

BULLETIN 770

APRIL 1977

1976 *INSPECTIONS* OF

**FERTILIZER
PESTICIDE
AND FEED
PRODUCTS**

J. Gordon Hanna

1976 Inspections of
Fertilizer, Pesticide and Feed Products

Data obtained by chemical analysis of officially collected samples of commercial feeds, fertilizers and pesticide formulations are contained in this report. The tables show the number of samples from each manufacturer (in parenthesis), the number of determinations made for each guaranteed ingredient, the number of deficiencies, and the average percent of claims for each component.

The deficiencies noted for feed samples are based on the permitted variations recommended by the Association of American Feed Control Officials, the investigational allowances for fertilizers are those of the Association of American Plant Food Control Officials, and the permissive guarantee variations suggested by the Association of American Pesticide Control Officials are used for pesticide formulations.

Data for 588 samples of feed representing 52 manufacturers, 416 samples of fertilizer representing 54 manufacturers and 285 samples of pesticide representing 53 manufacturers are summarized.

The feed and fertilizer laws are administered by the Commissioner of Agriculture. The pesticide law is under the direction of the Commissioner of Environmental Protection.

Analytical work was by R. Botsford, M. Fuzesi, W. Glowa, H. Kocaba, R. Smith, S. Squires and G. Wilmes. The report was assembled and typed by C. Peet.

J. Gordon Hanna, Chief Chemist

April, 1976

Feed Manufacturer	Number of Claims				Number Not Met			Average % of Claims		
	Protein	Fat	Fiber	Total	Protein	Fat	Fiber	Protein	Fat	Fiber
Agway (76)	76	76	76	228	0	0	0	106	125	68
Allen Products (3)	3	3	3	9	1	1	0	101	102	33
Allied Mills (42)	42	42	42	126	1	0	0	116	142	62
Armour Dial (1)	1	1	1	3	0	0	0	120	207	93
Beacon Milling (8)	8	8	8	24	0	0	0	114	127	60
Best Feed Farm Supplies (3)	3	3	3	9	0	0	0	103	127	63
Blue Seal Mill (4)	4	4	4	12	0	0	0	103	138	77
Bordo Citrus Products (2)	2	2	2	6	0	0	0	114	233	77
Bumble Bee Seafoods (1)	1	1	1	3	0	0	0	103	247	44
Cadillac Pet Foods (4)	4	4	4	12	0	0	0	105	156	70
Calo Pet Foods (2)	2	2	2	6	0	0	0	103	119	43
Carnation (7)	7	7	7	21	0	0	0	106	177	53
Central Connecticut Co-op (26)	26	26	26	78	2	0	0	104	120	73
Champion Valley Farms (2)	2	2	2	6	0	0	0	127	145	42
Derby Feed Co. (1)	1	1	1	3	0	0	0	100	130	36
John W. Eschelman (41)	40	40	40	120	1	0	0	108	145	67
Farm Bureau (16)	16	16	16	48	1	1	0	101	124	76
R. T. French (2)	2	2	2	6	0	0	0	130	152	22
General Foods (4)	4	4	4	12	0	0	0	115	170	65
Roy Goff (5)	5	5	5	15	1	0	0	98	134	38
Great A & P (25)	25	25	25	75	0	0	0	123	173	64
Hap-EE Pet Food (1)	1	1	1	3	1	0	0	92	112	10
Hartz Mountain (12)	12	12	12	36	0	1	0	111	137	59
E. C. & W. L. Hopkins (26)	26	26	26	78	0	0	0	104	134	73
Jerky Treats (2)	2	2	2	6	0	0	0	103	297	12
K & L Feed Mill (3)	3	3	3	9	0	0	0	116	116	69
Kal Kan Foods (3)	3	3	3	9	0	0	0	112	150	21
Keystone Dehydrators (1)	1	1	1	3	0	0	0	100	114	104
Lipton Pet Foods (3)	3	3	3	9	0	0	0	122	109	81
Liv-A-Snaps (3)	3	3	3	9	0	0	0	111	129	29
Mavar Shrimp and Oyster (1)	1	1	1	3	0	0	0	114	158	68
Miller Morton (6)	6	6	6	18	0	0	0	104	130	49
Morton Pet Food (1)	1	1	1	3	-	-	-	-	-	-
Nabisco (6)	6	6	6	18	2	0	0	104	140	53
National Alfalfa (1)	1	1	1	3	0	0	0	103	203	98
National Pet Food (2)	2	2	2	6	1	0	0	90	116	46
New England Fish (1)	1	1	1	3	0	0	0	120	130	46
Old Mother Hubbard (1)	1	1	1	3	0	0	0	106	237	32
Perk Foods (1)	1	1	1	3	0	0	0	104	241	65
Quaker Oats (12)	12	12	12	36	0	1	0	112	135	54

