

MANITOBA AGRONOMISTS CONFERENCE 2003

PROCEEDINGS

TABLE OF CONTENTS

SESSION I: PLENARY SESSION – CROPPING CONDITIONS IN 2003

What Weather Cards were we Dealt in 2003 – Heat and Moisture – and Fall Soil Moisture	1
A. Nadler, Manitoba Agriculture, Food and Rural Initiatives	
Why Crops Produced the Way They Did in 2003 – Ability to Handle Drought and Heat Stress	6
S. Angadi, P. Bullock, Dept. of Soil Science, University of Manitoba M. Entz, Dept. of Plant Science, University of Manitoba	
Moisture Management as Affected by Tillage System	14
B. Irvine, D. Derksen, D. McAndrew, AAFC, Brandon	
Soil Salinity	20
L. Henry, Dept. of Soil Science, University of Saskatchewan	
Environmental Effects on Soil – Plant – Pathogen Interactions	21
P. Bullock, Dept. of Soil Science, University of Manitoba	
Manure: Enhancing Crop Production and the Soil Resource	32
D. Heaney, Norwest Labs	

SESSION II: PEST MANAGEMENT

Rust Impact on Sunflower in Manitoba	40
K. Rashid, AAFC, Brandon	
Impact of a New Strain of Blackleg on the Canola Industry in Western Canada	41
D. Fernando, Y. Chen, Dept. of Plant Science, University of Manitoba	
Fusarium Management in Ontario	44
P. Johnson, Ontario Ministry of Agriculture and Food	
New Challenges to Canola Crop Establishment	48
J. Bessel, D. Hammond, Canola Council of Canada	
Grasshoppers – Biology, Control, and Scouting	55
J. Gavloski, Manitoba Agriculture, Food and Rural Initiatives	
Digital Crop Diagnostics	58
D. Kaminski, Manitoba Agriculture, Food and Rural Initiatives	
Minor Use Initiative	60
R. Kurtz, Manitoba Agriculture, Food and Rural Initiatives	

Management Strategies for Dandelion	62
N. Froese, BASF Canada	
Kochia Biology and Control	68
B. Murray, Manitoba Agriculture, Food and Rural Initiatives	
SESSION III: SOIL MANAGEMENT	
Plant Growth Promoting Rhizobacteria : Prospects for Increasing Nutrient Acquisition and Disease Control	72
M. Tenuta, Dept. of Soil Science, University of Manitoba	
Nutrient Management Plans – What Industry Agronomists are Doing	78
J. Heard, Manitoba Agriculture, Food and Rural Initiatives G. Martens, Dept. of Plant Science, University of Manitoba	
Using Soil Test Analyses as the Basis for Fertility Recommendations	91
D. Pryor, Green Key Solutions	
Identification of Sensitive Areas for Effective On-Farm Stewardship	95
C. Cavers, Manitoba Agriculture, Food and Rural Initiatives	
Uptake Patterns of Nutrients on Canola and Wheat and Potential for Post-Emergent Applications	101
A. Johnston, Potash & Phosphate Institute of Canada	
Screening Soybean Varieties for Resistance to Iron Chlorosis, 2003	107
J. Goos, B. Johnson, Dept. of Soil Science, NDSU	
Developing a Recipe for Composting Livestock Manure	112
P. Loro, Manitoba Agriculture, Food and Rural Initiatives	
Efficiency of Fall-Banded N: Effects of Application Date and Landscape Position and Inhibitors	118
K. Tiessen, D. Flaten, D. Burton, Dept. of Soil Science, University of Manitoba C. Grant, AAFC, Brandon R. Karamanos, Dept. of Plant Science, University of Manitoba	
SESSION IV: CROP MANAGEMENT	
Row Spacing and Plant Population Influence on Sunflower Performance	134
B. Johnson, Dept. of Plant Sciences, North Dakota State University M. Zarnstorff, National Crop Insurance Services J. Miller, USDA-ARS, Northern Crop Sciences Library	
Corn Agronomy Update	135
P. de Rocquigny, Manitoba Agriculture, Food and Rural Initiatives	
Benefits of Inoculating Legume Crops with Rhizobia in the Northern Great Plains	141
K. Vessey, Dept. of Plant Science, University of Manitoba	

