its third year. DFCC supports the research and development of seven high-potential, special crops: camelina, canary seed, flax, hemp,

mustard, quinoa, and sunflower. DFCC's projects include 15 research activities focused on variety development, agronomics and production and value-added initiatives. DFCC crop members took part in numerous field days and conferences across Canada in the past year. As well, DFCC had a booth at Ag in Motion 2019 and hosted its own Research Day in March 2020.

M E M B E R P R O F I L E

Sweet Prairie Haskap

Building a prairie fruit industry



Marg and Bill Sullivan first discovered the sweet purple berry when they approached the University of Saskatchewan (USask) looking for a hardy fruit tree that deer wouldn't eat. That led them to becoming propagators, growers, producers, product developers and industry builders for haskap (*Lonicera caerulea*), a fruit developed at USask by researcher Bob Bors. The Sullivan's own Four Seasons Greenhouse and Sweet Prairie Haskap.

"We not only grew our own haskap plants, we also became a propagator at our greenhouse. We were instrumental in getting the plants out to orchards in Saskatchewan and Alberta and decided to plant a few acres for ourselves. We realized that no one was processing any part of the plant other than the fruit, so we decided to explore what the plant had to offer as far as health benefits go," Marg Sullivan says.

Tests at the Saskatchewan Food Industry Development Centre (Food Centre) revealed that the leaves have even more health properties than the berries and can balance the bitter compounds that affect the flavour of the berries alone. A juice formulated with both the berries and the leaves turned out to contain levels of antioxidants and flavonoids (such as quercetin) that exceeded their expectations.

"Haskaps have more antioxidants, per ounce, than any other superfood. Its quercetin levels also qualify it as an energy booster. With all this bio-available nutrition, we realized we had to sell it on the health food market. Even using the flash pasteurization process the Food Centre helped us develop, it still has high levels of Vitamin C and an indefinite shelf life," says Sullivan.

Sweet Prairie Haskap doesn't have the capacity to undertake its own research and testing but has benefited from research at USask and Dalhousie University on the plant's sugar profiles and potential tumour fighting and anti-viral properties. "These aren't health claims we can make yet, but the research results are very promising," says Sullivan.

"With all this bio-available nutrition,
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health food market."

"The juice is a natural energy supplement.

The endurance athletes were my first best customers."

Endurance athletes who have tried the juice are spreading the word about its properties. "I let them trial the juice and they loved it added to protein drinks," says Sullivan. "The juice is a natural energy supplement and also stabilized their smoothies. The endurance athletes were my first best customers."

Sullivan herself is a walking advertisement for her product. She radiates energy. "I'm 63 years old. Bill and I run a 50,000 square foot greenhouse, a purebred cattle operation, and Sweet Prairie Haskap. I work 14-hour days and drink my haskap juice religiously. I can still feel tired sometimes, but without my juice, I'd be flat out." Marg has also served on the board of directors for Haskap Canada and organized haskap research symposiums.

Sweet Prairie Haskap's work with the Food Centre went beyond testing; it also helped them resolve their co-product issue, turning the pumice left behind from the juicing process into a powder, which can also be added to the juice. Some of the product development work at the Food Centre was supported by Canadian Agricultural Adaptation Program (CAAP) funding.

Sullivan recently participated in Ag-West Bio's Agri-Value Training program and has only good things to say. "It really helped me to focus my messaging on solving a customer problem and offering a solution." She says it also made her realize she needs help with marketing. "I've been a developer, a researcher and a grower, and Ag-West Bio training helped enormously. But marketing is a whole other job and there's not enough of me to go around."

Currently, Sweet Prairie Haskap's juice is available in local health food stores in Saskatoon, Weyburn and Estevan. The juice was about to expand into Manitoba when COVID-19 hit.

"We're in a launch posture. We have a co-processing company that is willing to work with us, and a marketer and distributor in the United States that approached us and wants to work with us. We just need to wait for our FDA approvals and wait for the cross-border traffic to open up."

The Sullivans saw the long-range potential of haskap from the beginning and believe it



Marg and Bill Sullivan

can develop into an industry. "We want to do more than grow fruit and sell it. As an industry, we will move forward faster, and we hope to be the arrowhead that leads the industry in Saskatchewan to new levels of possibility." ■

www.sweetprairiehaskap.com

M E M B E R P R O F I L E

Meat Chops

Passion project connects to the land



Chelsey Parker's journey into the value-added food industry began when she made some beef jerky in her home kitchen to take with her on a motorcycle trip. It led her to create Meat Chops, a snacking company committed to regenerative agriculture and local food production, and a passion project where Parker is committed to building a business that reflects her deepest values.

