

Agricultural Use of Pesticides in Arizona

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The Department of Entomology, through the Community Pesticides Study (which was terminated by EPA in November, 1973), has been keeping pesticide sales and use in Arizona under surveillance since 1965. The latest tabulation has just been completed for 1973, and is presented in the accompanying table with comparable records back through 1967.

These data were obtained from 17 major companies** doing business in Arizona. While the figures represent in most instances purchases of materials by the companies rather than

sales, on a time scale the trends reflect realistically the use of pesticides, since carryover inventories of different items remain relatively low from one growing season to the next. Of the more than 135 separate agricultural chemicals identified in the survey,

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only 100 are listed, since the remainder were considered to be of minor importance.

The decline of insecticide use from 8.4 million pounds in 1972 to 6.9 million pounds in 1973 reflects the low insect populations found in most crops in 1973. Herbicides, on the other hand, followed the growing national trend, increasing from 0.82 million pounds in 1972 to 1.3 million pounds in 1973, the highest usage on record. Fungicides, defoliants and desiccants

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TABLE OF AGRICULTURAL USE OF PESTICIDES IN ARIZONA

(All in 1,000 lbs. of Tech Material unless marked in gals.)

ORGANOCHLORINE INSECTICIDES ¹	1967	1968	1969	1970	1971	1972	1973
<i>Insecticide</i>							
BHC	18.9	9.0	8.5	.3	0.0	9.2	0.0
Chlordane	34.3	16.9	11.1	26.1	22.3	119.7	170.9
Chlorobenzilate	1.6	5.4	2.5	9.4	2.6	1.0	4.0
DDT	2,519.9	528.0	0.0	.7	0.0	0.0	0.0
Dieldrin	9.3	66.4	15.7	28.6	20.0	29.4	5.9
Dilan	24.6	15.8	81.5	38.7	0.0	0.0	0.0
Endrin	21.6	49.0	53.8	18.0	24.0	23.7	1.0
Dicofol (Kelthane) ²	5.6	14.7	9.2	10.2	5.1	5.2	20.3
Perthane	9.8	97.4	333.3	126.8	62.6	50.6	31.4
Strobane	214.9	1,226.0	292.9	397.4	897.9	509.2	363.9
Endosulfan (Thiodan)	75.2	106.9	370.7	128.2	56.4	77.0	92.8
Toxaphene	2,450.6	2,028.2	2,510.0	1,932.6	1,203.9	1,468.3	973.1
Others	.6	1.0	8.0	0.0	.6	1.1	1.2
	5,386.9	4,164.7	3,697.2	2,717.0	2,295.4	2,294.4	1,664.5

¹ Limited to materials used in agriculture, however some of chlordane and dieldrin used in structural pest control are also included.

² Proprietary names are in brackets when common names are either new or unfamiliar.

ORGANOPHOSPHATE INSECTICIDES

<i>Insecticide</i>	1967	1968	1969	1970	1971	1972	1973
Monocrotophos (Azodrin)	528.7	264.0	195.8	124.8	114.2	197.1	114.8
Bidrin	16.5	65.5	58.6	38.9	11.2	12.7	14.1
Dimethoate (Cygon)	24.6	13.4	28.3	33.5	38.0	47.2	54.2
Dioxathion (Delnav)	6.3	8.4	6.4	12.0	1.8	14.6	14.8
Diazinon	17.6	30.8	28.2	62.4	36.9	72.6	70.6
Naled (Dibrom)	6.3	13.3	33.1	32.6	8.6	13.7	31.4
Disulfoton (Di-Syston)	31.7	56.4	91.2	73.0	96.7	81.1	89.2
Trichlorfon (Dylox)	65.5	173.4	99.8	40.9	7.0	16.1	8.5
Ethion	—	—	—	—	0.2	11.9	9.0
Azinphosmethyl (Guthion)	22.4	64.6	59.3	49.0	21.9	18.5	29.4
Malathion	199.5	118.3	94.0	59.0	56.6	79.0	403.1
Oxydemeton-methyl (MetaSystox-R)	—	—	0.1	0.1	1.3	5.0	5.8
Methamidophos (Monitor)	—	—	—	—	—	48.9	13.3
Parathion, Ethyl	680.5 ³	158.2	882.0	852.0	2,606.7	1,231.5	825.9
Parathion, Methyl	—	1,167.2	985.1	1,121.2	1,780.3	2,052.4	1,500.5
Mevinphos (Phosdrin)	63.1	128.0	194.6	155.9	224.9	116.9	94.9
Phosphamidon	8.8	8.0	7.2	20.4	10.6	21.0	23.1
Demeton (Systox)	3.0	5.0	4.5	2.2	2.2	0.7	2.4
Phorate (Thimet)	54.7	63.6	244.5	110.0	106.1	102.6	137.8
Others	—	—	—	—	—	—	48.0
	<u>1,729.2</u>	<u>2,338.1</u>	<u>3,012.6</u>	<u>2,787.9</u>	<u>5,125.2</u>	<u>4,143.5</u>	<u>3,490.8</u>

