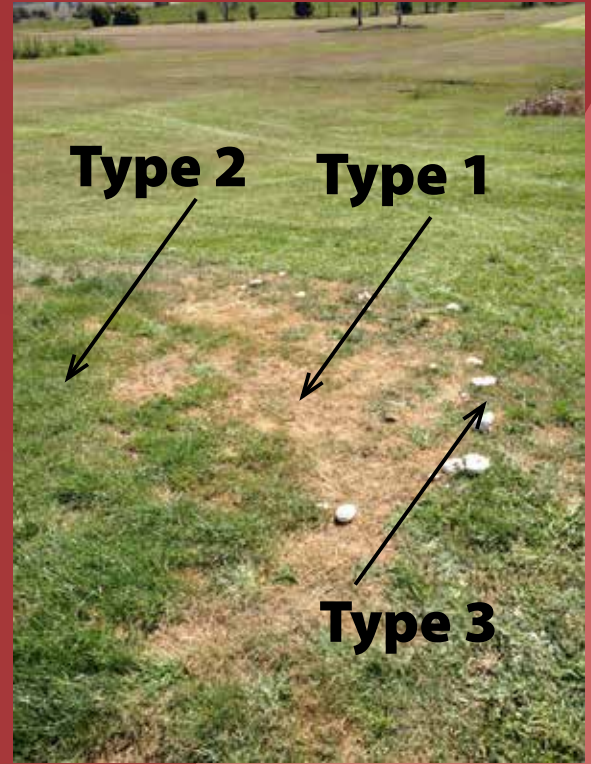
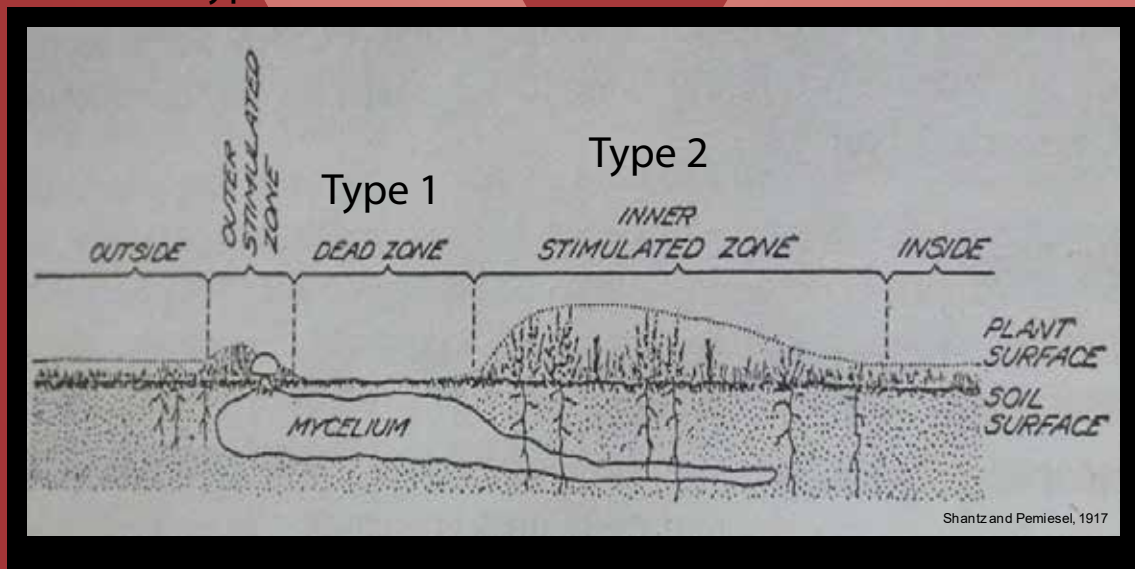


BEST PRACTICES FOR FAIRY RING (*Basidiomycetes* spp) MANAGEMENT



Type 3



This picture taken from Fidazna GCSAA Webcast Feb 2014

Classic example of a cross-section of fairy ring in turf.



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Type 1 Fairy Ring Facts



Symptoms

Dead turf appears in a circular shape

What is happening?

Fairy ring does not infect the plant directly it works in the soil.

The fairy ring fungi (Basidiomycetes spp) attach to the soil and the soil and sand particles become severely hydrophobic.

The soil becomes difficult to re-wet and the plant cannot take up any water or nutrients and hence suffers from drought stress.

