



# reachout

Faculty of Land and Food Systems  
Grounded in Science | Global in Scope

## Pilot Project Reduces Food Waste



Joseph Shen

## Not many people get excited about food waste.

But Joseph Shen counts himself lucky to be a part of a pilot food scrap recycling project that aims to cut down participants' garbage by 70 per cent before 2015.

"It's really heartening to see more people showing an interest in improving their environment especially when provided with the right tools," says Shen.

A third-year LFS Nutrition student, Shen is a member of a team helping to raise public awareness on making food waste a viable resource. Launched by the District of West Vancouver and Metro Vancouver, the pilot program includes West Vancouver, Delta, Township of Langley and Coquitlam. "We've been holding weekend information sessions in different neighbourhoods around the Lower Mainland."

Modeled after programs in Toronto and Seattle, residents are encouraged to collect food scraps in recycling bins for weekly curbside pickup. Eligible items include fruits, vegetables, eggs, meats, bones and pizza boxes, which are all taken to a regional composting facility and turned into compost that can be sold to landscapers and farmers.

"The hands-on application of classroom theory is exciting," says Shen. "Especially when it comes to illuminating the concepts discussed with Assoc. Prof. Art Bomke and during LFS courses like the Land, Food and Community Series."

Terms like "holistic" and "intraconnectivity" come to life, observes Shen. "I see the relationships where recycling food scraps lowers fossil fuel input, thereby reducing greenhouse gas emissions, which then leads to improved health for everyone."

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## Teaching Kids About Eating Right

Getting kids to eat their vegetables might be a little bit easier thanks to an LFS student-led initiative that provides nutrition education in Vancouver-area elementary schools.

"Giving kids the opportunity to touch, feel, smell and taste a variety of whole foods is key to cultivating a lasting relationship to healthy eating," says Tiffany Yeung, founder of Nutrikids. Through the program, volunteers plan and run interactive workshops to teach fundamental nutrition concepts and decision-making skills that will help children make healthy choices and establish positive dietary habits.

Yeung, a Dietetics student, created Nutrikids in 2005. Since then, the program has delivered over 200 workshops and seen its volunteer base grow from 20 volunteers to more than 100.

"Dietetics students are attracted to the program because it gives them the opportunity for hands-on experience in nutrition education," adds Yeung.

With support from sponsors like COBS Bread and Kin's Farm Market, the volunteers help kids understand concepts like fibre and vitamins through activities and games.

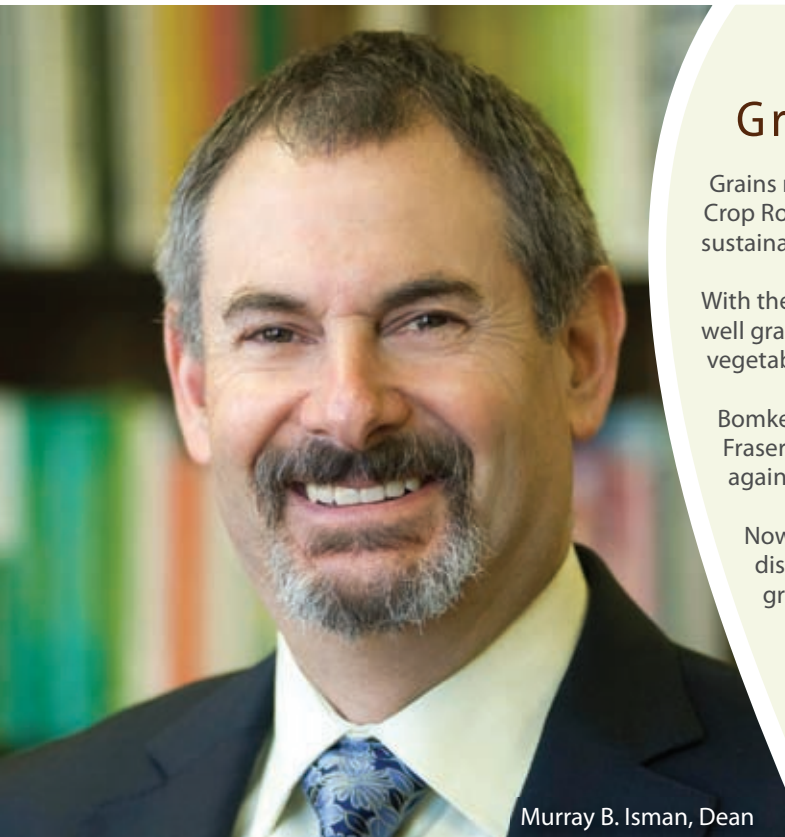


Tiffany Yeung



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA



Murray B. Isman, Dean

## Message from the Dean

The world needs our help. Never has that been more evident than in recent years as people across the globe struggle with issues like obesity, food security and the impact of climate change. In the Faculty of Land and Food Systems, our research focuses on finding viable solutions to these pressing global crises.

