

TERRACLOR SUPER X® 18.8G

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Abstract

Terraclor Super X 18.8G is a new development of Uniroyal Chemical Co., Inc. It contains 50% more active ingredient than the current market standard in-furrow fungicide, Terraclor Super X® 12.5G. The concentrated formula has demonstrated excellent chemical stability and physical characteristics after long term storage. When compared at comparable rates of active ingredient, i.e., fewer pounds of formulated product per acre, the efficacy of Terraclor Super X 18.8G is equal to or better than that of Terraclor Super X 12.5G. Distributors, dealers and growers should all benefit from the significant reductions in time, labor and space requirements to handle this product.

Benefits

Terraclor Super X 18.8G is a new, high concentrate in-furrow fungicide product developed by Uniroyal Chemical Co., Inc. to address the need for more environmentally sound products for the Agricultural Industry. As a result of its concentrated formula, fewer pounds of Terraclor Super X 18.8G are required to provide the same high levels of pre and post emergence seedling disease control provided by the current market standard, Terraclor Super X 12.5G. Distributors, dealers and growers will all benefit from the savings in time, labor and space required to handle this product. Growers, in particular, should benefit during the critical planting period as they spend more time planting seed and less time hauling and opening bags and filling hoppers.

Formulation

Terraclor Super X 18.8G contains the same two active ingredients (Terraclor® and Terrazole®) found in Terraclor Super X 12.5G. The content of Terraclor has been increased from 10 to 15%. The content of Terrazole was increased from 2.5 to 3.8%. Specialized formulation expertise was utilized to create a product that had desirable chemical and physical characteristics and, at the same time, contained 50% more active ingredient. Long term storage trials have demonstrated excellent stability of the active ingredient along with no agglomeration problems or increases in dustiness. End user trials have also demonstrated excellent flow characteristics through granular delivery systems.

Disease Spectrum Controlled

Based upon more than 30 years of successful performance in controlling the worst cotton seedling diseases caused by the *Rhizoctonia*, *Pythium* and *Fusarium* disease complex, the ratio of 4 parts of Terraclor to 1 part of Terrazole was maintained in Terraclor Super X 18.8G.

It has been well established that *Rhizoctonia* is the number one problem in cotton, being responsible for more than 80% of all seedling cotton losses due to disease. *Rhizoctonia* not only causes seedling death prior to emergence; it is also the primary cause of damping off (soreshin) after the seedling has emerged from ground. Terraclor®'s high specificity for *Rhizoctonia*, along with its unique ability to provide an extended period of residual control activity, make it the product of choice to control *Rhizoctonia*.

Pythium can also be a major problem, particularly in heavy soils when early planted cotton runs into a period of cold, wet weather during the first phases of seed germination. Terrazole's role is to help control *Pythium* infections that can kill the seedling before it emerges from the ground.

The combination of Terraclor and Terrazole has also been demonstrated to significantly suppress *Fusarium*, making Terraclor Super X 18.8G the broadest spectrum in-furrow fungicide available to cotton growers.

Efficacy

Efficacy trials conducted over the four year period (1992-1995) demonstrated that the active ingredients, Terraclor and Terrazole, are effectively released from the Terraclor Super X 18.8G granule into the soil zone surrounding the germinating seedling. Trials were conducted throughout the mid South and Eastern cotton belts under a wide variety of conditions. When compared to untreated checks, final plant stands in trials containing Terraclor Super X 18.8G were increased by 28% (Table 1). When directly compared at equal rates of active ingredient applied per acre, the performance of Terraclor Super X 18.8G was consistently as good as or slightly better than that of Terraclor Super X 12.5G (Table 2).

Applications Rates

The trials conducted over the four year period (1992-1995) have established a rate range of 5.5 to 8.0 lbs per acre (applied on 40 inch row spacings) for Terraclor Super X 18.8G. Table 3 compares currently labelled rates and acres treated per 50 lbs. of Terraclor Super X 18.8G, Terraclor Super X 12.5G and Ridomil PC®. It demonstrates that with each fill-up at the lowest rates, a grower will be able to plant significantly more acres with Terraclor Super X 18.8G.

Packaging

Terraclor Super X 18.8G will be packaged in a 50 lb. bag. The bag will contain a distinctive color to distinguish it from Terraclor Super X 12.5G. Because each bag of Terraclor Super X 18.8G can treat 50% more acres than Terraclor Super X 12.5G, there will be a corresponding reduction in the number of packages requiring disposal. At a time when regulatory and environmental considerations are demonstrating increasing concerns about package disposal, this is a significant value added feature to Terraclor Super X 18.8G.

Registration & Recommendations

Terraclor Super X 18.8G was registered by EPA in June 1995. In 1996, the product will be registered in all states shown in Table 4. Based upon successful efficacy trials throughout the midSouth and Eastern cotton belts, it is anticipated that state recommendations for the use of Terraclor Super X 18.8G will appear prior to the 1996 use season.

Commercial Introduction

Terraclor Super X 18.8G will be available in 1996 throughout the midSouth and Eastern cotton belts. This will give growers the opportunity to familiarize themselves with the handling efficiencies and performance of this new product. Limited quantities of Terraclor Super X 12.5G will also be made available for the 1996 season.

Terraclor®, Terrazole® and Terraclor Super X® are registered trademarks of Uniroyal Chemical Co., Inc.

Ridomil PC® is a registered trademark of Ciba-Geigy Corporation.

Table 1
Standcount comparisons of Terraclor Super X 18.8G and Terraclor Super X 12.5G as a % of untreated checks. Data includes all trials conducted in 1992, 1993, 1994 and 1995 at rates within current label directions.

Product	TSX® 18.8G	TSX® 12.5G
Rates (lbs/A)	6, 7, 8, 10	8, 10, 15
Days After Planting	Stand Count as a % Untreated Check	
0-14	129.6	117.9
15-28	121.2	117.7
>28	128.0	115.2

Table 2
Standcount comparisons of Terraclor Super X 18.8G as a % of Terraclor Super X 12.5. Data includes those trials conducted in 1992, 1993, 1994 & 1995 where direct comparisons at the indicated rates were made.

Terraclor Super X® 18.8G vs 12.5G (lbs/A)	Stand Counts 18.8G as a % of 12.5G Days After Planting		
	0-14	15-28	>28
6 vs 8	103.6	104.9	98.8
7 vs 10	107.5	100.4	
111.9			
8 vs 10	103.2	100.6	106.6
Avg. of all above rates	104.7	102.8	102.8

Table 3
Labelled rate ranges and acres treated per 50 lb. bag.

Product	Labelled Rates Range/A (lbs)	Acres Treated per 50 lb. bag*
Terraclor Super X 18.8G	5.5 - 10	9.1
Terraclor Super X 12.5G	8-12	6.3
Ridomil® PC 11G	7-10	7.1

* acres treated at lowest labelled rate

Table 4
State registrations for Terraclor Super X 18.8G in 1996.

Alabama	Mississippi	South Carolina
Arkansas	Missouri	Tennessee
Florida	New Mexico	Texas
Georgia	North Carolina	Virginia
Louisiana	Oklahoma	