

# Use Trends of Pesticides Listed by U.S. EPA as A or B Carcinogens or on the State's Proposition 65 List of Chemicals that are "Known to Cause Cancer": Cumulative Acres Treated

Text files of data are available at <https://files.cdpr.ca.gov/pub/outgoing/pur/data/>. The reported cumulative acres treated with chemicals that are listed by U.S. EPA as A or B carcinogens or on the State's Proposition 65 list of chemicals that are 'known to cause cancer.' Use includes primarily agricultural applications (Most nonagricultural pesticide use reports are not required to report acreage. A zero indicates some nonagricultural use occurred, but acreage was not reported. The word 'none' or 'N/A' indicates no use at all that year). The grand total for acres treated may be less than the sum of acres treated for all chemicals because some products contain more than one active ingredient.

| Chemical   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>1,2-dichloropropane, 1,3-dichloropropene and related c3 compounds</b> | N/A    | 18     | N/A    | 9      | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    |
| <b>1,3-dichloropropene</b>   | 59,065 | 69,441 | 71,852 | 69,656 | 78,332 | 75,739 | 70,641 | 65,782 | 62,136 | 63,497 |
| <b>2,4-d</b>   | 7,565  | 7,749  | 10,773 | 11,041 | 13,243 | 12,019 | 8,704  | 10,917 | 9,725  | 13,206 |
| <b>4-vinylcyclohexenediepoide</b>  | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | <1     | <1     | <1     |
| <b>acifluorfen, sodium salt</b>  | N/A    | <1     | <1     | 4      | N/A    | N/A    | N/A    | <1     | N/A    | N/A    |
| <b>alachlor</b>  | 3,385  | 3,284  | 2,670  | 2,033  | 1,497  | 70     | 3      | 3      | 3      | N/A    |
| <b>alpha-chlorohydrin</b>  | <1     | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    |
| <b>amitrole</b>  | <1     | <1     | N/A    | N/A    | N/A    | 70     | N/A    | N/A    | <1     | N/A    |
| <b>arsenic acid</b>  | <1     | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    | N/A    |
| <b>arsenic pentoxide</b>   | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | N/A    | N/A    |
| <b>arsenic trioxide</b>  | <1     | <1     | N/A    | <1     | <1     | <1     | N/A    | N/A    | N/A    | N/A    |
| <b>cacodylic acid</b>  | <1     | <1     | N/A    | <1     | N/A    | <1     | 6      | 88     | N/A    | <1     |

