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Limiting Moss and Algae in the Home Lawn

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Moss and algae occur in lawns when conditions are not suitable for growing a dense, healthy turf. Although not harmful, some homeowners may wish to limit or eliminate them. The 13,000 or more mosses constitute a large collection of lower plant life. About 50 mosses are commonly found in lawns. Mosses are adapted to a wide range of environmental conditions. Some grow well in dry areas; others grow best in bog-like habitats. Algae is a fresh water plant and is sometimes mistaken for moss when it is growing in moist areas under trees.

Mosses are small, leafy plants which look like a mass of fine stems. They vary greatly in size and do not have roots, but form rootlike filaments which attach to soil and other substratum (Figure 1).

Infestations of moss are associated with low fertility, poor drainage, too much shade, soil compaction, wet conditions, poor air circulation, or a combination of these factors. Contrary to popular opinion, low soil pH is seldom responsible for moss invasion.

The black, crusty layers found in some lawns are probably dead algae plants. Algae can appear in different colors, i.e., red, orange, green, or brown, before dying. Algae is most likely to occur in shaded, heavily compacted areas that are often wet for prolonged periods of time.

The only permanent control of moss or algae is to correct the conditions unfavorable to grass growth.

- **Maintain good soil fertility.** Lawns should be fertilized at least once per year. September is the preferred month. Use AY-4, "Lawn Fertilization for Established Turf," to develop a good fertilization program.
- **Improve drainage.** Soils that are constantly wet because of poor drainage should be contoured so that water will drain away from the wet areas of the lawn. In some lawns, tile drainage may be necessary to correct wet conditions. However, tile may be ineffective in heavy soils unless special precautions are taken to facilitate water movement to the tile system.
- **Improve air circulation.** Low-branched trees may be the cause of poor air circulation as well as dense shade. Lawns surrounded by buildings and tall vegetation with limbs close to the ground will require considerable effort to provide adequate air circulation necessary for the growth of a good lawn.
- **Provide for more light.** In some cases a choice between trees and a good lawn must be made. If the lawn is completely shaded, removal of

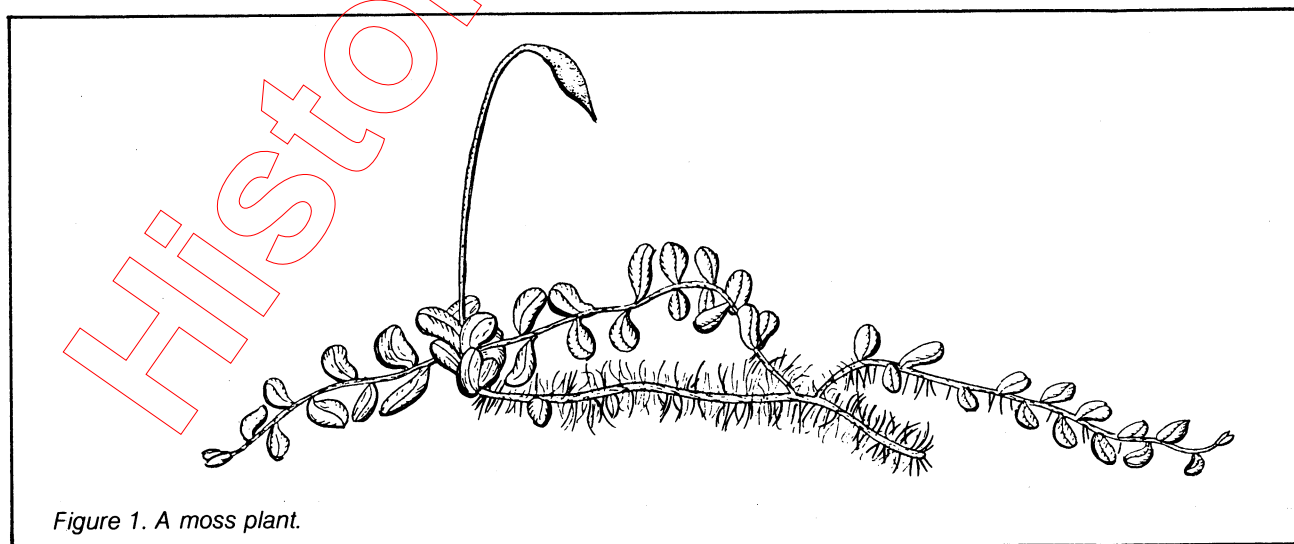


Figure 1. A moss plant.

some of the least desirable trees may be the only answer in order to grow a good turf. Other times, removal of low branches and thinning the crowns of trees will allow enough light to reach the ground surface so that a good turf can be produced. If you are not willing to remove enough vegetation so that direct sunlight reaches the ground during part of the day, consider substituting a ground cover for grass. In addition, plant grasses which are shade tolerant. Refer to AY-14, "Improving Lawns in Shade," for detailed information.

- **Loosen compacted soil.** The blackened algae layer found in some lawns inhibits gas flow from the air to the soil and vice versa and also reduces water infiltration. Compacted soil may be loosened by cultivation and addition of large amounts of organic matter if the lawn is to be renovated. Aeration with a machine that removes plugs of soil will help a lawn where it is undesirable to disturb the soil surface.

Moss—Chemical Control

- Dissolve 3 ounces of copper sulfate in 5 gallons of water and spray the mixture over each 1000 sq. ft. The material could stain your hands and clothing. Repeated applications can cause damage to existing turf. The material can be caustic to metal containers.
- Dissolve 3 ounces of iron sulfate in 5 gallons of water and spray the mixture over each 1000 sq. ft.

Algae—Chemical Control

- Dissolve 3 ounces of copper sulfate in 5 gallons of water and spray the mixture over each 1000 sq. ft. Refer to instructions above.
- Apply hydrated lime at 3 pounds per 1000 sq.ft.
- Dissolve copper sulfate according to instructions above, and follow by raking to remove the crust and then treating the area with hydrated lime.

The above measures are only temporary controls. Identifying and correcting the reasons for turf deterioration will give longer lasting results.

Historic Document