

Corn by-product works against crabgrass

Dr. Nick Christians at Iowa State says marketing talks under way for products containing corn gluten meal.

■ Surface applications of corn gluten meal can control crabgrass, reported Dr. N.E. Christians at the International Turfgrass Conference this past July.

Gluten is a protein substance extracted from some milled grains. The gold-colored powder is popular for use as an animal feed.

"Laboratory and field studies indicate that this material has the potential of being used as a natural 'weed and feed' product to inhibit the establishment of germinating weeds in mature turf stands," said the Iowa State University researcher.

"There is an inhibitory substance in this corn by-product," explained Christians, "that acts as a growth regulator to prevent

root formation of germinating plants.

"When drying occurs, the plant dies. A drying period is required for weed control. If the treated area remains excessively wet during the germination period, control is reduced."

According to Christians, timing of applications plays a big part in the effectiveness of the material's use as a pre-emergent. If the material is applied too early or too late, weed control is reduced.

The researcher commented that the material can provide nearly complete control of crabgrass in Kentucky bluegrass, but at rates above what a turfgrass manager would probably want to use. However, a level of 2 lbs. N per 1000 sq. ft. can provide 58 percent reduction in crabgrass establishment, he says. This is practical in a spring application because the corn gluten meal also contains approximately 10% nitrogen (N) by weight, making it a good natural fertilizer for turf.

"For plants with fully developed root

systems, the material acts as a natural, organic nitrogen source with N release characteristics similar to other commercially available organic N sources," said Christians.

Christians was issued a patent in July 1991 to use corn gluten meal as a pre-emergence herbicide when applied to the soil surface. Marketing agreements are reportedly under negotiation.

Further tests will determine the spectrum of weeds controlled by corn gluten meal, and whether it can be used on other crops.



Christians: Timing is key with gluten meal.

—Ron Hall



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