# **CURRICULUM VITAE (November 2019)**

for

# ROBERTSON, ALBERT J.

#### 1. ACADEMIC CREDENTIALS:

B.Sc., University of Saskatchewan, 1971, Department of Biology, Chemistry-Biology-Biochemistry

M.Sc., University of Saskatchewan, 1976, Department of Biology, Molecular Genetics Ph.D., University of Saskatchewan, 1983, Department of Biology, and University of Alberta, Department of Biochemistry, Molecular Biology

#### 2. OTHER CREDENTIALS:

Commercial truck driver for Alcan, Kitamat, BC (Steel workers Union member) with air ticket (1968). Drove fuel and fire trucks in northern BC. Received training in firefighting, and several first aid courses. Assisted Okanogan Helicopter rescue team in recovering bodies from plane crash in mountains.

Licenced through several radiation safety courses at the U. of S. to use radioisotopes (Iodine 125, 131; P32, Carbon and tritium labelled amino acids

Commercial Apiculturist 1975 Honey bee breeder since 1992 (Saskatraz Project, www.saskatraz.com) Pedigreed seed grower (select status) Gas and Arc Welding Diploma, 1977 Pre-Nuclear and Elite Potato Seed Grower

### 3. APPOINTMENT(S) AND PROMOTIONS:

President, CEO, and Senior Research Scientist at Meadow Ridge Enterprises LTD. A corporation (1996) and family run business. This corporation is involved in grain, elite seed potato production, pure bred Black angus cattle breeding, honey production and honey bee breeding and research (<a href="www.saskatraz.com">www.saskatraz.com</a>). Meadow Ridge Enterprises Ltd. owns 3300 acres of Farm land and leases approximately 5000 acres for pasture and hay production.

Research Scientist, 1989-2002, Crop Development Centre, University of Saskatchewan Professional Research Associate, 1984-1989, Crop Development Centre, University of Saskatchewan

Professional Research Associate, 1976-79, Department of Biology, University of Saskatchewan

Teaching Assistant (Laboratory demonstrator), 1971-74, Department of Biology, University of Saskatchewan

Research Assistant, 1971-75, Department of Biology, University of Saskatchewan

## 4. ASSOCIATE MEMBERSHIPS:

Canadian Society for Cell Biology
Canadian Seed Growers' Association
Saskatchewan Beekeepers Development Commission
Saskatchewan Alfalfa Seed Producers' Association
Manitoba Honey Co-operative
Saskatchewan Wheat Pool
Saskatoon Bee Club - Past-president
SeCan Association
Canadian Honey Council-Club 300
Saskatchewan Seed Potatoes Growers Association, Vice-president (1995-2000)
Member of American Honey Producers Association

### 5. HONOURS (MEDALS, FELLOWSHIPS, and PRIZES):

Nominated for ABEX award twice on innovation in Science for discovery of ROB-5 (2006, 2007)

## 6. <u>Unscheduled Instructional Activity</u>: (perform guest lectures in graduate classes)

Director for Saskatchewan on BeeMaid Board (2014-Current)

Instruction to researchers, graduate and undergraduate students and research technicians on techniques in molecular biology (DNA, RNA and protein isolation and characterization). CDNA library construction and Northern, Southern and Western analyses and PCR. I also have experience with antibody production, immunology techniques (Eliza, Immunoprecipitation, etc.), vector construction and transformation. In addition, own and operate a nuclear seed potato production facility and teach student's plant tissue culture techniques, greenhouse production and field production techniques of elite seed potato production. Involved in raising honeybees – breeding, maintenance and honey production.

# 7. <u>Postgraduate Students Supervised or on Their Committee:</u>

Name	Degree Sought	Thesis Subject Matter
1995-97: <u>Committee</u>		
G. Demmon	M.Sc.	Molecular biology - Instruction on molecular mapping techniques.
1993-95: <u>Committee</u>		
P. Fu	Ph.D.	Heat stable proteins and acclimation.
1991-92: <u>Committee</u>		
Grant Churchill Karen Hyland Ping Fu Yi Liu	M.Sc. M.Sc. Ph.D. Ph.D.	Effects of ABA analogs on intact plants. Salt tolerance in wild and domestic barley. Heat stable proteins and acclimation. Identification and characterization of low abundance transcripts associated with cold acclimation in <i>Arabidopsis thaliana</i> .
1990-91: <u>Committee</u>		
Grant Churchill Karen Hyland Ping Fu	M.Sc. M.Sc. Ph.D.	Effects of ABA analogs on intact plants. Salt tolerance in wild and domestic barley. Heat stable proteins and acclimation.
1989-90: <u>Committee</u>		
Pauline Wong	M.Sc.	Genetics of cold acclimation in <i>Arabidopsis</i> thaliana.
Grant Churchill Karen Hyland Ping Fu	M.Sc. M.Sc. Ph.D.	Effects of ABA analogs on intact plants. Salt tolerance in wild and domestic barley. Heat stable proteins and acclimation.

# 8. New or Revised Teaching Materials Developed or Authored:

Revised methods for Two-dimensional SDS-PAGE.

# 9. Other Teaching Related Activities (Provide Narrative Description):

Instruction in molecular biology techniques to graduate students at U. of S. Instruction to beekeepers, teachers, scientists, and employee's on beekeeping, queen rearing

### 10. THESES SUPERVISED:

Jin Wang. 2016. Potential biomarker genes for selecting varroa tolerant honey bee (*Apis mellifera*) and biochemical characterization of a differentially expressed carboxylesterase gene in response to mite infestation. Food and Bio products, Master of Science Thesis University of Saskatchewan.

Sanjie Jiang. 2013. Differential Gene Expression of Varroa-Tolerant and Varroa-Susceptible Honey Bees (*Apis mellifera*) In Response to *Varroa destructor* Infestation. Food and Bio products, Master of Science Thesis University of Saskatchewan.

- 11. BOOKS, CHAPTERS IN BOOKS, EXPOSITORY AND REVIEW ARTICLES:
- A.J. Robertson. 2010. The Saskatraz Project: A Review 2004-2009. 50 page booklet.
- A.J. Robertson. 1983. Characterization of Cell Envelope Polypeptides in the Yeast, *Saccharomyces cerevisiae*, by Surface Labelling and Two-dimensional Electrophoresis. Ph.D. thesis. Saskatoon: University of Saskatchewan.
- A.J. Robertson. 1975. Mitochondrial DNA Mediated Suppression of Respiratory Sufficiency in *Saccharomyces cerevisiae*. M.Sc. thesis. Saskatoon: University of Saskatchewan.

