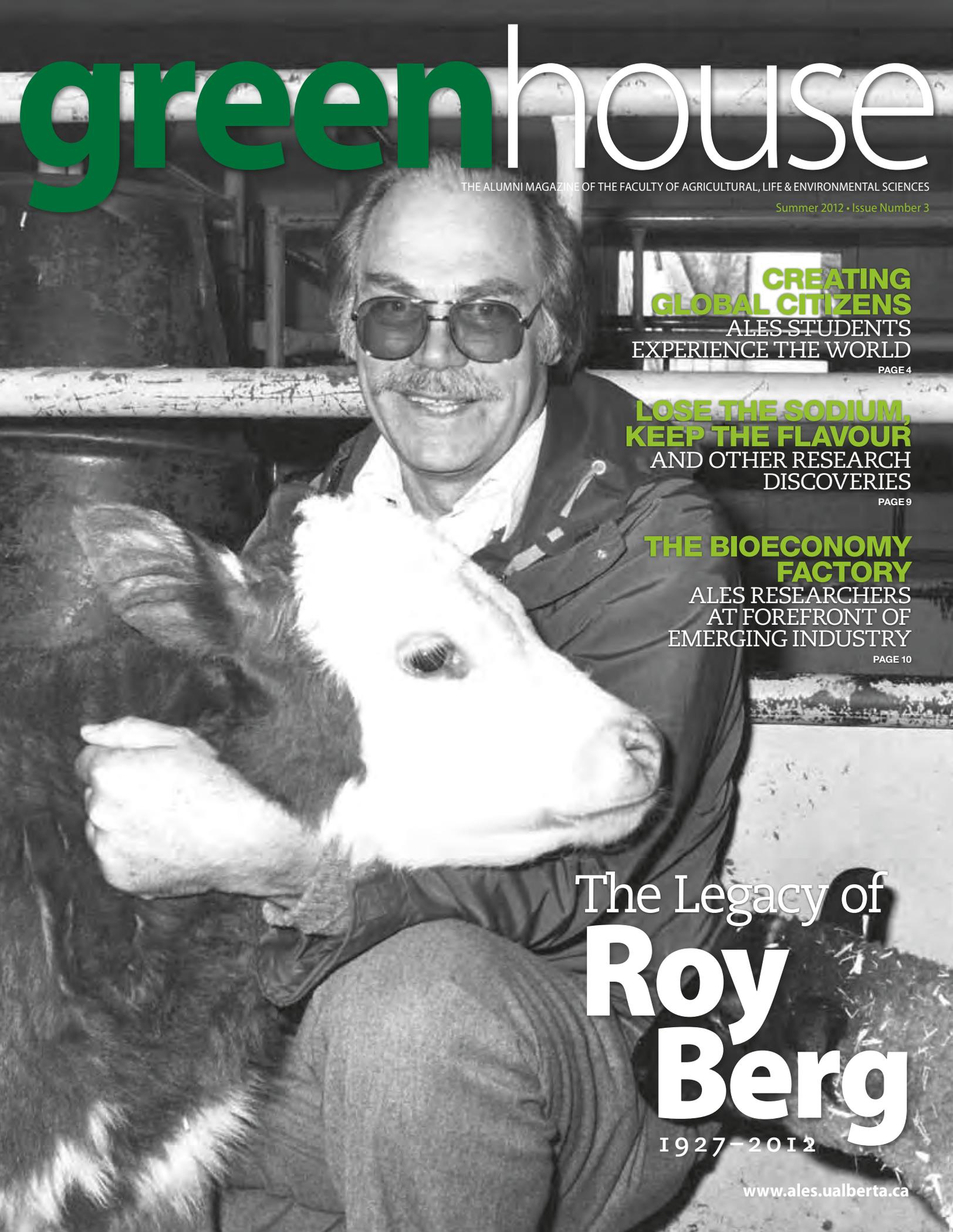


greenhouse

THE ALUMNI MAGAZINE OF THE FACULTY OF AGRICULTURAL, LIFE & ENVIRONMENTAL SCIENCES

Summer 2012 • Issue Number 3



**CREATING
GLOBAL CITIZENS**
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EXPERIENCE THE WORLD
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KEEP THE FLAVOUR**
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The Legacy of
**Roy
Berg**
1927-2012

From the Dean

On a recent trip to India with faculty colleagues and students, I was struck once again by the incredible value of these international experiences. On this particular trip, we were in India to work on a poverty alleviation project with the MS Swaminathan Research Foundation. Throughout the course of the three-year project, about six faculty members and at least a dozen students will work on it in India.

The experience will provide each of them with an unparalleled opportunity to learn that to solve some of the great challenges we face on a global level, we need to all work together. It's important to realize and be reminded that no one academic discipline or no one country or no one group of experts has all the answers or can solve all the issues.

By being a part of this project, or any other international learning opportunity, our students and faculty members experience different points of view, cultures, ideas, ways of doing things and ways of learning. It challenges their assumptions and contributes to making them better thinkers, better problem-solvers, better team players and in the end, I am convinced, better people.

I mention this because it is a key goal of our faculty to have every student have at least one experiential learning opportunity during their undergraduate studies and that 25 per cent of them have that experience in an international setting. On that count, we're doing well. On page 4, you'll see a world map with examples of where some of our students have been in the past

two years to have that international experiential learning opportunity. These experiences may be a community service-learning trip, an international field school, a practicum, an exchange or attendance at a conference. Wherever they may have gone, each student learned something they wouldn't have otherwise. Each of them expanded their horizons and took a step in becoming global citizens. And in the end, in whatever way they will end up contributing to providing solutions in the world, we run the very real risk of benefitting from their increased experiences, expanded knowledge and improved abilities. And for that, we are grateful to you as your donations make these experiences possible.

•

The faculty will be celebrating its centenary in 2015 and we've begun planning. If you're interested in volunteering and helping us put together once-in-a-lifetime celebrations, please contact me directly at John.Kennelly@ualberta.ca.

•

You'll notice some changes in the magazine. As a result of a recent alumni survey, the magazine has been re-positioned to better convey those stories you told us you wanted to read about. We are always interested in hearing what you have to say. Email me or the editor directly (greenhouse@ales.ualberta.ca) with your feedback.

John Kennelly, Dean
Faculty of ALES



PHOTO: MICHAEL HOLLY

greenhouse

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 **UNIVERSITY OF ALBERTA**
FACULTY OF AGRICULTURAL,
LIFE & ENVIRONMENTAL SCIENCES

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Class of '67 MSc (Ag) graduates Mel McMillan, Will Pattison and Jim Lockhart at the REES 50th anniversary celebrations. See page 24.



Jonathan Curtis is one of a growing number of ALES researchers turning worthless or low-value biomass, such as cow renderings and wood chips, into high-value chemicals and fuels

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Faculty researchers are at the forefront of an industry that some experts believe may one day overtake oil and gas as the biggest industry in Alberta

14 Why Are You Here?

In the field with faculty staff and students in India as they navigate through the joys and complexities of an international development research project

GREAT DISCOVERIES

An occasional series that looks at some of the great accomplishments made by ALES researchers over the years

In the first installment:

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Researcher revolutionized the beef cattle industry in Alberta despite a furor over his work

Chelsea Geiger '12 BSc (Ag) graduates to – literally – advise the Minister of Agriculture and Rural Development. See page 22.



