Andrew Winfield
RIVER CAFÉ’S TOP CHEF INVITES US INTO HIS KITCHEN

UNDER PRESSURE:
Rural Alberta’s fight against urban sprawl

Find out what organization is fighting for whole grains
8 pages of tantalizing wheat and barley recipes
Learn about this year’s hottest food trends

ASK A FARMER
You’ve got questions.
We’ve got answers.
P. 7
Regional Meetings and Zone Meetings

Nov. 12–27, 2014

For more information, visit:


Dr. Yueshu Li is the Director of Malting Technology with the Canadian Malting Barley Technical Centre (CMBTC). Dr. Li and his team study new varieties of malting barley, and perform brewing trials.

The wheat and barley check-off supports farmer-focused research that moves our industry forward.

Save the Date

The CMBTC is one of three organizations that receive funding from the wheat and barley check-off.
Know your food, know your farmers and know your kitchen.
– Joel Salatin

Fermentation may have been a greater discovery than fire.
– David Rains Wallace

Let there be work, bread, water and salt for all.
– Nelson Mandela

Growing up, I learned life’s important lessons at the dinner table.
– Chef John Besh
<table>
<thead>
<tr>
<th>Page</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td><strong>Restaurant Trends</strong></td>
</tr>
<tr>
<td>26</td>
<td><strong>Under Pressure</strong></td>
</tr>
<tr>
<td></td>
<td>What does big city growth mean for valuable nearby agricultural land?</td>
</tr>
<tr>
<td>30</td>
<td><strong>Shochu</strong></td>
</tr>
<tr>
<td></td>
<td>Is Japan's popular spirit set to take over North American markets?</td>
</tr>
<tr>
<td>34</td>
<td><strong>The Beer and Food Revolution</strong></td>
</tr>
<tr>
<td></td>
<td>Wine and cheese? No way. Beer and food have taken over palates and imaginations of foodies everywhere.</td>
</tr>
<tr>
<td>45</td>
<td><strong>Home Cookin’</strong></td>
</tr>
<tr>
<td></td>
<td>Crack open some of the top wheat and barley recipes from certified grain lovers.</td>
</tr>
</tbody>
</table>
Rolling Forward
Tom Steve wants you to “advocate” for what is right. And what’s right is agriculture.

Tall Wishes
Lisa Skierka tells you the difference between living and living well.

She Said, Three Said
Registered dietitians weigh in on how people and their eating habits have changed.

Tech@Work
Honey, are we out of milk? Peter Gredig gives you the goods on technology keeping you healthy.

Golden Rice
It’s a colourful GMO, not to mention a lightning rod of controversy.

Food Labels
With so many labels being slapped on packages, does anyone truly know what they mean anymore?

Health Claims
What Canadian products have legitimate (health) claims to fame and how did they get them?

Healthy Grains Institute
“Gluten-free,” “Grain Brain” and “Wheat Belly” don’t stand a chance against these grain gurus.

Flour Power
Learn how Canada’s flour market is expanding.

Food Development Centres
They’re the best-kept secret in the food business.

Marnie Burkhart
Marnie Burkhart has been a professional photographer for more than 25 years. Having worked solely commercially, making time for recent personal work has been key, and her images won awards in Applied Arts magazine in 2011 and 2012. Marnie is inspired by the diversity of the projects she involves herself in.

Tyler Difley
Tyler Difley is a journalism student at Carleton University in Ottawa, ON. His freelance work has appeared in publications including Barley Country and The Profile, the official publication of the Calgary Stampede International Agriculture committee. Tyler splits his time between the Prairies and the nation’s capital.

Allison Finnamore
Allison Finnamore is an agricultural writer, social media fiend and e-newsletter editor with 20-plus years of journalism experience. She’s an executive member of the Atlantic Canada Farm Writers’ Association, the Canadian Farm Writers’ Federation and the International Federation of Agricultural Journalists.

Alex Frazer-Harrison
Alex Frazer-Harrison is a Calgary-based freelance writer/editor. He’s written for the Calgary Herald, Avenue, Airdrie Life, up!, the Edmonton Journal, the Rockabilly Hall of Fame and others. He has also edited several books, including Canada’s Stonehenge by Gordon Freeman, and is a communications advisor with Silvera for Seniors.

Tiffany Sloan
As a freelance editor and writer, Tiffany Sloan’s daily grind ranges from magazine journalism to corporate communications to children’s book editing, and her written repertoire spans just about every subject under the sun. Although transplanted from Edmonton to Vancouver at an early age, she’s still a prairie girl at heart.

Jeff Tessier
Jeff Tessier is a photographer based in Hamilton, ON. His clients include marketing firms, advertising agencies and architecture firms, as well as print media outlets and municipal governments in Ontario. He specializes in documentary photography, ranging from environmental portraiture to industrial photography. He also teaches photography at Mohawk College.
IN A WORLD WHERE FOOD HAS YET again been labelled as the root of all of society’s ills, sometimes it’s nice to unplug from everything and hide. While I have been guilty of this myself, I know that running away from criticism doesn’t help anyone.

In fact, I’m thinking it might be time for a call to action. I’m here to tell you that it’s time to come out of hiding and start standing up for food.

Don’t stop there, though—start there. Stand up for the men and women who grow our food. Stand up for those who process our food in hundreds of different ways. Stand up for those who market our products with labels and reminders that if it’s Canadian, it’s quality. Stand up for the brilliant researchers who work hard to improve the profitability and viability of grains and other foods in Canada. And, most importantly, stand up for yourself.

We’ve all heard someone make a harebrained comment about food at some point—perhaps how grain is evil and rotting your brain. While it’s easy to think, ‘if they only knew’ and chuckle to yourself, there are other options. Admittedly, it takes guts to call someone out on their food fallacies, but think about it as striking up a conversation, or quickly sharing some real information. The reward of speaking the truth (and standing up for where your food comes from) outweighs the social risk. Plus, you can rest easy knowing you did your part.

Many people share the responsibility, including food companies and those with larger influence, such as government, agriculture groups and food processors. However, there’s nothing corporate or two-faced about the everyday men and women who are growing the food, raising the animals and supporting their families—that’s organic.

From social media to family dinners, I invite you to join me in standing up for agriculture.

Chef Andrew Winfield has been shaping Canadian seasonal cuisine for over 10 years with River Café. A prairie native, Chef Winfield’s culinary style is rooted in the land. He maintains close ties with our local producers, visiting countless farms and markets in search of the best ingredients the region has to offer. His reputation has earned him a role as a culinary ambassador with the Alberta Ate Chef Collaborative, and he recently received the Outstanding Chef 2014 – Terroir Award of Excellence.

Cover Photo by Marnie Burkhart
What have you always wanted to ask a farmer?

From being businessmen and women to marketers to mechanics to animal care specialists, the average farmer is more than just a farmer. For some people, what farmers do on a daily basis is a bit of a mystery. Here to answer your questions is Frank Robinson, a poultry production and physiology professor for nearly 30 years, as well as vice-provost and dean of students at the University of Alberta. Robinson was raised on a small mixed farm in southern Saskatchewan.

**Dear Betty:** There is no one answer if you are a farmer, because size really does matter. Big farms means big fields, long days, but can be offset by using bigger equipment. The weather can affect how many hours per day and weeks per year harvesting takes. Humidity at night and snow in the fall means premature shutdown of combines and hard-working families. Hot and dry weather speeds up the process. It’s not uncommon for a farmer to work 12-plus hours each day, including weekends, for multiple weeks to finish harvest.

**Dear Marion:** Plant breeders who selected varieties of grains that would produce well on the prairies 100 years ago were genetically modifying plants. Inserting genes from another plant is a more modern genetic modification. Today, “heritage” seeds are kept by some people and traded or sold through networks. As romantic as this sounds, expect higher production costs due to lower yields and a greater likelihood of problems.

**Dear Ryan:** Crop rotation does not involve picking up each plant having it face a different direction each day. It is a long-term management tool. By planting different crops in sequential years, advantages can be seen. Plants like legumes (peas, lentils) “fix” or naturally add nitrogen in the soil which can be a big plus for cereal crops each year. Some plant diseases and fungal infestations can be stopped in their tracks by planting a different crop without using chemicals.

**Dear Locke:** There has been a benefit for those farmers who establish a direct link to consumers. These consumers are likely to be repeat customers so farmers know they have a direct market and grow production confidently. However, the best example of eating local is the 50- or 100-foot diet. This is where you have a garden or perhaps some window boxes with fruits like tomatoes.

**Dear Gillian:** This depends on what your perception of the word organic means. The government has a legal definition. Most people don’t perceive organic as bad, but remember that farmers feed the world and not everyone can afford to run an organic operation. It comes down to use of herbicides, insecticides or preventative medications that influence production efficiency. Food safety is a high priority in Canada, and spray residues are limited by withdrawal times on food products before harvesting.
THE ROLE OF A FARMER IS changing. It is no longer just about producing food, but about being an advocate—or “agvocate,” as the agriculture industry likes to call it—for the food being produced.

With all the health and diet trends that exist today and the media attention they are receiving, it is more important than ever that farmers become advocates for the food they produce. Ten years ago, growers were advocating for marketing and trade opportunities, transportation, higher yields and fair returns for their crops. While those issues are still top of mind for growers, new issues have emerged—food and food safety.

Technology and research have advanced farming practices to allow Canadian farmers to become major contributors to the Canadian economy, with agri-food accounting for seven per cent of the Canadian gross domestic product in 2012. But even with the growing success of the agriculture industry, it has taken a beating in the media with fad diets such as “gluten-free,” “organic” and “non-GMO” becoming top food trends.

At the same time, farmers’ voices and images are now becoming marketing tools for food. When you walk the grocery store aisles, many food products link the item back to the farmer who produced it. This is how farmers are becoming advocates for the food they produce. Marketing has shown people are more likely to buy a food product when they know who has produced it. There is a sense of food safety when you can link your food back to the farmer.

So how do farmers battle media icons like Dr. Oz, environmentalist David Suzuki and Wheat Belly author Dr. William Davis, who are sending negative messages to consumers about agriculture, and promote the benefits of whole grains and the safety of the food produced on Canadian farms?

Social media is facilitating this discussion and creating a whole new generation of industry champions. Advocates like the Healthy Grains Institute are using social media to get the message out and dispel myths created by celebrities and so-called food and diet experts. This group is questioning the legitimacy of promoting the gluten-free diet as healthy.

Some celebrities are also joining the fight and questioning why people avoid things in their diet that they don’t know much about. For example, earlier this year a video went viral on social media when late-night talk show host Jimmy Kimmel asked four people on the gluten-free diet to explain what gluten is. None of the people interviewed could answer the question, and Kimmel proved that most consumers do not even know what they are avoiding and only perceive it as unhealthy because of new food trends.

Farmers across Canada have also played a role in setting the story straight, using social media, such as Twitter, to dispel diet myths and promote the goodness of the food they produce. Farmer-focused conferences have speakers talking about how to become advocates to rooms full of eager growers wanting to get the positive message out to consumers.

Commodity groups are speaking not only about the importance of growing better crops and having access to key international markets, but about the goodness of the food produced here in Canada. Grower groups like the Saskatchewan Pulse Growers are teaming up with celebrity chefs to promote Canadian lentils, Alberta Barley launched the GoBarley consumer campaign, which includes a successful cookbook, and the Alberta Wheat Commission has teamed up with the Healthy Grains Institute to promote whole grains.

The message about agriculture is changing and, while there may be some negative messages floating around because of celebrity health experts and social media, our growers are armed with information and social media tools to ensure consumers hear both sides of the story. I encourage all consumers to get out and engage in conversations with farmers about the food they produce, and not take what the self-declared health experts say as the gospel for food.

Tom Steve is the general manager of the Alberta Wheat Commission.
Soul food

THE DIFFERENCE BETWEEN LIVING AND LIVING WELL

QUINOA. NEW ZEALAND WINE. Canola oil. In agriculture, we’re fortunate to experience game-changing food movements motivated by economics, science and ingenuity. The creative spark is what influences this innovation, and it truly is a hallmark of the human experience.

The same capacity for creativity is at play in the extensive (and expensive) marketing and promotions campaigns behind new food fads and trends, none of which has successfully combated North America’s ongoing “battle of the bulge.” From gluten-free to fat-free, from sugar-free to calorie-free, consumers are beset by messaging aimed at convincing us to spend more to weigh less. Following these diet trends is almost an obsession in itself.

But why do we care so much about food?

When our ancestors first cultivated the land and engaged in animal husbandry, they were taking a key step in human evolution: They were farming. And as farming methods improved, they were able to move away from merely surviving on food to truly enjoying it. In this manner, innovation in farming evolved hand-in-hand with innovation in food, becoming part of our social fabric.

This is why so much of our commonality—our community and our culture—is built around food, making it a key part of how we relate to one another socially.

In the immortal words of country singer George Strait, “there’s a difference in living and living well.” Eating good food, in good company, and knowing it’s healthy, safe, sustainable and of top quality is a privilege most Canadians take for granted. Our daily grind is focused on when to eat and what to eat, as opposed to the more basic problems of “where can I find food?” and “do I have enough to feed my family?”

This is not to say Canada doesn’t have serious issues of poverty and hunger, but these issues are not the norm for Canadians. We are a nation built on farming and we are a nation of exceptional farmers.

And we are not afraid of innovation.

Science has given us the ability to fight crop diseases and pests, and to create newer, better and stronger crop varieties that really do mean farmers can feed the world. Exceptional marketing and a commitment to trade ensure we have enjoyed Peruvian quinoa, New Zealand wine and Florida oranges while people around the world have tried Alberta Beef, B.C. cherries and Canadian canola oil.

We are living in an international world and our lives are richer because of it.

Yet today’s farmers are both revered and relentlessly criticized. At a time when increasing numbers of Canadians have never been on a farm, and when the majority of Canadians are several generations removed from farming, there has been a resurgence of interest in where, exactly, food comes from. This current foodie movement looks at everything from the benefits of organic farming and the carbon footprint of our groceries to the costs of international trade and the overall sustainability of worldwide agriculture.

And somehow, modern agriculture comes up wanting.

The intense scrutiny our food systems are under demonstrates that food isn’t just fuel for the body, it is also fuel for the soul. People want to know—and understand—agriculture and food. They want to be a part of the social system that puts food on our tables, and they want to feel good about the food they eat. And, perhaps most importantly, they want to be part of a system that works for Canadians at home, while also allowing us to help feed the rest of the world.

As the world shrinks—as we truly become a global community—we will need human innovation and the creative spark more than ever. The challenges ahead will determine whether humanity will merely subsist on food, or if future generations will be able to enjoy it the way we do today. And that’s the difference between living and living well.

Lisa Skierka is the general manager of Alberta Barley.
GMO TOMATOES IN EUROPE VIA ONTARIO

LEAMINGTON, ON, IS CALLED THE “TOMATO CAPITAL OF CANADA” AND LOCAL OPERATION New Energy Farms has produced a large crop of English tomatoes that aren’t your average piece of fruit. The tomatoes in question are a deep purple GMO, full of antioxidants and other properties designed to fight cardiovascular disease and even cancer.

Cathie Martin is a plant biologist at the John Innes Centre in Norwich, U.K., where she and her team developed the technology. The seeds were sent to grow in Canada, thanks to our more open GMO stance compared with Europe’s strict anti-GMO regulations, she said.

“In Canada, they regulate the trait and not the technology that’s used to develop the trait,” said Martin, who hopes to sell in Canada, followed by the U.S. and hopefully Europe after that. “If something is approved in one place, the regulatory burden is lower, especially if it has a consumer advantage.”

Now, with more than 1,200 litres of extracted juice and seeds removed—to quell the prospect of contamination—the juice been sent back to the U.K. for trial research on patients with cardiovascular problems.

Trial research done on mice showed that those living on the purple tomatoes outlasted their red-tomato-diet counterparts by 30 per cent, according to Martin.