| Chemical                               | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>captan</b>                          | 210,103   | 209,406   | 187,988   | 211,312   | 212,100   | 246,074   | 220,606   | 219,034   | 202,223   | 235,283   |
| <b>carbaryl</b>                        | 68,469    | 97,229    | 96,667    | 108,805   | 136,319   | 116,667   | 106,736   | 99,823    | 98,844    | 108,589   |
| <b>carbon tetrachloride</b>            | <1        | <1        | N/A       | <1        | <1        | <1        | <1        | <1        | <1        | <1        |
| <b>chlordane</b>                       | N/A       | <1        | N/A       | N/A       | <1        | N/A       | <1        | <1        | N/A       | <1        |
| <b>chlordecone</b>                     | <1        | <1        | <1        | <1        | <1        | <1        | <1        | <1        | <1        | <1        |
| <b>chlorothalonil</b>                  | 590,737   | 573,875   | 530,738   | 566,227   | 541,351   | 542,115   | 584,739   | 549,211   | 541,627   | 523,918   |
| <b>chromic acid</b>                    | <1        | <1        | <1        | <1        | <1        | <1        | <1        | <1        | N/A       | N/A       |
| <b>creosote</b>                        | N/A       | N/A       | <1        | N/A       | <1        | N/A       | N/A       | <1        | <1        | 15        |
| <b>daminozide</b>                      | 2,430     | 2,983     | 2,549     | 2,443     | 2,412     | 2,083     | 2,258     | 2,241     | 1,886     | 1,712     |
| <b>ddvp</b>                            | 5,184     | 6,530     | 5,593     | 3,307     | 6,282     | 3,317     | 787       | 12        | 829       | 735       |
| <b>ddvp, other related</b>             | 1,945     | 5,442     | 5,537     | 3,301     | 5,149     | 3,287     | 703       | 10        | 615       | 470       |
| <b>diclofop-methyl</b>                 | 20        | N/A       | N/A       | N/A       | N/A       | N/A       | N/A       | N/A       | N/A       | N/A       |
| <b>diethanolamine</b>                  | N/A       | N/A       | N/A       | N/A       | 4,872     | 16,766    | 17,244    | 20,205    | 18,357    | 19,290    |
| <b>dioctyl phthalate</b>               | 4,741     | 5,311     | 3,188     | 1,885     | 626       | 76        | N/A       | 46        | 176       | 86        |
| <b>dipropyl isocinchomeronate</b>      | <1        | <1        | <1        | <1        | 1         | <1        | <1        | <1        | <1        | 101       |
| <b>diuron</b>                          | 692,252   | 555,463   | 440,691   | 342,061   | 279,721   | 330,900   | 408,775   | 352,532   | 343,921   | 253,055   |
| <b>ethoprop</b>                        | 1,892     | 541       | 676       | 844       | 591       | 575       | 582       | 1,712     | 1,682     | 2,299     |
| <b>ethyl acrylate</b>                  | 88        | N/A       | 24        | 222       | <1        | <1        | N/A       | N/A       | N/A       | N/A       |
| <b>ethylene dibromide</b>              | N/A       | <1        | N/A       | N/A       | <1        | N/A       | N/A       | N/A       | N/A       | <1        |
| <b>ethylene oxide</b>                  | N/A       | <1        | N/A       | <1        | N/A       | N/A       | N/A       | N/A       | N/A       | N/A       |
| <b>fenoxycarb</b>                      | 107       | 110       | 37        | 58        | 15        | 33        | 76        | 20        | 6         | 11        |
| <b>folpet</b>                          | N/A       | <1        | <1        | <1        | <1        | <1        | 3         | N/A       | 2         | <1        |
| <b>formaldehyde</b>                    | 6         | 4         | 52        | 2         | 30        | <1        | <1        | <1        | <1        | 30        |
| <b>glyphosate</b>                      | 1,808     | 508       | 451       | <1        | 24        | 2         | 23        | <1        | <1        | <1        |
| <b>glyphosate, diammonium salt</b>     | 8,559     | 3,287     | 2,938     | 3,381     | 1,173     | 665       | 308       | 22        | N/A       | 2,087     |
| <b>glyphosate, dimethylamine salt</b>  | 6,291     | 9,412     | 9,707     | 25,463    | 34,323    | 36,507    | 35,727    | 38,558    | 43,798    | 64,526    |
| <b>glyphosate, isopropylamine salt</b> | 2,597,116 | 2,380,803 | 2,427,171 | 2,322,698 | 2,184,855 | 2,166,532 | 2,278,332 | 2,386,315 | 2,409,292 | 2,245,933 |
| <b>glyphosate, monoammonium salt</b>   | 12,479    | 545       | 19,922    | 11,919    | 6,446     | 5,786     | 359       | 883       | 241       | 426       |
| <b>glyphosate, potassium salt</b>      | 2,901,917 | 3,152,672 | 3,132,079 | 3,110,231 | 3,426,747 | 3,397,878 | 3,282,399 | 3,226,931 | 3,276,783 | 3,259,393 |

