Soils & Crops

March 1 & 2, 2007
Western College of
Veterinary Medicine Bldg,
University of Saskatchewan
Saskatoon, SK

Coordinated by:

The Saskatchewan Institute of Agrologists
(SIA) and the Certified Crop Advisor (CCA)
program recognize this event as a
professional development opportunity.

and Saskatchewan Advisory Council
On Soils & Agronomy

Feb 7, 2007
Thursday, March 1

**Soil Fertility**

S1-1 The Future of the North American Fertilizer Industry — Gene Rurak, Westco Fertilizers


S1-3 Promoting Chickpea Maturity Through Fertility Management — Y. Gan, T. Warkentin, B. Vandenberg, R.P. Zentner, C.L. McDonald

S1-4 Phosphorus Status of a Soil in a Long-Term Experiment — R. Karamanos, G. Kruger

S3-1 Phosphorus Availability as Affected by Tillage System — J. Schoenau, G. Lafond, C. Bann, M. Grevers, T. King

S3-2 Fertilizer Management for Seed Production of Perennial Forages in Saskatchewan — S.S. Malhi, C.L. Vera

S3-3 Lessons from a Soil Fertility Laboratory — G. Kruger, J. Schoenau, K. Greer, R. Hangs

S3-4 Soils &Crops 1977 – 2007: Honouring the Founders of Soils & Crops

**Forages and Feeds**

S2-1 Feeds into the Future — S. Wright, Sask. Agriculture & Food

S2-2 High and Low Plant Biodiversity: Two Strategies Encountered in Southwest Saskatchewan Pastures — C. Hamel, M. Schellenberg, J.C. Perez, K. Hanson, R. Jeannotte

S2-3 Seasonal Variations in the Nutritive Parameters of Barley Grains for Cattle — K. Hart, B.G. Rossnagel, P. Yu

S2-4 Characteristics and Utilization of Canola Seed Fractions in Ruminant Feeds -A Processing and Value-Added Feed Research Program — R. Heendeniya, J. McKinnon, D. Maenz, D. Christensen, P. Yu

S4-1 Productivity and Nitrogen Fixation of Green Manure and Green Feed Forage Options in Organic Cropping Systems: Effects on Subsequent Cereal Crop — G. Marufu, F. Walley; J.D. Knight

S4-2 Effect of Winter Feeding Systems on Soil Nutrient Distribution — T. King, J Schoenau, B. Lardner, B. Kelin

S4-3 Chemical Characteristics and Nutritive Values of Three Oat Varieties for Ruminants — Z. Niu, B.G. Rossnagel, P Yu

S4-4 Economics of Mixed Farming Under Rotational Grazing with Low Input System — M. Khakbazan, A Moulin, C. Hamilton, M. Riekman
Pulses and Oilseeds

S6-1  Quantitation of Bioactive Compounds in Fenugreek Seeds for Commercialization in the Functional Foods and Natural Health Product Industry — E. Lee, M. Bandara, D. Driedger

S6-2  Hail Damage Assessment in Lentil — R. Bueckert (Ball)

S6-3  Disease Management Strategies for Ascochyta Blight of Chickpea — C. Armstrong-Choo, S. Banniza, G. Chongo, Y. Gan, T. Wolf

S6-4  When Flea Beetles meet Hairy Canola: Host Plant Resistance in Action — J. Soroka, M. Gruber, J. Holowachuk, L Grenkow

S6-5  Increasing Yield and Profit by Straight-cutting Canola — P. Watson, K.N. Harker, S.A. Brandt, G.W. Clayton

Agroforestry

S7-1  Agricultural Forestry in SK: a New Era for Planting Trees on Farms — K. van Rees

S7-2  Hybrid Poplar Crop Density — S. Poppy, C. van Oosten

S7-3  Using Willow Riparian Buffer Strips for Biomass Production — B. Schroeder, J. Kort, C. Stefner, J. Simpson

S7-4  Determining Soil Nutrient Requirements For Growing Hybrid Poplar — R. Hangs, K. Greer, K. van Rees, B. Schroeder

Philotm Bios
the inoculant company

Agricore
United

Agrium
POOL
Friday, March 2

**Crop Management & Updates**

**S8-1** Genetic Mapping of Quantitative Trait Loci Associated with Beta-glucan Concentration in Barley – J. Li, M. Båga, B.G. Roosnagel, W.G. Legge, R.N. Chibbar