“All the properties that are supposed to be in berries are also in the tomato,” said Martin. “They’re also cheaper than berries. It’s a more accessible high-anthocyanin (antioxidant) product.”

A DEADLY FUNGAL INFECTION CALLED Panama disease tropical race 4 (TR4) is appearing in banana crops around the world. The disease ravaged Southeast Asia and Australia before making its way through the Middle East. Most recently, it has moved into Africa, devastating millions of banana plants in Mozambique. For now, the disease has not been reported in Latin America, where the bananas consumed in North America are grown.

The soil-based fungus spreads rapidly, often carried from place to place in soil residue or water droplets attached to farm machinery or clothing. It can survive for more than 30 years in soil and is capable of destroying a plantation within a few years. Infected fruit is quickly reduced to inedible black mush and no effective treatments for the disease have been found.

Although hundreds of banana varieties are consumed around the world, here in North America there is just one: the Cavendish banana. This variety is currently the most successful banana in the world, and the only one you will find at your local grocery store. The Cavendish banana represents 47 per cent of the global banana crop and accounts for almost all banana exports, worth roughly $8 billion annually. It is also susceptible to TR4.

Ironically, the Cavendish banana was created in the 1950s to replace another banana variety decimated by disease. Between 1903 and 1960, a fungus similar to TR4 slowly eliminated the Gros Michel or “Big Mike” banana, which was more flavourful and less perishable than the Cavendish.

Some scientists believe TR4 has the potential to destroy 85 per cent of the global banana crop. Worldwide, more than 400 million people rely on bananas as their primary source of calories, according to United Nations Conference on Trade and Development.
TASTE OF THE PRAIRIES

TWO UNIVERSITY OF ALBERTA NUTRITION RESEARCHERS HAVE devised a menu plan that combines the vaunted Mediterranean diet with ingredients and tastes from the Prairies.

“We wanted to model it on the Mediterranean diet, but we also wanted to give it a Prairie flavour,” said Cathy Chan, one of the researchers behind the plan. “It took a lot of work—not just by us, but by many students and other helpers—to develop the menus so that they reflect what Albertans actually eat and use foods that are familiar to people who live on the Prairies.”

The 28-day program is called the Pure Prairie Eating Plan. For each week of the program, the plan outlines daily menus that include three balanced meals and several snack options designed to meet the recommendations of Canada’s Food Guide. Nutritional information is also provided for all of the meals, including tips on how to make each recipe even healthier.

Originally, Chan and co-author Rhonda Bell created the plan for people with Type 2 diabetes. People with the disease, Chan said, often have trouble managing their diet.

“If they go to their physician or dietician, they get some advice, but it’s pretty generic,” she said. “A lot of people request more concrete examples, so we started developing meal plans and using them in our research.”

Chan and Bell soon realized their meal plans could be used to help people without diabetes to make smart food choices, so they compiled them into a book.

At the book’s launch party, a lunch was served featuring several recipes from the plan, Chan said. By the time it was over, the guests had happily devoured everything in sight. According to the authors, the response to the book has been just as positive.

“People have really liked the recipes,” Bell said. “They’ve really liked the emphasis on foods that are easy to find, widely acceptable and can be served to everybody in their family.”

The book’s release coincides with a wider local food movement that promotes locally sourced ingredients and environmental sustainability. For many people on the Prairies, this represents a return to their agricultural roots.

“Most people aren’t farmers anymore. They might not even know any farmers,” Chan said. “They’re a really long way from knowing much about where their food comes from, so I think many people are interested to learn more about that.”

The plan helps remind people about the great food that is produced in their own backyard, Bell said, as well as the benefits of supporting local producers.

“When it’s grown here in town or here in Alberta, it keeps money here in Alberta, it helps to support our own economy, it helps to keep others employed and it really highlights all the wonderful things we do, right from production all the way to processing, cooking, then serving,” she said.

Pure Prairie Eating Plan is now available in bookstores across Alberta and Saskatchewan. It can also be purchased online through the plan’s official website, pureprairie.ca, or on Amazon.

RECYCLING FOR ROVER

WELL, IT’S FINALLY HAPPENED—GRAINS ARE GOING TO THE DOGS. It’s a good thing, though. Claire St-Francois works for Steam Whistle Brewing in Toronto and decided that maybe there is something more to be had from grain production. Not only do her Bark n’ Barley dog biscuits use the spent barley mash from beer production, the product also contains all-purpose flour, organic eggs and natural peanut butter.

She heard of the idea of repurposing spent grains and thought it might fit with Steam Whistle’s green initiatives, as well.

“Our manager said, ‘does anyone have any cool ideas that might benefit the brewery?’” said St-Francois about a meeting last fall. “I wrote the proposal, pitched the idea and they loved it.”

Within a few short months, she was selling Bark n’ Barley at Steam Whistle’s farmers market in January. She’s been barking up a storm in her modest apartment kitchen ever since.

“The dogs loved it, they just gobbled them up,” said St-Francois, admitting she’s also sampled the biscuits, calling them “pretty crunchy.”

The next step for St-Francois is to get Bark n’ Barley on store shelves and build a loyal network of furry clientele.
SOON, YOU MIGHT BE ABLE TO GET A BIT TIPSY WITHOUT EVEN having a drink. Iowa’s Templeton Rye Distillery is taking alcohol and food pairings to the next level.

The company recently purchased 25 Duroc pigs, known for their dark red colouring and defined muscle. Feeders have put the hogs on a steady diet of spent rye mash from the distilling process, some of which is sourced from Alberta. In theory, the animals could develop a distinctly whisky-infused flavour.

“A lot of the culinary world revolves around wine, and we thought this was an interesting way to introduce foodies to the category of rye whisky,” said Scott Bush, president and co-founder of Templeton. “We’re uniquely positioned to pull that off—Iowa has more pigs than people.”

It was pretty clear there was interest in the project, as well. Before the pigs were slaughtered, Bush had been solicited by chefs from more than 20 states and four countries, including a family in Canada looking for a new type of pig to roast at their annual family cookout.

As you might expect with something that’s never been done before, Bush isn’t quite sure what to expect when it comes time to raise his fork.

“We don’t really know what these are going to taste like,” said Bush. “It’s kind of a crazy idea—something that’s never been done before.”
**NO CORN, NO PROBLEM**

The days of corn production for ethanol may be numbered. In a recent scientific breakthrough, Stanford chemistry professor Matthew Kanan’s research found “appreciable” amounts of liquid ethanol created from carbon monoxide.

Ethanol is derived mainly from corn, which is a fairly water-intensive crop. Now, thanks to Kanan and graduate student Christina Li, new techniques could spell the end for high inputs of water and change the face of ethanol production, if scaled up.

“What we want to do is develop catalysts and make fuels,” said Kanan. “Catalysts that will work are challenging to produce. We’ve broken the problem into two steps: Carbon dioxide to CO, and then CO to fuels such as ethanol, propanol and acetic acid.”

Kanan views the work done to date as a starting point and said he and his team “have a long way to go,” but that’s not stopping him from setting goals and working toward sustainable large-scale production methods.

The key development reported by Kanan and his team is a new electrode that catalyzes fuel production. The process is complex, but in simplified terms, the electrode combines electricity, carbon monoxide and protons from water in an “electrochemical” reaction to generate ethanol, propanol and acetate. The latter two are of the most value, said Kanan. If scaled up and incorporated into practical electrolyzers, the catalyst could be used to produce fuel using renewable electricity from photovoltaics or wind turbines as the power source.

In the United States, a country that measures its maize crop in the billions of bushels each year, this could change the end-uses of corn. Last year, the United States used 13.2 billion gallons of ethanol in gasoline. In Canada, corn forecasts are rising and Monsanto recently announced a 10-year, $100-million corn expansion across the Prairies. DuPont Pioneer also announced plans to introduce new corn hybrids in Alberta over the next five years.

Regardless of what is farmed in North America, Kanan and company are focused squarely on renewable practices and mitigating rising carbon levels.

“It’s not clear to me that there’s any reasonable solution to the CO2 problem,” he said. “If you can make it possible to recycle CO2, you make an incentive for removing it and reusing it. That’s a long-term motivation.”

Kanan’s research was published in the science journal *Nature*.

---

**AT THE UNIVERSITY OF ALBERTA, FOOD SCIENTIST MIRKO BETTI** is giving new life to a variety of livestock byproducts, including skin, bone and cartilage from poultry and cattle.

“Meat and fish processing generates an immense amount of byproducts, and from these byproducts we can derive many interesting compounds,” Betti said. “[These are] bioactive substances, which can be purified and extracted.”

One of these substances is collagen, a fibrous protein found in a variety of animal tissues that helps those tissues withstand stretching. Once the collagen is extracted from animal tissues, it is treated using a process called hydrolysis to create collagen peptides. Those peptides are a valuable ingredient in various cosmetic products, especially anti-aging pills and skin creams.

“By recovering the collagen and transforming it to peptides, we can basically create the kind of nutraceuticals that will be used as anti-aging products, making the skin look younger,” Betti said.

Most of the collagen peptides sold commercially are made from gelatine, Betti said, in a long process that requires a lot of energy.

Betti and his research team have developed a process for hydrolyzing collagen that is much more efficient than traditional methods. The technology also makes the collagen peptides more bioavailable to humans, Betti explained.

“We’ve developed a technology that acts directly on the collagen without passing through the gelatine step, which saves a lot of energy and time,” he said.

The Alberta Livestock and Meat Agency (ALMA) and Alberta Innovates Bio Solutions fund Betti’s collagen research, which will be completed by 2015.

“Creating value out of low-value byproducts is a really great way to not only reduce waste, but to add value for both the industry and the processors,” said Susan Novak, ALMA’s executive director of strategic initiatives. “We feel it leads to a livestock industry that’s more sustainable.”
I’ve found people are keen to learn the origin of their food. They want to know where food comes from, its growing conditions and how it’s processed. I do more education because people are interested in learning the Canadian legislation around hormones and antibiotics in food, and organic labelling.

People are beginning to appreciate food for its quality and flavours rather than food being synonymous with quantity, which it typically is in Canada and the U.S.

One thing we were good at in the past, but not so much now, is cooking. I’m hopeful that since people want to know about the origin of their food, they’ll be more interested in getting back into the kitchen. Hopefully, people will spend more time enjoying the experience that food can be in their lives. We know that will translate into better nutrition. People eat less food when they’re taking time to enjoy it.

People are changing the sourcing of their food and they’re trying to find things that are less processed. There is a lot more information about nutrition out there. Nutrition labels became mandatory on packaged foods in 2007, so that’s a relatively new tool for us to make decisions about food.

I think people are still looking for that quick fix. In the ‘80s and ‘90s, it was all about low-fat, and then it evolved into the low-carb diet, and now people are looking for gluten-free foods.

The number of people who buy gluten-free products regularly way exceeds the number of people we estimate to have celiac disease or gluten intolerance.

People are going back to the basics, which I would agree with. Go to a mostly plant-based diet that’s minimally processed, and prepare your own meals because then you have control over what goes into them.
Go High-Tech for Healthy Eating

**NEW TECHNOLOGIES CAN HELP CONSUMERS KNOW MORE ABOUT THE FOOD THEY EAT**

It’s kind of ironic that bleeding-edge technology is helping people get back to simpler, healthier food. For years, nutritional information has been provided on food labels and even at major restaurant chains. But pulling together a healthy-eating strategy is still a lot of work. The result is often a piecemeal approach that leaves food consumers wondering if they are winning or losing.

But technology can help.

**APPS**

An app called Fooducate allows users to scan a food product’s barcode to get a full nutritional assessment that highlights red-flag issues like high sodium content, trans fat content and other unhealthy elements. It goes beyond counting calories—the app explains what they are and flags any health concerns.

Still using pen and paper to create the weekly shopping list? There are numerous apps available to make this a paperless task and deliver additional benefits. Healthy food choices don’t have to be more expensive. If you are a coupon clipper, use an app like Flipp to enter your location, browse local flyers on screen and save the coupons you want. Checkout 51 offers a variation on that theme—instead of clipping virtual coupons, it generates a list of discounted products once a week. Buy the product at any store, take a picture of your receipt and redeem the deal to get cash back. Cheques are mailed out once you reach $20 in rebates.

For many consumers, buying fresh, local produce is an important part of a healthy diet. An app called Farmers Fresh is GPS-enabled so you can find the nearest farmers market. You can also search by postal code or city. You can even search for a specific product, such as sweet corn or asparagus.

**SOCIAL MEDIA**

Tools like Facebook and Twitter have become extremely popular among both food consumers and primary producers. Connecting with farmers via social media allows buyers to learn more about how their food is produced, and where and when to buy the healthy products they are looking for. Direct communication with clients gives producers a strong understanding of what consumers want and how to earn their business.

**APPLIANCES**

Over the past couple of years, there has been a lot of hype about the arrival of the “smart fridge” with its built-in LCD touch-screen. The concept takes the refrigerator way beyond keeping food chilled or frozen. You can program your fridge to keep track of what’s inside using barcodes or radio frequency ID scanning. An Internet connection links your refrigerator to your smartphone, and can alert you by email if you need to replenish certain food items or if perishable foods are approaching their “best before” date.

A smart fridge can even suggest potential dishes or healthy recipes based on what’s on hand. Manufacturers such as LG and Samsung lead the way in offering these high-tech ice boxes, which cost two to three times that of a basic unit.

**UTENSILS**

There is no shortage of technology to help consumers determine what to eat, where to buy it and how to keep track of it. But you can also get help while you eat.

An electronic fork called the HAPIfork monitors your eating habits and lets you know with flashing lights or gentle vibrations when you are eating too fast. Sound crazy? Maybe, but there is evidence that speed eating leads to poor digestion and weight gain. The fork measures how long it took to eat your meal, the number of “fork servings” taken per minute, and the time intervals between each trip the fork takes from plate to mouth.

Technology can support a healthier diet—but remember that it’s still up to you to follow through and use it. Bon appétit!

Peter Gredig is a corn, soybean and wheat producer near St. Thomas, ON. He is also a partner in AgNition Inc., a Guelph-based mobile development company focused on building agriculture apps and solutions.
MORE THAN 15 YEARS AFTER ITS CREATION,
Golden Rice continues to have a polarizing reputation. For some, it is a miracle food and scientific triumph, while others view it as dangerous, unproven and a threat to food security in developing countries.

Golden Rice is a genetically modified organism (GMO) that has been altered to produce high levels of beta-carotene, which the human body converts into vitamin A. In normal rice varieties, the leaves produce and store beta-carotene, while the edible grain does not. The current version of Golden Rice, which produces and accumulates beta-carotene in the grain, was created using genes from maize (corn) and a common soil bacterium.

Adrian Dubock, executive secretary of the Golden Rice Humanitarian Board, uses a literary analogy to explain this gene transfer process.

“It’s really taking a word from one book and putting it into another book, and you can understand both the words, and the sentence that the word is a part of still makes sense,” he said.

The presence of beta-carotene in the grain is what gives Golden Rice its yellow or “golden” colour. The compound is also found in many yellow- and orange-coloured fruits and vegetables, such as carrots and sweet potatoes, and in green leafy vegetables.

European scientists Ingo Potrykus and Peter Beyer developed Golden Rice in the late 1990s to combat rampant vitamin A deficiency (VAD) in the developing world, especially among young children. According to the World Health Organization (WHO), the condition afflicts roughly 250 million preschool-aged children and causes an estimated 250,000 to 500,000 children to go blind every year, with half dying within 12 months of losing their sight.

“It’s the biggest killer of children in the world,” said Patrick Moore, Greenpeace co-founder turned chair of the Allow Golden Rice Society.

With a similar sentiment of wanting to help those less fortunate, Potrykus said his fight is with two giant issues: poverty and malnutrition.
country has become a battleground for the Golden Rice debate. Greenpeace continues to err on the side of caution, Pelegrina said, because of environmental and safety issues that could be caused by the introduction of Golden Rice.

