

Pennsylvania and Program States ^{1,2}: Apples – Fertilizer Primary Nutrient Applications, 2009

Primary Nutrient	Area Applied		Applications		Rate per Application		Rate per Crop Year		Total Applied	
	PA	US	PA	US	PA	US	PA	US	PA	US
Fertilizer/Nutrient ³	(percent)		(number)		(pounds per acre)		(pounds per acre)		(1,000 lbs.)	
Nitrogen	49	67	3.7	2.2	5	16	19	36	(Z)	7,000
Phosphate	24	33	2	2.1	10	7	19	16	(Z)	1,000
Potash	29	34	1.7	1.7	18	23	30	38	(Z)	3,000

¹ The 7 Program States consist of: California, Michigan, New York, North Carolina, Oregon, **Pennsylvania**, and Washington. ² (Z) is displayed for estimates less than half of the unit shown. ³ Data for sulfur is withheld from the table to avoid disclosing data for individual farms.

Pennsylvania and Program States ^{1,2}: Apples – Agricultural Chemical Applications, 2009

Active Ingredient	Area Applied		Applications		Rate per Application		Rate per Crop Year		Total Applied	
	PA	US	PA	US	PA	US	PA	US	PA	US
Herbicides ³	(percent)		(number)		(pounds per acre)		(pounds per acre)		(1,000 lbs.)	
2,4-D, dimethylamine salt	12	9	1.4	1.2	0.599	0.852	0.847	1.049	2	27
Diuron	9	5	1.1	1.2	1.159	1.368	1.261	1.587	2	21
Flumioxazin	1	1	1	1.1	0.292	0.246	0.292	0.276	(Z)	(Z)
Glyphosate isopropylamine salt	11	33	1.1	1.3	0.597	1.045	0.647	1.307	2	122
Paraquat	24	12	1.6	1.4	0.569	0.929	0.913	1.277	5	43
Pendimethalin	14	6	1.1	1.1	0.959	1.92	1.024	2.153	3	39
Simazine	7	8	1	1.4	1.03	1.421	1.059	1.961	2	42
Insecticides ⁴										
Abamectin	8	6	1.4	1.1	0.006	0.01	0.008	0.011	(Z)	(Z)
Acetamiprid	41	23	2.3	1.6	0.066	0.112	0.151	0.177	1	12
Azinphos-methyl	49	38	3	2	0.374	0.782	1.125	1.553	12	166
Benzoic acid	25	14	2.3	1.4	0.1	0.195	0.225	0.265	1	10
Carbaryl	34	51	1.2	1.4	0.786	1.206	0.96	1.707	7	248
Chlorantraniliprole	33	32	1.9	1.4	0.028	0.073	0.053	0.104	(Z)	10
Chlorpyrifos	37	42	1.4	1.2	0.638	1.419	0.883	1.707	7	201
Diazinon	3	7	1.3	1.2	0.873	1.661	1.148	1.917	1	36
Esfenvalerate	19	10	2.1	1.4	0.026	0.036	0.056	0.052	(Z)	1
Etoxazole	1	4	1.4	1.1	0.038	0.099	0.054	0.11	(Z)	1
Fenpropathrin	9	5	1.5	1.5	0.096	0.231	0.147	0.346	(Z)	5
Flubendiamide	13	2	2.8	2.2	0.046	0.067	0.128	0.145	(Z)	1
Gamma-Cyhalothrin	2	2	1.5	1.9	0.006	0.017	0.009	0.033	(Z)	(Z)
Imidacloprid	29	37	2.3	1.4	0.02	0.062	0.046	0.084	(Z)	9
Indoxacarb	9	3	2.5	2	0.033	0.083	0.081	0.168	(Z)	2
Lambda-Cyhalothrin	16	10	3.3	2.1	0.011	0.027	0.036	0.056	(Z)	2
Methomyl	2	3	1.6	1.3	0.345	0.695	0.568	0.928	(Z)	8
Permethrin	3	1	1.5	1.5	0.205	0.15	0.305	0.22	(Z)	1
Petroleum Distillate	17	48	1.8	1.9	10.929	16.221	19.177	30.634	69	4,217
Petroleum Oil	23	5	1.6	1.5	10.971	10.893	17.642	15.924	87	227
Phosmet	31	19	3.5	2.2	0.866	1.483	2.995	3.191	19	172
Spinetoram	34	35	2.6	1.5	0.03	0.083	0.077	0.125	1	12
Thiacloprid	5	18	2.4	1.4	0.056	0.162	0.137	0.227	(Z)	12
Fungicides ⁵										
Basic copper sulfate	21	10	1.3	1.2	0.823	1.243	1.05	1.548	5	44
Boscalid	9	13	1.7	1.3	0.007	0.013	0.012	0.017	(Z)	1
Calcium Polysulfide	2	29	6.4	1.3	0.952	12.845	6.091	17.106	2	1,423
Captan	73	33	7.7	6.7	0.932	1.82	7.209	12.177	111	1,146
Copper oxychloride sulfate	2	1	1.7	1.1	0.354	0.591	0.613	0.632	(Z)	2
Copper oxychloride	18	7	1.1	1.3	2.648	2.33	2.977	2.933	11	55
Copper sulfate	18	3	1.1	1.1	0.621	0.939	0.681	1.063	3	8
Cyprodinil	33	13	1.9	1.6	0.101	0.158	0.198	0.259	1	10
Difenoconazole	32	13	2.7	1.7	0.031	0.056	0.085	0.096	1	4
Fenarimol	3	12	2.2	1.4	0.045	0.068	0.101	0.093	(Z)	3
Fenbuconazole	17	6	2	1.8	0.068	0.09	0.138	0.164	1	3
Kresoxim-methyl	46	15	3	2	0.054	0.11	0.164	0.219	2	10
Mancozeb	63	36	5	3.6	1.075	2.345	5.337	8.451	71	856
Metiram	12	5	2.4	4.3	1.113	2.926	2.617	12.525	7	184
Myclobutanil	19	32	2.4	1.6	0.088	0.113	0.208	0.18	1	17
Phosphorous acid	9	2	4.2	2.7	0.366	1.051	1.551	2.849	3	19
Pyraclostrobin	9	13	1.7	1.3	(Z)	0.003	0.001	0.004	(Z)	(Z)
Streptomycin	10	11	1.7	1.9	0.108	0.164	0.182	0.308	(Z)	10
Streptomycin sulfate	14	5	1.8	1.8	0.115	0.15	0.202	0.271	1	4
Sulfur	12	36	2	1.9	2.714	5.144	5.427	9.615	14	976
Thiophanate-methyl	44	18	4.1	2.9	0.177	0.363	0.717	1.063	7	54
Trifloxystrobin	27	30	2	1.5	0.042	0.063	0.082	0.095	1	8
Triflumizole	1	35	1.5	1.4	0.265	0.299	0.391	0.419	(Z)	41
Ziram	7	10	3.3	2.2	1.397	2.777	4.546	6.043	7	172
Other Pesticides ⁶										
Benzyladenine	16	21	1.2	1.4	0.039	0.038	0.046	0.053	(Z)	3
Butenoic acid hydrochloride	6	12	1	1.1	0.07	0.086	0.07	0.094	(Z)	3
E-8-Dodeceny acetat	12	3	1.9	1.3	0.002	0.003	0.004	0.004	(Z)	(Z)
Ethephon	23	19	2.2	1.4	0.1	0.437	0.224	0.594	1	32
Gibberellic acid	1	2	2.8	1.9	0.014	0.023	0.039	0.045	(Z)	(Z)
Gibberellins A4A7	8	18	1.6	1.3	0.009	0.038	0.014	0.049	(Z)	2
NAA, sodium	29	14	1.4	1.6	0.009	0.011	0.013	0.018	(Z)	1
Prohexadione calcium	9	23	3.9	1.5	0.045	0.232	0.176	0.349	(Z)	23
Spirodiclofen	14	11	1.5	1.2	0.108	0.226	0.163	0.266	1	9
Z-8-Dodecen acetate	12	3	1.9	1.3	0.031	0.043	0.058	0.057	(Z)	(Z)

