



Neonic Registration Review Update

- June 27th OPP issued a memorandum updating Occupational and Residential Exposure Assessment for Seed Treatment Uses

[following the PID EPA received additional information on seed treatments; in 2022 changed baseline data and RA policy; all of the 2017 draft RA remains except for the following]

- The changes stem from new information on exposure not on hazard.
-

Specific crops and uses

Commercial Seed Treatment (CST) – Cleaning Equipment (MOE for Crop)

- o Beet, Sugar (25)
- o Broccoli (3)
- o Carrot (21)
- o Corn, pop (92)
- o Endive (26)
- o Leek (19)
- o Lettuce, head (2)
- o Lettuce, leaf (2)
- o Onion, bulb, dry (16)
- o Onion, green (16)
- o Parsley (37)

On Farm Seed Treatment Planting with Solids (OFST/P-S) – Dust (MOE for Crop)

- o Potato (67)

clothianidin

Specific crops and uses

Commercial Seed Treatment

Cleaning Equipment (MOE)

- Canola (25)
- Carrot, film-coated (99)
- Carrot, encrusted/pelleted (99)
- Corn, field (99)
- Corn, pop (99)
- Corn, sweet (99)
- Cotton (49)
- Crambe, film-coated (25)
- Crambe, encrusted/pelleted (25)
- Flax (25)

- Millet, Japanese (99)
- Millet, pearl (99)
- Millet, proso (99)
- Mustard seed, film-coated (25)
- Mustard seed, encrusted/pelleted (25)
- Mustard seed (25)
- Safflower (49)
- Sorghum, grain (99)
- Sunflower (49)

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Specific crops and uses

CST-Treating (Crop—Specialized Treat.)	CST-Packaging (Crop—Specialized Treat.)	CST-Cleaning Equipment (Crop—Specialized Treat.)	Loading/Planting (Crop—Specialized Treat.)
<ul style="list-style-type: none"> • Amaranth, Chinese (Spinach, Chinese)--Film-coated • Balsam pear (Bittermelon)--N/A • Canola--N/A • Celery--Film-coated • Chayote--N/A • Corn, field--N/A • Corn, pop--N/A • Corn, sweet--N/A • Cotton--N/A • Fennel--Encrusted/Pelleted • Fennel--Film-coated • Flax--N/A • Lettuce, head--Film-coated 	<ul style="list-style-type: none"> • Amaranth, Chinese (Spinach, Chinese)--Film-coated • Balsam pear (Bittermelon)--N/A • Celery--Film-coated • Chayote--N/A • Corn, field--N/A • Corn, pop--N/A • Corn, sweet--N/A • Fennel--Film-coated • Other, Cucurbits (9B)--N/A • Other, Leafy (4A)--Film-coated • Other, Leafy (4B)--Film- 	<ul style="list-style-type: none"> • Alfalfa--N/A • Amaranth, Chinese (Spinach, Chinese)--Encrusted/Pelleted • Amaranth, Chinese (Spinach, Chinese)--Film-coated • Balsam pear (Bittermelon)--N/A • Barley--N/A • Bean, Broad (Faba)--N/A • Bean, dry--N/A • Bean, lima--N/A • Bean, navy--N/A • Bean, snap--N/A • Bean, Yardlong--N/A 	<ul style="list-style-type: none"> • Amaranth, Chinese (Spinach, Chinese)--Encrusted/Pelleted • Amaranth, Chinese (Spinach, Chinese)--Film-coated • Bean, navy--N/A • Onion, green--Encrusted/Pelleted • Onion, green--Film-coated • Other, Leafy (4A)--Encrusted/Pelleted

thiamethoxam

Table 5.1.4. Summary of Combined (Dermal and Inhalation) Scenarios that Remain Risks of Concern (MOEs < 100) with Maximum Additional PPE (i.e., DL/G + PF10 R).

