TABLE OF CONTENTS

WELCOME ................................. 1
   Fritz McMullen

1990 TURF WEED CONTROL, PGR AND MANAGEMENT UPTAKE ................. 2
   Bruce E. Branham

1990 ATLETIC FIELD RESEARCH SUMMARY ------------------------------- 17
   John N. Rogers, III

TWO-YEAR TURFGRASS MANAGEMENT PROGRAM UPDATE ......................... 26
   John N. Rogers, III

LAWN CARE PROGRAM UPDATE ................................................. 29
   Eric Miltner

TURFGRASS SOIL MANAGEMENT RESEARCH REPORT .............................. 30
   P. E. Rieke, M. T. Saffe and J. A. Murphy

1990 ENTOMOLOGY RESEARCH REPORT ......................................... 51
   D. R. Smitley

TURFGRASS DISEASE MANAGEMENT REPORT - 1989-90 .......................... 61
   J. M. Vargas, R. Detweiler, C. Golembiewski, K. Penner

NUTRIENT LEACHING CONCERNS IN TURF MANAGEMENT ........................ 80
   A. Martin Petrovic

EFFECT OF TURF MANAGEMENT ON GROUND WATER QUALITY .................... 90
   S. Z. Cohen

UPDATE ON 2,4-D AND HUMAN HEALTH CONCERNS ................................ 93
   G. Marie Swanson

UNTANGLING UNDERGROUND TANK REGULATIONS ................................ 98
   Rena M. Pomaville

REGULATION 636, HOW IT APPLIES TO YOU ................................... 99
   Keith Creagh

REDUCING RISKS WITH PESTICIDES--PROTECTING FACILITIES AND WORKERS ...... 102
   Rena M. Pomaville

ADVICE ON DEALING WITH GOVERNMENTAL AGENCIES ........................... 106
   S. Z. Cohen

PRE AND POST EMERGENCE CONTROL OF ANNUAL BLUEGRASS ..................... 108
   T. M. Carlson and B. E. Branham

JAPANESE BEETLE AND GYPSY MOTH: KEY PESTS IN MICHIGAN .................. 114
   David Smitley
POSTEMERGENCE CRABGRASS CONTROL WITH NEW HERBICIDES .......................... 122
S. J. Keeley and B. E. Branham

LYSIMETERS FOR STUDYING THE FATE OF NITROGEN PESTICIDES .................... 123
Eric Miltner

COMBATTING THE UNEXPECTED--CHEMICAL SPILLS AND VANDALISM.................... 124
Rena M. Pomaville

ENDOPHYTIC FUNGI CAN SERVE AS BIOLOGICAL INSECT CONTROL IN TURFGRASSES.... 125
Richard Hurley

DON'T BAG IT - REDUCE CLIPPING REMOVAL ............................................. 129
P. E. Rieke

"DON'T BAG IT" PROGRAM ........................................................................ 133
Guy Kebbe

TRAINING SCOUTS FOR INTEGRATED PEST MANAGEMENT PROGRAMS .................. 136
Michael J. Raupp

NEW TWISTS TO OLD PROBLEMS .............................................................. 139
Pat Sanders

GOLF COURSE/LANDSCAPE INTEGRATED PEST MANAGEMENT .......................... 142
David G. Nielsen

FURTHER EVALUATIONS OF HIGH PRESSURE WATER INJECTION AS
A TURF MANAGEMENT TOOL ............................................................... 150
J. A. Murphy, C. L. Walworth, P. E. Rieke and M. T. Saffel

PRUNING SHADE AND ORNAMENTAL TREES ............................................. 157
J. James Kielbaso and Melvin R. Koelling

CULTURAL MANAGEMENT FOR NECROTIC RING SPOT OF KENTUCKY BLUEGRASS
............................................................................................................. 165
Bran Melvin, Joe M. Vargas, Jr., Lori Lick and Trevor D’Sousa

NEW APPROACHES TO WEED PROBLEMS WITH CONFRONT® AND GALLERY® .... 174
Bruce A. Jacobs

DIAGNOSIS AND MANAGEMENT OF TURFGRASS DISEASES .......................... 177
Pat Sanders

SPECIFICATIONS - WHAT TO LOOK FOR AN FOLLOWING THEM IN ATHLETIC
FIELD CONSTRUCTION .......................................................................... 184
Mark Wrona