#### **CHAPTERS IN BOOKS:**

- R.W. Wilen, P. Fu, A.J. Robertson and L.V. Gusta. 1997. A Comparison of the Cold Hardiness Potential of Spring Cereals and Vernalized and Non-vernalized Winter Cereals. In P.H. Li and T.H.H. Chen (eds.), <u>The Fifth International Plant Cold Hardiness Seminar</u>.
- R.W. Wilen, P. Fu, A.J. Robertson and L.V. Gusta. 1993. Molecular Biology of Cold Acclimation. In S.S. Purohit (ed.), <u>Agronomy Annual Review of Plant Physiology</u> (<u>Basic and Applied</u>). Agro Botanical, India.
- A.J. Robertson, G.C. Churchill and L.V. Gusta. 1992. The Role of Plant Growth Regulators on the Freezing Tolerance of Winter Annual Cereals and Cell Suspension Cultivars. In P.H. Li and L. Christenson (eds.), <u>The 4th International Plant Cold Hardiness Seminar</u>.
- D.B. Fowler, A.E. Limin, A.J. Robertson and L.V. Gusta. 1992. Breeding for Low-temperature Tolerance in Field Crops. ICSC.
- L.V. Gusta, M.J.T. Reaney, A.J. Robertson, S.R. Abrams and G.D. Abrams. 1990. ABA and ABA analogs: Metabolism, Compartmentation and Biological Activity. In R.E. Feeney (ed.), <u>Comments on Agriculture and Food Chemistry</u>. II (2) 143-169.
- M.J.T. Reaney, M. Ishikawa, A.J. Robertson and L.V. Gusta. 1987. The Induction of Cold Acclimation: The Role of Abscisic Acid. In P.H. Li (ed.), <u>Low Temperature Stress Physiology in Crops</u>, pages. Boca Raton, Florida: CRC Press Inc.
- G.H. Rank and A.J. Robertson. 1983. Protein and Lipid Composition of the Yeast Plasma Membrane. In J.F.T. Spencer (ed.), <u>Yeast Genetics: Fundamental and Applied Aspects</u>, Chapter 8, 225-239. New York: Springer-Verlag.

A.J. Robertson, G.H. Rank and G.W. Saunders. 1981. Polypeptides of Ghosts and pH Fractionated Vesicles of the Plasma Membrane from Baker's Yeast. In G.F. Stewart and I. Russell (eds.), <u>Current Developments in Yeast Research</u>, 143-148. Oxford and New York: Pergamon Press.

### 12. PAPERS IN REFEREED JOURNALS:

### PUBLISHED:

- A.J. Robertson, E. Scruten, M. Mostajeran, T. Robertson, C. Denomy, D. Hogan, A. Roesler, C. Rutherford, A. Kusalik, P. Griebel, S. Napper. 2020. Kinome Analysis of Honeybee (Apis mellifera L.) Dark-eyed Pupae Identifies Biomarkers and Mechanisms of Tolerance to Varroa Mite Infestation. Scientific Reports, Feb 7 (10): 1-12
- G. Codling, Y. Al Naggar, J.P. Giesy, A.J. Robertson. 2018. Neonicotinoid Insecticides in Pollen, Honey and Adult Bees in Colonies of the European Honey Bee (*Apis mellifera L.*) in Egypt. Ecotoxicology, Mar 27 (2): 122-131 doi: 10.1007/s10646-017-1876-2
- S. Jiang, T. Robertson, M. Mostajeran, A.J. Robertson, X. Qiu. 2016. Differential Gene Expression of Two Extreme Honey bee (*Apis mellifera*) Colonies Showing Varroa Tolerance and Susceptibility. <u>Insect Molecular Biology</u>, 25(3): 272-282
- G. Codling, Y. Al Naggar, J.P. Giesy, A.J. Robertson. 2016. Concentrations of Neonicotinoid Insecticides in Honey, Pollen and Honey Bees (*Apis mellifera L.*) in Central Saskatchewan, Canada. <u>Chemosphere</u>, 144: 2321-2328. doi: 10.1016/j.chemosphere.2015.10.135.
- Y. Al Naggar, A. Vogt, G. Codling, E. Najem, M. Mona, A. Seif, A.J. Robertson, J.P. Giesy. 2015. Exposure of Honeybees (*Apis mellifera*) in Saskatchewan, Canada to Organophosphorus Insecticides. <u>Apidologie</u>, <u>46</u>: 667-678 doi: 10.1007/s13592-015-0357-y.
- Y. Naggar, Y. Tan, C. Rutherford, W. Connor, P. Griebel, J.P. Giesy, A.J. Robertson. 2015. Effects of Treatments with Apivar® and Thymovar® on V. destructor populations, Virus Infections and Indoor Winter Survival of Canadian Honey Bee Colonies (*Apis mellifera L.*). <u>Journal of apiculture Research</u>, <u>54</u>: 548-554. doi: 10.1080/00218839.2016.1186917
- A.J. Robertson, B. Trost, E. Scruten, T. Robertson, M. Mostajeran, W. Connor, A. Kusalik, P. Griebel, S. Napper. 2014. Identification of Developmentally-Specific Kinotypes and Mechanisms of Varroa Mite Resistance through Whole-Organism, Kinome Analysis of Honeybee. <u>Frontiers in Genetics</u>, doi: 10.3389/fgene.2014.00139.
- T. Nakamura, J. Yazaki, N. Kishimoto, S. Kikuchi, A.J. Robertson, L.V. Gusta, M. Ishikawa. 2013. Comparison of Long-Term Up-Regulated Genes During Induction of Freezing Tolerance by Cold and ABA in Bromegrass Cell Cultures Revealed by Microarray Analyses. <u>Plant Growth Regulation</u>, 71: 113:136

