

APPENDIX 1-4. Usage Data for Simazine - SUUM

See attached memorandum, Simazine (080807) National and States Summary Use and Usage Matrix (October 21, 2020) from the Biological and Economic Analysis Division.



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 21, 2020

MEMORANDUM

SUBJECT: Simazine (080807) National and State Summary Use and Usage Matrix

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Introduction

This document is an update of the Simazine National and State Summary Use and Usage Matrix (SUUM) to include an addendum that provides additional data (aggregated PCTs) for Table 3. Simazine Non-agricultural usage.

This document contains national and state-level use and usage data on simazine, an herbicide registered for control of broadleaf and grass weeds in food and feed crops and non-agricultural sites such as conifers and turf grasses. National-level agricultural data are presented in Figure 1 and Table 1; state-level agricultural data are presented in Table 2; national-level non-agricultural data are presented in Table 3.

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The Environmental Protection Agency (EPA) has been working with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to develop a method for assessing the risks of pesticides to endangered and threatened species. Given that many listed species range over large areas, it is necessary to consider use of pesticides on a landscape scale, rather than simply a field or a small watershed. One consideration involves the percent of the crop in a given area (relevant to a listed species' range) that is treated with a pesticide. There are uncertainties in extrapolating from national level usage data to regional and state level ranges of protected species. In particular, national level data do not distinguish if there are areas of a species' range where usage is greater or less than the average national usage. In order to address these concerns, this document provides all available estimates of pesticide usage data for simazine, nationally and by state. All registered use sites as of August 2019 are listed although usage data are not available for every site.

The intended use of the data presented here is to inform assumptions about how simazine is used 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 (Table 2). PCT is calculated as the percent of the acres grown for a crop (CAG) that are treated with simazine. Additionally, the data may inform assumptions about crops and states where simazine is likely not being used, by identifying crops that are surveyed 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 simazine.

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 August 2019 were used in order to represent current usage and the most recent use trend.

Data Sources

- **Kynetec USA, Inc., The AgroTrak Study (Kynetec)**– proprietary pesticide usage data. 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

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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 (CADPR) 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 application. As such, CADPR data is a census of all usage rather than a survey. The Pesticide Use Summary reports are published annually.
- **California Agricultural Statistics Review (CASR)** – publicly available California crop production data. CASR data are used as the primary source for CAG data when calculating PCT estimates for California crops and based on acres planted.
- **California County Agricultural Commissioners' Report (CCACR)** – publicly available California crop production data. CCACR data are used as a secondary source to calculate California crop PCT estimates in instances where CASR data are not available. PCT estimates using CCACR data are based on acres harvested.
- **Kline and Company Data (Kline)** - proprietary pesticide usage data. Data covers 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.

Data Presentation

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 CADPR, 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. For crops with less than 80% California production, Kynetec is the primary source of usage data. Kynetec is the primary data source as it collected annually and tends to provide the most robust usage data among the available data sources. NASS data are used for crops which are not surveyed by Kynetec data. 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.

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- If a registered use site is surveyed by one of our data sources but no usage is observed, this is indicated with the notation "Surveyed but no usage reported" across the data columns. 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 "Not Surveyed at National Level" across the data columns.

Variables are rounded as follows:

- **Average pounds of active ingredient applied and average total acres treated**– Annual average pounds of the pesticide applied and total acres treated are reported for each agricultural crop (i.e., **for surveyed states**, not for the entire United States). Values are calculated by averaging within years, averaging across years, 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 percent of crop treated** - Values are calculated by averaging within years, averaging across years, 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 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.*

Summary

The agricultural usage trend for simazine since 1998 is presented in Figure 1. Simazine usage peaked in the early 2000's in terms of both pounds applied and total acres treated but has shown a strong trend toward decreased usage over the past decade. During the most recent five years of available survey data (2013-2017), an annual average of 3,000,000 pounds of simazine were applied to an average of 2,600,000 acres of agricultural crops (Table 1). Further information on percent of crops treated with simazine by state is available in Table 2. National-level non-agricultural usage data are available in Table 3.

