

**NAME: THEODORE B. BAILEY, JR.**

**02/09**

**CURRICULUM VITAE**

**NAME: Theodore B. Bailey**

2/09

**Field of Specialization:** Statistical Methods  
Quantitative Genetics

**Personal Data:**

Born: December 27, 1940 - Washington, Iowa  
Marital Status: Married, two children

**Degrees Held:**

B.A., Iowa State University, 1965, Horticulture  
M.S., University of Minnesota, 1969, Horticulture and Biometrics  
Ph.D., University of Minnesota, 1972, Genetics and Statistics

**Experience:**

1965-1969: Research Project Coordinator in Department of Horticultural Science, University of Minnesota  
1966-1967: Director of Experimental Investigation Examining the Effects of Chemical Regulators on Growth and Development of Turfgrass  
1969-1972: National Institute of Health Predoctoral Fellow of Genetics and Cell Biology, University of Minnesota  
1971-1972: Teaching Assistant in Department of Genetics and Cell Biology, University of Minnesota  
1972-1973: Assistant Professor in Department of Biology, St. Olaf College, Northfield, Minnesota

**Iowa State University Record:**

1973 - Assistant Professor  
1974 - Associate Member, Graduate Faculty  
1978 - Associate Professor  
1982 - Professor

**Honorary Society Memberships:**

Phi Kappa Phi  
Gamma Sigma Delta Honorary Society of Agriculture  
Sigma Xi  
Gamma Alpha Honorary Graduate Society  
(Officer and Delegate to National Convention)  
Osborn Research Club, Chair 2005

**Professional Society Memberships:**

American Statistical Association  
North Central Regional Technical Committee, NCCC-170  
(official ISU representative to the committee as of 12/4/90)

**Professional Society Memberships: (continued)**

North Central Regional Technical Committee, NCR-170  
(official ISU representative to the committee as of 12/92)  
North Central Regional Technical Committee, NCC-170  
(official ISU representative to the committee as of 11/08)

**Academic Honors:**

NIH Fellowship  
Research Assistantships  
Teaching Assistantship  
Undergraduate Scholarship Recipient

**Teaching:**

1973-74: 436(F), 401(W), 402(S), 401(SS1)  
1974-75: 436(F), 401(F), 402(W), 401(SS1)  
1975-76: 436(F), 401(F), 402(W), 411(SS1)  
1976-77: 436(F), 401(F), 402(W), 401(SSII)  
1977-78: 436(F), 401(F), 402(W)  
1978-79: 436(F), 401(F), 402(W)  
1979-80: 436(F), 401(F), 402(W)  
1980-81: 436(F), 401(F), 402(W)  
1981-82: 436(F), 401(F), 402(W)  
1982-83: 436(F), 401(F)  
1983-84: 436(F), 401(F)  
1984-85: 436(F), 401(F)  
1985-86: 436(F), 401(F)  
1986-87: 436(F), 401(F)  
1987-88: 436(F), 401(F)  
1988-89: 436(F), 401(F)  
1989-90: 436(F), 401(F)  
1990-91: 436(F), 401(F)  
1991-92: 401(F), 104(S)  
1992-93: 401(F), 436(S)  
1993-94: 401(F), 436(S), 401(S at Pioneer Hybrid)  
1994-95: 401(F), 436(S)  
1995-96: 402(F), 401(S),  
1996-97: 402(F), 401(S), 493(S)  
1997-98: 402(F), 401(S)  
1998-99: 402(F), 401(S), 493(S)  
1999-00: 402(F), 401(S)  
2000-01: 402(F), 401(S), 493(S)  
2001-02: 402(F), 401(S)  
2002-03: 402(F), 401(S)  
2003-04: 402(F), 401(S)  
2004-05: 402(F), 401(S)  
2005-06: 402(F), 401(S)  
2006-07: 402(F), 401(S)  
2007-08: 402(F), 401(S)  
2008-09: 402(F)

## University Service:

### Statistical Laboratory Committees:

- 1973-74: Graduate Minor
- 1974-75: Graduate Minor, Graduate Affairs, Seminar
- 1975-76: Graduate Minor, Ad Hoc Committee on the Teaching of Consulting
- 1976-77: Graduate Minor, Student-Faculty Committee on Instruction
- 1977-78: Graduate Minor, Student-Faculty Committee on Instruction, Ad Hoc Committee on Scheduling of Courses
- 1978-79: Graduate Minor, Student-Faculty Committee on Instruction, Faculty Development
- 1979-80: Graduate Minor, Faculty Development, Assistantship Evaluation Committee, Student Faculty Committee on Instruction
- 1980-81: Graduate Minor, Assistantship Evaluation Committee, Research and Instructional Use of Computers in Statistics, Faculty Development
- 1981-82: Graduate Minor, Assistantship Evaluation Committee (Chair), Research and Instructional Use of Computers in Statistics, Faculty Development
- 1982-83: Graduate Minor, Assistantship Evaluation Committee (Chair), Research and Instructional Use of Computers in Statistics, Faculty Development, Local Arrangements Committee for 50th Anniversary of STAT LAB, 1983
- 1983-84: Graduate Minor, Assistantship Evaluation Committee (Chair), Research and Instructional Use of Computers in Statistics, Faculty Development, Local Arrangements Committee for 50th Anniversary of STAT LAB, 1983
- 1984-85: Graduate Minor, Assistantship Evaluation Committee (Chair), Research and Instructional Use of Computers in Statistics, Faculty Development
- 1985-86: Graduate Minor (Chair), Research and Instruction Use of Computers in Statistics
- 1986-87: Graduate Minor, Research and Instructional Use of Computers, Safety
- 1987-88: Graduate Minor, Assistantship Evaluation Committee (Chair), Research and Instructional Use of Computers in Statistics
- 1988-89: Graduate Minor, Research and Instructional Use of Computers in Statistics (Chair), Library
- 1989-90: Graduate Minor, Research and Instructional Use of Computers in Statistics (Chair), Library
- 1990-91: Graduate Minor (Chair), Research and Instructional Use of Computers in Statistics, 5-Year Plan Committee
- 1991-92: Graduate Minor, Advisory Committee on Promotion & Tenure, Assistantship Evaluation Committee, Research & Instructional Use of Computers in Statistics
- 1992-93: Graduate Minor, Advisory Committee on Promotion & Tenure, Statistics Computation Advisory Committee
- 1993-94: Graduate Minor, Advisory Committee on Promotion & Tenure, Statistics Computation Advisory Committee
- 1994-95: Graduate Minor, Advisory Committee on Promotion & Tenure, Statistics Computation Advisory Committee
- 1995-96: Graduate Committee, Graduate Minor (Chair), Statistics Computation Advisory Committee, Search Committee
- 1996-97: Graduate Committee, Graduate Minor (Chair), Search Committee
- 1997-98: Graduate Committee, Graduate Minor (Chair), Honors & Awards Committee, Agriculture and Biological Sciences Consulting
- 1998-99: Graduate Committee, Graduate Minor (Chair), Search Committee (Chair)
- 1999-00: Graduate Committee, Graduate Minor (Chair) Search Committee (Chair)
- 2000-01: Graduate Committee, Graduate Minor (Chair)
- 2001-02: Graduate Committee, Graduate Minor (Chair)
- 2002-03: Graduate Committee, Graduate Minor (Chair)
- 2003-04: Graduate Committee, Graduate Minor (Chair)
- 2004-05: Graduate Committee, Graduate Minor (Chair)
- 2005-06: Graduate Committee, Graduate Minor (Chair), Honors & Awards Committee
- 2006-07: Graduate Committee, Graduate Minor (Chair), Honors & Awards Committee

