

Interregional Research Project Number 4 and Bayer Corporation

PP 1E6268, PP 1E6254, PP 1E6237, PP 1E6225, PP 0E6203, PP 2E6403, PP 2E6406, PP 2E6409, PP 2E6417, PP 2E6421, PP 2E6435, PP 2E6414, PP 2E6458, and PP 2E6506

EPA has received pesticide petitions from the Interregional Research Project Number 4 (IR-4), Technology Centre and Rutgers State University of New Jersey, 681 U.S. Highway #1 South, North Brunswick, NJ 08902-3390 proposing, pursuant to section 408(d) of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a(d), to amend 40 CFR part 180.472 by establishing tolerances for the combined residues of imidacloprid, 1-(6-chloro-3-pyridinyl)methyl-N-nitro-2-imidazolidinimine, and its metabolites containing the 6-chloropyridinyl moiety, all expressed as imidacloprid in or on the raw agricultural commodities as follows:

1. PP 1E6268 proposes tolerances for bushberry subgroup 13B and lingonberry, juneberry, and salal at 3.5 parts per million (ppm).
2. PP 1E6254 proposes a tolerance for okra at 1.0 ppm.
3. PP 1E6237 proposes a tolerance for watercress at 3.5 ppm.
4. PP 1E6225 proposes a tolerance for artichoke at 2.5 ppm.
5. PP 0E6203 proposes a tolerance for cranberry at 0.05 ppm.
6. PP 2E6403 proposes a tolerance for vegetable, legume, except soybean, group 6 at 4.0 ppm.
7. PP 2E6406 proposes tolerances for avocado, papaya, star apple, black sapote, mango, sapodilla, canistel, and mamey sapote at 1.0 ppm, and lychee, longan, Spanish lime, rambutan, pulasan, and persimmon at 3.0 ppm.
8. PP 2E6409 proposes a tolerance for vegetable, leaves of root and tuber, group 2 at 4.0 ppm.
9. PP 2E6417 proposes a tolerance for strawberry at 0.5 ppm.
10. PP 2E6421 proposes a tolerance for fruit, stone, group 12 at 3.0 ppm.
11. PP 2E6435 proposes tolerances for guava, feijoa, jaboticaba, wax jambu, starfruit, passionfruit, and acerola at 1.0 ppm.
12. PP 2E6414 proposes tolerances for corn, pop, grain at 0.05 ppm and corn, pop, stover at 0.2 ppm.
13. PP 2E6458 proposes a tolerance for mustard seed at 0.05 ppm.
14. PP 2E6506 proposes a tolerance for vegetable, root, and tuber, except sugar beet, group 1 at 0.4 ppm.

EPA has determined that the petitions contain data or information regarding the elements set forth in section

408(d)(2) of the FFDCA; however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data support granting of the petitions. Additional data may be needed before EPA rules on the petitions. Bayer Corporation, Crop Protection, Kansas City, MO 64120-0013 produces the imidacloprid product(s) of concern for these pending tolerances.

A. Residue Chemistry

1. *Plant metabolism.* The nature of the imidacloprid residue in plants and livestock is adequately understood. The residues of concern are combined residues of imidacloprid and its metabolites containing the 6-chloropyridinyl moiety, all calculated as imidacloprid.

2. *Analytical method.* The analytical method is a common moiety method for imidacloprid and its metabolites containing the 6-chloropyridinyl moiety using a permanganate oxidation, silyl derivatization, and capillary gas chromatography/mass spectrometry (GC/MS) selective ion monitoring. This method has successfully passed a petition method validation in EPA labs. There is a confirmatory method specifically for imidacloprid and several metabolites utilizing GC/MS and high performance liquid chromatography/using ultra-violet detection (HPLC/UV) which has been validated by EPA as well. Imidacloprid and its metabolites are stable for at least 24 months in the commodities when frozen.

3. *Magnitude of residues.* Bushberry subgroup, lingonberry, juneberry, and salal. IR-4 has received requests from Maine for imidacloprid use on lowbush blueberries and from New Jersey, Delaware, Michigan, and South Carolina for use on high bush blueberries. Two field trials were performed on lowbush blueberries and nine trials on highbush blueberries to support the requested tolerance of 3.5 ppm.

- *Okra.* No data was submitted in support of this tolerance petition; rather, IR-4 proposes that EPA, utilizes the registrant's fruiting vegetable data (peppers and tomatoes). IR-4 believes this approach is justified based upon the similarities of okra to members of the fruiting vegetable crop group. It is noteworthy that okra is classified as a fruiting vegetable under CODEX.

- *Watercress.* IR-4 received a request from the Florida Agricultural Experiment Station for the registration of imidacloprid on watercress. No watercress data were presented in support of this petition; rather, IR-4 requests that EPA utilizes the registrant's head and leaf lettuce data to

support the proposed watercress tolerance of 3.5 ppm.

- *Artichoke.* IR-4 has received requests from California for the use of imidacloprid on artichoke. To support this request and the proposed tolerance of 2.5 ppm, magnitude of residue data were collected from three field trials in California.

- *Cranberry.* IR-4 received a request from Massachusetts for the use of imidacloprid on cranberries. To support this request and the proposed tolerance for strawberry at 0.05 ppm. IR-4 conducted five field trials in the states of Massachusetts, New Jersey, Wisconsin, and Oregon.

- *Peas.* IR-4 received a request from Washington, Oregon, and Delaware for the use of imidacloprid on peas. In support of this request, field trials were conducted in Wisconsin, Ohio, Washington, Maryland, New Jersey, and California.

- *Mamey sapote.* IR-4 received a request from Florida for the use of imidacloprid on mamey sapote. In support of this request, two field trials were conducted in southern Florida.

- *Leaves of root and tuber crop group.* IR-4 received a request from Oregon and California for the use of imidacloprid on beets. In support of this request, magnitude of residue data were collected from field trials conducted in Texas, Ohio, New Jersey, Oregon, and Indiana. Data from beet tops were combined with the previously submitted petition for turnip tops to support a tolerance for leaves of root and tuber vegetables.

- *Stone fruit.* IR-4 received requests from Utah, Washington, Michigan, and Oregon for the use of imidacloprid on cherries, Michigan and Washington for the use of imidacloprid on peaches, and Michigan for the use of imidacloprid on plums. Magnitude of residue data were collected on these crops to support a stone fruit crop group tolerance.

- *Strawberry.* IR-4 received requests from Oregon, Mississippi, Michigan, Wisconsin, and North Carolina for the use of imidacloprid on strawberries. In support of this requested tolerance, magnitude of residue trials were conducted in Florida, California, New Jersey, Wisconsin, and Oregon.

- *Dry beans.* IR-4 received requests from New York, Washington, Wisconsin, Georgia, California, and Idaho for the use of imidacloprid on dry beans. In support of this request, magnitude of residue trials were conducted in Washington, North Dakota, New York, Wisconsin, and California.

- *Guava and related crops (feijoa, jaboticaba, wax jambu, starfruit,*