The rest of the world is beginning to catch on to the critical nature of these issues. Terms like “eco-friendly” and “carbon footprint”, unfamiliar terms just 10 years ago, are now part of our everyday vocabulary. While it’s encouraging to see them make their way into general conversation, we need to do more than just pay lip service as we still have a long road ahead. Every day we see the impact of our actions on the planet. We are facing some of the biggest challenges in the history of the human race and we need to work fast.

It may seem daunting, but some of the best and brightest are working on these problems from here in our own Faculty. In these pages, you will read about LFS ambassadors of change like Jenna Pfoh, a graduate of our Global Resource Systems program, who is advising Calgary residents on how to make their homes more environmentally-friendly. Or Joseph Shen, one of our Nutrition students, who is helping Vancouver area participants reduce their garbage by 70 per cent through a food scrap recycling project.

These are small steps, but they can inspire big change. We may not be able to turn back time, but if we can resolve these issues and learn how to do things differently then we can all look forward to a brighter future.

Murray B. Isman, Dean  
Faculty of Land and Food Systems

## Growing Local Grains

Grains may once again be grown in the Fraser Valley thanks to the Eco-Friendly Crop Rotations Project led by Assoc. Prof. Art Bomke, an expert in soil and sustainable agriculture.

With the Delta Farmers’ Institute, Bomke and his team are evaluating how well grains like oats, wheat and barley grow when planted in rotation with vegetables such as potatoes, broccoli, cabbage and cauliflower.

Bomke says that 80 years ago, there were a number of grain producers in the Fraser Valley, but due to the economies of scale, farms could not compete against the large-scale grain operations elsewhere in North America.

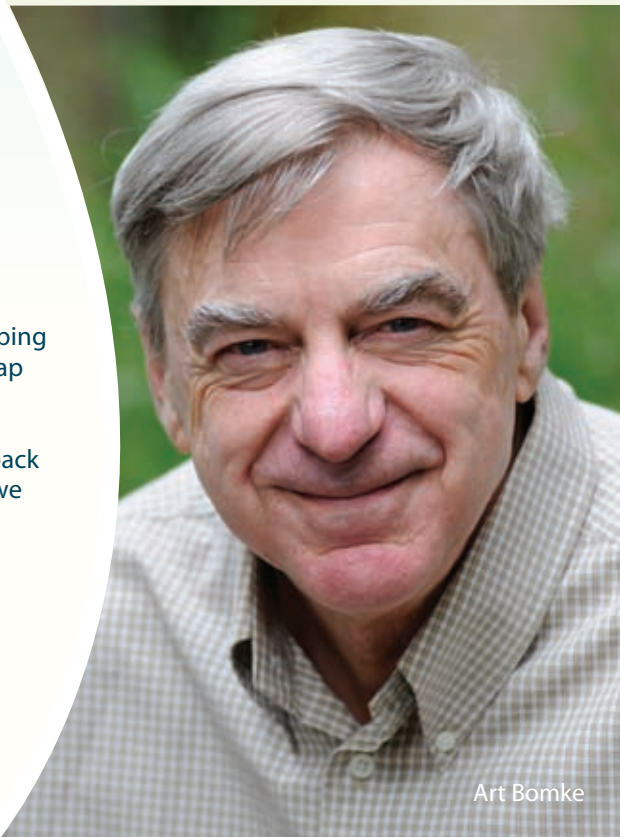
Now, however, the growing number of organic farms, the availability of new disease-resistant grain varieties and consumer demand for locally grown grains have made cereal production more feasible.

Farmers could earn more by adding a secondary rotation crop and also further ecological farming practices, says Bomke. Research shows that cereals, underseeded with legumes, can improve weed control and enhance soil quality by maintaining soil organic matter and increasing nitrogen availability for succeeding vegetable crops.

“It would reduce the need to purchase expensive fertilizers.”

Flour ground from our test wheat varieties is currently being tested by students in the Land and Food Systems 350 course in collaboration with FarmFolk/CityFolk, a non-profit society that supports local, sustainable food systems.

