

IMPROVING CRABGRASS CONTROL

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The principle of good pre-emergent crabgrass control is to establish a chemical barrier over the turf surface. As the crabgrass emerges from the seed, it picks up the chemical and dies. Anything that prevents the establishment of this barrier or physically breaks this barrier will result in poor crabgrass control. Several possibilities for poor crabgrass control include:

1. Using a lower rate of chemical than the recommended rate. The chemicals do not move from one area to another to even out the application.
2. Uneven distribution of the chemical when applied in early spring to unmowed, fluffed over turf. When the turf is cut the chemical is distributed with the large clumps of grass. This will result in excellent control in some section of the turf area, while other sections yield poor control.
3. The barrier will not be established permanently on lawns with a heavy infestation of rosette (dandelion, plantain, etc.) weeds. As the dicot weeds shrivel and die they take the barrier with them. The space voided by a dandelion or similar dicot is unprotected by the pre-emergent chemical.
4. The barrier can be broken by the activity of several animals and insects. Examples include earthworm casts, ant mounds, female dog scratching the surface, digger wasps, and moles. They can deposit unprotected soil on the surface. The crabgrass seed in this soil will germinate and grow untouched by the chemical.
5. The barrier can be physically broken by the activities of man. This includes dethatching, raking and the activities of children which destroy the chemical barrier.
6. Preemergents applied to lawns with heavy thatch and a regular watering program could result in physically forcing the chemical through the thatch. Movement of pre-emergent below the top 1/2 inch of thatch could result in crabgrass germination above the barrier. In addition, the lower portion of the thatch can chemically bind many pre-emergent chemicals with the organic fraction, making them inactive.
7. Pre-emergents applied to soils with a high organic matter or swelling clays can result in a shift of the chemical barrier due to the alternate wetting and drying. This will allow crabgrass to germinate between the minute cracks produced.
8. Many pre-emergents are broken down by microorganisms and/or chemical hydrolysis. Excess watering or rainfall could accelerate the break down chemically. Instead of the normal 90-120 day residual period you might find a 40 to 50 day residual period. The reason for crabgrass appearing along driveways and sidewalks is the higher temperature which increases the activity

of microorganisms. The result is a decreased level of crabgrass control. Consider making a second application along sidewalks and driveways.

9. The efficiency of pre-emergent chemicals and the population pressure must also be considered in evaluating the performance of chemical controls. Most pre-emergent herbicides are considered good if they control 90 to 95% of the weed population. You will never eradicate crabgrass from a lawn by relying strictly on chemical controls. It takes a combination of good cultural conditions and a healthy stand of turf plants.