"On that motorcycle trip, I drove through the big open prairie, seeing the land and smelling the smells. That was the inspiration to find a way to connect with the land through a business. I don't raise cattle; instead, I raise my voice through sharing my meat mission message in the form of beef products, and by ecologically sourcing from Top Grass Cattle Company. They have been my partner supplier for two years."

Meat Chops is currently the only snack food in Saskatchewan that sources certified grass-fed, grass-finished beef and turns it into a federally approved product that can be exported across Canada. "Our brand statement is 'From the land to Meat Chops brand, to in your hand.' You are what you eat. We want our customers to enjoy sunshine that has been turned into a better-for-you snacking option that regenerates the land."

Meat Chops has been a "knowledge-seeking quest" that shifted Parker from a maker of beef jerky to an advocate for regenerative

"I chose to invest in the science and regulations, instead of investing in a storefront"

agriculture. She jokes about earning a four-year degree in "the school of hard knocks" in creating a food brand, gaining knowledge by sticking to it through the hard times.

Parker experienced a few setbacks with quality assurance while working out of a certified kitchen, so she made a commitment to ramp up to federally inspected food products and the intensive testing capabilities of the Saskatchewan Food Industry Development Centre (Food Centre). "It was a big investment for a one-person business to work with the Food Centre. I chose to invest in the science and regulations, the staff and know-how available at the Food Centre instead of investing in a storefront. It helps me get taken seriously and have federal certification and also to maintain my

own dynamism and motion in my business. Many doors have opened because of my work with the Food Centre.”

The Food Centre helped Parker with product development, nutrition facts, and connecting her with a network of suppliers. She has also worked with the Product2Market program with the Saskatchewan Ministry of Agriculture. She says she benefited from participating in marketing events with Ag-West Bio, including the Agri-Value Training Program. She also appreciates being able to access Saskatchewan Trade and Export Partnership events without having to be a member. “When it comes time to become a member, I’d love to be able to take part in trade missions and share my story.”

After Parker did an in-person pitch telling the story of getting started using the store’s beef jerky kits, Meat Chops products are now selling in 15 Peavey Mart stores. She has since made a second product for Peavey Mart. The brand can also be found in the ‘local’ section of major grocery stores, health food stores, breweries and distilleries, and Regina Co-ops. She delivers direct to 80 stores. She had just signed on to a distributor when the COVID-19 crisis hit.

The COVID-19 crisis is also slowing Parker’s next big step: an opportunity to scale up with investors that believe in her ‘meat mission’ and are interested in both her commitment to regenerative agriculture and the high level of safety testing she has gained from working at the Food Centre.



The business hangs in the balance without access to her federally inspected kitchen.

In the meantime, Parker is happy to share what she has learned with other local food makers. “If you’re going to start a food brand, don’t expect it to turn over in a year. You have to persevere and be patient, meet more people, and eventually connect with like minds. It helps to know what opportunities and funding are available, and to know that you have to spend a lot out of pocket. Not every opportunity may be a good one for you. It’s important to align yourself with your values and your moral compass. I’ve committed to not cutting corners, and that is really hard. But I’m in it for more than profit; I’m in it for meat done the right way.”

Coming soon, Meat Chops is excited to expand into offering a heritage bison snack line in collaboration with Canadian bison ranchers.



She hopes one day to be able to buy and custom graze her own cattle and learn even more from the prairie land stewards who put their hearts and souls into tending and regenerating our grasslands, “for nourishment that is better for the animal, better for the land, and better for you.” ■

www.meatchopsleathershop.com



M E M B E R P R O F I L E

Northern Nutraceuticals Inc.

Adding value to farm and rural communities

After some tough farming years in the early 2000s, Kevin and Kathy Johnson started looking for ways to make a living that would allow them to stay on their farm near Spalding, SK. What began as a foray into growing herbs and spices – like coriander, caraway and borage seed – eventually evolved into a value-added edible oil company with an international reach.





Northern Nutraceuticals is a many-faceted business that processes borage, hemp and flaxseed for health industry applications. They ship seed and oil as bulk ingredients to health food manufacturers, provide co-packing and private label production at their facilities, and also have their own retail line: NorthernEdge oils, protein powders, hemp seeds and milled flax.

“It was a very steep learning curve the first couple of years. We made one drum of oil and then did an internet search for borage oil. We sent over 300 faxes to people working with borage oil and got back five responses. We eventually did significant

business with two of those companies, and we haven’t looked back since,” says Kevin.

