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TECHNICAL FACT SHEET

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Melting-Out

Within the CNITMA region, Melting-out most commonly occurs during late December – March and is generally most damaging to green surrounds, approaches, irrigated (*Poa annua* dominant) fairways and sometimes greens.

Melting-out is a leaf spotting disease and although different fungi are involved, appears as two distinct symptoms.

1. When temperatures are cool <20-25°C, the disease attacks the leaf and results in localised thinning of the turf cover. This is generally more common on browntop.
2. When temperatures are hot >20-25°C, the disease attacks the crown and can result in substantial loss of turf cover.

Symptoms

These typically consist of:

Poa annua/Ryegrass

As shown in the photo, the leaf turns a mid green- light yellow colour, then brown as it dies. Die back occurs from the leaf tip into the crown. Sometimes (although rare on *Poa annua*, the leaf spot is evident)

Browntop

As shown, the leaf generally turns a tan or reddish brown colour then a grey- brown colour as it dies.

As Melting-out proceeds, which can be very fast, the turf starts to thin out as shown in the lower photos.

Melting-out on ryegrass.

Melting-out on browntop.

Early stages of cover loss due to Melting-out.

Managing against Melting-out

Moisture Extremes

Melting-out is largely caused by moisture extremes, in that it will either occur when:

1. The turf remains wet for significant periods (>12hrs)and conditions are warm (>25^{0}C)

or

2. When the surface, is re wetted such as following dry patch.

Key requirements to avoid these situations are:

- ❑ Manage drypatch with wetting agents.
- ❑ In the absence of rain during summer, irrigate daily (i.e. apply 30-50% of the daily Evapotranspiration rate {1-2mm}) to keep the surface moist and deep water every 3-5 days as the profiles starts to dry at depth, i.e. maintain aeration and a deeper root system.
- ❑ Checking your irrigation coverage and hand water known dry areas.
- ❑ Managing thatch (<5% by weight) and any layering present.
- ❑ Minityning in early December to 50mm (approx) can assist to both dry the surface and improve the uniformity of infiltration following irrigation.
- ❑ Address inherent drainage problems.

Major cover loss.

Serious cover loss on a mixed ryegrass/Poa annua turf cover.

Fertility Requirements

- ❑ Avoid flushes of growth. On greens, ideally spray small amounts of nitrogen (5-10kg actual nitrogen/ha) every 10-14 days.
  Note: If using a controlled release nitrogen source, select a product in which at least 70% of the nitrogen is in a controlled form.
- ❑ On *Poa annua* surfaces aim to maintain a 1:1 N:K fertilising ratio over summer.
- ❑ On browntop aim to apply a 1:3-1:4 N:K fertilising ratio over summer.

Other

- ❑ Ensure your mower heads are kept sharp.
- ❑ Unless preventatively spraying with a fungicide, avoid the use of herbicides such as Pasma (MSMA), Axall, MCPA, Tordon Brushkiller etc during the summer stress period.
- ❑ Ideally avoid dusting greens with sand during January- February. If dusting is required:
  - Preventatively spray with a fungicide 2-3 days prior to sanding.
  - Keep the amount of sand applied to a minimum. (approx 3-4m^3/ha)
  - Syringe the greens immediately after the sand is worked (ideally brushed) into the surface.

Controlling Melting-out

- ❑ Correct fungicide selection is important. Some fungicides such as the DMI group (excluding prochloraz) or the Benzimidazole group provide poor, if any control.
- ❑ Contact fungicides such as Thiram, Orthocide or Mancozeb provide good results under mild disease pressures. Frequent spraying (7-10 days) will be required when disease is occurring.
- ❑ Quintozine (e.g. Terrachlor)[1], prochloraz (e.g. Sportak), iprodione (e.g. Rovral), azoxystrobin (Amistar)[2] are generally the best options for curative control, particularly when high disease pressures are occurring.

Notes: [1.] *Quintozine can burn turf when applied under hot temperatures.*
[2.] *Amistar will not control Dollar spot and its use may actually encourage this disease.*

Where you have experienced a major Melting-out outbreak, follow up applications of a contact fungicide at 7-10 day intervals are recommended to manage/reduce the high spore loading that will likely be present.