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Agricultural Usage

Simazine is an herbicide registered for use on the sites listed in the tables below. The following document presents a summary of the use and usage data that are available to the Agency on this active ingredient, during the years listed.

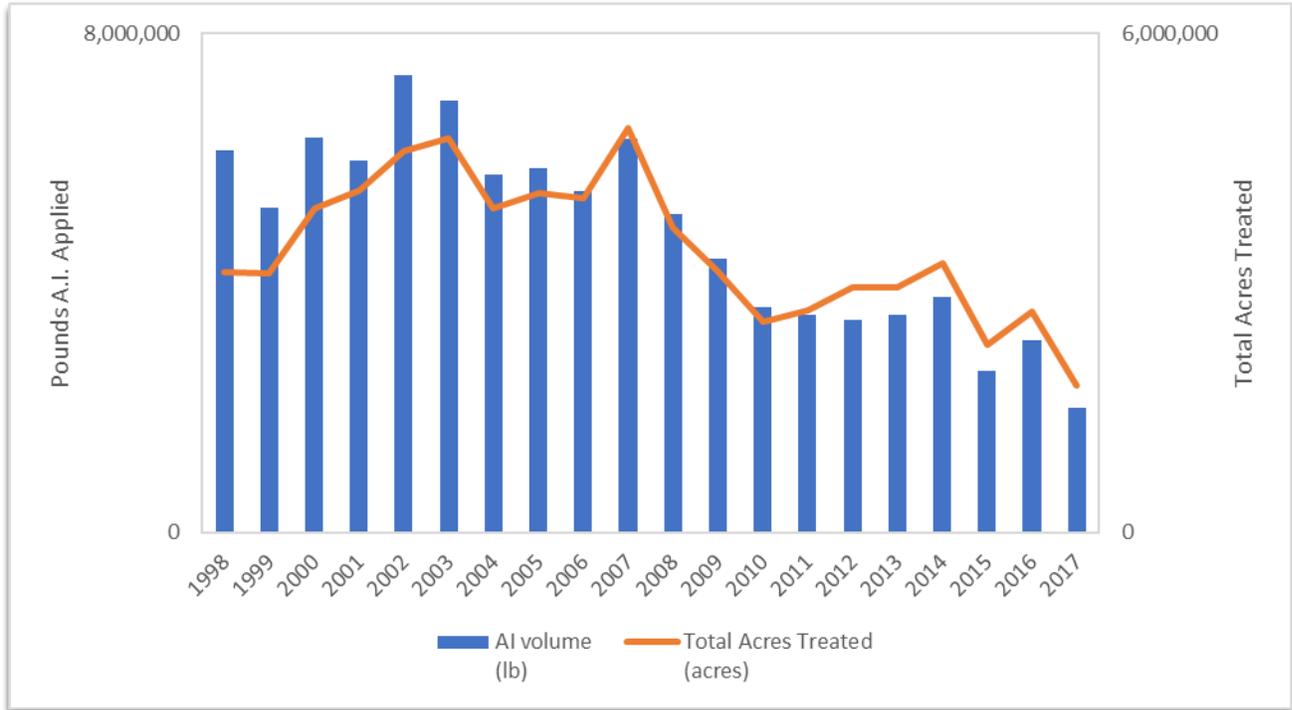


Figure 1: Simazine Total Acres Treated and Total Pounds A.I. Applied (1998-2017).
(Does not include usage data for unsurveyed crops and crops surveyed only by NASS or CADPR, as indicated in Table 1.)
Source: Kynetec USA, Inc. 2018, The AgroTrak Study, Database Subset: 1998-2017

