

2017 Fusarium Patch Action Plan

Marine Drive Golf Club Tim Tait, Director of Golf Wake Hawksworth, Links Superintendent
01-Feb-17



1 Consulting with experts and research

- ACTION** To date we have had personal meetings and or phone consultations with the following experts in the turfgrass industry
- Katerina Jordan - Associate Professor of Turfgrass Science at the University of Guelph Turf Disease Diagnostics Department (BSc, MSc, PhD)
 - Larry Gilhuly - USGA Turf Agronomist for the Pacific Northwest
 - Corrie Almack - Soil Consultant (PhD Ag)
 - Paul Giordano - Bayer Crop Science (Ph D)
 - Darcy Olds - Bayer Crop Science, Canadian Technical Support in Pathology
 - Jerry Sihota - Crop Protection Services, Western Canada Technical Support
 - Rob Golembiewski - Bayer Green Solutions Mid West, Former Professor with Oregon State University (PhD, MSc)
 - Alex Kowalewski - Pathologist at Oregon State University, currently researching Microdochium patch in the Pacific Northwest
 - Numerous Local Superintendents: PG&CC, Shaughnessy, Richmond, Vancouver G,
- TIMELINES**
- We have arranged a site visit with Mr.'s Giordano, Olds and Sihota on Thursday March 2nd for visual consultation
 - We are also trying to arrange a site visit with Rob Golembiewski around the same timeline
- EXPECTED RESULTS** Assemble further ideas and suggestions for disease control and turf health

2 Fungicide applications are based on provincial laws, research and consultation on best products, application intervals and weather conditions.

- ACTION**
- Applications will consist of single fungicide, dual fungicides and multiple fungicide active ingredient products.
 - Fungicides will be in combinations of contact, local penetrant or systemic
 - Applications will begin when soil temperature average reaches 10 to 12 degrees for 5 days consecutive
 - Applications will be on a 14 to 21 day schedule as recommended or less if necessary
 - Applications of contact and or local penetrants will be applied between scheduled applications as necessary
 - Fungicides must have a chance to dry 4 to 6 hours on turf before any significant rainfall
 - Turf grass must be growing to absorb systemic fungicides
 - Suggested fungicide application schedule from Bayer Crop Science for pacific coastal regions attached
- TIMELINES**
- Fungicide applications will start within the next 5 to 10 days according to weather and soil temperatures
 - We will side on caution to make sure we have fungicides applied as the greens thaw and warm up
- EXPECTED RESULTS** We expect to see complete control of Fusarium through to April

3 Fertilizing and plant health

- ACTION**
- Necessary applications and amounts of nutrients will be applied to maintain turf health
 - Nitrogen, potassium, phosphites, iron and seaweed extracts to name a few will be applied at rates of 1/10 to 1/4 pound for growth and health
 - These applications will generally be sprayed on turf as foliar feeding or root feeding by watering in the soil
- TIMELINES**
- Fertilizing will start as soon as soil temperatures reach 4 to 5 degrees and will be scheduled every 5 to 10 days as needed and weather permits
- EXPECTED RESULTS**
- Turf growth and health, adding in the effectiveness of fungicides and turf ability to ward off fungus

4 Vertical mowing with Graden

- ACTION**
- Deep vertical dethatching with a graden vertical mower equipped with 2mm blades spaced at 26mm (1 inch), previous done with 1mm blades
 - This creates vertical lines across the greens to a depth up to 40mm (1.5 inches) then sand top dressed
 - Over seeding with bentgrass to encourage a blend with the poa annua
 - Temp greens would be in play during process
 - Depending on timing could be fully healed by closure for fairway aeration
- TIMELINES**
- March when expected weather is correct and will take 1 to 2 days to accomplish, last year this was done during the spring closure
- EXPECTED RESULTS**
- Reduce thatch, thin the canopy, reduce leaf wetness, improved surface drainage, healthier turf

5 Increased bent grass make-up of our greens

- ACTION**
- Increase the intensity of bent grass overseeding with recommended varieties (007 and Dominant) to change the Poa to Bent grass ratio of our greens
 - While Poa is a vigerous growing grass, it is also very suseptible to certain disease and fungus stains such as Fusarium.
 - To maintain good turf health year round we need a larger ratio of bent to Poa grass in our green sites
- TIMELINES**
- March during Vetical mowing, during aeration closures
- EXPECTED RESULTS**
- Control thatch, increase turf health, and added will be smoother and firmer putting surfaces

6 Increased vertical mowing and light topdressing

- ACTION**
- We will increase light vertical mowing from every three weeks to every 2 weeks
 - Light sand topdressing will also increase to every 2 weeks in conjunction with the vertical mowing
- TIMELINES**
- May to September
- EXPECTED RESULTS**
- Control hatch, increase turf health, an added will be smoother and firmer putting surfaces

7 Increase maintenance days

- ACTION**
- Increase maintenance days from 12 to 21
 - Course closed to allow 6 hours of sun light maintenance duties, starting as early as daylight allows

TIMELINES March to September

- EXPECTED RESULTS**
- Accomplish spraying of fertilizers or fungicides, vertical mowing, venting, sand topdressing, brushing or matting
 - Improve turf health increases turf's ability to ward off diseases

8 AurborCom services

- ACTION**
- Propose computer mapping and modeling of sun and shade on green sites
 - Contract services to identify problem trees addressing shade issues
 - Remove and trim trees identified as sun blockers to green surfaces

TIMELINES

- March - May as approved
- Remove trees during year and or at course closures

- EXPECTED RESULTS**
- Improve sunlight to green surfaces
 - Improve growth and health of turf on greens
 - Decrease surface wetness
 - Improve disease control

9 Root pruning around greens

- ACTION**
- Cut through tree roots that are encroaching onto green sites
 - Rent a tractor driven pruner for 1 to 2 weeks
 - Start at 5, 6,9, 12 green sites and 4,5, 12 and 13 tees

TIMELINES March to May

- EXPECTED RESULTS**
- Reduce competition of tree roots for nutrients and water
 - Improve turf health and vigor
 - Improve disease control