

US EPA ARCHIVE DOCUMENT

EFFICACY REVIEW

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TYPE PRODUCT(S): I, D, (H), F, N, R, S \_\_\_\_\_

DATA ACCESSION NO(S). \_\_\_\_\_

PRODUCT MGR. NO. 25

PRODUCT NAME(S) Command 4EC and Command 6EC

COMPANY NAME FMC Corp.

SUBMISSION PURPOSE revised labeling for sprayer cleanup.

CHEMICAL & FORMULATION 2-(2-chlorophenyl)methyl-4,4-dimethyl-3-isoxazolidinone,  
47.1% liquid (4 lbs ai/gal) and  
64.3% liquid (6 lbs ai/gal).

# Efficacy Review

## 200.0 Introduction

200.1 Use: weed control in soybeans

200.2 Background: This submission is a request to revise directions for sprayer cleanups after use of Command 4EC or 6EC. The original label directions for sprayer cleanup were indicated as being impractical in previous reviews. Data were submitted to substantiate adequacy of cleanup procedures, as revised.

## 201.0 Data Summary

A 100 gallon spray tank was half filled with water, 5 qts of Command 4EC were added and the tank was then filled. The mixture was recirculated as in a spraying operation. The tank was drained then rinsed three times with rinse volumes of 12.5, 25 or 50 gallons of water. Water was recirculated for 15 minutes following each rinse. Two replicates were run. In an additional study, an adjuvant was added to the rinse water. The concentration of active ingredient in the rinse water samples was measured by HPLC and also bioassayed using two

corn varieties, oats, wheat and velvetleaf. Velvetleaf is the most sensitive plant species to Command.

The addition of adjuvant to the rinse water did not appreciably reduce concentrations in subsequent rinses below those obtained with water alone. Rinsing with greater volumes of water was no more effective in reducing the total amount of Command than the lowest volume tested. The concentrations were higher and phytotoxicity was greater with the low volume rinses but when diluted to equivalent amounts, concentrations and phytotoxicity ratings were nearly equal. This implies that total amount of residue removed was the same regardless of volume and that the noted effects were only due to greater dilution.

The data submitted indicated that moderate injury might be obtained on several crops from the first rinseate. Consequently, the water from the first rinse must be disposed of by applying to the field and incorporating into the soil as for the original spray. The second rinse had low levels of Command and plant assays indicated little or no phytotoxicity to crop plants. Slight injury could be

Detected on the most sensitive plant (velvetleaf). Therefore, the cleanup procedure for the second rinse recommends that the rinseate be utilized as part of the diluent for subsequent applications of preplant and PPT products on any crop. The dilution should be sufficient to reduce phytotoxicity to undetectable levels.

The sprayer cleanup recommendations submitted appear to be adequate to prevent phytotoxicity from reuse of the sprayer following Command applications.

The study submitted only utilized Command 4EC in the test. The residues in the rinse water for the 6EC formulation would be expected to be slightly higher but the reduction of active ingredient should follow the same pattern as for the 4EC. It is not likely that there would be sufficient amounts of Command left in the sprayer to cause damage to crop plants from either formulation if the recommended sprayer cleanup directions are followed.

#### 20210 Conclusions and Recommendations

The proposed sprayer cleanup directions

are acceptable.

It was noted that the same directions were included for both the 4EC and 6EC formulations. Since the first page of the attachment includes the product name, assure that the correct product name appears on labeling for each product.

C. Grable  
TSS, FNB  
RD (TS-767C)

E 4/24/87