

Oats through the Century

Alberta is celebrating its centenary this year, and agriculture, including oats, has been a part of the province's economy since the beginning. Used for everything from farm fuel to a healthy food in its own right, oats have played an important role in Alberta's history. Now, research into oat-enriched pasta may mean this crop will have new role to play in keeping Albertans healthy for the future.



Oats have played an important role in Alberta's 100-year history. In the early days, oats fuelled the machines of the farm: horses.

Oats have a history that is much older than Alberta – some sources estimate that the domestication of oats occurred around 2500 BC. Oat production in Alberta grew as the province became settled as an agricultural outpost. At one time, oat production was the second most economically important crop in Alberta, following closely behind wheat. It was at this time that oats powered the machines of the farm: horses, but as tractor power became available to farmers, the demand for oats began declining. For example, in 1943 over 3.5 million acres of oats were grown in the province, which decreased to over 2.5 million acres in 1962. Today, at 1.5 million acres, Alberta's oat production still outstrips Saskatchewan and Manitoba, which produce 1 million, and 0.5 million acres respectively.

While the advent of the tractor was one cause for the decline in oat production, it was not the only factor. Around the middle of

the century, barley replaced oats as the feed of choice for cattle and hogs. Rapeseed, which developed into canola, was introduced during World War II and became a valuable cash crop.

More recently, researchers have been discovering the health benefits of oats, which may help to breathe new life into the oat market. Oats are full of soluble fibre and contain beta glucan, which helps lower LDL cholesterol – the so-called “bad” cholesterol – which has been implicated in heart disease. There is some research that suggests that a diet high in soluble fibre may help stabilize blood glucose levels, which would help people with non-insulin dependent diabetes. In 1999, a study out of Tufts University in Boston showed that a diet high in oats could help lower blood pressure and total cholesterol level in as little as six weeks.

With all these emerging health benefits, it's no wonder that scientists are now looking at new food uses for oats. Oats have long been a staple breakfast food and used in baking, but there is some interest in using oats in pasta and noodle products. Dr. Kevin Swallow, a Food Scientist at the Food Processing Development Centre in Leduc, did some work with the late Dr. Solomon Kibite on using different oat varieties to produce these products. Working with some high beta glucan varieties that Kibite developed, Swallow produced results that showed progress. “We did the preliminary testing of this new pasta product and the oat pasta performed very well,” says Swallow.

Swallow says that while a pasta with 60% oats and 40% semolina

Continued on page 3

Inside

Team Effort

Teams of researchers are working together to address issues affecting the livestock industries in Western Canada. 2

A Future with a Common Front

Alberta's poultry industry has come together to establish priorities for moving the industry forward..... 4

Canola Research Gets a Booster Shot

Dr. Nat Kav and his team are focused on improving disease resistance in canola5

▶ Team Effort

Sharing everything from samples of manure to research findings, teams of scientists from several organizations are getting very smart about working together. In particular, they are focusing on protecting industry and consumers.

At any given time, there are a number of different livestock research projects on the go at academic, research, and government institutions in Alberta, complemented by efforts at the University of Saskatchewan's Vaccine and Infectious Disease Organization (VIDO), and the Western College of Veterinary Medicine (WCVM). Researchers at these institutions are working cooperatively in terms of resources, expertise, and coordinated research to address issues affecting the competitiveness and productivity of livestock industries in Western Canada.

The projects cover a breadth of areas: environmental concerns, production-limiting diseases, antimicrobial resistance, management and nutrition problems, and zoonotic diseases. Conducting research in such a vast number of areas takes an enormous amount of money and coordination. Both VIDO and WCVM have been involved in numerous R&D priority setting discussions with the Alberta Agricultural Research Institute and other Funding Consortium partners.

Part of the success in working collaboratively on numerous projects comes from the close proximity of the scientists; both VIDO and WCVM are located on the University of Saskatchewan campus. VIDO employs more than 125 researchers and support staff in its 100,000 square foot centre. Financial support for the 160-acre research facility comes from the federal government, the governments of Alberta and Saskatchewan, as well as industry.

