



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

UNIVERSITY OF ALBERTA



**Dare**  
to Make a World of  
**Difference!**

**Progress and Updates**

**Dare to Deliver 2010/2011**

## Discovery Learning

### a) Major Accomplishments

- New BA in Environmental Studies in collaboration with the Faculty of Arts was approved to be implemented, with the first intake of students September, 2011.
- Launched a new initiative to deliver our Bachelor of Science Environmental and Conservation Sciences degree program in northern Canada in partnership with Yukon College and the Faculty of Native Studies. The first students were accepted in January 2010; 17 registered in the fall.
- Offered experiential learning opportunities for undergraduates including:
  - Forestry 456 (International Forestry) provided 20 forestry students with the opportunity to travel through Mexico to learn about forest management.
  - 17 students participated in ENCS 465, a three week field course in Tanzania, on Conservation and Overlapping Land Use Issues.
  - 15 students were taken on a one-week Agriculture Ecological Tour of Cuba
  - Students in RENR 495 (Land Reclamation and Revegetation) were highlighted in the media for their capstone proposals to reclaim the Turner Valley Gas Plant and green the Edmonton City Centre airport.
  - Three Rural Economy students presented their capstone projects at the Alberta Agricultural Economics Association annual conference in May 2010 and won first and second place in the undergraduate poster competition.
  - The U of A Range Team won 7 awards at the Society for Range Management's Annual Meeting, including 1<sup>st</sup> and 2<sup>nd</sup> place for the two team awards, as well as the top two combined individual awards.
  - Human Ecology's 200-hour practicum program for senior undergraduates placed students at Alberta Child & Family Services, Health Canada, Mark's Work Warehouse, and Davey Textile Solutions.
  - 16 ALES students received cash awards from Farm Credit Canada for their outstanding business agriculture business plans created as part of the course work in AREC 323.
  - ALES forestry students won the Student Quiz Bowl at the National Canadian Institute of Forestry Conference.
  - Students in Human Ecology conducted field research in the U of A Hospital operating rooms in an effort to redesign hospital garments that are sterile, warm and comfortable under the supervision of Human Ecology's design and textile science faculty members.
- ALES fourth year and graduate rural economy and conservation students worked on two community investment projects with the Olds Institute for Community & Regional Development and Olds College under a pilot Rural Experiential Learning Initiative funded by the province.
- Undergraduate Sarah Cosgrove Bence received the Schlicht Medal recognizing Canada's most outstanding forestry student for 2010.
- Implemented new initiatives to support international students including a new transition course, University 101, setting up recruitment scholarship programs with Chinese 2+2 partners, and developing a Bridging Program for students with near-adequate English language skills.
- Implemented an ALES "Opportunities Abroad Fair" to encourage more ALES students to go abroad to study, volunteer and work.

- Piloted the ULEAD program to provide leadership opportunities for selected undergraduate students. We will be expanding this initiative in coming years.
- The Faculty has invested in an Experiential Learning Coordinator who has successfully revived our internship programs. We currently have 8 students placed with approximately 60 registered to make use of potential internship opportunities.

**b) Initiatives underway and planned**

- Comprehensive undergraduate program reviews are underway including the CFAB accreditation review of our Forestry Program.
- Exploring with the Faculty of Extension the development of distance education nutrition courses for professional upgrading and/or a certificate program in nutrition.
- Exploring the possibility of developing digital versions of selected ALES courses to be offered by Athabasca University to expand learning options for Albertans.
- Introducing an honours program in Nutrition and a new degree or specialization in Urban Ecology including aspects of urban planning.
- Exploring opportunities to develop and implement new and/or revised course-based Master's programs that meet student needs.
- Developing and implementing a new joint graduate program on Resource, Energy and Environmental Economics in collaboration with the Faculty of Arts and the School of Business.
- Discussions underway with Grant MacEwan University to develop joint programs to benefit students at both institutions.

