

US EPA ARCHIVE DOCUMENT

AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SUC for*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on cottonseed

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 81

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183

## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used to treat cottonseed (Tox review of 7/2/81, EFB # 81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Cottonseed treatment for seed rots and seedling diseases, apply Ridomil 2E to cottonseed at 0.015 - 0.03125 lb ai/100 lbs of seeds.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of parent noting that an acre of cotton requires 25 pounds of seeds.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.
- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13} H_{16} O_5 N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 270 cm below the soil surface in 700 days. Peak concentrations reached were: 4 ppb 30 cm from the surface at, 136 days after seeding cottonseeds; 1 ppb 90 cm below the surface, 416 days after seeding; and 0.2 ppb 180 cm below the soil surface, 766 days after seeding.

6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> ~~when used~~ as described, would not leach and contaminate ground water.

*Sami Malak*  
Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

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AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

From Dr. Willa Garner *SMC for*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached please find the environmental fate and/or EEC(s) requested for:

Chemical: CGA-62826

Acid degradate of metalaxyl #100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on onions

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 92

4  
186

## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on onions. (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Onions: Apply Ridomil 2E at 0.25 lb ai/A when conditions are favorable for disease development and continue at 14 day intervals throughout the season. Do not apply more than 0.75 lb ai/A/y.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13}H_{16}O_5N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 180 cm from the soil surface in 766 days. Peak concentrations reached were: 180 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 1 ppb in the 150 cm and to 3 ppt in the 180 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> ~~when used~~ on onions as proposed, would not leach and contaminate ground water.

*Sami Malak*  
Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SAC*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on tomatoes

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 91

7  
189



## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on tomatoes (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Tomatoes: For control of late blight, apply Ridomil 2E at 0.1875-0.25 lb ai/A as a foliar spray on a 14-day schedule when plants are 6" high or when conditions are favorable for disease development. For control of early and late blight, apply Ridomil 2E at 0.125-0.25 lb ai/A when plants are 6" tall or when conditions are favorable for growth. For seedling damping off, apply Ridomil 2E at 1 lb ai/A immediately before planting. For fruit rot, apply Ridomil 2E at 1-2 lb/A under the vines, 6-8 weeks before fallow as soon as possible. Do not apply more than 3 lbs ai/A/year.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13}H_{16}O_5N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 240 cm from the soil surface in 766 days. Peak concentrations reached were: 120 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 4 ppb in the 240 cm and to 4 ppt in the 240 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> ~~when used~~ on tomatoes as proposed, would not leach and contaminate ground water.

*Sami Malak*  
Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

From Dr. Willa Garner *SAC for*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached please find the environmental fate and/or EEC(s) requested for:

Chemical: Acid degradate of metalaxyl #100 - 607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on leafy  
vegetables (head lettuce and spinach)

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 90

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## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on leafy vegetable such as head lettuce and spinach (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Leafy vegetables: For control of downy mildew, apply Ridomil 2E at 0.25 lb ai/A starting when conditions are favorable for disease development and continue at 14 days interval throughout the season. Do not apply more than 1 lb ai/A/y.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

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- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13} H_{16} O_5 N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 180 cm from the soil surface in 766 days. Peak concentrations reached were: 24 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 3 ppb in the 120 cm and to 0.5 ppt in the 180 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use on</sup> ~~when used to~~ leafy vegetables as proposed, would not leach and contaminate ground water.

*Sami Malak*

Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

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AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SMC*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on wheat

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 83

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## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on wheat. (Tox review of 7/2/81, EFB # 83).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Wheat: For control of pythium seedling disease, use Ridomil 2E at 0.5-1.0 lb ai/A as a broadcast soil surface application at or before planting.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.
- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13} H_{16} O_5 N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

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## 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 180 cm from the soil surface in 700 days. The chemical remained in the upper soil stratum where a concentration of 79 ppb was predicted 90 cm below the surface, 766 days after metalaxyl application. At lower stratum, the concentrations dropped to 1 ppb in the 150 cm zone and 0.01 ppb in the 180 cm zone, 766 days after application.

## 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use on</sup> ~~when used to wheat~~ as proposed, would not leach and contaminate ground water.

*Sami Malak*

Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division



AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SAC for*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on conifer nurseries

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EF# : 77

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## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on conifer nurseries (Tox review of 7/2/81, EFB # 77).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Conifer Nurseries: For control of Phytophthora root rot, apply Ridomil 2E at 0.65 lb ai/A to seedbeds and plug plantings in the spring and again in the fall. To transplants, apply Ridomil 2E at 1.25 lb ai/A in the spring and again in the fall.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of parent noting that an acre of conifer nurseries requires 3.75 lb ai/y of metalaxyl.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.
- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13} H_{16} O_5 N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

## 5.0 PESTAN'S PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 120 cm below the soil surface in 766 days. Peak concentrations reached were: 160 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 3 ppb in the 120 cm substratum, 766 days after metalaxyl application.

## 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use on</sup> ~~when used to~~ conifer nurseries as proposed, would not leach and contaminate ground water.

