



# Aeration Fact Sheet

## What is Aeration?

**Aeration** is the process of perforating the soil to enable nutrients, water, and air to reach the plants and their roots.



The Merrimack County Conservation District rents out a spike aerator that perforates the ground with small spikes.

## Benefits of an Aeration:

- Water and fertilizer can be used more efficiently by the soil
- Roots can grow deeper and healthier
- Soil compaction is reduced
- Improved soil health
- Improved crop health and production
- Ability of soil to withstand more activity

## Agriculture Aeration Uses:

**Nutrient Absorption:** In order to grow and thrive, plants must be able to take up nutrients from the soil. Nutrients dissolve in a mixture of soil and water surrounding plant roots. Aeration creates openings in the soil which allow for nutrients, water, and air to enter the soil more easily.

**Thatch Buildup:** Thatch is a layer of dead and living plant shoots, that show up between the soil and plants in your fields. Having some thatch is good and can help with the resilience and health of growing plants. Excess thatch can prevent water from reaching roots, or it can hold too much water and cause root rot. Aeration can help to break up and thin out thatch layers.

**Compacted Soil:** In compacted soil, roots will stay nearer to the surface and are more readily affected by droughts. Aerating allows the soil to

relax and for water and nutrients to absorb into the soil. Relaxed soils allow for deeper root growth. Compaction can come from livestock and heavy equipment that travel over the soil. The easiest way to get reliable information on whether or not your soil is compacted is to use a soil compaction tester—such as a soil penetrometer.

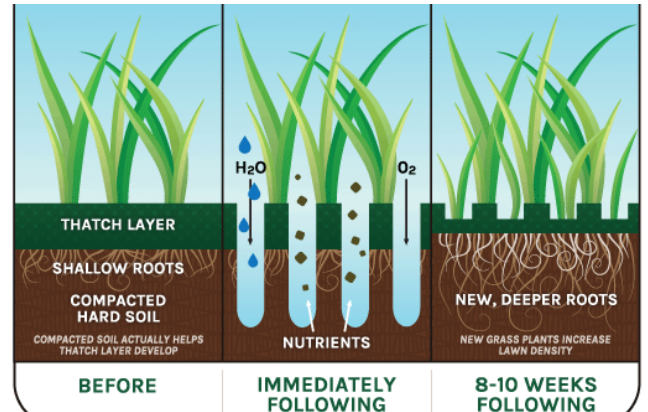


Image courtesy of VanPutte Gardens: To Aerate or Not Aerate?

## The Best Time to Aerate:

The two most popular times to aerate are **spring and fall**:

- Spring aeration gives plants an extra boost and provides nutrients for growth
- Fall aeration helps to strengthen underground root systems while providing a bed for overwintering.

**Note:** For best aeration results, an aerator should not be used when soils are overly dry or wet.

## Potential Uses for Manure Injection:

An aerator perforates the soil, creating holds for the manure to collect in. with a perforated surface, there is an increase in manure absorption into the soil and less opportunity for runoff and ammonia loss. A field can be aerated in a separate pass before or after a manure is surface broadcast onto a field.

**To rent an aerator or soil penetrometer contact:**

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