



**Guelph Turfgrass Institute
1992
RESEARCH REPORT**

**Ontario Agricultural College
University of Guelph**



Guelph Turfgrass Institute
Research and Information Centre

TABLE OF CONTENTS

	Page number
INTRODUCTION.....	i
ACKNOWLEDGEMENTS	ii
THE GUELPH TURFGRASS INSTITUTE.....	iii
DEVELOPMENT OF GTI RESEARCH PLOTS	iv
1992 WEATHER DATA, CAMBRIDGE RESEARCH STATION	vii
SOILS AND NUTRITION	
Effects of Ringer fertilizer and other lawn amendments on turfgrass, 1992 Xuecai Liu, Tom Hsiang, Ken Carey and Jack Eggens	3
TURFGRASS SEED PRODUCTION	
Seed yields and related information from varieties of turfgrass species produced in 1991, Elora Research Station E. E. Gamble and M. H. Peppard	15
TURFGRASS MANAGEMENT AND RENOVATION	
Population dynamics of four turfgrass species in the field from 1988 to 1992 B. He, T. Hsiang, and K. Carey.....	33
Management software for turf areas K. Carey and J. L. Eggens	43
Integrated pest management (IPM) for turf. I. Site monitoring P. Charbonneau and D. Telfer	49
Integrated pest management (IPM) for turf. II. Grub sampling and mapping P. Charbonneau and D. Telfer	51
Integrated pest management (IPM) for turf. III. Environmental monitoring and analysis systems P. Charbonneau and D. Telfer	52
Water injection aeration of putting greens P. Charbonneau, D. Telfer, and N. Baumgartner	53
Herbicide residues in composted turfgrass clippings P. Charbonneau, G. Stephenson, D. Telfer, and C. Bowhey.....	54
WEED CONTROL AND GROWTH REGULATION	
Effect of turfgrass cultivars and fertility programs in reducing weed populations in turf R. E. Pitblado, E. Hoste, J. C. Hall, and N. McCollum.....	57

Non-chemical weed control. I. Choice of species/cultivar and nitrogen fertility J. C. Hall, J. L. Eggens, K. Sagan, and K. Carey	63
Non-chemical weed control. II. Effects of mowing height in established turf J. C. Hall, J. L. Eggens, K. Sagan, and K. Carey	66
Non-chemical weed control. III. Newly seeded turf J. C. Hall, J. L. Eggens, K. Sagan, and K. Carey	67
Weed control in turf - 1992	
J. C. Hall and K. L. Sagan	69
Fall application for preemergence control of crabgrass	70
Fall application for preemergence control of crabgrass	71
Fall application for preemergence control of crabgrass	72
Pre-emergent control of crabgrass with pendamethalin.....	73
Impact of aeration on efficacy of MON 15100 for control of crabgrass.....	74
Impact of irrigation on the efficacy of MON 15100	75
Impact of irrigation on the efficacy of MON 15100	76
Impact of mowing on efficacy of MON 15100 for control of crabgrass	77
Early post emergence control of crabgrass	78
Mid POST crabgrass control	79
Annual bluegrass control in Kentucky bluegrass	80
Annual bluegrass control in bentgrass	81
Annual bluegrass control in bentgrass	82
Control of broadleaf weeds in turf.....	83
Control of broadleaf weeds in turf.....	84
Control of broadleaf weeds in turf.....	85
Application safety interval for applying MON 15151 to newly seeded Kentucky bluegrass.....	86
Application safety interval for applying MON 15151 to newly seeded perennial ryegrass.....	87
Application safety interval for applying MON 15151 to newly seeded bentgrass.....	88
Application safety interval for applying MON 15151 to newly seeded tall fescue	89
Phytotoxicity of pendamethalin to various turf grasses	90
Phytotoxicity of MON 15100 to bentgrass cultivars	91
Phytotoxicity of MON 15100 to bentgrass cultivars	92

TURFGRASS PATHOLOGY AND ENTOMOLOGY

Incidence and impact of necrotic ring spot disease of turfgrass in southern Ontario: Progress report for 1992 Tom Hsiang and Dan O'Gorman	95
Chemical trials for snow mould disease control, December 1991 - March 1992 T. Hsiang, A. Mueller and S. Cook.....	98
Chemical trials for dollar spot disease control, Summer, 1992 T. Hsiang and S. Cook	101
Resistance of bentgrass cultivars to dollar spot disease, Summer 1992 T. Hsiang, S. Cook and T. Voorberg	104

Biological control of dollar spot of turfgrass Greg J. Boland and E. A. Smith.....	106
Evaluation of the Agri-diagnostics Reveal kit for dollarspot disease detection. Tom Hsiang, Pam Charbonneau, Sandra Cook, Dave Telfer, and Mike Summerfield	110
Hypovirulence and virus-like agents in <i>Sclerotinia homoeocarpa</i> Greg J. Boland and E. A. Smith.....	113
Subsurface injection systems for placement of insecticides below turfgrass thatch for control of European chafer Dr. M. K. Sears	116
Detection of endophytes in tall fescue T. Hsiang and A. Mueller	118

EVALUATION OF SPECIES AND CULTIVARS

The Southwestern Ontario Turfgrass Cultivar Evaluation Trials - Ridgetown, 1992 R. E. Pitblado.....	123
Evaluation of bentgrass cultivars managed as fairway and putting green turf J. L. Eggens, K. Carey, and N. McCollum	132
Perennial ryegrass cultivar evaluation J. L. Eggens, N. McCollum and K. Carey	137
Tall fescue cultivar evaluation J. L. Eggens, N. McCollum and K. Carey	139

TURFGRASS EXTENSION

1992 Seasonal Summary Pam Charbonneau, Turf Extension Specialist.....	143
1990 Turf Industry Survey A. Anderson, S. Dean, M. Courneya, and P. Charbonneau.....	146