"There are cases of contamination that have been documented in rice," she said. "As well as the possible dramatic impacts to farmers, who will lose possible markets for their exports if some of this contaminated material is transported to the European Union."

The EU has a strict policy on GMOs and closely monitors all such crops that enter its borders. Currently, there are 50 GMO crops authorized in the EU, including different varieties of maize, cotton, sugar beets, rapeseed and soybeans. Most of these GMOs are imported then processed for food and feed end uses. Currently, only one GMO is authorized for cultivation in the EU, a pest-resistant maize variety called MON810.

Although cautious about GMOs, Greenpeace promotes other solutions to micronutrient deficiencies and malnourishment in the developing world that aim to address the underlying causes of these problems.

"It’s more of the long-term solutions that we’re advocating," Pelegrina said. "It’s really looking at access to diverse diet and promoting diversity, especially ecological agriculture."

Ecological agriculture involves using bio-diverse farming practices or intercropping, organic pest controls and natural fertilizers in place of monocultures, pesticides and synthetic fertilizers. Greenpeace maintains that these practices could improve access to diverse diets among both rural and urban communities to combat micronutrient deficiencies, including VAD.

The Canadian Biotechnology Action Network (CBAN) takes a similar stance on the issue. Taarini Chopra, a researcher with CBAN, said supporters of Golden Rice are missing the big picture.

I was inspired by my promise to make this technology available to the poor," Potrykus said. "I have invested a considerable part of my scientific career in producing provitamin-A rice with the intention that I wanted to help reduce vitamin A deficiency with all its consequences."

Potrykus and Beyer licensed their discovery to Syngenta for commercialization with one important stipulation: Syngenta had to offer the crop free of charge for humanitarian use in the developing world, where about 3.5 billion people derive 80 per cent of their daily calories from rice.

"Many of those people have hardly anything else in their diet," Moore said, explaining that although several vitamin-A-rich vegetables are grown in the developing world, they are often expensive and too low in calories to be a cost-effective source of nutrition. "If they have to choose between rice and vegetables, and they choose vegetables, they’d starve to death."

By 2004, Syngenta abandoned its research and donated the information to the Golden Rice Humanitarian Board, which is still operating the project today.

Due to its GMO status, Golden Rice spawned a wave of fierce opposition from anti-GMO and environmental organizations, including Greenpeace, GMWatch and Friends of the Earth.

"At present, our position is that we are against the use of Golden Rice," said Wilhelmina Pelegrina, a senior campaigner for Greenpeace International based in the Philippines, an island country many Golden Rice boosters see as a likely location for the crop’s debut.

"We are almost certainly going to go to the Philippines before anywhere else," Dubock said.

The Philippines is an ideal location, he added, because the country has already registered several GMO crops and, between the International Rice Research Institute and the Philippine Rice Research Institute, possesses a tremendous amount of rice expertise. As a result, the country has become a battleground for the Golden Rice debate.

Greenpeace continues to err on the side of caution, Pelegrina said, because of environmental and safety issues that could be caused by the introduction of Golden Rice.

"There are cases of contamination that have been documented in rice," she said. "As well as the possible dramatic impacts to farmers, who will lose possible markets for their exports if some of this contaminated material is transported to the European Union."

The EU has a strict policy on GMOs and closely monitors all such crops that enter its borders. Currently, there are 50 GMO crops authorized in the EU, including different varieties of maize, cotton, sugar beets, rapeseed and soybeans. Most of these GMOs are imported then processed for food and feed end uses. Currently, only one GMO is authorized for cultivation in the EU, a pest-resistant maize variety called MON810.

Although cautious about GMOs, Greenpeace promotes other solutions to micronutrient deficiencies and malnourishment in the developing world that aim to address the underlying causes of these problems.

"It’s more of the long-term solutions that we’re advocating," Pelegrina said. "It’s really looking at access to diverse diet and promoting diversity, especially ecological agriculture."

Ecological agriculture involves using bio-diverse farming practices or intercropping, organic pest controls and natural fertilizers in place of monocultures, pesticides and synthetic fertilizers. Greenpeace maintains that these practices could improve access to diverse diets among both rural and urban communities to combat micronutrient deficiencies, including VAD.

The Canadian Biotechnology Action Network (CBAN) takes a similar stance on the issue. Taarini Chopra, a researcher with CBAN, said supporters of Golden Rice are missing the big picture.

Continued on page 44
Over the past decade, the variety of claims made on food labels has exploded. And while some of these claims have strict regulatory and legal definitions, others are marketing tactics manufacturers can use more or less how they please.

New federal regulations are in the works to modernize labelling rules in order to meet rapidly evolving consumer expectations. Meanwhile, given the complexity and cost of staying in line with government-regulated labels, many producers are turning to new, industry-certified standards.

Driving this trend is an increasingly discriminating consumer, said David Wilkes, vice-president for government
relations and grocery division at the Retail Council of Canada.

“What we have right now is a very, very informed and educated consumer,” he said. “They are looking to make choices for their families that meet their unique needs.

“You just have to walk through the aisles to see the expanding variety of labels,” he added. “They wouldn’t be on the shelf if they weren’t of interest to the consumer.”

To get a grip on the proliferation of new food labels and product claims, the federal government announced the Food Labelling Modernization Initiative in the 2013 Speech From the Throne. This work is being undertaken by Health Canada and the Canadian Food Inspection Agency (CFIA), which share responsibility for food labelling.

Gary Holub, a spokesperson for Health Canada, said an initial round of consultations with consumers and producers began in January and was completed in April.

“Over the past few months, Health Minister Rona Ambrose and her colleagues have hosted round table discussions across the country and provided all Canadians with an opportunity to provide feedback directly to Health Canada by filling out an online questionnaire,” he said.

Holub did not say when the new regulations are expected to come into force.

Core food labelling requirements in Canada are quite simple. As a baseline, all foods—with the exception of products like raw fruits and vegetables—must have a label. This must include the food’s common name, expiration date, net quantity, a list of ingredients and the familiar nutritional information box. Beyond this, it must be bilingual, include the name and address of the manufacturer, and list any allergens contained.

Nutrition claims such as “cholesterol-free” and “reduced in calories” are also permitted, as are certain limited health claims such as “a healthy diet low in saturated and trans fats may reduce the risk of heart disease.”

Voluntary labelling not related to the safety of the product, on the other hand, is a bit of a mixed bag. Used primarily for marketing purposes, these voluntary claims range from highly regulated to virtually meaningless.

Laura Gomez is an Ottawa-based lawyer with Gowlings, and specializes in food labelling. She said that there are pages and pages of regulations behind some product claims, but relatively little for others.

“Consumers really want to have clear labelling and they want it to be true,” she said. “But consumers may not necessarily understand what the regulations are, so there is potential for some confusion.”

On the heavily regulated end of the spectrum are certified organic claims. According to Gomez, organic producers are frequently audited by government-certified inspectors who check every step of the product process to ensure no synthetic fertilizers, pesticides or other substances are used. Only then are products found to have greater than 95 per cent organic content allowed to use the “Canada Organic” logo, which increasing numbers of consumers look for. Should a producer fail to meet the stringent Canada Organic Regime standard, it is delisted and must stop making organic claims.

The tight regulatory oversight for organics is a major contributor to the high costs of these products, Gomez said.

“When you are adding more information to a food label that requires certifying information through the food supply chain, that will likely increase the cost of manufacturing that product.”

Labelling claims are now extending to genetically modified organisms (GMO), as well. To see products branded “non-GMO” or “GMO free” is becoming increasingly common, with even stalwart brands like Cheerios adopting a voluntary non-GMO label, meaning the cereal doesn’t contain genetically modified organisms.

Canada currently has a voluntary labelling scheme for foods that are not products of biotechnology or genetic engineering, but parts of the United States are moving aggressively towards mandatory GMO labelling. In early May, the Vermont senate passed a law to enact mandatory labelling of GMOs, making it the third U.S. state to pass such a law after Maine and Connecticut.

Cathleen Enright is executive vice-president for food and agriculture at the Biotechnology Industry Organization, an American pro-GMO lobby group. She said mandatory GMO labelling will require extensive product re-labelling, and some major brands may reconsider selling their products in these states, given the high cost of changing labels for a relatively small market.

Enright said companies are searching for ways to defray the costs of expensive voluntary labelling. Major cereal producer Post, for example, recently made Grape-Nuts GMO-free but reduced package contents from 32 to 29 ounces while keeping the price per box the same.

Enright said there is an ongoing push from the American industry for national regulations on GMO labelling, to keep costs down and labelling consistent from state to state.
“The conversation has been raised to a national level, and needs a national solution,” she explained.

Stephen Yarrow is vice-president for plant biotechnology at CropLife Canada, an industry association representing the biotechnology sector. Canada currently does not require GMO labelling, and Yarrow said that implementing such a system could be very costly given the pace of technological change.

A black-and-white, GMO-versus-non-GMO labelling requirement would be too simplistic, he said.

Many processed foods contain canola oil and fructose from corn, Yarrow said, and these crops are almost uniformly GMO. Therefore, any mandatory label would appear on virtually all processed foods.

“The vast majority of processed foods will have to be labelled as containing GMO, so it becomes almost meaningless.”

In addition, Yarrow said, it’s unclear how such a label would keep pace with new ingredients that will be produced with next-generation techniques, such as DNA editing.

“You can imagine in five to 10 years a lot of varieties of today’s crops will be improved by these new techniques,” he said. “In terms of what should be labelled, it’s a moving target.”

In the face of strict government regulations on labels, some sectors are moving toward industry standards expressed in the form of brands.

John Masswohl, director of government and international relations for the Canadian Cattlemen’s Association, said the beef industry knows all too well the negative effects heavy government regulations can have. Herds of cattle frequently move back-and-forth across the Canada–U.S. border, he explained, and therefore sometimes the beef produced from those animals might not meet the strict criteria to qualify for a voluntary “Product of Canada” label. According to CFIA guidelines for a “Product of Canada” claim to be valid, beef must be produced from cattle that have been fed at least 60 days in Canada, so beef from cattle that have been exported and re-imported into Canada might not be eligible for the label.

Canadian beef producers have also been devastated by the introduction of mandatory Country of Origin Labelling (COOL) in the United States, Masswohl said, which acts as a de-facto trade barrier. Because a USA label can only be used when the beef comes from cattle born, raised and processed in the U.S., COOL forces U.S. companies to sort, label and store meat from Canada differently than meat from domestic sources. This special treatment is expensive, and some companies have stopped buying cattle from Canadian feedlots as a result.

In response to these regulatory hurdles, the industry in Canada took another route and developed the “Canadian Beef” brand.

“The words ‘Canadian Beef’ are a brand—it’s not a government regulation—and is subject to the brand promise we control,” he said. “And if anyone wanted to look at what it means, they can look at our website and see what the brand promise is.”

Masswohl said consumers have come to trust the Canadian Beef brand, featuring a maple leaf, as a signifier of quality.

Similar action is being taken in the poultry sector.

Grocery chain Sobeys, for example, recently launched a branding program called “Better Food For All” under which all its poultry must be humanely raised. As a result, consumers have seen the “Certified Humane” brand on poultry product labels.

In 2003, Adele Douglass launched Humane Farm Animal Care, which runs the Certified Humane voluntary labelling program. To use this label, producers must meet strict treatment standards—including a mandatory six-hour dark period for poultry—and abide by strict slaughter standards.

When it comes to food labels, Douglass said, “natural” and “free range” are among the most misunderstood. She added that when consumers see a new label, they need to do a lot of research before they really understand how legitimate it is.

“Make sure you know what that standard means,” she explained.

With new regulations coming down the line, Wilkes said the government should not be too cavalier or heavy-handed when introducing changes to labelling requirements, and should phase them in gradually so changes can be incorporated into new batches as they are made.

“Labelling changes can be very expensive for industry and these costs are ultimately passed on to consumers,” he said. “Especially for poorer families where price is more important than accuracy in labelling, this is not helpful.”

“This means that we, as an industry, can’t be too quick to make changes that result in increased costs for consumers.”

In the face of strict government regulations on labels, some sectors are moving toward industry standards expressed in the form of brands.
FROM FAD TO FAIR SHAKE

Making profitable sense of consumer food trends

BY IAN DOIG • PHOTOGRAPHY BY MARNIE BURKHART
The Forest for the Trees

The last thing grain farmers want to read is that “gluten-free” (GF) is the nation’s number-one food trend according to Restaurants Canada (formerly the Canadian Restaurant and Foodservices Association). But bear with me as I briefly take you inside the belly of the beast.

The lineup to enter the 2014 Gluten Free Expo in Calgary extended well down the hallway of the University of Calgary’s kinesiology department from the doors of its Olympic Oval venue. The event was at capacity. Inside, visitors carried tote bags bursting with mostly complimentary GF foodstuffs from dozens of kiosks manned by fervent promoters of everything from fibre-packed Holy Crap breakfast cereal and Healthy Delights kale chips to Catelli GF pasta.

Ignore for a moment that this event and the trend that spawned it are inherently anti-gluten, and focus your attention instead on the economic magnitude that food trends can attain. Market research publisher Packaged Facts estimated U.S. consumption of GF foods will top US$6.6 billion by 2017. A study by America’s largest GF food brand, Udi’s Healthy Foods, claimed 4.3 million Canadians had adopted a GF or gluten-reduced diet as of 2013.

Now, imagine a similar food phenomenon springing from obscurity—one in which every product at the tradeshow is grain-based. It’s not a stretch. Take, for instance, Alberta Beer Festivals, an organization that holds annual beer fests in Calgary and Edmonton. These sprawling events embody the barley tsunami that is craft beer and microbrews, the fifth-biggest national food trend.

And trends change all the time. American food culture think tank The Hartman Group suggests consumers have inaccurately equated gluten consumption, rather than poor overall diet, with digestive issues. The group suggests, however, that consumers are re-embracing grains in healthier, whole-grain forms. As improbable as it seems, one such health-conscious, grain-based trend on the rise in San Francisco is the artisan toast bar. According to Calgary food writer, author and CBC Radio restaurant commentator John Gilchrist, when food trends break in Bay City restaurant kitchens, they typically arrive in Calgary a mere three weeks later.

That these pro- and anti-grain trends happily coexist on North American restaurant menus illustrates that grain-based products can capture trends and sales figures echoing those of GF.

Economics aside, to view either trend as pure fad is to misread contemporary food culture. The cachet of products like quinoa, goji berries and offal certainly ebbs and wanes,
but restaurant menus and supermarket shelves don’t return to a meat-and-potatoes default state when trends fade. The greater bundle of trends is dynamic, evolving and expanding, and embodies long-term opportunities for Canadian farmers.

**MILLENNIALS, GURUS AND GLOBAL MARKETS**

“Consumer trends affect everything, especially in Alberta,” said Jordan Mahar, Alberta Agriculture and Rural Development (AARD) post-farm gate business analyst. Provincial consumers are well informed about food, responsive to new culinary developments and have high average incomes to support their food purchase impulses. But it is millennial generation consumers—an especially strong demographic on the Prairies—who are most responsive to developments in food culture.

“These people are a lot more idealistic and open to new technologies and change,” said Mahar. “They’re more open to exploring new possibilities, especially in food.”

Plugged into the Internet, millennials are great appreciators of niche products and are an effective barometer of emerging trends.

“What you have is a few main gurus of particular topics like gluten-free, organic and all-natural,” explained Mahar. “These gurus will distribute their knowledge down the chain. They start this trend, and then the early adopters pick it up.”

For example, Canada’s organic food and non-alcoholic beverage sales hit $3 billion in 2012, tripling over just six years, according to the Canada Organic Trade Association.

Identifying the trend being propagated early in this chain may help to predict emerging trends as well as market opportunities. Mahar said global food demand is expected to rise 35 per cent between 2007 and 2025, mostly driven by the rise of the middle-income bracket in countries such as India and China.

“There are opportunities for Canada to feed the world, especially Alberta, which has a strong agricultural presence,” he said. And big corporations are spending big dollars to obtain statistical food marketplace information.