- P. Teerawanichpan, A.J. Robertson, X. Qui. 2010. A Fatty acyl-CoA Reductase Highly Expressed in the Head of Honey Bee (*Apis mellifera*) Involves Biosynthesis of a Wide Range of Aliphatic Fatty Alcohols. <u>Insect Biochem Mol Biol</u>, 40: 614-649 doi: 10.1016/j.ibmb.2010.06.004.
- M. Ishikawa, M. Suzuki, T. Nakamura, T. Kishimoto, A.J. Robertson, L.V. Gusta. 2006. Effect of Growth Phase on Survival of Bromegrass Suspension Cells Following Cryopreservation and Abiotic Stresses. <u>Annals of Botany</u>, <u>97</u>: 453-459
- G. Wu, A.J. Robertson, X. Liu, P. Zheng, R.W. Wilen, N.T. Nesbitt, L.V. Gusta. 2004. A Lipid Transfer Protein Gene is Differentially Regulated by Abiotic Stress, Aba, Anisomycin, and Sphingosine in Bromegrass (*Bromus inermis* Leyss). Plant Physiology, 161: 449-458
- L.V. Gusta, G. Wu, N.T. Nesbitt, X. Lou, A.J. Robertson, D. Waterer. 2002. Genetic Engineering of Cultivated Plants for Enhanced Abiotic Stress Tolerance. <u>Plant Cold Hardiness: Gene Regulation and Genetic Engineering</u>. (edited by P.H. Li and E.T. Palva). Pp 237-248
- P. Fu, R.W. Wilen, G. Wu, A.J. Robertson, L.V. Gusta, 2000. Dehydrin Gene Expression and Leaf Water Potential Differs Between Spring and Winter Cereal During Cold Acclimation. Plant Physiology, 156: 394-400
- G. Wu, R.W. Wilen, A.J. Robertson and L.V. Gusta. 1999. Chromosomal Localization and Differential Expression of Mitochondrial Mn Superoxide Dismutase and Chloroplastic Cu/Zn Superoxide Dismutase Genes in Wheat (*Triticum aestivum*). Plant Physiology, 120: 513-520.
- P. Fu, R.W. Wilen, G-H Wu, A.J. Robertson and L.V. Gusta. 1999. Changes in Water Status and Dehydrin Gene Expression in Spring and Winter Cereals During Cold Acclimation in Controlled Environments and the Field. <u>Journal of Cell Physiology</u>, <u>156(3)</u>, 394-400
- P. Fu, R.W. Wilen, A.J. Robertson, N.H. Low, R.T. Tyler and L.V. Gusta. 1998. Heat Tolerance of Cold Acclimated Puma Winter Rye Seedlings and the Effect of a Heat Shock on Freezing Tolerance. <u>Plant Cell Physiology</u>, 39: 98-115.
- L.V. Gusta, R. Wilen, P. Fu, A.J. Robertson and G.H. Wu. 1997. Genetic and Environmental Control of Winter Survival of Winter Cereals. <u>Acta Agronomic Hungarica</u>, Vol. 45(3), pp. 231-240.
- G. Wu, A.J. Robertson, R.W. Wlien, L.V. Gusta. 1997. Isolation and Characterization of Two cDNAs Encoding Mitochondrial Manganese Superoxide Dismutases In Wheat. <u>Plant Physiology</u>, <u>113</u>: 664
- G. Wu, A.J. Robertson, R.W. Wilen, L.V. Gusta. 1996. Molecular Cloning of Two Wheat (Triticum Aestivum) Genes Encoding Chloroplast Cu/Zn Superoxide Dismutases. Plant Physiology, 112: 1736

- G. Wu, A.J. Robertson, R.W. Wilen and L.V. Gusta. 1996. Molecular Cloning of a Wheat Chloroplast Cu/Zn Superoxide Dismutase (SOD1.1) Gene. <u>Plant Physiology</u>, Plant Gene Register U69536.
- G. Wu, R.W. Wilen, A.J. Robertson and L.V. Gusta. 1996. Molecular Cloning of a Wheat Chloroplast Cu/Zn Superoxide Dismutase (SOD1.2) Gene. <u>Plant Physiology</u>, <u>Plant Gene Register U69632</u>.
- G. Wu, A.J. Robertson, R.W. Wilen and L.V. Gusta. 1996. Molecular Cloning of a Wheat Mitochondrial Manganese Superoxide Dismutase (SOD3.1) Gene. <u>Plant Physiology</u>, <u>Plant Gene Register U72212</u>.
- R.W. Wilen, P. Fu, L.V. Gusta, A.J. Robertson, S.R. Abrams and N.H. Low. 1996. An Abscisic Acid (ABA) Analog Inhibits ABA-Induced Freezing Tolerance and Protein Accumulation, but not ABA-Induced Sucrose Uptake in a Bromegrass (*Bromus inermis* Leyss. Cell Culture. Planta, 200: 138-143.
- M. Ishikawa, A.J. Robertson and L.V. Gusta. 1995. Comparison of Viability Tests for Assaying Freezing, Heat and Salt Tolerance of *Bromus enermis* Leyss. Cell Suspension Cultures Treated with Abscisic Acid. Plant Science, 107: 83-93.
- A.J. Robertson, M. Ishikawa and L.V. Gusta. 1995. The Effect of Prolonged Abscisic Acid Treatment on the Growth, Freezing Tolerance and Protein Patterns of (Leyss) Cell Suspension Cultures at Either 3EC or 25EC. <u>Journal of Plant Physiology</u>, <u>145</u>: 137-142.
- A.J. Robertson, M. Ishikawa, S. McKenzie and L.V. Gusta. 1994. Abscisic Acid-Induced Heat Tolerance in *Bromus inermis* Leyss. Cell Suspension Cultures. Heat-stable, ABA-responsive Polypeptides in Combination with Sucrose Confer Enhanced Thermo Stability. <u>Plant Physiology</u>, 105: 181-190.
- A.J. Robertson, A. Weninger, R.W. Wilen, P. Fu and L.V. Gusta. 1994. Comparison of Dehydrin Gene Expression and Freezing Tolerance in *Bromus inermis* and *Secale cereale* Grown in Controlled Environment, Hydroponics and the Field. Plant Physiology, 106: 1213-1216.
- A.J. Robertson, M.J.T. Reaney, R.W. Wilen, N. Lamb, S.R. Abrams and L.V. Gusta. 1994. Effects of Abscisic Acid Metabolites and Analogs on Freezing Tolerance and Gene Expression in Bromegrass (*Bromus inermis* Leyss) Cell Cultures. <u>Plant Physiology</u>, <u>105</u>: 823-830.
- N. Lamb, A.C. Shaw, S.R. Abrams, M.J.T. Reaney, B.E. Ewan, A.J. Robertson and L.V. Gusta. 1993. Oxidation of the 8'-position of a Biologically Active Abscisic Acid Analogue. Phytochemistry, 34: 905-917.
- B.J. O'Conner, A.J. Robertson and L.V. Gusta. 1991. Differential Stress Tolerance in a Somalclonal Variant of Flax. Journal of Plant Physiology, 139: 32-36.
- M. Ishikawa, A.J. Robertson and L.V. Gusta. 1990. Effect of Temperature, Light, Nutrients and Dehardening on Abscisic Acid Induced Cold Hardiness in *Bromus inermis* Leyss. Suspension Cultured Cells. Plant Cell Physiology, 31 (1): 51-59

