

REACHOUT



*Borrowing
the Farm*
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DEAN'S MESSAGE

WE ARE A FACULTY OF SUPERHEROES.

If you think about it, the goal of any good superhero is to save the world – which is exactly what our faculty members, staff and students set out to do every day by addressing global issues surrounding health and sustainable land and food systems.

And there is much that needs to be saved. All living things depend on the sustainability of the earth's resources, and learning how to protect and better manage those limited resources is crucial to our survival. Critical environmental issues like water pollution, food shortages and rising temperatures could have a catastrophic effect on our ability to meet basic human needs in the near future.

Here's the good news: experts in the Faculty of Land and Food Systems are working on solutions to many of these problems. Our researchers are studying everything from climate change and food security to the relationship between food, nutrition, diet and health. The research discoveries being made here have the potential to reach across borders for world-wide applications..

We're also sharing what we've learned with the next generation of scientists – our students. They come to us with a strong sense of global responsibility, passionate about creating positive and lasting change. We believe



that by providing them with the opportunity to learn outside the traditional classroom – whether it's through an internship in their chosen field, taking part in a community-based experiential learning project or studying overseas - we can enhance their education and help them develop the skills they need to make their mark.

I can personally attest to the quality of education that our students receive, having once been a student here myself. To be able to return as Dean is particularly rewarding for me and I'm looking forward to working together and helping to shape the future of the Faculty of Land and Food Systems.

RICKEY YADA

DEAN, FACULTY OF LAND AND FOOD SYSTEMS



MURRAY ISMAN

AFTER NINE YEARS AS DEAN of the Faculty of Land and Food Systems, Murray Isman stepped down on September 30, 2014. Under his leadership, the Faculty launched

three new professional masters programs – Master of Food and Resource Economics, Master of Food Science and Master of Land and Water Systems – and the undergraduate program in Applied Biology. Undergraduate enrollment rose by 40% and the number of international students studying with our Faculty doubled. Isman also hired 14 new faculty members and helped to strengthen and promote staff morale through the development of employee programs and initiatives.

An internationally recognized scientist, he was recently one of ten new Fellows elected to the Entomological Society of America (ESA) for 2014. With almost 7000 members, the ESA is the largest professional organization of entomologists in the world. The election as a Fellow acknowledges outstanding contributions to entomology in one or more of the following: research, teaching, extension, or administration.

Isman will remain connected to the Faculty as a Professor and will continue his research in natural insecticides, insect toxicology and plant natural products, with particular emphasis on the development of botanical insecticides and antifeedants.

FOOD SCIENCE ALUM CREATES SIPsoda

Not many people can list gourmet ice cream bar consultant on their resume, but that's just one of the interesting job titles food scientist Jennifer Martin has had over the course of her career.

After graduating with her BSc in Food Science in 1979, Martin earned an MBA through the UBC Sauder School of Business. She worked in food product development for a number of major companies - Loblaw's, Heinz, and Dickie Dee Ice Cream - before striking out on her own and starting a company that placed water vending machines in grocery stores. That experience, along with an interest in herbs, eventually led her to create SIPsoda, a Vancouver-based company that produces "Simple, Infused, Pairings of Botanicals and Fruit" set in a sparkling spring water base.

"I have a love for good water and I thought I could take herbs and use them the way the wine industry uses grapes to create unique flavours," she said. "I wanted to develop an authentically healthy drink and lead the industry in bringing the level of added sugar down."

Martin worked out of her kitchen, pairing fresh herbs and citrus peel, trying to come up with a unique beverage with strong health properties that used very little sugar. The result was compelling flavours like lavender lemon peel, coriander orange and rosemary lime, each with 80% less sugar than regular soda and only 25 calories a serving.

"We're kind of a sophisticated lemonade stand," she said, adding that as a small business owner, she's responsible for overseeing manufacturing, distribution, public relations, and research and



development. "Starting SIPsoda was a big risk because it's a very different drink, but it's been a lot of fun and it's accomplishing what I wanted it to."

