

Soil compaction is trouble in hiding

■ It's the green industry's version of an oil leak or tooth decay.

You don't know it's there until you notice something's wrong, and by then it may be too late. But when you look for it, it's hard to miss.

It's soil compaction, and it's often responsible for weakening turf to the point of susceptibility to other problems.

The key area of concern in cool-season turf is the top three to four inches which contain the bulk of the roots, says soil expert Dr. Paul Rieke of Michigan State University.

Aerate droughty turf every year. Remove cores $\frac{1}{2}$ to $\frac{3}{4}$ inches in diameter, at a depth of up to six inches. This will improve permeability of the sod to rain and watering. This treatment also improves soil aeration and deeper rooting. Since the core holes permit much easier and deeper penetration of fertilizer and lime in situations which merit such treatment, aerification will help root development, and the yearly accumulation of dead roots will improve soil structure to the depth of rooting.

Certain soils compact more easily than others. The situation gets worse when you add heavy traffic to the picture, as on a golf green.

Compaction prevents moisture and nutrients from reaching the turf roots. Wet, waterlogged soil in heavy traffic com-



pacts quickly. Grass will begin to thin out, and eventually bare spots and weeds will result.

Solution: aerify and remove soil cores in late fall or early spring. Go in several directions for best coverage.

Do a light overseeding, then water heavily. The water will wash the seed into the newly formed core holes. Fertilize and seed bare spots before watering.

Some turf experts believe core aeration is best when done after Labor Day, so the holes can heal over before winter. In cool-season turf regions, soil is drier in fall and the temperature and moisture

conditions are more favorable and more predictable, and you have more time to fit it into your schedule.

—Sources: "Turfgrass Management" by Dr. Al Turgeon, Reston Publishing, 1980; "Ask The Lawn Expert," by Paul N. Voykin; MacMillan, 1976.

Coring cures COMPACTION

■ Coring offers a solution to compacted turf, but not without some disadvantages.

ADVANTAGES

- release of toxic gases from the soil
- improved wetting of dry or hydrophobic soils
- accelerated drying of persistently wet soils
- increased infiltration capacity, especially where surface compaction or thatch limits infiltration
- stimulated root growth within the holes
- disruption of soil layers resulting from topdressing
- control of thatch, especially where soil cores are reincorporated or where topdressing follows coring

- improved turfgrass response to fertilizers

DISADVANTAGES

- temporary disruption of the turf's surface
- increased potential for turfgrass desiccation as subsurface tissues are exposed
- increased weed development when conditions favor weed-seed germination
- increased damage from cutworms and other insects that reside in the holes.

Soil amendments can be used to alleviate soil compaction. Companies which manufacture these amendments include Aquatrols, headquartered in Cherry Hill, N.J.; Bonide Products, Inc. of Yorkville, N.Y.; Four Star Services, Inc. of Bluffton, Ind., and Innova Corp. of Westminster, Colo.