**S8-2** Identification and Validation of Molecular Marker for Pre-harvest Sprouting Resistance in Bread wheat – R. Singh, M. Matus-Cádiz, M. Båga, P. Hucl, R.N. Chibbar

**S8-3** A Provincial Soil for Saskatchewan – D. Anderson, K. van Rees, F. Walley

**S8-4** Crop Disease Management in "Next Year" Country – P. Pearse, Sask. Agriculture & Food

**S10-1** Weeds Update – C. Brenzil, Sask. Agriculture & Food

**S10-2** Insects Update – S. Hartley, Sask. Agriculture & Food

**S10-3** Influencing the Phosphorus Quality of Green Manure with Phosphate Rocks in Organic Farming Systems – M. Arcand

**S10-4** Fungal Diversity of Root Endophytes Associated with Allium and Taraxacum – Y. Li

**Environment**

**S9-1** Economic Assessment of Bio-fuels in Saskatchewan – C. Nagy, R. Gray

**S9-2** Vegetation Studies on Brine Impacted Sites at Potash Mines – G. Androsoff, H. Gerstmar, B. Zettl, Z. Abouguendia

**S9-3** Soil Management Protocols and Projects for Greenhouse Gas Offsets in Canada – D. Haak

**S9-4** Assessment of Simple Filter Systems for Treating Run-Off from Seasonal Livestock Areas – A. Stewart, G. Chu, S. Reedyk, A. Stewart

**S11-1** Discriminating Invasive Non-native Species in Grasslands National Park Using Remote Sensing Technology – W. Zhou, X. Guo

**S11-2** Technology Transfer: a New Way of Looking at an Old Idea – B. Hellegards; P. Entz

**S11-3** Training for Rural Development Project in Mongolia – P. Stevens

**S11-4** Learning in an International Context – G. Wood
**POSTERS**

- Evaluation of perennial cereal rye longevity and forage production when harvested at different stages of maturities and under grazing — **E.J. Birkedal, A.D. Iwaasa, J.G. McLeod, R.B. Muri, E. Birkedal, S. Acharya**
- Arbuscular mycorrhizal fungi associated with oil sands plants — **X. Bao, Susan G.W. Kaminskyj**
- Grain hardness in Barley — **G. Camm, B.G. Rossnagel**
- Stubble height and fertilizer N requirements of canola in the semiarid prairie — **H. Cutforth, B.G. McConkey, S. Angadi, D. Judiesch**
- Unique weather features of 2006 for Swift Current — **H. Cutforth, D. Judiesch**
- Effect of various conditions during dry roasting on spectral characteristics and rumen degradation kinetics of flaxseeds — **K. Doiron J. McKinnon, C. Christensen, D. Christensen, P. Yu**
Effect of barley variety on ferulic acid and para-coumaric acid concentrations and comparison among various barley varieties — L. Du, B. Rossnagel, J. McKinnon, V. Racz, D. Christensen, P. Yu

Effects of barley variety on hull content and comparison among various barley varieties — L. Du, B. Rossnagel, J. McKinnon, V. Racz, D. Christensen, P. Yu

Impact of Arbuscular Mycorrhizal Fungi on the Growth and Rhizobium Symbioses Development in Kabuli and Desi Chickpeas Grown Under Drought Stress Conditions — W. Ellouze, A. Nayyar, K. Hanson, S. Bouzid and C. Hamel

Tillage system and cropping sequence effects on common root rot of barley in eastern Saskatchewan — M. Fernandez, R.P. Zentner, R.M. DePauw, D. Gehl, F.C. Stevenson

Tillage system and cropping sequence effects on fusarium head blight in barley in eastern Saskatchewan — M. Fernandez, R.P. Zentner, R.M. DePauw, D. Gehl, F.C. Stevenson

Chickpea Yield Response to Stubble Type, Inoculation and Soil Fertility — Y. Gan, T. Warkentin, B. Vandenberg, R.P. Zentner, C.L. McDonald

Kabuli chickpea seed size fractions in response to growing environments and soil fertility — Y. Gan, T. Warkentin, B. Vandenberg, R.P. Zentner, L.B. Poppy


The effect of weed control method on soil nutrient availability and growth of different hybrid poplar clones — R. Hangs, K. Greer, B. Schroeder

Sulfentrazone / Isoxaflutole combinations for broad-leaved weed control in chickpea - F.A. Holm, A.E. Johnson, R. Blackshaw

