The STELA Research Centre is like a big family, and its members are known for a deep commitment to research and education spanning 25 years. STELA’s high-level research and outstanding graduates have contributed strongly to dairy industry competitiveness in Quebec and all over Canada.

CENTRE DESCRIPTION

STELA was founded in 1985 and today boasts 15 research professors and more than 75 graduate students and post-doctoral fellows.

The centre is home base for Canada’s largest research team in the dairy science and technology field. Its researchers are internationally recognized for their expertise in a multitude of dairy industry sectors.

STELA’s research program seeks new basic and applied knowledge relating to milk: its components and contaminants, how it is affected by processing methods, and the role of dairy products in diet. As part of the Institute of Nutrition and Functional Foods (INAF), STELA has also begun to study how dairy products and their components affect health and the prevention of chronic diseases.

MISSION

The STELA Research Centre fosters and conducts research relating to dairy science and technology in Quebec and throughout Canada.

Its mandate is to

> Contribute to basic and applied knowledge of milk and milk processing
> Train researchers and highly qualified personnel
> Promote the transfer of knowledge and technology to users

15 researchers 5 research professionals 75 students
STELA celebrated its 25th anniversary in 2010. A number of activities were presented to mark the event:

- An honorary doctorate from Université Laval was awarded to INRA-Rennes Professor Jean-Louis Maubois for his important contribution to dairy industry research and technology.
- Activities were organized for nontraditional clienteles such as Quebec’s professional order of dietitians and the general public.
- Interactive booths on dairy processing were presented at Expo Québec.
- The scientific journal Dairy Science and Technology Elsevier produced a special issue entirely devoted to publications by STELA researchers.
- A booklet was released tracing highlights from STELA’s history and featuring testimonials from the industry, university partners, and former students.

Scientific achievements include findings by the NSERC Industrial Research Chair for Cheese Typicity and Technology in the Dairy Industry (2006-2011) that paved the way for partners to control and better understand differences in the performance of starter cultures, microbial dynamics of cheese maturation, and the use of genomic and transcriptomic profiles in selecting the best cultures. These factors are very important in the consistent reproduction of cheese flavour and quality and in keeping processing costs down. They also contribute to the development of new products. The research chair’s work has also resulted in an extensive transfer of knowledge that has brought concrete benefits for the industry.

For a number of years now, STELA has also taken a leading role on the national level and was behind the initiatives that brought four major ($1.4 million) projects to Université Laval between 2009 and 2012 as part of the Dairy Farmers of Canada’s Dairy Research Cluster under Agriculture and Agri-Food Canada’s Growing Forward program. The projects address extremely topical issues, specifically the reduction of the salt content of cheese and the effects of dairy foods on hypertension and satiety.

STELA offers a stimulating academic environment based on peer interaction where students and postdoctoral fellows can develop close relationships with the dairy industry. As part of INAF, the centre has developed a multidisciplinary research culture that covers various fields of application, including nutrition, nutraceuticals, pharmacy, and biomedicine. Students conducting research at STELA come from Université Laval programs in food science and technology, nutrition, animal science, food engineering, microbiology, biochemistry, and chemistry.

Co-supervision of students by outside collaborators allows many to pursue part of their research at other universities and with government organizations and the industry both in Canada and internationally. Outside collaborators bring new perspectives along with expertise to complement that of centre researchers and broaden students’ scientific horizons.

A conference is held every other year to showcase student research for prospective employers, featuring oral and poster presentations. INAF presents an annual series of some 15 lectures by eminent researchers, providing an opportunity for students to broaden their horizons and perhaps identify international laboratories where they might go for research fellowships. A number of funding opportunities are also available through INAF: summer undergraduate internships providing research experience and a preview of graduate studies, supplements for graduate students and post-doctoral fellows, and travel funding for presenting research findings at international conferences. STELA’s close ties to the Canadian dairy industry also allow it to award graduate-level entrance scholarships through the generosity of organizations such as the Canadian Dairy Commission, the Canadian Institute of Food Science and Technology, and the Dairy Farmers of Canada.

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