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Table 1. National Simazine Agricultural Usage by Crop (Data averaged & rounded over reported years 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	% Acres Treated by Air	Avg. Single AI Rate (lb AI/A)	Max Labeled Single AI Rate ^c (lb AI/A)
Berries, small fruit	See individual crops below.						Full Crop Group Not Registered
Blueberries	NASS (2015, 2017)	GA, MI, NJ, NC, OR, WA	20,000	10,000	--	1.69	4.00
Caneberries	Kynetec (2013-2017)	OR, WA	10,000	10,000	0%	1.33	4.00
Cranberry	Not surveyed at the national level.						4.00
Grapes, Raisin	Kynetec (2013-2017)	CA	70,000	40,000	0%	1.97	4.00
Grapes, Table	Kynetec (2013-2017)	CA	10,000	8,000	0%	1.46	4.00
Grapes, Wine	Kynetec (2013-2017)	CA, NY	80,000	50,000	0%	1.82	4.00
Strawberries (Registered in OR & WA only)	Kynetec (2013-2017)	OR, WA	800	800	0%	1.00	1.00
Citrus Crops	See individual crops below.						Full Crop Group Not Registered
Grapefruit	Kynetec (2013-2017)	FL, TX	20,000	10,000	0%	2.21	4.00
Lemons	Kynetec (2013-2017)	CA	8,000	3,000	0%	2.64	4.00
Oranges	Kynetec (2013-2017)	CA, FL	200,000	90,000	0%	2.32	4.00
Cole Crops Grown for Seed (OR & WA SLNs only)	See individual crops below.						Full Crop Group Not Registered
Broccoli	Not surveyed at the national level.						1.00
Brussels Sprouts	Not surveyed at the national level.						1.25
Cabbage	Not surveyed at the national level.						1.25
Cabbage, Chinese	Not surveyed at the national level.						1.00
Cauliflower	Not surveyed at the national level.						1.25
Kale	Not surveyed at the national level.						1.00
Kohlrabi	Not surveyed at the national level.						1.00
Mustard	Not surveyed at the national level.						1.00
Radish	Not surveyed at the national level.						1.00
Rutabaga	Not surveyed at the national level.						1.00
Turnip greens	Not surveyed at the national level.						1.00
Field/Forage Crops	Full Crop Group Not Registered						Full Crop Group Not Registered

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Crop	Data Source	States with Reported Usage	Avg. Annual Pounds AI Applied ^a	Avg. Annual Total Acres Treated ^b	% Acres Treated by Air	Avg. Single AI Rate (lb AI/A)	Max Labeled Single AI Rate ^c (lb AI/A)
Alfalfa (Grown for Seed) (WA SLNs only)	Kynetec (2013-2017)	Surveyed but no usage reported.					1.60
Corn	Kynetec (2013-2017)	DE, IL, IN, IA, KY, MD, MI, MO, NC, OH, PA, VA, WI	2,300,000	2,200,000	<1%	1.05	2.00
Corn, Sweet	Kynetec (2013-2017)	MI, OH, PA, WI	4,000	4,000	0%	1.02	2.00
Nut Crops	See individual crops below.						Full Crop Group Not Registered
Almonds	Kynetec (2013-2017)	CA	20,000	20,000	0%	0.89	2
Hazelnuts (Filberts)	Kynetec (2013-2017)	OR	10,000	6,000	0%	1.90	4
Macadamia	Not surveyed at the national level.						4
Pecans	Kynetec (2013-2017)	GA	30,000	10,000	0%	1.87	4
Walnut	Kynetec (2013-2017)	CA	70,000	30,000	0%	2.19	4
Pome Fruit	Full Crop Group Not Registered						Full Crop Group Not Registered
Apples	Kynetec (2013-2017)	CA, MI, NY, NC, OH, OR, PA, VA, WA, WV	50,000	30,000	0%	1.90	4
Pears	Kynetec (2013-2017)	CA, OR, WA	9,000	4,000	0%	1.98	4
Stone Fruit	See individual crops below.						Full Crop Group Not Registered
Cherries	Kynetec (2013-2017)	MI, OR	10,000	6,000	0%	1.65	4
Nectarines	CADPR (2012-2016)	CA	100	100	0%	1.02	2
Peaches	Kynetec (2013-2017)	AL, CA, GA, IL, MI, PA, SC	15,000	10,000	0%	1.47	4
Plums	Kynetec (2013-2017)	CA	1,000	800	0%	1.66	4
Other Miscellaneous Crops	See individual crop below.						