Optimizing sulfentrazone rates in broadleaf crops — E. Johnson, D.J. Ulrich

The tolerance of cereal crops to post-emergence, in-crop harrowing — E. Johnson, S.J. Shirliffe

Effect of Timing of Isoxaflutole Application on Weed Control in Desi Chickpea (Cicer arietinum) E. Johnson, D.J. Ulrich, R.E. Blackshaw, K.L. Sapsford, F.A. Holm

Environmental risk assessment of Phosphorus forms in Biosolids-Amended Soils — G. Kar, D. Peak

Pea Varietal Effects on N Accumulation and Fixation, and on the Productivity and N Uptake by the Sequent Wheat — N. Lupwayi, Y. K Soon
Microbial biomass and diversity in Roundup-Ready corn rhizosphere — N. Lupwayi, R.E. Blackshaw


Small Grains Stubble Burning and Tillage Effects on Soil Organic C and N, and Aggregation in Northeastern Saskatchewan — S.S. Malhi, H. R. Katcher

Tillage, Crop Residue and N Fertilizer Effects on Crop Yield, Nutrient Uptake, Soil Quality and Greenhouse Gas Emissions in the Second 4-Yr Rotation Cycle — S.S. Malhi, R. Lemke, D. Leach

Nitrogen Fertilizer Management for No-Till Cereal Production in the Canadian Great Plains — S.S. Malhi, A. M. Johnston, C. A. Grant

Comparative Forage Yield Response of “Poor” versus “Good” Grass Stands to N, P, K and S Fertilizers in Northeastern Saskatchewan — S.S. Malhi, A. Foster, J. J. Schoenau, D. Leach, C.L. Vera

Comparative Seed Yield Response of Oilseed, Cereal and Pulse Crops to Sulphate-S Fertilizer on S-Deficient Soils in Northeastern Saskatchewan — S.S. Malhi, J.J. Schoenau, D. Leach

Managing wild oat in tame oat through the seeding date and seeding rate of tame oat — W. May, S.J. Shirtliffe, G.P. Lafond, D. McAndrew

Altering the competitiveness of tame oat verses wild oat with phosphorous and seeding rate — W. May, G.P. Lafond, C.B. Holzapfel

Determination of forage production of spring cereals under-seeded to perennial cereal rye, winter cereals and Italian ryegrass under irrigation — R. Muri, J.G. McLeod, A.D. Iwaasa, R.B. Muri, L. Bohrson

X-ray Absorption Spectroscopic analysis of raw and processed hog manure samples — T. Ogunremi, J. Cutler, C. Christensen, C. Sparks

Evaluation of suitable primer sets for the analysis of fungal root endophytes in prairie grasses — J.C. Pérez, T. Colenutt, K. Hanson, C. Hamel, M. Schellenberg, J. Germida

The impact of seed-row placed P and K on crop emergence, yield and P uptake under control environment conditions — P. Qian, J.J. Schoenau, T. King, C. Fatteicher

Characterization of Drought Tolerance in Chickpea — A. Rehman, T. Warkentin, R. S. Malhotra, R. Bueckert
Foxtail Barley (Hordeum jubatum) Control in Wheat and Flax — K.L. Sapsford, F.A. Holm

Branching in Field Pea — J. Spies, T. Warkentin, S Shirtliffe

Plant, Soil and Groundwater Nutrients in a central Albertan riparian area and adjacent upland
— A. Stewart, C. Arshad, G. Chu, S. Reedyk

A bioassay for detection of group 2 herbicides — A. Szmigielski, J. Schoenau, A. Irvine, B. Schilling

Characterization of the genetic basis of key quality traits affecting the market value of field pea
— L. Ubayasena, T. Warkentin, K. Bett, B. Tar'an, D. Bing

Does Seed Size Affect Alfalfa Establishment and Productivity in Saline Seedbeds? — K.G. Wall, H. Steppuhn

25 years’ tillage effects on wheat biomass in a continuous cropping system — H. Wang, B. G. McConkey, M. Peru, K. Brandt

Prairie Carnation®: A new crop for the Canadian Prairies — P.R. Watson, M. Oelck, E. Johnson, P. Kharbanda, J. Yang, E. Steinmann-Oelck

SPAD, a rapid, nondestructive method for measuring leaf nitrogen in lentil — H. Zakeri, R. Bueckert