Especially useful to smaller enterprises, AARD’s Competitiveness and Market Analysis Branch collects and disseminates this information, purchasing the publishing rights to studies and making them available on its website in its Alberta Food Consumer View and Consumer Corner forums.

**THE FARMER’S R&D DEPARTMENT**

“Eighteen million Canadians visit restaurants every day. That’s one out of two,” said Garth Whyte, president and CEO of Restaurants Canada. This illustrates the value of food trend analysis to his industry, which is by nature hypersensitive to customer demand. Restaurants, food businesses and governments use the organization’s annual Chef Survey to identify hot and emerging trends.

Whyte points out that the top 10 trends relate to healthy living and locally sourced food. Though pinning down which
individual trends will endure is a matter of instinct, he believes these macro-trends, which are explicitly linked to the Canadian farm economy, have permanence.

“Eating local and healthy-living choices: those types of trends are here to stay. If you look at heirloom fruit and vegetables, that’s local—it has to be,” he emphasized.

Restaurants are farmers’ R&D department, Whyte says, creating both the recipes and cachet necessary to sell the product, whether it’s Saskatoon berries, grass-fed beef, lentils, or hops used by beer producers. Naturally, the restaurant industry maintains a close relationship with the agri-food sector.

“There’s such a win-win that we need to be in lockstep with each other to find new opportunities,” he said.

SEVEN ACRES
It’s hard work, but the restaurant industry is doing a good job capitalizing on food trends, said Gilchrist. He grew up on a mixed farm near Wetaskiwin, and speaks to producers on the connection between farm and table.

The key for restaurants is being aware of trends and selective in following them, he said.

“Hotels especially—you’ll see so many labels down at the bottom of their menus it gets kind of funny. ‘Here are our Ocean Wise, heart-smart and gluten-free choices.’ Half the menu is these specialties,” he said. “So, you have to pick the labels that make sense.”

His advice to farmers mirrors this approach: go very big, or stay small and focused. Statistics Canada’s 2011 Census of Agriculture observed that farm size is increasingly skewing to extremes to magnify bulk production margins or to grow lucrative specialty crops.

“The concept of the mixed farm is really passing away,” said Gilchrist. “Commit to something and go for it.”

While the big producers take on the expanding global marketplace, the opportunity for small producers is predominantly in the regional specialty marketplace driven by ever-growing demand for locally grown products. Participating in this realm may facilitate an escape from the pitfalls of commoditization, but it requires a mind shift, said Gilchrist.

“They big concerns are import-export, country-of-origin labeling, feed protocols,” Gilchrist said of the average small producer. “They’re tied up with the mega picture, and the idea that the consumer wants this and not that—it’s too much for them.” Those demands may include ethically and sustainably raised products, grass-fed meats or ancient grains, but largely fall under the über trend of healthy eating.

Gilchrist cites Lund’s Organic Farm of Innisfail, a seven-acre produce operation specializing in carrots, as a typical specialized operation. Given the province’s enormous agricultural land base and that it was built on large tracts of agricultural land for grains and feedlots, boutique farming is not for everyone, he said.

“But, what we can incorporate within that is the seven acres. Anyone can carve out seven acres from a quarter-section of land and build something.”

Specialty meat producers such as Broek Pork Acres near Coalhurst and Spragg’s Meat Shop of Rosemary have done so by maintaining their own processing houses and dealing directly with restaurants and markets.

“It’s a matter of finding your niche,” said Gilchrist.

Mary Bailey, culinary commentator, editor of Edmonton food magazine The Tomato Food & Drink and co-chair of the Edmonton Food Council, is a booster of farmers markets and locally grown food, but warned they’re not a panacea. Some farmers markets have become little more than neighbourhood coffee klatches, she said.

“It is a trend, and people want to be part of that. But they also have to realize these are stores, and they’re trying to make a living.”
In the province’s many vibrant farmers markets, however, customers purchase directly from the farmer who raised the animals or pulled produce from the ground the day prior.

“The biggest benefit is the direct connection,” said Bailey. “There’s no one between the customer and the producer.”

Customers can appreciate where their food comes from, how it was grown and by whom, while farmers receive a hotline to market demand direct from the end users.

The economic opportunity is tremendous, she said, but the parties have to meet in the middle. While consumers and restaurateurs need to actively support market vendors, farmers can’t, for example, demand that buyers drive to the farm to pick up their purchases.

TELL YOUR STORY

It’s a fresh, sunny spring evening at River Café, located idyllically on an island park on Calgary’s Bow River. Nationally acclaimed for its contemporary Canadian cuisine and use of local ingredients, its seasonal menu features meat and produce grown by a network of more than 60 producers. Open windows allow a breeze into its fishing-lodge-chic interior where Slow Food Calgary hosts Roots and Shoots, an annual five-course dinner utilizing “good, clean and fair” ingredients prepared by several of the city’s best chefs. Tonight’s meal incorporates products ranging from Highwood Crossing steel-cut oats and Greens Eggs and Ham duck breast to Hog Wild Specialties boar tenderloin. “The concept of the mixed farm is really passing away. Commit to something and go for it.”

–John Gilchrist

The group works diligently to meet farmers halfway. One of three Alberta “convivia,” Slow Food Calgary is one of the country’s most active, and part of its mission is to connect consumers and chefs with local producers.

Slow Food also conserves heritage animal breeds as well as grain and vegetable varieties that are a major component of the altruistic, eat-local trend.

“It’s people wanting to know where their food comes from,” she said. “If you have kids, you’re thinking about it.”

Also in attendance is Hotel Arts Group director of business development Fraser Abbott. The group’s three critically acclaimed restaurants—Chef’s Table, Raw Bar by Duncan Ly and Yellow Door Bistro—utilize Alberta-grown ingredients. Abbott is also vice-chair of the Alberta Culinary Tourism Alliance, whose mission is to unite its producer, distributor, restaurateur and tourism stakeholders behind compelling Alberta food stories that respond to media and consumer hunger (forgive the pun) for culinary connection.

Though the organization focuses on specialty producers, Abbott said he would like it to advocate for big ones as well. “There might be a malt producer here in Alberta growing some amazing product they’re exporting to Belgian beer producers. From an economic development perspective, we’d love to tell that story, too.”

Both Henderson and Abbott encourage farmers to contact them. “Tell us what you’re doing,” advised Henderson. “What is it that might be in sync with our goals that we could do better together?”

These offers make it clear that farmers are no longer stuck merely responding to food trends, but can take an active hand in creating and steering them.
The loss of agricultural land is an increasingly common story in Canada and around the world. Over half the world’s population lives in cities, but all of those people still need to eat. Lenore Newman, PhD, is the Canada Research Chair in food security and environment at the University of the Fraser Valley in Chilliwack, B.C.

“We are entering a period of food crisis around the world, and Canada is one of the few places that still has underutilized farmland,” Newman explained. “That means we haven’t had the conversation about whether or not we should be losing farmland.”

Newman pointed to California to illustrate her point. “California is in crisis. Ninety per cent of the state is in severe drought, and 70 per cent is extreme. In Canada, we import $1.8 billion of California produce every year, and this summer it’s going to run out,” she said.

“Where they want to do this urban sprawl is the majority of the good land. Let’s sprawl to where the farmers struggle to make a living.”

–Barb Wedman

The Food Issue 2014

grainswest.com
the challenges facing prairie cities like Calgary and Edmonton.

All along the Highway 2 corridor from Edmonton to Calgary, land is being bought for speculation and development. It is driving land prices higher, and gradually converting agricultural land to other uses.

According to Farm Credit Canada (FCC), agricultural land values have increased every year since 1992. The price of agricultural land across Alberta was up by 12.9 per cent last year. Nationally, the average increase was 22.1 per cent—the highest since FCC started tracking in 1985.

“The main drivers for land values are location and supply and demand. If there’s a sector that’s not active, prices won’t go up,” explained Kenneth Gurney, senior appraiser for FCC in Alberta. “In the Highway 2 corridor, oil and gas is strong, the urban influence is strong and agriculture is strong, so the values keep going up.”

Over the last couple of years, good crops and high prices have helped keep agriculture competitive for land use, but the pressure keeps building for land on the urban fringe.

“You can’t argue that agricultural land is not being swallowed by urbanization, particularly along the Highway 2 corridor and the edge of major centres,” said Jason Cathcart, land-use policy manager with Alberta Agriculture and Rural Development.

From 1996 to 2009, approximately 200,000 acres were permanently lost by agriculture, said Cathcart, 90 per cent of which was between Edmonton and Calgary. Ninety-five per cent of that development is on Class 2 and 3 soils, some of Alberta’s most productive cropland. Cathcart estimated that roughly an equal amount of land has been temporarily lost to industrial uses, but could eventually be reclaimed and brought back into production.

Getting hard numbers is difficult because the data is incomplete. The provincial government tracked the loss of agricultural land from the 1970s until 1995, when the Municipal Government Act granted autonomy to municipalities to make decisions about land use. The provincial land use plan that accompanies the Act provides high-level direction to municipalities with recommendations to identify their agricultural lands and zone them accordingly; limit fragmentation and conversion; direct development away from agricultural lands; and limit conflicts between intensive agriculture and non-agricultural uses.

“There has been no provincial oversight, monitoring or knowledge as to how well municipalities have been doing since 1995,” said Cathcart. “Then, during the last boom cycle in the mid-2000s, the province started to hear the public asking what we were doing for public planning for land in the province. Up until then, the province took private property interests to the extreme.”

Without a coherent, legislated agriculture policy, urban municipalities are left to navigate through networks of regional planning boards, inter-municipal development plans and other tools to try to fill the void. As the City of Edmonton continues to grow, two major principles guide their efforts.

“We are working to reduce our footprint and be efficient in the use of infrastructure dollars and infrastructure,” said Tim Brockelsby, senior planner in urban planning and environment for the City of Edmonton. “In the big scheme, to have those principles applied preserves agricultural land by being more efficient.

“As planners, we need to look ahead, but there’s a general acceptance that there will be growth,” he added. “With the annexation or within the existing city boundaries, ultimately it comes down to the land owner making a choice around this issue.”

Janelle Hebert could not disagree more. She returned to her family’s farm, Riverbend Gardens, with her husband in 2006 to grow vegetables for the local market and raise a family. The land was part of an area annexed into the City of Edmonton in 1981. A couple of years after they arrived, an area structural plan (ASP) was presented to the city council to begin development in the area.

“I think the spin of leaving agricultural land in the farmers’ hands is the wrong one,” said Hebert, after six years of negotiating with the council and developers. “It’s not up to me. You can’t leave it in the hands of the people who are struggling to make it because it makes it so easy to walk away.”

Hebert and other farmers worked with the City to have the land designated for agriculture, but when the province asked to have a provincial highway included in the ASP, the developers ran it through the middle of the farmland. The farmers say the City could save their farms by redirecting the highway, but the developers don’t want it on their land, either.

“Some of the farmers want to cash out and have been waiting for it for 30 years. Some of us who have really viable businesses are hanging on and saying, ‘let’s make agriculture part of development,’” she said. “If I cash out, I take this away from the future generations. It’s a one-time payout and it’s over. This kind of development and politics is really shortsighted. The value of agricultural land is priceless in the long term.”

“In the Highway 2 corridor, oil and gas is strong, the urban influence is strong and agriculture is strong, so the values keep going up.”

—Kenneth Gurney
Look carefully. Nestled among the whiskies in Edmonton’s Chateau Louis Liquor Store, you might spot a frosted white bottle with Japanese lettering, labelled “Iichiko.” Peer at the fine print and you can pick out the description, “The Mugi Shochu.”

Confused? Thankfully, store manager Adam Koziak is eager to answer your questions. Koziak developed a taste for shochu (a Japanese distilled spirit) during trips to New York. He marvelled at how well shochu went with Japanese and Korean food, and decided to introduce it to the Edmonton market.

Koziak settled on iichiko as his store’s first brand. “I’ve tried probably 10 or 12 different ones over the years, and this is the one that we typically go back to,” he said. “It’s smooth enough that you can drink it straight. Throw it on the rocks, and squeeze a lemon or lime into it, and you’re ready to go.

“So,” he said with a laugh, “it’s in my store mostly for myself!”

Although it’s a distilled spirit, shochu typically contains 25 per cent alcohol—more than wine but less than most hard liquor. Although ichiko is distilled from malted barley (in Japanese, mugi means barley), shochu can also be made with sweet potatoes, buckwheat, rice or blends of the above.

But, for now, let’s stick with mugi shochu.
Sanwa Shurui, the distillery behind iichiko, describes its product as “Japan’s best-selling genuine shochu.” Shochu has been produced in Japan for centuries, but it is currently enjoying an unprecedented surge in popularity (surpassing even sake in the domestic market). The trend has even started to spill over to North America, with shochu bars popping up in New York City.

What’s the Canadian connection? Significant work has been done to identify and develop a Canadian barley variety for shochu, and to explore the potential for developing a North American shochu market. The work is ongoing, says Alberta Barley Research Manager Garson Law, but interest in shochu is increasing.

“Canmore has been identified as an existing variety that has great potential for shochu,” explained Law. “Although, it is currently undergoing seed increases to build up enough volume, which takes a couple of years.”

While building the Canadian connection, Japanese shochu from companies like Sanwa Shurui is slowly building profile in Canada. Davin de Kergommeaux, an Ontario independent whisky commentator, recently sampled several different varieties of iichiko shochu.

“This is really good stuff,” he enthused. “I really enjoyed it. My wife had got me a nice plate of sushi, so I did some pairings. The taste is very familiar to me, but I’m not sure if I’ve tried it before. I recall shochu as being much more alcoholic and a lot less flavourful.”

In any case, he’s a fan now.

“They sent me three bottles. I’m looking at them now, and I think I did quite a bit of tasting last night. Normally I keep an extra glass on the table, and I use that for spitting into—but I didn’t do any spitting at all last night.”

Down the road in Bloomfield, ON, craft distiller Sophia Pantazi has already tried her hand at a made-in-Canada shochu. Her business, 66 Gilead Distillery, currently produces small batches of a barley-rice shochu called White Dragon.

Like Koziak and de Kergommeaux, Pantazi loves the way shochu pairs with Asian cuisine.

“Wine doesn’t really go with Korean or Japanese food, and beer is very filling. So, sake or shochu are your best options. Sake is fine, but it tends to be very sweet. Shochus have a lighter, cleaner taste, and I feel it goes better with the food.”

When Pantazi looked for shochu at her local outlet, run by the Liquor Control Board of Ontario (LCBO), the closest substitute she could find was soju, a

“It’s smooth enough that you can drink it straight. Throw it on the rocks, and squeeze a lemon or lime into it, and you’re ready to go.”

—Adam Koziak
cheaper Korean spirit that, while similar, doesn’t match shochu’s flavour or complexity, in her opinion.

“I thought, well, that’s a real shame. So, the best way to get around that is to make it here.”

Unfortunately, the LCBO still doesn’t carry shochu, despite Pantazi’s efforts to get White Dragon into its stores.

“Their opinion is that there’s not a market for high-end shochu. But I disagree, because it sells so well at our store. The people who come and discover it, love it.”

Outside Alberta, Canada’s retail liquor market presents a challenging landscape for innovative or niche products, explained Jan Westcott, president and CEO of Spirits Canada. Most provincial liquor boards have a “one-for-one” policy—if they add one product to their catalogues, they have to remove a product to make room. As a result, they generally require a great deal of convincing.

“As an importer or agent, what are you going to do in my marketplace to make sure that the sales of your product actually take off? Are you going to advertise? Are you going to put people in the stores to do tastings? How much money are you going to spend? What’s your marketing plan? How are you going to get consumers to come into my stores and pick this up off the shelf?”

That said, Westcott sees some positive signs for the growth of shochu in Canada. Even though shochu accounts for a mere 700 cases a year in a market of 16 million cases, those 700 cases represent 14 or 15 different products.

