

Purchase bulbs from reliable dealers well known in the trade. Avoid bargains and cheap mixtures. They are usually inferior to graded bulbs. Bulbs are graded by size and shape when offered for sale.

One last note, after the summer color from the annuals have gone, put in some chrysanthemums for some fall color.

## WHY TOPDRESS

The answer to "Why Topdress" originates deep in the basic tenets of agriculture and anyone who manages fine turf would do well to learn the real reasons for topdressing and should become aware of the damage he does to the valuable turf entrusted to his expert care if he does not know this answer and does not observe the principles involved.

The answer comes from the laboratory of the microbiologist, from the rules for successful composting, from the time proven practices of the agronomists, from the findings of soil chemists and physicists.

The answer, derived from these many sources, might be expressed in this way, "To bury the dead and succour the living." This abstruse answer demands explanation.

To better explain this statement let us agree to describe the cross section of turf from the top of the grass plant down to just below the main root mass as "The Growth Zone."

Within this "Growth Zone" there is a complexity of life processes which are interdependent and upon which, to varying degrees, success or failure in turf culture depend. The processes are: physical growth of grass plants, often under adverse conditions; photosynthesis carried out by leaves which are constantly being mowed, sprayed and trampled; chemical reactions relating to fungicides, fertilizers, herbicides, and water borne minerals and other chemicals; biological reactions relating to the decomposition of dead plant and animal tissue; and to the micro-biological population which increases or decreases as conditions determine. These, and other processes, must be properly maintained to insure healthy satisfactory turf and turf grass.

Where does topdressing fit in this "Growth Zone" complex.

Topdressing is a prime requisite for the optimum functioning of the "Growth Zone." These are the ways in which topdressing contributes to this optimum functioning.

- (1) It provides a physical separator to keep plant and animal residues from matting into an impervious mass which would be a barrier to passage of air, water, and chemicals, and which would be a serious deterrent to decomposition.
- (2) It introduces a buffering agent to modify chemical reactions.
- (3) It physically supports the plants to help absorb the shock of compacting factors.
- (4) It introduces and supports microbiological activity so essential to the prevention of an undesirable amount of thatch.
- (5) It builds up the soil surface slowly.
- (6) It maintains a friability in the "Growth Zone" which assures a proper degree of porosity.
- (7) It ultimately produces a soil of a sandy loam texture.

WITHOUT PROPER TOPDRESSING, EXCESSIVE THATCH CONTROL BECAME THE RULE. THE NEED OF CONSTANT MECHANICAL AERIFICATION AND THATCH CONTROL BECAME THE RULE. THE OLD TIME "GREENSKEEPER," ALTHOUGH HE DID NOT KNOW TECHNICAL REASONS FOR TOPDRESSING, CERTAINLY KNEW THAT GOOD GREENS WERE THOSE WHICH WERE PROPERLY TOPDRESSED.

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Editors note: Additional benefits in topdressing;

- a. Reduced grain; upright growth encouraged.
- b. Disease reduced - as thatch breaks down, disease and insect problems are reduced.
- c. Improved air, water, and fertilizer penetration.
- d. Winter desiccation reduced when topsoil covers crown of plant.

## HOW MUCH TOP SOIL NEEDED

The amount of topsoil needed for a given area is determined by multiplying the area involved by the depth in inches desired, and dividing this total by 10, a factor for loosened soil. This gives cubic feet. To convert to cubic yards, divide cubic feet by 27.

Example - Putting green area 7,000 square feet, 12 inches deep  $7,000 \times 12 = 84,000 \div 10 = 8,400$  cu. ft.  $\div 27 = 311.1$  cu. yds.

The approximate volume of topdressing needed has been determined in the book, Turf Management.

Depth Desired	3,000 sq. ft.		5,000 sq. ft.		7,000 sq. ft.	
	cu. ft.	cu. yd.	cu. ft.	cu. yd.	cu. ft.	cu. yd.
1/8"	31.2	1.2	52.0	1.9	72.8	2.7
1/4"	62.4	2.3	104.0	3.9	145.6	5.8

The O.J. Noer Sampling Tool, illustrated below made from a discarded steel golf shaft is an excellent tool for sampling. (Courtesy Milwaukee Sewage Commission)

Soil Sampler Made from a Golf Shaft