“We’re seeing how the flour tastes in home baking,” says Bomke.



Art Bomke

## Lowest Obesity Rates

Could living in certain geographic areas impact your risk of obesity? That appears to be the case according to UBC nutrition researcher Jennifer Black who found higher obesity rates in Canada's eastern provinces, rural areas and northern Aboriginal communities than in Western Canada.

"It's not randomly distributed," says Asst. Prof. Black, who discovered the east-to-west gradient upon reviewing 24 studies about the distribution of food and obesity in Canada conducted since 1997.

Black's findings show that women in Vancouver have the lowest obesity rates in the nation. For men, the lowest obesity rates are in Richmond.

Her next step is to look at the larger contextual issues for obesity rates such as family income, the availability of healthy and affordable food and opportunities to be physically active.

A registered dietitian, Black specializes in social determinants of health and dietary choice. "I'm interested in how attitudes and behaviours related to eating, cooking, food selection, and body weight shape nutrition and health."

Previously a post-doctoral fellow in UBC's Dept. of Sociology, Black joined the Faculty's Food, Nutrition and Health program in January.

With LFS Nutrition Prof. Susan Barr, Black is also developing UBC research know-how and infrastructure to tackle data from the Canadian Community Health Survey (CCHS), the first set of comprehensive Canadian nutrition data generated in more than 35 years. Released in 2004, the CCHS surveyed upwards of 35,000 respondents from across the country on their dietary intake, vitamin and mineral supplement use, health risks and behaviours.



Jennifer Black

Jenna Pfoh and Ashley Lubyk, Program Manager, of Healthy Homes Calgary



## Extreme Environmental Home Makeover

Jenna Pfoh is making the world a greener place, one household at a time.

Pfoh, a Healthy Homes Advisor for Green Calgary (and a graduate of our Global Resource Systems program), visits Calgary-area homes and provides free advice about energy efficiency, water conservation, indoor air quality, waste reduction and healthy/environmentally-friendly food choices.

"It's a very unique program. There's really nothing else like it in North America," says Pfoh, adding that clients are also provided with compost bins, rain barrels, non-toxic cleaners and low-flow tap aerators and shower heads.

During the home visit, teams of two go through each room, educating homeowners on how to make the space more energy efficient and environmentally-friendly. The team also leaves behind green household cleaners to replace conventional cleaners that could be harmful to one's health and the environment. A second in-home visit is conducted two to three months later to evaluate progress and address the participants' questions or concerns.

Pfoh credits the GRS program for helping her to develop the skills that she uses in her role with Green Calgary.

"The GRS program really prepared me for this position. The core courses and the small group work taught me how to engage in relevant discussions and allowed me to easily fit in with this organization," she says.

## Changing Faces



Kevin  
Allen



Nathan Langley  
and Chris Kalbfleisch



Darin  
Bennett

### New Faces

#### **Dr. Kevin Allen, Assistant Professor, Food Microbiology, Food, Nutrition and Health**

Dr. Allen received his PhD in Molecular Food Microbiology at the University of Guelph in 2007 and most recently worked as a Research Manager at Bioniche Life Sciences Inc. in Ontario.

#### **Dr. Jennifer Black, Assistant Professor, Dietetics and Human Nutrition, Food, Nutrition and Health**

Most recently a Postdoctoral Fellow in the Department of Sociology at UBC, Dr. Black received her PhD in Nutrition and Dietetics at New York University in 2008.

#### **Christopher Kalbfleisch, Horticulturist 1**

A graduate of Wilfrid Laurier University, Christopher Kalbfleisch is pleased to be developing his horticulturist career through his new position at UBC Botanical Garden. As a Horticulturist, he is responsible for maintenance throughout the Garden. Christopher previously worked at UBC Plant Operations.

#### **Nathan Langley, Horticulturist 1**

A position as a summer student worker in UBC's Botany department as well as UBC Botanical Garden led Nathan Langley to his current role as Horticulturist at the Garden. His main responsibilities include general maintenance of the Garden. Nathan graduated with a BSc Biology from UBC in 2009.

#### **Dr. Robin Mellway, Postdoctoral Research Fellow, Wine Research Centre**

Dr. Mellway received his PhD in 2009 from the University of Victoria. His research area was the molecular analysis and genetic engineering of the proanthocyanidin biosynthetic pathway in poplar. He will be working with Dr. Steven Lund.