WCVM houses seven academic departments and has a staff of over 70 faculty members all under one roof, which encourages team research and an interdisciplinary approach to resolving challenges facing the livestock industries in Western Canada. "Many of our projects cross provincial borders as many of the challenges we are dealing with in the livestock industries are similar across Western Canada," says Dr. Cheryl Waldner, an Associate Professor in the Department of Large Animal Sciences at WCVM.

"We have been very successful in maximizing the use of funding dollars, data, and samples to concurrently address many questions of importance to both the cattle and swine industries," says Waldner. She provides an example of splitting collected manure



"When problems are tackled by researchers in different disciplines, you have new perspectives that can help tackle difficult issues."

– Dr. Cheryl Waldner, WCVM

samples to serve dual purposes. "By linking different projects and sharing field samples, we were able to test for *Cryptosporidia*, *Escherchia coli* (*E. coli*) 0157:H7, and antimicrobial resistance after a single series of field visits. This allowed us to collect information that will address several different issues at the same time, saving research dollars and expediting results," explains Waldner.

Additionally, Waldner believes that partnering with other researchers allows for the sharing of expertise and the integration of knowledge, both of which are critical for getting results quickly. "When problems are tackled by researchers in different disciplines, you have new perspectives that can help tackle difficult issues," says Waldner.

Much of the concurrent research focuses on zoonotic diseases and food safety issues. Researchers at various institutions are working to develop a better understanding of the occurrences of the bacteria: salmonella species, *Campylobacter jejuni*, and *E. coli* 0157:H7 in livestock, as well as an understanding of their methods of colonization in host animals, in order to develop pre-harvest control mechanisms.

Disease Detection

Developing improved detection methods for determining the prevalence of bacteria in livestock is an important aspect of zoonotic

disease research. One project Waldner is currently working on, funded in part by the Alberta Livestock Industry Development Fund, compares and evaluates the agreement of three different tests – bacterial culture, PCR, and serology – for detecting the presence of *Salmonella* in Alberta and Saskatchewan swine units. Although pork is not considered to be a major source of salmonella infection in North America to date, there is a desire to keep *Salmonella* bacteria counts low, spurring research into its prevalence in Prairie swine.

Waldner is collecting fecal and blood samples from farrow to finish operations and sending them to the Agri-Food Laboratory Services Branch, Food Safety Division of Alberta Agriculture, Food and Rural Development in Edmonton for culture and PCR testing. "Our ongoing partnership with the Alberta Agriculture Food Safety Division has been a great asset to our research program," says Waldner. "Additionally, support from the Alberta Agriculture Funding Consortium and the various livestock industries is important for the ongoing success of our research programs."

Vaccine Development

For their part, researchers at VIDO are working to understand the biology of the micro-organisms in order to develop vaccines

Continued from page 1

The *E. coli* 0157:H7 vaccine recently developed by VIDO and the University of British Columbia is one example of how vaccinating cattle can ultimately reduce the risk of this pathogen in humans.

which will reduce micro-organisms' ability to both colonize within their hosts and release into the environment, ultimately resulting in improved food safety.

The *E. coli* 0157:H7 vaccine recently developed by VIDO and the University of British Columbia is one example of how vaccinating cattle, a known carrier and the primary reservoir of this strain of bacteria, can ultimately reduce the risk of this pathogen in humans. The infection, sometimes referred to as "hamburger disease", is potentially deadly to humans and is usually acquired by eating undercooked, contaminated meat. The bacteria can be transferred from infected animals to the meat at slaughter. "Industry losses in Canada as a result of *E. coli* 0157 are estimated to be \$60 to \$80 million per year," says Dr. Andy Potter, Associate Director of Research with VIDO.

The Alberta Research Council and Bioniche Life Sciences Inc. are in the process of commercializing the vaccine. VIDO is also working on developing other vaccines. According to Potter, "the research is all about providing producers with the tools, and vaccines are one tool among several that producers are able to use to produce a safe and quality product."