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Crop	Data Source	States with Reported Usage	Avg. Annual Pounds AI Applied ^a	Avg. Annual Total Acres Treated ^b	% Acres Treated by Air	Avg. Single AI Rate (lb AI/A)	Max Labeled Single AI Rate ^c (lb AI/A)
Avocado	CADPR (2012-2016)	CA	10,000	10,000	<1%	1.28	4
Olives	CADPR (2012-2016)	CA	7,000	3,000	<1%	1.98	4

Notes	
Kynetec (YEAR-YEAR)	Agricultural usage surveyed by market research firm(s). Values rounded.
CADPR (-YEAR-YEAR)	Surveyed by the California Department of Pesticide Regulation. Over 80% of crop is grown in California
NASS (YEAR)	Surveyed by United States Department of Agriculture National Agricultural Statistics Service
Kline (YEAR)	<i>Citation</i>
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	Max labeled rate from 2019 Simazine Pesticide Label Use Summary (PLUS) Report
--	Data unavailable.

Table 2. Simazine Agricultural Usage by Crop and State (Data averaged & rounded over reported years according to rounding rules provided in the Introduction.)

Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Berries, small fruit	See individual crops below.						
Blueberries	CADPR-CASR (2012-2016)	CA (5%) [†]	5,000	800	Data withheld due to likely overcounting caused by reporting issue.		
Blueberries	NASS (2015, 2017);	GA	20,000	7,000	20%	25%	20%
Blueberries	NASS (2015, 2017);	MI	20,000	5,000	10%	10%	10%
Blueberries	NASS (2017);	NJ	10,000	3,000	25%	25%	25%
Blueberries	NASS (2015, 2017);	NC	9,000	(D)	(D)	(D)	(D)

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Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Blueberries	NASS (2015, 2017);	OR	10,000	5,000	15%	35%	25%
Blueberries	NASS (2015, 2017);	WA	10,000	(D)	(D)	(D)	(D)
Caneberries	Kynetec (2013-2017)	OR	10,000	7,000	<2.5%	60%	40%
Caneberries	Kynetec (2013-2017)	WA	7,000	7,000	0%	100%	40%
Caneberries (<i>Blackberries only</i>)	CADPR-CCACR (2012-2016)	CA (7%) ⁺	1,000	4	Data withheld due to likely overcounting caused by reporting issue.		
Cranberry	Not surveyed at the state level.						
Grapes, Raisin	Kynetec (2013-2017)	CA	200,000	70,000	10%	30%	15%
Grapes, Table	Kynetec (2013-2017)	CA	100,000	10,000	<2.5%	5%	5%
Grapes, Table	Kynetec (2013-2017)	NY	700	Surveyed but no usage reported.			
Grapes, Wine	Kynetec (2013-2017)	CA	600,000	70,000	<1%	15%	5%
Grapes, Wine	Kynetec (2013-2017)	NY	20,000	20,000	0%	70%	20%
Grapes, Wine	Kynetec (2013-2017)	WA	50,000	Surveyed but no usage reported.			
Strawberries (<i>Registered in OR & WA only</i>)	Kynetec (2013-2017)	OR	1,000	500	0%	50%	25%
Strawberries (<i>Registered in OR & WA only</i>)	Kynetec (2013-2017)	WA	600	300	0%	85%	25%
Citrus Crops	See individual crops below.						
Grapefruit	CADPR-CASR (2012-2016)	CA (12%) ⁺	10,000	2,000	Data withheld due to likely overcounting caused by reporting issue.		
Grapefruit	Kynetec (2013-2017)	FL	40,000	10,000	<1%	10%	5%
Grapefruit	Kynetec (2013-2017)	TX	10,000	8,000	10%	50%	15%
Lemons	Kynetec (2013-2017)	CA	50,000	8,000	<1%	10%	5%
Lemons	Kynetec (2013-2017)	AZ	6,000	Surveyed but no usage reported.			
Oranges	Kynetec (2013-2017)	CA	200,000	50,000	<2.5%	20%	10%

