

Appendix 1-4. Usage Data for Imidacloprid – SUUM

See attached memorandum, Imidacloprid (129099) National and State Summary Use and Usage Matrix (November 16, 2020- revised June 3, 2021) from the Biological and Economic Analysis Division.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 16, 2020 (*revised June 3, 2021*)

MEMORANDUM

SUBJECT: Imidacloprid (129099) National and State Summary Use and Usage Matrix

FROM: Briana Otte, Biologist
Science Information and Analysis Branch
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THRU: Hope Johnson, Chief
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TO: Justin Housenger, Branch Chief, and
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Introduction

This document presents a summary of the use and usage data that are available to the Agency on this active ingredient, during the years listed.

This document provides all available estimates of pesticide usage data for on the listed active ingredient(s), nationally and by state. All registered use sites as of date provided in tables are listed although usage data are not available for every site.

The intended use of the data presented here is to inform assumptions about the use of the active ingredient(s) in the United States, and the extent, variability, and rate of that usage at the state level. Pesticide usage data are reported at the state level; usage data at smaller levels may not be statistically valid due to reduced sample size. Extent and variability of usage at the state level are presented using minimum, maximum, and average percent crop treated (PCT) over the five-year observation period. PCT is calculated as the percent of the acres grown for a crop that are treated with the active ingredient(s). Additionally, the data may inform assumptions about crops and states where this active ingredient is likely not being used, by identifying crops that are surveyed for but where usage is not observed during the observation period. The state level estimates of pesticide usage presented here (especially PCT) can be used to inform estimates of the proportion of a species range that may be exposed to this active ingredient.

The pesticide usage data summarized herein were obtained from both public and private (proprietary) sources. As presented, the data are not proprietary, business confidential, or a trade secret. The most recent five years of available data as of publication were used in order to represent current usage and the most recent use trend.

Data Sources

Kynetec USA, Inc. The AgroTrak Study, Database Subset (Kynetec) – proprietary pesticide usage. These data are collected and sold by a private market research firm. The data are collected by annual surveys of agricultural users in the continental United States and provides pesticide usage data for about 60 crops, including both specialty and row crops. The survey design targets at least 80 percent of US acreage/production of the surveyed commodities. Survey methodology provides statistically valid results, typically at the state and national levels.

United States Department of Agriculture’s National Agricultural Statistics Service (NASS) – publicly available pesticide usage data. NASS data are based on surveys that focus on the top-producing states that together account for the majority of U.S. acres or production of the surveyed commodity. NASS survey design targets a minimum of 80 percent of the acreage/production for every fruit, vegetable, and field crop surveyed. Operation level data are combined during summary and, pending compliance with disclosure rules, published at the state and national levels. NASS does not collect data annually for each crop, but surveys for various commodities on a rotating schedule.

California Department of Pesticide Regulation (CDPR) Pesticide Use Reporting (PUR) –publicly available pesticide usage data. The PUR database contains detailed records and summaries of agricultural applications of pesticides on crops based on application permits. All agricultural growers must submit their production agricultural pesticide use reports monthly and pest control businesses must submit pesticide use reports within 7 days after their application. As such, CDPR data is a census of all usage rather than a survey and is published annually.

Kline and Company Data (Kline) - proprietary pesticide usage data. Data cover pesticide usage in several U.S. markets, including consumer, professional pest management, turf and ornamentals, food handling establishments, stored grain, industrial vegetation, as well as specialty biocides and biopesticides. Data are collected via surveys of pest management companies, suppliers, dealers, distributors, food-handling establishments, trade associations, consumers, and retailers. Market sizes and brand shares are determined by analyses of sales and other data obtained through interviews and are believed to be sufficiently accurate for screening-level needs at the national level. Market reports reflect usage by class/market segment and chemical and are based on sales information (manufacturer and retail) and end-user surveys. Study dates vary by market sector.

The presented usage data are averaged over the number of years of available survey data during the most recent five years of available data, based on sampling frequency (five years for Kynetec and CDPR, and 1-2 years for NASS and Kline), regardless of whether usage is observed in each surveyed year. The presented data may thus underestimate the maximum yearly usage. Kynetec is the primary source of usage data because it is collected nationally and annually. It also provides usage data for the most sites among the available data sources. NASS data are used for crops which are not surveyed by Kynetec. CDPR data are used when neither national source surveys a crop. When over 80% of crop grown in California, California usage is considered to be representative of National usage. In these cases, CDPR data may be included in Table 1. When less than 80% of a crop is grown in California, but none of the national sources survey the crop, CDPR is included in Table 2 to represent only California usage. The presented data may not be a reliable indicator of the variability in usage between individual years. In certain cases, data are unavailable or withheld. These cases are specified in the tables as follows:

Some data sources do not provide all data elements. When a data element is not available this is indicated with a “--” notation in the relevant column.

If a registered use site is surveyed by one of our data sources but no usage is observed, this is indicated with the notation "NR" indicating that the use site is “Surveyed but no usage reported”. Lack of reported usage data for the pesticide on a surveyed crop indicates that there is a very low likelihood that the given pesticide is used on that crop.

If a registered use site is not surveyed nationally by any of our data sources, this is indicated with the notation "***" indicating that the site is "Not Surveyed at National Level".

For some crops, CDPR has reported usage, but due to a reporting issue the data are not sufficiently reliable to provide an estimate. In these cases, Percent Crop Treated data are withheld. This is indicated with the notation "#".

In some cases, data is withheld by NASS to avoid disclosing data for individual operations. This is indicated with the notation "(D)".

Averaging

The presented usage data are averaged over the number of years of available survey data based on sampling frequency (five years for Kynetec and CADPR, and 1-2 years for NASS), regardless of whether usage is observed in each surveyed year.

Rounding

Average pounds of active ingredient applied – Annual average pounds of the pesticide reported applied for each agricultural crop (i.e., for surveyed states, not for the entire United States). Values are calculated by merging pesticide usage data across all observations within a year, averaging across year, and then rounding. Any surveyed year without reported usage for the AI is included as a value of zero pounds applied in the calculation of the average. Values are rounded using common rounding rules (i.e., the half round up method). **Note:** *If the estimated value is less than 500, then that value is labeled <500. Estimated values between 500 & <1,000,000 are rounded to 1 place value. Estimated values of 1,000,000 or greater are rounded to the hundred thousands' place value. (Examples: 478 would be reported as "<500"; 43,873 would be reported as "40,000"; 47,873,901 would be reported as "47,900,000").*

Average annual total acres treated – Annual average total acres treated with the pesticide reported for each agricultural crop (i.e., for surveyed states, not for the entire United States). Values are calculated by merging pesticide usage data across all observations within a year, averaging across year, and then rounding. Any surveyed year without reported usage for the AI is included as a value of zero acres treated in the calculation of the average. Values are rounded using common rounding rules (i.e., the half round up method). **Note:** *If the estimated value is less than 500, then that value is labeled <500. Estimated values between 500 & <1,000,000 are rounded to 1 place value. Estimated values of 1,000,000 or greater are rounded to the hundred thousands' place value. (Examples: 478 would be reported as "<500"; 43,873 would be reported as "40,000"; 47,873,901 would be reported as "47,900,000").*

Average percent of crop treated - Values are calculated by averaging within a year, averaging across year, and then rounding to the nearest multiple of 5. **Note:** If the estimated value is less than 1, then the value is labeled <1. If the estimated value is less than 2.5, then the value is labeled <2.5.

Maximum percent of crop treated - Value is the single maximum annual average value reported across all observations, across all years. The value is rounded up to the nearest multiple of 5. **Note:** *If the estimated value is less than 2.5, then the value is labeled <2.5.*

Notes on 6-3-2021 Corrections

This document was edited to correct some minor errors, as noted below. No further analyses have been performed and no new data are included. This revised document supersedes the version dated 03-10-21.

Mustard (seed treatment) (Table 1 and 2)

Moved from Crop Group "Brassica Leafy (Cole) Vegetables (seed treatment)" to "Oilseed Group (seed treatment)"

Commerical shellfish beds (to control burrowing shrimp in intertidal commercial shellfish beds of Washington state's Willapa Bay and Grays Harbor) (Table 3)

Additional use site added under Crop Group "Other"

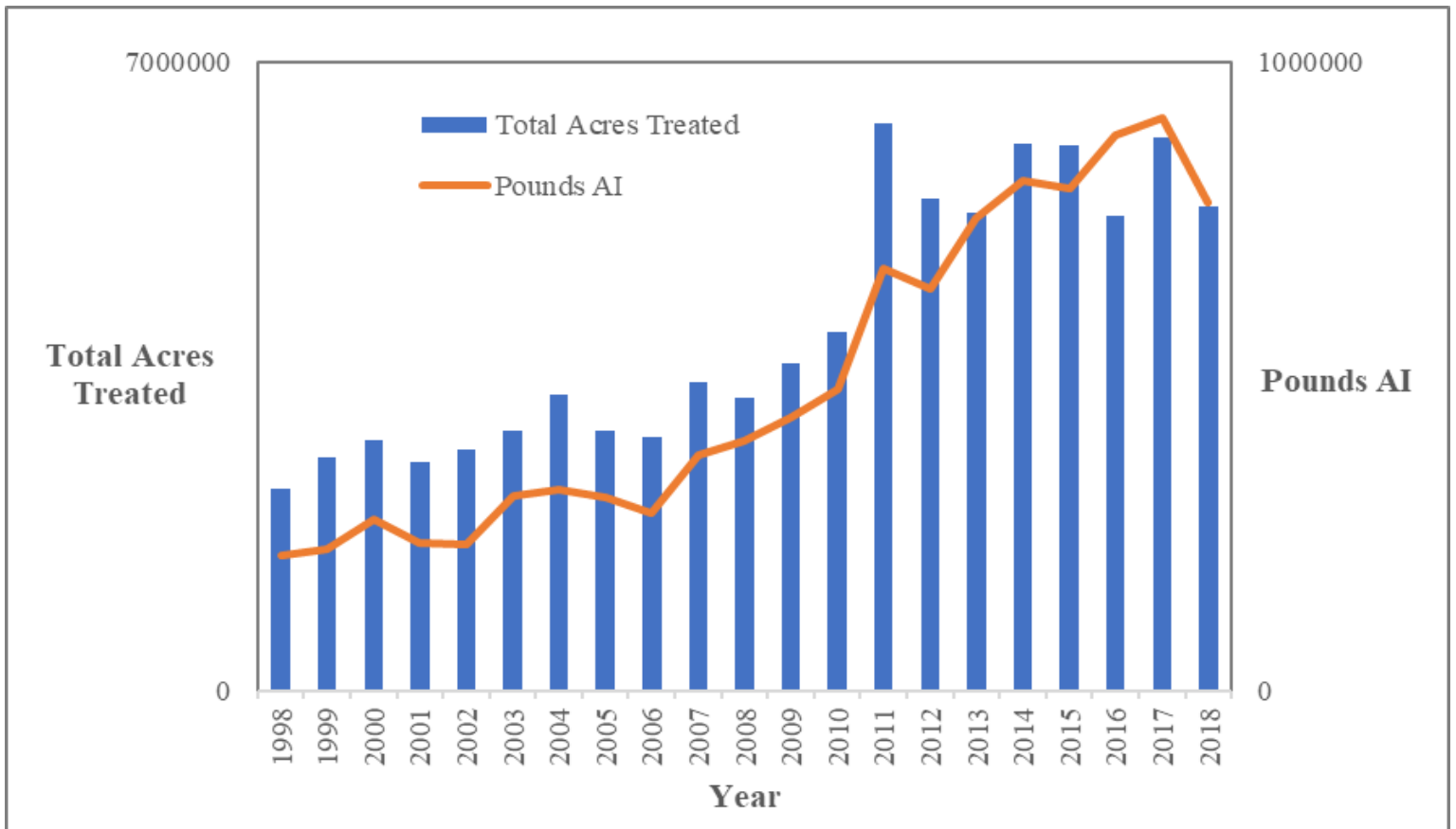


Figure 1. Imidacloprid Total Acres Treated and Total Pounds A.I. Applied to Agricultural Crops (1998-2018).
(Does not include seed treatment usage, or crops surveyed only by NASS and CDPR, as indicated in Table 1)

Source: Kynetec USA, Inc. 2019. "The AgroTrak® Study from Kynetec USA, Inc." Database Subset: 1998-2018

Table 1. National Imidacloprid Agricultural Usage by Crop. Data averaged over reported years. Values are rounded according to rounding rules provided in the Introduction.