Northern Nutraceuticals built a processing plant in the village of Spalding. They source their seed from surrounding conventional and organic farmers. While they sell their retail products locally and in health food stores across Western Canada, 75 per cent of their product is exported outside North America.

“We’re always trying to diversify our operation instead of having all our eggs in one basket. Bulk sales bring in more revenue than the retail side of things, but we chose to acquire a flax milling business in 2010, and we want to keep working with both retail and wholesale markets.

“Living in central Saskatchewan, we’re in the midst of prime agricultural land, both conventional and organic. We bring in raw material from all three provinces, but being right in the middle of farmland is a huge plus. Canada has a global reputation for a clean environment and safe agricultural products, and our international visitors are amazed at our wide open spaces.”

While limited human resources in our sparsely populated province can be an issue for value-added businesses, Johnson hasn’t found that to be an issue. “We have no problem finding staff. There are many people that only want to work part-time, and we can offer that. There are several industries within a 40-mile radius, so there is a good density of employers and

employees.” He notes freight as another potential drawback, but it has not held back the business in any significant way.

Johnson appreciates the support of the Saskatchewan Trade and Export Partnership, which was a huge help in getting their products into various markets around the world, attending trade shows and business-to-business meetings, and getting them established. Northern Nutraceuticals is a new member of Ag-West Bio, joining after their marketing director attended the Agri-Value Training program.

With 18 years of experience in the value-added food sector in Saskatchewan, Johnson has some advice for those just starting out. “When we first started in this business, there was no such thing as HACCP, ISO designations, GMO certification, and so on. There was only an organic certificate. Now you have to have so many accreditations to be in the food business. Food safety is a high profile issue, and the accreditation is expensive, time consuming and involves tons of paperwork. We are required to have a dedicated quality assurance staff person as part of the accreditation.

“Consumers look for this accreditation. Most buyers are demanding accreditation that shows due diligence. It’s challenging for small companies trying to get into the market. The paperwork definitely isn’t my favourite part, and had I known where the industry was headed when we started out, I might have thought twice about it.

www.northernnutra.ca

It’s serious business, but rightfully so. Even with all that, value-added production can certainly add to your profit margins.”

Johnson’s level-headed approach to business comes from years of experience. “There’s always some sort of challenge in the market. The stress can get overwhelming. Right now it’s COVID-19. To new startups I would say, have some patience, go at it one day at a time, and do the best you can.” ■



Events & Communications

Community connections & science communications

Keeping Saskatchewan's bioscience community connected and informed is an important part of our work at Ag-West Bio. We continue to encourage collaboration and partnerships through our events and communication activities.

The coronavirus pandemic curtailed our events in March and April. Bringing groups of people together physically is out of the picture for now, but technology still allows us to come together virtually. Like many organizations, we are regrouping and developing a new system, using online tools to share information.

Over the past year we hosted or co-hosted 41 events with more than 2,020 attendees representing more than 380 organizations. A few highlights:

- An estimated 150 families participated in the 2019 Science Zone at Ag in the City
- The 2019 Annual Meeting focused on protein sources and included cricket snacks
- Global Biotech Week 2019 included 16 events in Saskatoon and Regina, with 880 attendees
- The Canola Industry Meetings in December 2019 attracted 283 attendees
- A Fireside Chat in December showcased one of our member companies to over 70 attendees
- Meeting of Minds 3 in February 2020



hosted 68 scientists to showcase their research

- The Agri-Value Training Program helped 13 companies develop marketing skills

Communications

Our Weekly Update email keeps our stakeholders informed about industry news while our quarterly Bio Bulletin features articles about Saskatchewan research and commercialization activities. We are active on Twitter, Facebook and LinkedIn. A new edition of our Saskatchewan BioScience Resource Guide, featuring organizations in a wide range of activities, will soon be available in print or electronic versions.

Last year, we created a series of video vignettes featuring Saskatchewan start-up companies that illustrate the diversity of activities in this province. These videos capture the innovative spirit and resourcefulness of local entrepreneurs.

Science Communications

Many if not most of us get our news online and indeed, the Internet is an amazing resource with loads of accurate information. It is also rife with *misinformation* and even worse, *disinformation* (the former refers to unintentional inaccuracies; the latter is “misleading by design”). This problem is not new; the COVID-19 pandemic has simply amplified it.

In pandemic times, the role of science for preserving our society has never been so critical. As of this writing in May 2020, the



Dr. Julia Boughner, founder of Café Scientifique Saskatoon looks on as Dr. Melissa Arcand presents to a full house (below) at the event during 2019 Global Biotech Week in Saskatoon.



ABIC is evolving!