PEER REVIEW

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HAPPENINGS

CREATING GLOBAL CITIZENS

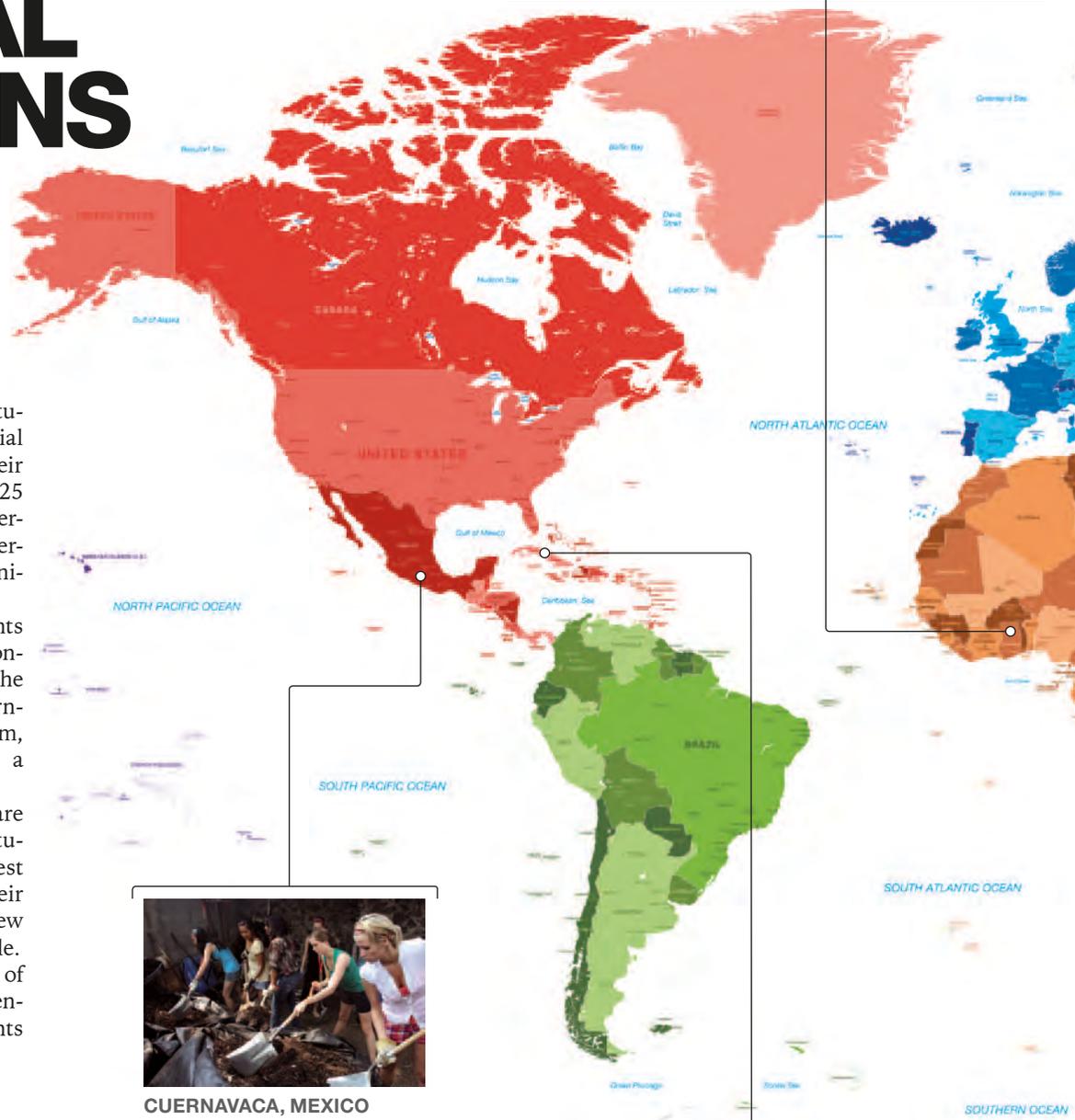
ALES students experience the world

In its quest to have every ALES student have at least one experiential learning opportunity during their undergraduate degree, and that 25 per cent of them have it in an international setting, the faculty leverages and creates several opportunities for its students.

Last year, 75 ALES students seized one of the many international opportunities that come in the form of a community service-learning trip, a field school, a practicum, an internship or attendance at a conference.

Many of these experiences are life-changing. They challenge students to expand their horizons, test their assumptions, broaden their knowledge and learn some new skills. It makes them better people.

The map provides a sampling of some of the international experiential learning opportunities students seized in the past two years.



GHANA

Leslie Presnolo, a nutrition student, was one of two ALES students who went to Ghana with other U of A students, primarily from Education, to help set up a clinic in a small village. She said having students from different disciplines enriched the experience. "It was an incredible experience."



CUERNAVACA, MEXICO

Ten ALES students spent a week in an impoverished area, attending workshops, meeting with local families and building a roof and a wall for needy families in a squatters' settlement. "A trip like this takes you out of your bubble. It stimulated me to do way more," said Arisha Seeras, a fourth-year food and nutrition student who is helping organize, along with the rest of her traveling companions, a fundraising dinner for the families she met.

CUBA

For the third year in a row, Jane King led a group of 23 students to the Caribbean country to study its agricultural systems. "They do everything by hand, their farms are usually more diverse and they're closer to the cities," said third-year ENCS student Brent Buechler. What most struck him were the conditions in which the Cubans live. "I think we all came away from the trip appreciating something we have in our lives a lot better. For me, it was hot water."



CZECH REPUBLIC

Three students spent three weeks in the Czech Republic studying the country's forest management techniques as part of a fourth-year international forestry course. "It was a great experience being able to see how different they are from us," said forestry student Dani Kjosness. Last year, four students went to Germany and next year, a group will go to Romania.



KYOTO, JAPAN

Originally scheduled to go in May 2011, a group of seven ALES students' sustainable agriculture exchange trip was postponed because of the tsunami until this past May. It was worth the wait. "I probably learned the most from this experience," said Brett Campbell, a third-year ENCS major. "It was one of the most valuable learning experiences I've had as a student."

INDIA

Eleven ALES students went to India during Reading Week last February, visiting small communities and meeting some of the poorest of the poor. "It was fascinating," said Lisa Kinesowich, a fourth-year ENCS student. The students harvested rice, made rope from coconut fibres, helped prepare an onion field and helped make a natural pest control and fertilizer mixture.



CAMEROON

Natalie Cox fulfilled her Human Ecology practicum by working at an orphanage while Andrew Merrill was at a school for kids with learning disabilities. Both graduated from family ecology with minors in international development.

SOUTH AFRICA

Caylee Weber worked with an apparel manufacturer and designed sleepwear, did some marketing, worked with buyers and learned a great deal about the country she moved to, South Africa, as she fulfilled her Human Ecology practicum.

BOTSWANA, SOUTH AFRICA AND TANZANIA

"It was a transformative experience, for sure," says Courtney Hughes, of her 20-day trip to Botswana and South Africa. "It forces you to shift who you are." She went with 12 classmates as part of a fourth-year ENCS class and wrestled with things like baffling bureaucracy, heart-rending poverty, land-use issues, cultural and racial divides. The following year, a group of 17 students went to Tanzania.



AWARDS



First Place: *Jacob Onyschuk and the Premier's Award.*

Student wins 4-H Premier's Award

After being a member of 4-H for only four years, animal science student Jacob Onyschuk won the prestigious Premier's Award for outstanding 4-H achievement.

A member of 4-H clubs in Bon Accord, Vimy and the U of A, Onyschuk competed provincially in public speaking.

"[Winning the award] was just a really cool experience and it was really reassuring that all the hard work I'd put in over the last four years wasn't going unnoticed," he said.

The hard work is far from over because Onyschuk will now represent Alberta 4-H at an upcoming conference in Montana and then plan an August 2013 international youth agriculture conference themed around feeding the growing world population. The conference will feature 120 delegates from 20 different countries.



We are the champions: *Nine-member Range Team won seven awards.*

Another big Range Team win

Chalk up another big win for the U of A range team as it garnered seven awards at the recent North American competition sponsored by the Society for Range Management held in Spokane, Washington.

Nadine Clifton, who just graduated with a BSc (Ag) majoring in range and pasture management, took top honours in one of the two categories. Her teammate Karen Anderson placed third and Mark Lyseng placed fifth. Other team members were Chelsea Geiger, Meaghan Dunn, Scott Dunn, Carly Hansen and Jamie Walker.

"We were backstage, after having received a team award and you can't hear anything back there," explained Clifton. "They called Mark out and we didn't know why because you can't hear what's happening on stage and then they called Karen and we didn't know why and then I got called out.

You walk out from behind the stage, lights are in your eyes, you can't see anything, you don't know why you're there. Barry (Irving) said I was standing there, looking like a deer caught in the headlights.

"I was pretty shocked. I didn't think I did that well. It was pretty neat."



