

# Aeration: a breather for tired turf



easier it is for moisture to penetrate the thatch layer.

Aerifying too early in the fall or in late spring gives weeds a place to nest: lespedeza, prostrate spurge, purslane and crabgrass.

Landscapers can feel comfortable charging between \$10 to \$12 per 1000 sq.ft. Charge \$12 to \$15 per 1000 for areas that require more time, such as housing complexes or large corporate sites.

The following chart lists the different aeration methods and their benefits to the turf.

— Terry McIver

**You should be willing to try anything that makes the turf look better. And that includes—especially—soil aeration.**

■ If only life were always so simple: you make money, your customer is happy and the turf is healthy. That's what happens when you add soil aeration to your service contracts.

Everyone knows that aeration works, it's just that—in the case of landscapers—the service is not offered as regularly as fertilizing or dethatching.

Think about aeration for this coming September and October; it can be that extra you've been looking to add to your list of services. The deciding factor should be the proven fact that aeration relieves soil compaction, and prepares the turf for the summer traffic or winter dormancy.

Aeration goes a long way in complementing pesticide and fertilizer applications. As it opens a channel between soil layers, it removes part of the problem soil and permits topdressing and refilling with more compatible material.

Cool-season grasses are best aerated in the spring and fall, to coincide with foliar growth. If you aerify in late fall or early spring, the lawn is susceptible to winter annual weed germination from knawel, speedwell, henbit and chickweed, and annual weeds like knotweed.

Water infiltration is closely related to aeration. The less compacted the turf, the

## Aeration methods and benefits

### Hollow tine, spoon, screw devices

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened <sup>1</sup>	Soil brought to the surface <sup>2</sup>	Moisture required <sup>3</sup>
a. tractor-drawn	1/2-3/4"	3-6"	6"	2	2-4	FC
b. drum-type	1/2-3/4"	2-3"	2-3"	1	2-4	FC
c. verti-drain	hollow tine	10-12"	1-8"	4-5	2-4	FC-DFC
d. vertical tines	2/3-7/8"	3-5"	2-6"	2	3-5	FC
e. deep-drill	1/2-3/4"	5-10"	5"	1	2	FC

### Solid tine

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
a. verti-drain	1/2-1"	12-16"	1-8"	4-5	1	DFC
b. shatter core	1/2-3/4"	3-5"	2-6"	2-4	1	DFC
c. Aera-vator	1/2"	3-1/4"	4"	2-5	2	FC-DFC
d. quad tine	1/4"	2-3"	2"	1	1	FC

### Slicing

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
a. straight tine	n/a	3-7"	6-12"	1	1	FC
b. straight blade	thin width	2-4"	4"	1	1	FC
c. offset lines	1/3-1/2"	6-8"	7"	2-4	1	DFC

### Spiking

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
Not powered by motor; penetrates by machine weight	Knife-like blades	1/4-2"	1-2"	1	1	FC

### High pressure water injection (Toro Hydroject)

Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
n/a	4-20"	3-6"	2-3	1	FC-DFC

### Subaerification

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
vibration	blades	2-8"	9-10"	4-5	1	DFC

### Grooving

Method	Tine diam.	Depth of penetration	Spacing	Soil loosened	Soil brought to the surface	Moisture required
Power-driven blades	Used for renovation, not routine cultivation	1-5"	1-5"	1-4	4-5	FC-DFC

<sup>1</sup>Soil loosened: 1=none; 5=most effective

<sup>2</sup>Soil brought to surface: 1=none; 5=most effective

<sup>3</sup>FC=field capacity; DFC=drier than field capacity

Source: Dr. Robert Carrow, Univ. of Ga.