Feed Manufacturer	<u>Number of Claims</u>				<u>Number Not Met</u>			<u>Average % of Claims</u>		
	Protein	Fat	Fiber	Total	Protein	Fat	Fiber	Protein	Fat	Fiber
Ralston Purina (76)	76	76	76	228	0	0	0	110	153	58
Reward Co. (3)	3	3	3	9	0	0	0	102	227	20
Riviana Foods (2)	2	2	2	6	0	0	0	112	145	45
Star-Kist Foods (2)	2	2	2	6	0	0	0	105	166	41
Stop & Shop (11)	11	11	11	33	0	0	0	110	165	52
Strongheart Products (1)	1	1	1	3	0	0	0	124	138	123
Sunshine Feed Mills (1)	1	1	1	3	0	0	0	100	106	55
Superior Pet Products (1)	1	1	1	3	0	0	0	110	440	105
Triumph Pet Industries (7)	7	7	7	21	0	0	0	106	123	57
United Co-op Farmers (17)	15	15	15	45	0	0	0	106	113	68
Valley Pet Food (1)	1	1	1	3	0	0	0	119	160	46
H. K. Webster (105)	105	104	104	313	2	0	0	105	125	76
(588)	585	584	584	1753	13	4	0	108	139	65

Percent of claims deficient: 0.97

Fertilizer Manufacturer	Number of Claims			Number Not Met		Average % of Claims	
	N	P ₂ O ₅ ⁺	Total	N	P ₂ O ₅ ⁺	N	P ₂ O ₅ ⁺
		K ₂ O			K ₂ O		K ₂ O
Agrico Chemical Co. (21)	17	37	54	5	16	112.1	95.2
Agway, Inc. (72)	63	126	189	2	10	104.4	107.1
Atlas Fish Fertilizer (2)	2	3	5	0	0	111.8	125.9
A.V.I. (2)	2	3	5	0	0	125.5	124.3
Brockville Chemical (1)	1	0	1	0	-	100.5	-
Cadwell and Jones (18)	15	33	48	2	11	107.6	98.0
Carefree Garden Products (2)	2	4	6	0	0	98.9	107.7
Chevron (18)	17	33	50	0	0	107.4	109.0
Chilean Nitrate Sales (1)	1	1	2	0	0	98.1	99.7
Continental Peat (4)	4	8	12	1	1	110.4	135.6
Corenco (13)	13	24	37	4	3	103.6	115.0
Ross Daniels (6)	6	12	18	0	0	142.1	105.3
The Dramm Co. (1)	1	2	3	0	0	102.7	127.2
Dunhill Organic (1)	1	2	3	0	0	121.0	183.3
DuPont (1)	1	0	1	0	-	98.4	-
Dysart Chemical Co. (1)	1	2	3	0	0	102.4	96.1
Ecology (1)	1	0	1	1	-	1.8	-
Encap (1)	1	2	3	0	0	110.8	187.2
Faesly & Besthoff (4)	4	4	8	0	0	102.3	132.9
Federal (2)	2	4	6	0	0	104.4	105.2
Fer-Mel (14)	14	26	40	2	0	99.1	105.0
W. R. Grace (1)	1	0	1	0	-	101.1	-
Charles C. Hart Seed (6)	6	12	18	0	2	118.5	104.1
Hercules (2)	1	0	1	0	-	101.0	-
Hyponex (4)	4	8	12	0	0	108.7	120.5
Hytrous (4)	4	8	12	0	0	124.7	120.0
International Spike (1)	1	2	3	0	0	112.5	111.8
Kerr-McGee (76)	64	139	203	16	32	101.9	112.1
Lebanon (17)	17	34	51	1	2	109.3	107.3
Loft's (3)	3	6	9	0	1	131.8	125.9
Luzerne (8)	8	16	24	4	1	95.5	104.9
3M (3)	3	6	9	0	0	104.6	101.7
Wilson and George Meyer (1)	1	0	1	0	-	98.6	-
Mississippi Chemical (1)	1	0	1	0	-	100.9	-
New Plant Life (1)	1	2	3	0	0	107.6	110.2
Old Fox (61)	56	114	170	24	36	99.3	108.1
Organic Compost (4)	3	6	9	0	0	98.0	131.3
Organic Recycling (1)	1	1	2	0	0	100.0	104.8
Pennsylvania Dutch (1)	1	2	3	0	0	131.1	106.5
Robert B. Peters (5)	5	10	15	0	0	107.6	109.5
Rain Bird (1)	1	2	3	0	0	101.4	100.0
Rapid Gro (1)	1	2	3	0	0	104.4	100.6
Royster (2)	2	4	6	0	0	104.6	117.8

Fertilizer Manufacturer	Number of Claims			Number Not Met		Average % of Claims	
	N	P ₂ O ₅ + K ₂ O	Total	N	P ₂ O ₅ + K ₂ O	N	P ₂ O ₅ + K ₂ O
Schultz Co. (2)	2	4	6	0	1	109.7	98.1
O. M. Scott (6)	6	12	18	1	1	100.9	122.8
Sears (3)	3	6	9	0	1	111.0	118.2
Stern's (4)	4	8	12	0	0	102.4	105.0
Stim-U-Plant (1)	1	2	3	0	0	100.4	172.8
Unified Div. Diamond Salt (1)	1	2	3	0	0	118.0	107.9
Universal Chemical (2)	2	4	6	0	1	94.0	106.4
USS Agri Chemicals (2)	2	2	4	1	0	95.4	134.0
Venturi (2)	2	4	6	0	0	156.0	115.5
Vigoro (1)	1	2	3	0	0	103.1	113.6
Wegro Div., Old Fort (2)	2	4	6	0	0	104.4	104.3
(416)	380	750	1130	64	119	105.0	107.9