SIPsoda is sold at Whole Foods, Urban Fare, Loblaw's City Market and select Save on Foods, as well as being served in restaurants around Vancouver, including UBC's Point Grill. ☺



A MONGOLIAN-STYLE YURT

IS A UNIQUE AND SUSTAINABLE ADDITION TO UBC FARM

A 65-square-metre yurt—a circular, semi-permanent tent-like structure common to Mongolia and other parts of Central Asia—now sits on the grounds of the UBC Farm. A rare sight at a university, not to mention an urban setting, the centuries-old design of these collapsible bent wood structures is simple, smart and sustainable.

UBC Farm will use the yurt for courses, children’s programs, community workshops, as well as events and lectures.

“We were bursting at the seams with our programming and our current facilities couldn’t keep up with the growth that we were seeing,” says Director Amy Frye. “Building a yurt seemed like a sustainable solution.”

Yurts consist of a circular latticework frame wrapped with fabric and covered by a domed roof. They are easy to assemble and transport while also sturdier than a typical tent.

They first started popping up in North America in the late 1960s, and have become more popular in recent years. Their historical significance, however, dates back much further.

“Yurts have been the primary form of housing in Central Asia for centuries, even before the arrival of Genghis Khan,” says Julian Dierkes, a sociologist and expert on Mongolia at UBC’s Institute of Asian Research. “These ancient dwellings remain hugely significant in the region.”

In addition to nomadic Mongolians, nearly a half-million people who live outside the capital of Ulaanbaatar still live in yurts, Dierkes adds.

As for the yurt at UBC Farm, Frye says it’s the first step towards greater expansion.

“We hope to see even more infrastructure go up in the next couple of years that’s as unique and useful as the yurt is already proving to be.”

The yurt was made possible by a number of generous donors and friends of the UBC Farm who supported the project. ☺



FAREWELL, AMY FRYE

After serving as Director of the UBC Farm for the past three years, Amy Frye is stepping down from the role this winter to take on a new challenge: starting a farm with her husband, Jacob.

Amy began her career with the UBC Farm in 2006, working her way from Marketing Coordinator to Programs Manager to Director in 2011. She was involved in the campaign to secure the UBC Farm site and has overseen the organization during periods of significant growth. In the past few years, she has worked closely with Dean Murray Isman to move plans for a new Farm Centre forward. ☺





Enhancing **BEE HABITAT** AT THE UBC FARM

It's no secret that a widespread decline of the world's bee populations is underway and that it poses a very real threat to our food security. This decline has been linked to pesticide use, changes in land use, and loss of biodiversity. Close to home, the local loss of natural vegetation, due to urban development coupled with agricultural land use, can effect farm biodiversity, including bee populations.

In response, the Centre for Sustainable Food Systems (CSFS) at UBC Farm is collaborating with Shifting Growth on a project to enhance the Farm's bee habitat and increase biodiversity. Shifting Growth is a Vancouver-based organization that transforms vacant, under-utilized spaces into temporary community gardens and growing spaces.

"CSFS is a unique research centre that aims to understand and fundamentally transform local and global food systems," said Véronik Campbell, Academic Programs Manager. "This project fits perfectly with our research mission at CSFS because it presents us with the opportunity to ask how we produce healthy food and develop thriving, engaged communities while still ensuring responsible stewardship of our environment within the context of competing land uses."

To start the project, hedgerows, comprised of native pollinator habitats, will be planted among UBC Farm's cultivated fields. The hedgerows are designed to provide bee forage, which will boost the resiliency of the resident bee populations. In addition to forage, these hedgerows will serve as an important research platform.

"CSFS seeks to be a university and community research space that allows people from different disciplines to work together on complex problems. The complexity

of the bee decline is a perfect example of how we need multiple perspectives and expertise to find sustainable solutions for these types of problems," said Andrew Riseman, Academic Director. ☺



PROPOSED UBC FARM CENTRE RECEIVES \$1 MILLION GIFT FROM THE RBC FOUNDATION.

