

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
	(percent)		(number)		(pounds per acre)		(pounds per acre)		(1,000 lbs.)	
Fertilizer/Nutrient ³										
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
	(percent)		(number)		(pounds per acre)		(pounds per acre)		(1,000 lbs.)	
Herbicides ³										
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	1.1	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	1.1	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-Dodecenyl 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, Oxyfluorfen, 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, Clofentazine, Cyd-X granulo. virus, Cyfluthrin, Emamectin benzoate, Endosulfan, Fenpyroximate, Fonofos, Hexythiazox, 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, Tetradecanol, Z-8-Dodecanol.