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---|---------------------|--|--|--|------------------------|------------------------|--|
| Root and Tuber Vegetables Group | + | + | + | + | + | + | 0.38 lbs AI/A |
| Sugar beets | Kynetec (2014-2018) | CA | (S) | (S) | (S) | (S) | 0.38 lbs AI/A |
| 1B Root Vegetables (except sugar beet) subgroup | + | + | + | + | + | + | 0.38 lbs AI/A |
| Beet, garden | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Carrots | Kynetec (2014-2018) | CA, WA, WI | 5,000 | 20,000 | 5% | 0.30 | 0.38 lbs AI/A |
| Celeriac | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Chervil | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Chicory | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Daikon | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Radish | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Turnip | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other 1B root vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Tuberous and corm vegetables | + | + | + | + | + | + | 0.38 lbs AI/A |
| Ginger | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Potato | Kynetec (2014-2018) | CA, CO, FL, ID, ME, MI, MN, MT, NE, NY, NC, ND, OR, PA, WA, WI | 80,000 | 400,000 | 10% | 0.18 | 0.38 lbs AI/A |
| Sweet potato | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Yam | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other tuberous and corm vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Root and Tuber Vegetables Group (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Carrots (seed treatment) | ** | ** | ** | ** | ** | ** | 0.036 lbs AI/A |
| Potato (seed treatment) | ** | ** | ** | ** | ** | ** | 0.50 lbs AI/A |
| Sugar beets (seed treatment) | ** | ** | ** | ** | ** | ** | 0.293 lbs AI/A |
| Bulb Vegetable Group | + | + | + | + | + | + | 0.5 lbs AI/A |
| Garlic | Kynetec (2014-2018) | CA | (S) | (S) | (S) | (S) | 0.5 lbs AI/A |
| Leek | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|--|---------------------|----------------------------|--|--|------------------------|------------------------|--|
| Onions | Kynetec (2014-2018) | CA, ID, OR, TX | (S) | (S) | (S) | (S) | 0.5 lbs AI/A |
| <i>Other Bulb Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Bulb Vegetable Group (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Onion (seed treatment) | ** | ** | ** | ** | ** | ** | 0.15 lbs AI/A |
| Leek (seed treatment) | ** | ** | ** | ** | ** | ** | 0.15 lbs AI/A |
| Scallion (seed treatment) | ** | ** | ** | ** | ** | ** | 0.15 lbs AI/A |
| Leafy Vegetables Group | + | + | + | + | + | + | 0.38 lbs AI/A |
| Amaranth, edible (chinese spinach) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Arugula | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cardoon | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Celery | Kynetec (2014-2018) | CA, MI | 800 | 4,000 | 15% | 0.21 | 0.38 lbs AI/A |
| Chrysanthemum garland | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Corn salad | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cress, Garden | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Dandelion greens | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Endive (escarole) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Lettuce | Kynetec (2014-2018) | AZ, CA | 40,000 | 200,000 | <2.5% | 0.18 | 0.38 lbs AI/A |
| Radicchio | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Spinach | Kynetec (2014-2018) | AZ, CA, OK | 3,000 | 20,000 | 20% | 0.13 | 0.38 lbs AI/A |
| Swiss chard | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Upland Cress | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other Leafy Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| 5. Brassica Leafy (Cole) Vegetables | + | + | + | + | + | + | 0.38 lbs AI/A |
| Bok choy | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Broccoli | Kynetec (2014-2018) | CA | 10,000 | 100,000 | 10% | 0.13 | 0.38 lbs AI/A |
| Broccoli, Chinese (Gai lon) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Brussel sprouts | CDPR (2013-2017) | CA* | 1,000 | # | # | 0.08 | 0.38 lbs AI/A |

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|--|---------------------|--|--|--|------------------------|------------------------|--|
| Cabbage | Kynetec (2014-2018) | AZ, CA, CO, FL, GA, MI, NY, NC, WI | 4,000 | 20,000 | <2.5% | 0.18 | 0.38 lbs AI/A |
| Cabbage, chinese (napa) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cauliflower | Kynetec (2014-2018) | AZ, CA | 6,000 | 40,000 | 10% | 0.15 | 0.38 lbs AI/A |
| Collards | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Kale | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Kohlrabi | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Mizuna | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Mustard greens | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Mustard, Chinese (Gai choy) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Rape | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Rapini | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Turnip greens | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Watercress | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other Brassica Leafy (Cole) Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Brassica Leafy (Cole) Vegetables (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Broccoli (seed treatment) | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Legume Vegetables Group | + | + | + | + | + | + | 0.38 lbs AI/A |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | CA, FL, IL, MI, NY, TN, WI | 2,000 | 10,000 | 25% | 0.12 | 0.38 lbs AI/A |
| Dry Beans/Peas | Kynetec (2014-2018) | CA, ID, MI, MT, WA | 800 | 20,000 | 40% | 0.05 | 0.38 lbs AI/A |
| Lima Beans | Kynetec (2014-2018) | CA, WI | (S) | (S) | (S) | (S) | 0.38 lbs AI/A |
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | MN, WI | <500 | 600 | 85% | 0.04 | 0.38 lbs AI/A |
| Soybean | Kynetec (2014-2018) | AR, GA, IL, IN, IA, KS, KY, LA, MN, MO, NE, NC, ND, OH, OK, SD, TN, WI | 50,000 | 1,300,000 | 35% | 0.04 | 0.38 lbs AI/A |
| <i>Other Legume Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |

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|---|---------------------|--|--|--|------------------------|------------------------|--|
| Legume Vegetables Group (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Soybean (seed treatment) | ** | ** | ** | ** | ** | ** | 0.21 lbs AI/A |
| Beans (seed treatment) | ** | ** | ** | ** | ** | ** | 0.50 lbs AI/A |
| Peas (seed treatment) | ** | ** | ** | ** | ** | ** | 0.05 lbs AI/A |
| Fruiting Vegetables Group | + | + | + | + | + | + | + |
| Eggplant | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Okra | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Peppers | Kynetec (2014-2018) | AZ, CA, FL, GA, NJ, NM, NC, OH | 7,000 | 30,000 | <1% | 0.27 | 0.5 lbs AI/A |
| Tomato | Kynetec (2014-2018) | CA, FL | 60,000 | 300,000 | 10% | 0.21 | 0.38 lbs AI/A |
| Tomatillo | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other Fruiting Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cucurbit Vegetables | + | + | + | + | + | + | 0.38 lbs AI/A |
| Bitter Melon | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cantaloupe | Kynetec (2014-2018) | AZ, CA, FL, NC, TX | 8,000 | 30,000 | 0% | 0.31 | 0.38 lbs AI/A |
| Cucumber | Kynetec (2014-2018) | CA, FL, MI, NC, TX | 3,000 | 9,000 | 0% | 0.30 | 0.38 lbs AI/A |
| Pumpkin | Kynetec (2014-2018) | CA, CT, IL, IN, MA, MI, NJ, NY, OH, PA, TX, WI | 3,000 | 10,000 | 0% | 0.28 | 0.38 lbs AI/A |
| Squash | Kynetec (2014-2018) | CA, CT, FL, GA, MA, MI, NJ, NY, NC, OH, PA, SC, TX | 2,000 | 7,000 | 0% | 0.26 | 0.38 lbs AI/A |
| Watermelon | Kynetec (2014-2018) | CA, FL, GA, IN, NC, OK, SC, TX | 8,000 | 30,000 | 0% | 0.28 | 0.38 lbs AI/A |
| <i>Other Cucurbit Vegetables</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Citrus Fruit Group | + | + | + | + | + | + | 0.5 lbs AI/A |
| Grapefruit | Kynetec (2014-2018) | FL, TX | 10,000 | 40,000 | 10% | 0.24 | 0.5 lbs AI/A |
| Kumquat | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Lemon | Kynetec (2014-2018) | AZ, CA | 6,000 | 20,000 | 10% | 0.37 | 0.5 lbs AI/A |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---------------------------|-------------------------|------------------------------------|--|--|------------------------|------------------------|--|
| Lime | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Oranges | Kynetec (2014-2018) | CA, FL | 80,000 | 300,000 | 10% | 0.29 | 0.5 lbs AI/A |
| Pomelo | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Tangelos | NASS (2015) | FL | <500 | -- | -- | 0.22 | 0.5 lbs AI/A |
| Tangerines | NASS (2015, 2017, 2019) | CA, FL | 20,000 | -- | -- | 0.41 | 0.5 lbs AI/A |
| <i>Other Citrus Fruit</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Pome Fruit Group | + | + | + | + | + | + | 0.38 lbs AI/A |
| Apple | Kynetec (2014-2018) | CA, MI, NY, NC, OH, OR, PA, VA, WA | 10,000 | 100,000 | <1% | 0.11 | 0.38 lbs AI/A |
| Pear | Kynetec (2014-2018) | CA, OR, WA | 2,000 | 7,000 | 0% | 0.20 | 0.38 lbs AI/A |
| Pear, Asian | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Quince | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other Pome Fruit</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Stone Fruit Group | + | + | + | + | + | + | 0.38 lbs AI/A |
| Apricot | Kynetec (2014-2018) | CA | (S) | (S) | (S) | (S) | 0.38 lbs AI/A |
| Cherry | Kynetec (2014-2018) | CA, MI, OR, WA | 7,000 | 80,000 | <1% | 0.09 | 0.38 lbs AI/A |
| Nectarine | CDPR (2013-2017) | CA* | <500 | # | # | 0.06 | 0.38 lbs AI/A |
| Peach | Kynetec (2014-2018) | CA, CO, GA, MI, NJ, NY, PA, TX, WA | 800 | 10,000 | 0% | 0.08 | 0.38 lbs AI/A |
| Plums/Prunes | Kynetec (2014-2018) | CA | <500 | 4,000 | <1% | 0.07 | 0.38 lbs AI/A |
| <i>Other Stone Fruit</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |

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|------------------------------------|-------------------------|----------------------------|--|--|------------------------|------------------------|--|
| Berry and Small Fruit Group | + | + | + | + | + | + | <i>Full crop group not registered</i> |
| Grape, Raisin | Kynetec (2014-2018) | CA | 20,000 | 100,000 | 0% | 0.24 | 0.5 lbs AI/A |
| Grape, Table | Kynetec (2014-2018) | CA | 30,000 | 70,000 | 0% | 0.46 | 0.5 lbs AI/A |
| Grape, Wine | Kynetec (2014-2018) | CA, NY, WA | 100,000 | 300,000 | <1% | 0.30 | 0.5 lbs AI/A |
| Strawberry | Kynetec (2014-2018) | CA, NY, PA | 2,000 | 7,000 | 0% | 0.29 | 0.5 lbs AI/A |
| Bushberries | + | + | + | + | + | + | 0.5 lbs AI/A |
| Blueberries | NASS (2015, 2017, 2019) | GA, MI, NJ, OR, WA | 3,000 | -- | -- | 0.10 | 0.5 lbs AI/A |
| <i>Other bushberries</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Caneberries | + | + | + | + | + | + | 0.5 lbs AI/A |
| Blackberries | NASS (2017) | OR | (D) | -- | -- | (D) | 0.5 lbs AI/A |
| Raspberries | NASS (2015, 2017, 2019) | CA, WA | 1,000 | -- | -- | 0.14 | 0.5 lbs AI/A |
| <i>Other caneberries</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Tree Nut Group | + | + | + | + | + | + | 0.5 lbs AI/A |
| Almonds | Kynetec (2014-2018) | CA | (S) | (S) | (S) | (S) | 0.5 lbs AI/A |
| Hazelnut | Kynetec (2014-2018) | OR | <500 | 4,000 | 40% | 0.07 | 0.5 lbs AI/A |
| Pecans | Kynetec (2014-2018) | AL, AZ, GA, LA, NM, OK, TX | 10,000 | 100,000 | <2.5% | 0.11 | 0.5 lbs AI/A |
| Pistachio | Kynetec (2014-2018) | CA | 4,000 | 20,000 | 0% | 0.21 | 0.5 lbs AI/A |
| Walnut | Kynetec (2014-2018) | CA | 8,000 | 90,000 | 5% | 0.09 | 0.5 lbs AI/A |
| <i>Other Tree Nuts</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---------------------------------------|-------------|----------------------------|--|--|------------------------|------------------------|--|
| Cereal Grains (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Barley (seed treatment) | ** | ** | ** | ** | ** | ** | 0.130 lbs AI/A |
| Buckwheat (seed treatment) | ** | ** | ** | ** | ** | ** | 0.017 lbs AI/A |
| Corn, field (seed treatment) | ** | ** | ** | ** | ** | ** | 0.118 lbs AI/A |
| Corn, pop (seed treatment) | ** | ** | ** | ** | ** | ** | 0.056 lbs AI/A |
| Corn, sweet (seed treatment) | ** | ** | ** | ** | ** | ** | 0.189 lbs AI/A |
| Millet (seed treatment) | ** | ** | ** | ** | ** | ** | 0.12 lbs AI/A |
| Oats (seed treatment) | ** | ** | ** | ** | ** | ** | 0.081 lbs AI/A |
| Rye (seed treatment) | ** | ** | ** | ** | ** | ** | 0.436 lbs AI/A |
| Sorghum (seed treatment) | ** | ** | ** | ** | ** | ** | 0.092 lbs AI/A |
| Wheat (seed treatment) | ** | ** | ** | ** | ** | ** | 0.176 lbs AI/A |
| Triticale (seed treatment) | ** | ** | ** | ** | ** | ** | 0.10 lbs AI/A |
| 19A Herbs | + | + | + | + | + | + | 0.38 lbs AI/A |
| Basil, Sweet | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Chives, Chinese | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Chives | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Cilantro | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Dill | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Fennel | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Mint | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Oregano | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Parsley | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Pepper, Spice | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Rosemary | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Sage | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Tarragon | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| Thyme | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |
| <i>Other 19A Herbs</i> | ** | ** | ** | ** | ** | ** | 0.38 lbs AI/A |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---|---------------------|--|--|--|------------------------|------------------------|--|
| Oilseed Group | + | + | + | + | + | + | Full crop group not registered |
| Cotton | Kynetec (2014-2018) | AL, AZ, AR, CA, FL, GA, LA, MS, MO, NC, OK, SC, TN, TX | 200,000 | 1,500,000 | 5% | 0.11 | 0.33 lbs AI/A |
| Oilseed Group (seed treatment) | + | + | + | + | + | + | Full crop group not registered |
| Borage (seed treatment) | ** | ** | ** | ** | ** | ** | 0.01 lbs AI/lbs seed |
| Canola/Rape (seed treatment) | ** | ** | ** | ** | ** | ** | 0.082 lbs AI/A |
| Cotton (seed treatment) | ** | ** | ** | ** | ** | ** | 0.095 lbs AI/A |
| Crambe (seed treatment) | ** | ** | ** | ** | ** | ** | 0.01 lbs AI/lbs seed |
| Flax (seed treatment) | ** | ** | ** | ** | ** | ** | 0.01 lbs AI/lbs seed |
| Mustard (seed treatment) | ** | ** | ** | ** | ** | ** | 0.07 lbs AI/A |
| Sunflower (seed treatment) | ** | ** | ** | ** | ** | ** | 0.02 lbs AI/A |
| Safflower (seed treatment) | ** | ** | ** | ** | ** | ** | 0.01 lbs AI/lbs seed |
| Tropical and Subtropical Fruit Group | + | + | + | + | + | + | 0.5 lbs AI/A |
| Avocado | CDPR (2013-2017) | CA* | <500 | <500 | 0% | 0.20 | 0.5 lbs AI/A |
| Guava | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Mango | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Olive | CDPR (2013-2017) | CA* | <500 | <500 | 0% | 0.10 | 0.5 lbs AI/A |
| Persimmon | CDPR (2013-2017) | CA | <500 | <500 | 5% | 0.17 | 0.5 lbs AI/A |
| Pomegranate | CDPR (2013-2017) | CA* | 4,000 | 10,000 | # | 0.21 | 0.5 lbs AI/A |
| <i>Other Tropical Fruit</i> | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---|---------------------|--------------------------------|--|--|------------------------|------------------------|---|
| Miscellaneous Crops | + | + | + | + | + | + | + |
| Artichoke | Kynetec (2014-2018) | CA | (S) | (S) | (S) | (S) | 0.38 lbs AI/A |
| Coffee | ** | ** | ** | ** | ** | ** | 0.5 lbs AI/A |
| Hops | ** | ** | ** | ** | ** | ** | 0.3 lbs AI/A |
| Peanuts | Kynetec (2014-2018) | AL, FL, GA, NC, SC, VA | 60,000 | 200,000 | 0% | 0.28 | 0.38 lbs AI/A |
| Tobacco | Kynetec (2014-2018) | GA, KY, NC, OH, PA, SC, TN, VA | 20,000 | 100,000 | 0% | 0.15 | 0.4 lbs AI/A |
| Miscellaneous Crops (seed treatment) | + | + | + | + | + | + | + |
| Peanuts (seed treatment) | ** | ** | ** | ** | ** | ** | 0.141 lbs AI/A |
| Switch Grass grown for biofuel (seed treatment) | ** | ** | ** | ** | ** | ** | 0.03 lbs AI/100 weight seed (TN and PA only) |
| Miscellaneous Crops (crops grown for seed) | + | + | + | + | + | + | + |
| Corn grown for seed (HI and PR only) | ** | ** | ** | ** | ** | ** | 0.00001 lbs AI/2 inch pot (HI only) 0.10 lbs AI/A (PR only) |
| Field corn grown for seed (production, research, and breeding purposes) (HI only) | ** | ** | ** | ** | ** | ** | 0.2 lbs AI/A |
| Greenhouse containerized corn being grown for seed (plant breeding programs) (PR only) | ** | ** | ** | ** | ** | ** | 0.0002 lbs AI/1 gal pot |
| Sunflower grown for seed (HI only) | ** | ** | ** | ** | ** | ** | 0.00001 lbs AI/2 inch pot |
| Greenhouse containerized sunflower being grown for seed (plant breeding programs) (PR only) | ** | ** | ** | ** | ** | ** | 0.0002 lbs AI/1 gal pot |
| Soybean grown for seed (HI only) | ** | ** | ** | ** | ** | ** | 0.00001 lbs AI/2 inch pot |
| Greenhouse containerized soybean being grown for seed (plant breeding programs) (PR only) | ** | ** | ** | ** | ** | ** | 0.0002 lbs AI/1 gal pot |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 6-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Pounds AI Applied ^a | Avg. Annual Total Acres Treated ^b | Percent Applied by Air | Avg. AI Rate (lb AI/A) | Max Labeled Rate ^c (units listed) |
|---|-------------|----------------------------|--|--|------------------------|------------------------|--|
| Greenhouse use vegetable seed crops (<i>plant breeding program</i>) (CA only) | ** | ** | ** | ** | ** | ** | 0.0004 lbs AI/2 inch pot |

| Notes | |
|-----------------|--|
| Kynetec (YEARS) | Agricultural usage surveyed by market research firm(s). |
| NASS (YEARS) | Surveyed by United States Department of Agriculture National Agricultural Statistics Service. |
| CDPR (YEARS) | Surveyed by the California Department of Pesticide Regulation. Used when 80% or more of crop is grown in California. |
| * | California crop. Over than 80% of crop grown in California. California usage is considered to be representative of National usage. |
| a | The pounds AI displayed in this document may differ from those displayed in the SLUA and other BEAD documents, because different calculation methods were used. |
| b | Total Acres Treated accounts for multiple applications to a single area. This may overestimate the number of acres treated as some acres are treated more than once. |
| c | Currently registered labels as of August 2020. |
| + | See constituent crops below. |
| (D) | Data withheld by NASS to avoid disclosing data for individual operations. |
| (S) | Insufficient number of reports to establish an estimate. |
| # | Withheld by EPA due to likely overcounting caused by reporting issue. |
| NR | Surveyed by the indicated source in the years listed, but no usage reported. |
| -- | Data unavailable. |
| ** | Site not surveyed at national level. |

Table 2. Imidacloprid Agricultural Usage by Crop and State. Data averaged over reported years. Values are rounded according to rounding rules provided in the Introduction.