Deer in the headlights: *Nadine Clifton on stage receiving the top prize.*



Fellow Fellows: *David Chanasyk welcomes John Kennelly into the club.*

Kennelly named Ag Fellow

Dean John Kennelly received the Agricultural Institute of Canada's highest honour recently when he was named a Fellow. A national award, it recognizes an AIC member who has made a distinguished contribution to Canadian agriculture through contributions to building scientific capacity for societal good, integration and collaboration between disciplines and sectors, communications and volunteer activities.

"He has done many things in all those areas," said Frances Rodenburg, the AIC's Manager of Administration and Communications. "He is a credible and passionate advocate for agriculture who understands and has championed the connections between agriculture and the environment and human health."

She added Kennelly also has a strong ability to build partnerships with industry, government and the community.

David Chanasyk, himself an AIC Fellow, presented the honour to Kennelly during the faculty's annual awards ceremony last October.

PHOTOGRAPHY: ALEXANDRIA ELDRIDGE (4-H), BARRY IRVING (RANGE TEAM), MICHEL PROULX (AG FELLOW)



Building bridges: MOU will increase collaboration.

Faculty signs MOU with Seoul National University

The Faculty of ALES signed a Memorandum of Understanding with Seoul National University's College of Agriculture and Life Sciences, paving the way for increased collaboration between the two. The MOU calls for the development of a major joint research project, an increase in the exchange of faculty members and graduate students and the co-supervising of graduate students.

Seoul National University is generally considered the pre-eminent public university in South Korea. The College of Agriculture and Life Sciences has eight departments offering 17 programs.

Bork named Mattheis Chair

Edward Bork was named the Mattheis Chair in Rangeland Ecology and Management. "We need to create an environment that will improve profitability for the cow-calf industry, including alternative business strategies that currently don't exist," he said. "I see my role as being a research facilitator, bringing people together from the public side, industry including primary producers, as well as other major stakeholders such as non-governmental organizations."



*New Mattheis chair
Edward Bork*

Kudos to ALES and its researchers

Plant ecologist Ellen Macdonald and swine nutrition researcher George Foxcroft, both ALES researchers, were two of four University of Alberta researchers cited in the first Canadian version of HiBAR, an index that measures research influence.

The ranking of academics' influence is based on their h-index, determined by the number of scholarly articles published and the amount of citations the articles receive in other papers.

The good news came following a release from the Higher Education Evaluation and Accreditation Council of Taiwan, which listed the University of Alberta 73rd overall in world rankings. Interestingly, in the rankings by field, "agricultural" at the U of A placed 25th, the highest ranking of any discipline at the university, "environment" was 33rd and "agriculture" was 39th.

The HEEACT ranking system compares the publication and citation performance of 828 universities. Because there is no survey component to this ranking, it is less subjective than others.

Phytola gets new digs

A new \$1.5 million state-of-the-art lab will consolidate Alberta Innovates – Phytola Centre's research activities in one place, creating an environment that's more conducive to collaboration by facilitating more effective interactions among researchers.

"It will also allow research activities to expand as new industrial partners come into play," said scientific director Randall Weselake, whose team focuses on bioactive oils, including the development of innovative techniques for increasing seed oil content, use of plant oils in place of petroleum products and the creation of a high-value, omega-3 enriched nutritional supplement for poultry and aquafeed.



Randall Weselake

Forest programs pass accreditation test with flying colours

It took the better part of a year to produce a 589-page document, and many, many hours to prepare and host an accreditation audit team for a three-day site visit, but it was well worth the effort as the ALES's forestry and forest business management programs received re-accreditation for six years, the maximum allowable by the CFAB.

"It's wonderful news. It gives us credibility and stability for the next six years," said Vic Lieffers, chair of the Department of Renewable Resources, which delivers the programs with substantial support from the Department of Resource Economics and Environmental Sociology.

The renewed accreditation enables the U of A to graduate foresters who can then join the Forester-In-Training program which leads to the professional designation of Registered Professional Forester (RPF).

"More and more companies require candidates to be RPFs," explains Silins. "And what we're seeing increasingly is foresters being hired by utility companies and the oil and gas sector because these companies have forests to manage and that's what foresters do."

"The face of forestry has changed."



EVENTS



Welcome: The entrance of the U of A's newest property.

Meet the neighbors

Last June, six months after donating their 12,000-acre ranch to the University of Alberta, Edwin and Ruth Mattheis hosted a branding party. The couple, who still live on the property during the summer, invited the new owners – the U of A – and the community neighbours. More than 100 people showed up, mingled and got to know each other. It was the beginning of a relationship that will last for generations.

President Indira Samarasekera shares a laugh with Edwin and Ruth Mattheis.



Dean John Kennelly (left) and Edwin Mattheis (above) serve up the chow.

DISCOVERIES



Unexpected dangers in the kitchen

A study by a devoted student foodie from the Department of Human Ecology shows that ill-fitting uniforms are one of the main hazards for injury for commercial chefs.

Brianna Ehnes queried a group of culinary students about their uniforms, their comfort in the workplace and whether they'd already been injured through their work. All said they had.

She found that burns and cuts on hands and forearms were common because chefs often roll up sleeves that are too long and loose. The survey also revealed the importance of non-slip shoes to kitchen safety and that one-size-fits-all uniforms are ineffective.

More trees, less carbon?

Researchers Scott Chang from the Department of Renewable Resources and Edward Bork with the Department of Agricultural, Food and Nutritional Science are co-leading a project in which they will measure the reduction in the amount of greenhouse gas by using agroforestry systems.

Results may lead to new diversified farm income and new employment opportunities through the development of bio-based products.

PHOTOGRAPHY: MICHEL PROULX (EVENTS), SUPPLIED (COOKING)

Lose the sodium, keep the flavour

In the quest to lower sodium consumption in the North American diet, ALES researchers Mirko Betti, Michael Gänzle and Maurice Ndagijimana may have come up with an elegant solution. The team took proteins from low value parts of poultry, fish and vegetables and created molecules that have kokumi characteristics. Kokumi, recently identified as the sixth basic taste, enhances the flavour with which it's combined.

"Hopefully, we'll be able to significantly reduce the sodium in several food products by replacing it with the kokumi we developed, (which) allows foods to have much less salt and be better for you, without sacrificing the flavour. Done right, most consumers wouldn't know the difference," says Betti.

The group recently received funding to conduct taste and sensory trials and fine-tune the technology they've created to develop the product.



Beefing up the beef rating system

The system that rates Canadian beef cattle could be beefed up to offer consumers a more consistent grading, according to Resource Economics and Environmental Sociology researcher Sven Anders.

Anders is examining the Meat Standards Australia (MSA) grading system, which uses 27 different parameters to measure quality throughout each stage of production – from farming to processing. Based on these measurements, the meat is graded on a scale of one to five stars and labelled accordingly. Anders says the current Canadian grading system, in which the carcasses are visually inspected and its meat labelled, cannot provide the same quality assurance as the more extensive MSA system.



Safe water: Aman Ullah may have found a way to remove arsenic from contaminated water.

Saving lives with chicken feathers

Aman Ullah vividly remembers seeing pictures in his youth of farmers in his native Pakistan. Their hands had dark black spots. "It's a symptom of arsenic consumption," he explains. "It's in the water."

Normally, if metal, including arsenic, is consumed through water in doses the liver can process, it's removed through urine. The World Health Organization states that the human body can normally excrete up to 10 micro grams per litre.

But in some poorer regions near where Ullah grew up, levels have been reported to be as high as 300 micro grams per litre. As people are unable to process the arsenic, it enters their bloodstream, leading to skin cancer, diabetes, blindness and kidney and liver damage. "The problem is the people living in those areas don't have alternative drinking water. Groundwater is their only source. They have to drink it," says Ullah.

While many scientists have attempted to resolve the issue over the years, it remains. But Ullah thinks he may have a solution.

Working as a post-doctoral fellow on Jianping Wu's project to convert plastic chicken feathers into bioplastics, Ullah modified the technology and created a filter capable of capturing the arsenic. Initial tests were successful and the project won a Grand Canada Challenge with an accompanying \$100,000 prize to develop the technology.

