DATA EVALUATION RECORD
SEEDLING EMERGENCE TEST
§ 122-1 (TIER I)

1. **CHEMICAL:** Azoxystrobin — PC Code No.: 128810

2. **TEST MATERIAL:** ICIA5504 50 WG — Purity: 48%

3. **CITATION:**

Authors: L. Canning, C.L. Russell, and J.F.H. Cole
Title: ICIA5504: A Tier I Glasshouse Study to Evaluate the Effects on Seedling Emergence on Terrestrial Non-Target Plants.
Study Completion Date: July 11, 1994
Laboratory: Zeneca Agrochemicals, Bracknell, Berkshire, UK
Laboratory Report ID: RJ1596B
Sponsor: Zeneca Ag. Products, Wilmington, DE
MRID No.: 436781-56

4. **REVIEWED BY:**

William Erickson
Biologist
EEB/EFED/EPA

Signature: W. Erickson
Date: 4/03/96

5. **APPROVED BY:**

Harry Craven
Section Head 4
EEB/EFED/EPA

Signature: H. T. Craven
Date: 6/21/96

6. **STUDY PARAMETERS/RESULTS SYNOPSIS:**

Definitive Study Duration: 21 days
Species tested: cocklebur, carrot, morning glory, rape, soybean, sugar beet, velvetleaf, corn, meadow fescue, purple nutsedge, wheat, wild oat
Affected species: carrot (damage) and rape (emergence)

7. **CONCLUSIONS:** This study is scientifically sound and fulfills the guideline requirement for a Tier I seedling emergence test.

8. **ADEQUACY OF THE STUDY:**

A. Classification: Core.

B. Rationale: N/A

(1)

DATA EVALUATION RECORD
SEEDLING EMERGENCE TEST
§ 122-1 (TIER I)

1. **CHEMICAL:** ~~Sulfentrazone~~ **PC Code No.:** ~~129081~~ 128810

2. **TEST MATERIAL:** ICIA5504 50 WG **Purity:** 48%

3. **CITATION**

Authors: L. Canning, C.L. Russell, and J.F.H. Cole
Title: ICIA5504: A Tier I Glasshouse Study to Evaluate the Effects on Seedling Emergence on Terrestrial Non-Target Plants.
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MRID No.: 436781-56
DP Barcode: ~~D217072, D217078~~

4. **REVIEWED BY:** Mark Mossler, M.S., Toxicologist, KBN Engineering and Applied Sciences, Inc.

Signature: Mark Mossler **Date:** 1/19/96

APPROVED BY: Pim Kosalwat, Ph.D., Senior Scientist KBN Engineering and Applied Sciences, Inc.

Signature: P. Kosalwat **Date:** 1/19/96

5. **APPROVED BY:**

Signature: **Date:**

6. **STUDY PARAMETERS**

Definitive Study Duration: 21 days

7. **CONCLUSIONS:** This study is scientifically sound, fulfills the guideline requirements for all species except wild oat. Carrot, cocklebur, rape, and soybean were significantly affected for some measured parameter. The study using wild oat is invalid due to poor control emergence (17%).

8. **ADEQUACY OF THE STUDY**

A. Classification: Core for eleven species, invalid for one species (wild oat).

C. **Repairability:** N/a

9. **GUIDELINE DEVIATIONS:** No major deviations.

10. **SUBMISSION PURPOSE:** New chemical.

11. **MATERIALS AND METHODS:**

A. **Test Organisms**

Guideline Criteria	Reported Information
Species 6 dicots in 4 families, including soybean and a rootcrop; 4 monocots in 2 families, including corn.	Dicots: cocklebur, carrot, morning glory, rape, soybean, sugar beet, velvetleaf Monocots: corn, meadow fescue, purple nutsedge, winter wheat, wild oat
Number of seeds per rep 10	10
Source of Seed	Various commercial suppliers
Historical % Germination of Seed	53-99%

B. **Test System**

Guideline Criteria	Reported Information
Solvent	None
Site of test	Greenhouse
Planting method / type of pot	Planted at 0.5-, 1- or 2-cm depths in trays (5 cm in depth)
Method of application	Track sprayer
Method of watering	Bottom-watering
Growth stage at application Seed or plant.	Seed

C. **Test Design**

Guideline Criteria	Reported Information
Dose range 2x or 3x	Tier I study conducted at two rates: 0.15 and 1.0 lb ai/A
Doses At least 5	2
Controls Negative and solvent	Negative control
Replicates per dose At least 3	3
Duration of test 14 days	21 days
Were observations made at least weekly?	Yes
Maximum labeled rate	1.0 lb ai/A

12. **REPORTED RESULTS**

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
Was an NOEL observed for each species?	Yes
Phytotoxic observations	Yes
Were initial chemical concentrations measured? (Optional)	No
Were adequate raw data included?	Yes

Inhibition results for the most sensitive endpoint[a]:

Species	Endpoint	Percent inhibition
Corn	dry weight	14.4
Meadow fescue	visual damage	8.6
Purple nutsedge	dry weight	5.3
Wheat	dry weight	24.6
Wild oat[b]	-	-
Carrot	damage	33.2[c]
Cocklebur	damage	16.1
Morning glory	dry weight	10.1
Rape	dry weight	27.2[c]
Soybean	visual damage	10.2
Sugar beet	dry weight	11.2
Velvetleaf	dry weight	14.8

[a]based on application rate of 1 lb ai/acre
[b]because of poor germination (17%), inhibition cannot be adequately assessed
[c]species inhibited ≥25% require Tier II testing

Observations: The major symptoms of toxicity were stunted and malformed plants, with some chlorosis and necrosis. Early senescence was also noted.

13. **REVIEWER'S COMMENTS:** All plants were treated with biological control (*Phytoseuilus persimilis*) to control red spider mites. Although the treatment probably did not affect the study, plants should be cultivated in areas which are free of insects.

For cocklebur, carrot, velvetleaf, and wild oat, the control germination values were 60, 53, 50, and 17%, respectively. The value for carrot is acceptable based on the Federal Seed Act, and the control germination for cocklebur and velvetleaf were near those reported in the seed history section (55 and 59%, respectively). The control germination of 17% for wild oat is considered inadequate; however, because seedling emergence data are required for only 10 species, repeat testing with wild oats is not necessary.

This study is scientifically sound and fulfills the guideline requirement for Tier I seedling emergence testing. The study is classified as **Core** for a formulation. Because endpoints for carrot and rape were inhibited more than 25%, Tier II testing is required for those species.