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Root and Tuber Vegetables Group | + | + | + | + | + | + | + |
| Sugar beets | Kynetec (2014-2018) | CA | 10,000 | 800 | 0% | 80% | 25% |
| Sugar beets | Kynetec (2014-2018) | CO | 30,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | ID | 200,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | MI | 100,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | MN | 400,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | MT | 40,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | NE | 50,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | ND | 200,000 | NR | NR | NR | NR |
| Sugar beets | Kynetec (2014-2018) | WY | 30,000 | NR | NR | NR | NR |
| 1B Root Vegetables (except sugar beet) subgroup | + | + | + | + | + | + | + |
| Beet, garden | CDPR (2013-2017) | CA (15%) | 2,000 | <500 | # | # | # |
| Beet, garden | -- | Other States (85%) | ** | ** | ** | ** | ** |
| Carrots | Kynetec (2014-2018) | CA | 70,000 | 5,000 | 10% | 35% | 25% |
| Carrots | Kynetec (2014-2018) | MI | 4,000 | NR | NR | NR | NR |
| Carrots | Kynetec (2014-2018) | WA | 6,000 | (S) | <2.5% | 35% | 15% |
| Carrots | Kynetec (2014-2018) | WI | 4,000 | (S) | 0% | 60% | 15% |
| Celeriac | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Celeriac | -- | Other States (--%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|-------------------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Chervil | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Chervil | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Chicory | CDPR (2013-2017) | CA (82%)* | 700 | <500 | # | # | # |
| Chicory | -- | Other States (18%) | ** | ** | ** | ** | ** |
| Daikon | CDPR (2013-2017) | CA (79%) | 700 | <500 | # | # | # |
| Daikon | -- | Other States (21%) | ** | ** | ** | ** | ** |
| Radish | CDPR (2013-2017) | CA (13%) | 2,000 | <500 | # | # | # |
| Radish | -- | Other States (87%) | ** | ** | ** | ** | ** |
| Turnip | CDPR (2013-2017) | CA (6%) | <500 | <500 | # | # | # |
| Turnip | -- | Other States (94%) | ** | ** | ** | ** | ** |
| <i>Other 1B root vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Tuberous and corm vegetables | + | + | + | + | + | + | + |
| Ginger | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Ginger | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Potato | Kynetec (2014-2018) | CA | 40,000 | (S) | 15% | 65% | 35% |
| Potato | Kynetec (2014-2018) | CO | 60,000 | (S) | 0% | 20% | 10% |
| Potato | Kynetec (2014-2018) | FL | 30,000 | (S) | 0% | 40% | 15% |
| Potato | Kynetec (2014-2018) | ID | 300,000 | 40,000 | 45% | 60% | 50% |
| Potato | Kynetec (2014-2018) | ME | 50,000 | 6,000 | 25% | 45% | 35% |
| Potato | Kynetec (2014-2018) | MI | 50,000 | 8,000 | 30% | 85% | 65% |
| Potato | Kynetec (2014-2018) | MN | 40,000 | (S) | 10% | 25% | 20% |
| Potato | Kynetec (2014-2018) | MT | 10,000 | (S) | 20% | 80% | 35% |
| Potato | Kynetec (2014-2018) | NE | 10,000 | (S) | 0% | 100% | 40% |
| Potato | Kynetec (2014-2018) | NY | 10,000 | (S) | 15% | 65% | 25% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Potato | Kynetec (2014-2018) | NC | 10,000 | (S) | 0% | 55% | 30% |
| Potato | Kynetec (2014-2018) | ND | 80,000 | (S) | 5% | 55% | 25% |
| Potato | Kynetec (2014-2018) | OR | 40,000 | (S) | 5% | 60% | 30% |
| Potato | Kynetec (2014-2018) | PA | 3,000 | 600 | 0% | 80% | 40% |
| Potato | Kynetec (2014-2018) | TX | 10,000 | NR | NR | NR | NR |
| Potato | Kynetec (2014-2018) | WA | 200,000 | 7,000 | 20% | 60% | 35% |
| Potato | Kynetec (2014-2018) | WI | 70,000 | 4,000 | 20% | 45% | 30% |
| Sweet potato | CDPR (2013-2017) | CA (13%) | 20,000 | <500 | # | # | # |
| Sweet potato | -- | Other States (87%) | ** | ** | ** | ** | ** |
| Yam | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Yam | -- | Other States (--%) | ** | ** | ** | ** | ** |
| <i>Other Tuberous and Corm Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Root and Tuber Vegetables Group (seed treatment) | + | + | + | + | + | + | + |
| Carrots (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Potato (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Sugar beets (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Bulb Vegetable Group | + | + | + | + | + | + | + |
| Garlic | Kynetec (2014-2018) | CA | 30,000 | (S) | 0% | 10% | 5% |
| Leek | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Leek | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Onions | Kynetec (2014-2018) | CA | 50,000 | (S) | 0% | <2.5% | <1% |
| Onions | Kynetec (2014-2018) | CO | 2,000 | NR | NR | NR | NR |
| Onions | Kynetec (2014-2018) | GA | 7,000 | NR | NR | NR | NR |
| Onions | Kynetec (2014-2018) | ID | 8,000 | (S) | 0% | 15% | 5% |
| Onions | Kynetec (2014-2018) | NY | 8,000 | NR | NR | NR | NR |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Onions | Kynetec (2014-2018) | OR | 20,000 | (S) | 0% | 45% | 20% |
| Onions | Kynetec (2014-2018) | TX | 5,000 | (S) | 0% | 20% | 5% |
| Onions | Kynetec (2014-2018) | WA | 20,000 | NR | NR | NR | NR |
| <i>Other Bulb Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Bulb Vegetable Group (seed treatment) | + | + | + | + | + | + | + |
| Onion (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Leek (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Scallion (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Leafy Vegetables Group | + | + | + | + | + | + | + |
| Amaranth, edible (chinese spinach) | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Amaranth, edible (chinese spinach) | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Arugula | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Arugula | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Cardoon | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Cardoon | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Celery | Kynetec (2014-2018) | CA | 30,000 | 700 | 10% | 20% | 15% |
| Celery | Kynetec (2014-2018) | MI | 700 | (S) | 0% | 85% | 25% |
| Chrysanthemum garland | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Chrysanthemum garland | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Corn salad | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Corn salad | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Cress, Garden | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Cress, Garden | -- | Other States (--%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Dandelion greens | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Dandelion greens | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Endive (escarole) | CDPR (2013-2017) | CA (65%) | 2,000 | <500 | # | # | # |
| Endive (escarole) | -- | Other States (35%) | ** | ** | ** | ** | ** |
| Lettuce | Kynetec (2014-2018) | AZ | 70,000 | 20,000 | 65% | 95% | 80% |
| Lettuce | Kynetec (2014-2018) | CA | 200,000 | 20,000 | 60% | 80% | 70% |
| Radicchio | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Radicchio | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Spinach | Kynetec (2014-2018) | AZ | 10,000 | (S) | 0% | 10% | 5% |
| Spinach | Kynetec (2014-2018) | CA | 30,000 | 3,000 | 35% | 70% | 55% |
| Spinach | Kynetec (2014-2018) | CO | <500 | NR | NR | NR | NR |
| Spinach | Kynetec (2014-2018) | NJ | 1,000 | NR | NR | NR | NR |
| Spinach | Kynetec (2014-2018) | OK | 800 | (S) | 0% | 100% | 35% |
| Spinach | Kynetec (2014-2018) | TX | <500 | NR | NR | NR | NR |
| Swiss chard | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Swiss chard | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Upland Cress | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Upland Cress | -- | Other States (--%) | ** | ** | ** | ** | ** |
| <i>Other Leafy Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| 5. Brassica Leafy (Cole) Vegetables | + | + | + | + | + | + | + |
| Bok choy | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Bok choy | -- | Other States (--%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