Benefiting from Immune Stimulants

Although a recent comprehensive Alberta study shows that the use of antibiotics in cattle production is not currently a major contributor to the development of antimicrobial-resistant bacteria affecting human health, researchers are still actively pursuing ways to reduce antibiotic use in livestock production.

The team at VIDO is examining immune stimulates as a way of helping livestock ward off diseases without the use of antibiotics. "All animals' immune

systems, if stimulated properly, will kill bacteria quite easily without the use of antibiotics," says Potter. The research approach involves administering bits of synthetic bacterial DNA, also referred to as CpGs, to the cattle as they enter feedlots.

The research results from trials conducted in Alberta feedlots are promising, as cattle given the high-powered CpG formulation had lower incidences of disease, reducing the need for antibiotics. "The great thing about CpGs is that they have the same effect as an antibiotic, but there is no danger of resistance developing – the immune response is a natural occurrence," Potter explains.

While cattle have been the spotlight of the research thus far, swine and poultry will be the focus in future studies. "And although bacterial DNA-enhanced products are still several years away, they will give producers another powerful tool in the effort for controlling diseases," says Potter. "It's all about giving producers choices."

The development and incorporation of new technologies that improve animal health and reduce the risk of human illnesses while providing superior quality products, will help maintain the competitiveness and profitability of Western Canada's livestock industries. And from the collaborative effort on the part of researchers at WCVI and VIDO, government institutions, and funding organizations, it is evident that many hands working together helps to create the best solution.



would have health benefits for consumers, it will take some time before a product like this becomes available. Getting industry support, which he is currently working on, is an essential step.

While the oat may have had a humble beginning in Alberta as feed for the horses that fuelled the farm, further research into the health benefits of this cereal may see new oat products on grocery store shelves, fuelling the health-conscious consumer of the 21st century.



Good-for-you Oats

Oats contain a number of vitamins and minerals important to health, including:

- Vitamin E
- Calcium
- B-vitamins
- Phosphorus
- Magnesium
- Potassium

Oats are also a good source of protein and contain some unique fatty acids and antioxidants. In combination with vitamin E, these fatty acids and antioxidants are thought to slow cell damage and help reduce the risk of cancer.

▶ A Future with a Common Front

Focused on technology transfer, Alberta's poultry sector is planning to get the right information into the right hands.

To bring together a common front to poultry research and development in Alberta, leaders in the poultry sector have identified priorities to move the industry forward on flock health, the environment, innovation, and information sharing.

Forty participants, including representatives from the four commodity groups: Alberta Chicken Producers, Alberta Hatching Egg Producers, Alberta Egg Producers, and Alberta Turkey Producers, as well as researchers, poultry processors, veterinarians, support organizations, and funders, attended the inaugural strategic planning session last spring. The meeting provided a great opportunity to decide on priorities from an industry-based perspective.

R&D priorities for each of the commodity groups as well as the overall poultry industry were identified. The four overall industry priorities were:

1. Antibiotic replacement – examine the feasibility of poultry production without antibiotics by:

- developing methods to stimulate innate immunity in poultry;
- exploring the use of probiotics (natural and native gut bacteria) to reduce colonization of undesirable flora which may be beneficial in reducing intestinal diseases and maintaining consumer confidence in poultry products; and
- more efficient testing methods for antibiotic residues in poultry products.

2. Scientific expertise – recruit poultry meat scientists and product development researchers.

3. Education plan – for consumers and pre-secondary students, and conduct technology transfer:

- transfer research findings from both local and global experts to the producers through seminars and written information;
- hire a technology transfer expert to implement a technology transfer program within the province; and
- continue to develop youth leadership and education programs for pre-secondary students to introduce them to careers in the poultry industry and post-secondary education in this agriculture sector.

