



Integrated Pest Management

Ways to Control Weeds

Corn Gluten Meal

WHAT IS CORN GLUTEN MEAL?

Corn gluten meal (CGM) is a by-product of wet-milling corn processing. It appears as a bright yellow granule and is used primarily as a feed supplement for livestock. Various studies at Iowa State University found that corn gluten meal has pre-emergence herbicidal effects on certain weed seeds. Preemergent herbicides work by keeping weeds seeds from growing and establishing normally.

HOW DOES IT WORK?

Proteins naturally present in corn gluten inhibit normal seed root development. The proteins do not kill directly but they cause seedlings to form poor roots and die when they are stressed for water. The plant growth regulator activity works only against seedlings and it will not affect existing plants. Young, actively sprouting herbaceous seeds are the most susceptible to corn gluten meal treatments. The herbicidal effects of an application of CGM last from 2-6 weeks. It is known that seeds of some weed species are not affected by CGM. Corn gluten meal is also a good source of nitrogen. Use of CGM will act as a fertilizer and will encourage growth in any plant it is applied to. This can be of benefit in turf, where encouragement of grass helps it to crowd out competing weeds. However treating areas with existing weeds may increase their growth and survival as well.

Efficacy of this product is highly dependent on soil moisture conditions and rainfall. If the root zone is kept consistently moist by irrigation or rainfall, the weed seed will usually outgrow the effects of the CGM and survive. This results in ineffective weed control in climates where consistent moisture is typically present during use. Maritime Pacific Northwest climates are generally not conducive to CGM effectiveness.

Cost of CGM use may be prohibitive in large scale landscapes.

Effective application rates are typically cited at 20-40+ pounds of product per 1,000 sq. ft.



DISCLAIMER

The use of pesticide trade names does not constitute an endorsement by the City of Portland. Descriptions of the use of materials, pesticides, or other methods for pest management are for general informational purposes only and are not intended as a complete guide to any method or pesticide use. The City of Portland and Portland Parks and Recreation assume no liability for the information contained in this written material. Before using any chemical, read and follow the directions on the label of the container. Any use of a pesticide contrary to instructions on the printed label is not legal or recommended.