

Grower Survey on NEONICOTINOID Use in Field Vegetables

Introduction

Imidacloprid (e.g. trade names include Admire, Genesis, Gaucho) is registered for insect control in a wide range of horticultural crops including pome and, stone fruit, berries and small fruit, and leafy, tuberous and legume vegetables.

Health Canada's Pest Management Regulatory Agency (PMRA) published the Proposed Re-evaluation Decision for imidacloprid, PRVD2016-20 on November 23, 2016.

The environmental assessment showed that, in aquatic environments in Canada, imidacloprid is being measured at levels that are harmful to aquatic insects (aquatic invertebrates).

The health assessment did not identify human health concerns from any exposure route when used according to current label standards.

FOR THE PROTECTION OF THE ENVIRONMENT, PMRA IS PROPOSING TO PHASE-OUT ALL AGRICULTURAL USES OF IMIDACLOPRID OVER THREE TO FIVE YEARS. PMRA will consider alternate risk management proposals, provided that they can achieve acceptable levels in the environment in the same timeframe with a deadline for response of February 21, 2017.

In addition, the PMRA has announced the initiation of Specials Reviews (REV2016-17) of two additional neonicotinoid insecticides clothianidin (e.g. trade names Titan, Poncho, Prosper, Emesto Quantum) and thiamethoxam (e.g. trade names Actara, Minecto Dual, Helix, Cruiser) also due to potential risk to aquatic invertebrates.

For the CHC to respond effectively to the PMRA consultation on imidacloprid and gather information on the other two neonicotinoids, grower input on how these products are actually used is essential, and your feedback in the attached grower survey is critical.

Note: Potatoes growers should report under the separate potato survey.

This survey will take at least 15-20 minutes to complete.



Grower Survey on NEONICOTINOID Use in Field Vegetables

General Operation Questions

*** 1. This survey is being completed by:**

Respondent Type (Grower/Association/PMUC/Other)
(required):

Province (required):

2. What field vegetables do you grow? Please indicate your answer in either acres or hectares. (enter "NA" if not applicable).

Sweet corn

Legume vegetables (6)

Root vegetables (1-B)

Tuberous corm vegetables (except potatoes) (1-D)

Bulb vegetables (3)

Leafy green vegetables (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

Cucurbit vegetables (9)

3. At what row width are your field vegetables planted? Please indicate your answer in either inches or centimetres (enter "NA" if not applicable).

Sweet corn

Legume vegetables (6)

Root vegetables (1-B)

Tuberous corm vegetables (except potatoes) (1-D)

Bulb vegetables (3)

Leafy green vegetables (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

Cucurbit vegetables (9)

4. Do you grow any of the following crops on your farm? If yes, please indicate your answer in either acres or hectares. (Enter "N/A" if not applicable).

Potatoes

Canola

Cereals

Field or Seed corn

Soybeans

Other (specify)



Grower Survey on NEONICOTINOID Use in Field Vegetables

IMIDACLOPRID QUESTIONS

(Trade Names: ADMIRE, GAUCHO, GENESIS, ALIAS, GRAPPLE, STRESS SHIELD)

5. What percentage of your field vegetable crop is treated with imidacloprid insecticide at least once per season by any application method? (enter "NA" if not applicable).

Sweet corn	<input type="text"/>
Legume vegetables (6)	<input type="text"/>
Root vegetables (1-B)	<input type="text"/>
Tuberous corm vegetables (except potatoes) (1-D)	<input type="text"/>
Bulb vegetables (3)	<input type="text"/>
Leafy green vegetables (4-A)	<input type="text"/>
Brassica/cole vegetables (5)	<input type="text"/>
Fruiting vegetables (except cucurbits) (8)	<input type="text"/>
Cucurbit vegetables (9)	<input type="text"/>

6. What percentage of each crop is treated with imidacloprid insecticide at least once per season by any application method? (Enter "N/A" if not applicable).

Potatoes	<input type="text"/>
Canola	<input type="text"/>
Cereals	<input type="text"/>
Corn	<input type="text"/>
Soybeans	<input type="text"/>
Other (specify)	<input type="text"/>

7. IF YOU DO NOT USE IMIDACLOPRID ON YOUR FARM GO TO CLOTHIANIDIN SECTION OF SURVEY



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IMIDACLOPRID QUESTIONS

(Trade Names: ADMIRE, GAUCHO, GENESIS, ALIAS, GRAPPLE, STRESS SHIELD)

8. What are the key field vegetable pests controlled by imidacloprid on your farm?

9. Do you use other insecticides for control of these key pests?

Yes or No?