For 20 years, ABIC operated an international conference series with a vision of “creating value in agriculture, food, health, energy, and bio-based industries for the benefit of humankind.” The final conference took place in 2018 in China. ABIC has re-emerged as the Agricultural Bioscience Innovation Centre (ABIC) with the goal of promoting science as a powerful tool for addressing global challenges.

The ABIC Speaker Series will invite high-calibre speakers to share their passion for science with the public and inspire local entrepreneurs.



Above right: *More Beans Please* panel
(Left to right): Kelly Hagen (Entomo Farms),
Matthew Anderson-Baron (Future Fields), Gordon
Zello (USask), and Deborah Wilson (TrustBIX)

Below: Blaine Chartrand (Program Head
Saskatchewan Polytechnic BioScience Technology
Program) kicks off the annual Amazing Biotech
Race at Innovation Place in Saskatoon during
Global Biotech Week 2019.

world has nearly been stopped in its tracks by something we can't even see. As citizens, the best we can do is literally, nothing. We hunker down, buying time while the world's best scientists (including a team at Saskatchewan's own VIDO-InterVac) focus on the painstaking work of developing tests, vaccines, antivirals, and other treatments. They're racing to achieve in months what normally takes years and we eagerly await every news report on their progress.



Wilf Keller (front row, right) celebrates with friends at his retirement party in January 2020. Wilf served as president and CEO of Ag-West Bio for 10 years.

While the average person with no scientific background may have a hard time determining what information is true, we all have a responsibility to do our best not to make matters worse. Literally anyone with an Internet connection and a smartphone can post anything online. It's up to all of us to think carefully before hitting the 'share' button.

Not everyone understands how science works and it is up to scientists and science communicators to address that. Building trust is key to public acceptance of science and technology. We need more scientists to participate in outreach – not just to talk about their research but also to explain the scientific process and, maybe most importantly, to show they are real people



with the same cares and worries as everyone else. I would like to personally thank all the scientists that have helped us in the past with outreach activities, such as our Science Zone at Agriculture in the City. (Unfortunately, the 2020 event was cancelled, like so many others.)

Ag-West Bio is happy to promote two organizations that work to build public trust of agriculture and agri-science: Farm and Food Care Saskatchewan

and Agriculture in the Classroom Saskatchewan. We encourage our members to support these organizations as they provide an important service to the entire bioscience sector. If your organization has a project idea that builds public trust in agriculture, consider applying for funding through the Saskatchewan Ministry of Agriculture's Agriculture Awareness Initiative Program (AAIP). ■

Prairie Biosciences Canada (PBC)

A partnership between BioAlberta, Ag-West Bio and Bioscience Association Manitoba, PBC helped 51 companies (including six from Saskatchewan) attend eight shows: 12th Plant Protein Ingredient Summit (Saskatoon), BIO World Congress (Des Moines, IO), Water Environment Federation's Technical Exhibition and Conference (Chicago, IL), Institute of Food Technologists (New Orleans, LO), Agri-Tech Venture Forum (Toronto, ON), SupplySide West (Las Vegas, NE), Agritechnica (Hanover, Germany), and Globe Forum (Vancouver, BC). Plans to bring 26 more companies (17 from Saskatchewan) to March 2020 trade shows were cancelled due to

COVID-19. Cumulatively, the companies project over \$8 million in sales as a result of attending shows with PBC.

What Sask companies had to say:

"We are able to utilize this funding to increase our spend on exposure... It created a great opportunity for both sales leads and brand."

"On our own, we likely cannot afford to attend this valuable event. PBC allows [our company] to punch above its weight."



Thank you!

A sincere thanks to our members for the support and endorsement of our activities as we work to grow the bioeconomy in Saskatchewan. We are currently at 136 members, and the number continues to rise.

Members are widely varied, from public research institutions, to start-ups, to multinationals. They are active in the areas of sustainable crop production, value-added food processing, health and nutrition, digital agriculture, environment, and bioproducts.

Get connected, stay informed... make a difference!

The Ag-West Bio team is working to grow the bioeconomy in Saskatchewan, and you can be a part of it. Anyone active in Saskatchewan's bioeconomy should consider membership in Ag-West Bio. By working together to grow the provincial bioscience sector, we diversify and strengthen Saskatchewan's economy.

Visit our website to learn more about the benefits of membership and to view member profiles.

www.agwest.sk.ca

Financial statements are available for members upon request.



Saskatchewan

Canada

Photo sources:

Ag-West Bio

Meat Chops

Northern Nutraceuticals

Saskatchewan Food Centre

Sweet Prairie Haskap

USask College of Agriculture and Bioresources



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