#### **Promotions – Faculty**

Darin Bennett, Assistant Professor Without Review, Avian Research Centre

#### **Returning (from maternity leave)**

Jennifer Honeybourn, Communications Manager

#### **Departures**

Randal Mindell, RA/T 3, UBC Botanical Garden

#### **Retirement**

Bev Busch, Administrative Manager, joined UBC in 1987 working in various capacities for the Faculty of Commerce and Purchasing before making the Plant Science Department and LFS her home. Busch's contributions continue to have an enduring and positive impact on the Faculty and we thank her for her many years of dedicated service.



Minh Ngo

### Learning on the Job

"This Faculty does a very good job of instilling the desire to make a difference in students," says Minh Ngo, Community Based Experiential Learning Coordinator.

Ngo, a Global Resource Systems (GRS) alum, is eager to help create engaging and challenging learning opportunities for students.

"Everyone who goes into the GRS program wants to have an impact on the world," she says, adding that her role in working to further community-based research (CBR) and community-service learning (CSL) within the Faculty fits well with the values she developed through the GRS program.

Funded by UBC's Community Learning Exchange, the Community Based Experiential Learning Coordinator position was recently established to support the work of CSL and CBR collaborations between faculty members, students and community partners. The position directly supports the goals of *Place and Promise*, UBC's new strategic plan, which identifies CSL and CBR as key strategies to creating an exceptional learning environment.

Ngo works with LFS instructors to identify opportunities for CSL and CBR projects, develops relationships with community partners, and assists students and instructors in evaluating the impact of the CSL and CBR components of their courses.

"I'm excited to be part of a vibrant community that has played such an important role in shaping me into the person that I am," Ngo says.

## Vitamin D for Pregnant Women



Tim Green

Blame it on Canada's watery winter sun, but women who are pregnant or breastfeeding need to take vitamin D supplements, according to human nutrition researcher Tim Green.

"Our preliminary data shows that Vitamin D levels in the mother's blood are fairly low," says Green, an associate professor in the Faculty's Food, Nutrition and Health program and lead investigator of the study funded by the Canadian Institute of Health Research.

He explains that vitamin D is vital for bone health. Without it, babies can develop rickets, a condition when bones are too soft and do not form properly. Green's research partners include the BC Women's Hospital and Health Centre and the departments of pediatrics and obstetrics and gynecology at UBC's Faculty of Medicine

"Although we get a small amount of vitamin D from food, our bodies create it as it absorbs sunlight," says Green. "And during the Canadian winter, especially in Vancouver, there isn't enough sun for this to happen."

Green is exploring how much vitamin D pregnant and breastfeeding women are currently getting and how much they should take as supplements to ensure health for themselves and their babies. The study makes use of donated supplements created by Natural Factors.

With more than 200 pregnant women as study participants, the research team is measuring the effect of vitamin D supplements on the growth of the baby and on the bone health of mother and baby.

As well, the study investigates the possible effect of skin colour on vitamin D levels. Skin with darker pigments, either naturally or from a tan, tend to absorb less light, and therefore affects the amount of vitamin D the body produces. Researchers will measure how much light is reflected by a person's skin using a device called a colorimeter.



®

**United Way**  
of the Lower Mainland



Lynn Newman

## Together We Made a Difference

Working together, we can make a difference.

Lynn Newman, Assistant Dean, Students witnessed that firsthand when she lent her expertise to the UBC Community United Way Campaign in 2009 as Campaign Chair.

"The goal of last year's campaign was to increase engagement on our Vancouver campus," says Newman, who adds that she is particularly proud that our Faculty had the highest participation rate at UBC and credits Dean Murray Isman with helping to significantly raise the profile of United Way at LFS. She also applauds faculty, staff and students for stepping up their support, especially in these tough economic times.

"Thanks to the UBC community, we raised enough money to help more than 65,000 Lower Mainland seniors remain healthy and engaged in their communities," adds Newman.

LFS was also the only Faculty to participate in the 2009 United Way Day of Caring. Led by Christine Harris, Development Officer and a former United Way Loaned Representative, and Jonathan Knill, a student in our FNH program, a team of LFS students and staff volunteers set up a haunted house at the Boys and Girls Club of South Delta as a way to give back.

The Faculty also held a raffle with a top prize of a wine tasting with Associate Dean Research and Director of the Wine Research Centre, Hennie van Vuuren.

Newman is already gearing up for UBC's 2010 United Way campaign, set to launch in October, which she will co-chair with Steve Tuckwood, Associate Director of Athletics and Recreation. The University will have an even larger presence with the United Way this year as UBC President Prof. Stephen Toope is Co-Chair of the United Way of the Lower Mainland's overall campaign.

