

## **FEED PROCESSING TECHNOLOGY**

### **SA Endowed Chair**

#### **Introduction**

Feed represents the largest single cost factor (65 per cent) in animal production. Advancements in feed processing technology have the ability to reduce this cost through a number of distinct avenues including improving feed quality and nutritional value, decreasing the cost of production and increasing the utilization of local feed ingredients. Combined, these benefits could translate beyond pure economic benefits to positively impact the environment, animal health and food quality. The recent creation of the Feeds Innovation Institute, investments in the Feed Technology Research Facility and the strong core of nutritional research and development within the Department of Animal and Poultry Science stand to benefit substantially from a strong research program focussed on feed processing.

The Chair in Feed Processing Technology will be a joint appointment with the primary appointment in the Department of Animal and Poultry Science in the College of Agriculture and Bioresources and secondary appointment in the Department of Agriculture and Bioresource Engineering in the College of Engineering.

#### **Goal**

To develop, adapt and refine feed processing technology to increase the value from Saskatchewan feedstock, improve the competitive position of our livestock industry and increase economic return to Saskatchewan.

#### **Research and Program Activities**

- Conduct research on the link between feed processing, processing technologies and;
  - nutritional value
  - cost of production
  - economic value
  - energy use
  - functionality and functional properties and
  - environmental impact
- Conduct research in response to needs as identified by Saskatchewan Agriculture, other researchers and the Saskatchewan feed processing industry
- Collaborate with existing researchers, industry and graduate students in animal nutrition, feed processing and crop breeding
- Interact with industry at the local and international level on feed processing related issues
- Teach graduate and undergraduate courses
- Supervise graduate students

**Program Outputs**

- Novel, high value feeds derived from Saskatchewan commodities and bioprocessing co-products
- Feed processing technologies and products, adopted by industry, that maximize the value of Saskatchewan commodities and bio-processing co-products
- Scientific and peer reviewed manuscripts on feed processing science
- Industry focussed, short term feed processing courses that meet local and international requirements
- Undergraduate and graduate level feed processing courses

**Desired Outcomes**

- An internationally recognized research program in feed processing science
- An effectively led and highly efficient Canadian Feed Technology Research Facility that serves as a centre of excellence for training personnel in feed processing
- Improved functionality, nutritional value and cost of production for feeds derived from Saskatchewan commodities and ingredients
- Increased scientific knowledge and understanding of feed properties and the processing factors that affect feed functionality, nutritional composition and cost of production
- Increased livestock and feed production efficiencies tied to improved livestock product quality and reduced environmental impact
- Highly qualified people (HQP) trained in advanced feed processing
- Growth in feed processing research and development capacity