The UBC Farm Centre is one step closer to becoming a reality, thanks to a \$1 million gift from the RBC Foundation. RBC's investment in the Centre for Sustainable Food Systems (CSFS) makes them the first major donor committed to helping construct a new eco-friendly building at the UBC Farm, which will be used for research, teaching and community learning.

"As our first community investor into our infrastructure, RBC accelerates the UBC Farm's local and global impact as a prototyping site for exportable solutions relevant to communities worldwide," said Amy Frye, Director, Centre for Sustainable Food Systems.

The proposed infrastructure will enable CSFS to be a global gathering place to create solutions addressing every part of the food system, from sustaining honeybee populations to promoting the next generation of farmers' access to land. Plans for the site includes research labs, classrooms, kitchens, flexible working spaces for community groups, increased space for crop preservation and seed saving, and meeting spaces for hands-on learning that are integrated into the farmland landscape. ☺

UBCFARM.UBC.CA

BORROWING THE FARM

YOUNG FARMERS, OFTEN WITH UNIVERSITY DEGREES, FIND ALTERNATIVE MODELS TO GAIN ACCESS TO LAND

Young BC farmers who don't own land and don't have enough money to buy a farm are finding creative ways to get their hands on the acreage they need.

That's the most recent finding of a new report by Hannah Wittman, an associate professor in LFS and Jessica Dennis, an LFS master's student.

Their report examines community farms and agricultural land trusts in the province, as well as identifies the needs and challenges for new farmers.

"If you don't come from a traditional farming background or inherit land, the barriers you face to farm can be quite significant," says Wittman.

It should be no surprise that the biggest need – and challenge – for beginning farmers, many of whom are cash-strapped university graduates, is money. A quick online search for farmland in B.C., for example, lists 27.6 acres for \$1.52 million in Langley.

So what do you do if you have a green thumb, but no deep pockets? Enter "alternative models of land access," a farming formula gaining ground in the province.

"Through documenting and characterizing these alternative access models, we've found that there are actually quite a few options out there," says Wittman. "We have a growing inventory of examples that new or prospective farmers can use to build their own strategy to access land."

Some of the options documented by the researchers are:

INCUBATOR FARMS

A municipality or organization grants new farmers the option to use their land for a set number of years, up to seven in total. "The structured lease allows you to grow into your farming practice with a buffer of having an organization around you," explains Wittman. Equipment and growing and marketing knowledge is shared among other new farmers on the land.

LAND LINKING

As the name suggests, this option links new farmers with retiring landowners. The retiring landowner serves as a mentor as the new farmer learns to manage the land, eventually transferring ownership through an individual or cooperative financing arrangement. "This is beneficial for new farmers who do not come from farming families," said Dennis.

CO-OPERATIVE FARMING

Several types of co-operative farming exist. In one case, multiple people work as a single co-operative business on the land. In another, several independent businesses co-operatively share an individual farm. One of the farms included in Wittman's and Dennis' research hosted an herb business, a bee business, goats and eggs, and fruit and vegetables all operating on one piece of land.

FARMLAND TRUSTS

Farmland trusts hold land that is taken out of the market permanently. Land is donated or purchased through community-based fundraising and held in trust, usually by a non-profit organization or a municipality. This protects the land from real estate speculation. Farmers are able to access the land through a long-term affordable lease for food production.

But farmland trusts are easier said than done, and are still rare in the agricultural sector. Groups still need to finance the acquisition of the land through investors and community fundraising. In addition, they need the support of a non-governmental organization or city that wants to preserve the land they buy for farming. Dennis says the feasibility of farmland trusts "depends on political will and community support."





CLASSMATES TURN FARM DREAM INTO A REALITY

What began as an idea tossed around between classmates soon turned into an award winning agriculture enterprise, thanks to a shared vision and a lot of hard work.