"This gives us a year and a half to get the proof of concept," says Ullah, who was also recently hired by the faculty as an assistant professor. "If we can prove it works in the different areas and reduce arsenic in water to WHO standards, we will get a \$1 million grant from Grand Challenges Canada to bring it to market."



Leading the way:

David Bressler is one of many ALES researchers turning waste and low value feedstock into high value items.

THE BIOECONOMY FACTORY

Discoveries being made by ALES researchers are nurturing an emerging industry that could one day rival oil and gas

By Michel Proulx

Manfred Kircher was vice-president of biotechnology policy and branding with Evonik Industries, a large multinational corporation operating in high value chemicals, headquartered in Germany. In 2011, it spent €365 million in research and development, had sales of \$14.5 billion euros and employed 33,500 people. Kircher was also the chairman of Clib, a worldwide cluster of 93 members including industry, academia, investors and business support and networks such as Alberta Innovates – Bio Solutions. Immersed in all things biotechnological, Kircher, who is now retired, was an extremely busy man.

While attending the Canadian Conference on Industrial Bioproduct Innovation in Montreal in 2008, he was somehow persuaded to visit Drayton Valley, a small community of about 7,000, an hour or so southwest of Edmonton. Since the closure of a Weyerhaeuser panelboard facility in the area in 2007, the town has been working at re-positioning itself to provide a home for companies, organizations and research partnerships that are focused on creating new products from the biomass generated by the existing forestry and agricultural industries in the area. Getting Kirchner to visit was a coup and, as hoped, when he saw the amount of biomass and land and space available, he was amazed. Clib even set up an office in the Drayton Val-

ley Bio-Mile, as they call the industrial area in which the companies are set up. The office provides Clib with an official North American presence, an important step in establishing links and building a strong relationship in the area that could lead to major business opportunities and economic development.

David Bressler, an ALES researcher equally involved in all things biotechnological – he is the executive director of the Faculty of ALES-based Biorefining Conversions Network – was not surprised at Kirchner's reaction. "Alberta is one of the few places in the world where you'll find all the right tools: we have the biomass from both the agricultural and forest industries, we have the heavy industry base, the pipelines, the infrastructure, the distribution networks, the educated workforce, water, electricity and revenue generated by the oil and gas industry. It's what distinguishes us from pretty much anybody else in the world."

The provincial government is also keenly aware of this and has built into its economic development strategy, funding for research and innovation in the bio-economy through Alberta Innovates – Bio-Solutions.

"Alberta just couldn't be in a better position to seize the opportunities and be a world leader in the emerging bio-economy," adds Bressler.

Most people think of the bio-economy as converting biomass into energy. While

converting biomass into energy is a major component of the bio-economy, it is, according to Bressler, only one part of it. The bio-economy is much, much bigger than that, he says. Another major component is creating high-value chemicals used as ingredients in food and cosmetics. And another part can be summed up in one word: plastics.

The bioeconomy takes organic feedstock (or biomass) – agricultural residues such as animal bones, fat, bloodmeal, plant oils and fats, as well as forestry residues such as tree limbs, bark, sawdust and chips – and converts it not only into different transportation fuels but also into electricity or specialty chemicals used to make ingredients to produce a variety of items such as pharmaceuticals, functional foods, cosmetics, plastics, coatings, lubricants, solvents, foam mats and even biomedical packaging. "The possibilities are almost endless," says Bressler. "In the long run, decades from now, it could rival the oil and gas sector in terms of revenues and economic activity."

That's pretty heady stuff given that in 2009, the oil and gas sector accounted for 23.4 per cent of Alberta's \$247 billion gross domestic product. Building up an industry takes a wide range of activity but underpinning it all is the ability to conduct research to make the discoveries on how to best convert the various feed stocks into chemicals that can be used to create products cost-effectively.

While Bressler wasn't the first scientist to convert plant and animal fat into fuels, he was the first to do it cost-effectively, using a unique process, which has been patented. He recently received \$2.4 million in funding from Western Economic Diversification and the Alberta Meat and Livestock Agency to create a pilot industrial plant at Agri-Food Discovery Place on the university's South Campus, the next step as he commercializes the patented conversion process he discovered.

Other ALES researchers are also discovering new processes to convert feedstock. Jonathan Curtis converted canola oil into polyurethane, and then used that to make rigid foam insulation panels for modular buildings. He recently signed an agreement with a West Coast manufacturer who is using his process, which was also patented.

Feral Temelli and Thava Vasanthan developed a fractionation technique to extract

beta-glucan from oats and barley. The high-concentration beta-glucan is then used as an ingredient in other foods, including as a dietary supplement. The two were the first to extract the beta-glucan cost-effectively. Meanwhile Mirko Betti is using discarded poultry meat protein and converting that into a plastic that is molded to make water bottles. These are but a few of the examples of an increasing number of ALES faculty researchers who are conducting ground-breaking research (see chart below).

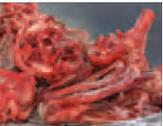
The faculty clearly sees the potential for this field. Recently, as it developed its academic plan for the next five years, the faculty listed what it calls "bioresources science" as one of its four major research themes.

"There's no question bioresource sciences will play a major role in our faculty's future and quite frankly, in the world's future," says John Kennelly, dean of the faculty.

In fact, Kennelly is the driving force behind a scheduled conference on the bioeconomy in October. Building on the 2009 OECD report entitled *The Bioeconomy to 2030: Designing a policy agenda*, the Faculty of ALES is partnering with the Canadian Faculties of Agriculture and Veterinary Medicine, the Association for European life Sciences and the Association of Public and Land-grant Universities to host the three-day conference, which will take place in October in Banff. It will focus on the challenges and opportunities in this emerging industry, paying particular attention to the environmental, social and economic implications of its growth.

The conference complements the annual retreat hosted by the Biorefining Conversions Network, in which leading academics, business leaders and government officials meet to discuss the new technologies and latest trends emerging in the industry. 

Adding value: a sampling of some of the research being conducted in ALES

ALES RESEARCHER	FEEDSTOCK	END PRODUCT
Mirko Betti	 <p>poultry meat protein</p>	 <p>water bottles and other mouldable plastic products</p>
David Bressler	 <p>cattle rendering</p>	 <p>car parts, packaging materials, DVD cases</p>
David Bressler	 <p>animal fat, crop seed oil</p>	 <p>gasoline, lubricants, jet fuel, solvent, diesel, diluents</p>
Lingyun Chen	 <p>barley</p>	 <p>coatings for pill capsules, cosmetic products, nutraceutical products</p>
Jonathan Curtis	 <p>canola oil</p>	 <p>rigid foam products, insulation panels, car parts (dashboards)</p>
Feral Temelli	 <p>carrots, tomatoes, flax oil</p>	 <p>ingredients for food and cosmetics</p>
Thava Vasanthan	 <p>barley, wheat, triticale</p>	 <p>ethanol</p>
Jianping Wu	 <p>chicken feathers</p>	 <p>films, packaging materials</p>

PLAN A

Roadtrip

to see your
classmates at

**ALES
ALUMNI
WEEKEND • 2012**



Join us for:

Friday, September 21
**Devonian Botanic Garden
Tour and Lunch**

11 am – 3 pm, Cost \$25.00/person (includes
transportation)

**Human Ecology Clothing
and Textiles Collection Tour**

Pre-registration is required (maximum 8 per
tour). Tour times 1:30 pm, 2:00 pm,
2:30 pm and 3:00 pm, No charge

Saturday, September 22
**Faculty of ALES
Alumni Breakfast**

9 am – 11 am, Hotel MacDonald,
Complimentary, Space is limited

Please RSVP for all alumni weekend events at
www.alumni.ualberta.ca



UNIVERSITY OF ALBERTA
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LIFE & ENVIRONMENTAL SCIENCES

Skepticism: *A villager wonders why ALES researchers and their party have come.*

WHY ARE YOU HERE?