“That’s pretty amazing,” observed Westcott. “It speaks to the fact that, in Japan particularly, the shochu business is very robust.”

Angela Lum, investment attraction manager for southern Alberta with Alberta Agriculture and Rural Development (AARD), said her department recognizes the potential for shochu development in North America.

As our population ages, Lum suggested, consumers may look for lower-carb, lower-alcohol drinks.

“There is also an increasing interest in Japanese culture and authentic dining experiences here in North America,” she added.

Both Law and Lum see potential for a shochu company to set up shop in Alberta. In Japan, Canada enjoys a reputation as a land of blue skies, endless rolling plains and snow-capped mountains. A Japanese distiller, using premium Alberta barley and clean water from pristine Rocky Mountain glaciers, could develop an exceptional product.

“Alberta is looking for value-added opportunities to bring to its growers,” enthused Lum. “Companies would be close to raw materials and efficient logistics to a growing market in the Pacific Northwest.”

If you walk into a liquor store a decade or two from now, you might very well find an entire shochu section—with a made-in-Alberta option on the top shelf.
Although Canada may be better known for its whisky and beer, vodka is a versatile spirit that has made great strides here over the last 30 years. It represents a sizeable chunk of the Canadian spirits market, and new craft distilleries are rethinking the classic spirit—with delicious results.

Vodka can be made from a variety of base ingredients, including wheat, barley, rye, potatoes and even different types of fruit. Anything that can be fermented and then distilled can be used to create vodka, with each base providing subtle differences in flavour and texture.

“Good vodka can be made from many products,” said David Farran, president of Eau Claire Distillery in Turner Valley, Alberta’s newest distillery. “The usual base grain for vodka has been winter wheat, and that has been primarily chosen because of yield and economics, but you’re starting to see other grains used specifically for flavour profiles.”

In the U.S., vodka sales eclipsed those of gin and eventually whisky, making it the country’s top spirit by the mid-1970s. Vodka’s popularity followed a similar trajectory here in Canada.

“From what I have heard in general, interest in vodka began during the 1970s and 1980s,” said Davin de Kergommeaux, an independent whisky commentator based in Ontario. “During this period, the old art of mixology morphed into cocktail pre-mixes that could be assembled on the fly at bars. Vodka lent itself perfectly to this trend, becoming the base for popular cocktails such as the Cosmopolitan, the Kamikaze and the White Russian.

From the 1980s onwards, the selection of vodkas exploded across the country, as producers sought to capitalize on the spirit’s popularity and expand its reach. According to Mike Shaddock, manager of Willow Park Wines & Spirits’ main Calgary store, Alberta has been no exception. Vodka is the top-selling spirit at the store, he said, and they carry roughly 150 different vodkas.

“With our selections in the province, it’s totally taken off—really, ever since they started introducing all the new flavours,” he said.

Flavoured iterations have become a mainstay for most commercial vodka producers. The first commercial flavoured vodka was a peppery concoction from Sweden’s Absolut released in 1986. Since then, the company has expanded its line of flavoured vodkas to include everything from raspberry to vanilla. In Canada, Newfoundland’s Iceberg Vodka rolled out new flavours in 2013, including cucumber, chocolate mint and crème brûlée.

“The flavoured vodka trend really just exploded with so many new flavours,” de Kergommeaux said. “However, flavoured vodka was a trend and it seems to be running its course.”

The numbers seem to indicate an adoration of vodka across the country. Statistics Canada reported whisky earned 27 per cent of the spirits market share in 2013, while vodka was hot on its heels, pulling in 24 per cent. With a thirst for excellent vodka, homegrown options are increasing as well.

“There are some really wonderful vodkas made right here in Canada,” de Kergommeaux said, pointing to examples such as Still Waters Distillery’s single malt vodka and 66 Gilead Distillery’s rye vodka.

At Eau Claire Distillery, a base of two-row malting barley, CDC Meredith, lends the vodka its unique flavour.

“It brings out a really smooth kind of nougaty sweetness in it, which is very unusual and very tasty,” Farran said. “It’s a sipping vodka.”

For Farran, great vodka starts with great grain, and Alberta is the source of the best grain in the world.

“All of our products are made with Alberta grain,” he said. “That’s a core part of our farm-to-glass philosophy. The Eau Claire Distillery plans to profile its farm suppliers, letting drinkers learn exactly where the grains originated from and the entire production process.

“As a farm distillery, we specifically source grain of specific types from farmers, rather than treating the grain as just a commodity, and that translates into very special taste profiles.”

BY TYLER DIFLEY

grainswest.com
GrainsWest writer Ian Doig and River Café Chef Andrew Winfield share a laugh while talking about the finer points of beer and food pairings.
Beer and food pairings take centre stage

BY IAN DOIG · PHOTOS BY MARNIE BURKHART

There’s some takes delight in the carriages a rolling . . .
But I takes delight in the juice of the barley.
And courting pretty fair maids in the morning bright and early.

WELL-KNOWN IRISH FOLK song, “Whiskey in the Jar,” ends with its doomed subject wistfully reminiscing about life’s simple pleasures, especially beer. He certainly doesn’t long for a glass of Pinot Noir on his way to the gallows. Beer has long been a working class delight, but chefs are now elevating the juice of the barley, choosing it in place of wine as an accompaniment to upscale cuisine.

Not any old brew will do, however. Chefs and contemporary restaurant diners aren’t content to wash down their meals with whatever big-name brand is at hand. They want the beer to complement their meal and enhance the dining experience.

The impulse to pair beer with food in this way is relatively new to Alberta. The province is a slow and steady participant in a craft beer explosion that has gripped the West Coast from Seattle to Vancouver. Independent breweries from Calgary’s Big Rock Brewery and Wild Rose Brewery to Edmonton’s Alley Kat Brewing Company are now producing dozens of lagers, ales, stouts and porters.

Many finer Alberta restaurants feature a selection of these local and international beers. Calgary’s River Café is internationally known for its contemporary Canadian cuisine and its wine menu. However, chef Andrew Winfield said beer is increasingly comparable to wine, with restaurant patrons preferring specific brew styles in combination with their meals, and simply being eager to try new tastes.

“Now it’s becoming more mainstream,” he said. “It’s right for a chef to pair a dish with an ale as opposed to a wine.” River Café now offers such pairings on occasion, and hosts dining events that focus on beer as the accompaniment.

Beer’s rise in the food scene also owes a lot to upscale dining becoming much less rarified, and beer more sophisticated. The two have met in the delicious middle.

“Beer is the new wine, and wine geeks are the biggest beer geeks,” confirmed Mike Tessier, co-owner of Artisan Ales, a Calgary beer consultant and importer of craft beers. Tessier is a beer purist and champion of craft beers, and his clients include Co-op liquor stores as well as independent wine boutiques. “With the Quebec and European breweries I deal with, lots of places that were primarily wine-focused are drawn to that craft beer market,” he said.

Artisan Ales recently held a food-and-beer tasting event at Calgary’s tiny Taste restaurant, which even employs its own Cicerone, the beer equivalent of a wine sommelier. Tessier enjoys briefing restaurant staff on the art of pairing beer with food. “Oh, I see you’re having steak or chocolate cake, well this beer would be awesome with that,” he says. “It doesn’t necessarily have to work—people like to experiment.”

“The future of the craft beer market is nothing but growth,” said Tessier. Though beer-food pairing is a new restaurant trend, the juice of the barley has successfully made the jump from the go-to beverage of backyard barbecues to the world of fine dining. The phenomenon is limited only by the creativity of chefs and brewers.

In May, Winfield was named Canada’s outstanding chef at the 2014 Terroir Symposium, a prestigious hospitality industry honour, and River Café owner Sal Howell was named the nation’s best restaurateur. Below is a series of dishes created by Winfield for GrainsWest. Each is paired with a craft beer selection.
Craft beer really lends itself to the seasons, said Winfield. “Most wines make sense most of the year, but those ales—there’s a certain kind of weather and a feeling you have. You want to have a different style of craft beer at that time.”

In this sunny entrée, the chef pairs rich and flavourful wild Canadian sablefish and very seasonal fiddleheads with Big Rock Brewery’s Traditional Ale. Pouring the broth over the balance of the dish, the dashi and birch syrup flavours highlight the flaky sablefish, while the wheat adds texture and crunch.
“Beer is so versatile,” said Brian Smith, Wild Rose Brewery’s director of brewing operations. “There’s such a wide range of flavours with your yeast, hops and malt. You get all sorts of colours and strengths, you’ve got varied carbonation and bitterness. It really gives chefs a lot to play with.”

Here, Winfield playfully pairs Electric Avenue Golden Lager with salmon so buttery soft it melts in your mouth. The crispness of the lager supports the subtle, smoky play of flavours in the dish, including an insanely delicious garnish of crisped salmon skin.
“This beer and food thing has really taken off in the last year or two,” said Smith. “People are experiencing new flavours, and they’re enjoying them. I don’t think it’s a whole lot more complicated than that.”

Pairing the uniquely formulated Wild Rose Velvet Fog (a wheat beer that also incorporates 50 per cent barley in the brewing process) with a simple and inventive take on beef tartare, this appetizer is all about the meat. Nestled between red fife- and flax-based crackers, the unbeatable taste of sirloin is a natural combination with the fresh tang of the unfiltered wheat ale.
Winfield’s approach to pairing is simple: Serve beer that enhances both the taste of the food it’s served with and the overall dining experience. In this bright, summer seafood dish, the light crispness of Wild Rose Brewery’s Electric Avenue Golden Lager suits the richness of squid and the spicy tang of kimchi. The beer accents the savoury, smoky char on the squid and the nutty, toasty edge of the barley.
While no one can argue that mothers’ often-heard advice—‘eat it, it’s good for you’—was necessarily wrong, it takes far more than that home-kitchen assurance to convince Health Canada a Canadian food product is worthy of a therapeutic health claim.

Advocates must travel a long and well-documented road before seeing a statement saying that eating X amount of barley, oats or flax in a day can help lower cholesterol—a risk factor for heart disease. Wheat, another healthy grain, is still traveling that documentation road. While research shows excellent potential for wheat in a couple areas, more research is needed. Disease-risk-reduction or therapeutic health claims aren’t handed out lightly. In fact, over the past decade or so, there have only been 11 similar health claims approved by Health Canada. Others are under consideration, but the science must be proven before the claim can proceed.

Nancy Ames, PhD, an Agriculture and Agri-Food Canada research scientist based in Winnipeg, is all too familiar with the health claim process. A cereal chemist, she piloted the first review of scientific literature that led to the 2009 petition for a health claim for barley beta glucan (a soluble fibre) in Canada. That research, documentation and submission, combined with the review and approval process by Health Canada, took roughly three years. The cholesterol-lowering health claim for barley was approved for use on eligible food labels in July 2012.

“Health Canada needs to see the science that supports these health claims,” said Ames. “When we started the groundwork for a health claim submission for barley back in about 2007, there was no guidance document in place. We prepared our petition by working closely with Health Canada,
who subsequently developed the
guidance document that sets out the
process and criteria needed for any food
to receive a health claim.”

In 1997, the U.S. Food and Drug
Administration (FDA) issued a
therapeutic health claim regarding
the benefits of beta glucan in oats
in reducing disease risk. Canadian
researchers and food processors were
interested in securing a similar health
claim for oat products in Canada. The
FDA approved a comparable health
claim for barley in 2006.

“When you first look at it, it might
appear to be a no-brainer,” said Ames.
“The FDA has approved a health claim
for oats and barley, so it should be easy
to get one in Canada. But why should
it be? We are different countries, we
have different laws. You look around the
world and every country has different
laws and regulations, so why should it
be any different with this? So then the
task at hand was to collect the data
needed to support a health claim in
Canada. It is important to ensure claims
made on Canadian product labels are
validated and inform consumers based
on sound data.”

Securing a health claim begins with
a scientific literature review. Literally
thousands of studies and clinical trials
have been done around the world
looking at the health benefits of barley
and oats. Most, if not all, suggest they
help to reduce blood cholesterol levels.
However, which of those studies has
the highest scientific standards? It’s
a process of sorting the wheat from
the chaff. Most of the studies are quite
valid, but some are just more solid
than others in terms of the research
procedures used, the type of clinical
trials conducted, and the demographics
of the test subjects.

In the initial literature screening
process for barley, for example, more
than 18,000 articles were found, and from
that, said Ames, they narrowed it down
to about 262 relevant studies. Of those,
22 were deemed the most acceptable
and reviewed by other scientists. A final selection of just 11 studies was included in the evidence package submitted to Health Canada for its review.

“It is a process based on quality and not necessarily quantity,” said Ames.

“We’re looking for the most relevant studies, conducted with the best science that is most applicable to the Canadian population. It is important for the science behind these studies to be real and stand the test of time.”

Grant Morrison, a retired scientist now with the Quaker Oats Company, said a review of the scientific literature in 2006 was important in obtaining the Health Canada health claim for oats.

“Health Canada demands very rigorous scientific studies to support a health claim. A health claim is important to the company to help support its marketing efforts, but it is also important for consumers to know there is science behind that health claim. It isn’t just a marketing gimmick.”

Although quantities vary, the therapeutic health claims for oats, barley and flax are similar. For example, the health claim calls for a daily diet to include three grams of beta glucan fibre from oats or barley, while with flax it is 40 grams of ground whole flaxseed—and all can help lower blood cholesterol, which is a risk factor for heart disease.

The science stands solidly behind those claims, but what do they mean to the average consumer?

“It means if individuals consume the recommended amounts (or a combination) of those grains and oilseeds in their daily diets, it will help reduce blood cholesterol levels,” said Kelley Fitzpatrick, a consulting nutritionist who works with both the Flax Council of Canada and the Barley Council of Canada. She is also working with the hemp industry on the health benefits of hemp seed.

Fitzpatrick, working with the Flax Council, was instrumental in preparing the submission that earned flax a Health Canada therapeutic health claim in 2014.

“With the Health Canada guidance document in place, we were able to complete the process in about 18 months,” said Fitzpatrick. “With my background, I was able to review about 1,100 published studies, eliminate those that didn’t apply, and narrow it down to about 16 that we felt qualified.

And from that, Health Canada selected six it felt were of high enough quality to support the health claim.”

After achieving a health claim, the next step is to inform consumers of the health benefits of the food. While many food processors are keen to include health claims on products as part of their marketing efforts, Fitzpatrick said it is also important to explain what that “daily amount” looks like in portion size.

Back in Nancy Ames’ lab, they not only reviewed scientific studies, but they did a lot of work looking at different forms of barley—whole barley, pearl barley, barley flakes and barley flour—in typical serving sizes. They were all tested to determine the amount of beta glucan fibre in different forms of barley.

With oats, researchers looked at oat bran, rolled oats/oatmeal and whole oat flour to determine amounts of beta glucan fibre.

The health claim for both cereals calls for a daily serving of three grams of beta glucan fibre. For an oat food product to carry the health claim, it must contain 0.75 grams of beta glucan oat fibre per serving, and with barley it must have one gram of beta glucan per serving.

This information matters to consumers, who are paying attention to health claims on food products, said Brooke Bulloch, a private food nutritionist operating her own Food to Fit Consulting Service in Saskatoon.

“People are becoming more aware of what foods they eat, and are interested in the health benefits of different foods,” said Bulloch. “When we do grocery store tours, one of the first things we look at is the health claims.”

Health Canada, along with other public researchers and a wide range of industry partners, is working to establish therapeutic health claims on several other foods or food ingredients, including whole grains and pulses, as well as flax, hemp and canola oil. These foods are thought to provide an array of benefits, ranging from cardiovascular disease and diabetes prevention to weight management and improved digestive health. The goal of these health claims is not only to provide food processors and manufacturers with new, health-conscious marketing tools, but, more importantly, to provide education and guidance to consumers on healthy food choices.