Canola Seed Vigour Ethanol Test	150
W. Buckley, K. Buckley, AAFC, Brandon R. Elliott, AAFC, Saskatoon	
Identification of Agronomic Practices Associated with the Development of Fusarium Head Blight in Spring Wheat in Southeastern Saskatchewan	157
M. Fernandez, F. Selles, R. DePauw, R. Zentner, AAFC, Swift Current D. Gehl, AAFC, Indian Head	
Stubble Effects on Crop Micro-Climate and Yield	168
K. Volkmar, B. Irvine, AAFC, Brandon	
Strategic Tillage – Evolution or Devolution of Zero Tillage?	176
B. Irvine, D. Derksen, A. Moulin, D. McLaren, C. Grant, AAFC, Brandon	
Timing of Nitrogen Application Winter Wheat: Fall Versus Spring, Recommended Practices and Current Research	182
D. Poisson, R. Karamanos, N. Flore, J. Harapiak, Western Cooperative Fertilizers Limited	
GM – Non-GM Crops Coexistence in Western Canada: Can it Work?	189
R. Van Acker, A. Brûlé-Babel, L. Friesen, Dept. of Plant Science University of Manitoba	
SESSION V: POTATO PRODUCTION	
Potato Early Dying Complex: Key Factors Related to Disease Development	198
N. Selvanathan, Manitoba Agriculture, Food and Rural Initiatives	
Irrigated Potato Rotation: Results after 6 Years of Research	202
K. Volkmar, R. Mohr, D. McLaren, A. Moulin, M. Khakbazan, D. Derksen, B. Irvine, M. Monreal, AAFC, Brandon	
Success 480 SC – New Class of Insecticide for Use in Potatoes	220
G. Turnbull, Dow AgroSciences Canada	
Fluaziam – New Chemistry for Late Blight Control in Potatoes	223
R. Marsh, Syngenta Crop Protection Canada	
Reason 500 SC Fungicide	227
L. Bourgeois, Bayer Crop Science	
Lance (Boscalid) Fungicide: A New Tool for Canadian Potato Growers	230
S. MacDonald, BASF Canada	
Tanos 50™ DF on Potatoes	231
A. Crouse, DuPont Agricultural Products	
POSTER SUBMISSIONS	
Broadcasting Ammonium Sulphate Fines as a Source of Nitrogen	238
R. Karamanos, D. Poisson, Western Cooperative Fertilizers Limited T. B. Goh, Dept. of Soil Science, University of Manitoba	

Effects of Soil Moisture and Landscape Position on the Maximum Rate of 2,4-D Mineralization	245
J. Shymko, N. Nahar, A. Farenhorst, Dept. of Soil Science, University of Manitoba	
Effects of Landscape Variability on the Rate and Maximum of 2,4-D Mineralization	246
N. Nahar, J. Shymko, A. Farenhorst, Dept. of Soil Science, University of Manitoba	
Fate of 2,4-D as Affected by Landscape Position and Soil Depth	247
J. Gaultier, A. Farenhorst, Dept. of Soil Science, University of Manitoba	
Do Manitoba Producers Reduce In-Crop Herbicide Rates?	248
G. Thomas, J. Leeson, H. Beckie, AAFC, Saskatoon	
R. Van Acker, Dept. of Plant Science, University of Manitoba	
Effect of Short-Term Disturbance on Soil Properties after Long-Term Zero Tillage	249
A. Moulin, B. Irvine, AAFC, Brandon	
Industrial Hemp Trials at the Parkland Crop Diversification Foundation	253
K. Watson, Manitoba Agriculture, Food and Rural Initiatives	
Nitrogen, Phosphorus and KCI Management for Oat	254
R. Mohr, C. Grant, AAFC, Brandon	
W. May, AAFC, Indian Head	
2,4-D Mineralization as Affected by Pre-Incubation Length of Amended Soils	255
M. Reimer, A. Farenhorst, Dept. of Soil Science, University of Manitoba	
Trends in Production and Markets for Western Canadian Barley Varieties	256
M. Grenier, A. Hilderman, M. Brophy, Canadian Wheat Board	
Canada Western Red Winter (CWRW) Select – What’s it About?	257
M. Grenier, A. Hilderman, P. Rosher, Canadian Wheat Board	
Wheat Grade and Quality Responses to Growing Season Weather Variation Across the Canadian Prairies	258
C. Jarvis, P. Bullock, Dept. of Soil Science, University of Manitoba	
Factors Affecting Soil Nutrient Supply Rate Measurements with PRS™- Probes	259
C. Sulewski, K. Greer, Western Ag Innovations	
J. Schoenau, Dept. of Soil Science, University of Saskatchewan	
V. Baron, AAFC, Lacombe	
Various WADO Projects	260
L. Kaskiw, C. Manshreck, J. Whetter, Westman Agricultural Diversification Organization	