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|-----------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Broccoli | Kynetec (2014-2018) | CA | 100,000 | 10,000 | 60% | 80% | 65% |
| Broccoli, Chinese (Gai lon) | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Broccoli, Chinese (Gai lon) | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Brussel Sprouts | CDPR (2013-2017) | CA (90%)* | 8,000 | 1,000 | # | # | # |
| Brussel Sprouts | — | Other States (10%) | ** | ** | ** | ** | ** |
| Cabbage | Kynetec (2014-2018) | AZ | 1,000 | (S) | 0% | 100% | 40% |
| Cabbage | Kynetec (2014-2018) | CA | 10,000 | 2,000 | 30% | 85% | 55% |
| Cabbage | Kynetec (2014-2018) | CO | <500 | (S) | 0% | 100% | 20% |
| Cabbage | Kynetec (2014-2018) | FL | 7,000 | (S) | 0% | 45% | 10% |
| Cabbage | Kynetec (2014-2018) | GA | 4,000 | (S) | 0% | 100% | 20% |
| Cabbage | Kynetec (2014-2018) | MI | 4,000 | (S) | 0% | 70% | 20% |
| Cabbage | Kynetec (2014-2018) | NY | 9,000 | (S) | 20% | 100% | 55% |
| Cabbage | Kynetec (2014-2018) | NC | 3,000 | (S) | 0% | 5% | <2.5% |
| Cabbage | Kynetec (2014-2018) | TX | 4,000 | NR | NR | NR | NR |
| Cabbage | Kynetec (2014-2018) | WI | 5,000 | (S) | 0% | 20% | 5% |
| Cabbage, chinese (napa) | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Cabbage, chinese (napa) | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Cauliflower | Kynetec (2014-2018) | AZ | 2,000 | (S) | 0% | 60% | 25% |
| Cauliflower | Kynetec (2014-2018) | CA | 40,000 | 6,000 | 65% | 90% | 75% |
| Collards | CDPR (2013-2017) | CA (5%) | 600 | <500 | # | # | # |
| Collards | -- | Other States (95%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Kale | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Kale | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Kohlrabi | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Kohlrabi | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Mizuna | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Mizuna | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Mustard greens | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Mustard greens | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Mustard, Chinese (Gai choy) | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Mustard, Chinese (Gai choy) | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Rape | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Rape | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Rapini | CDPR (2013-2017) | CA (--%) | -- | 600 | # | # | # |
| Rapini | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Turnip greens | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Turnip greens | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Watercress | CDPR (2013-2017) | CA (71%) | <500 | <500 | # | # | # |
| Watercress | -- | Other States (29%) | ** | ** | ** | ** | ** |
| <i>Other Brassica Leafy Cole Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| 5. Brassica Leafy (Cole) Vegetables (seed treatment) | + | + | + | + | + | + | + |
| Broccoli (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Legume Vegetables Group | + | + | + | + | + | + | + |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | CA | 8,000 | (S) | 25% | 75% | 55% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | FL | 30,000 | (S) | 0% | 35% | 15% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | GA | 7,000 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | IL | 10,000 | (S) | 0% | <2.5% | <1% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | IN | 1,000 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | MI | 20,000 | (S) | 0% | 25% | 10% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | NY | 30,000 | (S) | 0% | 35% | 10% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | NC | 2,000 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | OR | 10,000 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | PA | 9,000 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | TN | 9,000 | (S) | 0% | 15% | <2.5% |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | TX | 800 | NR | NR | NR | NR |
| Beans (Snap, Bush, Pole, String) | Kynetec (2014-2018) | WI | 70,000 | <500 | <1% | <1% | <1% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|----------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Dry Beans/Peas | Kynetec (2014-2018) | CA | 50,000 | (S) | 0% | 45% | 15% |
| Dry Beans/Peas | Kynetec (2014-2018) | CO | 50,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | ID | 200,000 | (S) | 0% | 5% | <2.5% |
| Dry Beans/Peas | Kynetec (2014-2018) | MI | 200,000 | (S) | <1% | 5% | 5% |
| Dry Beans/Peas | Kynetec (2014-2018) | MN | 200,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | MT | 800,000 | (S) | 0% | <1% | <1% |
| Dry Beans/Peas | Kynetec (2014-2018) | NE | 200,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | NY | 5,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | ND | 1,200,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | TX | 20,000 | NR | NR | NR | NR |
| Dry Beans/Peas | Kynetec (2014-2018) | WA | 300,000 | (S) | 0% | <1% | <1% |
| Dry Beans/Peas | Kynetec (2014-2018) | WY | 20,000 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | CA | 6,000 | (S) | 0% | 30% | 10% |
| Lima beans | Kynetec (2014-2018) | DE | 9,000 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | IL | 2,000 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | MD | 800 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | SC | <500 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | WA | 2,000 | NR | NR | NR | NR |
| Lima beans | Kynetec (2014-2018) | WI | 5,000 | (S) | 0% | 5% | <2.5% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | MN | 60,000 | <500 | 0% | <1% | <1% |
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | NY | 3,000 | NR | NR | NR | NR |
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | OR | 20,000 | NR | NR | NR | NR |
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | WA | 40,000 | NR | NR | NR | NR |
| Peas (Fresh/Green/Sweet) | Kynetec (2014-2018) | WI | 30,000 | (S) | <1% | 5% | <2.5% |
| Soybean | Kynetec (2014-2018) | AL | 500,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | AR | 3,400,000 | (S) | 0% | <2.5% | <1% |
| Soybean | Kynetec (2014-2018) | DE | 200,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | GA | 300,000 | (S) | 0% | <1% | <1% |
| Soybean | Kynetec (2014-2018) | IL | 10,300,000 | 10,000 | 5% | 5% | 5% |
| Soybean | Kynetec (2014-2018) | IN | 5,800,000 | (S) | 0% | <1% | <1% |
| Soybean | Kynetec (2014-2018) | IA | 9,900,000 | 7,000 | <1% | <2.5% | <2.5% |
| Soybean | Kynetec (2014-2018) | KS | 4,300,000 | (S) | 0% | 5% | <2.5% |
| Soybean | Kynetec (2014-2018) | KY | 1,900,000 | (S) | 0% | <1% | <1% |
| Soybean | Kynetec (2014-2018) | LA | 1,400,000 | 10,000 | 10% | 30% | 20% |
| Soybean | Kynetec (2014-2018) | MD | 500,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | MI | 2,200,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | MN | 7,800,000 | (S) | 0% | 10% | <2.5% |
| Soybean | Kynetec (2014-2018) | MS | 2,200,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | MO | 5,600,000 | 3,000 | <1% | <2.5% | <2.5% |
| Soybean | Kynetec (2014-2018) | NE | 5,400,000 | (S) | <1% | <2.5% | <2.5% |
| Soybean | Kynetec (2014-2018) | NY | 300,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | NC | 1,700,000 | (S) | 0% | <1% | <1% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Soybean | Kynetec (2014-2018) | ND | 6,300,000 | (S) | 0% | <1% | <1% |
| Soybean | Kynetec (2014-2018) | OH | 4,900,000 | (S) | <1% | 5% | <2.5% |
| Soybean | Kynetec (2014-2018) | OK | 500,000 | (S) | 0% | <2.5% | <1% |
| Soybean | Kynetec (2014-2018) | PA | 600,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | SC | 400,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | SD | 5,200,000 | (S) | 0% | <1% | <1% |
| Soybean | Kynetec (2014-2018) | TN | 1,700,000 | (S) | 0% | 25% | 5% |
| Soybean | Kynetec (2014-2018) | TX | 200,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | VA | 600,000 | NR | NR | NR | NR |
| Soybean | Kynetec (2014-2018) | WI | 2,000,000 | (S) | 0% | <2.5% | <1% |
| <i>Other Legume Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Legume Vegetables Group (seed treatment) | + | + | + | + | + | + | + |
| Soybean (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Beans (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Peas (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Fruiting Vegetables Group | + | + | + | + | + | + | + |
| Eggplant | CDPR (2013-2017) | CA (13%) | 700 | <500 | # | # | # |
| Eggplant | -- | Other States (87%) | ** | ** | ** | ** | ** |
| Okra | CDPR (2013-2017) | CA (6%) | <500 | <500 | # | # | # |
| Okra | -- | Other States (94%) | ** | ** | ** | ** | ** |
| Peppers | Kynetec (2014-2018) | AZ | <500 | (S) | 0% | 75% | 15% |
| Peppers | Kynetec (2014-2018) | CA | 30,000 | 6,000 | 40% | 75% | 65% |
| Peppers | Kynetec (2014-2018) | FL | 10,000 | (S) | 0% | 20% | 10% |
| Peppers | Kynetec (2014-2018) | GA | 3,000 | (S) | 0% | 20% | 5% |
| Peppers | Kynetec (2014-2018) | NJ | 1,000 | (S) | 0% | 45% | 10% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|----------------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Peppers | Kynetec (2014-2018) | NM | 8,000 | (S) | 0% | 25% | 15% |
| Peppers | Kynetec (2014-2018) | NC | 2,000 | (S) | <2.5% | 25% | 15% |
| Peppers | Kynetec (2014-2018) | OH | 1,000 | (S) | 0% | 40% | 10% |
| Peppers | Kynetec (2014-2018) | TX | 700 | NR | NR | NR | NR |
| Tomato | Kynetec (2014-2018) | CA | 300,000 | 50,000 | 65% | 75% | 70% |
| Tomato | Kynetec (2014-2018) | FL | 30,000 | 7,000 | 50% | 70% | 60% |
| Tomatillo | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Tomatillo | — | Other States (--%) | ** | ** | ** | ** | ** |
| <i>Other Fruiting Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Cucurbit Vegetables | + | + | + | + | + | + | + |
| Bitter Melon | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Bitter Melon | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Cantaloupe | Kynetec (2014-2018) | AZ | 20,000 | (S) | 50% | 100% | 75% |
| Cantaloupe | Kynetec (2014-2018) | CA | 30,000 | 4,000 | 35% | 60% | 50% |
| Cantaloupe | Kynetec (2014-2018) | FL | 3,000 | (S) | 0% | 10% | <2.5% |
| Cantaloupe | Kynetec (2014-2018) | GA | 2,000 | NR | NR | NR | NR |
| Cantaloupe | Kynetec (2014-2018) | IN | <500 | NR | NR | NR | NR |
| Cantaloupe | Kynetec (2014-2018) | NC | 600 | (S) | 0% | 15% | 5% |
| Cantaloupe | Kynetec (2014-2018) | SC | <500 | NR | NR | NR | NR |
| Cantaloupe | Kynetec (2014-2018) | TX | 2,000 | (S) | 0% | 35% | 10% |
| Cucumber | Kynetec (2014-2018) | CA | 9,000 | (S) | 0% | 25% | 10% |
| Cucumber | Kynetec (2014-2018) | DE | 2,000 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | FL | 30,000 | (S) | 0% | 45% | 15% |
| Cucumber | Kynetec (2014-2018) | GA | 9,000 | NR | NR | NR | NR |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|----------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Cucumber | Kynetec (2014-2018) | MD | <500 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | MI | 40,000 | (S) | 0% | 15% | 10% |
| Cucumber | Kynetec (2014-2018) | MO | <500 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | NJ | 700 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | NC | 10,000 | (S) | 0% | 20% | 10% |
| Cucumber | Kynetec (2014-2018) | SC | <500 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | TX | 7,000 | (S) | 0% | 10% | <2.5% |
| Cucumber | Kynetec (2014-2018) | WA | <500 | NR | NR | NR | NR |
| Cucumber | Kynetec (2014-2018) | WI | 6,000 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | CA | 6,000 | 1,000 | 30% | 70% | 55% |
| Pumpkin | Kynetec (2014-2018) | CT | 1,000 | <500 | 35% | 100% | 65% |
| Pumpkin | Kynetec (2014-2018) | IL | 20,000 | (S) | 0% | <1% | <1% |
| Pumpkin | Kynetec (2014-2018) | IN | 5,000 | (S) | 0% | 30% | 10% |
| Pumpkin | Kynetec (2014-2018) | MD | <500 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | MA | 2,000 | <500 | 45% | 100% | 70% |
| Pumpkin | Kynetec (2014-2018) | MI | 5,000 | (S) | <1% | 40% | 15% |
| Pumpkin | Kynetec (2014-2018) | MN | 2,000 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | MO | 1,000 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | NJ | 2,000 | <500 | 0% | 20% | 5% |
| Pumpkin | Kynetec (2014-2018) | NM | <500 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | NY | 5,000 | 700 | 0% | 95% | 50% |
| Pumpkin | Kynetec (2014-2018) | OH | 7,000 | (S) | 0% | <2.5% | <1% |
| Pumpkin | Kynetec (2014-2018) | PA | 5,000 | (S) | 0% | 70% | 35% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Pumpkin | Kynetec (2014-2018) | TN | <500 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | TX | 3,000 | (S) | 0% | <1% | <1% |
| Pumpkin | Kynetec (2014-2018) | VA | 2,000 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | WA | 2,000 | NR | NR | NR | NR |
| Pumpkin | Kynetec (2014-2018) | WI | 2,000 | (S) | 0% | 5% | <2.5% |
| Squash | Kynetec (2014-2018) | CA | 6,000 | (S) | 10% | 25% | 15% |
| Squash | Kynetec (2014-2018) | CT | 800 | <500 | 45% | 100% | 85% |
| Squash | Kynetec (2014-2018) | FL | 5,000 | (S) | 0% | 40% | 15% |
| Squash | Kynetec (2014-2018) | GA | 3,000 | (S) | 0% | <2.5% | <1% |
| Squash | Kynetec (2014-2018) | MA | 2,000 | <500 | 20% | 100% | 75% |
| Squash | Kynetec (2014-2018) | MI | 6,000 | (S) | 0% | 30% | 15% |
| Squash | Kynetec (2014-2018) | NJ | 3,000 | (S) | 0% | 15% | 5% |
| Squash | Kynetec (2014-2018) | NY | 4,000 | 600 | 0% | 90% | 50% |
| Squash | Kynetec (2014-2018) | NC | 3,000 | (S) | 0% | 15% | 5% |
| Squash | Kynetec (2014-2018) | OH | 2,000 | (S) | 0% | <2.5% | <1% |
| Squash | Kynetec (2014-2018) | OR | 3,000 | NR | NR | NR | NR |
| Squash | Kynetec (2014-2018) | PA | <500 | (S) | 0% | 95% | 20% |
| Squash | Kynetec (2014-2018) | SC | 1,000 | (S) | 0% | 10% | <2.5% |
| Squash | Kynetec (2014-2018) | TX | 2,000 | (S) | 0% | 35% | 10% |
| Squash | Kynetec (2014-2018) | WI | 1,000 | NR | NR | NR | NR |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|----------------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Watermelon | Kynetec (2014-2018) | AL | 1,000 | NR | NR | NR | NR |
| Watermelon | Kynetec (2014-2018) | AZ | 600 | NR | NR | NR | NR |
| Watermelon | Kynetec (2014-2018) | CA | 10,000 | 2,000 | 30% | 75% | 55% |
| Watermelon | Kynetec (2014-2018) | FL | 20,000 | (S) | <2.5% | 55% | 25% |
| Watermelon | Kynetec (2014-2018) | GA | 20,000 | (S) | 0% | 15% | 5% |
| Watermelon | Kynetec (2014-2018) | IN | 7,000 | (S) | 0% | 20% | 10% |
| Watermelon | Kynetec (2014-2018) | MD | 700 | NR | NR | NR | NR |
| Watermelon | Kynetec (2014-2018) | MS | <500 | NR | NR | NR | NR |
| Watermelon | Kynetec (2014-2018) | MO | 600 | NR | NR | NR | NR |
| Watermelon | Kynetec (2014-2018) | NC | 6,000 | (S) | 0% | 35% | 20% |
| Watermelon | Kynetec (2014-2018) | OK | 2,000 | (S) | 0% | 85% | 20% |
| Watermelon | Kynetec (2014-2018) | SC | 8,000 | (S) | 0% | 5% | <1% |
| Watermelon | Kynetec (2014-2018) | TX | 30,000 | (S) | 35% | 55% | 45% |
| <i>Other Cucurbit Vegetables</i> | ** | ** | ** | ** | ** | ** | ** |
| Citrus Fruit Group | + | + | + | + | + | + | + |
| Grapefruit | Kynetec (2014-2018) | FL | 40,000 | 8,000 | 45% | 70% | 55% |
| Grapefruit | Kynetec (2014-2018) | TX | 7,000 | (S) | 0% | 95% | 35% |
| Kumquat | CDPR (2013-2017) | CA (74%) | <500 | <500 | # | # | # |
| Kumquat | -- | Other States (26%) | ** | ** | ** | ** | ** |
| Lemon | Kynetec (2014-2018) | AZ | 3,000 | (S) | 0% | <2.5% | <1% |
| Lemon | Kynetec (2014-2018) | CA | 50,000 | 6,000 | 20% | 40% | 30% |
| Lime | CDPR (2013-2017) | CA (77%) | 1000 | <500 | # | # | # |