In 2013, Foster Richardson, Natasha Tymo, Jay Baker-French and Kelsey Knoll decided to take what they'd learned through their studies – Applied Biology and, in Richardson's case, Global Resource Systems – and apply them to their own farm.

"We all knew we wanted to be farming, and having that common educational background meant we were on the same page in a lot of ways," said Richardson, who credits the skills they developed through LFS courses in soil science and small business management in agri-food industries for helping them become better farmers.

The first challenge the group faced was finding affordable farm land. So when Edgar Smith, co-owner of Beaver Meadow Farms in Courtenay, BC offered to lease them three acres of his land to grow organic crops, the group jumped at the chance.

And they haven't looked back. These days, the four of them live together in a house on the farm, about a km from their field, and they eat what they grow – which is everything from vegetables and cereal grains to black beans and quinoa. They also sell their produce at farmers markets around the Comox Valley, as well as to restaurants, and through weekly community-supported agriculture (CSA) boxes.

After just one year of business, the group – known as The Birds and the Beans – won the 2013 Comox Valley Chamber of Commerce Agriculture Business of the Year award. The recognition means a lot, as they see it as affirmation that they're on the right track.

"This whole experience has been a good test to see if this truly is the life we want to live," Richardson said. "We haven't had to sink much capital into our farm, it's just been an investment of our time, but it's been worth it. We're learning so much."

THEBIRDSANDTHEBEANS.BLOGSPOT.CA

STORMY WEATHER AHEAD FOR FARMERS?

Wittman and Dennis' report is part of a larger community-based research project they coordinate with the Centre for Sustainable Food Systems at UBC Farm and FarmFolk/CityFolk, a local NGO that supports local growers and producers. The project, a public sector finalist in the 2014 Real Estate Foundation of BC Land Awards, has documented some 60 farms across B.C. that rely on some alternative land access model.

Farmland access is becoming more of an issue due to recent changes to the Agricultural Land Reserve, a zoning designation that is applied to 4.7 million hectares of public and private land in the province. The changes have raised concerns about the future of the B.C. farming industry. Unlike farmland trusts, land in the ALR can still be sold and used for residential purposes.

The changes have also opened up farm and ranch land, as well as traditional hunting and gathering lands used by Indigenous communities in Northern B.C., for commercial development, including liquid natural gas exploitation.

According to Wittman and Dennis, the competing pressures for land use threatens food security.

"If we don't preserve our foodlands, we have no food," says Wittman. "Regional food security is a growing concern in the face of climate change and in the face of increasing problems with food production in the United States."

Helping new or prospective farmers is vital to maintain and improve B.C.'s local food system, the researchers say. Otherwise, the food we eat will have to come from somewhere else. ☺

UBC CLIMATE STATION

TRACKS WEATHER CHANGES
FOR OVER 50 YEARS.

Climate change is top of the list of environmental issues that our planet is facing. Over the past 50 years, the earth has warmed up considerably and, as a result, many areas of the world are experiencing weather changes.

One of the tools scientists use to monitor and record changes in weather patterns are climate stations. UBC's own climate station, located at Totem Field, has been recording climate data since 1957. The station provides measurements of atmospheric variables such as temperature, humidity, wind, precipitation, snow, and radiation.

"The climate station allows us to look at weather changes at Totem Field over an extended period of time," said LFS Professor Andy Black. "Keeping a record is important because it allows us to better understand the impact of CO2 emissions and deforestation on the atmosphere, and also helps us to predict future changes to the climate."

Black has been involved with the campus climate station since the mid-1970s. Thanks to Black and his colleagues, the station has kept up with technological changes – instead of having to physically visit the station in order to read data, for example, the information is directly uploaded to a database.

