

Re-establishing Bare Areas

At the end of the playing season bare areas can be a problem on some bowling greens. Renovation provides an opportunity to reinstate these damaged areas and provide bowlers with a quality playing surface for the next season. Key considerations when re-establishing damaged areas are summarised below.

Problem identification

In order that the bare areas do not reoccur again, it is desirable to identify and address **why** these patches developed in the first place.

Common reasons for bare areas are summarised below:

- Poor levels or excessive thatch which favours scalping.
- Heat stress (particularly with *Cotula dioica*).
- Nematodes.
- Insects (particularly *Cotula* weevil).
- Wear (particularly around the ends).
- Other.

Contact your NZSTI advisor for assistance

Sourcing stolons, bulbils or Starweed seed

For best results when re-establishing bare areas ensure:

- Material (stolons, bulbils, seed) are sourced from healthy greens.
- The green is free of problem weeds such as *Hydrocotyle*, *Pratia*, *Tillaea* etc.
- Stolons are not sourced from greens with a history of severe nematode problems.
- The green is free of problem diseases such as *Phytophthora* or Golden Bracelet.

ESTABLISHMENT PROCEDURE

| Suggested procedure | Common pitfalls |
|---|---|
| <p><u>Stolonising (Dioica, Maniototo)</u></p> <ol style="list-style-type: none"> 1. Stolons should be 2-4 leaf nodes in length. 2. Prepare a friable seedbed to a depth of 5-10mm. 3. Reinstate levels before stolonising. 4. Spread stolons equivalent to a thickness equivalent to 1-2 stolons over the bare area and roll into the seedbed. If necessary lightly soil to improve stolon/soil contact. 5. Consider applying Foresite and/or Tribunil to prevent other weeds germinating. 6. Keep the stolons constantly moist. <p>Weekly (approx) foliar fertiliser applications can be applied during establishment. Once stolons establish, an NP product such as DAP is preferred.</p> | <ul style="list-style-type: none"> ▪ Often, stolons are little more than shredded leaf material as a result of grooving too deep or using too fast a rotor speed. ▪ "Crusts" of slime or moss are not addressed. ▪ Surface is not adequately cultivated. ▪ Surface is either dug out or cultivated too deep and consequently making it impossible or extremely difficult to reinstate a level surface. ▪ Stolons are often spread too thick and eventually compost, creating a soft spongy (thatchy) area. ▪ Soil is often applied too heavily and can smother stolons. Approximately 50% of stolons should be visible through soil. ▪ Contact your NZSTI advisor. ▪ This may require up to several light waterings each hour, daily for approximately 10 days. <p>Bare areas are often underfered. Regular fertilising is required to achieve a full cover.</p> |
| <p><u>Seeding (Starweed)</u></p> <ol style="list-style-type: none"> 1. Seed should be fresh (<12 months old). 2. Prepare a friable seed bed to a depth of 5mm. 3. Reinstate levels before seeding. 4. Oversow the area with starweed seed at 3 - 5g/m² and lightly brush or rake into the surface. Then lightly roll. <p>The surface needs to be kept constantly moist until germination occurs.</p> | <ul style="list-style-type: none"> ▪ "Crusts" of slime or moss are not addressed. ▪ Surface is not adequately cultivated. ▪ Mix the seed with dry sieved soil prior to spreading. ▪ Avoid burying the seed too deep (>2-3mm). ▪ The use of scrim can slow the drying of the surface. <p>Watch for and treat any slime or moss that develops. This will smother young plants.</p> |
| <p><u>Bulbils (Maniototo)</u></p> <ol style="list-style-type: none"> 1. Prepare a friable seedbed to a depth of 5-10mm. 2. Reinstate levels prior to sowing the bulbils 3. Spread bulbils at 20g/m². <p>Ensure the bulbils are covered with 4-5mm of soil and lightly roll the seedbed.</p> | <ul style="list-style-type: none"> ▪ Order bulbils early. ▪ Keep the bulbils cool and dry until they are used. Turn the bulbils regularly (ideally daily). ▪ Bulbils that are either not adequately covered with soil or firmed into the seedbed are very susceptible to being washed out during heavy rain. ▪ The use of scrims will further reduce the risk of the bulbils being washed out. |