If yes, please list the other insecticides.

10. How effective are the alternative products in controlling the key insects? Please explain.

*** 11. How important is imidacloprid to insect management in field vegetables on your farm?**

- 1 = Not important
- 2 = Slightly important
- 3 = Important
- 4 = Moderately important
- 5 = Extremely important

Comments:

12. What percentage of your field vegetable seed is purchased pre-treated with a neonicotinoid (e.g. imidacloprid + clothianidin) seed treatment? (enter "NA" if not applicable).

Sweet corn

Legume vegetables (6)

Root vegetables (1-B)

Tuberous corm vegetables (except potatoes) (1-D)

Bulb vegetables (3)

Leafy green vegetables (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

Cucurbit vegetables (9)

13. If you use transplants in your field vegetable production, are the transplants treated with a neonicotinoid (either grown from neonicotinoid treated seed or treated as transplant tray plug drench in the greenhouse)?

Yes

No

Unknown

Comments:

14. What percentage of your field vegetable acres are treated with imidaclopridas a soil application each year? (Enter "NA" if not applicable).

Sweet corn

Legume vegetables (6)

Root vegetables (except sugar beets) (1-B)

Tuberous corm vegetables (except potatoes) (1-D)

Bulb vegetables (3)

Leafy green vegetables (except Brassica) (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

Cucurbit vegetables (9)

15. What percentage of your field vegetable acres are treated with imidaclopridas a foliar spray each year? (Enter "NA" if not applicable).

Root vegetables (1-B)

Tuberous corm vegetables (except potatoes) (1-D)

Leafy green vegetables (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

16. What is the typical rate of application used for imidacloprid applied on field vegetables as a soil application?

Name of Product Used:

Rate (mL/100 metres of row):

17. What is the typical rate of application used for imidacloprid applied on field vegetables as a foliar spray?

Name of Product Used:

Rate (mL/ha):

18. What is the typical frequency of foliar applications of imidacloprid that you would apply in field vegetables?

- Once per season
- Twice per season
- Depends on scouting or monitoring

Other (please specify)



Grower Survey on NEONICOTINOID Use in Field Vegetables

CLOTHIANIDIN QUESTIONS

(Trade Names: TITAN, PONCHO, PROSPER, NIPSIT INSIDE, CLUTCH, EMESTO QUANTUM, PROSPER EVERGOL, NIPSET SUITE)

Field vegetable seed may be commercially available pre-treated with clothianidin/imidacloprid seed treatment.

Also, clothianidin is only registered for use as a foliar spray on cucurbit vegetables.

19. What percentage of your field vegetable crop is seeded using clothianidin pre-treated seed? (enter "NA" if not applicable).

Sweet corn

Legume vegetables (6)

Root vegetables (1-B)

Tuberous corn vegetables (except potatoes) (1-D)

Bulb vegetables (3)

Leafy green vegetables (4-A)

Brassica/cole vegetables (5)

Fruiting vegetables (except cucurbits) (8)

Cucurbit vegetables (9)

20. What percentage of each crop grown on your farm is treated with clothianidin insecticide at least once per season? (enter "NA" if not applicable).

Potatoes

Canola

Cereals

Corn

Soybeans

Other (specify)

21. IF YOU DO NOT USE CLOTHIANIDIN ON YOUR FARM GO TO THIAMETHOXAM SECTION OF SURVEY



Grower Survey on NEONICOTINOID Use in Field Vegetables

CLOTHIANIDIN QUESTIONS

(Trade Names: TITAN, PONCHO, PROSPER, NIPSIT INSIDE, CLUTCH, EMESTO QUANTUM, PROSPER EVERGOL, NIPSET SUITE)

Field vegetable seed may be commercially available pre-treated with clothianidin/imidacloprid seed treatment.

22. What are the key field vegetable pests controlled by a clothianidin seed treatment on your farm?

23. Do you use other insecticides for control of these key pests?

Yes or No?

If yes, please list the other insecticides.

24. How effective are the alternative products in controlling the key insects? Please explain.

*** 25. How important is clothianidin to insect management in field vegetables on your farm?**

- 1 = Not important
- 2 = Slightly important
- 3 = Important
- 4 = Moderately important
- 5 = Extremely important

Comments:



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CLOTHIANIDIN QUESTIONS - Cucurbit Vegetables

(Trade Name: Clutch 50WDG)

Clothianidin is only registered for use as a foliar spray on cucurbit vegetables.

