IPM in Turfgrass

April 28, 2015 69th Southeastern Turfgrass Conference Lorie Felton Abraham Baldwin Agricultural College

What is your definition of IPM ?

Inches Per Minute

Intelligent People Minimized

International Plowing Match





IPM

(International Plowing Match)





LINK TO THE PAST. LOOK TO THE FUTURE. September 22-26, 2015 FINCH, ONTARIO

www.plowingmatch.org

What does IPM really stand for?



Integrated Pest Management (IPM)



Pest management strategy that uses a combination of BMPs to reduce pest damage with the least disruption to the environment.

Objectives for today

- To introduce IPM and its components
- To present possible applications of IPM for turfgrass.



WHY IPM?

- Resistance
- Pest resurgence



- Induced secondary pest outbreaks
- Potential hazards to wildlife
- Environmental and groundwater contamination





DDT...FOR CONTROL OF HOUSEHOLD PESTS





1947 Government Publication

"MANAGE" PESTS RATHER THAN "ELIMINATE" THEM



COMPONENTS of an IPM Program

- Scouting for pest activity
- Pest identification
- Determining the threshold for pest damage
- Choosing a control
 - Control methods non-chemical; biological or chemical
- Evaluating results (record keeping)

Scouting for PEST POPULATIONS



SCOUTING FORM Golf Course: Sample Golf and Country Club Scout's Name: Bobby Jones Date: June 18, 2010 Current conditions: Sunny Cloudy Mixed sun/cloud Soil Temp at 3": 8 °C Previous 24 hr data: Precipitation: 0 mm Air Temp: High 26.30 °C Low 10.70 °C Humidity: Low 🔳 Med 📃 High 🗔 # of Pests seen Pest or Condition Location **Possible Contributing Factors** Action Taken (#/unit area or %) #01 Fairway 12% Clover compact soils Anthracnose 3% warmer temps, no chemical applied European Chafer Clover Dandelion #01 Rough 7/0.1m² #02 Rough Clover 5% 4% Dandelion compacted soils #03 Fairway Clover 6% warmer temps, no chemical applied Anthracnose 3% #03 Rough Clover 10% compacted soils Dandelion Results : (to be filled in a few days after action taken)

I attest that the above information is accurate and truthful. I also acknowledge that I, and the golf course owner/operator are responsible to be aware of the requirements of IPM Accreditation as defined by the IPM Council of Canada and that failure to meet the requirements can result in loss of the golf course's IPM Accreditation status.

IPM Agent name & IPM certification number: Bobby Jones, IPM002

IPM Accreditation Program

Signature:

May 10, 2010

Scouting – What tools do you need?

- Signs & symptoms
- Pest life cycles





Growing degree days (average daily temperatures)



ESTABLISH ACCEPTABLE INJURY LEVEL





PLAN FOR CONTROL





TACTICS

- Non-chemical tactics
 - Cultural
 - Physical & mechanical
- Biological
 - Natural
 - Biological
- Chemical





CULTURAL CONTROLS

- Sanitation
- Plant density
- Healthy pest-free plants
- Mowing
- Aerification

- Soil and fertility management
- Water management (drainage and irrigation practices)
- Weed control

PHYSICAL & MECHANICAL CONTROLS*

- Hand picking pests
- Traps
- Crop isolation
- Destroy alternate host
- Barriers, screens, cloths
- Slash & Burn

- Hand weeding
- Tillage
 - Rotary Hoe
 - Cultivator
 - Disc

*Note: most of these do not apply in turf management

NATURAL and BIOLOGICAL CONTROLS

- Predators
- Parasites
- Pest-specific diseases
- Genetic Enhancements
 - -Drought Resistant
 - –Insect Resistant

CHEMICAL CONTROL TACTICS

- Least toxic first
- Rotate between chemical classes
- Read and follow label directions
- Wear PPE

EVALUATION

- Determine program effectiveness
 - -What works?
 - What doesn't work?
 - -How much chemical is being used?
 - Are chemicals being reduced?
- How should program be adjusted?



KEEP RECORDS FOR FUTURE USE

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Conclusions

- IPM is easy to implement using common sense and a little planning.
- IPM is especially applicable in the pesticide dependent crops we grow in this area.
- IPM is part of a Best Management Program for any urban or rural setting.