Good intentions meet the harsh realities of working in an impoverished area

Story and photos by **John Pattison**

Horns blaring, the little car just barely avoids the truck careening towards us on “switchback 39”. Feeling vaguely nauseous and wishing that perhaps I had avoided the cheesy mango lassi and curry soup for breakfast, I steel myself for the next curve. Over the low barrier on my left is a drop of several hundred meters to the Tamil Nadu plain. On my right is a rock face with various inspirational yet cryptic messages: “one child = ten trees” in particular catches my eye. I gain some solace that my traveling companions, although perhaps made of sterner stuff, have also lapsed into a . . . companionable silence. But not for long. That next curve is nearly here, and the inevitable oncoming traffic. I resign myself to my fate, for there are 22 switchbacks to go.

The switchback in question is found in the Kolli Hills in the southern state of Tamil Nadu in India. Our merry band of researching adventurers are on day eight of a journey that has taken us from the organized chaos of Bangalore, to the steamy morning mists of the Kerala highlands, here to the twisting trails of the Kolli Hills, and that will ultimately lead us onwards to the heat and activity of Chennai, a city of six million off the Bay of Bengal.

Although new to these parts, my companions are well-known figures in the

hallowed halls of the University of Alberta. Dean John J. Kennelly sits in the co-pilot seat making insightful observations. Brent Swallow, co-principal investigator and experienced development economist, blinks dust of the plain from his eyes, perhaps missing the guidance of his partner in development, Nat Kav, who remained in Chennai. Seasoned professor Marty Luckert rationally observes the passing scene while graduate student Evan Miller-Tate considers his new home for the next two months. We are visiting one of our research sites in the Kolli Hills and are headed for a gathering of local Indian farmers and community members. All in a typical day for an ALES researcher involved in one of the major international research projects currently underway in the faculty.

In the spring of 2011, the Faculty of Agricultural, Life and Environmental Sciences (ALES) and the MS Swaminathan Research Foundation (MSSRF) in India received \$4.9 million in funding from the International Development Research Council (IDRC) of Canada to collaborate on a research project to inform development in southern India. The three-year project, entitled “Alleviating Poverty and Malnutrition in Biodiversity Hotspots”, includes seven faculty members and four graduate students from ALES, a pro-

fessor and graduate student pair from both the School of Public Health and the Faculty of Science, and nearly 30 researchers from the MSSRF in India.

The project has five central objectives. First, to increase farm productivity by promoting sustainable crop and livestock diversity. The second is to enhance food and nutritional security at the individual, household and community levels. Thirdly, it seeks to enhance on- and off-farm livelihood diversification and fourth, to increase capacity of local farm families and communities to deal with social and economic change, with a particular emphasis on women. Lastly it aims to organize and disseminate the information for future regional development initiatives. In order to accomplish these objectives, various interventions or activities, such as nutrition gardens and village knowledge centres, have been initiated in villages within the project site, and their success will be monitored by extensive household surveys.

We arrive at the village in a cloud of dust, and the near-death by car-sickness finally ends. There are several purposes for our visit: to meet with the local partners from MSSRF, see the nutritional gardens and cassava plot projects, and formally meet the leaders in these villages. But what I’m most interested





Better agricultural practices: A nutritional garden plot established by the project.



Agricultural staple: Indian women work in the rice paddies.

in at this time is what do the people – those local farming men and women that are directly impacted by this project – think?

I seek out the villagers who have come out to look and see what this strange group of foreigners from Canada is all about. After one particularly rousing village welcome, a woman catches my eye. A late-comer, she sits near the back and eyes our foreign delegation with some skepticism. I approach, and translating through one of our MSSRF staff partners, I ask her what she thinks of the whole affair. She bluntly asks, “Why are you here?” Explaining the basics of the research project – that we are working with the local community and the MSSRF to assist in poverty alleviation and food security – she slowly softens and wishes our team the best in our research. She expresses the hope that somehow it will help her and her family.

Throughout our journey this story plays over again and again – initial curiosity and then enthusiasm – as the women and men of the villages come out to discuss the chronic challenges they face in this part of the world. Concerns over crop yields, having access to markets for rice and cassava crops, concern

over nutritional needs of children, the rights and responsibilities of women, all issues they face. And then they bring up problems that are familiar to me, a rural Alberta farm kid: what future is there in agriculture for my children? How do I send my children to school? How do we keep the kids on the farm? The conversations are interesting and interacting

I seek out the villagers who have come out to look and see what this strange group of foreigners from Canada is all about.

with the local people brings a personal connection to the project.

This project is undoubtedly ambitious but we’re confident we can achieve our goals. International development research is a complex field of nuanced cultural dynamics, project implementation challenges and even

personality differences. Our elusive quest for sustainable interventions requires a comprehensive interdisciplinary approach, and that is why our project is made up of various experts from the U of A and MSSRF counterparts in India. Through the research and interventions, we hope that some tangible results can be found to alleviate poverty in this densely populated and nutritionally marginal part of the globe.

As the hill meetings draw to a close, I feel a sense of satisfaction from our visit here. We have seen the project gardens and we have met with the people. And although the time was short, it has given us an insight into the logistical and academic challenges ahead of us, an insight that can never be found in an email or picture. We feel a sense of connection, ownership and purpose for the project and the people that we are here to work with.

With these happy thoughts swirling in my mind, I approach the car . . . and the smile slowly disappears from my face to be replaced by a look of grim resignation. There are 72 switchbacks to traverse before night and I just had another one of those spicy soups. 🍲

An occasional series that looks at some of the **great accomplishments** made by **ALES researchers** over the years.

Berg's Bastards

Controversial research forever changed the Alberta beef industry

BY MICHEL PROULX

Photos courtesy of **Ruth Ball**

It had been a glorious day. Thirty years after Roy Berg had begun his controversial research at Kinsella Ranch, he and his fellow researchers had showed assembled guests how they had been able to improve the productivity of beef cattle by up to 40 per cent.

The 150 people gathered included the who's who of the beef cattle industry in Alberta and Canada, including then-deputy Prime Minister Don Mazankowski, who had grown up in the area.

"We were just about finished and an old farmer got up in the back," explains Mick Price, a long-time Berg collaborator who was emceeding the event. "He came walking down the middle and had a cranky look about him. He was mumbling as he was coming down the aisle and I thought, 'Oh geez, there's all ways trouble.'

"He asked me if I was finished because he wanted to say a few words. He told me, 'I was one of the people who opposed this ranch from the very start.' So he got to the microphone and asked the crowd if they minded if he said a few words. I mean, what can I do?"

"I'd like to say now that I was wrong," said the old farmer. "Roy Berg has done more

good for the beef industry than everybody else combined!"

Roy Torgny Berg grew up on a farm in Millicent, Alberta, one of nine children. He graduated from the University of Alberta with a BSc (Ag) in 1950, earned an MSc and PhD from the University of Minnesota and then, in 1955, returned to the U of A as an assistant professor in the Department of Animal Science.

Together with the head of his department, L.W. McElroy, they began planning for the creation of a beef cattle breeding facility. Eventually, they received funding from the provincial government through the Horned Cattle Trust Account and the search for an adequate site began in earnest.

It didn't take long before Berg settled on a 5,500-acre ranch in Kinsella, Alberta, two hours east of Edmonton. "This ranch had everything we wanted," Berg is quoted as saying in *Agriculture and Forestry Bulletin* in 1980. "It had native grass, shelter, (and) water with a rolling topography. It was ideal for cattle."

As an animal geneticist, Berg sought to

improve fertility in females and growth in males. Specifically, he wanted to show that selective cross-breeding of beef cattle – passing on desirable traits from a variety of breeds and capitalizing on hybrid vigour – could improve production.

You'd have thought he wanted to outlaw ranching in Alberta, given the uproar it caused.

"There were tremendously strong feelings about it," explains Price. "Ranchers thought that by crossbreeding, we would ruin the herds. They used the word 'mongrelized.' They thought that once you mongrelized the breed, you'd never get back the beauty that was the Alberta herd and everybody would be ruined."

The opposition to his research was so ferocious, producers dubbed the cross-bred cattle "Berg's bastards" and "Roy Burgers." Editorials denouncing the research were published. A group of producers even went so far as to try and have him fired from the university. Their efforts were quickly rebuffed by then-president Walter H. Johns. "He pointed out that (Berg) had tenure and there was no possible way of getting rid of him for doing what he consciously believed was the right



At home on the range: Roy Berg at the Kinsella Ranch with some purebred and some cross-bred cattle.

thing,” said Price.