# True North Strong and Free



Ashley Tufts

Freezing temperatures, pristine beauty and the deep hush of new snow add up to an idyllic place to grow up, says Ashley Tufts who calls Iqaluit home. Perched on the south coast of Baffin Island at the head of Frobisher Bay, Iqaluit is the capital of Nunavut and has a population of 6,500 people.

“There are more people on the UBC campus than all of the people in Nunavut combined,” says Tufts, a fifth-year student in the Global Resource Systems (GRS) program.

Tufts’ passion for Canada’s north stood her in good stead in Copenhagen this past December. Selected from applicants across Canada, Tufts co-lead the Arctic team as one of 30 youth delegates at the

15th United Nations Conference on Climate Change.

The issue of Arctic sovereignty is pivotal, says Tufts, in light of the melting ice cap and growing commercial interest in the natural resources and potential shipping lanes.

“The North is one of the few places in the world untouched by development. It would be a serious ecological and political mistake to open the Northwest Passage as a shipping route,” she observes.

Tufts’ advocacy for northern perspectives has also informed the GRS program, which allows students to focus their scientific study on a resource area and a region of the world. She successfully lobbied the Faculty to include a new topic area: the environment in the Circumpolar North.

Iqaluit’s distinct landscape, culture and profound sense of community all compel Tufts to return home.

“People ask me how I deal with all that open space and snow, but I’ve actually found it harder to get used to being around so many trees in Vancouver,” says Tufts.



(left to right): Joshua Robertson, Lia Dragan, Winnie Pang, Minh Ngo, Roxana Quinde

## Moving On Up

LFS Student Services moved into its beautiful new office space on the third floor in the MacMillan Building last December.

“I feel we now have the nicest advising office on campus,” says Lynn Newman, Assistant Dean, Students. “Gathering all of the LFS student service providers together into one space builds a more cohesive unit and enables us to provide better service to our students. Student feedback so far has been very positive; they’ve indicated they find the new environment very welcoming.”

“We’re more of a one-stop shop now,” says Allison Barnes, Manager, Graduate Programs.

The office provides more than 1400 square feet of space and houses the Undergraduate and Graduate Student Services offices as well as the Global Resource Systems program, the First Nations Coordinator and the LFS Community Learning Initiative.

## Milestones



Rebecca Robertson

### Hands-on Learning Aids Tech Transfer

Rebecca Robertson draws on her longtime knowledge of food companies to find “win-win” placements for Master of Food Science (MFS) students.

“I connect with a lot of companies to develop experiential learning for students in their interest area while providing technology transfer for the host company,” says Robertson, industry liaison for the Food, Nutrition and Health (FNH) program.

Robertson helps to find industry partners for students’ four-month industry practicum in the Master of Food Science program. She monitors as many as 17 concurrent projects with partners as diverse as Superior Tofu and the B.C. Centre for Disease Control.

At the Vancouver Aquarium, for example, MFS students are currently helping the staff and scientists devise clear systems for handling animal feed from fruit for birds to krill – a mini shrimp favoured by whales, dolphins and other fin fish. Students learn that food safety tenets hold true whether for humans or animals.

“They are the same principles: know the integrity of the supplier, store the feed under the right conditions and prepare it in a way to keep its nutritional quality,” explains Robertson, a UBC microbiology alumna and industry consultant and educator for Hazard Analysis and Critical Control Point (HACCP).

Last summer, Robertson brought a team of MFS students to UBC Farm to enhance food safety practices for the weekly Saturday Farm Market. The team devised clear plans for several post-harvest procedures, from the water temperature to rinse a freshly laid egg to the storage of just-picked vegetables.

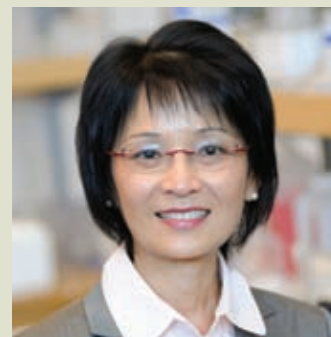
“They were really interested to discover, for example, that tomatoes really don’t like refrigeration, but if you have to put them in the fridge, the temperature should ideally be no less than 10 degrees Celsius.”

