



Where to use Milorganite, and what to expect

Milorganite is an excellent sustainable fertilizer for turfgrass. It contains organic nitrogen for sustained feeding without any burn potential. Milorganite phosphorus is plant available, but resistant to leaching. Milorganite iron is non-staining.

USES

GENERAL FERTILIZATION. Use Milorganite as a general fertilizer to promote healthy turfgrass growth, without the peaks and valleys of growth and color associated with readily soluble nitrogen. Greens Grade Milorganite is well suited for closely-mowed golf greens, and Milorganite Classic is suitable for fairways and lawns. Both have excellent physical properties, making application easy. Expect long-lasting growth and color with very little nitrogen leaching. Make monthly applications at the rate of 20 pounds per 1,000 square feet, or higher rates less frequently. Milorganite is excellent in spoon feeding programs because it has a moderately low analysis, so it can be applied easily at low rate of nitrogen.

PROVIDE PHOSPHORUS WHERE AVOIDING PHOSPHORUS LEACHING TO ADJOINING WATERS IS CRITICAL. The phosphorus in Milorganite resists leaching, yet it is plant available. Use Milorganite to correct phosphorus deficiencies that result in thin, unthrifty turf, poor rooting, and weed invasion. *Expect to see improved turf density.*



EFFECTIVE IN HIGH PH SOILS, EVEN CALCAREOUS SOILS.

LONG LASTING. UP TO 12 WEEKS OF IRON RESPONSE.

EASILY APPLIED WITH A FERTILIZER SPREADER.

NON-BURNING. CAN BE APPLIED TO WET TURF.

NON-STAINING ON ANY SURFACE.

RELEASES INTO PLANT'S ROOT SYSTEM. WON'T BE REMOVED WITH FREQUENT MOWINGS.

PROVIDE IRON WHERE IRON STAINING IS AN ISSUE. Iron is important for turfgrass color. However, most iron fertilizers will stain concrete surfaces such as walkways, cart paths, deck areas, and markers, and the rust stains can persist for a long time. Milorganite can be used safely around concrete to provide plant-available iron without staining. *Expect to see improved turfgrass color, without rust-colored speckles on concrete.*

RELIEVE STRESSED TURF. Milorganite is often used to improve turf color and density where poor growth and color are observed. *Expect to see more dense turf with better color.*

- Extra fertilization with Milorganite can improve turf growing on isolated regions within a fairway that have unusually sandy soil, thin soils over rock, or in places with low organic matter. Apply 20 to 50 pounds Milorganite per 1,000 square feet to these areas.
- Often Milorganite is used around bunker perimeters to improve weak turf.
- Use Milorganite mixed with sand (eg. 50/50 by volume) as a topdressing on thin spots on greens. Apply weekly until the turf has recovered.



Milorganite was topdressed with sand within the square delineated by the orange dots.

TOPDRESSING FOLLOWING CULTIVATION. Milorganite mixed with topdressing sand at the rate of 10 or more pounds per cubic yard of sand will speed recovery from core aerifications or verticutting. The low-salt property of Milorganite makes it preferable to chemical fertilizers which may stress grass that already is damaged by the aerification, and Milorganite fortifies the sand topdressing with organic matter.

SEEDING AND OVERSEEDING. When overseeding with moderate to low rates of seed, mix the seed with Milorganite to aid in seed distribution and provide a low-salt starter fertilizer. The standard Milorganite-to-seed rate is 4 to 1, by weight.

MILORGANITE FOR FILLING FAIRWAY DIVOTS



Green dyed sand being mixed with Milorganite (approximately 80/20) on the bed of the utility cart to make up sand for filling in fairway divots.

FILLING FAIRWAY DIVOTS. Milorganite is added to sand (sometimes stained green) for use in filling fairway divots to improve turfgrass recovery.

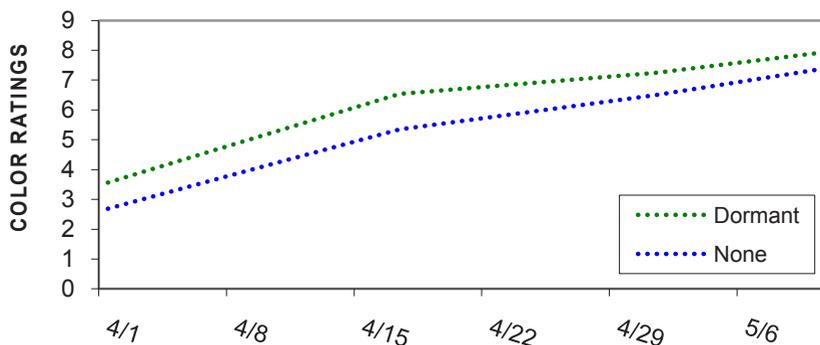
GROWING IN NEW GREENS. In both the north and the south, for seeded and sprigged greens, Milorganite inclusion in the root zone mix (5 to 10 pounds Milorganite per cubic yard of root zone mix) has been demonstrated to provide faster grow-in.

SODDING. Fertilize with Milorganite prior to laying sod at the rate of 50 to 100 pounds per 1,000 square feet on sand soils, and at half that rate for heavier textured soils. Mix 2 to 4 inches into the root zone to place nutrients where they are readily available to roots emerging from the sod. *Expect to see better rooting, without fertilizer burn and root pruning, and faster establishment of the sod.*

DORMANT FEEDING. In temperate zones, Milorganite is applied in late fall, just prior to a winter snow cover. Dormant feeding research, performed at the University of Wisconsin showed that 0.16 to 0.21 lbs. of Milorganite nitrogen was mineralized per 1,000 sq. ft. between the time of application in November and mid March, five days after snowmelt. This proves that there are microorganisms active even under snow cover that mineralize the nitrogen in Milorganite. This winter-released nitrogen is available for uptake as soon as the soil thaws in the spring. *Expect to see improved color after snowmelt, earlier recovery from snow mold damage, and improved turf damage repair from early season play.*



BENTGRASS COLOR RATINGS



EFFECT OF DORMANT FEEDING WITH MILORGANITE ON BENTGRASS COLOR RATINGS

PRIOR TO COLD FRONTS. In the south, warm-season grasses go dormant temporarily after cold fronts sweep through. Dormancy is encouraged by high light intensity and cold temperatures, a condition that is common when cold fronts pass through. Milorganite applied just before the cold front is well known to reduce the dormancy and off-color associated with cold fronts and even light frosts, apparently because of its black color, and the nutrition it provides. *Look for improved color after the cold front.*

AS FILLER IN BLENDED FERTILIZERS. Blended fertilizers often use sand or limestone as filler. Neither contributes any favorable properties to the turf, except for the latter if the soil is highly acid. Using Milorganite as the filler improves the fertilizer physical properties, provides plant nutrients, and leaves no unsightly residue.

USING MILORGANITE AS A FILLER IN BLENDED FERTILIZERS PREVENTS UNSIGHTLY RESIDUES



Limestone ring residue following application of a fertilizer containing limestone filler

Milorganite Seed Mixing Chart

Seed Type	Milorganite (lbs.)	Seed (lbs.)	Seed per 1,000 sq. ft. (lbs.)	Coverage Area of Mix (sq. ft.)	Milorganite per 1,000 sq. ft. (lbs.)
Bentgrass	20	5	1	5,000	4
Bermuda Grass	20	5	1	5,000	4
Blue Grass	100	25	4	6,250	16
Blue-Rye Mix	100	25	6	4,250	23
Rye Grass	100	25	8	3,250	30



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