Yet Berg also had his supporters, a handful of producers who believed in what he was doing. They were a small but influential group that included, among others, members of the Copithorne family, a big ranching family in Alberta, Bert Hargrave, the federal MP for Medicine Hat, and Neil Harvie, one of Berg’s students, who ran Glenbow Ranching. His father had founded the Glenbow Museum and the Glenbow Foundation.

In 1970, they and others including Sherm Ewing and John Stewart-Smith founded Beef Boosters, a company that revolutionized the bull breeding industry by following similar hybrid breeding techniques as those used by Berg. It’s still in business today.

“(Roy) often said to me that without them, he would have given up,” said Price.

“You have to have some friends out there, because if there’s no one listening to you, you have no impact,” Berg said in a 1999 *Folio* article. “You could do your research and demonstrate some things, but if you haven’t got an audience then nothing will happen. It’ll get in the scientific literature, and that’s where it’ll stay.”

Berg had the tenacity to see his research through, despite the brutal opposition.

“He was a very complex man,” says Price, who worked with Berg for decades. “There’s no easy way to describe him. He would say controversial things. He’d tell people that their cattle were too fat. He went straight for the jugular. If he believed that hybrid

If he believed that hybrid breeding was the best way to produce cattle, he wouldn’t compromise; he just wouldn’t back down.

breeding was the best way to produce cattle, he wouldn’t compromise; he just wouldn’t back down.”

In a 1989 *Folio* article, Berg says he was just being himself.

“I had colleagues in other institutions say-

ing, ‘You shouldn’t be spouting off like that or you’re going to get in trouble.’ But I couldn’t help it,” says Berg. “I never had enough sense to realize this was a danger.”

Thanks to Berg’s research program, Kinsella Ranch became one of the most successful cattle breeding research operations in the world. He bred two hybrid lines, according to Price. The first was 30 per cent more productive while the second was 40 per cent more productive.

To begin his research, Berg took a pure bred Hereford group of cows, as the breed was the standard cattle in Alberta at the time, and developed a three-way hybrid by crossing Angus, Charolais and Galloway cattle. Using the exact same criteria – fertility in females and growth in males – he compared the two groups to see which one improved the fastest.

The fertility criterion he used for females was having a calf at two years old, not three as was typical at the time, and another calf every year from then on. If they didn’t, they were no longer part of the herd. For the males, they underwent the 140-day test, which consisted of being fed for 140 days after being weaned.



In his element: Roy Berg loved the outdoors.

Whichever bulls grew the fastest under those conditions were used as sires for the next generation. The others weren't.

"You had to be a bloody good cow to stay in this herd," says Price.

At the time, according to Price, people accepted the notion that if you cross-bred cattle, there would be an immediate increase in fertility for females and growth in males through hybrid vigour.

"But many in the industry would say that you get this one jump up and from then on, it's all downhill," explains Price. "That was what many people felt. From a genetic point of view, that's total nonsense. Genetically, the more genes you've got, the faster your progress will be."

And so it was. Berg's hybrids kept getting more productive and the gap in productivity between his new line and the purebred Herfords was increasing.

"No geneticist in the world was even the slightest bit surprised," says Price.

It took Berg and his colleagues 10 to 15 years to convince the cattle industry of the merits of his hybrid breeding and the economic advantages it would provide produc-

ers. But eventually, with the evidence being overwhelming, cross-breeding became the norm in the beef cattle industry.

Today, when travelling on Alberta highways and seeing the various herds, travelers are hard pressed to find a purebred commercial herd. It happened to the late Frank Jacobs, the long-time editor of *Canadian Cattlemen* magazine, who after driving from Edmonton to Medicine Hat and back again in 1980, wrote about the trip in the magazine.

"I counted three solid black herds, four straight-bred red cattle with white face and two all-white herds. The rest were rainbow herds – crossbreds of various kinds. Why all the crossbred cattle?"

Well, one reason is that research work at Kinsella indicates that selective cross-breeding, combined with realistic selection, will increase production by more than 30 per cent over conventional one-breed systems. Try to estimate what that could mean in an industry which generates \$1.1 billion in the province in 1979."

"Just think what that means today," says Price. Indeed. 🌱

1927 – 2012

After a long illness, the man who revolutionized the Alberta cattle industry passed away last May. He was 85.

"Roy Berg was larger than life," said John Kennelly, dean of the Faculty of Agricultural, Life & Environmental Sciences. "He was a very accomplished researcher who cared passionately about students. He was one of the best-known professors ever to work in our faculty and his impact on the agricultural sector in Alberta is unparalleled."

His daughter Ruth says her father shared his love of knowledge and his love of the outdoors with her and her three siblings, and later with the grandchildren. She remembers spending her childhood summers at Kinsella Ranch. "We thought we were just having fun and riding horses but he was actually using us as unpaid help. It was win-win."

In June, the family hosted a Celebration of Life, attended by more than 150 people. They were regaled with tales of his sense of humour, passion and dedication to his family and community. He will be missed.

PEER REVIEW



Being the change:

Chris Opio in Uganda in 2009.

to the extent that we were getting angry — all the time ‘study, study, study — education is what will pull you out of poverty.’”

Opio did continue his education, going to college in Uganda for forestry and becoming an instructor there. But in 1979, dictator Idi Amin’s military was on a rampage and came to the college. Because Opio was in charge of the college canteen, he had the keys to the vehicles, which the soldiers wanted. When he didn’t give up the keys, they tortured him, hitting him on the head with a gun so that he bled.

“The college was in chaos and a group of four students from the north came to me and said, ‘what are our options?’ I said, ‘let’s go home now.’ So we started walking from there, from the college, to our village and it took us three days. (It was) 100 miles,” he says. “That was the moment I said, ‘no, Uganda was not my place.’”

Opio left Uganda in 1982. Now, he is a professor at the University of Northern British Columbia, after completing an undergraduate degree in forestry at the University of New Brunswick, a masters at the University of Calgary, and a PhD at the University of Alberta.

But the importance of education wasn’t the only lesson from his parents that Opio has implemented in his own life. Despite their family’s suffering, Opio’s parents instilled in him the need to help others.

“We didn’t have anything but we used to help people in the villages (...) The parents passed that to us – the need to help society.

“What I went through, I could’ve just come (to Canada) and said, ‘I don’t care, I’ve gone through a lot, why should I bother.’ But I said I want to do something to give to the people that don’t have.”

And Opio has given to thousands of people who do not have. As the co-founder and chairman of the Northern Uganda Development Foundation, he has overseen the construction of 42 wells to provide clean and sustainable drinking water to 50,000 people in northern Uganda.

Established in 2007, the NUDF works not only to build wells, but to make sure they last, by involving the community in the building and site selection process and then overseeing the establishment of a three-person management committee to look after the well once it’s built.

GIVING THE GIFT OF LIFE

By Alexandria Eldridge

Chris Opio arrives at the training centre in Uganda to the ecstatic singing of hundreds of villagers, who carry flowers, sprinkling them beneath his feet as he walks, calling him “King Opio.” The man who obtained his PhD in forestry and rural economy from the faculty of ALES in 1994 certainly doesn’t want the recognition, but he has given these villagers a gift. And they are very grateful.

Born and raised in northern Uganda along with nine siblings, Opio had a hard life and often went without clean and accessible water. As a child, he suffered from bilharzia, a parasitic disease contracted from snails living in contaminated water. Later, his brother died from what the family suspected

was a water-related disease.

“We had to go and collect dirty water for two to five kilometres, barefooted. We suffered from diarrhea and so on. Somehow we survived,” he says. “Then later on, one of my brothers (...) died in his late 20s. That was a milestone, a sad thing, but that didn’t stop us. I was so determined to continue my studies.”

Opio had always had a strong conviction in the importance of education — something his parents instilled in him.

“My parents were quite poor. My dad stopped (school) in grade four and my mom never went to school. But one thing they had which was really important was the value of education. They talked to us every evening,

“We feel that this a very unique approach, because some NGOs and even government (...) set up the well and just walk away assuming that the water well will last. But reports and studies have indicated that they don’t last more than a year or two years,” Opio explains.