- M.J.T. Reaney, L.V. Gusta, S.R. Abrams and A.J. Robertson. 1989. The Effects of Abscisic Acid, Kinetin and Gibberellic Acid on Freezing Tolerance in Smooth Bromegrass (Bromus inermis Leyss) Cell Suspensions. Canadian Journal of Botany, 67: 3640-3646.
- A.J. Robertson, L.V. Gusta, M.J.T. Reaney and M. Ishikawa. 1988. Identification of Proteins Correlated with Increased Freezing Tolerance in Bromegrass (*Bromus inermis* Leyss. cv. Manchos) Cell Cultures. Plant Physiology, 86: 344-347.
- A.J. Robertson, L.V. Gusta, M.J.T. Reaney and M. Ishikawa. 1987. Protein Synthesis in Bromegrass (*Bromus inermis* Leyss) Cultured Cells Induced to Cold Harden by ABA or Low Temperature. <u>Plant Physiology</u>, 84: 1331-1336.
- A.J. Robertson and L.V. Gusta. 1986. Abscisic Acid and Low Temperature Induced Polypeptide Changes in Alfalfa (*Medicago sativa*) Cell Suspension Cultures. Canadian Journal of Botany, 64: 2758-2763.
- G.H. Rank, A.J. Robertson and S.M. Gilmer. 1982. An Analysis of Major Protein Species During Pupation in *Megachile rotundata*. Insect. Biochem., 12: 699-705.
- A.J. Robertson, J.H. Gerlach, G.H. Rank and L.C. Fowke. 1980. Yeast Cell Wall, Membrane and Soluble Marker Polypeptides Identified by Comparative Two-dimensional Electrophoresis. <u>Canadian Journal of Biochemistry</u>, <u>58</u>: 565-572.
- G.H. Rank, A.J. Robertson and H. Bussey. 1978. The Viscosity and Lipid Composition of the Plasma Membrane of Multiple Drug Resistant and Sensitive Yeast Strains. Canadian Journal of Biochemistry, 56: 1036-1041.
- G.H. Rank, J.H. Gerlach, A.J. Robertson and R.P. Van Hoeven. 1978. High Viscosity Vesicles of Yeast Separated at pH 4 Have Surface Glycoprotein. Nature, 273: 682-684.
- G.H. Rank, A.J. Robertson and J.H. Gerlach. 1977. Single Gene Alteration of Plasma and Mitochondrial Membrane Function in *Saccharomyces cerevisiae*. Molecular Genetics, 152: 13-18.
- J.R. Dimmock, N.W. Hamon, K.W. Hindmarsh, A.P. Seller, W.A. Turner, G.H. Rank and A.J. Robertson. 1976. Evaluation of 2-benzylidene- cyclohexanones and 2,6-Bis (benzylidene) cyclohexanones for Anti-tumour and Cytotoxic Activity and of Mitochondrial Function in Yeast: Metabolism Studies of (E)-2-benzylidene-cyclohexanone. <u>Journal of Pharmaceutical Sciences</u>, 65: 538-543.
- J.R. Dimmock, N.W. Hamon, K.W. Hindmarsh, D.G. Mills, L.E. Negrave, G.H. Rank and A.J. Robertson. 1976. Evaluation of Mannich Bases and Related Compounds as Inhibitors of Mitochondrial Function in Yeast and Inhibition of Blood Platelet Aggregation, Blood Clotting, and In Vitro Metabolism of 5-dimethylamino-phenyl-1-phenyl-1-penten-3-one- hydrochloride. <u>Journal of Pharmaceutical Science</u>, 65: 482-488.

- G.H. Rank, J.H. Gerlach and A.J. Robertson. 1976. Some Physiological Alterations Associated with Pleiotropic Cross Resistance and Collateral Sensitivity in *Saccharomyces cerevisiae*. Molecular Genetics, 144: 281-288.
- G.H. Rank, A.J. Robertson and K. Phillips. 1975. Modification and Inheritance of Pleiotropic Cross Resistance and Collateral Sensitivity in *Saccharomyces cerevisiae*. Genetics, 80: 483-493.
- G.H. Rank, A.J. Robertson and K. Phillips. 1975. Reduced Plasma Membrane Permeability in a Multiple Cross Resistant Strain of *Saccharomyces cerevisiae*. <u>Journal of Bacteriology</u>, 122: 359-366.
- A.J. Robertson, N.T. Bech-Hansen and G.H. Rank. 1975. *Saccharomyces cerevisiae* Petite Mitochondrial DNA of Suppressive and Neutral Haploids and of (<u>rho</u> -) Diploids Obtained from Crossing (<u>rho</u> +) to a Neutral Petite. <u>Canadian Journal of</u> Genetics and Cytology, 17: 381-389.

### 9. PAPERS IN NON-REFEREED JOURNALS:

- A.J. Robertson, et al. 2012. The Saskatraz Project 2012. Western Apiculture Journal, February 22 p. 20-22
- A.J. Robertson. 2012. The Saskatraz Hybrid Project. <u>Saskatchewan Beekeepers Association Newsletter</u>, Spring Edition
- A.J. Robertson, et al. 2011. Summary of Saskatraz Research Project Activities. <u>Hivelights</u>, May, p. 41
- A.J. Robertson, et al. 2011. Management of Varroa Population Growth with Saskatraz Breeding Stock and Selective Treatment Strategies. <u>Saskatchewan Beekeepers Association Newsletter</u>, April
- A.J. Robertson. 2008. The Saskatraz Project. Hivelights, 20:15-19
- A.J. Robertson. 2008. Isolation Protects Saskatchewan Bees. <u>Western Producer</u>, <u>86(8)</u>:29
- A.J. Robertson. 2008. The Saskatraz Project: Selection of Productive Honey Bee Genotypes with Tolerance to Varroa and Tracheal Mites. <u>Hivelights</u>, <u>2008</u> <u>Supplement</u>: 13
- A.J. Robertson. 2007. The Saskatraz Project. <u>Saskatchewan Beekeepers Association</u> <u>Newsletter</u>, <u>12(3)</u>: Special Edition
- A.J. Robertson. 2006. The Saskatraz Report 2006-2007 using Natural selection and molecular assisted breeding methods to develop productive, gentle honey bee with tolerance to mites and brood diseases. <u>Saskatchewan Beekeepers Association Newsletters</u>, 11(2): Special Edition
- A.J. Robertson. 2006. Study Hunts Resistant Bees. Western Producer, 84:38