### **Statistical Laboratory Committees: (Continued)**

- 2007-08: Graduate Committee, Graduate Minor (Chair), Honors & Awards Committee, Memorial Lectures (Chair)  
2008-09 Graduate Committee, Graduate Minor (Chair), Honors & Awards Committee, Memorial Lectures (Chair)

### **University Committees:**

- 1976 : International Conference Coordination Committee  
1982-83: Executive Committee, World Soybean Research Conference III, 1984  
1984-85: College of Agriculture Biotechnology Research Committee  
1985-86: Vice Chair, Undergraduate Student Membership Committee of Phi Kappa Phi  
1986-87: Chair, Undergraduate Student Membership Committee of Phi Kappa Phi  
1987-88: Agricultural Biotechnology Council  
1990-91: Representative Assembly (College of Liberal Arts and Sciences) for Department of Statistics  
1991-92: Representative Assembly (College of Liberal Arts and Sciences) for Department of Statistics  
1992-93: Representative Assembly (College of Liberal Arts and Sciences) for Department of Statistics  
2003 (S): Faculty Senate (substitute for Department of Statistics)  
2003-04: Faculty Senate and ad hoc Committee of Faculty Senate to assess the results of the evaluation of ISUCOMM  
2004-05: Faculty Senate  
2005-06: Faculty Senate  
2006-07: Faculty Senate

### **M.S., Ph.D. Committees:**

- 1975-76: Member (or minor representative) for 41 student  
1976-77: Member (or minor representative) for 45 students  
1977-78: Member (or minor representative) for 30 students  
1978-79: Member (or minor representative) for 35 students  
1979-80: Member (or minor representative) for 33 students  
1980-81: Member (or minor representative) for 35 students  
1981-82: Member (or minor representative) for 37 students  
1982-83: Member (or minor representative) for 21 students  
1983-84: Member (or minor representative) for 20 students  
1984-85: Member (or minor representative) for 15 students  
1985-86: Member (or minor representative) for 15 students  
1987-88: Member (or minor representative) for 13 students  
1988-89: Member (or minor representative) for 13 students  
1989-90: Member (or minor representative) for 13 students  
1990-91: Member (or minor representative) for 13 students  
1991-92: Member (or minor representative) for 13 students  
1992-93: Member (or minor representative) for 10 students  
1993-94: Member (or minor representative) for 16 students  
1994-95: Member (or minor representative) for 15 students  
1995-96: Member (or minor representative) for 16 students  
1996-97: Member (or minor representative) for 18 students  
1997-98: Member (or minor representative) for 25 students  
1998-99: Member (or minor representative) for 27 students  
POS, Chair for Ph.D. student  
1999-00: Member (or minor representative) for 27 students  
2000-01: Member (or minor representative) for 28 students

### **M.S., Ph.D. Committees: (Continued)**

2001-02: Member (or minor representative) for 27 students  
2002-03: Member (or minor representative) for 27 students  
2003-04: Member (or minor representative) for 13 students  
2004-05: Member (or minor representative) for 21 students  
2005-06: Member (or minor representative) for 17 students  
2006-07: Member (or minor representative) for 17 students  
2007-08: Member (or minor representative) for 14 students

### **Publications:**

Proceedings of the International Conference of Quantitative Genetics. ISU Press. 1977. (with E. Pollak and O. Kempthorne, Co-editors).

Vegetation Maintenance Practices, Programs, and Equipment on Minnesota Highways. University of Minnesota Agricultural Experiment Station, Investigation No. 619, Special Report, 69 pages, 1968. (with D. B. White).

Chemical Regulation of Growth in Turfgrasses. First International Turf Conference, Proceedings. Harrogate, England. July 1969. (with D. B. White, D. Heng, and L. Foote).

Effect of Three Selected Growth Regulators on Penncross Bentgrass (Agrostis Palustris Hud.). M.S. Thesis, University of Minnesota, 1969.

Selection and Linkage in Self-fertilizing Populations. *Genetics* 71(3). Supplement. Abstract. 1972.

Methods and Material for the Maintenance of Turf on Highway Right-of-way. University of Minnesota Agricultural Experiment Station, Investigation No. 619. Final Report, 100 pages, 1972. (with D. B. White, M. Smithberg, W. Brown, D. A. Heng, and D. D. Houlton).

Utilization of Source Populations in Producing Superior Varieties in Self-fertilizing Species. Ph.D. Thesis, University of Minnesota, 1972.

Estimation of Leaflet, Trifoliolate, and Total Leaf Areas of Soybeans. *Agronomy Journal* 67: 26-30, 1975. (with J. Wiersma).

A Rapid Method for Estimating Leaf Area Per Plant in Maize (Zea mays L.). *Crop Sci.* 15: 691-694. 1975. (with R. B. Pearce, and J. J. Mock).

Linkage and the Synthesis of Better Genotypes in Self-fertilizing Species. *Crop Science* 16: 63-370. 1976. (with R. E. Comstock).

Selection Limits in Self-fertilizing Populations Following the Cross of Homozygous Lines. pp. 399-412. In: Edward Pollak, Oscar Kempthorne, and Theodore B. Bailey, Jr. (eds.). Proceedings of the International Conference on Quantitative Genetics. Iowa State University Press, Ames, Iowa. 1977.

Production Response and Stability Characteristics of Oat Cultivars Developed in Different Eras. *Crop Science* 18: 938-942. 1978. (with I. Langer and K. J. Frey).

The Response of Maize Varieties to Environment in West Africa. *Tropical Agriculture (Trinidad)* 56(2): 89-97. 1979. (with B. R. Taylor).

**Publications: (continued)**

Long-term potassium requirements of nitrogen-fertilized Smooth Bromegrass. *Agronomy Journal* 71(4): 586-591. 1979. (with J. R. George and M. E. Pinheiro).

Correlations Among Grain Yield, Protein Yield and Related Traits of Oat (*Avena sativa* L.) Cultivars. *Egyptian Journal of Genetics and Cytology* 8(2): 283-294. 1979. (with K. Takeda and K. J. Frey).