#### UBC Farm named among Tides Canada top 10

UBC Farm was recently named one of Canada’s most innovative and forward-thinking organizations by Tides Canada. This annual top 10 list recognizes organizations that inspire people to take action, to think in new ways, and to make the world a better place. This is the first time in the award’s six year history that a university-based initiative has made the list. UBC Farm received kudos for its leadership in sustainable food systems research and teaching, and community outreach.

#### Prof. Eunice Li-Chan recognized by the American Chemical Society

Professor Eunice Li-Chan was named a Fellow of the Agriculture and Food Chemistry Division of the American Chemical Society. Chan, a professor in our Food, Nutrition and Health program, was recognized for her outstanding scientific contributions to the field of agricultural and food chemistry. Her research focuses on gaining a basic understanding of the molecular properties of food components, in the hopes of creating a systematic approach to food quality control, process improvement and new product development.



#### Prof. Quentin Cronk receives Harvard Honour

Harvard University recognized Professor Quentin Cronk with the Charles Bullard Fellowship for research excellence in woody plant biology. The Charles Bullard fellowship program supports advanced research and study by individuals who show promise of making an important contribution, either as scholars or administrators, to forestry and forest-related subjects.



#### Prof. Kim Cheng presented with 2009 Richards Service Award

The 2009 Richards Service Award was presented to Professor Kim Cheng in December. This award, named in honour of Professor Emeritus Jim Richards, is given annually to an LFS faculty member who exemplifies the qualities of outstanding service in their work with faculty, staff and students. A Professor of Animal Science in the Applied Biology Program, Cheng has earned a reputation for innovations in poultry science and avian research and is also known as a giving and caring mentor.

#### Tony Bujas receives 2009 Shynkaryk Service Award

The Shynkaryk Service Award, given annually to a staff member in our Faculty who consistently goes above and beyond the call of duty in their work, was awarded to Tony Bujas in 2009. As AV/Computer Systems Support, Bujas works calmly behind the scenes to solve computer issues and keep things running smoothly.

#### Anusha Samaranayaka wins Best Poster award

Anusha Samaranayaka received the Best Poster award at the International Society of Nutraceuticals and Functional Foods Annual Conference held in San Francisco in November 2009. Anusha, a PhD candidate in the Food Science program, received the award for her poster entitled “Functional protein hydrolysates from Pacific hake (*Merluccius productus*).”

## Want to be included in our Faculty's history?

Preserving our Faculty's history is incredibly important. Dr. Bob Blair, Professor Emeritus and a Former Head of Animal Science, has collected and maintained a detailed record of our past, including biographies that celebrate the many distinguished achievements of our faculty, staff and alumni.

We would love to hear from you! Faculty, staff and alumni are invited to submit bios. Please include: years at UBC, degree obtained and specialization, courses taught and area of research specialization, reminiscences

and stories relating to time at UBC, a brief account of your career, your photograph.

For more information on formatting and submitting your bio, please check our website: [www.landfood.ubc.ca/faculty-history](http://www.landfood.ubc.ca/faculty-history)

Dr. Beryl March, 1953. from Dr. Jacob Biely's Collections



John and Mary Young

## John and Mary Young Memorial Scholarship

The newly established John and Mary Young Memorial Scholarship will allow an LFS graduate student to manage the cost of continuing their education in dairy research.

Scottish immigrants John and Mary Young came to Vancouver in 1929 with 6 children, 24 Ayrshire cows and one bull in tow. John, an Ayrshire breeder, was hired by UBC Professor H.M. King to bring the livestock to the University. Two years after the Youngs arrived, the Great Depression struck, forcing UBC to make severe cutbacks. Farm employees were terminated and the decision was made to close the

farm. As a last minute plan for survival, John Young leased the farm from the University and used the revenue from milk sales to operate it.

As a result of the Youngs' foresight and dedication, the UBC Dairy Education and Research Centre exists in Agassiz, BC today and has evolved into a world renowned centre for dairy research.

Thanks to contributions from the Young family and friends, and the UBC Dairy Education and Research Centre, the scholarship has been endowed and will be awarded for the first time this year.

### ReachOut is published by the Faculty of Land and Food Systems at UBC

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- UBC-AAFC Avian Research Centre
- Animal Welfare Program
- Biometerology and Soil Science
- UBC Botanical Garden and Centre for Plant Research
- Centre for Sustainable Food Systems at UBC Farm
- UBC Dairy Education and Research Centre
- UBC/DFO Centre for Aquaculture and Environmental Research
- Food and Resource Economics
- Food Science
- Human and Animal Nutrition
- Wine Research Centre



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