- A.J. Robertson. 2006. Plants Get Tough with Hardy Gene (Rob-5). Western Producer, 84:1
- A.J. Robertson. 2005. Evaluation of Varroa and Tracheal mite tolerance in selected honeybee lines and attempted correlation of tolerance with DNA Markers. <u>Hivelights</u>, 18:13
- A.J. Robertson. 2005. The Saskatraz Project. <u>Saskatchewan Beekeepers Association Newsletter</u>, <u>10(2)</u>:13
- A.J. Robertson. 2005. The Saskatraz Project. <u>Saskatchewan Beekeepers Association Newsletter</u>, <u>10(3)</u>
- A.J. Robertson. 2004. The Saskatraz Project. <u>Saskatchewan Beekeepers Association</u> <u>Newsletter</u>, <u>9(1)</u>:6
- A.J. Robertson. 2004. The Saskatraz Project. <u>Saskatchewan Beekeepers Association</u> Newsletter, 9(4):16
- A.J. Robertson. 2003. The Saskatraz Project. <u>Saskatchewan Beekeepers Association Newsletter</u>, <u>8(1)</u>:6
- A.J. Robertson. 2002. The Saskatraz Project. <u>Saskatchewan Beekeepers Association</u> <u>Newsletter</u>, <u>7(4)</u>:15
- 15. Invited and contributed PAPERS IN PUBLISHED CONFERENCE PROCEEDINGS AND ABSTRACTS:
  - G. Wu, A.J. Robertson, P. Zheng, R.W. Wilen and L.V. Gusta. 2000. Isolation and Characterization of a Novel Stress-Inducible Membrane Protein Gene in Bromegrass (*Bromus inermis* Leyss.) <u>International Congress of Plant Molecular</u> Biology.
  - G. Wu, X. Luo, C. Cohn, A.J. Robertson, P. Zheng, R.W. Wilen, A. McHughen and L.V. Gusta. 2000. Overexpression of Wheat Mitochondrial Mn Sod Enhances the Heat and Cold Tolerance in Canola (*Brassica napus*). <u>International Congress of Plant Molecular Biology</u>.

## PUBLISHED:

- A.J. Robertson. 2012. The Saskatraz Project: The Saskatchewan Honey Bee Breeding and Selection Program. <u>Apimondia Symposium 2012</u>, Queen Breeding, Selection and Honey Bee Health, p. 28-30
- A.J. Robertson. 2008. The Saskatraz Project. 2nd World Symposium of Queen Breeders and Artificial Insemination. Nayarit, Mexico. October 15-20. p. 121-125
- A.J. Robertson. 2005. Saskatchewan Beekeepers Honey Bee Breeding Program: 2004-2005. 64th Annual CHC CCM Meeting, 18:17-21

- H. Wang, A.T. Palasz, A.J. Robertson, L.V. Gusta and R.J. Mapletoft. 1999. Fast Freezing of Mouse Embryos in Glycerol or Ethylene Glycol Supplemented with BSA or Wheat Germ Protein Extract. <u>International Congress of Cryobiology</u>, Marseille, France, July.
- P. Fu, R. Wilen, A.J. Robertson and L.V. Gusta. 1998. Heat Tolerance of Cold Acclimated Puma Winter Rye Seedlings and the Effect of a Heat Shock on Freezing Tolerance. <u>Proceedings of the 9<sup>th</sup> International Wheat Genetics Symposium</u>, p. 22-24.
- G. Wu, R.W. Wilen, A.J. Robertson and L.V. Gusta. 1998. Differential Regulation of Mitochondrial Mn Superoxide Dismutase and Chloroplastic Cu/Zn Superoxide Dismutase Genes Under Cold and Drought Stress in Wheat. <u>Proceedings of the 9<sup>th</sup> International Wheat Genetics Symposium</u>, p. 108-110.
- G. Wu, R.W. Wilen, A.J. Robertson and L.V. Gusta. 1998. Molecular Cloning and Mapping of Mitochondrial Mn Superoxide Dismutase and Chloroplastic Cu/Zn Superoxide Dismutase Genes in Wheat. <u>Proceedings of the 9<sup>th</sup> International Wheat Genetics Symposium</u>, p. 111-113.
- P. Fu, R. Wilen, G. Wu, A.J. Robertson and L.V. Gusta. 1998. Changes in Water Status and Dehydrin Gene Expression in Spring and Winter Cereals During Cold Acclimation in Controlled Environments and the Field. <u>Proceedings of the 9<sup>th</sup> International Wheat Genetics Symposium</u>, p. 25-27.
- R.W. Wilen, P. Fu, A.J. Robertson and L.V. Gusta. 1997. A Comparison of Vernalized and Non-vernalized Winter Cereals Subjected to Cold Hardening Conditions. In P.H. Li and T.H.H. Chen (eds.), <u>Fifth International Plant Cold Hardiness Seminar</u>. August 5-8.
- G. Wu, R. Wilen, A. Robertson and L. Gusta. 1997. Molecular Cloning and Differential Expression of Wheat Mitochondrial Mn Superoxide Dismutase and Chloroplastic Cu/Zn Superoxide Dismutase Genes During Cold Stress. W-130 Freeze Damage and Protection of Fruits and Crops. August 9-12, Saskatoon, Saskatchewan.
- L.V. Gusta, P. Fu, R. Wilen, A.J. Robertson and G.H. Wu. 1997. The Genetic and Environmental Control of Survival of Winter Cereals. <u>W-130 Freeze Damage and Protection of Fruits and Crops</u>. August 9-12, Saskatoon, Saskatchewan.
- A.J. Robertson. 1996. Update on Nuclear Seed Potatoe Production in Saskatchewan. Proceedings of the Prairie Potatoe Council. January.
- P. Fu, R. Wilen, A. Robertson and L.V. Gusta. 1996. Physiological, Molecular and Biochemical Changes During Rehardening of Winter Cereals. <u>Plant Physiology</u>, 111: 206.
- P. Fu, R.J. Wilen, A.J. Robertson and L.V. Gusta. 1996. The Role of Dehydrins, Carbohydrates and Water Status in the Development of Freezing Tolerance in Winter Cereals. New Biological Approaches to Understand and Improve Winter Survival of Plants. April 11-13, Arkus, Denmark.