4. Environmental issues – conduct research that deals with specific environmental issues including:

- manure and phosphorus management;
- processing waste management;
- Best Management Practices for mass disposal such as composting; and
- developing bio-digesters for spent hens, manure, etc.

“The success of the strategic planning session represents a very positive sign of the commitment of all poultry commodity groups,” says Dr. Frank Robinson, Professor at the University of Alberta. “This planning session showed the industry’s commitment for coming together as a unified voice and figuring out what is important for the industry, both in the short and long term.”

“The model allows individual commodity groups to reach their own corporate goals and still accommodate the direction of the whole poultry industry. The planning session allowed everyone to see the big picture so that, as funders, we can consider funding projects that fit the wider goals of the industry,” says Lloyd Johnston, General Manager of the Alberta Chicken Producers. “With more people working together, we will be able to invest in leading-edge R&D that is relevant to our industry.”

The next steps include continuing to work with the commodity groups to increase their understanding of the collaborative process, with the ultimate goal of strengthening the partnership. The Funding Consortium will use the identified priorities to establish and communicate the research and development priorities in future R&D proposal calls.



“The success of the strategic planning session represents a very positive sign of the commitment of all poultry commodity groups.”

– Dr. Frank Robinson

► Canola Research Gets Booster Shot

Antibodies for canola – it's a new approach to protecting one of Alberta's most significant crops.



Dr. Nat Kav is the lead investigator on a University of Alberta research project to develop antibodies against *Sclerotinia* in canola.

Research at the University of Alberta (U of A) into disease resistance of canola recently received a shot in the arm from the Alberta Agricultural Research Institute.

AARI will contribute \$782,000 over the next four years to the work of Dr. Nat Kav and his team of researchers who are working on developing antibodies to *Sclerotinia* in canola plants. “Basically what we are doing is developing antibodies against fungal pathogens, getting those genes for the antibodies, and introducing them into the canola plant,” says Kav, a professor in the U of A’s Agricultural, Food and Nutritional Sciences Department.

Plants don’t naturally produce antibodies; they have their own defence mechanisms, such as enzymes that break down a pathogen cell wall or proteins that inhibit pathogen growth. The problem with this type of defence is that pathogens evolve – they don’t stay the same whereas a specific enzyme or protein would – and the pathogen could then easily bypass these types of defence mechanisms. “What we know about antibodies is that they are a very broad type of defence mechanism which may not be easily broken down,” says Kav.

Canola is a very important crop to both Alberta and the rest of the Canadian Prairies. Canola is seeded to 12 million acres on the Prairies, with a significant portion of that being seeded in Alberta. Furthermore, exports of the crop from Alberta account for approximately \$600 million annually, according to Kav – and that’s in a bad year. In a good year exports are closer to \$1 billion. With numbers like that, it is quite evident why AARI and Kav would be interested in protecting this valuable crop.

The work Kav and his researchers are doing involving *Sclerotinia* antibodies complements another project Kav is working on, also funded by AARI along with the Alberta Crop

Industry Development Fund. This project is a breeding program aimed at developing canola plants resistant to *Alternaria* and blackleg – the other two devastating diseases of canola. Kav feels the *Sclerotinia* project is particularly important however, because less attention is given to this pathogen. “Blackleg and *Alternaria* are the most important diseases from an agronomic perspective, but there are already lines resistant to the blackleg fungus in Alberta,” says Kav. “There is also a significant amount of research into *Alternaria*. *Sclerotinia* is important because there is not a lot of breeding material that breeders can use, so a novel approach like the one we’re pursuing with antibodies is more desirable with *Sclerotinia*.”

Kav says there is potential that *Sclerotinia* could wipe out a significant portion of the canola industry by dropping yields. “It’s not that much of a problem at the present time in Alberta,” he notes, “but there’s the potential for huge damage. One of the biggest things about this project is that AARI is

taking a very proactive approach in funding this work.”