Wheat is still looking for its first health claim in Canada. It is a healthy cereal grain, said Ames, and has potential for a couple of therapeutic health claims if the supporting research data can be assembled to meet Health Canada criteria. In Europe, for example, the European Food Safety Authority has approved a health claim for wheat bran and its value in speeding digestion leading to, in more specific terms, “accelerated intestinal transit.” As well, there is another health claim for arabinoxylan, a soluble fibre extract from wheat that has value in reducing blood glucose.

“These are two examples of the potential health claims in wheat we need to look at,” said Ames. “There is lots of evidence supporting the good nutrition of wheat; the work just needs to be done to pull the research and evidence together to support a health claim in Canada.”

“We’re looking for the most relevant foods they eat, and are interested in the health benefits of different foods.”

—Brooke Bulloch
How are you growing?

AFSC provides clients with:
• Lending - Farm Loan Program and Revolving Loan Program
• Insurance - Annual, Perennial and Straight Hail
• Delivery agent of AgriStability in Alberta

We have solutions to help you grow your business.

1-877-899-AFSC (2372)
www.AFSC.ca

Farm Manager
Your Business Resource

Alberta Ag-Info Centre
310—FARM

Phone 310—FARM (3276) toll-free to contact Alberta Agriculture and Rural Development, or visit one of our field offices across the province for your agricultural information needs.

agriculture.alberta.ca/farm-manager
"The big-picture solution, the real problem here, is not VAD," she said. "VAD is very serious, its implications are very serious, but it is not an isolated issue. It is a symptom of wider food insecurity problems."

These problems can be addressed in the long-term by improving land access and infrastructure support, Chopra said. "Most of the time, in the communities that are dealing with malnutrition issues, it’s not the lack of food that’s the issue. It’s an inability to access the already-available food."

CBAN also views Golden Rice as a waste of money that could be better spent on proven short-term measures to counter VAD, such as supplementation and food fortification.

"There are some very cost-effective, efficient solutions that have been around for awhile, which need more resources for extension," Chopra said. "We’re spending hundreds and hundreds of millions of dollars to produce a technological response to a problem that isn’t a technology problem."

For Potrykus, criticism of Golden Rice’s ability to address the underlying causes of VAD is misguided because this was never its goal in the first place.

"We have developed it to reduce VAD and that’s what it can do very effectively," he said. "It is not a silver bullet. We never claimed it’s a silver bullet to solve all problems around micronutrient deficiency. But it is an effective measure to do what we have promised to do."

Instead, Potrykus sees Golden Rice as a complement to existing methods of VAD reduction.

"Programs of food supplementation or vitamin A capsules depend on infrastructure and other resources and funding," Dubock said. "The reason we still have so many people dying and going blind as a result of VAD is because those interventions don’t reach everybody for different reasons."

And those who want to see Golden Rice being planted regularly still balk at the anti-GMO contingent.

"It’s been demonstrated many, many times that all this opposition is emotional, ideological and has nothing to do with science," Potrykus said.

"What could be more natural, what could be more organic, than the plants making their own nutrition from their own genomes?" Dubock asked, taking the debate a step further.

Because of the opposition, and the series of regulatory hurdles that still need to be cleared, Golden Rice has not been released. Field trials are ongoing in locations throughout Indonesia, Bangladesh and the Philippines. However, due to some setbacks—including the destruction of a Philippine test plot in August of 2013—the final variety is not yet complete and agronomic data is still being collected.

For Moore, it’s about looking ahead to what might come next by stacking different traits into the rice.

"You can basically turn a grain of rice into a vitamin pill by using genetics, and that is sustainable," he said.
TANTALIZE
THE
TASTEBUDS

PHOTOGRAPHY BY BRYCE MEYER

Put down the phone, you’re not ordering in tonight. In a province blessed with an abundant supply of nutritious grains, there’s more reason than ever to incorporate wheat and barley into your favourite dish. Alberta produces millions of tonnes of these two grains, and creative minds in the kitchen are only limited by their imagination. So, lick your lips and get ready to salivate as you turn the pages of these eight delicious recipes. Cut them out, pin them up, but whatever you do, don’t let these recipes pass you by—you’ll be sorry, and so will your tastebuds!
A creamy red pepper and feta dip paired with a warm, fluffy wheat pita is a great starter for any meal, or serve it as an appetizer at your next party.

**FLUFFY WHEAT PITAS**

**Ingredients**
- 1 cup (250 mL) warm water (approx. 100° F/40° C)
- 2 tsp (10 mL) instant yeast (or active dry yeast)
- 1 ½ cups (375 mL) whole-grain wheat flour
- 1 cup (250 mL) all-purpose wheat flour
- 2 tsp (10 mL) salt
- 1 Tbsp (15 mL) canola oil

**Instructions**
In a large bowl, combine yeast and water. Stir until yeast has dissolved. Add whole-grain wheat flour, all-purpose wheat flour, salt and oil. Mix with hands until combined.

Dust your work area with flour. Turn the dough onto the work surface and knead for 5 to 10 minutes. If the dough feels too sticky, add extra all-purpose flour. Once the dough is smooth and elastic, use a small amount of canola oil to coat the bottom and sides of a large bowl. Place the dough ball in the bowl and turn the ball over to coat it in oil—this will keep it from drying out. Drape a dry dish towel over the bowl and set aside until the dough has doubled in volume (approximately 1 hour).

Place the dough on a lightly floured work surface and gently pat down. Cut the dough into 8 equal pieces and roll each piece into a 6-inch (15 cm) round. Heat a pan (cast iron pan, crepe pan or regular frying pan) over medium heat. Carefully spread canola oil over the pan’s surface with a paper towel or silicone pastry brush. Place one dough round in the hot pan. Once it begins to bubble, use tongs or a spatula to turn it over. Repeat on the second side. Cook remaining pitas one at a time.

Makes 8 pitas.

**RED PEPPER AND FETA DIP**

**Ingredients**
- 2 red bell peppers, washed, halved and seeded
- ½ cup (125 mL) plain Greek yogurt
- ½ cup (125 mL) crumbled feta cheese
- 1 clove garlic, crushed or minced
- 1 Tbsp (15 mL) canola oil
- ½ tsp (2 mL) salt
- chili pepper flakes, to taste

**Instructions**
Place the peppers, cut side down, on a baking tray. Cook under the broiler until the skin is completely blackened. Remove the peppers from heat and, once cooled, remove their skin (it should peel away easily) and discard.

Place peppers, yogurt, feta cheese, garlic, oil and salt into a food processor or blender and puree. Add chili pepper flakes, to taste.

Refrigerate dip for several hours or overnight before serving. Serve with Fluffy Wheat Pitas.
BARLEY FALAFELS

These are so good. They’re crunchy on the outside, with a moist interior. Tuck them into a pita with your favourite toppings, add them to a salad, or serve as an appetizer with tzatziki dip. Or, keep them in the freezer and reheat for a quick and tasty snack.

Ingredients
1 can (19-oz [540 mL]) chickpeas, drained and rinsed
2 cloves garlic
1 Tbsp (15 mL) lemon juice (juice of ½ lemon)
Ground cumin
1 tsp (5 mL) ground coriander
½ tsp (2 mL) salt
2 Tbsp (30 mL) warm water (optional)
1 cup (250 mL) cooked pot or pearl barley
1 carrot, grated
1 green onion, finely sliced
¼ cup (60 mL) packed, coarsely chopped, fresh parsley
1 Tbsp (15 mL) whole barley flour or all-purpose flour
½ tsp (2 mL) red pepper flakes
2 Tbsp (30 mL) sesame seeds (optional)
cooking oil spray

Instructions
Preheat oven to 325°F /160°C (unless using a slow cooker).

In a food processor, place chickpeas, garlic, lemon juice, cumin, coriander and salt. Process, occasionally pushing ingredients down. If mixture is very dry, gradually add water until it has the consistency of oatmeal. Remove to a mixing bowl.

Stir in barley, carrot, green onion, parsley, barley flour and red pepper flakes until well combined.

Spray a large baking sheet with cooking spray. Spoon falafel mixture onto baking sheet in 1-Tbsp (15 mL) mounds approximately 1 inch (2.5 cm) in diameter. Spray falafels with a fine mist of cooking spray, and sprinkle evenly with sesame seeds, if using.

Bake for 15 to 20 minutes, turning once about halfway through cooking, until outside of falafels is golden and crisp.

Makes 30 falafels.

Tip: Falafels can be frozen for up to a month.
WHEAT BERRY SALAD

The crunch of the wheat berries, crisp spinach and red peppers, mixed with the flavor of smoked Gouda cheese make this salad a mouthwatering addition to any meal. Better yet, make it a complete meal by topping off the salad with a grilled chicken breast, barbecued steak or cedar-plank salmon.

Salad Ingredients

- 1 cup (250 mL) wheat berries
- ½ cup (125 mL) packed, washed and torn baby spinach leaves
- 1 red bell pepper, washed, seeded and cut into ¾-inch (2 cm) cubes
- 4 green or spring onions, washed and diced
- ½ cup (80 mL) smoked cheese (gouda or cheddar work well), cut into ½-inch (1 cm) cubes

Salad Dressing Ingredients

- ½ cup (125 mL) canola oil
- 3 Tbsp (45 mL) balsamic vinegar
- 3 Tbsp (45 mL) maple syrup
- 3 Tbsp (45 mL) grainy Dijon mustard
- 1 clove garlic, crushed or minced
- salt and pepper to taste

Instructions

Cook wheat berries according to package instructions. If no instructions are available, boil 4 cups of water with a pinch of salt. Add wheat berries and cook until tender (25 to 30 minutes). Drain wheat berries using a fine strainer. Rinse with cold water to cool.

Combine cooked wheat berries, spinach, red pepper, green onion and cheese in a large bowl and toss. Place dressing ingredients in a sealed bag or dressing container. Shake to combine. Toss desired amount of dressing into salad. Leftover dressing can be refrigerated for up to one week.
CHOCOLATE BARLEY CREPES

Filled with yogurt and fresh fruit, and topped with maple syrup and a sprinkle of cinnamon, these chocolate crepes make extra special breakfast or brunch fare. Or, serve them as dessert wrapped around frozen yogurt or ice cream and drizzled with chocolate sauce or a dusting of grated dark chocolate.

Ingredients

- ½ cup (125 mL) whole barley flour
- 2 Tbsp (30 mL) unsweetened cocoa powder
- pinch salt
- 1 egg
- 2 Tbsp (30 mL) liquid honey
- cup (150 mL) milk
- ½ tsp (2 mL) canola oil

Instructions

In a medium bowl, stir together barley flour, cocoa powder and salt. Whisk in egg and honey until blended. Whisk in milk until mixture is smooth. Let mixture stand for 15 to 20 minutes or refrigerate for an hour to allow flour to absorb liquid. Batter should thicken slightly upon standing, but should flow easily and resemble the consistency of cream. If batter becomes too thick, add a little milk to thin.

In a 6 x 8 inch (15 to 20 cm) non-stick skillet, heat oil over medium heat; brush or wipe inside of pan with paper towel to distribute oil. When skillet is hot, pour about 3 Tbsp (45 mL) crepe batter into the centre of the skillet all at once. Immediately tilt skillet so batter flows evenly over entire bottom surface of skillet. Cook until crepe loses its shiny appearance, 1 ½ to 2 minutes. Bubbles may appear on crepe. Loosen edge of crepe with a thin spatula. Carefully lift crepe and turn over to cook second side briefly. Repeat with remaining crepe batter, stacking crepes on a plate as they are cooked and covering them to keep warm until all crepes are made. You shouldn’t need to add more oil to the skillet between crepes, but have some handy in case the batter starts to stick to the skillet.

Serve crepes with filling and topping of your choice.

Makes 8 crepes (2 crepes per serving).

Tip: Leftover crepes should be stacked with pieces of parchment or waxed paper between them. Wrap well and refrigerate or freeze.
APPLE PECAN BREAD PUDDING

Chunks of whole-grain bread, soaking up the flavours of apple, brown sugar, cinnamon and nutmeg are topped with fresh pecans and baked to perfection. Serve warm with a scoop of vanilla ice cream.

**Ingredients**

- 2 ½ cups (600 mL) milk (skim or 2%)
- ½ cup (125 mL) applesauce
- 3 eggs
- ½ cup (125 mL) brown sugar
- 1 Tbsp (15 mL) cinnamon
- 1 tsp (5 mL) nutmeg
- 12 slices whole-grain bread, cut into 1-inch (3 cm) cubes (try different flavours, like honey whole-grain)
- 1 large apple, washed, cored and cut into ¾-inch (2 cm) cubes
- ½ to 1 cup pecans (125 to 250 mL)

**Instructions**

Preheat the oven to 350° F /175° C. In a large bowl, whisk together milk, applesauce, eggs, brown sugar, cinnamon and nutmeg. With a spatula, gently fold in bread, apple and pecans. Turn out ingredients into a 9 x 13 inch (23 x 33 cm) or similar baking dish coated with a non-stick cooking spray.

Cover and refrigerate for approximately 1 hour. Remove from fridge and bake for 45 minutes to 1 hour, until the top is golden brown and there is no excess liquid remaining. Serve the bread pudding warm with ice cream, or serve chilled with a vanilla or caramel sauce.

**Substitutions:** Pecans can be replaced with raisins or other nuts. In place of apples, try adding a cup of blueberries or Saskatoon berries.
KOREAN-STYLE BEEF RIBS AND BARLEY

Short ribs and barley simmer together, absorbing the sweet and salty Korean-style sauce for tender deliciousness. A terrific slow cooker meal, or simmer low and slow in the oven.

Ingredients

- 2 lbs (1 kg) beef short ribs, bone in, fat trimmed
- 1 yellow onion, sliced
- 2 cloves garlic, minced
- 3 ½ cups (900 mL) low-sodium beef broth
- 1 cup (250 mL) orange juice
- ½ cup (75 mL) low-sodium soy sauce
- ¼ cup (60 mL) hoisin sauce
- 1 tsp (5 mL) sesame oil
- 1 tsp (5 mL) sriracha sauce or red pepper sauce
- 1 cup (250 mL) pot or pearl barley
- sliced green onions, for garnish
- fresh cilantro, for garnish
- lime wedges, for garnish

Instructions

Preheat oven to 325°F /160°C (unless using a slow cooker).

Heat a Dutch oven or deep, oven-safe skillet with lid over medium heat. Add half of the ribs and brown on all sides. The fat will render out and prevent sticking. Remove ribs to a platter. Brown remaining ribs and remove to platter. Pour off any remaining fat, leaving approximately 1 Tbsp (15 mL) in the skillet. Add onion and garlic; cook just until softened. Return ribs to the skillet.

In a mixing bowl or large measuring cup, combine broth, orange juice, soy sauce, hoisin sauce, sesame oil and sriracha sauce. Stir into meat mixture. Add barley and stir well. Cover and place in oven to simmer until meat is tender, about 1 ½ hours.

Serve garnished with green onion, cilantro and lime.

For slow cooker: Place browned ribs, softened onions and garlic in a slow cooker. Stir in combined liquids and barley. Cook on low until meat is tender, about 3 hours.

Makes 5 servings, approximately 2 to 3 ribs each.

grainswest.com
PEACH UPSIDE-DOWN GINGER CAKE

Here’s a delicious way to use fresh peaches. But frozen ones that have been thawed will do, too. Once baked, the cake is turned upside down, leaving the peaches on top. Yummy as-is or topped with whipped cream.