The creation of the climate database was part of a UBC Teaching and Learning Enhancement Fund grant that Black and Andreas Christen (UBC Department of Geography), received a few years ago. The statistics date back to 1959 and are used by UBC researchers and students to monitor local weather, growth conditions, climate statistics and climate change on campus.

In order to collect the most accurate reading, climate stations need to be situated in a grassed area, away from urban buildings. A climate station is currently in the works for the UBC Farm, a natural place to put one, according to Black.

"The Farm often has school tours and it would be fantastic to be able to teach kids and other visitors about how we monitor our climate," he said.



WALKABOUT THURSDAYS AT THE UBC FARM

This past summer, students enrolled in the UBC Farm Practicum in Sustainable Agriculture participated in "Walkabout Thursdays", an outdoor lecture series held at the UBC Farm. The series was delivered by some of our emeritus professors, including Judy Myers, Bob Copeman, Bob Blair, Art Bomke and Tim Ballard, and featured topics such as entomology, poultry care and nutrition, and sheep handling with dogs. Discussions were also led by Professor Mahesh Upadhyaya (weed ecology and management) and LFS alumnus Bill Awmack (seeds, forage and cover crops).

JULIE WILSON IS UNCOVERING INNOVATIVE APPROACHES TO STORMWATER MANAGEMENT, EVEN IN YOUR OWN BACKYARD



AS THE REALITIES OF CLIMATE CHANGE set in, cities need to pay attention to stormwater management if they want to avoid a flooding crisis, says Julie Wilson, Academic Coordinator for our Masters of Land and Water Systems program.

Why is stormwater management important for cities?

Urban centres are projected to grow in many parts of the world. They consume large amounts of resources and generate a lot of pollution. Stormwater management can help mitigate some of the environmental impacts. When rain falls onto the ground, especially in cities, the water can't be absorbed back into the soil. Water that falls on impervious surfaces, like roads and parking lots, creates stormwater runoff, which is a phenomenon we don't typically see in natural landscapes. During heavy rain events, excess stormwater can lead to flooding, which can have devastating consequences, both environmentally and financially, like in Toronto last July. Stormwater can also pick up oil and grease before going down a storm drain, where it eventually discharges into an ocean, river or lake, depending on where you are. This can have an adverse effect on habitat for fish and other organisms.

What are some ways people can help manage stormwater at home?

The driveway and the roof are the main sources of run-off to your stormwater system in a single-family home. One way to better manage stormwater is to detach your gutter's downspout that connects to the storm sewer and replace it with a splash block or gutter chain. This allows water to run down and infiltrate into the soil on your property. Some homeowners create rain gardens below gutter chains, turning them into a water feature. It's both functional and decorative. Replacing a large asphalt driveway with interlocking paving stones or pervious pavement will also help retain rainwater on your property. Changes on an individual property will not significantly reduce urban flooding, but multiply these small changes across an entire urban watershed and the cumulative effects can be considerable.

Why should the average person know about stormwater management?

Innovative stormwater designs can often be overlooked as we wouldn't necessarily take notice of them in our everyday lives. But having awareness about these technologies can empower people to think about new developments being built in and around their communities, and ask whether these techniques are being implemented or not. Being knowledgeable about stormwater management makes us think about where we live a lot differently, which hopefully spurs people's desires to be more environmentally conscious. ☺



UBC's Tony Farrell is part of a research group that studies the ability of the Atlantic salmon to adjust to warmer temperatures.

Populations of Atlantic salmon have a surprisingly good capacity to adjust to warmer temperatures that are being seen with climate change, a group of scientists at the University of Oslo and University of British Columbia have discovered. The finding about Atlantic species adds to recent UBC-supported research on heat tolerance of Pacific salmon.

The new study, a collaboration between Norwegian and Canadian researchers, was recently published in *Nature Communications*. Funded by the Norwegian Research Council, it addressed questions around how climate change might affect salmon species distribution and abundance.

UBC authors of the study include Katja Anttila, a postdoctoral fellow who now works at the University of Turku in Finland, and Tony Farrell, Chair in Sustainable Aquaculture.