CST-Treating (Crop—Specialized Treat.)	CST-Packaging (Crop—Specialized Treat.)	CST-Cleaning Equipment (Crop—Specialized Treat.)	Loading/Planting (Crop—Specialized Treat.)
<ul style="list-style-type: none"> • Lettuce, leaf--Film-coated • Other, Cucurbits (9B)--N/A • Other, Leafy (4A)--Film-coated • Other, Leafy (4B)--Encrusted/Pelleted • Other, Leafy (4B)--Film-coated • Other, Oil Seed (20A)--N/A • Other, Oil Seed (20B)--N/A • Pumpkin--N/A • Rhubarb--Encrusted/Pelleted • Rhubarb--Film-coated • Rice--N/A • Safflower--N/A • Sorghum, grain--N/A • Squash, Chinese--N/A • Squash, summer--N/A • Squash, winter--N/A • Sunflower--N/A • Watermelon--N/A 	<ul style="list-style-type: none"> coated • Other, Oil Seed (20B)--N/A • Pumpkin--N/A • Rhubarb--Film-coated • Safflower--N/A • Sorghum, grain--N/A • Squash, Chinese--N/A • Squash, summer--N/A • Squash, winter--N/A • Watermelon--N/A 	<ul style="list-style-type: none"> • Beet, sugar--Film-coated • Broccoli--Encrusted/Pelleted • Broccoli--Film-coated • Broccoli, Chinese--Encrusted/Pelleted • Broccoli, Chinese--Film-coated • Broccoli, Chinese--N/A • Brussels sprout--Encrusted/Pelleted • Brussels sprout--Film-coated • Buckwheat--N/A • Cabbage--Encrusted/Pelleted • Cabbage--Film-coated • Cabbage, Chinese--Encrusted/Pelleted • Cabbage, Chinese--Film-coated • Canola--N/A • Cantaloupe--Encrusted/Pelleted • Cantaloupe--Film-coated • Carrot--Encrusted/Pelleted • Carrot--Film-coated • Cauliflower--Encrusted/Pelleted • Cauliflower--Film-coated • Celery--Encrusted/Pelleted • Celery--Film-coated • Chayote--N/A • Collards--Encrusted/Pelleted • Collards--Film-coated • Corn, field--N/A • Corn, pop--N/A • Corn, sweet--N/A • Cotton--N/A • Cowpea--N/A • Cucumber--Encrusted/Pelleted • Cucumber--Film-coated • Endive--Encrusted/Pelleted • Endive--Film-coated • Fennel--Encrusted/Pelleted • Fennel--Film-coated • Flax--N/A • Guar--N/A • Honeydew--Encrusted/Pelleted 	<ul style="list-style-type: none"> • Other, Leafy (4A)--Film-coated • Other, Leafy (4B)--Encrusted/Pelleted • Other, Leafy (4B)--Film-coated • Other, Legume (6A)--N/A • Other, Legume (6C)--N/A • Parsley--Encrusted/Pelleted • Parsley--Film-coated • Pea, Edible-podded--N/A • Pea, Field--N/A • Potato--N/A • Rice--N/A • Rice (Planting Restriction/High-end)--N/A • Soybean--N/A

Table 5.1.4. Summary of Combined (Dermal and Inhalation) Scenarios that Remain Risks of Concern (MOEs < 100) with Maximum Additional PPE (i.e., DL/G + PF10 R).

CST-Treating (Crop—Specialized Treat.)	CST-Packaging (Crop—Specialized Treat.)	CST-Cleaning Equipment (Crop—Specialized Treat.)	Loading/Planting (Crop—Specialized Treat.)
		<ul style="list-style-type: none"> •Honeydew--Film-coated •Kale--Encrusted/Pelleted •Kale--Film-coated •Kohlrabi--Encrusted/Pelleted •Kohlrabi--Film-coated •Lentil--Encrusted/Pelleted •Lentil--Film-coated •Lettuce, head-- Encrusted/Pelleted •Lettuce, head--Film-coated •Lettuce, leaf-- Encrusted/Pelleted •Lettuce, leaf--Film-coated •Lupin, White--N/A •Millet, pearl--N/A •Millet, proso--N/A •Muskmelon-- Encrusted/Pelleted •Muskmelon--Film-coated •Mustard greens-- Encrusted/Pelleted •Mustard greens--Film-coated •Mustard seed-- Encrusted/Pelleted •Mustard seed--Film-coated •Mustard, Chinese-- Encrusted/Pelleted •Mustard, Chinese--Film- coated •Oat--N/A •Onion, dry, bulb-- Encrusted/Pelleted •Onion, dry, bulb--Film-coated •Onion, green-- Encrusted/Pelleted •Onion, green--Film-coated •Other, Brassica (5A)-- Encrusted/Pelleted •Other, Brassica (5A)--Film- coated •Other, Brassica (5B)-- Encrusted/Pelleted •Other, Brassica (5B)--Film- coated •Other, Cereal Grains (15)-- N/A •Other, Cucurbits (9A)-- Encrusted/Pelleted 	

Table 5.1.4. Summary of Combined (Dermal and Inhalation) Scenarios that Remain Risks of Concern (MOEs < 100) with Maximum Additional PPE (i.e., DL/G + PF10 R).

CST-Treating (Crop—Specialized Treat.)	CST-Packaging (Crop—Specialized Treat.)	CST-Cleaning Equipment (Crop—Specialized Treat.)	Loading/Planting (Crop—Specialized Treat.)
		<ul style="list-style-type: none"> •Other, Cucurbits (9A)--Film-coated •Other, Cucurbits (9B)--N/A •Other, Leafy (4A)--Encrusted/Pelleted •Other, Leafy (4A)--Film-coated •Other, Leafy (4B)--Encrusted/Pelleted •Other, Leafy (4B)--Film-coated •Other, Legume (6A)--N/A •Other, Legume (6B)--N/A •Other, Legume (6C)--N/A •Other, Oil Seed (20A)--N/A •Other, Oil Seed (20B)--N/A •Parsley--Encrusted/Pelleted •Parsley--Film-coated •Pea, Edible-podded--N/A •Pea, Field--N/A •Pea, garden--N/A •Pea, Pigeon--N/A •Pea, Southern--N/A •Peanut--N/A •Pumpkin--N/A •Rape Greens--Encrusted/Pelleted •Rape Greens--Film-coated •Rhubarb--Encrusted/Pelleted •Rhubarb--Film-coated •Rice--N/A •Rye--N/A •Safflower--N/A •Sorghum, grain--N/A •Soybean--N/A •Spinach--Encrusted/Pelleted •Spinach--Film-coated •Squash, Chinese--N/A •Squash, summer--N/A •Squash, winter--N/A •Sunflower--N/A •Swiss Chard--Encrusted/Pelleted •Swiss Chard--Film-coated •Triticale--N/A •Triticale--N/A •Watermelon--N/A •Wheat--N/A 	