## **Incubating Scholarship**

**a) Major Accomplishments**

- Alberta Innovates BioSolutions committed \$4.5 million to the establishment of two Centres in ALES: Phytola is working to improve the quantity and quality of oil in crops such as canola and flax. Livestock Gentec is looking at ways to produce healthier, more efficient cattle and better beef and dairy products.
- ALES' total research funding increased by 39% over the past five years to over \$40 million for fiscal year 2009/10. Tri-Council funding increased by 36% from 2008/09 to 2009/10.
- ALES faculty staff reported 419 refereed publications in their 2009 annual reports, an average of 3.7 publications per faculty staff member.
- Over the past five years, 75 Reports of Invention were generated by ALES researchers, and 34 of those led to patents being filed.

- A partnership in 'Wildland Fire' with Alberta Sustainable Resource Development and the Canadian Forest Service resulted in the funding of two scientific positions.
- Secured funding to launch the Global Social Initiative on Ageing (GSIA), a new activity of the International Association of Gerontology. GSIA will look at critical challenges related to population ageing from global trends.
- In a 2010 ranking of agricultural economic departments in North America looking at research output and research influence for the period 2000 to 2007, the Department of Rural Economy was ranked second in both categories, competing very well with its US and Canadian counterparts.
- An all-time high of 504 graduate students were registered in September 2010 (a 20% increase over the last three years). Of these 45% are PhD students.
- ALES graduate students were recognized for their innovative work with a number of awards within Canada and internationally including:
  - A PhD student in Rural Economy won PrioNet Canada's science writing competition.
  - Two PhD students were honoured with multiple awards from the American Oil Chemists society.
  - A Rural Economy MSc candidate won one of the most prestigious NSERC awards offered to Master's level students, the Julie Payette Research Scholarship.
  - A PhD student in AFNS won first prize for the best paper at the American Association of Cereal Chemists Annual International Meeting.

**b) Initiatives underway and planned**

- ALES researchers are engaged with partner institutions in three International Development Research Centre (IDRC) /Canadian International Development Agency (CIDA) projects in India, South Africa and Tanzania.
- ALES researchers are leading the Land Reclamation research theme of the Helmholtz Alberta Initiative, a project that links the UofA, the provincial government and the Helmholtz Association of German Research Centres in pursuit of environmental sustainability in oil sands and other mining.
- Recruitment of the Bock Chair in Agriculture and the Environment and constructing the required laboratory facilities.
- Recruitment of the Mattheis Chair in Rangeland Ecology and Management and establishment of an Institute for Rangeland Ecology and Management.
- Establishment of a Restoration Ecology Centre under an umbrella Institute for Environmental Sustainability.

## Community Engagement

### **a) Major Accomplishments**

- The first Alberta School of Forest Science & Management program for international forestry professionals was held in 2010. Twenty-two research scientists and policy makers from Vietnam spent two weeks in Alberta to learn about sustainable forest management practices.
- ALES' ongoing collaboration with Inner Mongolia Agricultural University piloted an exchange of academics, with two ALES professors teaching at IMAU in 2010 and eleven IMAU faculty members spending the winter semester at the UofA.
- 10 undergraduate students from Kyoto University in Japan visited the U of A in 2010 as part of an agricultural exchange. A group of UofA students will travel to Kyoto in May, 2011.
- Two "international exchange" grant applications were approved for funding by HRSDC involving ALES, one focuses on offering dual MSc Forestry degrees jointly between Canadian and European schools; the other exchange program connects forestry programs at several universities in Eastern Europe with Canadian partners.
- Over the past decade Renewable Resources academics have published 102 field nature guides about fish, birds, animals, trees and plants in the United States, Canada, Mexico and Ecuador.
- Over 600 children, primarily from Grades 4 -6, attended the Devonian Botanic Garden Green School for five consecutive school days last year to learn about the natural world.
- U of A and the Department of Renewable Resources renewed their agreement with the Mixedwood Management Association for another five-year term.
- Two graduate interns from the Indian Institute of Technology (IIT) Bombay visited the Department of AFNS for specialized training in genomics and proteomics. Two undergraduate interns from IIT-Kharagpur were trained in the laboratories of AFNS researchers last spring and one undergraduate intern from IIT-Kharagpur is expected in Spring 2011.