Scientists studied wild salmon from two European rivers. They compared a cold-water population from Norway's northern Alta River, where

water temperatures have not exceeded 18°C for 30 years, with warm-water populations from France's Dordogne River, located 3,000 kilometres south, where annual water temperatures regularly exceed 20°C.

Eggs from both populations were hatched at the University of Oslo, where they were raised at 12 or 20°C. Despite substantially different natural environments, both populations had remarkably similar capabilities when warmed.

When reared at 12°C temperatures, salmon from both populations developed cardiac arrhythmias at 21 to 23°C, after a maximum heart rate of 150 beats per minute. But those raised at 20°C developed cardiac arrhythmias at a surprising 27.5°C, after the heart reached 200 beats per minute. Researchers found that increasing the fish's acclimation temperature by 8°C raised temperature tolerance by 6°C.

"The results are surprising," Farrell said. "A fish faced with uncomfortably warm temperatures might relocate or even die if it is too extreme. Here we have evidence for warm acclimation of a commercially and culturally important fish species." ☺

AWARDS AND HONOURS

KILLAM GRADUATE STUDENT AWARD

Soil Science MSc student Bryanna Thiel – teaching assistant for our Land, Food and Community II (LFS 350) course – was selected for a 2013/14 Killam Graduate Teaching Assistant Award. UBC annually awards teaching prizes to 16 UBC Teaching Assistants in recognition of the valuable role they play in our undergraduate programs.

KILLAM POSTDOCTORAL RESEARCH FELLOW

Dr. Becca Franks joined the UBC Animal Welfare Program as a Killam Postdoctoral Research Fellow in March. The UBC Killam Postdoctoral Research Fellowships are provided annually to support advanced education and research. Recipients receive an annual stipend of \$50,000 for a maximum of two years plus travel and research allowance of \$4,000 over two years.

2014 CANADIAN NETWORK FOR INNOVATION IN EDUCATION AWARD

In May 2014, the SOILx project team led by Associate Professor Maja Krzic was awarded the 2014 Canadian Network for Innovation in Education (CNIE) Award for Excellence and Innovation in the Integration of Technology, in a Formal or Non-Formal Educational Program. The award was given for their cross-platform project, SOILx (soilx.ca), an interactive teaching and learning tool.

STARS IN GLOBAL HEALTH GRANT

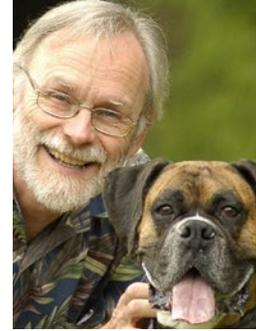
Human Nutrition PhD Candidate Kyly Whitfield and Professor Tim Green have received a Grand Challenges Canada “Stars in Global Health” seed grant. The grant, worth \$112,000, will fund their project on fortifying fish sauce in Cambodia with thiamin to raise levels in mother’s milk and prevent infantile beriberi.

VANIER CANADA GRADUATE SCHOLARSHIPS

Crystal Karakochuk, a PhD student in Human Nutrition, was awarded a Vanier Canada Graduate Scholarship. The Vanier Canada Graduate Scholarships program attracts and retains world-class doctoral students and helps establish Canada as a global centre of excellence in research and higher learning. The scholarship is worth \$150,000, paid over three years. Crystal is investigating integrated nutrition and agriculture programs in Cambodia and their impact on poverty, food security, and nutrition.

CANADIAN INSTITUTES OF HEALTH RESEARCH (CIHR) DOCTORAL RESEARCH AWARD

Kyly Whitfield, a PhD candidate in Human Nutrition, received a Canadian Institutes of Health Research (CIHR) Doctoral Research Award as part of the Frederick Banting and Charles Best Canada Graduate Scholarships doctoral program. The award, valued at \$105,000 over three years, is intended to provide special recognition and support to students who are pursuing a doctoral degree in a health related field in Canada. Whitfield’s doctoral project aims to decrease the level of thiamin deficiency among Cambodian women of childbearing age as a means of improving the health of Cambodian infants.