And NUDF is still growing. They were recently able to purchase their own drilling machine and are going to be building seven new wells with it. Without their own machine, each well costs \$2,500 to drill, but now Opio suspects that the cost will be significantly reduced.

NUDF also works to educate villagers on agricultural methods and have 18 oxen and plows that they rent out to groups.

In 2008, the group met a man who said he thought he would die without ever drinking clean water. That comment has stayed with Opio.

They also have a demonstration farm where they grow a variety of crops that they can educate visitors about.

When Opio goes back to Uganda and sees NUDF’s progress, he describes it as an emotional experience. He feels inspired after hearing about how dramatically the wells improve the quality of life of the villagers. In 2008, the group met a man who said he thought he would die without ever drinking clean water. That comment has stayed with Opio.

“When I hear things like that, that inspires me that I’m really giving hope,” Opio says. “When I hear that I say, ‘yes, this is my mission – I want to give back to the community.’”

As for his many accolades and his near-royal status in Uganda, Opio is humble. “I appreciate the recognition but I just continue doing what I’m doing.” 🍀



Against the odds: Forsythe in her Connecticut studio.

EMBRACING LIFE’S CURVEBALLS

By Alexandria Eldridge

When Cassandra Forsythe was just 13 years old, she was diagnosed with a back condition called spondylolisthesis, in which one vertebra slips forward in relation to the one below. For many, a condition like that would signal the end of a fit lifestyle. For Forsythe, it was just the opposite.

Although forced to quit gymnastics because of her condition, she adjusted to the curveball life threw at her and became a self-proclaimed “gym rat,” discovering a love of fitness and the gym.

Later, fully expecting to embark on a career in sales, she enrolled in business at the University of Northern British Columbia.

“When I did my first microeconomics class, I was like, ‘this sucks - I’m never doing this again!’ So I moved over from there.”

The second curveball propelled her to the University of Alberta where she discovered her other passion — nutrition. “Food is better than medicine. When you change what you eat, you can heal a lot of different ailments and I had my own personal ailments, so nutrition was always one of the things that helped me.”

Forsythe earned her BSc and MSc from

the Faculty of ALES and then moved to the University of Connecticut where she obtained her PhD in Exercise Science and Nutrition in 2009. But then another curveball was thrown.

“Pretty much the day of my graduation I found out I was pregnant. I was going to stay in academia to do some teaching . . . but that was kind of put on hold because of the baby,” Forsythe explains.

Once again, however, the change in plans turned out to be a gift. Forsythe started teaching fitness classes after having her baby and discovered how much she loved motivating clients, leading her to open her own fitness facility, which now has 200 members. A passionate fitness and nutrition advocate, she has written two books and numerous articles in magazines such as *Women’s Health* and *Oxygen*.

While the B.C. native never imagined that she would settle down so far from home, she has found her calling. “I do enjoy being active every day and I also enjoy encouraging other people to be happy and fit,” she says. “A lot of people have a lot of stress in their jobs, so I want to be the person that makes them less stressed.” 🍀



Ministerial appointment: *Chelsea Geiger on her family's farm near Westlock.*

GRAD TO BEND MINISTER'S EAR

By Michel Proulx

It was, to put it mildly, an unexpected moment. Last February, Chelsea Geiger, '12 BSc (Ag), was participating in a meeting between then-Minister of Agriculture and Rural Development Evan Berger, Assistant Deputy Minister Jason Kripps, Dean of Students and ALES professor Frank Robinson and other learning coaches of the Heifer in Your Tank program. They were discussing the future of the program, which is delivered through the cornerstone second-year Animal Science 200 course.

Taught by Robinson, students are given an agricultural question to answer. In small groups, their task is to find the answers and present them in a creative way, either as a short skit or video. The idea is to have students own their learning, according to

Robinson, a recipient of a 3M teaching fellowship, the highest teaching honour awarded to university professors. Robinson is convinced the more students own their learning, the better they will do.

In Geiger's case, it did much more. During her first year, the Westlock resident struggled with loneliness and depression, crying herself to sleep most nights. The course, with its camaraderie and shared learning, helped her turn things around. "Having that sense of community and friendship base was night and day, the change it made in me. Now I have such power to be the happiest person I can be," she says.

She remained in the program for the rest of her degree as a learning coach, providing advice to new students. This spring, she

was hired as the new coordinator for Heifer in Your Tank, which performs its skits and shows its videos in different communities every year. But that will only be her day job.

At the end of the meeting, Minister Berger and Kripps asked her if she would be interested to sit on a new council they were forming that would provide advice to the government about getting young people involved in agriculture.

"Through my talking about growing on a farm and wanting to take over the family farm, but first I want to do ag education, I guess my passion for agriculture really came out," she says.

The 13-member Next Generation Advisory Council is scheduled to hold its first meeting this month. 🏡

THE WINTER COUNT AN ASTONISHING TALE

Allen Wells has never been one to sit back and wait for life to come to him. His recent accomplishment is no exception.

“Rather than wait for somebody to write your obituary, you should write your autobiography, and that’s what I did,” said the 1951 Agriculture grad. Wells, 81, recently self-published a book, entitled *The Winter Count*, which details his early life, beginning with his birth in Wellsville, Alberta in 1931. Wellsville was a small community in southern Alberta — Wells describes it as “a desk in our living room.” After the Depression hit, the family moved to Saskatchewan where Wells discovered a curiosity for trees.

“There were no trees in southern Alberta so I was interested in trees and bird’s nests,” he explained. This interest would change the course of his life. “I smacked a willow branch across my eye and ended up with about 16 per cent vision. Most of my life was kind of racing to get an education before I would have to convert to braille.”

But rather than sit back, Wells got to work. In a family of teachers, he quickly finished his high school education. At 16, he was the youngest student at the Faculty of Agriculture where he wrote for *Evergreen and Gold*, was a member of both the Philosophical Society and the Agriculture Club, and worked at the plant science research lab.

“Alberta had a very high reputation in agriculture at that time,” he described, particularly noting the talented faculty members. But the highlight of his time on campus was the first Bar None dance in 1950.

After a short career in agriculture that included a trip to Yellowknife, he went on to become a teacher and taught in West Africa and the West Indies, after which he began work with the UN in emergency response. He also worked in the Philippines, Brazil and Bahrain before eventually returning to teaching as a professor at the University of Windsor and teacher at Lambton College.

Even though this is his first book, Wells has written many articles over his lifetime.

“While writing isn’t something that I inherited, writing is something that the family tends to hold highly,” he said, noting the importance of accurate family history. “I thought it would be wise to write down what is correct and then seven generations from now people would get that version rather than a muddled version.”

One grateful reader is his son, Paul, the political editor at *Maclean’s* who wrote about his father – and the many lessons he learned from him – and his book in the June 25 issue of the magazine.

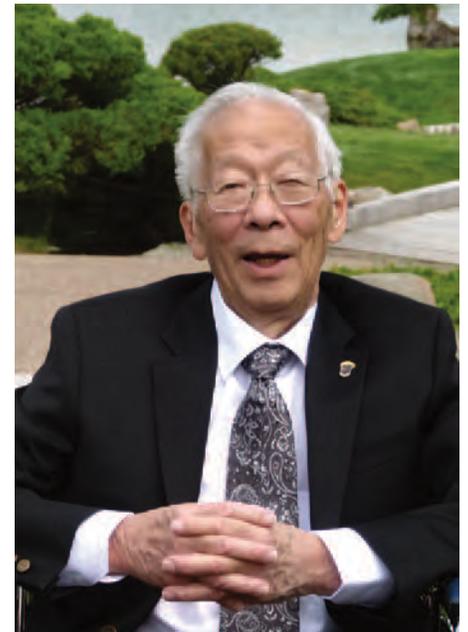
“He is not a man of famous achievement and I took his little book project to be the sort of thing one does at a certain age. Then my copy arrived. I read it and discovered an astonishing tale.”

The Winter Count is available as a hardcover, softcover or ebook on the Xlibris website. It is also available as an audio book on the PayLoadz website.

– Eldridge



My first Bar None: Allen Wells is all decked out for the first-ever Bar None in 1947.



Garden paradise: Robert Hironaka in the Japanese garden he co-founded.