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³ The following herbicides were withheld from the table to avoid disclosing data for individual farms: 2,4-D, Carfentrazone-ethyl, Glufosinate-ammonium, Glyphosate, Glyphosate ammonium salt, Glyphosate potassium salt, Norflurazon, Oxlyfluorfen, Pebulate, Rimsulfuron, Terbacil ⁴ The following insecticides were withheld from the table to avoid disclosing data for individual farms: Azadirachtin, Bifenazate, Bifenthrin, BT subspecies kurstaki, Clofentezine, Cyd-X granulo. virus, Cyfluthrin, Emamectin benzoate, Endosulfan, Fenpyroximate, Fonofos, Hexythiazoxn, Kaolin, Novaluron, Malathion, Methidathion, Oxamyl, Pyridaben, Pyriproxyfen, Spinosad, Spirotetramat, Thiamethoxam ⁵ The following fungicides were withheld from the table to avoid disclosing data for individual farms: Bacillus subtilis, Benomyl, Chlorothalonil, Copper hydroxide, Dodine, Mefenoxam, Pyrimethanil, Tebuconazole, Thiram, Triphenyltin hydroxide.

⁶ The following other pesticides were withheld from the table to avoid disclosing data for individual farms: Chlorophacinone, Dodecadien, Dodecanol, Hydrogen Peroxide, NAA, NAA, potassium salt, Tetracanol, Z-8-Dodecanol.