AUG 12 1981

TO: Chief, Toxicology Branch
Hazard Evaluation Division

FROM: Dr. Willa Garner SIC 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 cottonseed

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 81

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 claculated 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, resulting from metalaxyl use ~~when used~~ as described, would not leach and contaminate ground water.

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 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

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 submiited.

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 claculated 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 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, resulting from metalaxyl use ~~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
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

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 submiited.

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 claculated 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 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, resulting from metalaxyl use ~~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 SMC 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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192

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 submiited.

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 claculated 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 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, resulting from metalaxyl use on ~~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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194

AUG 12 1981

TO: Chief, Toxicology Branch
Hazard Evaluation Division

FROM: Dr. Willa Garner SYC 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 wheat

Date in: 7/20/81

Date out: AUG 12 1981

EEC/EFP#: 83

13
195

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 submiited.

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 claculated 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 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, resulting from metalaxyl use on ~~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 SMC 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/EFP#: 77

1c

198

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 submiited.

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 claculated 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, ~~when used to~~ resulting from metalaxyl use on 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

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 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 submiited.

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 claculated 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 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, ~~when used to~~ resulting from metalaxyl use on soybeans 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

AUG 12 1981

TO: Chief, Toxicology Branch
Hazard Evaluation Division

FROM: Dr. Willa Garner
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

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 submiited.

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 claculated 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 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, resulting from metalaxyl use ~~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 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 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 submiited.

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 claculated 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, when used~~ resulting from metalaxyl use on potatoes as proposed, would not leach and contaminate ground water.

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
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

28

210

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 submiited.

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 claculated 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 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, resulting from metalaxyl use ~~when used~~ on cabbage, broccoli and cauliflower as proposed, would not leach and contaminate ground water.

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