

## Seasonal Update

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# Crabgrass: From Valuable Grain Crop to Hated Weed

There are two species of crabgrass that are troublesome weeds in the North east. Smooth, or small, crabgrass (*Digitaria ischaemum*) is a common problem in turf, landscaped areas and container nurseries. Large, or hairy, crabgrass (*Digitaria sanguinalis*) is more commonly seen in field and row crops.

Crabgrass was one of the earliest grain crops, preceding wheat and other grains in its native lands of Africa and Asia. In the 1880s, crabgrass was intentionally introduced into the US to serve as a drought-tolerant forage crop for cattle in the south. When other more nutritious crops replaced crabgrass, it escaped and became a very successful weed!

Crabgrass is probably the most troublesome annual weed that we have, annually costing millions of dollars for control by chemicals and mulches. Despite this intensive level of control, crabgrass continues to be a serious weed in many of the same sites that it is managed, like home lawns and landscaped areas.

### Many Unhappy Returns

There are many reasons for the annual return of crabgrass. It has several characteristics of an 'ideal' weed. It produces prodigious numbers of nutrient-rich seed. This source of fat and protein is readily consumed by migrating birds and other wildlife in the fall as they prepare for winter. Not all of the seed is completely digested, and birds act as a major source of movement of crabgrass seed to new sites.

Crabgrass is also very 'plastic'. For instance, a single plant can grow into a large available bare spot on a lawn, producing many tillers and seed heads. However, if many seedlings were to emerge in that same bare spot, the individual plants would be crowded by their neighbors, but in total, the same number of seed would still be produced within the bare patch. This

characteristic allows the weed to compensate for variability in germinating seed population to still produce sufficient number of seed to overwinter for the next season.

### Crabgrass Management

There are several preemergence herbicides which can be very effective in preventing crabgrass from establishing in the spring. These can be used in turf, landscaped areas, nurseries, and in the field. Refer to the *Cornell Pest Management Guidelines* for specific information.

In turf, particularly, there is often a problem with obtaining season-long control of crabgrass with a single preemergent application made in early spring. This is partially due to the long period that crabgrass can germinate. On Long Island, we usually see germination begin in early May and continue into August. It is simply asking too much of a single preemergence application to persist for 3 to 4 months. For this reason, a split application (half applied in April and half or two thirds applied in June) will extend the control period considerably.

Post emergence crabgrass herbicides are also an option to manage late germinating escapes. To get the most out of them, applications should be made to young crabgrass that is growing healthily, especially not under drought stress.

Maintaining a high mowing height and proper fertilization regime will help to keep the soil beneath the turf canopy cool and shaded. These conditions will reduce crabgrass germination and vigor.

In landscaped beds, organic mulches are often applied to manage this weed. However, because crabgrass can root at the stem nodes as it spreads, it is difficult to hand pull if allowed to grow to a point where the tillers (side shoots) begin to grow. Early detection and action are important to keep this weed in control.

Andy Senesac



Left: specimen of large crabgrass plant. Middle: specimen of smooth crabgrass plant. Right: large crabgrass growth habit.