M DLF



NORTH AMERICA

MICROCLOVER MANAGEMENT GUIDE





MICROCLOVER® - A BREAKTHROUGH IN SUSTAINABLE TURF CARE

White clovers are classified arbitrarily into three broad categories based on leaf size. The largest includes the ladino types which are very large leaved and usually used for quality forage. The medium leaved group is made up of the more common white clovers often called Dutch types and include Huia clover often used for grazing. The small leaved category comprises the wild type of clovers and it is from this category that the Microclover[®] was developed.

Microclover[®] is a tiny white clover developed by DLF plant breeders for use with turfgrasses. The unique small leaved clover has a special ability to grow between grass plants and naturally supply them with nitrogen, resulting in a dense and resilient turf that stays green with minimal upkeep.

Microclover[®] is a leguminous species. Legumes can fix nitrogen from the air which eliminates the need for artificial fertilizer. This N-fixation takes place in the root nodules formed by the symbiotic Rhizobium bacteria. Yielding up to 400 pounds of nitrogen per hectare, it substantially reduces the need for fertilizers and makes turf maintenance more sustainable and economical. Since it takes time for this process to occur, stands perform better if fertilizer is added at the time of seeding. Microclover® produces stolons that help it spread evenly in the turf, creating a dense, low growing canopy, high wear tolerance and prevents weeds from establishing. Microclover® grows fast and recovers quickly after severe stress, it has a high tolerance to cold, drought and shade, enabling it to thrive in a wide range of climatic and soil conditions.

The light requirements for Microclover[®] are 4 hours direct sunshine, or 6 to 8 hours filtered sun. You may need to contain its spread with borders along flower beds. A pure white clover lawn will not tolerate traffic and clothing will be more prone to grass stains.

Microclover[®] is a versatile, cost effective and environmentally sustainable solution for a variety of turfgrass applications, including, residential lawns, urban greenery, municipal parks, golf courses, sports fields, high-traffic locales, water edges, and slopes.





A SIMPLE MANAGEMENT GUIDE FOR DLF MICROCLOVER®:

1. **SEEDING AND ESTABLISHMENT:** Ensure proper seedbed preparation for existing lawn by removing weeds and debris and aerifying or mowing low to decrease grass competition.

Broadcast the Microclover[®] seeds evenly over the existing lawn area or utilize slit seeding. Higher success is achieved by seeding in the early fall and late spring/early summer. A seeding rate of 1 lb/1000 sq. ft (5 gr/sq. m) should be utilized into existing grass. If seeding in late summer must be done 6 weeks before expected killing frost.

Lightly rake the seeds into the soil to ensure good seed-to-soil contact or topdress with compost or soils to help hold moisture and improve the chances of establishment. Water the area thoroughly after seeding. A new seeding of improved turfgrasses with Microclover® should include 5% Microclover® seed per total weight of grass seed (ex. 1kg of grass seed will require 50g of Microclover® in the mix). We do not recommend establishing a new lawn with only white clover. A pure white clover lawn will not be tolerant to traffic. You may need to contain its spread with borders along flower beds.

AMOUNT OF SEED (GRAMS) REQUIRED	ESTABLISHED LAWN SEEDING AREA (SQUARE FEET)	NEW LAWN SEEDING AREA (SQUARE FEET) - RECOMMENDED
50g	1000ft ²	100ft ²
250g	5000ft ²	500ft ²
500g	10,000ft ²	1000ft ²
2500g (2.5kg)	50,000ft ²	5000ft ²

- 2. WATERING: Keep the seeded area consistently moist until the Microclover® establishes, usually within 2-3 weeks. After establishment, Microclover® is drought-tolerant but benefits from occasional watering during dry spells. If you experience hot and dry environments, ensure proper supplemental watering is applied, or you risk the Microclover® going dormant. White clover seeds have a hard shell and need enough moisture to germinate. Higher moisture and cooler temperatures are preferred by Microclover®.
- 3. MOWING: Microclover[®] can be mown from ½ inch (12mm), or you can choose to mow once or twice per year. If included in a No Mow or reduced mowing mix, mowing once or twice a year improves uniformity. Microclover[®], if allowed to grow taller will flower and provide pollinator benefits. Microclover[®] can grow to 6"-8" if not mown. Leaf size will diminish with regular mowing.
- **4. FERTILIZATION:** Microclover® has (all legumes have this ability) the ability to fix nitrogen from the atmosphere, reducing the need for synthetic fertilizers. However, to maintain microclover at desired level (>50% in the sward), some N application in spring and early summer is recommended. 100kg N/ha (2lbs N/1000 sq. ft) is needed, but 50kg N/ha (1 lb/1000 sq. ft) is typically sufficient.

Summer and autumn applications are not necessary and fertilizer applications are most important in establishment year. However, you may still need to fertilize with P, K and Mg if a soil test shows a deficiency as the Microclover[®] cannot fix those nutrients from the soil or air. (Many areas require a soil test before P can be applied)

- 5. PEST/DISEASE AND WEED CONTROL: One of the benefits of Microclover[®] is its ability to outcompete weeds. Maintaining a healthy lawn through proper watering, mowing, and fertilization, will help suppress weed growth. Microclover[®] roots are a less favored food source for white grubs so it will reduce the need to treat however Microclover[®] will not protect other grasses. The level of disease present in a turf stand is related to the grass genetics. Adding in improved turfgrasses with your Microclover[®] reduces the need for fungicide sprays. If broadleaf weeds appear, Microclover[®] tolerates 2,4-D and this can be utilized to remove them from stand and leave the clover.
- 6. OVERSEEDING: Over time, Microclover[®] may thin out in some areas. Overseeding with additional Microclover[®] seeds can help maintain a lush, dense lawn. Fall is usually the best time for overseeding, as cooler temperatures and increased moisture support germination and establishment but late spring/early summer can also be used.
- 7. AERATION: Periodic core aeration can benefit both the grass and Microclover® by relieving soil compaction, improving nutrient and water uptake, and promoting healthier root growth.
- 8. WINTER CARE: Microclover[®] has excellent winter-hardiness surviving even if the top is damaged. In a mixed stand with grasses, winter diseases and direct winter kill may damage the grass portion of the stand. In more northern climates the leaves will die back to the crown and decompose. This is one of the reasons we don't recommend a pure stand.
- **9. LAWN MIXES AND LAWN CARE:** Microclover[®] works well in mixes with other elite DLF turfgrasses. Depending on what grass species you choose, the microclover will need varying amounts of mowing.
 - Planting with fine fescue: Mow once per week, once per month or once per year.
 - Planting with tall fescue: Mow from 1 inch to 4 inches once per week, or when lawn reaches 4.5 inches, mow back to 3 inches.
 - Planting with Kentucky bluegrass: Mow from 1 inch to 4 inches once per week, or when lawn reaches 4.5 inches, mow back to 3 inches.