And this research may have applications aside from canola. *Sclerotinia* affects many crops including field peas, potato, mustard, lentils, safflower, and flax. If this new technology is successful in canola, Kav doesn’t foresee any reason it wouldn’t work in other crops. “Anything that works with one crop, such as our antibody approach, can easily be moved into another crop,” says Kav.

This research is important to the canola industry in that it has the potential to protect Alberta growers from great loss in the future. Kav notes the importance of funders, like AARI, that recognize the significance of cutting edge research such as this. “Without AARI funding we couldn’t have gone anywhere with this research. We’re on track with our targets for the current year and we’re going to keep going forward,” says Kav. “We’re very confident we will be successful.”

This research is important to the canola industry in that it has the potential to protect Alberta growers from great loss in the future.

▶ Profiling our Partners – DLFOA Ltd.

If you find yourself reaching for bison in the meat department of your grocery store, you've discovered the success of the Diversified Livestock Fund of Alberta's marketing strategy.

The Diversified Livestock Fund of Alberta Ltd. (DLFOA) was set in motion in 2001 to support the development, profitability, and sustainability of the diversified livestock industry. "As fledgling industries with the potential for significant expansion, they require resources to help them get past obstacles which inhibit or limit market growth," says Bill Buchta, General Manager of DLFOA Ltd., which represents ten different livestock species on its Board.

Funded by the province of Alberta, DLFOA supports market research, market development, improvements in primary production, value chain development, extension, and technology transfer, explains Buchta. "These activities focus on the primary production to market chain, and on market access support processes such as quality assurance in the areas of food safety, consumer product preferences, animal welfare, and environmental sustainability."

Over the last three years the producer-directed funding agency has provided approximately \$1.1 million in funding towards 43 projects in areas from basic research to market access. "Each industry submits a visionary development plan and DLFOA approves projects that are consistent with this plan," says Buchta. "The funding approval process allows producers to have direct input on what projects are funded and are of value to their particular industries."

"The majority of projects funded by DLFOA focus on product promotion and market development," says Len Shandruk, Chair of DLFOA. He provides an example of the elk industry, which was originally developed for the antler, and until recently, had no way of marketing the meat since consumer interest and acceptance of elk meat products were virtually non-existent. However, with a coordinated effort on the part of producers, retailers, and processors to develop and promote elk products, the demand for elk meat is increasing dramatically, he explains.

Building this type of commercial success in the elk and other diversified livestock industries is enhanced by partnering with the Alberta Agriculture Funding Consortium.

"The partnership allows these smaller industries the opportunity to access the expertise of a broader spectrum of agriculture and to coordinate the support of research and development amongst various support agencies," says Buchta. "Instead of funding research in a piecemeal fashion, the partnership encourages a program of

development which consists of several projects that will help develop these smaller industries from the farm gate through the value chain to profitable markets."

A typical example of a program of development is the developmental thinking of the alpaca fibre industry, explains Buchta. "This project is a collaborative, industry-wide value chain-based project that involves the key components of the product to market system," says Buchta. "The project focuses on collaborative development of the fibre industry by developing fibre standards, efficient fibre grading methods, and educating all players in the chain. The result will be quality assured, global market access for Alberta's alpaca fibre products. This program could create a model and tools for other fibre producing species."

In the future, DLFOA will focus on four major development strategies. DLFOA will look for specific initiatives that can quickly increase cash flow in the diversified livestock sector. Simultaneously, it will encourage deliberate and collaborative programs for its long-term viability. Funding will also be directed towards ensuring that critical production through marketing processes are functioning and meeting global market standards. In the process, DLFOA will attend to the development of the diversified livestock industry's capabilities and the relationships necessary for market leadership.

DLFOA focuses on the following species:

- bison
- deer
- alpaca
- fish
- llama
- horse
- elk
- sheep
- goat
- reindeer



▶ AARI Board Undergoes Change

The contributions AARI Board members make are critical. Recent appointments mean it's time to welcome some new members while saying good-bye to others.