| Lime | -- | Other States (23%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---------------------------|-------------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Oranges | Kynetec (2014-2018) | CA | 200,000 | 20,000 | 15% | 40% | 30% |
| Oranges | Kynetec (2014-2018) | FL | 400,000 | 50,000 | 20% | 50% | 35% |
| Pomelo | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Pomelo | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Tangelo | CDPR (2013-2017) | CA (70%) | 5,000 | 1,000 | # | # | # |
| Tangelo | NASS (2015) | FL | 2,000 | <500 | 0% | 45% | 15% |
| Tangerines | NASS (2015, 2017, 2019) | CA | 70,000 | 20,000 | 35% | 55% | 45% |
| Tangerines | NASS (2015, 2019) | FL | 9,000 | 900 | 40% | 15% | 25% |
| <i>Other Citrus Fruit</i> | ** | ** | ** | ** | ** | ** | ** |
| Pome Fruit Group | + | + | + | + | + | + | + |
| Apple | Kynetec (2014-2018) | CA | 20,000 | (S) | 5% | 30% | 15% |
| Apple | Kynetec (2014-2018) | MI | 40,000 | 2,000 | 5% | 65% | 35% |
| Apple | Kynetec (2014-2018) | NY | 50,000 | <500 | 5% | 30% | 15% |
| Apple | Kynetec (2014-2018) | NC | 3,000 | (S) | 0% | 80% | 25% |
| Apple | Kynetec (2014-2018) | OH | 2,000 | (S) | 0% | 20% | 5% |
| Apple | Kynetec (2014-2018) | OR | 2,000 | (S) | 0% | 40% | 10% |
| Apple | Kynetec (2014-2018) | PA | 20,000 | 1,000 | 25% | 65% | 40% |
| Apple | Kynetec (2014-2018) | VA | 10,000 | 700 | 0% | 75% | 45% |
| Apple | Kynetec (2014-2018) | WA | 200,000 | 8,000 | 15% | 55% | 35% |
| Apple | Kynetec (2014-2018) | WV | 2,000 | NR | NR | NR | NR |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Pear | Kynetec (2014-2018) | CA | 10,000 | (S) | 0% | 20% | 10% |
| Pear | Kynetec (2014-2018) | OR | 20,000 | (S) | 0% | 15% | 5% |
| Pear | Kynetec (2014-2018) | WA | 20,000 | 1,000 | 10% | 40% | 25% |
| Pear, Asian | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Pear, Asian | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Quince | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Quince | -- | Other States (--%) | ** | ** | ** | ** | ** |
| <i>Other Pome Fruit</i> | ** | ** | ** | ** | ** | ** | ** |
| Stone Fruit Group | + | + | + | + | + | + | + |
| Apricot | Kynetec (2014-2018) | CA | 10,000 | (S) | 0% | 5% | <2.5% |
| Cherry | Kynetec (2014-2018) | CA | 40,000 | <500 | 10% | 20% | 15% |
| Cherry | Kynetec (2014-2018) | MI | 40,000 | 2,000 | 10% | 45% | 25% |
| Cherry | Kynetec (2014-2018) | OR | 6,000 | 700 | 0% | 85% | 35% |
| Cherry | Kynetec (2014-2018) | WA | 40,000 | 5,000 | 55% | 85% | 75% |
| Nectarine | CDPR (2013-2017) | CA (87%)* | 20,000 | <500 | # | # | # |
| Nectarine | -- | Other States (13%) | ** | ** | ** | ** | ** |
| Peach | Kynetec (2014-2018) | AL | 1,000 | NR | NR | NR | NR |
| Peach | Kynetec (2014-2018) | CA | 50,000 | <500 | <1% | 15% | 5% |
| Peach | Kynetec (2014-2018) | CO | 700 | (S) | 0% | 65% | 15% |
| Peach | Kynetec (2014-2018) | GA | 10,000 | (S) | 0% | 65% | 15% |
| Peach | Kynetec (2014-2018) | IL | <500 | NR | NR | NR | NR |
| Peach | Kynetec (2014-2018) | MI | 3,000 | <500 | 30% | 60% | 50% |
| Peach | Kynetec (2014-2018) | NJ | 4,000 | (S) | 0% | 10% | <2.5% |
| Peach | Kynetec (2014-2018) | NY | <500 | (S) | 0% | 75% | 15% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|------------------------------------|-------------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Peach | Kynetec (2014-2018) | PA | 5,000 | <500 | 10% | 75% | 40% |
| Peach | Kynetec (2014-2018) | SC | 20,000 | NR | NR | NR | NR |
| Peach | Kynetec (2014-2018) | TX | 5,000 | (S) | 0% | 5% | <2.5% |
| Peach | Kynetec (2014-2018) | WA | 1,000 | (S) | 0% | 80% | 30% |
| Plums/Prunes | Kynetec (2014-2018) | CA | 70,000 | <500 | <1% | 15% | 10% |
| <i>Other Stone Fruit</i> | ** | ** | ** | ** | ** | ** | ** |
| Berry and Small Fruit Group | + | + | + | + | + | + | + |
| Grapes, Raisin | Kynetec (2014-2018) | CA | 200,000 | 20,000 | 40% | 55% | 45% |
| Grapes, Table | Kynetec (2014-2018) | CA | 100,000 | 30,000 | 40% | 65% | 55% |
| Grapes, Table | Kynetec (2014-2018) | NY | 700 | NR | NR | NR | NR |
| Grapes, Wine | Kynetec (2014-2018) | CA | 600,000 | 90,000 | 40% | 55% | 50% |
| Grapes, Wine | Kynetec (2014-2018) | NY | 7,000 | (S) | 0% | 60% | 15% |
| Grapes, Wine | Kynetec (2014-2018) | WA | 60,000 | (S) | 0% | 55% | 20% |
| Strawberry | Kynetec (2014-2018) | CA | 40,000 | 2,000 | 10% | 20% | 15% |
| Strawberry | Kynetec (2014-2018) | FL | 10,000 | NR | NR | NR | NR |
| Strawberry | Kynetec (2014-2018) | MI | <500 | NR | NR | NR | NR |
| Strawberry | Kynetec (2014-2018) | NY | <500 | (S) | 0% | 30% | 10% |
| Strawberry | Kynetec (2014-2018) | OR | 800 | NR | NR | NR | NR |
| Strawberry | Kynetec (2014-2018) | PA | <500 | (S) | 0% | 10% | <2.5% |
| Strawberry | Kynetec (2014-2018) | WA | <500 | NR | NR | NR | NR |
| Bushberries | + | + | + | + | + | + | + |
| Blueberries | CDPR (2013-2017) | CA (8%) | 7,000 | <500 | # | # | # |
| Blueberries | NASS (2015, 2019) | GA | 20,000 | 600 | NR | NR | NR |
| Blueberries | NASS (2015, 2017, 2019) | MI | 20,000 | 1,000 | 25% | 40% | 35% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--------------------------|-------------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Blueberries | NASS (2015, 2017, 2019) | NJ | 10,000 | (D) | (D) | (D) | (D) |
| Blueberries | NASS (2017) | NC | 9,000 | NR | NR | NR | NR |
| Blueberries | NASS (2015, 2019) | OR | 10,000 | (D) | 0% | (D) | (D) |
| Blueberries | NASS (2015, 2017, 2019) | WA | 10,000 | 1,000 | 65% | 70% | 65% |
| <i>Other bushberries</i> | ** | ** | ** | ** | ** | ** | ** |
| Caneberries | + | + | + | + | + | + | + |
| Blackberries | NASS (2017) | OR | 6,000 | (D) | 0% | (D) | (D) |
| Blackberries | CDPR (2013-2017) | CA (13%) | 2000 | <500 | # | # | # |
| Raspberries | NASS (2019) | CA | 7,000 | (D) | 0% | (D) | (D) |
| Raspberries | NASS (2017) | OR | 3,000 | NR | NR | NR | NR |
| Raspberries | NASS (2015, 2017, 2019) | WA | 10,000 | 1,000 | 65% | 80% | 75% |
| <i>Other caneberries</i> | ** | ** | ** | ** | ** | ** | ** |
| Tree Nut Group | + | + | + | + | + | + | + |
| Almond | Kynetec (2014-2018) | CA | 1,000,000 | (S) | 0% | <1% | <1% |
| Hazelnut | Kynetec (2014-2018) | OR | 40,000 | <500 | <2.5% | 20% | 10% |
| Pecan | Kynetec (2014-2018) | AL | 3,000 | (S) | 0% | 10% | <2.5% |
| Pecan | Kynetec (2014-2018) | AZ | 7,000 | (S) | 0% | 5% | <1% |
| Pecan | Kynetec (2014-2018) | GA | 100,000 | 9,000 | 10% | 50% | 30% |
| Pecan | Kynetec (2014-2018) | LA | 3,000 | (S) | 0% | 75% | 15% |
| Pecan | Kynetec (2014-2018) | NM | 40,000 | (S) | 0% | 15% | 5% |
| Pecan | Kynetec (2014-2018) | OK | 100,000 | (S) | 0% | <2.5% | <1% |
| Pecan | Kynetec (2014-2018) | TX | 200,000 | (S) | 0% | 30% | 10% |
| Pecan | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Pistachio | Kynetec (2014-2018) | CA | 300,000 | 4,000 | 5% | 10% | 10% |
| Walnut | Kynetec (2014-2018) | CA | 400,000 | 8,000 | 15% | 30% | 20% |
| <i>Other Tree Nuts</i> | ** | ** | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---------------------------------------|------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Cereal Grains (seed treatment) | + | + | + | + | + | + | + |
| Barley (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Buckwheat (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Corn, field (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Corn, pop (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Corn, sweet (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Millet (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Oats (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Rye (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Sorghum (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Wheat (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Triticale (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| 19A Herbs | + | + | + | + | + | + | + |
| Basil, Sweet | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Basil, Sweet | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Chives, Chinese | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Chives, Chinese | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Chives | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Chives | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Cilantro | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Cilantro | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Dill | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Dill | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Fennel | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Fennel | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Mint | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Mint | -- | Other States (--%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Oregano | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Oregano | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Parsley | CDPR (2013-2017) | CA (66%) | 3,000 | <500 | # | # | # |
| Parsley | -- | Other States (34%) | ** | ** | ** | ** | ** |
| Pepper, Spice | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Pepper, Spice | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Rosemary | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Rosemary | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Sage | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Sage | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Tarragon | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Tarragon | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Thyme | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Thyme | -- | Other States (--%) | ** | ** | ** | ** | ** |
| <i>Other 19A Herbs</i> | ** | ** | ** | ** | ** | ** | ** |
| Oilseed Group | + | + | + | + | + | + | + |
| Cotton | Kynetec (2014-2018) | AL | 400,000 | 10,000 | 5% | 30% | 15% |
| Cotton | Kynetec (2014-2018) | AZ | 100,000 | (S) | 0% | <2.5% | <1% |
| Cotton | Kynetec (2014-2018) | AR | 400,000 | (S) | 5% | 45% | 15% |
| Cotton | Kynetec (2014-2018) | CA | 200,000 | 6,000 | 5% | 35% | 20% |
| Cotton | Kynetec (2014-2018) | FL | 100,000 | (S) | 0% | 50% | 20% |
| Cotton | Kynetec (2014-2018) | GA | 1,300,000 | 20,000 | 5% | 20% | 15% |
| Cotton | Kynetec (2014-2018) | KS | 10,000 | NR | NR | NR | NR |
| Cotton | Kynetec (2014-2018) | LA | 200,000 | 10,000 | 50% | 75% | 65% |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Cotton | Kynetec (2014-2018) | MS | 500,000 | 10,000 | 20% | 35% | 30% |
| Cotton | Kynetec (2014-2018) | MO | 300,000 | 7,000 | <1% | 45% | 20% |
| Cotton | Kynetec (2014-2018) | NC | 400,000 | 20,000 | 20% | 35% | 30% |
| Cotton | Kynetec (2014-2018) | OK | 400,000 | 2,000 | 5% | 10% | 5% |
| Cotton | Kynetec (2014-2018) | SC | 200,000 | (S) | <1% | 20% | 10% |
| Cotton | Kynetec (2014-2018) | TN | 300,000 | (S) | <2.5% | 45% | 15% |
| Cotton | Kynetec (2014-2018) | TX | 6,100,000 | 40,000 | 5% | 10% | 5% |
| Oilseed Group (seed treatment) | + | + | + | + | + | + | + |
| Borage (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Canola/Rape (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Cotton (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Crambe (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Flax (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Mustard (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Sunflower (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Safflower (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Tropical and Subtropical Fruit Group | + | + | + | + | + | + | + |
| Avocado | CDPR (2013-2017) | CA (89%)* | 60,000 | <500 | <1% | <1% | <1% |
| Avocado | -- | Other States (11%) | ** | ** | ** | ** | ** |
| Guava | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Guava | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Mango | CDPR (2013-2017) | CA (--%) | (D) | <500 | # | # | # |
| Mango | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Olive | CDPR (2013-2017) | CA (94%)* | 40,000 | <500 | 0% | <1% | <1% |
| Olive | -- | Other States (6%) | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|------------------------------|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Persimmon | CDPR (2013-2017) | CA (76%) | 4,000 | <500 | 5% | 15% | 10% |
| Persimmon | -- | Other States (24%) | ** | ** | ** | ** | ** |
| Pomegranate | CDPR (2013-2017) | CA (98%)* | 30,000 | 4,000 | # | # | # |
| Pomegranate | -- | Other States (2%) | ** | ** | ** | ** | ** |
| <i>Other Tropical Fruits</i> | ** | ** | ** | ** | ** | ** | ** |
| Miscellaneous Crops | + | + | + | + | + | + | + |
| Artichoke | Kynetec (2014-2018) | CA | 7,000 | (S) | <2.5% | 40% | 25% |
| Coffee | ** | ** | ** | ** | ** | ** | ** |
| Hops | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |
| Hops | -- | Other States (--%) | ** | ** | ** | ** | ** |
| Peanuts | Kynetec (2014-2018) | AL | 200,000 | 9,000 | 0% | 50% | 20% |
| Peanuts | Kynetec (2014-2018) | FL | 200,000 | (S) | 0% | 35% | 10% |
| Peanuts | Kynetec (2014-2018) | GA | 700,000 | 20,000 | 0% | 20% | 15% |
| Peanuts | Kynetec (2014-2018) | NC | 100,000 | 20,000 | 30% | 65% | 45% |
| Peanuts | Kynetec (2014-2018) | OK | 20,000 | NR | NR | NR | NR |
| Peanuts | Kynetec (2014-2018) | SC | 100,000 | (S) | 0% | 40% | 15% |
| Peanuts | Kynetec (2014-2018) | TX | 200,000 | NR | NR | NR | NR |
| Peanuts | Kynetec (2014-2018) | VA | 20,000 | (S) | 0% | 70% | 40% |
| Peanuts | CDPR (2013-2017) | CA (--%) | -- | <500 | # | # | # |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown† | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|---|---------------------|----------------------------|-------------------------------|--|-----------------|-----------------|-----------------|
| Tobacco | Kynetec (2014-2018) | GA | 10,000 | (S) | 65% | 90% | 70% |
| Tobacco | Kynetec (2014-2018) | KY | 80,000 | 8,000 | 50% | 65% | 60% |
| Tobacco | Kynetec (2014-2018) | NC | 200,000 | 5,000 | 15% | 25% | 20% |
| Tobacco | Kynetec (2014-2018) | OH | 1,000 | (S) | 0% | 45% | 20% |
| Tobacco | Kynetec (2014-2018) | PA | 8,000 | (S) | 75% | 100% | 90% |
| Tobacco | Kynetec (2014-2018) | SC | 10,000 | (S) | 0% | 80% | 35% |
| Tobacco | Kynetec (2014-2018) | TN | 20,000 | 3,000 | 65% | 85% | 70% |
| Tobacco | Kynetec (2014-2018) | VA | 30,000 | 2,000 | 30% | 50% | 40% |
| Miscellaneous Crops (seed treatment) | + | + | + | + | + | + | + |
| Peanuts (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Switch Grass grown for biofuel (seed treatment) | ** | ** | ** | ** | ** | ** | ** |
| Miscellaneous Crops (crops grown for seed) | + | + | + | + | + | + | + |
| Corn grown for seed (HI and PR only) | ** | ** | ** | ** | ** | ** | ** |
| Field corn grown for seed (production, research, and breeding purposes) (HI only) | ** | ** | ** | ** | ** | ** | ** |
| Greenhouse containerized corn being grown for seed (plant breeding programs) (PR only) | ** | ** | ** | ** | ** | ** | ** |
| Sunflower grown for seed (HI only) | ** | ** | ** | ** | ** | ** | ** |
| Greenhouse containerized sunflower being grown for seed (plant breeding programs) (PR only) | ** | ** | ** | ** | ** | ** | ** |
| Soybean grown for seed (HI only) | ** | ** | ** | ** | ** | ** | ** |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Crop | Data Source | States with Reported Usage | Avg. Annual Crop Acres Grown [†] | Avg. Annual Pounds AI Applied ^a | Min. Annual PCT | Max. Annual PCT | Avg. Annual PCT |
|--|-------------|----------------------------|---|--|-----------------|-----------------|-----------------|
| Greenhouse containerized soybean being grown for seed (<i>plant breeding programs</i>) (PR only) | ** | ** | ** | ** | ** | ** | ** |
| Greenhouse use vegetable seed crops (<i>plant breeding program</i>) (CA only) | ** | ** | ** | ** | ** | ** | ** |