CARBAMATE INSECTICIDES

	1967	1968	1969	1970	1971	1972	1973
Propoxur (Baygon)	0.3	1.5	1.1	1.9	2.7	0.5	0.8
Methomyl (Lannate)	—	—	2.2	73.0	125.4	122.9	148.9
Carbaryl (Sevin)	54.8	151.9	185.1	279.0	243.6	233.2	137.4
Aldicarb (Temik)	—	—	—	4.1	21.4	41.5	26.5
Carbofuran (Furadan)	—	—	—	—	—	0.3	12.7
Formetanate (Carzol)	—	—	—	—	—	—	1.6
Chlordimeform (Galecron-Fundal)	—	—	—	—	58.7	160.9	258.2
	<u>55.1</u>	<u>153.4</u>	<u>188.4</u>	<u>358.0</u>	<u>451.8</u>	<u>559.3</u>	<u>586.1</u>

MISCELLANEOUS INSECTICIDES

	1967	1968	1969	1970	1971	1972	1973
Cryolite	144.7	224.0	248.7	445.0	572.7	120.9	439.9
Bacillus thuringiensis	15.5 gal.	30.0 gal.	27.0 gal.	49.0 gal.	49.0 gal.	77.0 gal.	99.3 gal.
Sabadilla	13.5 gal.	9.6 gal.	14.7 gal.	72.0 gal.	6.7 gal.	24.3 gal.	2.3 gal.
Ryania	—	—	—	—	23.5	11.0	—
Sulfur	—	—	—	325.0	641.6	1,148.6	620.0

FUNGICIDES

	1967	1968	1969	1970	1971	1972	1973
Captan	32.7	13.5	9.1	7.6	6.9	7.0	15.9
Copper Sulfate	—	—	—	—	—	40.0	0.0
Dicloran (Botran)	—	—	—	4.5	1.2	5.4	6.0
Benomyl (Benlate)	—	—	—	—	—	4.8	6.6
Folpet	—	—	—	9.0	0.0	0.0	0.0
Daconil	—	—	—	—	—	3.6	0.0
Maneb	1.6	15.9	27.1	45.2	14.5	36.0	37.3
PCNB	47.0	49.4	135.6	60.0	24.4	12.6	28.9
Metiram (Polyram)	—	10.4	0.7	4.5	0.0	0.0	0.0
Zineb	17.3	36.8	85.0	47.0	9.0	33.5	30.1
Ziram	—	—	—	1.8	0.0	0.0	0.0
Folpet (Phaltan)	—	—	—	—	—	0.9	0.0
	<u>98.6</u>	<u>126.0</u>	<u>257.5</u>	<u>179.6</u>	<u>56.0</u>	<u>143.8</u>	<u>124.8</u>

DEFOLIANTS AND DESICCANTS

	1967	1968	1969	1970	1971	1972	1973
DEF	166.2	53.2	67.0	55.0	86.3	75.5	66.4
Folex	0.7	3.8	14.9	7.5	22.6	10.8	54.8
Sodium Chlorate	889.7	943.3	2,100.7	2,490.0	1,630.0	1,145.4	969.4
Magesium Chlorate	—	—	—	125.0	12.4	16.5	0.0
Arsenic Acid (75%)	13.4	83.8	101.6	130.0	61.5	63.7	64.3
	<u>1,070.0</u>	<u>1,084.1</u>	<u>2,284.2</u>	<u>2,807.5</u>	<u>1,812.8</u>	<u>1,311.9</u>	<u>1,154.9</u>

FUMIGANTS

	1967	1968	1969	1970	1971	1972	1973
Methyl bromide	0.3	10.8	3.4	22.4	9.2	6.9	9.4
Vapam	38.6	0.1	2.2	2.1	19.6	21.8	13.3
Dibromochloropropane (Nemagon)	160.8	181.0	122.2	372.0	128.2	191.5	162.3
Telone	453.5	757.0	1,205.7	883.8	408.2	623.6	186.0
D-D	—	—	42.2	86.0	152.0	165.0	148.3
	<u>653.2</u>	<u>948.9</u>	<u>1,375.7</u>	<u>1,366.3</u>	<u>717.2</u>	<u>1,008.8</u>	<u>519.3</u>

³ Parathions combined.