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Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Oranges	Kynetec (2013-2017)	FL	400,000	200,000	10%	15%	10%
Cole Crops Grown for Seed (OR & WA SLNs Only)	See individual crops below.						
Broccoli	Not surveyed at the state level.						
Brussels Sprouts	Not surveyed at the state level.						
Cabbage	Not surveyed at the state level.						
Cabbage, Chinese	Not surveyed at the state level.						
Cauliflower	Not surveyed at the state level.						
Kale	Not surveyed at the state level.						
Kohlrabi	Not surveyed at the state level.						
Mustard	Not surveyed at the state level.						
Radish	Not surveyed at the state level.						
Rutabaga	Not surveyed at the state level.						
Turnip greens	Not surveyed at the state level.						
Field/Forage Crops	See individual crops below.						
Alfalfa Grown for Seed (WA SLNs only)	Kynetec (2013-2017)	WA	400,000	Surveyed but no usage reported.			
Corn (forage-fodder only)	CADPR-CASR (2012-2016)	CA (7%) ⁺	500,000	20	Data withheld due to likely overcounting caused by reporting issue.		
Corn	Kynetec (2013-2017)	DE	200,000	40,000	0%	70%	25%
Corn	Kynetec (2013-2017)	IL	11,800,000	900,000	5%	10%	5%
Corn	Kynetec (2013-2017)	IN	5,800,000	500,000	5%	10%	10%
Corn	Kynetec (2013-2017)	IA	13,800,000	5,000	0%	<1%	<1%
Corn	Kynetec (2013-2017)	Ky	1,500,000	50,000	<2.5%	5%	5%
Corn	Kynetec (2013-2017)	MD	500,000	200,000	10%	65%	30%
Corn	Kynetec (2013-2017)	MI	2,600,000	20,000	0%	5%	<2.5%
Corn	Kynetec (2013-2017)	MO	3,400,000	200,000	<2.5%	5%	5%
Corn	Kynetec (2013-2017)	NC	900,000	20,000	0%	5%	<2.5%
Corn	Kynetec (2013-2017)	OH	3,600,000	100,000	<2.5%	5%	5%
Corn	Kynetec (2013-2017)	PA	1,500,000	60,000	<2.5%	5%	5%

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Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Corn	Kynetec (2013-2017)	VA	500,000	200,000	25%	45%	35%
Corn	Kynetec (2013-2017)	WI	4,100,000	30,000	<1%	<2.5%	<2.5%
Corn	Kynetec (2013-2017)	AL, AR, CA, CO, GA, ID, KS, LA, MN, MS, NE, NM, NY, ND, OK, SC, SD, TN, TX, WA, WY	41,800,000	Surveyed but no usage reported.			
Corn, Sweet	CADPR-CCACR (2012-2016)	CA (6%) ⁺	20,000	5	Data withheld due to likely overcounting caused by reporting issue.		
Corn, Sweet	Kynetec (2013-2017)	MI	6,000	15	0%	<2.5%	<1%
Corn, Sweet	Kynetec (2013-2017)	OH	20,000	800	0%	25%	5%
Corn, Sweet	Kynetec (2013-2017)	PA	8,000	700	0%	5%	5%
Corn, Sweet	Kynetec (2013-2017)	WI	70,000	2,000	<2.5%	5%	5%
Corn, Sweet	Kynetec (2013-2017)	FL, GA, IL, MN, NJ, NY, WA	400,000	Surveyed but no usage reported.			
Nut Crops	See individual crop below.						
Almonds	Kynetec (2013-2017)	CA	1,000,000	20,000	0%	5%	<2.5%
Hazelnuts	Kynetec (2013-2017)	OR	40,000	10,000	5%	30%	15%
Macadamia	Kynetec (2013-2017)						
Pecans	Kynetec (2013-2017)	GA	100,000	30,000	0%	20%	10%
Pecans	Kynetec (2013-2017)	AL, AR, LA, NM, OK, TX	300,000	Surveyed but no usage reported.			
Walnut	Kynetec (2013-2017)	CA	300,000	70,000	<2.5%	15%	10%
Pome Fruit	See individual crops below.						
Apples	Kynetec (2013-2017)	CA	20,000	300	0%	<2.5%	<2.5%
Apples	Kynetec (2013-2017)	MI	40,000	2,000	0%	5%	<2.5%

