

## **Shur Gain Award for Excellence in Nutrition and Meat Science**

### **Alan Tong**

This award is presented to a member of the Canadian Society of Animal Science to recognize excellence in teaching, research or extension on the fields of nutrition and meat science at the provincial, federal or international levels. This award is sponsored by Shur-Gain Canada.

Dr. Tong was born in China but has made Canada his home for many years. He received his BSc and MSc from McGill University in 1973 and 1974, respectively. He then went on to complete his PhD in Guelph in 1977. He has worked at the Lacombe Research Centre in Alberta since that time.

Dr. Tong has led a multi-disciplinary team of academic programmers and industry personnel in the design and evaluation of a computer vision grading system that uses cameras to capture images both of the whole carcass on the kill floor and at the traditional grading site. Traditional beef grading relies on manual measurements at a single grading site and tends to be subjective and variable, and does not give a true representation of saleable, lean yield. The innovative computer software developed by Dr. Tong is utilized to interpret the images and predict lean yield and provides the industry with a more accurate, value based system. This system is currently used in nine major packing plants across North America.

The automated computer based system has also been an integral component of a trace back system for the industry. This allows meat to be traced back from the retail store to the farm. This technology also supports the harmonization of grading between Canada and the United States. The Executive Vice President of the Canadian Cattlemen's Association has cited the computerized grading system as the most exciting development the industry has seen in 25 years.

Dr. Tong has invented and holds patents on processes for using image analysis to determine meat and carcass characteristics, detecting poor meat quality in live animals and determining tissue composition characteristics of animals. From these patents he developed a video imaging system for beef and hog grading; an infra-red imaging system for estimating body tissue composition and an ultrasound imaging system for estimating body tissue composition for hog grading. In addition he has also developed a neural-network model to predict beef tenderness and developed a multi-frequency bio-impedance meter to provide a non-destructive method for carcass grading.

Dr. Tong has been involved in publishing over 80 scientific papers, 50 departmental reports and 85 plus conference proceedings. He has served as associate editor of the Canadian Journal of Animal Science and has been adjunct professor of computer science at the University of Alberta since 1996. His team was awarded the AAFC Agcellence Award for Innovation in 1997 and the Federal Partners in Technology Transfer Award in 2000.

Dr. Tong was nominated for this award by Duane McCartney, Jennifer Aalhus and Allan Schaefer. The Canadian Society of Animal Science is pleased to recognize Dr. Alan Tong's accomplishments by bestowing on him the Award for Excellence in Nutrition and Meat Science.