| Chemical                          | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    | 2020    |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| glyphosate-trimesium              | 431     | 172     | 43      | 450     | N/A     | N/A     | 90      | 30      | 4       | N/A     |
| heptachlor                        | N/A     | <1      | N/A     | N/A     | N/A     | N/A     | <1      | <1      | N/A     | N/A     |
| imazalil                          | 2       | <1      | <1      | 32      | 1       | 50      | 2       | <1      | <1      | 137     |
| iprodione                         | 639,260 | 530,487 | 479,735 | 459,139 | 407,066 | 519,831 | 479,145 | 141,350 | 137,137 | 118,052 |
| kresoxim-methyl                   | 281,390 | 192,781 | 199,709 | 210,369 | 172,536 | 177,876 | 177,279 | 151,272 | 131,142 | 127,025 |
| lindane                           | 1       | N/A     | <1      | N/A     | 28      | N/A     | N/A     | N/A     | <1      | N/A     |
| malathion                         | 281,044 | 271,663 | 289,865 | 285,266 | 266,825 | 218,571 | 204,397 | 216,999 | 200,840 | 217,575 |
| mancozeb                          | 636,488 | 679,086 | 675,657 | 711,031 | 740,602 | 830,311 | 858,638 | 720,038 | 855,347 | 810,364 |
| maneb                             | 41,106  | 4,559   | 1,524   | 1,006   | 425     | 987     | 1,286   | 75      | 1,858   | 918     |
| metam-sodium                      | 71,078  | 59,078  | 28,145  | 24,422  | 24,254  | 19,437  | 17,423  | 20,139  | 22,626  | 21,707  |
| methyl eugenol                    | <1      | N/A     | <1      | N/A     | N/A     | <1      | <1      | <1      | <1      | <1      |
| methyl iodide                     | 279     | 37      | N/A     | N/A     | N/A     | N/A     | N/A     | N/A     | 1       | N/A     |
| methylene chloride                | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      |
| metiram                           | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      | <1      |
| naphthalene                       | <1      | N/A     | <1      | N/A     | N/A     | N/A     | <1      | <1      | <1      | N/A     |
| nitrapyrin                        | N/A     | <1      | 1       | N/A     | <1      | <1      | N/A     | 34      | 478     | N/A     |
| ortho-phenylphenol                | 117     | 85      | 130     | 104     | 329     | 264     | 71      | 175     | 124     | 47      |
| ortho-phenylphenol, sodium salt   | <1      | <1      | <1      | <1      | <1      | 2       | N/A     | N/A     | N/A     | N/A     |
| oryzalin                          | 294,584 | 263,734 | 203,900 | 203,504 | 162,536 | 90,433  | 106,348 | 92,524  | 74,061  | 35,789  |
| oxadiazon                         | 927     | 1,148   | 1,511   | 1,239   | 1,777   | 1,067   | 1,151   | 1,074   | 653     | 418     |
| oxythioquinox                     | 1       | 1       | <1      | <1      | N/A     | 7       | N/A     | 2       | N/A     | N/A     |
| para-dichlorobenzene              | <1      | <1      | <1      | N/A     | N/A     | N/A     | <1      | <1      | <1      | N/A     |
| parathion                         | 68      | 15      | <1      | 1       | 207     | 82      | 60      | <1      | 304     | 80      |
| pentachlorophenol                 | 1       | 15      | 170     | 3       | 5       | 97      | 296     | 413     | 243     | 111     |
| pirimicarb                        | <1      | N/A     | N/A     | N/A     | N/A     | N/A     | N/A     | N/A     | N/A     | N/A     |
| potassium dichromate              | N/A     | N/A     | <1      | N/A     | <1      | N/A     | N/A     | N/A     | N/A     | N/A     |
| potassium n-methyldithiocarbamate | 44,080  | 50,361  | 46,861  | 39,708  | 48,516  | 49,022  | 47,542  | 45,459  | 32,751  | 45,567  |
| propargite                        | 142,430 | 114,213 | 121,952 | 104,758 | 87,943  | 87,430  | 106,446 | 97,986  | 101,849 | 93,640  |
| propoxur                          | 3       | <1      | 4       | 179     | 39      | 19      | <1      | 25      | <1      | <1      |
| propylene oxide                   | <1      | 288     | 9       | <1      | <1      | <1      | 14      | <1      | <1      | <1      |
| propyzamide                       | 61,014  | 57,625  | 51,921  | 51,307  | 49,022  | 110,619 | 122,516 | 122,209 | 119,543 | 120,233 |
| pymetrozine                       | 29,669  | 33,671  | 37,228  | 42,540  | 30,716  | 42,744  | 36,824  | 52,283  | 62,986  | 50,094  |

| Chemical                           | 2011             | 2012             | 2013             | 2014             | 2015             | 2016             | 2017             | 2018             | 2019             | 2020             |
|------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| resmethrin                         | 6                | 4                | 436              | 18               | 7                | 3                | <1               | 21               | <1               | 203              |
| s,s,s-tributyl phosphorotrithioate | 27,139           | 21,894           | 22,774           | 15,139           | 7,582            | 7,725            | 10,624           | 11,007           | 6,091            | 5,106            |
| sedaxane                           | N/A              | N/A              | N/A              | N/A              | N/A              | <1               | 4                | N/A              | N/A              | N/A              |
| sodium dichromate                  | N/A              | N/A              | N/A              | <1               | N/A              | N/A              | N/A              | N/A              | N/A              | N/A              |
| spirodiclofen                      | 72,318           | 83,128           | 135,077          | 124,024          | 97,629           | 107,825          | 121,796          | 121,493          | 110,033          | 129,964          |
| terrazole                          | 443              | 579              | 414              | 660              | 255              | 175              | 283              | 239              | 239              | 133              |
| tetrachloroethylene                | <1               | <1               | <1               | <1               | <1               | <1               | <1               | <1               | <1               | <1               |
| tetrachlorvinphos                  | 5                | 8                | 4                | 3                | 1,044            | 5                | 3                | <1               | <1               | <1               |
| thiodicarb                         | 656              | 206              | 247              | N/A              | N/A              | N/A              | <1               | N/A              | N/A              | N/A              |
| toxaphene                          | 1                | <1               | <1               | <1               | <1               | <1               | 2                | <1               | <1               | <1               |
| trichloro ethylene                 | <1               | N/A              | <1               | N/A              | N/A              | N/A              | <1               | <1               | <1               | N/A              |
| vinclozolin                        | 100              | 33               | 11               | 5                | 10               | 6                | 18               | 13               | 3                | 1                |
| <b>Total</b>                       | <b>9,786,536</b> | <b>9,443,579</b> | <b>9,224,111</b> | <b>9,056,479</b> | <b>9,021,710</b> | <b>9,198,901</b> | <b>9,231,365</b> | <b>8,626,054</b> | <b>8,712,943</b> | <b>8,473,162</b> |