*Sami Malak*  
Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

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AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SNC for*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on soybeans

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 82

19  
201

## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on soybeans (Tox review of 7/2/81, EFB # 82).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Soybeans: For control of Pythium damping off and seedling Phytophthora root and stem rot, broadcast 1.5 lb ai of Ridomil 2E per acre.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.
- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13}H_{16}O_5N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 120 cm from the soil surface in 700 days. Peak concentrations reached were: 240 ppb 60 cm from the surface at 766 days after metalaxyl application. In the 120 cm zone, however, the concentration dropped to 1 ppt at 766 days after application.

6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use on</sup> ~~when used to soy-~~ beans as described in the proposed label, would not leach and contaminate ground water.

*Sami Malak*

Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

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AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SMC*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on cucumbers  
and melons

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 89

22  
204

## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on cucumbers and melons (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Cucumbers and Melons: For control of downy mildew, apply Ridomil 2E at 0.25 lb ai/A when the plants are in the two-leaf stage and continue at 14 day intervals through out the season. Do not apply more than 2 lbs ai/A/y.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

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- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13}H_{16}O_5N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 300 cm from the soil surface in 766 days. Peak concentrations reached were: 86 ppb 180 cm below the surface in 766 days. However, this concentration dropped to 4 ppb in the 240 cm and to 3 ppt in the 300 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> ~~when used~~ on cucumbers and melons as proposed, would not leach and contaminate ground water.

*Sami Malak*  
Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

FROM: Dr. Willa Garner *SMC* *ja*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached find environmental fate information and/or EEC(s) requested for:

Chemical: CGA-62826

acid degradate of metalaxyl # 100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on potatoes

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 84

25  
207

## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on potatoes. (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Potatoes: For control of late blight, apply Ridomil 2E at 0.125-0.25 lb ai/A when plants are 6" tall or when conditions are favorable. For early and late blight, apply Ridomil 2E at 0.062-0.125 lb ai/A when plants are 6" high or when either disease first appears and continue at 7-10 day intervals. Do not apply more than 2.25 lb ai/A/year.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13} H_{16} O_5 N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN's PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 150 cm from the soil surface in 766 days. Peak concentrations reached were: 130 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 3 ppb in the 150 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> when used on potatoes as proposed, would not leach and contaminate ground water.

*Sami Malak*

Sami Malak, Chemist  
Review Section #1  
Environmental Fate Branch  
Hazard Evaluation Division

AUG 12 1981

TO: Chief, Toxicology Branch  
Hazard Evaluation Division

From Dr. Willa Garner *SMC*  
Chief, Review Section No. 1  
Environmental Fate Branch

Attached please find the environmental fate and/or EEC(s) requested for:

Chemical: CGA-62826

Acid degradate of metalaxyl #100-607

Product Name: \_\_\_\_\_

Use Pattern for EEC Calculations: In ground water when used on cabbage,  
broccoli and cauliflower

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 88

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## 1.0 INTRODUCTION

This is to address the question raised by the Toxicology Branch as to whether or not CGA-62826, an acid metabolite of metalaxyl, would contaminate ground water when the parent chemical is used on cabbage broccoli and cauliflower (Tox review of 7/2/81).

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco, certain ornamentals and turf (# 100-607). Because of its high water solubility and low  $K_d$  value, metalaxyl is currently being monitored for its potential to leach into the soil and contaminate ground water.

## 2.0 PROPOSED USES

Cabbage and Broccoli: For control of downy mildew, apply Ridomil 2E at 0.25 lb ai/A when conditions are favorable for disease development and continue at 14 day intervals. Do not apply more than 1 lb ai/A/y.

## 3.0 DISCUSSION OF DATA

No environmental chemistry or ground water monitoring data were submitted.

## 4.0 PESTAN LEACHING MODEL

Input and output parameters are filed in the EFB, note that:

- (a) Minimum projected time was 66 days because that is when CGA-62826 reaches its peak of 53.63% of parent (EFB review of 2/26/79). It follows that CGA-62826 dosage was calculated at 53.63 of the maximum dosage of parent.
- (b) CGA-62826 solubility was estimated (not determined) to be near that of parent (W.B. Nixon of Ciba-Geigy 919/292-7100).
- (c) With the information available in the EFB review of 2/26/79, CGA-62826 half-life was calculated at 240 days. The degradation rate coefficient was then calculated considering a correction factor of 3 to correct for PESTAN's assumptions that biodegradation is depth independent when, in fact, it is not.

- (d) The MW of CGA-62826 was calculated from the empirical formula  $C_{13}H_{16}O_5N$  at 266.
- (e) The sorption constant ( $K_d$ ) was calculated from the organic matter.
- (f) All other soil parameters were obtained from USDA survey analyses.

#### 5.0 PESTAN'S PREDICTIONS

Prediction obtained showed that CGA-62826 would not leach below 180 cm from the soil surface in 766 days. Peak concentrations reached were: 69 ppb 90 cm below the surface in 766 days. However, this concentration dropped to 1 ppb in the 150 cm and to 17 ppt in the 180 cm substratum, 766 days after metalaxyl application.

#### 6.0 CONCLUSIONS

Predictions obtained by PESTAN showed that CGA-62826, <sup>resulting from metalaxyl use</sup> ~~when used~~ on cabbage, broccoli and cauliflower as proposed, would not leach and contaminate ground water.

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