The effectiveness of organizations correlates to the effectiveness of the Boards which provide leadership and direction, and AARI has made progress toward its goals because of the leadership and vision of many dedicated Board members over the years. Nevertheless, it is important that Boards are continually renewed, both to keep them energized and to gain new perspectives.

In the past months AARI has experienced some Board changes. The current Board members include:

- Barry McFarland – MLA Co-Chair
- Art Froehlich – Industry Co-Chair
- Dr. Pete Desai – Vice Chair
- Harry Haney
- Dr. Mark Redmond
- Dr. Rob Rennie
- Tom Towers
- Henry Vos
- Ex-officio:
 - Bob Fessenden (Deputy Minister Innovation and Science)
 - Brian Rhiness (Assistant Deputy Minister Alberta Agriculture, Food and Rural Development)

Unfortunately, new appointments also mean some good-byes. Neal Oberg, who has served on the AARI Board for nearly six years, has completed his term as Co-Chair and will be leaving the Board to take on other challenges. We sincerely thank Neal for his many contributions over the years. Similarly, Dr. Steve Morgan-Jones and Dr. Francis Yeh have left the Board due to the expiration of their terms. Both will be missed for their insights and contributions during their time with AARI.

AARI Board Co-Chairs

Barry McFarland, MLA Co-Chair, was recently re-elected to serve a fifth term as MLA for the Little Bow Constituency. He held a variety of municipal positions, including Reeve, prior to his election to the Legislative Assembly. A graduate of the Southern Alberta Institute of Technology (SAIT) Business Administration program, he has been engaged in dryland grain farming in the Carmangay area for over 30 years. McFarland served previously as Chair of AARI while it was under Agriculture Food & Rural Development. He has also chaired the Standing Policy Committee on Agriculture & Municipal Affairs. Although McFarland recognizes that much has changed at AARI since those days, he notes that it has always been a challenge to attract and retain researchers. He is committed to decision making based on what is good for Alberta as a whole. McFarland replaces MLA Co-Chair Hector Goudreau.



Barry McFarland,
MLA Co-Chair

Art Froehlich is well positioned to take on the role of industry Co-Chair. He has been a member of the Board for two years, in addition to serving a previous term with AARI several years ago. With a degree in Agriculture combined with studies at the Wharton School of Business, he brings a wide range of knowledge to the deliberations of AARI. He is a partner in AdFarm, an agricultural communications company, and at the same time manages a cow/calf operation and raises registered Angus cattle. His overseas marketing experience has added to his understanding of effective models for research and development, and he is a firm advocate of the industry/researcher partnership AARI and the Alberta Agriculture Funding Consortium are built on.



Art Froehlich,
Industry Co-Chair

▶ Board Profile – Tom Towers

Tom Towers has a lifetime investment in Alberta agriculture. He grew up on a ranch which included land homesteaded in 1894 by his great-grandfather and grandfather, and some of that land is still part of his operation today. That may explain his determination to do what he can to improve agriculture – ensuring that farm and ranch families can continue to operate in an economically sustainable manner.

Towers sat on the original AARI Board, a position he held for seven years, and was reappointed in June 2004. He applauds the team approach of the AARI Board and the involvement of AARI in the Alberta Agriculture Funding Consortium, which brings many stakeholders to the table and creates synergy in R&D, as the most effective way to ensure a better future for agriculture.

Bringing a producer's perspective to the deliberations, Towers is enthusiastic about research which increases margins for producers. Citing the current work on fractionation as an example of efforts to expand the value-added aspect of agriculture, Towers is convinced it's the way to go. "Canadians are smart enough and innovative enough to find ways to develop products for end-users," he says. Working together with his AARI colleagues he'll do what he can to ensure that Alberta leads the way in that approach.



Tom Towers

Art Froehlich, Co-chair of the AARI Board, has first-hand knowledge of the impact of agriculture beyond our borders.



Art Froehlich was part of a Food Study Tour to Malawi and Mozambique, where he saw first hand the difference technology and knowledge can make in the less developed world.