Ingredients

- 2 ½ cups (625 mL) sliced fresh peaches
- 1 cup (250 mL) granulated sugar, divided
- 2 tsp (10 mL) round cinnamon, divided
- 1 tsp (5 mL) grated orange rind
- 1 tsp (5 mL) all-purpose flour
- 2 tsp (10 mL) baking powder
- 1 tsp (5 mL) ground ginger
- ½ tsp (2 mL) salt
- ¼ tsp (1 mL) baking soda
- ¼ cup (75 mL) butter or margarine, softened
- 1 egg
- ¾ cup (175 mL) molasses
- ¾ cup (175 mL) buttermilk

Instructions

Preheat oven to 350°F /180°C. Line a 9-inch (23 cm) square pan with parchment paper and lightly grease. In a medium bowl, mix peaches with ½ cup (125 mL) of the sugar, 1 teaspoon (5 mL) of the cinnamon, and the orange rind. Arrange overlapping peach slices in a circle in the bottom of the pan. In a medium bowl, combine the barley flour, all-purpose flour, baking powder, ginger, salt, baking soda, and remaining 1 teaspoon (5 mL) of cinnamon. In a large bowl, cream butter or margarine with remaining ½ cup (125 mL) of sugar. Add egg and whip until fluffy, then mix in molasses. Add flour mixture to butter mixture, alternating with buttermilk and starting and ending with flour mixture. Stir after each addition until just mixed.

Pour batter over peaches. Bake for 45 to 50 minutes or until cake springs back when lightly touched. Let cake cool on rack for 10 minutes, then run a knife around the sides of the pan and invert onto a serving dish.

Makes approximately 16 pieces.
**BREAKFAST COOKIES**

Wholesome cookies or little sweet cakes can occasionally stand in for a full breakfast when you’re pinched for time, especially when accompanied by a glass of milk or a bowl of yogurt. These cookies are made with the nutritious ingredients of barley flour, barley flakes, oats, and a mixture of dried fruit, seeds and nuts. They are also great with mid-morning coffee or as an after-school snack.

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Measurement</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>¾ cup (175 mL) whole barley flour</td>
<td></td>
<td>whole barley flour</td>
</tr>
<tr>
<td>½ cup (125 mL) all-purpose flour</td>
<td></td>
<td>all-purpose flour</td>
</tr>
<tr>
<td>½ tsp (2 mL) baking powder</td>
<td></td>
<td>baking powder</td>
</tr>
<tr>
<td>½ tsp (2 mL) baking soda</td>
<td></td>
<td>baking soda</td>
</tr>
<tr>
<td>½ tsp (2 mL) ground cinnamon</td>
<td></td>
<td>ground cinnamon</td>
</tr>
<tr>
<td>¼ cup (125 mL) butter or margarine, softened</td>
<td></td>
<td>butter or margarine, softened</td>
</tr>
<tr>
<td>¼ cup (175 mL) packed brown sugar</td>
<td></td>
<td>packed brown sugar</td>
</tr>
<tr>
<td>2 eggs</td>
<td></td>
<td>eggs</td>
</tr>
<tr>
<td>¼ cup (60 mL) sweetened applesauce</td>
<td></td>
<td>sweetened applesauce</td>
</tr>
<tr>
<td>1 cup (250 mL) barley flakes</td>
<td></td>
<td>barley flakes</td>
</tr>
<tr>
<td>1 cup (250 mL) quick-cooking rolled oats</td>
<td></td>
<td>quick-cooking rolled oats</td>
</tr>
<tr>
<td>3 Tbsp (45 mL) whole flaxseed</td>
<td></td>
<td>whole flaxseed</td>
</tr>
<tr>
<td>½ cup (125 mL) raisins</td>
<td></td>
<td>raisins</td>
</tr>
<tr>
<td>¼ cup (60 mL) raw sunflower seeds</td>
<td></td>
<td>raw sunflower seeds</td>
</tr>
<tr>
<td>¼ cup (60 mL) slivered almonds</td>
<td></td>
<td>slivered almonds</td>
</tr>
</tbody>
</table>

**Instructions**

Preheat oven to 350°F /180°C. Lightly grease a baking sheet. In a medium bowl, combine barley flour, all-purpose flour, baking powder, baking soda, and cinnamon. In a large bowl, cream butter or margarine; beat in brown sugar, then eggs and applesauce.

Stir in flour mixture, then barley flakes, rolled oats, flaxseed, raisins, sunflower seeds and almonds. Drop ¼ cup (60 mL) scoops of dough onto prepared baking sheet, 2½ inches (6 cm) apart. Bake for 17 to 18 minutes or until golden brown.

Makes 18 cookies.
Christine Lowry of the Healthy Grains Institute explains the importance of incorporating whole grains into your everyday diet.
The digital era is both a blessing and a curse. Everywhere you turn there is information overload, but the quality and reliability of the data can be underwhelming. That’s OK when you’re looking for the latest movie review, but what if you’re seeking advice on the proper foods to eat and how to maintain your health? Where do you turn for guidance you can trust?

These questions were, in part, the impetus for establishing the Healthy Grains Institute (HGI). Launched in November 2012, the HGI is a non-profit organization whose mission is to inform and enhance Canadians’ knowledge and understanding of whole grains and how they contribute to health and weight management. The HGI receives backing from eight operating members, including Loblaws, Weston Foods, the Canadian National Millers Association, the Baking Association of Canada, Canada Bread, the Grain Growers of Canada, Grain Farmers of Ontario and the Alberta Wheat Commission.

“We’re the only national authoritative voice in Canada promoting all grains and their health benefits to consumers, health professionals and media,” said Christine Lowry, registered dietitian and nutrition and policy consultant for the Healthy Grains Institute.

“We work hard to ensure that everything we share with the public is credible, factual and reliable,” said Lowry. “Nothing is published on our website or through Facebook and Twitter until it is thoroughly reviewed by our Scientific Advisory Council.”

With recognized plant scientists and nutritional experts from across Canada, the advisory council is an independent body that offers guidance to the HGI and ensures that any data it disseminates is based on sound science and the latest research.

The three advisory council members have diverse expertise and conduct their own research programs.

“My current research focuses on cereal and pulse crop improvement,” said advisory council member Ravi Chibbar, PhD, professor and Canada Research Chair (crop quality) in the Department of Plant Sciences at the University of Saskatchewan. “We’re looking at increasing low-temperature tolerance in winter cereals such as wheat and rye, and changing the seed composition in cereal and pulse grains so they may confer additional health benefits.”

While the research isn’t paid for by the HGI, some of it, such as the historical changes in wheat grain composition, relates to its mandate.

“These projects advance basic science and develop concepts that can help produce new crops and/or modify grain composition for the betterment of human health,” said Chibbar. “As well, some of the discoveries are incorporated to develop new crop cultivars which benefit producers.”

The research is mostly funded by the federal and provincial research granting councils such as Canada Research Chairs, the Natural Sciences and Engineering Research Council of Canada, the University of Saskatchewan and the Saskatchewan Ministry of Agriculture, as well as crop producer groups.

Research also plays a part in educating the public, addressing food myths.

“There is so much fiction out there in regard to healthy eating,” said HGI board member Paul Hetherington, president and CEO of the Baking Association of Canada. “A lot of media and celebrities have made dietary choices and people think ‘if it’s good for them, it must be good for me.’ Before you embark on any diet plan, it’s critical that you consult a doctor and get advice from a nutritionist.”

The gluten-free movement is one food trend that has gained momentum in recent years. “We understand that about two per cent of the population is diagnosed with celiac disease and another four per cent are gluten-sensitive, so they have to eat in...”

Many people assume that ‘gluten-free’ means healthier, that somehow ‘free’ equates with ‘better.”

—Christine Lowry
a certain way,” said Lowry. “But the rest of us can enjoy the benefits and goodness of wheat, barley, oats and rye.”

This need to separate fact from fiction was echoed by Sue Newell, operations manager of the Canadian Celiac Association.

“There is a small group of people who feel better when they don’t eat gluten,” explained Newell. “Some have celiac disease and others self-diagnose gluten sensitivity. But since there’s no reliable test for the latter condition, many more people are restricting their diets in ways that aren’t making a significant difference to their health.”

Gordon Harrison, president of the Canadian National Millers Association (CNMA) and a founding member of the HGI, put it in perspective.

“If 30 per cent of North American consumers are avoiding gluten and six per cent may actually have gluten intolerance, it means five times as many people are worrying about it than need to be.”

It’s this sort of incongruity that prompted the CNMA and other industry organizations to support the HGI.

“We saw what happened with the low-carb diet phase, particularly the Atkins diet,” said Harrison. “It was a disturbing example of how misinformation can influence consumer behaviour to the detriment of producers, processors and the general public. From that, we identified an urgent need for the kind of outreach that the HGI has implemented.”

Central to that outreach is promoting the advantages of grains in the diet. Grain-based foods provide some key elements of proper nutrition, including B vitamins, iron and fibre.

“Fibre is a key one, as we are not consuming enough of it,” said Lowry. “People think they’ll get it from fruits and vegetables, but those foods have different types and amounts of fibre than what is found in whole-grain foods.”

Not only is there scientific evidence that people eating whole grains have a reduced risk of cancer and healthier body weights, but removal of grains from their diets could have long-term consequences.

“Many people assume that ‘gluten-free’ means healthier, that somehow ‘free’ equates with ‘better,’” said Lowry. “But what if it said ‘vitamin-free’ or ‘nutrient-free’? Many gluten-free foods are highly processed and contain a lot of starch and fat, so that some people can actually gain weight on a gluten-free diet.”

That’s the sort of information that the HGI wants to share with the public.

“Communication is critical. Through our website, we post the latest scientific research and articles as well as fact sheets on key topics such as gluten sensitivity, the benefits of wheat, and the role of whole grains in weight control.”

Additionally, the HGI is active on Facebook and Twitter, and features “Wheat Wednesdays” on its website with interesting factoids. Lowry emphasizes that this online material receives close scrutiny from the scientific advisory council to ensure that it’s accurate and science-based.

And it’s not just consumers who benefit from that accuracy.

“From field to fork, there are so many entities involved in this business that a need existed for one group to provide authentic, reliable data on behalf of industry. If we can be that focal point for all links in the value chain, we’re happy to do it,” said Lowry.

But the HGI has no intention of doing it alone.

“We’re working closely with the Grain Foods Foundation and the Wheat Foods Council in the United States. Our scientists are collaborating with their scientists to review projects and share information.”

While the HGI isn’t engaged in its own research at present, Lowry sees that as an area of potential growth.

On the topic of growth, Lowry is proud of how far the HGI has come in two years and is excited about the future.

“We need to tell more people who we are and connect with other stakeholders to understand their information needs and help them to better serve their constituents,” she said. ✔
Not all flours are created equal

BY ALLISON FINNAMORE • PHOTOGRAPHY BY CANDICE WARD
AN EVOLUTION IN CUSTOMER

demand is driving the changing face of Canada’s baking industry, from research to sales.

For as long as many of us can recall, Canada has been a traditional market where flour came from one source—wheat—and was either white or whole wheat. Today, Canadian diets are changing to reflect a diversity of products in the marketplace.

Marta Izydorczyk, PhD, is program manager of the Grain Research Laboratory at the Canadian Grain Commission and has done extensive studies on the health benefits found in alternative flours, including barley. Although barley contains gluten, it is recognized as an alternative flour because it contains high quantities of beta-glucan, making it high in dietary fibre and rich in antioxidants. The trick is finding that sweet spot in the milling process. Too much milling “depletes the goodness,” she said, while not enough fails to sufficiently crush the barley to allow the goodness to appear.

Izydorczyk explained that the beta-glucan in barley flour contains a compound that, in sufficient amounts, can reduce the risk of coronary heart disease. And while wheat bran is created by removing certain outer layers of the wheat kernel, with barley, it’s the outer layers and cell walls that contain the beta glucan.

“Consumers are really understanding about healthy eating.”
—Thava Vasanthan

“If the same process used on wheat to obtain bran is done on barley, there are still very few beta glucans,” she stated, adding that research is ongoing. “It’s a new way of looking at barley and milling.” The beta glucan may be key to marketing barley flour, Izydorczyk said. Because of the high concentration of beta glucan and its proven link to disease prevention, the product can be marketed with federally approved health claims. Health Canada’s food directorate assesses health claims and, if proven, allows the product to use the government-approved health claim for marketing purposes.

Barley in Canada has had a health claim since 2012 that states, “Barley fibre helps reduce/ lower cholesterol, a risk factor for heart disease.” However, obtaining a health claim is just one step, Izydorczyk said. Consumers need to be more accepting of the fact that foods with barley and other alternative flours will look different. Pasta will appear brown or have dark flecks, she explained, as will bread. At the same time, many health-conscious consumers are looking for darker-coloured bread products and don’t mind the look of barley products. The chemical structure of wheat means that it’s important with most baking recipes to help give standability to bread products. While barley can be used to bake with, a portion of wheat typically makes its way into a baking recipe.

Thava Vasanthan, PhD, is a professor in the Agricultural, Food and Nutritional Science Department at the University of Alberta and has studied the milling of cereal grains, oat and barley beta glucan extraction, and more. He agreed with Izydorczyk and said consumers are looking for products with additional nutritional benefits, such as those recognized in a health claim. “Consumers are really understanding about healthy eating,” Vasanthan stated, pointing to a decade of growth and increasing demand from consumers. He adds that pulse flours appeal to consumers with celiac disease for their lack of gluten, but also for their nutritionally balanced proteins. “Amino acids are the building blocks of protein,” Vasanthan explained. “When you compare the quality of amino acids of pulses with cereals, the pulses are superior quality.” Pulses also contain high-quality starch. The slow-digesting nutrient is processed into glucose, Vasanthan said, and is an excellent insulin regulator. But that doesn’t mean that wheat is being left out in the cold.

According to Statistics Canada’s Cereals and Oilseeds Review, milled wheat in Canada continues to be the front-runner in terms of quantities. Between 2005 and 2010, Canada milled an average of 2.1 million tonnes of Red Spring Wheat, 287,000 tonnes of
amber durum wheat, 77,000 tonnes of other western wheat, 463,000 tonnes of Ontario winter wheat and 168,000 tonnes of other eastern Canadian wheat, adding up to over three million tonnes in total. During the 2011–12 marketing year, a total of 2.6 million tonnes were milled.

The Canadian National Millers Association says that, across the country, mills process about 3.1 million tonnes of Canadian wheat a year. Approximately 75 per cent of that is grown in Western Canada, with the remainder mostly coming out of Ontario, but from Quebec and the Atlantic Provinces as well.

From the total processed, about 2.4 million tonnes is for human consumption, with the balance going for animal feed and non-food products. While dependent on North American market values of cereal grains, the value of Canadian wheat exports is approximately $1.2 billion a year, with about $300 million in value-added products.

While wheat remains the flour frontrunner, market trends show that it makes good business sense to branch into alternative markets.

Brian Hinton, owner of Calgary’s Lakeview Bakery, said supplying his two stores with specialty flours like spelt, kamut and quinoa can be challenging because these products are largely sourced from outside of Canada. He added that ingredients like flours made from food barley, lentils and chickpeas are not easy to get, either, even though they’re home grown.

“An inconsistent supply is the biggest obstacle,” he explained.

Still, demand for alternative products has been exponential for Hinton, expanding from three varieties of gluten-free products in 1996 to over 250 today.

Frank Sarro, purchasing manager with Community Natural Foods in Calgary, has witnessed the same rapid and steady increase in demand during the last several years. Today, the selection at Community Natural Foods is diverse and includes dozens of rice and bean flours, as well as premade products.

“There’s high demand,” Sarro said, pointing out that as medical diagnoses of celiac disease increase, patients are arriving at his stores armed with a list of foods they’re no longer able to eat and looking for help. Salespeople become educators and help customers through the initial stages.

As a purchaser, though, Sarro sees gaps in the supply chain with flours and organics. A member of the national Organic Value Chain Roundtable, he said there is certainly a production and capacity issue in Canada as far as supplying organics.

“We need to attract more producers; we are definitely seeing capacity issues,” he said.

And while some farmers balk at the paperwork involved in Canada’s organic certification, Sarro points out that virtually every step of agriculture involves paperwork—from getting Hazard Analysis and Critical Control Points (HACCP) approved, to selling to co-operatives, to elevator sales. Creating that trail, he explains, is a key to successful business.

“Paperwork is going to pay you,” he stated, pointing out that farmers need differentiation to gain a premium price.