PPE can be increased to accommodate the new identified risks except for:

- occupational handler risks for on-farm seed treatment of potato seed pieces with a dust formulation; and
- 2) occupational handlers cleaning commercial seed treatment equipment for all formulations and numerous seed types



Pesticide Update

EPA's Office of Chemical Safety and Pollution Prevention

EPA Releases Updated Occupational Exposure Assessments for Seed Treatment Uses for Three Neonicotinoids

Today, the U.S. Environmental Protection Agency (EPA) is releasing its updated occupational exposure assessments for handling and treating seeds with clothianidin, imidacloprid, and thiamethoxam, which belong to a class of pesticides called "neonicotinoids." Neonicotinoids are systemic insecticides that work by disrupting the central nervous system of insects. If humans are exposed to very high amounts of neonicotinoids, they could also experience harmful effects such as neurotoxicity (e.g., tremors and decreased motor activity), reproductive, or developmental effects. These pesticides are used on a wide variety of crops, turf, ornamentals, pets (*i.e.*, flea treatments), and other residential and commercial indoor and outdoor uses. There are also over 100 different seed treatment products that contain clothianidin, imidacloprid, or thiamethoxam, which are used to control chewing and sucking insects that can cause significant damage to seeds and young plants

Currently AIB's BMPs focus on use and application

BMPs for Neonicotinoid Pesticides

Prioritize BMPs to include in proposed rule for use of neonicotinoid pesticides

- There will be changes coming to pesticide labels in response to this.
- Comment period closes September 24th.
- EPA is asking for additional information from seed treatment companies and individuals.

<https://www.regulations.gov/document/EPA-HQ-OPP-2011-0581-0723>

* Required

1. Use cultural, physical, and biological controls and select insect resistant/tolerant crop varieties to avoid or reduce pest risk. *

1 = high priority BMP, important to include in BMP rule: 5 = low priority BMP, not necessary to include in BMP rule

1	2	3	4	5
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2. Scout fields regularly and use economic thresholds to help determine if, when, and where to apply. *

1 = high priority BMP, important to include in BMP rule: 5 = low priority BMP, not necessary to include in BMP rule

1	2	3	4	5
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3. Use hot-spot spraying and banding where appropriate to reduce the amount of pesticide applied. *

1 = high priority BMP, important to include in BMP rule: 5 = low priority BMP, not necessary to include in BMP rule

Soliciting seed treatment information – for the on-farm treating/planting scenario

- Describe the pesticide loading system in your operation on farm to treat seed. Is this an open or closed loading system? Please state the type of seed in your response. Is a liquid or solid formulation of clothianidin, imidacloprid, or thiamethoxam in use for that seed type?
- Describe the treating equipment used to treat seeds on farm. Please state the type of seed treated with this equipment. Is a liquid or solid formulation of clothianidin, imidacloprid, or thiamethoxam in use for that seed type?
- Describe the planting equipment used to sow seeds after they have been treated on farm. Please state the type of seed that is sown with this equipment.
- To the best of your knowledge, please describe how treating potato seeds and treating and planting cotton and wheat seeds on farm is different than treating and plantings seeds in your operation. Please state the type of seed in your response.
- Do you use the maximum label application rate to treat [type/use] seeds?
- What is the maximum rate used to treat [type/use] seeds?
- What is the average (“typical”) rate used to treat [type/use] seeds?
- What is the median rate (some XXth percentile) used to treat [type/use] seeds?
- The Agency assumes that 61, 80, and 200 acres are planted by a loader/planter in one eight hour day for potatoes, vegetables and other specialty annual crops, and large acreage field crops (i.e., alfalfa, some beans, sugar beets, canola, field and pop corn, cereal grains, cotton, mint, rice, and soybean), respectively. How many acres are planted in one eight-hour day in your operation after you treat seeds on farm? Please state the type of seed planted.
- The Agency assumes a high-end seeding density (or number of seeds/acre) for each type of seed in its models of dermal and inhalation exposure to those workers who treat seeds on farm and then plant. The current assumptions for seeding density are found in Table 3.1 (pages 16-18) in Policy 15: https://www.epa.gov/system/files/documents/2022-01/exposacpolicy-15_amount-seed-treated-planted.pdf o There are more types of seeds with their associated seeding density listed in the worksheet named “Amount Seed Planted variables” in the seed treatment calculator (Microsoft Excel file). Look at values in Column ‘D’. https://www.epa.gov/system/files/documents/2022-02/seed-treatment-and-plantingexposure_mar2022.xlsx What is the highest seeding density used in your operation? Please state the type of seed planted at this density

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