UFAW MEDAL FOR OUTSTANDING CONTRIBUTIONS TO ANIMAL WELFARE SCIENCE

Professor. David Fraser of the UBC Animal Welfare program received the Universities Federation for Animal Welfare (UFAW) Medal for Outstanding Contributions to Animal Welfare Science in July 2014. The award recognises scientists for “fundamental contributions to the advancement of animal welfare”.

Professor Fraser’s work has greatly influenced the quality and direction of animal welfare research and policy for more than 40 years. He conducted some of the earliest research on the welfare problems of pigs, did pioneering work on the use of vocalizations to identify emotional states in animals, and studies of wildlife including the causes and prevention of highway collisions. Together with colleagues Dan Weary and Marina von Keyserlingk, he has built a program of animal welfare science at UBC that is internationally recognised as one of the best of its kind. David also plays a leading role in the development of global policy on animal welfare through his work with the World Organisation of Animal Health (OIE) and the Food and Agriculture Organization (FAO) of the United Nations.



2014 PRESIDENT’S AWARD FOR STAFF

Samantha Turner, Research Communications Coordinator at the UBC Wine Research Centre received a 2014 President’s Award for Staff in June. Sam was selected for the Emerging Leadership category. UBC presents the President’s Service Awards for Excellence and other staff awards annually, to recognize staff members who demonstrate outstanding achievement and excellence within the UBC Community. Winners are selected by the President, with the support of an advisory committee, and are awarded \$2,000.



ABRAHAM GIRGIH, LECTURER, FOOD SCIENCE

It was a simple quirk of fate that led Abraham Girgih to a career in Food science. As an undergraduate at the University of Agriculture Makurdi in Nigeria, Girgih had set his sights on becoming a doctor or a pharmacist. So when he found himself placed in a Food Science course he hadn't applied for, he was taken aback – until he realized Food Science was actually the perfect fit.

“Benue State, where I'm from, is nick-named the food basket of Nigeria, because of its rich agricultural resources,” said Girgih. “I saw an opportunity in learning how to process, package and preserve food, as well as its distribution as a unique calling.”

Girgih went on to complete his Masters in Food Science and Technology, then spent an additional four years with the university as a lecturer in the Faculty of Food Technology. In 2004, he moved to the U.S. After living and working in Boston for a few years, Girgih was accepted into the Human Nutritional Sciences PhD program at the University of Manitoba in 2009. His thesis on using hemp seed meal protein-derived peptides to help reduce blood pressure and incidences of antioxidant-related stress recently won a University of Manitoba Distinguished Dissertation Award.

“Prescription drugs can be expensive and can have side effects,” he said. “We need to get back to our food system and see if we can find solutions through functional foods and balanced nutrition. Hemp seed protein meal obtained as a by-product after oil extraction from the seeds has high protein content and when consumed regularly, it can help reduce blood pressure and act as a potent antioxidant.”

The combination of Girgih's experience in food science and nutrition makes him the perfect fit for our newly created Lecturer, Food Science position. Beginning in September, Girgih will teach courses in food engineering (FNH 300), a food science lab (FNH 325) and our capstone course, FNH 425. In January, he will take on food processing (FNH 309) and a second lab course (FNH 326).

“I love sharing what I've learned with the youth,” said Girgih. “I'm delighted to play a role in producing food scientists who are ready to take over academia and industry, and are qualified to develop safe, wholesome processed food products.”

WILL VALLEY INSTRUCTOR, TENURE-TRACK

Will Valley is very familiar with our Land, Food and Community core series. Before he was hired as an Instructor in July, he spent five years working as a teaching assistant and, later, a sessional instructor for several of the courses.