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Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Apples	Kynetec (2013-2017)	NY	50,000	5,000	<2.5%	20%	5%
Apples	Kynetec (2013-2017)	NC	3,000	300	0%	5%	<2.5%
Apples	Kynetec (2013-2017)	OH	3,000	2,000	0%	45%	20%
Apples	Kynetec (2013-2017)	OR	3,000	300	0%	5%	<2.5%
Apples	Kynetec (2013-2017)	PA	20,000	8,000	5%	40%	15%
Apples	Kynetec (2013-2017)	VA	10,000	4,000	<1%	25%	20%
Apples	Kynetec (2013-2017)	WA	200,000	30,000	0%	15%	10%
Apples	Kynetec (2013-2017)	WV	3,000	3,000	0%	95%	35%
Pears	Kynetec (2013-2017)	CA	10,000	1,000	0%	10%	5%
Pears	Kynetec (2013-2017)	OR	20,000	3,000	0%	20%	10%
Pears	Kynetec (2013-2017)	WA	20,000	4,000	<2.5%	25%	10%
Stone Fruit	See individual crops below.						
Cherries	CADPR-CASR (2012-2016)	CA (35%) ⁺	30,000	60	Data withheld due to likely overcounting caused by reporting issue.		
Cherries	Kynetec (2013-2017)	MI	40,000	10,000	10%	15%	10%
Cherries	Kynetec (2013-2017)	OR	10,000	80	0%	<2.5%	<1%
Cherries	Kynetec (2013-2017)	WA	40,000	Surveyed but no usage reported.			
Nectarines	CADPR-CASR (2012-2016)	CA (87%) ⁺	20,000	100	Data withheld due to likely overcounting caused by reporting issue.		
Peaches	Kynetec (2013-2017)	AL	2,000	600	0%	55%	15%
Peaches	Kynetec (2013-2017)	CA	40,000	600	0%	5%	<2.5%
Peaches	Kynetec (2013-2017)	GA	10,000	1,000	0%	25%	5%
Peaches	Kynetec (2013-2017)	IL	700	2,000	0%	70%	25%
Peaches	Kynetec (2013-2017)	MI	3,000	300	0%	20%	5%
Peaches	Kynetec (2013-2017)	PA	5,000	1,000	0%	30%	15%
Peaches	Kynetec (2013-2017)	SC	20,000	10,000	0%	80%	45%

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Crop	Data Source	State	Avg. Annual Crop Acres Grown [†]	Avg Annual Total Lbs. AI Applied ^a	Min. Annual PCT ^b	Max. Annual PCT ^b	Avg. Annual PCT ^b
Peaches	Kynetec (2013-2017)	CO, NJ, NY, TX, WA	10,000	Surveyed but no usage reported.			
Plums	Kynetec (2013-2017)	CA	80,000	1,000	<2.5%	<2.5%	<2.5%
Other Miscellaneous Crops	See individual crop below.						
Avocado	CADPR-CASR (2012-2016)	CA (81%) ⁺	50,000	10,000	Data withheld due to likely overcounting caused by reporting issue.		
Olives	CADPR-CASR (2012-2016)	CA (97%) ⁺	40,000	7,000	Data withheld due to likely overcounting caused by reporting issue.		

