



Section 2(ee) Recommendation

Date: December 19, 2003

Products: Caparol® 4L Herbicide
EPA Registration No. 100-620

Cotoran® 4L Herbicide
EPA Registration No. 1812-439

Cotoran® 80 DF Herbicide
EPA Registration No. 1812-323

Use: Reduced rates of Caparol 4L and Cotoran 4L or Cotoran 80 DF
in tank mixture for use on cotton

States: Alabama, Arkansas, Florida, Georgia, Louisiana, Missouri,
Mississippi, North Carolina, South Carolina, Tennessee, Virginia

This recommendation is made under the authority of FIFRA Section 2 (ee) and recommends a lower use rate for Cotoran 4L and 80 DF products and Caparol 4L when combined in tank mixture for use on cotton in the above noted states.

DIRECTIONS FOR USE

Cotton

General Information

Caparol and Cotoran have been the standard cotton herbicides for many years. Historically, Cotoran has been used in the Delta and Southeastern states. Caparol is generally used in the southwestern states. This use pattern has developed based on weed species, application rates and timing(s), cultural practices and application techniques. The original labels have not been changed significantly for many years. Relatively high applications rates and the option for multiple applications were initially labeled for broad spectrum weed control. Over time, new products, and modified uses of established products, have provided alternatives to the full use pattern of Caparol and Cotoran. Cotton cultural practices have evolved to include various degrees of reduced tillage, and this has decreased the potential weed control options. This combination broadens the spectrum over that of either product alone, providing the grower with a broader spectrum of weed control.

The dinitroaniline preplant incorporated herbicides were used on a high percentage of cotton acreage. No-till and reduced tillage, with a high percent of surface residue, now prevents the effective use of incorporated products. Prowl can be used as a preemergence product, but its relative effectiveness is less than when incorporated. Also, certain species are now resistant to these dinitroaniline products. Palmer pigweed, on which the Caparol + Cotoran

combination is effective, is an example species having resistant biotypes. Weed resistance to specific herbicides is an increasing problem. Triazine resistant biotypes occur, and tank mixtures with a non-triazine herbicide are recommended for their control. The Caparol + Cotoran tank mixture meets the need for multi-mode of action products. This mixture is an alternative to the new ALS-inhibitor herbicides, which also recommend application with a different mode of action to overcome the spectrum of biotypes resistant to ALS herbicides.

With the increase in reduced tillage, the option for cultivation to control escaped weeds is taken away from the grower. Preemergence products Caparol and Cotoran, alone or in mixtures with Gramoxone Extra® or Roundup® are effective for residual weed control. The addition of Gramoxone Extra or Roundup provides burndown of existing vegetation prior to cotton emergence. Prowl herbicide used as a preemergence application is not as effective, especially when compared to its preplant incorporated application in conventional tillage practices.

Crop tolerance must be considered for each herbicide component in the cotton weed control program. Caparol and Cotoran are labeled for multiple applications, including preplant incorporated or preemergence, postemergence, or post-directed, totaling 5.0 lbs. ai/A for Cotoran and almost 6.0 lbs. ai/A of Caparol. If these rates are used for broad spectrum control, there is a risk of cotton injury, especially under adverse conditions. The proposed combinations, with the combining of weed spectrums, allows for broad spectrum weed control with less total product.

Lowering the total rate of these products allows for greater rotational flexibility. Most of the rotational restrictions are related to the high rate totals when multiple applications are used. The proposed label specifies a single preemergence treatment.

Several combinations of Caparol + Cotoran are proposed. These are utilized to provide the broadest spectrum of weed control at the lowest rate of total herbicide. An important grower concern is level of weed control per unit of input cost. The proposed mixture will add to the grower's options for effective weed control in the available cotton weed control programs.

Preemergence Tank Mixture of Caparol 4L + Cotoran 4L in Cotton

Apply Caparol + Cotoran preemergence to cotton according to rates listed in Table 1. This tank mixture will control pigweed species and other small seeded broadleaf and grass species listed on the federal label for Caparol and Cotoran in conventional and reduced tillage cotton.

Table 1

Caparol 4L + Cotoran 4L Tank Mixture - Cotton

Soil Texture	Broadcast Rates Per Acre		
	Caparol 4L	+	Cotoran 4L
Sands and Loamy Sands		DO NOT USE	
Sandy Loams	1.5-2.0 pts.	+	2.0 pts.
Medium Soils	2.0-3.0 pts.	+	2.5-3.0 pts.
Fine Soils	2.5-3.5 pts.	+	3.0-3.5 pts.

When using Cotoran 80 DF, use equivalent rates. Multiply pints of Cotoran 4L by 0.6 to get pounds of the Cotoran 80 DF.

Precautions:

1. Do not make more than one preemergence application of the Caparol 4L + Cotoran 4L or 80 DF tank mixture per cropping season.
2. The use of this tank mixture following the use of a systemic insecticide at planting may result in cotton injury.
3. Do not feed treated forage to livestock, or graze treated areas, or illegal residues may result.
4. Refer to the Caparol and Cotoran labels and follow all directions, precautions, limitations, and restrictions. Do not exceed the maximum allowed rate of Caparol 4L or Cotoran 4L or 80 DF per acre per crop year.

Caparol 4L + Cotoran 4L or 80 DF Tank Mixtures:

Caparol + Cotoran + Dual

Caparol + Cotoran + Prowl

Caparol + Cotoran + Zorial Rapid 80

Caparol + Cotoran + Gramoxone Max

Caparol + Cotoran + Roundup D-Pak

For tank mixtures of Caparol and Cotoran and the above noted products, the user must refer to the respective labels for these products, and follow all restrictions, precautions, limitations, and directions for use. Use the rates of Caparol and Cotoran listed in Table 1 above in these tank mixtures.

The user must refer to the federally approved Caparol 4L and Cotoran 4L Herbicides or Cotoran 80 DF Herbicide labels and read and follow all applicable directions for use, restrictions, and precautions.

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

This recommendation should be in the possession of the user at the time of pesticide application.

This recommendation is made as permitted by Section 2(ee) of FIFRA, as amended, and has not been submitted to or approved by the EPA.

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Prowl® - Trademark of American Cyanamid

Cotoran® - Trademark of Makhteshim Agan North America

Roundup® - Trademark of Monsanto

Label Code: AL0620018BC1003