26. Do you grow cucurbit vegetables?

Yes

No

If you do not grow cucurbit vegetables, submit the survey now. Please continue if you grow cucurbit vegetables.



Grower Survey on NEONICOTINOID Use in Field Vegetables

CLOTHIANIDIN QUESTIONS - Cucurbit Vegetables

(Trade Name: Clutch 50WDG)

Clothianidin is only registered for use as a foliar spray on cucurbit vegetables.

27. What percentage of your cucurbit acres are treated with clothianidin as a foliar spray?

28. What are the typical foliar spray rates of clothianidin (Clutch 50WDG) applied on cucurbit vegetables?

Name of Product Used:

Rate (g/ha):

29. What are the key pests controlled with a foliar spray in cucurbit vegetables?

30. Do you use other insecticides for control of these key pests?

Yes or No?

If yes, please list the other insecticides.

31. How effective are the alternative products in controlling the key insects? Please explain.

32. How many foliar applications of clothianidin would you typically apply on cucurbit vegetables?

- One
- Two
- Depends based on monitoring and scouting

33. How important is aerial application of clothianidin on cucurbit vegetables?

- Not important at all.
- May be important in some seasons when ground application is not possible.
- Very important and is used routinely

Comments:



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THIAMETHOXAM QUESTIONS

(Trade Names: ACTARA 25WG, ACTARA 240SC, MINECTO DUAL, HELIX, CRUISER, ENDIGO)

*** 34. What percentage of your field vegetable crop is seeded using commercial pre-treated seed? (Enter "NA" if not applicable).**

Sweet corn

Edible succulent beans

Edible succulent peas

Cucurbit vegetables

Other (specify)

35. What percentage of each other crop grown on your farm is treated with thiamethoxam insecticide at least once per season? (enter "NA" if not applicable).

Potatoes

Canola

Cereals

Corn

Other (specify)

36. IF YOU DO NOT USE THIAMETHOXAM ON YOUR FARM END SURVEY.



Grower Survey on NEONICOTINOID Use in Field Vegetables

THIAMETHOXAM QUESTIONS

(Trade Names: ACTARA 25WG, ACTARA 240SC, MINECTO DUAL, HELIX, CRUISER, ENDIGO)

37. What are the key field vegetable pests controlled by a thiamethoxam on your farm?

38. Do you use other insecticides for control of these key pests?

Yes or No?

If yes, please list the other insecticides.

39. How effective are the alternative products in controlling the key insects? Please explain.

*** 40. How important is thiamethoxam to insect management in field vegetables on your farm?**

- 1 = Not important
- 2 = Slightly important
- 3 = Important
- 4 = Moderately important
- 5 = Extremely important

Comments:

41. What percentage of your field vegetable acres are treated with thiamethoxamas a soil application each year? (enter "NA" if not applicable).

Leafy green vegetables, except Brassica (4-A)

Brassica/Cole leafy vegetables (5)

Fruiting vegetables, except cucurbits (8)

Cucurbit vegetables (9)

42. What typical rate of application of thiamethoxam do you use for soil application?

Name of Product Used:

Rate (mL/ha):

43. What percentage of your field vegetable acres are treated with thiamethoxamas a foliar spray application each year? (enter "NA" if not applicable).

Leafy green vegetables, except Brassica (4-A)

Brassica/Cole leafy vegetables (5)

Fruiting vegetables, except cucurbits (8)

Cucurbit vegetables (9)

Field peppers

44. What typical rate of application of thiamethoxam do you use for foliar spray application?

Name of Product Used:

Rate (Please indicate g OR mL/ha):

45. How many foliar applications of thiamethoxam would you typically apply on cucurbit vegetables?

- One
- Two
- Depends based on monitoring and scouting



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Risk Mitigation

46. Do you use pest monitoring prior to applying one of the above insecticides by foliar application?

Yes

No

47. Do you have permanent vegetative buffer strips for fields adjacent to natural water bodies such as creeks, streams, rivers, ponds, lakes, marine sites?

Yes

No

48. Do you use temporary buffer strips/zones (areas not receiving pesticide treatment) for fields adjacent to natural water bodies such as creeks, streams, rivers, ponds, lakes, marine sites?

Yes

No

49. Indicate ideas for mitigating the risk to aquatic invertebrates when neonicotinoids are applied in field vegetables.

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Thank you for your participation.

By providing your accurate responses, it will ensure that the PMRA has accurate information that reflects how NEONICOTINOIDS are actually used in modern horticultural practice. Grower input is essential for the CHC to respond effectively to the PMRA consultation on NEONICOTINOID use.

Thank you for taking time to provide your input.