Notes	
Kynetec (YEAR-YEAR)	Agricultural usage surveyed by market research firm(s). Values rounded.
CADPR (YEAR-YEAR)	Surveyed by CADPR and Year(s) of data included. Values rounded. Percent of crop grown in California included under state. Crops with reported CADPR data, but less than 80% of crop grown in California, are grown in other states, but other survey data is unavailable.
NASS (YEAR)	Surveyed by USDA NASS. Values rounded.
+	Percent of crop grown in California.
*	California crop. Over than 80% of crop grown in California. California usage is considered to be representative of National usage.
†	Crop Acres Grown (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 values for the data sources come from the following: Kynetec comes from Kynetec estimate, NASS comes from the 2017 Census of Agriculture, and CDPR comes from the 2017-2018 California Agricultural Statistics Review (CASR) or 2012-2016 California County Agricultural Commissioners' Reports (CCACR)
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	The PCTs displayed in this document may differ from those displayed in the SLUA and other BEAD documents, because different calculation methods were used.
(D)	Withheld by NASS to avoid disclosing data for individual farms.
--	Data unavailable.

Simazine: National and State Summary Use and Usage Matrix

Non-Agricultural Usage

Table 3. Simazine Non-agricultural Usage and Use by (Data averaged & rounded over reported years according to rounding rules provided in the Introduction.)

Site	Data Source	Avg. Annual Pounds AI Applied ^a	Avg. Annual Acres Treated ^b	Max Single Labeled Rate (lb ai/a) ^c
Ornamental Lawns & Turf	See individual sites below.			
<i>Applied by Institutional Turf Facilities</i>	Kline (2014)	70,000	30,000	2.00
<i>Applied by Golf Courses</i>	Kline (2014)	200,000	40,000	2.00
Ornamental Sod Farms (Turf)	Kline (2014)	30,000	40,000	4.00 (FL); 2.00 (Other States)
Ornamentals	See individual sites below.			
Christmas Tree Plantings Shelterbelts* (<i>Coniferous/Deciduous Hardwoods</i>); Ornamental shrubs/vines; Trees (non-food) (<i>Timber Plantations</i>)	Kline (2014)	400,000	--	4
<i>Nursery Crops:</i> Christmas Tree Plantings Shelterbelts* (<i>Coniferous/Deciduous Hardwoods</i>); Ornamental shrubs/vines				3
Water Structures (<i>Aquariums & Ornamental Ponds & Fountains</i>)	Not surveyed at the National Level.			0.00000651 lb/gal

Notes	
Kline (2014)	Nonagricultural usage surveyed by market research firms.
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	Max labeled rate from 2019 Simazine Pesticide Label Use Summary (PLUS) Report.
--	Data unavailable.
*	Registrant (Syngenta) proposes voluntary cancellation of shelterbelts from all labels via 4/17/2020 letter to EPA.

Simazine: National and State Summary Use and Usage Matrix

Attachment: Addendum

Simazine SUUM_2020 Excel File.

Simazine: National and State Summary Use and Usage Matrix

Addendum

This addendum provides additional data for Table 3. Simazine Non-agricultural Usage. The additional data is derived from a supplemental method for obtaining estimated aggregated PCTs using available survey data on **treatable acres and base acres treated** for some of the non-ag uses. The maximum PCT is based on the ratio of base acres treated with all herbicides to the **total treatable acres** for that site while the average PCT is based on the ratio of acres treated with the chemical (simazine) to the **total treatable acres**. See the table below on PCT estimates for simazine non-agricultural sites.

Simazine Non-Agricultural PCT Estimates, 2013-2017

Site	Data Source	Treatable Acres	Base Acres Treated w/Herbicides	Acres Treated w/Simazine	Avg PCT ^a	Max PCT ^b
Ornamental Lawns & Turf		<i>See sector usage below.</i>				
<i>Applied by Institutional Turf Facilities</i>	Kline (2014) T&O	7,800,000	2,000,000	30,000	<1%	25%
<i>Applied by Golf Courses</i>	Kline (2014) T&O	1,700,000	1,300,000	40,000	<2.5%	76%
<i>Applied by Ornamental Sod Farms (Turf)</i>	Kline (2014) T&O	320,000	310,000	40,000	12.5%	97%

Notes	
Kline (YEAR)	Nonagricultural usage surveyed by market research firm. Sectors: T&O (Professional Turf & Ornamental Markets).
a	Calculated based on ratio of acres treated with simazine to treatable acres.
b	Calculated based on ratio of base acres treated with all herbicides to treatable acres.