Contribution of GR & HI to Grain YLD of Oats (*Avena sativa* L.) Following Selfing and Outcrossing of M<sub>1</sub> Plants. *Euphytica* 28(2): 219-226, 1979. (with B. S. Jalani and K. J. Frey).

Associations Among Productivity, Production Response and Stability Indexes in Oat Varieties. *Euphytica* 28(1): 17-24. 1979. (with I. Langer, and K. J. Frey).

Contribution of Growth Rate and Harvest Index to Grain Yield in F<sub>9</sub> Derived Lines of Oat. *Canadian J. Plant Science* 60: 379-384. 1980. (with K. Takeda and K. J. Frey).

Heterosis in Wheat. *Crop Science* 20(3): 339-342. 1980. (with C. O. Qualset and D. F. Cox).

Field Emergence Comparisons of Opaque-2 and Sugary-2 Segregates in Two Maize Synthetics. *Crop Science* 20: 459-462, 1980. (with P. J. Loesch, Jr.).

Production Traits of Oats Selected Under Low, Medium, and High Productivity. *Crop Science* 20: 739-744, 1980. (with R. Shabana and K. J. Frey).

Variation in Protein Yield, and its Relationships to Growth Rate, Harvest Index Grain Yield, and Groat-Protein Content of Oats (*Avena sativa* L.) Following Selfing and Outcrossing of M<sub>1</sub> Plants Z. *Pflanzenzuchtg.* 86: 89-98, 1981. (with B. S. Jalani and K. J. Frey).

Detection of Soybean Mosaic Virus in Seed by SPRIA. *Plant Disease*, 66: 693-695. 1981. (with G. R. Bryant, J. H. Hill, H. Tachibana, D.P. Durand, and H. I. Benner).

Estimation of genetic effects and errors from use of the Design II, p. 5. Rep. of the North Central Corn Breeding Res. Committee (NCR-2) Meetings. Des Plaines, Illinois. 1983. (with N. Vakili).

Seed Yield Response of Three Switchgrass Cultivars for Different Management Practices. *Agronomy Journal* 77: 214-218. 1985. (with P. Kassel and R. Mullen).

Changes in Mean, Variance, and Covariation Among Agronomic Traits in Successive Backcross Generations of Interspecific Matings (*Avena sativa* L. x *A. sterilis* L.) of Oats. *Canadian Journal of Genetics and Cytology* 27(4): 426-432. 1985. (with K. Takeda and K. J. Frey).

Relationships Among Traits in F<sub>q</sub>-Derived Lines of Oats. *Iowa State Journal of Research*, Vol. 62 (2): 313-327. (with K. Takeda and K. J. Frey).

Seed Dormancy and Germination of Switchgrass for Different Row Spacing and Nitrogen Levels. *Journal of Applied Seed Production* 3: 28-34. 1985. (with R. E. Mullen and P. C. Kassel).

Review Report of ASA Co-ordinating Committee Crops Review Team relative to the EPA National Acid Precipitation Assessment Program. *The American Statistician* 39(4):244-250. 1985. (with V. Anderson, N. R. Draper and J. O. Rawlings).

Yield Response of Corn Hybrids and Inbred Lines to Phylloplane Treatment with Mycopathogenic Fungi. *Crop Science* 29(1):183-190. 1989. (with N. Vakili).

**Publications: (continued)**

Soybean Mosaic Virus: Effects of Primary Disease Incidence on Yield and Seed Quality. *Plant Disease* 71(3): 37-239. 1987. (with J. H. Hill, H. I. Benner, and H. Tachibana).

Synergism Between a Mycopathogenic Fungus Sphaeronaemella helvella (Hypocreales: Nectriaceae) and an Entomopathogenic Fungus Beauveria bassiana (Deuteromycotina: Hypomycetes) in Suppressing Damage Caused by European Corn Borer, Ostrinia nubilalis (Lepidoptera: Pyralidea, in Corn. Submitted to *Journal of Economic Entomology*. (with N. Vakili and L. C. Lewis).

Statistics and Biotechnology. *Stat Lab News*, No 2, October 1988.

Differentiation of soybean mosaic virus isolates by Cleveland maps immunoblotted with monoclonal antibodies. *Phytopathology* 79(11):1261-1265. 1989. (with J. H. Hill, T. A. Permar, R. E. Andrews, D. P. Durand and R. A. Van Deusen).

Nonlinear Relationship Between Single-Cross Hybrids and Their Parental Lines. *Brazilian J. Genetics* 12(2):287-301. 1989. (with Gengchen Han and A. R. Hallauer).

Degradable Plastic Polyethylene Biodegradation by Ligninolytic Microorganisms in Pure Culture. *Applied and Environmental Microbiology*, Section of Physiology and Biotechnology. *Applied and Environmental Microbiology* 57(3):678-685, 1991. (with B. Lee, A. L. Pometlo III, A. Fratzke).

Effects of Three Selected Non-Meat Ingredients and Their Interactions on the Functionality of Pale, Soft and Exudative (PSE) Pork. Submitted to the *Journal Paper of the Iowa Agriculture and Home Economics Experiment Station, Ames, IA*. (with H. Goto, and C. L. Knipe).

An Evaluation of Hemostatic Parameters Following Use of Hypertonic Saline Combined with Colloids for Resuscitation of Hypovolemia. *American Journal of Veterinary Research*, Accepted & Editorial. 53:1791-1796. 1991. (with Debra L. Zoran, Albert Jergens, Dean Riedesel, Gary Johnson, & Stephen D. Martin).

Effect of High Water Table Conditions on Corn Growth. *Transactions of American Society Agricultural Engineers* 35(4):1173-1177. 1992. (with N. Ahmad, R. S. Kanwar, T. C. Kaspar).

Relations of Grain Proximate Composition and Physical Properties to Set-Milling Characteristics of Maize. *Journal of Cereal Chemistry*, 69(2):191-197. 1992. (with S. R. Fox, L. A. Johnson, C.R. Hurburgh, Jr., & C. Dorsey-Redding).

Microspore Developmental Stage and Anther Length Influence of the Induction of Tomato Anther Callus. *HortScience* 27(7):838-840. 1992. (with William L. Summers and Juan Jaramillo).

An Evaluation of Hemostatic Parameters Following Hypertonic Saline Combined with Colloids for Resuscitation of Hypovolemia. *American Journal Veterinary Research*. 53(10):1791-1796. 1992. (with D. L. Zoran, A. E. Jergens, D. H. Riedesel and S. D. Martin).

Effects of Three Selected Non-meat Ingredients and their Interactions on the Functionality of Pale, Soft and Exudative (PSE) Pork. Submitted to the *Journal of Muscle Foods*. 1992. (with H. Goto and C. L. Knipe).

Surface Residue and In-Row Treatment Effects on Long Term No-Tillage Continuous Corn. (Accepted) *Agronomy Journal*. December 1993. (with J. B. Swan, R. L. Higgs, and N. C. Wollenhaupt).