HIGH HONOUR FOR HIGH ACHIEVER

When Robert Hironaka, ’51 BSc (Ag) and ’53 MSc, got the call that he had been awarded the Alberta Order of Excellence, he was stunned. “You must mean someone else,” he said. No, not at all.

Dr. Hironaka, a former chancellor of Lethbridge University who had a distinguished scientific career in animal nutrition, is being honoured for his tireless work at strengthening multiculturalism in Lethbridge and Alberta. He played a major role in the development of the landmark Nikka Yuko Japanese Garden in Lethbridge, built in 1967, and continues, to this day, to sit on the board of the Garden he loves.

“I first looked at Nikka Yuko to enjoy its outward beauty. When I saw beyond the physical beauty of the garden, I realized the balance, harmony, simplicity, beauty and nature inherent in it. It was then that I felt the true value of the garden, even for just a moment.”

Dr. Hironaka will be invested into the Alberta Order of Excellence, along with seven other Albertans, this fall.

– Proulx

REES CELEBRATES 50 YEARS OF SCHOLARSHIP AND SERVICE

After concurrent meetings of the two networks hosted by the department, a well-attended and well-delivered keynote speech by the Globe and Mail's award-winning national affairs columnist, Jeffrey Simpson, a full day of panel discussions about agricultural economics, environmental sociology and resource and environmental economics, and a guided tour of the campus conducted by well-known alumnus Reg Norby, '74 MSc, it was time to party. More than 200 REES alumni and their guests gathered at the Old Timer's Cabin for a dinner, dancing and good times.





- ❶ Former chair Michele Veeman and Alex McCalla, '61 BSc, who is a professor at University of California - Davis.
- ❷ Former Saskatchewan Premier Grant Devine, '69 MSc, in conversation with Murray Hawkins, '64 MSc, the department's first-ever graduate.
- ❸ Jane Norby, Maureen McMillan, Melville McMillan, '67 MSc, former Chair Michele Veeman, Professor Emeritus Terry Veeman, Vic Yanda (support staff from 1962-66), Lasha Savage, (support staff from 1963-75), Sandy Lockhart and Jim Lockhart, '67 MSc.
- ❹ Gordon Murray, '02 MSc, Gordon Lee, current PhD candidate, Professor Peter Boxall, '91 MSc, '99 PhD, and Craig Schram, '09 MSc.
- ❺ Dianne McCann-Hiltz, '02 MSc, Lukas Matejovsky, '10 MSc, and Jennifer Jabs, '02 MSc.
- ❻ Top: Emad Ghafoori-Chamanifard, Catalina Solano Rivera '09 MSc, John K Pattison, '09 MSc, Jesse Cole, '10 MSc and Heather Cole. Bottom: Maryam Chamanifard, '11 MSc, Lukas Matejovsky, '10 MSc, Curtis Boyd, '12 MSc and Adrianna Boyd.
- ❼ Current MSc students Shuoyi Xie, David Zimmer and Kara Barnes.
- ❽ Janaki Alavalapati, '90 MSc, '95 PhD.
- ❾ Gosia Armstrong and Glen Armstrong, '90 MSc.



PHOTOGRAPHY: MICHEL PROULY (2, 4, 6, 7, 8); SVEN ANDERS (5, 9); BRETT LAMBERT (3); MANIKARNIKA KANJILAL (1)

AFTERGRAD

Not just Grandpa's helper anymore

By Monika Ross, '10 BSc (Ag)

After a wonderful four years of learning, on May 3, 2010, I officially closed the chapter of my life that was my university career.

Everyone told me I was ready, I had the skills, the knowledge and the confidence to take on a job in the agriculture industry.

I packed up my truck, said goodbye to the big city and made the trek back to the Peace River Country, ready to take on the farmers and ranchers of the region.

In January of that year, I had accepted a livestock nutrition and sales position with Champion Feed Services, out of the Grande Prairie Mill. From now on, I would spend the majority of my waking hours in a small green pick-up truck, travelling a vast territory, serving cow-calf producers and feedlot operators in the Peace Country of northern Alberta and British Columbia.

When I look back on the day I started my career, it's hard for me to imagine how I did my job every day, how I made farm calls and recommendations to producers with the limited real-world experience I actually had.

Granted I had spent my entire life around agriculture and livestock, but the way you see the world as Grandpa's helper feeding calves or the veteran 4-H member is much different from the way things really are when you're immersed in production situations and making decisions.

Fall is the busiest time of year for a feed mill, especially for a nutritionist. On a mid-September day during my first year with Champion, I suddenly realized the reality of what I had signed up for. It had already been a long week and it was only Tuesday, I remember thinking that warm fall day. I was spending the week in the BC Peace, visiting



On the road, selling feed: Monika Ross and her trusted small green pick-up truck.

ranches north of Fort St John and up the Alaska Highway, in some very isolated areas. I had already been lost twice that day down winding roads with poor signage, I had come across a couple of challenging questions I couldn't answer, I was having trouble returning phone calls because of poor phone service and I still had three more farms visits before I made the two-hour drive back to stay in Fort St. John for the night.

I was feeling more than a little overwhelmed but by the end of the week, I felt much better about the challenges I was going to face over the next few months. I had enjoyed all of my visits with producers that week, I had acquired a Northern BC back-roads map and I had taken in countless stunning views along the way. I was once again excited and determined to do my job, to contribute what I could to the Peace Region's agriculture industry and learn all that I could from my co-workers and more importantly, customers.

Over the next few months, I would learn

to become very independent. Thankfully, I sure thought I was smart when I left university; the confidence I had gained and the strong foundation of knowledge I had acquired in my classes carried me through the very challenging first few months of my new job.

Over the past two years, it's hard to believe how much I have changed and grown. I have gained a vast amount of knowledge and experience and truly enjoy working with ranchers and their livestock. I have recently been expanding my livestock nutrition repertoire beyond the bovine species, and can be found giving advice on raising a backyard chicken flock, how to start lambs on creep feed, and I'll even give the odd recommendation on

goat nutrition!

The producers with whom I am privileged to work keep me excited to go to my job each morning; not only are they welcoming and gracious, but they have given me a wealth of new knowledge and I never leave a farm without learning something new. I enjoy the challenge of helping a producer meet their production goals and solve feed-related problems. I have also had the opportunity to become involved in my community, sitting on the Teepee Creek Stampede Board and the Peace Country Beef Congress Board of Directors.

I feel blessed and privileged to have been given the opportunity to come back to the community I grew up in and to do the job that I do. I treasure the freedom that I have and the opportunity to see the rare beauty of this northern country. My little green truck and the ranches of the Peace Country have been the perfect classroom for me to further my knowledge and allow me to be immersed in the industry that I love. 🍀

SAVE DATE



Forest Industry Lecture Series

Sally Aitkens
Professor, Director of Centre for
Forest Conservation Genetics
November 1, 2012
3:00 p.m.
Myer Horowitz Theatre



Bentley Lecture in Sustainable Agriculture

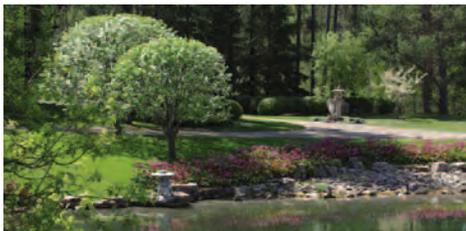
Norman Uphoff
Cornell University
November 14, 2012
3:30 p.m.
Myer Horowitz Theatre



Bar None Alumni Dinner

November 17, 2012
5:30 p.m.
Shaw Conference Centre

Alumni Weekend September 21-22, 2012



Devonian Botanic Garden Tour and Lunch

Friday, September 21
11:00 a.m. to 3:00 p.m.
\$25/person (includes lunch and bus
transportation)
Bus departs from Agriculture/Forestry
Building at 11:00 a.m.



Human Ecology Clothing & Textiles Collection Tour

Friday, September 21
1:30 to 3:00 p.m. (tours depart every
half hour)
Human Ecology Building



Alumni Brunch

Saturday, September 22
9:00 a.m.
Hotel MacDonald, Edmonton

greenhouse

2-14 Agriculture/Forestry Centre
University of Alberta
Edmonton, AB T6G 2P5



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