Since the recent holiday season, there has been unprecedented attention paid to the plight of people in south-eastern Asia, and Canadians have been quick to respond with financial and other types of support. It is, however, important that in our eagerness to help we not forget the ongoing needs of so many others. Canadians have a history of involvement in areas of the world less fortunate than our own and the Canadian Foodgrains Bank (CFGB) is one of the agencies which is playing a meaningful role.

The CFGB is an organization comprised of 13 different churches coordinating efforts to meet desperate food needs around the world. There are three sources of the food and cash CFGB disperses:

- donations of grain directly from Canadian farmers;
- "Grow Projects" across Canada (which maximize resources by using free or low-cost land, donated inputs, and volunteers to produce a crop which is in turn donated); and
- cash contributions from farmers and non-farmers alike.

Such an undertaking can only be successful with broad support, and critical to garnering that support is assurance that individual contributions do make a difference.

It was my privilege to be part of a Food Study Tour to Malawi and Mozambique last year and I was gratified to see that, at least in the case of the CFGB, in excess of 95% of the designated grain does get to those who need it. This may well be because the program is small enough to work directly with local partners, on a non-parochial basis. It is at this level that you understand the impact of what is being done, and that no gift is too small to make a difference if you get it into the hands of local people.

Since my return, I think about Africa every single day: how great the need is and how appreciative the people are. Africans are a proud people and they are determined to give something in return, no matter how little they have. It may be a hand-made straw broom or a single coin – one young woman insisted on giving me one of only two kwacha she had (one kwacha is equivalent to about 16 cents). They don't want hand-outs; they need a hand up.

While in Malawi I met a group of five women who formed an agriculture co-op. These women live in a place where there is an abundance of some types of fruit, but no means of storing it. Using their own ingenuity and determination, they built a solar dryer to dry bananas. They now have a product which they can sell out-of-season, and they have generated enough income to dramatically improve the quality of life for their families. They are proud of their accomplishment and they asked for nothing but that we remember them when we returned home.

CFGB coordinates with other organizations to ensure the best use of resources and the best

response to local needs. It is important that we protect the local economy by buying some of the food we distribute from local markets. In some situations the need may be greatest for new seed, new equipment, or training.

Albertans get caught up in agriculture as it pertains to our own province and country, but in fact some technologies and knowledge will have a role to play in the less developed world. For example, some new seed technology is improving yields. Improvements in grain storage could protect harvested crops. Irrigation and the effective, efficient use of water can impact not only crops but also animal health. And genetics may make it possible to breed animals more suited to local needs, like a beast more trainable than the cranky African water buffalo!

One of my goals for 2005 is to get back to Africa. I wish you a New Year that includes a chance for you to make a difference beyond our borders. Remember, no matter how you choose to do it, every little bit counts.

Art Froehlich
AARI Board Co-Chair

Alberta Agricultural Research Institute
9th Floor North, John E. Brownlee Building
10365-97 Street, Edmonton, AB T5J 3W7
Tel: 780.427.1956 | Fax: 780.427.3252
www.aari.ab.ca

The Link is a quarterly newsletter published by the Alberta Agricultural Research Institute (AARI) that communicates with Alberta's agriculture and research communities. Submissions and feedback are welcome.

AARI was established by the Alberta Science and Research Authority Act and funds numerous projects each year that play a significant role in advancing Alberta's position as a global player in the agriculture and food sector. AARI's mission is to enhance the economic contributions of the Alberta agricultural and food industry through support for research and technology transfer, with a strategic emphasis on life sciences.

AARI is also a member of the Alberta Agriculture Funding Consortium. The Funding Consortium is a strategic partnership of agricultural funding groups that was created to provide better funding for research and development in Alberta's agricultural industry. This unified approach provides a one-window application process for researchers, reducing and simplifying the application workload while ensuring proposals are exposed to a maximum number of funders. The Funding Consortium's goal is to ensure that funding decisions and investment made within Alberta's agricultural sector are consistent with the industry's vision for a thriving and innovative future.