| Notes | |
|-----------------|---|
| Kynetec (YEARS) | Agricultural usage surveyed by market research firm(s). |
| NASS (YEARS) | Surveyed by United States Department of Agriculture National Agricultural Statistics Service. |
| CDPR (YEARS) | Surveyed by the California Department of Pesticide Regulation. Percent of crop grown in California included in parentheses. When over 80% of crop is grown in California, usage is considered to be representative of National usage. When less than 80% of crop is grown in California, but no national source surveys the crop, CDPR data is provided for California, but is not considered to be nationally representative. In these cases, survey data is unavailable for other states where the crop is grown. |
| * | California crop. Over than 80% of crop grown in California. California usage is considered to be representative of National usage. |
| † | CAG represents the total number of acres that are grown of the crop in each state. It is independent of treatment with any pesticide. CAG source is the 2017 Census of Agriculture for NASS and CDPR sites, and Kynetec for Kynetec sites. Kynetec calculates CAG yearly based on the Census of Agriculture and other NASS data. |
| a | The pounds AI displayed in this document may differ from those displayed in the SLUA and other BEAD documents, because different calculation methods were used. |
| + | See constituent crops below. |
| NR | Surveyed by the indicated source in the years listed, but no usage reported. |
| -- | Data unavailable. |
| ** | Site not surveyed at national level . |
| (D) | Data withheld by NASS to avoid disclosing data for individual operations. |
| (S) | Insufficient number of reports to establish an estimate. |
| # | Data withheld due to likely underestimate caused by reporting issue. |