- P. Fu, A.J. Robertson, R.W. Wilen, A. Limin, D.B. Fowler and L.V. Gusta. 1995. Expression and Accumulation of Dehydrin in Cold Acclimating Spring and Winter Cereals. In <u>Value Added Cereals Through Biotechnology</u>. June 10-13, Saskatoon, Sask.
- P. Fu, A.J. Robertson and L.V. Gusta. 1994. Thermotolerance of Cold Acclimated Rye. Plant Physiology, 105 (1): 964
- M. Ishikawa, K. Komal, A.J. Robertson, L.V. Gusta. 1994. Abscisic Acid Induced Arabinoxylan-enriched Extracellular Polysaccharides in Bromegrass (*Bromius inermis* Leyss) Suspension Cultured Cells. 31st Annual Meeting of Society for Cryobiology. August, Kyoto, Japan.
- P. Fu, A.J. Robertston, A. Weninger, R.W. Wilen, B.J. O'Connor and L.V. Gusta. 1994. Differential Expression of Dehydrins in Spring and Winter Cereals During Cold Acclimation. <u>Plant Physiology</u>, 105 (1): 940.
- A.J. Robertson, M.J.T. Reaney, R.W. Wilen, N. Lamb, S.R. Abrams, L.V. Gusta. 1994. Effects of Abscisic Acid Metabolites and Analogs on Freezing Tolerance and Gene Expression in Bromegrass (*Bromus inermis*) Leyss Cell Cultures. <u>Plant Physiology</u>, 105 (1): 211.
- R.W. Wilen, L.V. Gusta, P. Fu, A.J. Robertson, N. Low, S.R. Abrams. 1994. The Role of ABA, Carbohydrates and Heat-stable Proteins in Freezing Tolerance in Bromegrass Cells. <u>Plant Physiology</u>, 105 (1): 213.
- A.J. Robertson, M. Ishikawa, S. MacKenzie and L.V. Gusta. 1993. Abscisic Acidinduced Heat Tolerance in *Bromus inermis* Leyss Cell Suspension Cultures. Heat-stable, ABA-responsive Polypeptides in Combination with Sucrose Confer Enhanced Thermostability. Sixteenth Annual Symposium in Plant Physiology. Plant Responses to Cellular Dehydration During Environmental Stress.
- K.E. Churchill, C.G. Suhayda and A.J. Robertson. 1991. Heat-stable Proteins Induced by Salinity Stress in Two *Hordeum* Species. <u>Plant Physiology</u>, <u>96 (1)</u>: 110.
- H.J. Jacobsen, S. Stirn, A.J. Robertson and S. Altherr. 1991. Molecular Analysis of an Auxin-inducible Embryo Marker Protein from Pea. Third Int. Congress of Plant Molecular Biology. On Molecular Biology of Plant Growth and Development. Tucson, Arizona. Oct. 6-11, 1991. Edited by R.B. Hallick. Abstr. 614.
- A.J. Robertson, M. Ishikawa and L.V. Gusta. 1991. Heat Stable Abscisic Acid Responsive Proteins: Possible Role in Conferring Resistance to Environmental Stress. Journal of Cellular Biochemistry, 15A: 154.
- L.V. Gusta, B.J. O'Connor, A.J. Robertson and R.S. Bhatty. 1990. The Effects of Chilling and Heat on Flax Quality and Yield. 53rd Flax Institute of the United States. Fargo, ND.
- M.J.T. Reaney, N.J. Livingston, L.V. Gusta and A.J. Robertson. 1990. The Measurement of Physiological Parameters of Plant Cultures Using Centrifuge Induced Water Potentials. Plant Physiology, 93 (1): 20.

- G.C. Churchill, G.C., L.V. Gusta, M.J.T. Reaney, S.R. Abrams and A.J. Robertson. 1990. Effect of Abscisic Acid Analogs on the Cold Hardiness of Fall Rye (Secale Cereal L. CV Puma) Seedlings. Plant Physiology, 93 (1): 21.
- L.V. Gusta, M.J.T. Reaney, A.J. Robertson, Bruce Ewan, Garth D. Abrams, S.R. Abrams and Nancy Lamb. 1990. Effects of (R,S) Abscisic Acid, (s)-Abscisic Acid, (R)-Abscisic Acid, Phaseic Acid and Enantioners of 2', 3' Dihydroabscisic Acid on Freezing Tolerance in Bromegrass (Bromus inermis Leyss CV Munchar) Cell Suspension Cultures. Plant Physiology, 93 (1): 159.
- M.J.T. Reaney, L.V. Gusta, B. Ewan, S.R. Abrams and A.J. Robertson. 1990. Evidence for Absicisc Analogs that Inhibit Abscisic Acid Action: The Discovery of Anti-Abscisins. Plant Physiology, 93 (1): 24.
- A.J. Robertson, M. Ishikawa, M.J.T. Reaney, S.R. Abrams and L.V. Gusta. 1990. Effects of (R,S)-Abscisic Acid, (S)-Abscisic Acid, Phaseic Acid and 2', 3'-Dihydro Absicic Acid on Freezing Tolerance and Protein Changes in *Bromus inermis* Cell Suspension Cultures. Journal of Cellular Biochemistry. 14E 308: (R243).
- M. Ishikawa, A.J. Robertson, M.J.T. Reaney and L.V. Gusta. 1988. Cold Hardiness Induction by Abscisic Acid. Its Optimization and Physiological and Molecular Changes Involved. 13th International Conference on Plant Growth Substances, Calgary, Canada, July 17-22, 1988.
- A.J. Robertson, M. Ishikawa, L.V. Gusta. 1988. Identification of Proteins Induced by Abscisic Acid and Environmental Stresses in *Bromus inermis* Leyss Suspension Culture Cells. Plant Physiology, 88 (4): 133
- L.V. Gusta, A.J. Robertson and M. Ishikawa. 1986. Biochemical and Biophysical Changes in Plants Associated with Stress Adaptation. 29th Annual Meeting of the CSPP, Saskatoon, Sask., June 16.
- M. Ishikawa, A.J. Robertson, M. Reaney and L.V. Gusta. 1985. Abscisic Acid Induced Tolerance to Freezing, Heat, Salt and Osmotic Stresses in Actively Growing *Bromus inermis* Leyss Suspension Culture Cells. Plant Physiology, 77 (4): 850.
- M. Reaney, A.J. Robertson, M. Ishikawa and L.V. Gusta, 1985. Effect of Culture Conditions on Abscisic Acid Induced Freezing Tolerance in *Bromus inermis* Leyss Suspension Cultures. <u>Plant Physiology</u>, 77 (4): 852.
- A.J. Robertson, M. Ishikawa and L.V. Gusta, 1985. Abscisic Acid Induced Proteins Detected in Extracellular Fractions of Freezing Tolerant (*Bromus inermis* Leyss Suspension Cultures. <u>Plant Physiology</u>, 77 (4): 851.

## 18. INVITED LECTURES OUTSIDE AND INVITED CONFERENCE PRESENTATIONS:

- A.J. Robertson 2019. The Saskatraz Project. Saskatchewan Beekeepers Association Conference and Trade Show. Saskatoon, SK. November 28
- A.J. Robertson, 2019. The Saskatraz Project. 46<sup>th</sup> Apimondia. Montreal, CA. November 7-12.