### **b) Initiatives underway and planned**

- Transfer agreements for students from China (2+2 program for BSc Students) and similar agreements for additional interested universities are being streamlined.
- Research partnerships with Germany, India, UK, Nigeria, China and several other countries are increasing.
- Discussions have been initiated with institutions in India on a 2+2 (or similar) program for BSc students.
- Discussions with the School of Biosciences, Indian Institute of Technology, Mumbai, to initiate co-supervision of PhD students are underway. The existence of an MOU between IIT Mumbai and the U of A will facilitate this process significantly.

## Transformative Organization

### a) Major Accomplishments

- The largest gift of land to a Canadian university resulted from the donation of the Mattheis Ranch (12,300 acres) in Southern Alberta. The ranch will support ALES' rangeland ecology and management research.
- Faculty staff excellence was acknowledged institutionally, nationally and internationally. Awards in 2010 included:
  - Premier's Alberta Food for Health Award (first time awarded) – Feral Temelli and Thava Vasanthan
  - IUFRO (International Union of Forest Research Organizations) Scientific Achievement Award – Janusz Zwiazek. Dr. Zwiazek joins five other ALES researchers who have received this prestigious award.
  - North American Colleges and Teachers of Agriculture (NACTA) Teaching Fellow Awards – Lynn McMullen and Craig Wilkinson
  - Vargo Teaching Chair (re-appointment) – Anne Naeth
  - ASTech Award for Innovation in Agricultural Sciences – Lloyd Dosedall
  - ASTech Award for Excellence in Science and Technology Public Awareness – John Acorn
  - Soil Science Society of America 2010 Distinguished Service Award – Charlie Arshad
  - Alberta Agriculture Hall of Fame – Ian Morrison
  - McCalla Professor – Debra Davidson
  - Canadian Institute of Forestry Tree of Life Award – Vic Lieffers
  - AATCC Review's W.J. Weaver Paper of the Year Award – Rachel McQueen
- Professor M. S. Swaminathan delivered the combined Bentley Lecture in Sustainable Agriculture and Lester Pearson Memorial Lecture and received an honorary University of Alberta degree at a special convocation ceremony attended by over 750 people in October.
- Erasmus Okine was reappointed as Chair of the Department of Agricultural, Food & Nutritional Science in July, 2010 and Vic Lieffers has been appointed as Chair of the Department of Renewable Resources effective July, 2011.
- The Honourable Shirley McClellan, distinguished scholar in residence in the Department of Rural Economy, was presented with an Honorary Doctor of Laws degree from the University of Lethbridge.
- Dr. Stefanie Gärtner, a postdoctoral fellow in Renewable Resources, received the 2010 German Forest Science Award at the German Forest Science Conference, awarded to an outstanding young scientist.
- The provincial government contributed \$4.0 million in 2010/11 to develop the research infrastructure of the St. Albert, Kinsella and Edmonton Research Stations, as part of a \$12 million commitment over three years.
- Brett Finch, IT coordinator for ALES, was a co-recipient of the University's first Information Technology Leadership Award.

- Maureen McKay, Integrated Dietetics Internship Coordinator, was awarded the Mary Mitchell Award by the College of Dieticians of Alberta.
- Pak Chow, a research assistant in the Department of Renewable Resources won the 2010 University Support Staff Recognition Award in the technical staff category.
- In 2010 the Microfungus Collection and Herbarium (UAMH) at the Devonian Botanic Garden celebrated 50 years of operation at the U of A

***b) Initiatives underway and planned***

- ALES' Vision for South Campus is being finalized with a final report expected shortly.
- Planning is underway for a new Ecological Learning Centre at the Devonian Botanic Garden to accommodate academic programs and support community engagement.
- Plans are being finalized with the Aga Khan Foundation for the establishment of an Islamic Garden at the Devonian Botanic Garden.
- The Faculty is working with Facilities & Operations on a plan to address its space shortfalls and to help consolidate its academic programs.