The series, which integrates community engaged scholarship approaches, community-based experiential learning and community-based action research with flexible learning strategies, was also the focus of his PhD thesis in Integrated Land and Food Systems.

“I love the community based experiential learning components of these courses,” he said. “LFS really emphasizes undergrad learning experiences and engaging students with the community.”

Valley, a former elementary and high school science teacher, has a first-hand understanding of the value of community engagement; since 2009, he's been the project coordinator for the Think&EatGreen@School project, a community-university research alliance that is investigating ways in which the Vancouver School Board can transition its food system towards sustainability.

“Think&EatGreen aligns with my interests in learning how to teach about food in the K-12 system more



effectively,” he said, adding that the opportunity to work with Associate Professor Alejandro Rojas, the principal investigator of the project, is part of what drew him to do his PhD with our Faculty.

Valley's desire to create a more sustainable food system also inspired him to establish Inner City Farms, a Vancouver-based urban farming company that grows food in residential spaces and distributes the produce to households, restaurants and community kitchens through a Community-Shared Agriculture (CSA) model.

“It seems like our culture is becoming more interested in food and food systems. A number of programs across North America are looking to emulate what and how we've been teaching through our core series for the past 15 years,” he said. “We're ahead of the curve for sustainable food systems programs and it's exciting to be part of that.”

APPLIED ANIMAL BIOLOGY UNDERGRAD

STUDIES THE WELFARE OF STRAY DOGS IN BRAZIL

Earlier this year, organizers of the 2014 winter Olympics in Sochi, Russia faced controversy when animal advocates accused city authorities of euthanizing street dogs in preparation for the Games. The controversy shed light on the problem of stray dogs, an issue that Rio de Janeiro, Brazil – host of the 2016 Summer Olympic Games – is also dealing with.

The difference, however, is that some parts of Brazil are exploring an alternative way of humanely managing these animals. The Brazilian town of Campo Largo, for example, has established a ‘community dog’ program, through which certain stray dogs are spayed or neutered, health-checked and officially registered in their residing neighbourhoods. Eugenia Kwok, a fourth year student in our Applied Animal Biology program, spent the summer in Campo Largo studying the town’s stray dog population.

“I’ve always been fascinated by the resilience of stray dogs and their ability to survive in adverse situations with reduced wild instincts,” said Kwok. “The community dogs in Campo Largo are offered basic necessities such as food, water and shelter by community members, while routine veterinary care is provided by the town hall”.

Kwok worked closely with Federal University of Paraná’s Dr. Carla Molento and UBC Animal Welfare Professor Marina von Keyserlingk to learn more about the dogs’ daily activities and interactions.

“An important component to dog population control is to discourage dog abandonment through education on responsible pet ownership,” said Kwok. “What the community dog program offers is an opportunity for community members to share the responsibilities in caring for and managing street dogs with the help of staff at the town hall.”

Eugenia will continue to analyze her data in the coming year as she completes her undergraduate thesis on this research. She hopes that her research will help the public become more curious about stray dogs in other communities and encourage critical thinking on the welfare implications associated with these animals.

Eugenia was able to spend 3 months in Brazil thanks to a \$5,000 Mitacs Globalink Research Award, which allows faculty members and students at Canadian universities to build an international research network and undertake research abroad.

It was a busy summer for Kwok, as she also travelled to Shanghai to represent UBC at the Universitas 21 Undergraduate Research conference on International Food Safety and Security and to Prague to attend the 9th World Congress on Alternatives and Animal Use in Life Sciences. The presentations



at both conferences summarized the research that she completed while taking the Applied Animal Biology 398 course on research methods taught by Drs. Marina von Keyserlingk and Dan Weary.

“Spending time in foreign countries taught me the importance of being open to new ideas and accepting different opinions. Every community faces a different challenge,” she said. “The experience has really strengthened my knowledge of animal welfare and broadened my perspectives as a student researcher.” ☺

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