Carbon-Dioxide Evolution of Fungicide-Treated High-Moisture Corn. *Transactions of the American Society Agricultural Engineers*, 36(5):1417-1422. 1993. (with S. A. Al-Yahya, C. J. Bern and M. K. Misra).

**Publications: (continued)**

Variation of Cell-free Translation Profiles Among Pathogenic Strains of Soybean Mosaic Virus. *Journal of Phytopathology*, 137:293-300. 1993. (with L. M. Mansky, D. P. Durand, and J. H. Hill).

Effect of Soil Salt Concentration on the Transport of Salts to Ground Water in a Layered Soil - A Laboratory Study. *Agricultural Engineering Journal*, 4(1&2):1-16. 1995. (with B. T. Devrajani, R. S. Kanwar).

Cardiopulmonary Responses in Healthy Dogs During Endoscopic Examination of the Gastrointestinal Tract. *American Journal of Veterinary Research* 56(2):215-220. 1995. (with Albert E. Jergens, Dean H. Riedesel, Philip A. Ries, Kristina G. Miles).

Mode of Inheritance of Face Fly Diapause and Its Correlation with Other Development Traits. *Ecological Entomology* 20:359-366. 1995. (with Y. Kim, E. M. Krafur, and Suling Zhao).

Preservative Effects of Iprodione on Shelled Corn. *American Society of Agricultural Engineers* 39(5):1751-1756. 1996. (with P. N. Dugba, C. J. Bern, I. Rukunudin, and M. K. Misra).

Long-Term Tillage Effects on Continuous Corn Yields. *Proceedings of the 1996 Kansas State University Conference on Applied Statistics in Agriculture*. p. 18-32. 1996. (with J. B. Swan).

Comparison of Laboratory and Pilot-Plant Corn Wet-Milling Procedures. *Cereal Chemistry* 74(1):40-48. 1997. (with S. K. Singh, L. A. Johnson, L. M. Pollak, and S. R. Fox).

Shattercane (*Sorghum bicolor*) Emergence and Seed Survival Following Burial and Moving of Seed. *Weed Science*, 1997. (with Kegode, George O., and R. Brent Pearce).

Immunohistochemical Characterization of Immunoglobulin-Containing Cells and T Cells in the Colonic Mucosa of Healthy Dogs. *American Journal of Veterinary Research* 59:(5)552-556. May 1998. (with Albert E. Jergens, Yvan Gamet, Yosiya Niyo, Marek Brabec, and Becky Smith).

A Modified Method for Determining Free Fatty Acids from Small Soybean Oil Sample Sizes. *Journal of the American Oil Chemists' Society*, 75(5) 563-568. 1998. (with Rukunudin, I. H., P. J. White, and C. J. Bern).

Influence of fluctuating temperatures on emergence of shattercane (*Sorghum bicolor*) and giant foxtail (*Setaria faberi*). *Weed Science* 46:330-335. 1998. (with Kegode, George O., R. Brent Pearce).

Surface residue- and root-derived carbon in stable and unstable aggregates. *Soil Science Society of America*, 64(1):196-201, 2000. (with Gale, W. J., C. A. Cambardella).

Root-derived carbon and the formation and stabilization of aggregates. *Soil Society of America*, 64(1):201-207, 2000. (with Gale, W. J., C. A. Cambardella).

A Comparison of Four Mower Conditioners on Drying Rate and Leaf loss in Alfalfa and Grass. *Applied Engineering in Agriculture*. 16(1):15-21, 2000. (with Walley Greenlees, H. M. Hanna, K. J. Shinnars, and S. J. Marley).

Extrusion of Cross-Linked Hydroxypropylated Corn Starches. I. Pasting Properties. *Cereal Chemistry*. 77(3):320-325. 2000. (with A.E. Mcpherson, and J.Jane).

Tillage and Nitrogen Management Effects on Crop Yield and Residual Soil Nitrate. *Transactions of the ASAE*, Vol. 43(6):1589-1595. 2000. (with Bakhsh, A., R. S. Kanwar, D. L. Karlen, C. A. Cambardella, T. S. Colvin and T. B. Moorman).

**Publications: (continued)**

N-Management and Crop Rotation Effects on Yield and Residual Soil Nitrate Levels. 2001. Soil Science. 166(8):530-538. 2001. (with A. Bakhsh, R. S. Kanwar, D. L. Karlen, C. A. Cambardella, T. B. Moorman and T. S. Colvin).

Capule Removal and Caryopsis Scarification Improves Germination of Eastern Gamagrass Seed. Crop Science. 42(1):185-189. 2002. (with X. Tian, A. D. Knapp, K. J. Moore, E. C. Brummer).

Effects of Row Spacing and Plant Density on Corn Rootworm (Coleoptera: Chrysomelidae) Emergence and Damage Potential to Corn. Journal of Economic Entomology 95(3):570-577. 2002. (with Timothy M. Nowatzki and Jon J. Tollefson).

Effects of Laying Hen Manure Application Rate on Water Quality. Transactions of the ASAE 45(2):299-308. 2002. (with A. J. Chinkuyu, R. S. Kanwar, J. C. Lorimor and H. Xin).

Functional Changes in Isolated Guinea-pig Papillary Muscle Induced by Monensin and Digoxin. J Vet Med A Physiol Pathol Clin Med. 49(1):51-6. February 2002. (with I. Meral, F. B. Hembrough, and W. Hsu).

Functional Properties of Extruded-Expelled Soybean Flours from Value-Enhanced Soybeans. JAOCS 79(7):699-702. 2002. (with A. A. Heywood, D. J. Myers, and L. A. Johnson).

Effect of Value-Enhanced Texturized Soy Protein on the Sensory and Cooking Properties of Beef Patties. JAOCS 79(7):703-707. 2002. (with A. A. Heywood, D. J. Myers, and L. A. Johnson).

Cytokine effects on maturation of the phagosomes containing *Mycobacteria avium* subspecies *paratuberculosis* in J774 cells. FEMS Immunology and Medical Microbiology. 34(2):127-134. 2002. (with Jesse M. Hostetter, Edward M. Steadham, Joseph S. Haynes, and Norman F. Cheville).

Cropping System Effects on NO<sub>3</sub>-N Loss with Subsurface Drainage Water. ASAE. Vol. 45(6):1789-1797. 2002. (with A. Bakhsh, R. S. Kanwar, C. A. Cambardella, D. L. Karlen, and T. S. Colvin. ).

Response of Eastern Gamagrass Seed to Gibberellic Acid Buffered below Its pKa. Crop Sci. 43(3):927-933. 2003. (with A. Tian, D. Knapp, L. R. Gibson, R. Struthers, K. J. Moore, and E. C. Brummer).

Phagosomal maturation and intracellular survival of *Mycobacterium avium* subspecies *paratuberculosis* in J774 cells. Comparative Immunology, Microbiology and Infectious Diseases 26(4):269-283. 2003. (with J. Hostetter, E. Steadham, J. Haynes, and N. Cheville).