What conditions favour fairy ring

- Turf which is under low fertility and low mowing heights
- Turf suffering from heat/drought/soil moisture stress
- Extremes in wet/dry weather conditions favour fairy ring. Can occur anytime of the year
- High thatch areas

Type 2 Fairy Ring Facts



Symptoms

Dark green rings

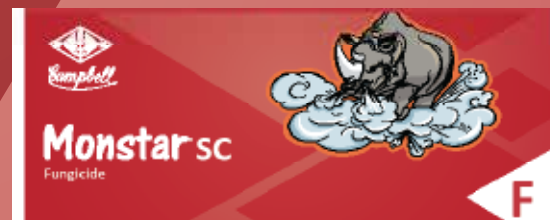
What is happening?

Green rings appear due to increase nutrients of decomposition of organic matter or the fungi

Fairy ring is associated with the breakdown of organic matter and a build up of ammonia.

The bacteria normally converts the ammonia into a nitrate form

Hence you get the stimulated green ring commonly seen.



Type 3 Fairy Ring Facts



Symptoms

Mushrooms have appeared from nowhere overnight. No dark rings only mushrooms in ring or arc formation.

What is happening?

Mushroom usually seen after heavy rainfall or irrigation. Many different types of mushroom species may pop up. Can turn into damaging type 1 or 2 fairy ring

What conditions favour fairy ring: Turf which is under low fertility and low mowing heights mainly

- Turf suffering from heat/drought/soil moisture stress
- Extremes in wet/dry weather conditions favour fairy ring - this season has been perfect conditions for fairy ring
- High thatch areas
- Can occur anytime of the year. Mainly seen from spring onwards.
- Fairy ring is seen regularly in the same areas of your green/sportsfield/fairway year on year. Those areas are best to be treated preventively.

Cultural Practices to help recover from Fairy Ring outbreak:

- Regular use a good quality wetting agent
- Monitor soil moisture levels with a moisture meter as areas infected can retain less moisture than healthy areas.
- Monstar and other fairy ring fungicides kill the fungi but the profile is still hydrophobic and until this is cured the turf cannot recover fully so a good quality wetting agent program is a must.
- Hand watering areas with wetting agent tablets can also aid in recovery.
- Aerify or spike area to be treated.
- Utilise kelp to simulate root growth and health

Best Application of Monstar:

- Apply Monstar with a good soil wetting agent
- Irrigate turf before application
- Aerify or spike area to be treated.
- Apply Monstar as per permit rates up to 200mL per 100m². Apply with 400L water per hectare and water in to affected area 5mm irrigation - however do not puddle up the area get Monstar to the target area).
- A follow up second application may be needed 2-4 weeks later if needed

Recovery can take time after an application. Monstar kills the fungi but the profile is still hydrophobic and until this is cured the turf cannot recover fully. Hand watering areas with wetting agent tablets can also aid in recovery.

Monitor soil moisture levels with a moisture meter as areas infected can retain less moisture than healthy areas. Full recovery can take time especially from type 2 rings as the nitrogen to deplete.

Below is a guide for preventative fairy ring control. Timings may change due to climatic conditions. It is recommended to start applications when soil temperatures at a 2 inch depth reach 16°C consistently for 5 days @9am.

Suggested Fairy Ring Program

Product	September	October	November	December	January	February
Monstar (Flutolanil) MOA 7						
Evolution® (Tebuconazole + Azoxystrobin) MOS 3+11						

Notes on the program:

Monstar is to be mixed with a soil wetting agent for application.

Use Monstar at a rate of 15L-20L per ha.

Aerify the area before treating. Water in after application 5-10mm

Evolution® is to be used at 4L per hectare. A soil wetting agent must be applied 1-2 weeks prior to application. Water in after application 6-10mm

The Strongest Fairy Ring Control



Available in a 1L and 5L pack size

How Monstar works

GROUP 7 Fungicide

Monstar bring a new resistance group to the turf industry. Monstar is a Group 7 Fungicide. Also known as the SDHI class. Monstar works on the disease by that stopping the fungi from producing energy following infection hence the fungi cannot grow and reproduce. Monstar is a locally systemic fungicide.

Other Aspects of Monstar

- Unscheduled signal heading
- Unique mode of action
- Liquid formulation
- No phytotoxicity of turf
- Stable pH of 3-11
- Excellent tank mix properties
- Curative and preventative properties
- Used in USA for over 25 years



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