

**TERRACLOR 15G**  
**A NEW HIGH CONCENTRATE**  
**GRANULAR IN-FURROW FUNGICIDE**  
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**Abstract**

Terraclor 15G is a new, high concentrate in-furrow cotton fungicide developed by Uniroyal Chemical Co., Inc. to replace Terraclor 10G. As a result of the 50% increase in active ingredient, time, labor and space required to handle the product will be significantly reduced with no loss of performance. It has been demonstrated to have excellent physical handling and long-term chemical stability properties. Product efficacy trials indicate that Terraclor 15G has excellent pre and post emergence fungicidal properties. Terraclor 15G has been registered with EPA and will be available for the 1999 cotton production season.

The current Uniroyal Chemical Co., Inc. family of cotton in-furrow fungicides includes a broad array of granular and emulsifiable concentrate products. These products are based upon the unique active ingredient quitozene. In response to market demands, Uniroyal Chemical Co., Inc. has continued to develop new in-furrow products to meet the needs of cotton growers. These improvements have created a product line which can be used more efficiently and effectively by distributors, dealers and most importantly the grower.

Examples of these improvements include Terraclor Super X®18.8G which contains 50% more active ingredient than its predecessor, Terraclor Super X 12.5G. The development of Terraclor Super X plus DiSyston® EC, made available for the first time a liquid unit package which combined the broad based fungicide activity of quitozene and etridiazole in combination with the soil insecticide disulfoton. The development of Terraclor 15G is another example of the company's ongoing commitment to providing new and improved products to the market place.

Terraclor 15G contains 50% more active ingredient on each granule than the previous Terraclor 10G. As a result of the increased concentration, there is a significant reduction in time, labor and space required to handle this product. In addition, the farmer will receive the ultimate benefits of increasing the number of acres each bag of product will treat with the same high level of performance expected of Terraclor in-furrow products.

Terraclor 15G has been registered with the EPA under the Registration 400-458. The label includes all current uses

found on the Terraclor 10G label such as cotton, peanuts, peppers, Cole crops, and vegetable bedding plants. The primary diseases controlled include *Rhizoctonia solani*, and *Plasmiodiophora brassicae*. Application methods include in-furrow or banded soil treatments followed by incorporation either immediately before planting or at the time of planting. For vegetable bedding plants, Terraclor 15G can be premixed into the growing media used for seeding or seedling transplants.

The soil borne disease *Rhizoctonia* has long been recognized as the single most important seedling disease that affects initial emergence, final stand counts and seedling vigor of cotton. Quitozene, the primary active ingredient in all Terraclor and Terraclor Super X products is the industry standard for soil applied fungicides to control *Rhizoctonia*. Trials done with Terraclor 15G have demonstrated that it is highly effective as an in-furrow fungicide to control cotton seedling diseases caused by *Rhizoctonia*.

Figures 1 and 2 show that when Terraclor 15G or Terraclor 10G were applied at equal rates of active ingredient per acre (0.75lbs), they were equally effective in increasing plant stands. In addition to improving early emergence stands, Terraclor 15G maintained plant stands at both locations up to the time final plant stand counts were made. This extended period of activity was in direct contrast to the significant reductions in plant stands noted in the untreated checks, which had received only seed treatments before planting. The post emergence activity of in-furrow applications of Terraclor 15G should be of particular value to growers trying to establish uniform healthy plant stands during unpredictable weather conditions which often occur throughout the entire stand development period.

Figure 3 demonstrates that yield increases associated with Terraclor in-furrow treatments may be the result of something more than plant stand improvements. Although there was no apparent difference in plant stands between the untreated check and the in-furrow treatments, there was a significant reduction in the number of seedlings exhibiting symptoms of severe root disease. In the case of Terraclor 15G, this was associated with a 10.2% increase in lint yield per acre. The improvement in yield appears to be correlated with the lower level of severe root disease and the plants ability to better withstand stress conditions throughout season.

The physical properties of Terraclor 15G are very similar to those of Terraclor 10G. Its color ranges from tan to gray. It is a free flowing granule containing less than 1.5% fines. Long-term trials indicate that it does not agglomerate in storage. The product remains stable with no loss of active ingredient after three years of storage at ambient temperatures.

Terraclor 15G will be available in 50-pound pinch bottom bags. The bags will be lined to prevent moisture penetration during storage. The primary difference in the physical properties of the two products is weight per unit volume. Terraclor 15G, because of the additional amount of active ingredient on each granule, weighs approximately 10% more per unit volume than Terraclor 10G. Calibration charts will be made available before the 1999-use season to aid farmers in the proper calibration of their equipment.

Labeled application rates for Terraclor 15G range from 6.4 to 12.8 oz. per 1,000 row feet based upon 40-inch row spacing (13,058 row feet per acre). The 6.4 oz. per 1,000 row feet will apply 0.75 lb. active ingredient quinterozone in-furrow. This rate is the equivalent of applying 5 lbs. of Terraclor 15G per acre to cotton planted on 40-inch rows recommended for normal planting conditions. Higher rates are recommended if environmental or cultural conditions favor increased *Rhizoctonia* disease pressure. One 50 pound bag of Terraclor 15G will treat 10 acres at the 6.4 oz per 1,000 row feet rate of application compared to only 6.6 acres for a 10G formulation at an equivalent rate of active ingredient per 1,000 per row feet.

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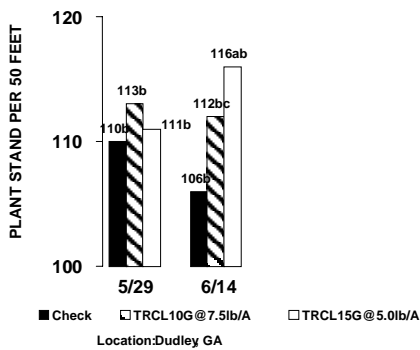


Figure 1: 1998 comparison of Terraclor 10g and Terraclor 15g in-furrow fungicides on cotton seedling stand counts

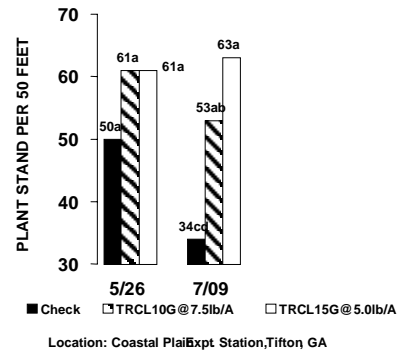


Figure 2: 1998 comparison of Terraclor 10g and Terraclor 15g in-furrow fungicides on cotton seedling stand counts

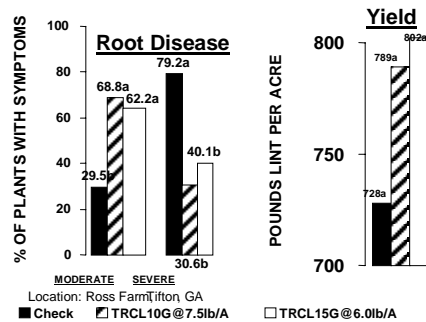


Figure 3: 1998 comparison of Terraclor 10g and Terraclor 15g in-furrow fungicides on (a) root disease, (b) yield