Distribution of substance P receptor (neurokinin-1 receptor) in normal ovine lung and during the progression of bronchopneumonia in sheep. J Histochem Cytochem. 52(1):123-30. 2004. (with B. Grubor, R. Ramirez-Romero, J. M. Gallup, and M. R. Ackermann).

Surfactant protein D expression in normal and pneumonic ovine lung. Veterinary immunology and immunopathology. 101:235-242. October 2004. (with B. Grubor, J. M. Gallup, R. Ramirez-Romero, E. C. Crouch, K. A. Brogeden, M. R. Ackermann).

Carbon Dioxide Evolution from Fresh and Preserved Soybeans. Transactions of ASAE. 47(3):827-833. March 2004. (with C. J. Bern, M. K. Misra).

Effects of Organic Acid Salt Solutions on Sensory and Other Quality Characteristics of Frankfurters. J Food Sci. 70(2):S123-7. March 2005. (with Z. Lu, J. G. Dickson and A. F. Mendonca).

Application of Predictive Models to Estimate *Listeria monocytogenes* Growth on Frankfurters Treated with Organic Acid Salts. Journal of Food Protection. 68(11):2326-2332. November 2005. (with Zheng Lu, Joseph G. Sebranek, James S. Dickson, Aubrey F. Mendonca).

### **Publications: (continued)**

Corn-Soybean and Alternative Cropping Systems Effects on NO<sub>3</sub>-N Leaching Losses in Subsurface Drainage Water. *Applied Engineering in Agriculture* 21(2):181-188. March 2005. (with R. S. Kanwar, R. M. Cruse, M. Ghaffarzadeh, A. Bakhsh, D. L. Karlen).

Oxalate and Phytate Concentrations in Seeds of Soybean Cultivars [*Glycine max* (L.) Merr.] *Journal of Agricultural and Food Chemistry* 53(20):7870-7877. October 2005. (with Harry T. Horner, Teresa Cervantes-Martinez, Rosanne Healy, Manju B. Reddy, Betsy L. Deardorff, Ismail Al-Wahsh, Linda K. Massey, Reid G. Palmer).

A Microscopic Study of Trichomes on Gynoecia of Normal and Tetraploid Clark Cultivars of *Glycine Max* and Seven Near-Isogenic Lines. *Int. J. Plant Science* 166(3):415-425. May 2005. (with Rosaria A. Healy, Harry T. Horner, Reid G. Palmer).

Inhibitory Effects of Organic Acid Salts for Control of *Listeria monocytogenes* on Frankfurters. *Journal of Food Protection* 68: 499-506. March 2005. (with Z. Lu, J. G. Sebranek, J. S. Dickson, A. F. Mendonca).

Molecular Marker Satt481 is Associated with Iron-Deficiency Chlorosis Resistance in a Soybean Breeding Population. *Crop Science* 45:2394-2399. October 2005. (with Dirk V. Charlson, Silvia R. Cianzio, and Randy C. Shoemaker).

Multiple Randomizations. *Journal of the Royal Statistical Society, Series B* 68:571-609. 2006. (C. J. Brien and R. A. Bailey, authors, discussion by T. B. Bailey, p. 604.)

N-Source Effects on Temporal Distribution of NO<sub>3</sub>-N Leaching Losses to Subsurface Drainage Water. *Water, Air, and Soil Pollution* 181:35-50. 2007. (with A. Bakhsh, R. S. Kanwar, and C. Pederson)

Assessing phenotypic, biochemical, and molecular diversity in coriander (*Coriandrum sativum* L.) germplasm. *Genetic Resources and Crop Evolution* 55(2):247-275. March 2008. (with Pedro A. López<sup>1</sup>, Mark P. Widrlechner<sup>2</sup>, Philipp W. Simon<sup>3</sup>, Satish Rai<sup>4</sup>, Terri D. Boylston<sup>5</sup>, Terry A. Isbell<sup>6</sup>, Candice A. Gardner<sup>2</sup> and Lester A. Wilson<sup>5</sup>).

### **Papers Presented:**

"Construction of Foundation Populations in Autogamous Species," at Department of Statistics, Iowa State University, June 1972.

"Selection and Linkage in Self-fertilizing Populations," at Genetics Society of American Meetings, AIBS, International Meetings, Minneapolis, Minnesota, August 1972.

"Results of Studies on Genetic Improvement of Self-fertilizing Populations," at Department of Genetics and Cell Biology, University of Minnesota, November 1972.

"Effect of Tight Linkage and Selection," at Department of Agronomy and Plant Genetics, University of Minnesota, January 1973.

"Consequences of Genetic Linkage on Limits of Progress in Population Improvement." Statistics Department, Iowa State University, Winter 1975.

**Papers Presented: (continued)**

"Selection Limits in Populations Formed From Homozygous Lines." International Conference on Quantitative Genetics. Iowa State University. Ames, Iowa. August 18, 1976.

"The Interpretation of Results from Research Experiments." Horticulture Department, Iowa State University, March 1977.

"Evaluation of Alternative Breeding Schemes in Naturally Self-fertilizing Populations." Invited paper given to NCR-21 Population and Quantitative Genetics Technical Committee, Chicago, Illinois. March 1977.

"Probabilities of Superior Genotypes in Homozygous Lines." Statistical Laboratory, Iowa State University. March 1977.

"Some Results of Simulation Studies Comparing Various Selection Systems During the Development of Inbred Lines." Invited paper given to NCR-21 Quantitative Genetic Meetings. Chicago, Illinois. March 1978.

"Effect of Family Structure in Selection Programs with Self-fertilizing Species." Seminar to Agronomy Graduate Students. Spring 1978.

"Production Traits of Oats Selected Under Low, Medium, and High Productivity." National Meetings of American Society of Agronomy. Fort Collins, Colorado. August 1979. (with R. Shabana and K. J. Frey).

"Comparison of Test Environments." Interregional Corn Improvement Conference. Atlanta, Georgia. February 1980.

"Some Results on the Problem of Identifying the Test Environment that will Result in the Maximum Response to Selection." Department of Horticulture, Iowa State University. April 1980.

"Switchgrass Seed Production as Influenced by Nitrogen Level and Row Spacing." National Meetings of American Society of Agronomy. Atlanta, Georgia, August 1981. (with P. Kassel and R. Mullen).

"Estimation of Genetic Effects and Errors from Use of the Design II Experiment." North Central Corn Breeding Research Committee (NCR-2) Meetings. Des Plaines, Illinois. February 22-24, 1983.

"A Comparison of Three Root Viability Tests to Determine Freeze Injury in Container-Grown Evergreens." (with F. D. Gibbons, J. P. Mahlstede and Cecil Stewart) 79th Annual Meeting American Society for Horticultural Science. Iowa State University. Ames, Iowa. August 8-13, 1982.