- A.J. Robertson, 2019. The Saskatraz Project. LCBA Field Day. Lorraine County, OH. June 1.
- A.J. Robertson, 2018. The Saskatraz Project. Global Forum for Innovations in Agriculture, ApiArab Expo. Abu Dhabi, UAE. February 5.
- A.J. Robertson. 2016. The Saskatraz Project. Saskatchewan Beekeepers Association Conference and Trade Show. Saskatoon, SK. December 3
- A.J. Robertson, 2015. The Saskatraz Project Update. SBA Field Day. Tisdale, Saskatchewan, Canada. June 15.
- A.J. Robertson. 2014. The Saskatraz Project. Saskatchewan Beekeepers Association Conference and Trade Show. Saskatoon, SK. November 22
- A.J. Robertson. 2012. The Saskatraz Project. SBA Convention and Trade Show. Saskatoon, SK. November 28-30.
- A.J. Robertson. 2012. The Saskatraz Project: Saskatchewan Honey Bee Breeding and Selection Program. Apimondia Symposium 2012. Hotel Chateau Laurier, Quebec City. November 16-18.
- A.J. Robertson. 2012. The Saskatraz Project. Maritime Bee Tour. Charlottetown, PEI. August 10-12.
- A.J. Robertson. 2012. The Saskatraz Project. SBA Field Day. Saskatchewan. June 25.
- A.J. Robertson. 2011. The Saskatraz Project. Saskatchewan Beekeepers Association Annual Convention. Saskatoon, SK. December 2.
- Meetings with California queen producers, Cabazon, CA November 13-15, 2011 at California State Beekeepers Association, including to set up Saskatraz hybrid project.
- A.J. Robertson. 2011. The Saskatraz Breeding Program. North American Beekeeping Conference. Galveston, Texas, USA. January 4-8.
- A.J. Robertson. 2010. The Importance of Apiculture. Saskatchewan Beekeepers Association Annual Convention. Saskatoon, SK. December 3.
- A.J. Robertson. 2010. The Saskatraz Project. Agriculture Biotechnology International Conference. Saskatoon, SK. September 15.
- A.J. Robertson. 2010. The Saskatraz Project. SBA Field Day. Ridgedale, SK. June 25.
- A.J. Robertson. 2010. The Saskatraz Project. Manitoba Beekeepers Association. Brandon, MB. March
- A.J. Robertson. 2010. Saskatraz Project. North American Beekeeping Conference. Orlando, Florida. January 12-26.

- A.J. Robertson. 2009. The Saskatraz Project. SBA Field Day. Saskatchewan. June 20
- Invited to Santiago, Chile by Agrovivo Corp; Jan.10-22, 2009 to establish breeding program (two lectures given on Saskatraz project.
- A.J. Robertson. 2008. The Saskatraz Project. Canadian Honey Council Symposium and Ontario Beekeeper's Association. Niagara Falls, ON. December 9-13.
- A.J. Robertson. 2008. The Saskatraz Project. SBA Annual Meeting. Saskatoon, SK. December 2-4.
- A.J. Robertson. 2008. The Saskatraz Project. 2nd World Symposium of Queen Bee Breeders and Artificial Insemination. Nayarit, Mexico. October 15-20.
- A.J. Robertson. 2008. The Saskatraz Project. SBA Field Day. Saskatchewan. June
- A.J. Robertson. 2008. Bear pit session on Discussion of "Queen Selection Criteria". Saskatchewan Beekeeper's Association; 85th Annual Convention Program. Saskatoon, SK. February 2.
- A.J. Robertson. 2008. The Saskatraz Project. Saskatchewan Beekeeper's Association; 85th Annual Convention Program. Saskatoon, SK. February 2.
- A.J. Robertson. 2008. The Saskatraz Project. Saskatchewan Beekeeper's Development Commission. Saskatoon, SK January 30.
- A.J. Robertson. 2008. Saskatraz Breeding Project: Past, Present and Future. 67th Canadian Honey Council and Canadian Association of Professional Apiculturists Annual General Meeting and Convention. Calgary, AB. Jan 23-26.
- Participated in discussions on CCD at AHPA meetings in Sacramento, CA, USA January 10-12 2008
- A.J. Robertson. 2007. Update on Saskatraz Research Project. SBA Annual Meeting. Saskatoon. November 29
- A.J. Robertson. 2007. Update on Saskatraz Research Project. SBA Field Day. Saskatchewan. June
- A.J. Robertson. 2007. Update on Saskatraz Research Project. Saskatchewan Beekeeper's Association 84<sup>th</sup> Annual Convention. Saskatoon, SK. February 1-3.
- A.J. Robertson. 2007. Update on Saskatraz Research Project. Beekeepers Development Commission (AGM). Saskatoon SK. January 31.
- A.J. Robertson. 2006. The Saskatchewan Beekeeper's Honey Bee Breeding Program. SBA Annual Meeting. Saskatoon, SK. November 17.
- A.J. Robertson. 2006. The Saskatchewan Beekeeper's Honey Bee Breeding Program. SBA Field Day. Saskatchewan. June 17.

- A.J. Robertson. 2006. The Saskatchewan Beekeeper's Honey Bee Breeding Program. Annual SBA Convention. Saskatoon, SK. February 1-4
- A.J. Robertson. 2006. The Saskatchewan Beekeeper's Honey Bee Breeding Program. Canadian Honey Council Meetings 65th Annual. Quebec City, Canada. January 24-28
- A.J. Robertson. 2006. The Saskatchewan Beekeeper's Honey Bee Breeding Program. American Honey Producers Association 37th Annual Convention. Houston, Texas, USA. January 10-14.
- A.J. Robertson. 2005. The Saskatchewan Beekeeper's Honey Bee Breeding Program. Proceeding of the 64th Annual CHC-CCM Meeting. Saskatoon, SK. February 4.
- Invited again as Visiting Research Scientist to the National Institute of Agrobiological Resources, Tsukuba, Science City, Yatabe, Ibaraki, 305, Japan. February-March 1991.
- Invited as Visiting Research Scientist to the National Institute of Agrobiological Resources, Tsukuba Science City, Yatabe, Ibaraki, 305, Japan November-December 1988 to continue collaborative research with Dr. Masaya Ishikawa.
- A.J. Robertson, 1987. ABA-induction of Freezing Tolerance in Cultured Plant Cells. Gordon Research Conference on Temperatures Stresses in Plants. Miramar, Santa Barbara, California, U.S.A. January 12-16.

## 19. PRESENTATIONS AT CONFERENCES (Non-Invited):

- A.J. Robertson. 1998. Genetic Engineering of Potatoes for Disease Resistance. Canada-Saskatchewan Agri-Food Innovation Fund Agbiotech R&D Seminar (AIBC '98), June 12.
- A.J. Robertson. 1998. Stress Tolerance in Flax, Potato and Canola. Canada-Saskatchewan Agri-Food Innovation Fund Agbiotech R&D Seminar (AIBC '98), June 12.
- A.J. Robertson et al. 1991. Heat Stable Abscisic Acid Responsive Proteins: Possible Role in Conferring Resistance to Environmental Stress. Journal of Cellular Biochemistry 15A: 154. Keystone Symposia on Molecular and Cellular Biology, Keystone, Colorado. January 10-24, 1991.
- A.J. Robertson et al. 1990. Effects of (R,S)-Abscisic Acid, (S)-Abscisic Acid, Phaseic Acid and 2', 3'-Dihydro Abscisic Acid on Freezing Tolerance and Protein Changes in *Bromus inermis* Cell Suspension Cultures. Journal of Cellular Biochemistry 14E: 308. Poster presented at the Keystone Symposia on Molecular and Cellular Biology, Keystone, Colorado. April 1990.