Back at the flour research level, Izydorczyk sees only opportunities ahead for the alternative flour industry in Canada. For barley, for instance, new seed varieties of edible, hulled barley are in development. And as research continues, now is also the time for promotion.

“This is the time to promote this barley for food uses. It is happening,” she said.
In operation since 2008, Edmonton’s Agri-Food Discovery Place (AFDP) is the newest of several centres across the Prairies. The facility has access to 17 professional staff in the University of Alberta food science and bioresource technology division to undertake projects for academics and numerous industry clients.

“We completed 47 projects last year for university academics, for Alberta Agriculture and Rural Development staff, and for a number of companies,” said Bob Rimes, executive director.

Most food development centres (FDCs) have a full-time Canadian Food Inspection Agency inspector on staff, allowing emerging products to be food safe.

Got a farm-grown idea for a new food? Food development centres across Canada are helping turn entrepreneurs’ ideas into a reality.

By John Dietz
grade—fit for human consumption. But that’s not the kind of food products the AFDP specializes in.

“We do not plan to be CFIA-certified,” Rimes said. “We do food-grade R&D, but these items are not for resale. Any research product or ingredient leaving the AFDP has a sticker stating, ‘Not for Human Consumption.’”

Instead, AFDP research priorities include grain and meat science, meat processing, functional foods, pet foods, nutraceutical solvent extraction, and fermentation of non-food products. AFDP has eight labs for the crops research unit, four labs for meats research, and a microbiology lab. Future plans include a pilot plant to manage food-grade fermentation.

HIGH-TECH HELPER
One company getting high-tech help from the AFDP and other centres is Ceapro Inc., an Edmonton supplier of cosmetic ingredients extracted from oats. Its core business is extracting liquid beta glucan from oats and selling it to cosmetics companies.

Breakthroughs in the AFDP lab can translate into big business opportunities for companies like Ceapro. Most recently, in early 2014, the AFDP found an economical new process for purifying what amounts to the “anti-itch” component of oats. It achieved a purity level, in sufficient quantity, to enable the component to be used for health-related research. The compound, avenanthramide, is normally produced in oat seed at a level of only a few parts per million.

According to Ceapro chief financial officer Branko Jankovic, this marks the first time that avenanthramide has been separated and purified to this level.

“We have a relatively large amount of highly purified natural avenanthramide, for ourselves and our partners, to investigate health applications. We’re talking well beyond skin treatments, to applications for seniors, to arthritis, arteriosclerosis and perhaps inflammatory bowel disease,” Jankovic said.

It’s not the first time Ceapro benefitted from an FDC with hard-to-find equipment and expertise. In 2010, Ceapro wanted to convert liquid beta glucan to a dry powder form for new marketing options. Jankovic found help at the BioFoodTech FDC in Charlottetown, P.E.I., which had the essential equipment for super critical extraction. Using the available technology, Ceapro achieved its beta glucan powder—resulting in a new product that is lightweight and preservative-free, and has a long shelf life.

LEDUC FDC
If the end use is human consumption, the CFIA-registered Agrivalue Processing Business Incubator at Leduc is the ideal place to go for an Alberta startup. Staffed by Alberta Agriculture food scientists, engineers and technologists, it is one of five facilities in AARD’s food and bio processing division.

“They have an incubator setup so that a client can come in with his mini-business, set everything up as he needs and sell his product right out of there, and test the economics as to whether it’s viable to build a commercial plant,” Rimes said.

Other facilities in the division include the AFDP, Food Processing Development Centre (FPDC), Food Science and Technology Centre and Consumer Product Testing Centre. Together, they provide full-service product development, culinary evaluation and sensory evaluation with laboratories and pilot plant facilities.

“We tend to work with companies that come with an idea or product who want to optimize a processing technique or recipe and bring their product to market,” said Kevin Swallow, a food scientist who has spent the last 17 years at the Leduc FPDC. “Many companies, especially the small ones, don’t know what food safety issues they may have. When we help them develop a product, we help them make sure it will be a safe product to consume. Food safety is more important than anything else.”

SASKATCHEWAN FDC
In Saskatchewan, the Food Industry Development Centre in Saskatoon
works with 40 to 50 clients a year in food development, processing and extrusion. The federal facility is inspected for meat, dairy and processed foods, and can also work with pulses and grains.

“Our mandate is to serve the Saskatchewan food industry, but we do have clients from other provinces, the U.S. and all over the world asking for services,” said Carmen Ly, communications director.

“An entrepreneur can come to us literally with just a product idea,” said Ly. “Our food scientists and technical experts in food development, packaging and labelling will take them through the whole process and, because we have a federal license, products manufactured here can be sold across borders and be compliant to food regulations. The product is safe for consumption and looks professional.”

For example, Best Cooking Pulses at Rowatt, Saskatchewan, markets pea fibre and pulse flours internationally; however, it doesn’t make snacks. “It works well to hand out snacks made with our pulse ingredients when we attend [trade] shows,” said Mike Gallais, general manager. “We’ve been using the FDC team in Saskatoon for several years to make our pulse puffs (similar to corn puffs) for snack food. They process our blended pulse flours through a high-pressure, high-heat extruder. It’s to the point that staff are almost like one of our team.”

“A small business can’t afford that kind of expertise. We have the ideas. They have the equipment and trained people. They work on developing recipes and labelling. We still do the marketing.”

MANITOBA FDC
Startups looking to get a fledgling idea off the ground and into stores can look to Manitoba for comprehensive, A-to-Z help. Established in 1978, the Food Development Centre at Portage la Prairie is one of the oldest and largest FDCs in Canada. It boasts 26 full-time staff and 60,000 square feet of space—two-thirds of which is dedicated to end-stage commercialization.

Companies rent space, bring in equipment and start their production in the pilot plant so they can begin selling product before graduating to their own facility, explained general manager Tim Hore. The FDC even has some specialty licenses for developing organic products, hemp products and nutraceuticals.

Colleen Dyck is one of the Portage la Prairie FDC’s many success stories.

Her Gorp Clean Energy Bars started in the kitchen of her Niverville farm in 2004 as a homemade snack food to help her train for amateur triathlon events. Gorp bars are a dietitian’s dream—natural energy with high protein, fibre and antioxidants. Many of the ingredients, such as hemp hearts, originate on family farms.

“I needed something as a good source of fuel,” said Dyck. “It needed to be convenient and healthy and it needed to taste good.”

Dyck brought the health bar idea and recipe to the Portage la Prairie FDC. “They were very good at helping me with trying to commercialize and scale up the recipe. That was one of my biggest challenges,” Dyck said, noting the FDC also helped with shelf-life testing, labelling and packaging.

She worked with the FDC from 2005 until the Gorp bar’s commercial release in 2012. Today, Gorp Clean Energy Bars are sold in about 100 Manitoba retail outlets and across Canada in Mountain Equipment Co-op stores, in addition to being test marketed at two major drug store chains. They’re also a favourite of the Winnipeg Jets hockey team.

“Every time I ever felt like giving up along this adventure, God always sent me a sign to keep going, whether it was an encouraging email from a customer or a great new account that would somehow land in our laps,” she said.

In total, there are 11 food and bio-product technology centres spanning the country from British Columbia to Prince Edward Island, loosely networked through Foodtech Canada. Together, they serve over 1,000 companies each year to produce innovative food, feed, natural health and bio-product goods.
FERMENTATION IS ONE OF THE OLDEST METHODS of preparing and preserving food. 
And, when it comes to fermenting grains to produce home- or bakery-made items such as bread, pancakes and even pasta, the old ways have never really died out.

Part of this continued popularity is due to the raised awareness of the benefits of “eating live” and the move towards probiotics, said John Juurlink, owner of Prairie Mill Bread Co. in Calgary.

“When we say ‘eating live,’ you get the visual of eating raw chicken, but in this context it’s really about working with live cultures, enzymes,” Juurlink said. “It does help with the digestive tract—you can feel it working in your body.”

Wait a second—did he just say “eating live”?

It may seem counterintuitive in today’s society, where we’re paranoid about food going bad and germs and disease, but fermentation—particularly of grain—actually relies on the growing of healthy bacterial cultures. These are living organisms, but ones that are beneficial to digestion.

“I would call any bread made using this method sourdough,” said Michael Gänzle, PhD, professor and Canada Research Chair in the Agricultural, Food and Nutritional Science department at the University of Alberta. “In North America, the term is usually associated with San Francisco sourdough. Many bakers who use sourdough call it ‘leavened.’”

Basic sourdough cultures that form the basis for creating foods like bread, pancakes, doughnuts and muffins start out with a mixture—usually of wheat or another grain-based flour.

It only gets better with age

BY ALEX FRAZER-HARRISON
and water—which is left in a container to sit and, basically, grow. Periodically, more “food” is added to the culture (also known as a starter) by way of adding more flour and/or water, as bacteria and wild yeast captured by the culture continues to grow. When the time comes to bake bread or other goods, a portion of the culture is doled out; the remainder is saved and reused in later baking, refreshed by the addition of more starter.

“It's a throwback to how bread used to be made,” said Juurlink. “At the turn of the century, gold miners brought sourdough cultures with them. When they went to the Yukon, they slept with them to keep them alive. That's a real Canadian history story.”

If properly maintained, a culture can be kept alive for decades. Juurlink cited the Acme Bread Company in San Francisco, which he says has a culture that has been maintained for more than 30 years. Juurlink himself has been working with a culture that dates back 15 to 16 years.

Of course, bread and other grain products aren't the only foods that can be prepared using variations of fermenting techniques. The Light Cellar in Calgary offers classes on topics such as cheese making and meat curing, and owner Malcolm Saunders discusses how fermenting can be used to preserve many types of foods.

"Fermentation increases the availability of the nutrients and you're able to digest the food better," he said. "It breaks the molecular structure of the grain."

"There's a huge movement to the small, the local, the DIY, the traditional. People are looking to what their ancestors did; a general sense of something being lost in the modern day and age in consumer products. What did our ancestors eat?"

Saunders said people need to get past their "general bacteria phobia," even though there are common products like yogurt, sauerkraut and kimchi—not to mention beer—that are created via fermentation.

"Once you start creating your own ferments, the whole world is open to..."
you,” he said. “It becomes a playground to explore.”

Saunders has heard of sourdough cultures still in circulation dating back to the gold rush, though one can be baking with a newly created sourdough starter within a few days. However, it depends on the culture, and he said it can take up to two weeks to develop a healthy culture with a so-called “wild starter” utilizing wild yeast, as opposed to domesticated/cultivated yeast one might buy when making beer.

The sourdough fermentation process may convert wheat proteins to a point where people with gluten intolerance can handle them, Gänzle said, but sourdough bread is still not safe for people with celiac disease. Research published in 2009 in the journal Food Microbiology and tests published in 2011 by researchers at the University of Naples suggested sourdough fermentation could be a way for people with celiac disease or gluten intolerance to safely eat certain bread products.

But the Naples study, published in Applied and Environmental Microbiology, also acknowledged that long-term effects still need to be studied. Responding to such research, those involved in promoting awareness of celiac disease, an autoimmune condition, agree with Gänzle, and say no level of gluten is safe.

“The truth is there is serious research going on and no answer yet,” said Janet Dalziel, past president of the Canadian Celiac Association. “But for anything to be labelled gluten-free in Canada, it cannot contain any protein from wheat, rye, barley and oats.” Making matters even more complex, she said, is the fact gluten-free standards differ between countries. “The Americans only recently got a definition on gluten-free from the FDA.” The main difference, Dalziel said, is the Food and Drug Administration currently does not include oats on its list of prohibited grains.

That said, there are still options for making sourdough using gluten-free ingredients. The website celiac.com, for example, offers a recipe for a sourdough starter that utilizes rice flour.

Gänzle says fermentation is an option for those who are simply sensitive to gluten. “Someone who doesn’t tolerate plain bread well will possibly tolerate sourdough bread because the protein is more digestible,” he explained.

And there are health benefits to sourdough.

“There is some research that came out that wheat-flour sourdough bread has the properties of a low-glycemic-index food,” said Alan Dumonceaux, chair of the baking program at NAIT. “This is because of the metabolism—the degradation of the proteins in the sourdough culture. It’s changing it from a high- to a low-glycemic-index food.”

Fermenting also causes minerals within the bread to be more readily absorbed, said Gänzle, because it degrades the amount of phytates in the bread and lets the body absorb more of its natural vitamins and minerals.

Saunders said fermentation also produces vitamin B.

“One thing about fermentation is you have a higher amount of enzymes and friendly flora bacteria—we’re always needing and looking for sources to replenish them,” he said. “Antibiotics and chemicals in food tend to diminish those populations. But fermented food is a source to replenish that—it’s a basis of our digestion.”

Dumonceaux said many kinds of grain can be used in fermenting, with different blends producing different flavours, such as rye, purple wheat and red fife.

“Every flour will give it character,” he said.
AGAINST THE GRAIN

SELF-SERVE

When Henry Marshall Jenkins opened his first grocery store in Calgary in 1909, he probably had no idea of the trend his eventual chain of food retail outlets would launch on the Canadian food industry.

Jenkins, the son of a Prince Edward Island potato farmer, arrived on the train platform in Calgary after paying $10 for his train ticket west. Then at age 28, he began working in a grocery store. Within two months of arrival, he partnered with a man named Cornfoot and they opened their first store under the name Jenkins and Cornfoot Grocers. A year later, Jenkins bought out Cornfoot’s interest and renamed the business Jenkins and Company.

The grocery store—typical for the era in that customers simply asked the clerk behind the counter to assemble the foods needed—flourished and became successful. In 1914, as the First World War was beginning and labour was in short supply, Jenkins heard of a new food merchandising system in the U.S. He travelled to Seattle to visit a store using this system, and eventually purchased the rights to use the name “groceteria” in Canada.

In 1918, Jenkins opened in Calgary the first self-serve grocery store of its kind in Canada. Customers could walk along well-stocked shelves of food, pick out what they needed and bring their goods to the cashier for purchase. The idea caught on. Jenkins opened eight more Jenkins’ Groceteria outlets in Calgary that year, and by 1928 he had 18 stores across the city.

The stores were successful, and, as the years passed, he eventually built a chain of 48 groceterias across Calgary and throughout southern Alberta. Jenkins offered free home delivery service of groceries using bicycle couriers.

The stores also offered free in-store cooking classes to showcase new products and cooking trends to housewives. The classes ranged anywhere from one afternoon to five days long. In addition to local instructors, Jenkins also recruited big U.S. names of the day to give cooking lessons in his stores. Two notable names were Dorothy Rimmer, a famous home economist from New York City, and Mary Miller, a well-known home economist with the Better Home Making Service. And at each cooking class, 15 baskets of groceries were given away as prizes to those who attended.

In 1959, 50 years after opening his first store, Jenkins sold the thriving business to Westfair Foods Ltd., which, today, is a subsidiary of the Real Canadian Superstore (Loblaws) chain.
Tweet at us!

What is your favourite food trend of 2014 so far?

Let us know in 140 characters or less for your chance to win! The best answers will receive a $50 gift card to either Boxwood or River Café.

Use the hashtag #favefood14 to join the conversation!

@ BoxwoodCalgary  @ RiverCafeYYC  @ Grainswest
A SAMPLING EVENT!

2014

SEPT. 26TH/27TH

LOCAL • SEASONAL • CRAFT

CALGARY
Oktoberfest

2014

FRIDAY 4PM - 10PM
SATURDAY 2PM - 9PM

Sample delicious food & craft beer!
Enjoy Oktoberfest music, dancing & tradition!

USE PROMO CODE OKT15
15% OFF TICKETS TO OKTOBERFEST

www.albertabeerfestivals.com

A SAMPLING EVENT!

2014

OCTOBER 3RD/4TH

LOCAL • SEASONAL • CRAFT

EDMONTON
Oktoberfest

USE PROMO CODE OKT15
15% OFF TICKETS TO OKTOBERFEST

www.albertabeerfestivals.com