"Statistical Consulting in Plant Science--One Example." Seminar presented ISU Statistics Department. October 6, 1982.

"Estimation of Effects and Errors in a Crossed Mating Design." Statistical Laboratory 50th Anniversary Conference. Iowa State University. Ames, Iowa. June 13-15, 1983.

"Association of traits with backcrossing." Corn Quantitative Genetics Conference. Chicago, Illinois. February, 1986.

"Quantitative Genetics, Biotechnology and Statistical Consulting." Osborn Research Club. March 17, 1986.

"Performance of Superior Genotypes Using Pedigree Selection." 2nd International Conference on Quantitative Genetics, May 31 - June 5, 1987. Raleigh, North Carolina.

"Statistics and Biotechnology." Joint Statistical Meetings. ASA-ENAR-WNAR-IMS. August 17-20, 1987. San Francisco, California.

**Papers Presented: (continued)**

History of Iowa State University Statistical Center, presented at the American Statistical Association Sesquicentennial Meetings in Washington D.C., August 6, 1989. (Poster Session) (with J. Walker).

"Old Problems and Under-Used Statistical Procedures for Plant Scientists." Seminar, Department of Agronomy. February 21, 1991.

"Role of Statistics in Agricultural and Biological Sciences." Seminar presented to ISU Stat-ers. November 11, 1991.

Discussion leader for a session on Use of Molecular Markers in Plant Breeding, January 7, 1991, during the 1991 Gordon Research Conference on Quantitative Genetics, in Oxnard, California.

"Culture Media Influences on Induction of Tomato Anther Callus." Tomato Breeders Round Table, San Diego, California, March 1991. (with William L. Summers and Juan Jaramillo).

"An Evaluation of Hemostatic Parameters Following Use of Hypertonic Saline Combine with Colloids for Resuscitation of Hypovolemia." University of Iowa College of Medicine Research Days XVI, April 1991. (with A. E. Jergens).

"Inflammatory Bowel Disease in the Dog and Cat: Histological and Endoscopic Observations." National Pathology Meetings, Orlando, Florida, December 8-13, 1991. (with A. E. Jergens).

"An Evaluation of Hemostatic Parameters Following Hypertonic Saline Combined with Colloids for Resuscitation of Hypovolemia." Annual Meetings, American College of Internal Medicine. San Diego. May 1992. (with Zoran, D. L., A. E. Jergens, D. H. Riesdesel, and S. D. Martin).

"Surface Residue and In-Row Treatment Effects on Long-Term No-Tillage Continuous Corn." Annual Meetings of American Society of Agronomy. Mpls., Minn. Nov 1-6, 1992. (with J. B. Swan, R. L. Higgs, and N. C. Wollenhaupt).

"Breeding Orchardgrass for Increased Seed Yield in Oregon." ASA-CSSA-SSSA Meetings. Mpls., Minn. Nov. 1-6, 1992. (with I. T. Carlson and W. C Young III).

"Effects of Salts on Saturated Hydraulic Conductivity of Sandy Loam Soil" paper given at Mid-Central Conference of American Society of Agricultural Engineers, St. Joseph, MO, April 9-10, 1993. (with B. T. Devrajani, R. S. Kanwar and S. W. Melvin).

"Transport of NO<sub>3</sub>-N and Atrazine Through Long Disturbed Columns." Presented at the Mid-Central Conference of American Society of Agricultural Engineers, St. Joseph, MO, April 9-10, 1993. (with B. T. Devrajani, R. S. Kanwar and S. W. Melvin).

"Data Displays in the Analysis of Data." Paper given at Iowa SAS User's Group Meeting, Iowa State University, Ames, Iowa, May 20, 1993.

"The Statistician as a Collaborator with Researchers in Agriculture." Joint Statistical Meetings. San Francisco, CA. August 8-12, 1993.

Joint meeting of USSES (University Statisticians of Southern Experiment Stations) and NCR170 Research Advances in Agricultural Statistics Technical Committee Meeting. Waterford Hotel, Oklahoma City, - Oklahoma. Hosted by Oklahoma State University, August 5-7, 1998. Presented a PROC MIXED short course prepared for the National Agronomy Meetings, Fall 1998. The short course was developed and presented by Susanne Aref of the University of Illinois, Ted Bailey of ISU and Larry Douglas of the University of Maryland.

**Papers Presented: (continued)**

90<sup>th</sup> Annual Meeting of the American Society of Agronomy. October 18, 1998. Presented a workshop entitled 'MIXED MODELS. Using PROC MIXED for Biological and Environmental Interactions'. Susanne Aref, Ted Bailey and Larry Douglas were co-presenters. A revised version of the workshop materials was made available in electronic form and has been used at various sites, including universities and presented at the USDA\_ARS Meeting.

American Society American Engineers Annual International Meeting. July 9-12, 2000. Midwest Express Center. Milwaukee, Wisconsin. Impact of Swine Manure Appreciation Rate and Method on Bacteria Transport with Runoff Water. (with Fengyu Wang, presenter, R.S. Kanwar, and J.L. Baker).

NCR170 (Research Advances in Agricultural Statistics Technical Committee) Meeting. Springdale, Arkansas. July 12-13-2001. Hosted by University of Arkansas. Presentation on 'Use of spatial statistics in design and analysis of data from designed experiments'.

Joint Statistical Meetings. American Statistical Association. Atlanta, Georgia. August 6, 2001. Section on contemporary issues in Statistical Consulting and Collaboration. Some current Issues of Agricultural/Biology Researchers.

Joint Statistical Meetings. American Statistical Association. New York, N.Y. August 13, 2002. Section on Quality and Productivity. 'Design and Analysis of Experiments involving Development of New Food Products and Taste Panels.'

NCR170 (Research Advances in Agricultural Statistics Technical Committee) Meeting. Reno, NV. July 10-11, 2003. 'Design and Analysis of Experiments involving Development of New Food Products and Taste Panels.'

Joint Statistical Meetings. American Statistical Association. San Francisco, CA. August 8, 2003. Biopharmaceutical Section. 'Choice of Number of Observations in Experiments with Repeated Measures.'

31st Annual Autumn Immunology Conference, Chicago, Illinois. November 23-25, 2002. 'Granuloma formation and antigen-specific T cell proliferation in subcutaneous Mycobacterium avium subsp. paratuberculosis infection.' (with F. J. Simutis, and D. E. Jones).

American Society for Microbiology Meeting. Salt Lake City, Utah. May 21, 2002. 'Surfactant Protein D expression in Normal and Pneumonic Ovine Lung'. With B. Grubor, R. Ramires-Romero, J. M. Gallup, A. B. Barua, E. C. Crouch, K. A. Brogden, T. B. Bailey, M. R. Ackermann.

Joint Statistical Meetings. American Statistical Association. San Francisco, CA. August 8, 2003. Biopharmaceutical Section. 'Choice of Number of Observations in Experiments with Repeated Measures.'

NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Reno, NV. July 10-11, 2003. 'Design and Analysis of Experiments involving Development of New Food Products and Taste Panels.'

Botany Society of America. Phytochemical Section. Snow UT. July 31-August 5, 2004. Oxalate and phytate concentrations in seeds of soybean (*Glycine max L.*) (with H.T. Horner, T. Cervantes-Martinex, R. Healy, M. Ready, R. L. Bernard, R. Palmer).

Botany Society of America. Developmental and Structural Section. Snowbird UT. July 31-August 5, 2004. Trichomes on the gynoecium of cultivar Clark (*Glycine max L.*), seven near-isogenic lines, and a tetraploid Clark: a comparative study of their relative numbers and types. (with R. Healy, H.T. Horner, R. Palmer).

### **Papers Presented: (continued)**

Joint Statistical Meetings. American Statistical Association. Toronto, Canada. August 7-10, 2004.  
“Evaluation of the Use of Molecular Markers to Identify and Select Genotypes.”

Joint Statistical Meetings. American Statistical Association. Seattle, WA. August 6-10, 2006.  
“Uncontrolled variation in multi-stage experiments.”

“Screening the Gene Pool for Special Uses in Coriander” Presented at the 6<sup>th</sup> National Symposium on  
“Creating Markets for Economic Development of New Crops and New Uses,” San Diego, CA, 14-18  
October 2006. (with P.A.Lopez, M.P. Widrlechmer, P.W. Simon, S. Rai and C.A.Gardner).

“Discussion of ‘Multiple Randomizations’.” Invited discussant for paper presented at Ordinary Meeting of  
the Royal Statistical Society, London. February 1, 2006. Organized by the Research Section Committee.  
Presented paper written by C. J. Brien and R. A. Bailey.

Joint Statistical Meetings. American Statistical Association. Salt Lake City, Utah. July 29-August 2, 2007.  
“Randomization of factors in multiphase experiments.”

NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Utah State  
University, Logan, Utah. July 26, 27, 2007. Using PROC GLIMMIX in service courses and consulting –  
analyzing and interpreting factorial treatment designs.”

### **Conferences, Symposiums:**

Computer Science and Statistics: Seventh Annual Symposium on the Interface. October 1973.  
Iowa State University. Ames, Iowa.

North Central Regional 21 Annual Meeting of Population and Quantitative Genetics.  
St. Paul, Minnesota. July 17-19, 1974.

International Maize Symposium, Genetics and Breeding. University of Illinois, Urbana-Champaign.  
September 8-12, 1975.

International Corn Improvement Conference. Cincinnati, Ohio. February 9-10, 1976.

International Conference on Quantitative Genetics. Iowa State University. Ames, Iowa.  
August 16-21, 1976.

Joint Meeting of NCR-21 Population Genetics Technical Committee, Corn Quantitative Genetics  
Group and NCR-2 Corn Breeding Technical Committee. Chicago, Illinois. March 1977.

Short Course on Statistical Analysis System - General Linear Models Procedure. Bethesda, Maryland,  
November 14-15, 1977. Presented by Continuing Education Institute.

NCR-21 Quantitative Genetics Meeting. Chicago, Illinois. March 1978.

John Tukey Short Course on Exploratory Data Analysis. May 30 - June 2, 1978. Ames, Iowa.

**Conferences, Symposiums: (continued)**

- Plant Breeding Symposium II. March 12-16, 1979. Ames, Iowa.
- Interregional Corn Improvement Conference. February 11-14, 1980. Atlanta, Georgia.
- North Central Regional-2 Quantitative Genetics Meetings. March 3-5, 1981. Des Plaines, Illinois.
- North Central Regional-21 Quantitative Genetics Meetings. August 20-21, 1981. Ames, Iowa.
- North Central Regional-2 Quantitative Genetics Meetings. March 2-3, 1982. Des Plaines, Illinois.
- North Central Regional-2 Quantitative Genetics Meetings. February 22-24, 1983. Des Plaines, Illinois.
- ISU Statistical Laboratory 50th Anniversary Conference. June 13-15, 1983. Ames, Iowa.
- Fourth Interregional Corn Improvement Conference. February 21-23, 1984. St. Louis, Missouri.
- North Central Regional-2 Quantitative Genetics Meetings. March 26-27, 1985. Des Plaines, Illinois.
- North Central Regional-2 Quantitative Genetics Meetings. February 25, 26, 1986. Des Plaines, Illinois.
- Gordon Research Conference on Quantitative Genetics and Biotechnology. January 20-24, 1986. Santa Barbara, California.
- Joint Statistical Meetings. ASA-ENAR-WNAR-IMS. August 17-20, 1986. Chicago, Illinois.
- 2nd International Conference on Quantitative Genetics. May 31 - June 5, 1987. Raleigh, North Carolina.
- Joint Statistical Meetings. ASA-ENAR-WNAR-IMS. August 17-20, 1987. San Francisco, California.
- American Statistical Association. 1988 Winter Conference: 'Statistics in Biotechnology,' January 6-8, 1988. San Antonio, Texas.
- Gordon Research Conference on Quantitative Genetics and Biotechnology. January 9-13, 1989. Oxnard, California.
- From Observation to Inference. A Conference In Honor of Oscar Kempthorne. June 23, 1989. Iowa State University. Ames, Iowa.
- Sewall Wright Centennial Symposium. June 8-9, 1990. University of Wisconsin. Madison Wisconsin.
- North Central Regional-21 Technical Committee Meeting. January 5-6, 1991. Oxnard, California.
- Gordon Research Conference on Quantitative Genetics and Biotechnology. January 7-11, 1991. Oxnard, California. Discussion Leader for Session on 'Use of Molecular Markers in Plant Breeding.'
- North Central Regional Committee on Quantitative Genetics (NCR-21). April 24-25, 1992, Clemson University, Clemson, SC.
- North Central Regional Committee on Research Advances in Agriculture Statistics (NCR-170). July 9-10, 1992, Lincoln, NE.
- North Central Regional Committee on Quantitative Genetics (NCR-21). February 13-14, 1993, Ventura, CA.

### **Conferences, Symposiums: (continued)**

Fourth Gordon Conference on Quantitative Genetics and Biotechnology (NCR-21). February 1993, Ventura, CA.

North Central Regional Committee on Research Advances in Agricultural Statistics (NCR-170). July 15-16, 1993, Ames, IA.

Joint meeting of USSES (University Statisticians of Southern Experiment Stations) and NCR170 Research Advances in Agricultural Statistics Technical Committee) meeting. Waterford Hotel, Oklahoma City, Oklahoma. Hosted by Oklahoma State University, August 5-7, 1998. Presented a PROC MIXED short course prepared for the National Agronomy Meetings, fall 1998. The short course was developed and presented by Susanne Aref of the University of Illinois, Ted Bailey of ISU and Larry Douglas of the University of Maryland.

NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Springdale, Arkansas. July 12-13-2001. Hosted by University of Arkansas. Presentation on 'Use of spatial statistics in design and analysis of data from designed experiments'.

Joint Statistical Meeting. American Statistical Association. Atlanta, Georgia. August 6, 2001. Section on contemporary issues in Statistical Consulting and Collaboration. Some current Issues of Agricultural/Biology Researchers.

Joint Statistical Meetings. American Statistical Association. New York, N.Y. August 13, 2002. Section on Quality and Productivity. 'Design and Analysis of Experiments involving Development of New Food Products and Taste Panels.'

Gordon Research Conference on 'Quantitative Genetics and Genomics'. Ventura, CA. Feb 9-Feb 14, 2003.

NCR170 (Research Advances in Agricultural Statistics Technical Committee). Reno, NV. July 10-11, 2003. Paper presented: "Design and Analysis of Experiments involving Development of New Food Products and Taste Panels."

Joint Statistical Meetings. American Statistical Association. San Francisco, CA. August 8, 2003. Biopharmaceutical Section. Paper presented: "Choice of Number of Observations in Experiments with Repeated Measures."

Joint meeting of USSES (University Statisticians of Southern Experiment Stations) and NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting). Gainesville FL. July 11-13. 2004.

Joint Statistical Meetings. American Statistical Association. Toronto, Canada. August 7-10, 2004. Evaluation of the Use of Molecular Markers to Identify and Select Genotypes.

NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Fort Collins, Colorado, July 14-15, 2005.

Joint Statistical Meetings. American Statistical Association. Minneapolis, Minnesota. August 6-10, 2006. Uncontrolled Variation in Multi-stage Experiments.

NCCC-170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Madison WI. July 13-14, 2006.

Joint Statistical Meetings. American Statistical Association. Salt Lake City, Utah. July 29-August 2, 2007. "Randomization of factors in multiphase experiments."

NCR170 (Research Advances in Agricultural Statistics Technical Committee) meeting. Utah State

**Conferences, Symposiums: (continued)**

University, Logan, Utah. July 26, 27, 2007. Using PROC GLIMMIX in service courses and consulting – analyzing and interpreting factorial treatment designs.”

**Other Professional Experience:**

- (1) Co-organizer of International Conference on Quantitative Genetics. Iowa State University. Ames, Iowa. August 16-21, 1976.
  - a) Chairman of publicity and local arrangements
  - b) Co-editor of Proceedings from the conference
- (2) Member of Policy Committee and Transportation Sub-committee of Plant Breeding Symposium II, March 12-16, 1979 at Iowa State University. Program Host for Session I on Selection and Breeding Methods.
- (3) Short course in Statistical Methods. Cedar Rapids, Iowa. 1976.
- (4) Invited to present a short course on Statistical Methods to participants of 1979 Soil Science Institute held at ISU, Winter 1979.
- (5) Short course in Statistical Methods. Marshalltown, Iowa. 1981.
- (6) Chair of Local Arrangements Committee for Statistical Laboratory 50<sup>th</sup> Anniversary Conference. Ames, IA. June 13-15, 1983.
- (7) Program Committee, World Soybean Research Conference III, 1984.
- (8) In 1985 I served as a member of an American Statistical Association Committee to evaluate statistical methods being used to study the effects of acid rain on crops. The Crops Review Team was formed, as one of several teams, by the American Statistical Association Coordinating Committee in consultation with the Environmental Protection Agency under a cooperative agreement between ASA and EPA for the review of specified statistical issues in the EPA sponsored research on the effects of acid deposition. The Crops Review Team had the responsibility of reviewing the following topics:
  - Project A: Regionalization of crop dose response studies, and
  - Project B: Estimation of acid deposition effects from crop statistics
- (9) I submitted 'expert' testimony to a hearing of the Iowa Department of Revenue relative to regression methods used by the DOR to obtain 'equalized' average net income per acre values for each of the counties in the state of Iowa.
- (10) Guest lectures to Agronomy 621, 'Introduction to theory of limits to artificial selection,' 1987, 1988.
- (11) Contributed an article, 'Statistics and Biotechnology' in the October, 1988 issue of Stat Lab News.
- (12) Served on a committee to review research proposals for the Agricultural Biotechnology Council, spring 1988 (committee members were from ISU, industry and other universities).
- (13) Coordinator of ISU's contribution to the Poster Session, History of ISU's Department of Statistics and Statistical Laboratory, at the ASA Meetings in Washington D.C., August 1989.

**Other Professional Experience: (continued)**

- (14) Appointed member of NCR-21 Technical Committee, December 4, 1990.
- (15) Discussion Leader for Session on “Use of Molecular Markers in Plant Breeding”. Gordon Research Conference on Quantitative Genetics and Biotechnology. January 7-11, 1991. Oxnard California.
- (16) Interdepartmental Genetics Program faculty member, Iowa State University, as of 1992.
- (17) Departmental liaison, Gamma Sigma Delta, the honor society of Agriculture, as of 1992.
- (18) Departmental liaison, Phi Kappa Phi honor society, as of 1992.
- (19) NCR-21 Technical Committee. Ventura, CA. February 13-14, 1993.
- (20) Gordon Research Conference on Quantitative Genetics and Biotechnology. Ventura, CA. February 19-23, 1993.
- (21) Chair, 1993 Snedecor Award Committee. Presented the award during the COPSS Session of the Joint Statistical Meetings, San Francisco, CA August 11, 1993.
- (22) NCR-107 Technical Committee. Ames, IA. July 15-16, 1993.
- (23) Taught STAT 401X (Statistical Methods for Research Workers) to researchers at Pioneer Hybrid, Inc., Johnston, IA. Fall 1993.
- (24) Co-presenter of Workshop of PROC MIXED at the 1998 Annual Agronomy Society Meetings, October 20, 1998, Baltimore, MD.
- (25) Reviewed Hatch proposal for the University of Vermont. May 1999.
- (26) Osborn Research Club President, January-December 2005.
- (26) Science Review Board Member, Food Quality Protection Agency, FIFRA Scientific Advisory Panel Meeting October 9-11, 2007.
- (27) Science Review Board Member, Food Quality Protection Agency, FIFRA Scientific Advisory Panel, Environmental Protection Agency. Meeting held in Arlington VA October 9-11, 2007. The Panel examined a set of scientific issues being considered by the Environmental Protection Agency pertaining to the potential for atrazine to affect amphibian gonada development.
- (28) Departmental liaison, Gamma Sigma Delta, the honor society of Agriculture (2007).
- (29) Science Review Board Member, Food Quality Protection Agency, FIFRA Scientific Advisory Panel, Environmental Protection Agency. Meeting held in Arlington VA February 5-8, 2008. The Panel examined a set of scientific issues being considered by the Environmental Protection Agency regarding The Agency’s Proposed Action Under FIFRA 6(b) Notice of Intent to Cancel Carbofuran.