A.J. Robertson. 1974. Mitochondrial DNA in Respiratory Deficient Strains of *Saccharomyces ceerevisiae*. Gordon Research Conference on Nucleic Acids. Banff, Alta.

### 20. PATENTS GRANTED OR PENDING:

1. Pending: Application of Plant stress Proteins in the Culture and Cryopreservation of Animal Cells

Inventors: Dr. A. J. Robertson, Dr. A. Palasz, Dr. L. V. Gusta, Dr. R. Mapletoft.

File reference: 46237-PT

2. Production of Plants with Enhanced Tolerance to Abiotic Stresses, Increased Vigour and Yield by Expressing a Novel Gene (Rob-5) in Transgenic Plants.

Inventors: Robertson, Albert J., Guohai Wu, Gusta, L.V.

File Reference: 60426012

3. Meadow Ridge brand named (patented) Saskatraz breeding stock – filing date 25 June 2010 – service Steve Seiferling (McKercher LLP) Saskatoon, Saskatchewan. Registration date July 14, 2011; Trade Mark No.1486509. Please visit <a href="www.saskatraz.com">www.saskatraz.com</a> for trade mark and registration information. Saskatraz breeding stock is trademarked in Canada, the USA and Australia.

### 21. RESEARCH GRANT INFORMATION:

Nil

## 22. ARTISTIC EXHIBITIONS, PERFORMANCES OR RELATED ACTIVITIES:

Nil

### 23. PROFESSIONAL PRACTICE:

- Served on the Western Potato Council, Breeding and Selection Committee.
- Attended Canadian Horticulture Council meetings (Ottawa 1998/Charletown 1997) and participate in formulating resolutions (to the Minister) important to the industry at the national level. Involved in representing the potato industry (Canada/Saskatchewan) against international trade investigations and violations (Charlestown 1997).
- In 1993 we evaluated two of our selected honey bee breeding lines for Tracheal mite tolerance.
- Established private tissue culture laboratory and greenhouse facilities (Norvigor Tubers Ltd.) for the production of disease-free potato seed stock (1992).
- Review grant proposals for the National Science Foundation, the USDA and NSERC operating grants.
- Fully qualified select pedigree seed grower since 1991.
- Accepted in 1990 as a producer of elite potato seed in Saskatchewan.
- Participate in the review of manuscripts for Canadian Journal of Botany and Plant Physiology (1986-present).
- I have been a cereal grain and oilseed producer since 1975 and currently own 3300 acres of land for grain and cattle production. We produce Black Angus breeding stock and Saskatraz honey bee breeding stock in Canada, the US, UAE and Iran

- I am a member of the Canadian Seed Growers Association (1980) and SeCan (1983). I have produced registered and certified 6- and 2-row malting barley varieties, and pedigree forage and pulse (pea, beans) seeds. I have produced breeder plots of NorGold sweet clover and CDC Blackstrap beans, Pinto beans and Chickpeas.
- In 1985 I participated in field testing the plant growth regulator "Tilt" for Giba-Geigy on my farmland.
- I have consulted with and assisted in the assessment of the effects of plant growth regulators on winter wheat production in collaboration with Dr. L.V. Gusta and associates (1985-87).
- I have participated in studies on the management of leafcutter bees and alfalfa seed production with Dr. G.H. Rank, Department of Biology, University of Saskatchewan (1979-82).
- I have performed field selections of alfalfa plants for salinity tolerance were forwarded to Dr. B. Goplen, Agriculture Canada, Saskatoon for further evaluation (1985).
- I have kept honeybee colonies since 1975 and currently operate a large commercial honey operation (1800 to 2000 colonies). Meadow Ridge Enterprises Ltd has been instrumental in evaluating, testing and developing new technologies for successful queen rearing and honeybee breeding programs in Canada. In 1985 we evaluated 200 "peace queens" produced by Dr. Szabo's queen breeding program at the Beaverlodge Research Station in Alberta. In 1986 and 1987 we have been actively engaged in developing our own queen breeding program.
- In 1992, we obtained means to use Buckfast lines to introduce mite tolerance into our selected queen lines.
- We established our first close population bee breeding program in 1992, establishing the Saskatraz breeding program in 2005. This program is now internationally recognized and can be accesses at our website <a href="https://www.saskatraz.com">www.saskatraz.com</a>

#### 27. PROFESSIONAL AND ASSOCIATION OFFICES AND COMMITTEE ACTIVITY.

As an executive member of the Saskatchewan Seed Potato Growers Association (SSPGA) chaired First Annual SSPGA Meeting, November 6-7, 1996.

Attended meetings with Minister of Agriculture to discuss issues important to potato seed producers, March, 1996.

I serve on the executive committee of the Saskatchewan Potato Seed Growers Association.

As a member of the Canadian Honey Council Club 300 I have been associated with committees involved in naming the Tracheal and Varroa mites of Honeybees as serious threats to the Canadian Honeybee industry. Agriculture Canada, Ottawa has now officially named these mites as pests under the "Pests Act"

Served on the Saskatchewan Beekeepers board of Directors for three years (2002 to 2005)

Saskatchewan member on BeeMaid board of directors

#### 28. PUBLIC AND COMMUNITY CONTRIBUTIONS:

Member, Canadian Order of Foresters

### 29. EXTENSION ACTIVITIES:

- Was the subject of and assisted in the publishing of a brochure for the Saskatchewan Seed Potato Growers Association in Mexico (published in English and Spanish).
- Participated in the production of a video on seed potato production, "So You Want to Grow Seed Potatoes," in conjunction with the Department of Plant Sciences, University of Saskatchewan.
- A.J. Robertson. 2000. Seed Potato Industry in Saskatchewan. CTV News interview, Lethbridge, Alberta. January 27.
- A.J. Robertson. 1999. Growing Top Quality Seed. Farm and Ranch News, Vol. 7, #1, January/February/March, Idaho, Oregon, Washington. Pages 1 and 12.
- A.J. Robertson. 1992. Technology Will Keep Us in the Game. Fieldstone Comm. Interview and article, October.
- L.V. Gusta and A.J. Robertson. 1988. Developing Hardier Winter Wheat. ADF News, p. 2, February.
- A.J. Robertson. 1985. Detrimental Effects of Indiscriminate Application of Pesticides on Foraging Honeybees. D. Kyle, CBC Television (Local and National News), July 10.
- A.J. Robertson. 1985. Grasshopper Pesticides and Honeybees Recommended Practices for Applying Pesticides in the Vicinity of Honeybee Colonies. CJWW Radio telephone interview, July 10.