Table 3. Imidacloprid Non-agricultural Usage. Data averaged over reported years. Values are rounded according to rounding rules provided in the Introduction.

| Use Site | Survey Status | Avg. Annual Pounds AI Applied ^a | Max Labeled Rate Outdoor ^b (see units below) | Max Labeled Rate Indoor ^b (see units below) |
|---|---------------------------|--|--|--|
| Ornamentals | + | + | + | + |
| Ornamentals grown in nurseries and greenhouses and surrounding areas (including nonbearing fruit and nut trees) | ** | ** | 0.5 lbs AI/A | 0.5 lbs AI/A |
| Potted vegetable plants intended for resale | ** | ** | 0.40 lbs AI/A | 0.40 lbs AI/A |
| Ornamentals (including nonbearing fruit and nut trees) | ** | ** | 0.43 lbs AI/A; 0.84 lbs AI/100 gallons; 0.003 lbs AI/in trunk in LA and TX | 0.43 lbs AI/A; 0.84 lbs AI/100 gallons; 0.003 lbs AI/in trunk in LA and TX |
| Grass/Turf | + | + | + | -- |
| Lawns and turf | ** | ** | 0.43 lbs AI/A; 0.84 lbs AI/100 gallons | -- |
| Golf course turfgrass | ** | ** | 0.43 lbs AI/A; 0.84 lbs AI/100 gallons | -- |
| Sod farm (turf) | ** | ** | 0.40 lbs AI/A | -- |
| Tree Use | + | + | + | -- |
| Christmas tree plantations | ** | ** | 0.1 lbs AI/A | -- |
| Cottonwood (<i>for pulp/timber</i>) | ** | ** | 0.5 lbs AI/A | -- |
| Poplar (<i>for pulp/timber</i>) | ** | ** | 0.5 lbs AI/A | -- |
| Trees in pastureland/rangeland | Kline (2016) ^f | <500 | 0.0002 lbs AI/diameter inch of tree | -- |
| Trees | Kline (2016) ^f | 5,000 | 0.84 lbs AI/10 gal injection (all US); NJ and NY: 0.074 lbs AI/24 in trunk | -- |
| Ash | Kline (2016) ^f | (included in "trees" usage) | MI & IN & OH: 0.003 lbs AI/in trunk | -- |
| Hemlock | Kline (2016) ^f | (included in "trees" usage) | GA, MD, NC, TN, VA, WV: 1.2 lbs AI/A | -- |
| Premises/Areas | + | + | + | + |
| Agricultural | + | + | + | + |
| Agricultural/Farm Building | ** | ** | 0.07 lbs AI/A | 0.0002 lbs AI/100 sq ft |
| Occupational/Manufacturing/Processing/Industrial Area | + | + | + | + |
| Food Handling Establishments | + | + | 0.08 lbs AI/A; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Food Processing Plants/Mills/Premises | Kline (2014) ^d | 10,000 ^c | 0.08 lbs AI/A; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Food Warehouses | Kline (2014) ^d | 2,000 ^c | 0.08 lbs AI/A; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Use Site | Survey Status | Avg. Annual Pounds AI Applied ^a | Max Labeled Rate Outdoor ^b (see units below) | Max Labeled Rate Indoor ^b (see units below) |
|--|--|--|---|--|
| Restaurants (eating establishments/grocery/market) | Kline (2014) ^d | 20,000 ^c | 0.08 lbs AI/A; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Institutional Kitchens | Kline (2014) ^d | 20,000 ^c | 0.08 lbs AI/A; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Medical/Hospital/Health/Sanitary Areas/Buildings/Premises | ** | ** | 0.14 lbs AI/A; Spray (no specific rate given) | 0.05 lbs AI/1000 sqft; Spray (no specific rate given) |
| Commercial/Municipal/ School Building/Rooms/Areas | ** | ** | 0.3 lbs AI/A; Spray (no specific rate given) | 0.05 lbs AI/1000 sqft; Spray (no specific rate given) |
| Bed bugs | ** | ** | -- | Spray (no specific rate given) |
| Residential/Recreational/Schools/Institutional/Retail | + | + | + | + |
| Consumer market (indoor and outdoor insecticides) | Kline (2016) ^c , NMRD (2019) ^g | 40,000 ^c | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Household Rooms/Areas | ** | ** | 0.26 lbs AI/A | 0.0002 lbs AI/100 sqft; Spray (no specific rate given) |
| Crawling insects nests/mounds/ General insect control/broad spectrum treatment (indoor and outdoor; pest management professionals) | Kline (2016) ⁱ | up to 80,000 ^c | 0.14 lbs AI/A | 0.0002 lbs AI/100 sqft |
| Bed bugs (Indoor only; pest management professionals) | Kline (2016) ⁱ | 40,000 | -- | Spray (no specific rate given) |
| Animal Areas | + | + | + | + |
| Pet/Animal Equipment/Bedding/Cages | ** | ** | Spray (no specific rate given) | Spray (no specific rate given) |
| Livestock/Animal Equipment/Bedding/Cages | Kline (2015) ^h | NR | 0.08 lbs AI/A | 0.05 lbs AI/1000 sqft |
| Animal/Pet Areas/Quarters/Houses | ** | ** | 0.08 lbs AI/A; spray (no specific rate given) | 0.05 lbs AI/1000 sqft paint or spray; spray (no specific rate given) |
| Premises/Areas | + | + | + | + |
| Impervious paved areas | Kline (2016) ^f | NR | 0.08 lbs AI/A | -- |
| Sewer/Sewage/Wastewater Systems Areas | ** | ** | 0.14 lbs AI/A | -- |
| Wood protection treatment to buildings/products | ** | ** | -- | 0.338 lbs AI/10 sq ft; 0.1% dilution (MS and LA SLNs) |
| Subterranean termite control (soil applied) | Kline (2016) ⁱ | 200,000 | 0.338 lbs AI/10 sq ft; 0.1% dilution (MS and LA SLNs) | -- |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Use Site | Survey Status | Avg. Annual Pounds AI Applied ^a | Max Labeled Rate Outdoor ^b (see units below) | Max Labeled Rate Indoor ^b (see units below) |
|---|---------------|--|---|--|
| Occupational/Manufacturing/Processing/Industrial Area | + | + | + | + |
| Refuse/Trash/Solid Waste/Waste Areas | ** | ** | 0.05 lbs AI/1000 sqft | 0.08 lbs AI/A |
| Refuse/Trash/Solid Waste/Waste Containers | ** | ** | 0.05 lbs AI/1000 sqft | -- |
| Pets | + | + | -- | + |
| Cats (adults/kittens) | ** | ** | — | 0.0002 lbs AI/ animal liquid; 1 collar/animal solid |
| Dogs/canines (adults/puppies) | ** | ** | — | 0.0009 lbs AI/ animal liquid; 1 collar/animal solid |
| Ferrets | ** | ** | — | 0.0001 lbs/animal |
| Transportation Vehicles | + | + | -- | + |
| Aircraft | ** | ** | — | Spray (no specific rate given) |
| Boats/Ships | ** | ** | — | Spray (no specific rate given) |
| Ground Transportation/Vehicles | ** | ** | -- | 0.0002 lbs AI/100 sq ft; Spray (no specific rate given) |
| Material Incorporation, During Manufacture | + | + | -- | + |
| Textiles/Fabrics/Fibers | ** | ** | -- | 1% product per weight of article (disallowed in CA); 0.40% product per weight of article (all US) |
| Plastic/Rubber/Polymers Plastic Products | ** | ** | -- | 1% product per weight of article (disallowed in CA); 0.40% product per weight of article (all US) |
| Adhesives | ** | ** | -- | 0.12% product formulation (disallowed in CA); 0.40% product per weight of article (all US) |
| Wood Materials/Products (Construction/Pre-finished) | ** | ** | -- | 0.005 lbs AI/ft ³ of wood composite; 24 ppm AI in pressure wash solution; 10% dip and spray |

Imidacloprid National and State Summary Use and Usage Matrix (11-16-20) (revised 06-3-21)

| Use Site | Survey Status | Avg. Annual Pounds AI Applied ^a | Max Labeled Rate Outdoor ^b (see units below) | Max Labeled Rate Indoor ^b (see units below) |
|---|---------------|--|---|--|
| Other | + | + | + | + |
| Commerical shellfish beds (<i>to control burrowing shrimp in intertidal commercial shellfish beds of Washington state's Willapa Bay and Grays Harbor</i>) | ** | ** | 0.5 lbs AI/A | -- |
| Food processing water | ** | ** | -- | 0.5 lbs AI/A |
| Rodent Burrows/nests (<i>to control fleas on squirrels and Prarie dogs</i>) | ** | ** | 0.00003 lbs AI/A | -- |

| Notes | |
|--------------|---|
| Kline (YEAR) | Non-agricultural usage surveyed by market research firm(s). |
| NMRD (YEAR) | Non-agricultural usage surveyed by market research firm(s). |
| a | The pounds AI displayed in this document may differ from those displayed in the SLUA and other BEAD documents, because different calculation methods were used. |
| b | Max labeled rate from currently registered labels as of September 2020. |
| c | The pounds active ingredient applied represents the total of both indoor and outdoor use where applicable. |
| + | See constituent use sites below. |
| ** | Site not surveyed at national level. |
| -- | Site not approved for this use. |
| NR | Surveyed by the indicated source in the years listed, but no usage reported. |
| d | Kline 2014. Pest Control in Food-Handling Establishments 2014: U.S. Market Analysis and Opportunities - All Food Handling by End Use Segment. [Data Accessed August 2020]. |
| e | Kline and Company. 2017. Consumer Markets for Pesticides and Fertilizers 2016: U.S. Market Analysis and Opportunities - Volume 1. [Data Accessed August 2020]. |
| f | Kline and Company. 2017. Industrial Vegetation Management of Pesticides and Fertilizers 2016: United States Market Analysis and Opportunities. [Data Accessed August 2020]. |
| g | Nonagricultural Market Research Data (NMRD). 2019. Study on consumer markets for pesticides and fertilizers. [Data Accessed August 2020]. |
| h | Kline 2016. Pest Control in Production Animal Health 2015: U.S. Market Analysis and Opportunities. Accessed August 2020. |
| i | Nonagricultural Market Research Data (NMRD). 2016. Study on consumer markets for pesticides and fertilizers. [Data Accessed August 2020]. |