Percent of claims deficient: 16.2

Mixed Fertilizer Distribution

July 1, 1975 - June 30, 1976

<u>Grade</u>	<u>Tons</u>
0-10-30	39
0-10-40	141
0-15-30	395
0-20-20	21
0-25-25	35
5-10-5	845
5-10-10	3,862
5-20-20	78
6-3-6	1,107
7-7-7	46
8-8-8	16
8-10-10	3,014
8-16-16	53
10-6-4	2,505
10-10-10	7,237
10-15-15	40
10-20-10	548
10-20-20	617
12-4-8	108
15-8-12	1,177
15-10-10	2,714
15-15-15	440
15-30-15	47
16-8-8	13
20-0-10	182
20-4-8	127
20-5-10	276
20-10-5	626
20-10-10	427
20-20-20	21
23-7-7	957
25-5-10	150
Miscellaneous*	<u>11,713</u>
Total	39,677

*Small amounts or reported by fewer than three manufacturers

Secondary and Minor Elements

Manufacturer	Element Claimed	Number Of Claims	Number Not Met	Average % Of Claims
Agrico (1)	Magnesium	1	0	254
Agway (5)	Boron	3	0	177
	Iron	2	0	1250
Carefree Garden Products (2)	Magnesium	2	0	102
Chevron (1)	Iron	1	1	81
Ross Daniels (2)	Iron	2	0	105
Ecology (1)	Boron	1	1	9
	Chlorine	1	1	0
	Copper	1	1	6
	Iron	1	0	10
	Magnesium	1	0	10
	Manganese	1	1	66
	Zinc	1	1	7
Kerr-McGee (2)	Magnesium	2	1	81
Lebanon (4)	Calcium	4	0	203
	Iron	4	0	264
	Magnesium	2	0	225
	Sulfur	4	1	93
Loft's (2)	Boron	2	0	450
	Copper	2	0	89
	Iron	2	0	103
	Magnesium	2	0	2069
	Sulfur	2	1	81
	Zinc	2	0	153
Old Fox (7)	Magnesium	7	0	351
	(27)	53	9	285

Percent of claims deficient: 17.0

Tonnages of Fertilizer Materials and Mixed
Fertilizers Purchased During the Period of
July 1, 1975 - June 30, 1976

Chemical Nitrogen

Ammonium nitrate	320
Ammonium sulfate	5
Calcium nitrate	86
Nitrate of soda	107
Nitrogen solutions	475
Urea	3,848
Urea - formaldehyde	<u>106</u>
	4,947

Organics

Castor pomace	109
Cottonseed meal	389
Dried blood	2
Dried manures	5,820
Fish scrap and meal	99
Sewage	1,407
Other natural organic materials	<u>47</u>
	7,873

Phosphates

Ammonium phosphate	1,537
Diammonium phosphate	123
Bonemeal	29
Phosphate rock	5
Superphosphate 20%	104
Superphosphate 46%	<u>651</u>
	2,449

Potash

Muriate of potash	2,481
Sulfate of potash	18
Sulfate of potash-magnesia	10
Other potash materials	<u>4</u>
	2,513

Secondary and micronutrients

Aluminum	2
Borax	23
Copper	2
Iron	3
Zinc	3
Element mixtures	<u>2</u>
	35

Mixed Fertilizers

Commercial mixtures	39,677
Special mixtures	<u>7,386</u>
	47,063

Total 64,780

Pesticide Manufacturer	Pesticide	Number Of Claims	Number Not Met	Average % Of Claims
Agway, Inc. (10)	Ammonium sulfamate	1	0	100
	Captan	3	0	101
	Carbaryl	2	0	100
	Folpet	1	0	102
	Malathion	4	0	101
	Methoxychlor	3	0	103
	Prometone	1	0	101
	Pyrethrins	1	0	100
	Resmethrin	1	0	92
	Rotenone	1	0	105
Amchem Products, Inc. (4)	Amitrol	2	0	105
	2,4-D + 2,4,5-T	1	1	87
	2,4-D + Dicamba	1	0	96
Athena Corp. (1)	Baygon	1	0	126
Black Leaf Products Co. (16)	Arsenic	1	0	100
	Captan	1	0	101
	Carbaryl	3	0	101
	Chlordane	1	0	102
	Diazinon	1	0	104
	Folpet	1	0	100
	Kelthane	1	0	105
	Lindane	1	0	99
	Malathion	3	0	102
	Maneb	1	0	98
	Manganese	1	0	105
	Methoxychlor	1	0	102
	Nicotine	2	0	98
	Rotenone	1	0	107
	Silvex	1	0	160
	Silvex + 2,4-D	1	0	109
	Warfarin	1	0	112
Bonide Chemical Co. (39)	Ammonium sulfamate	1	0	99
	Arsenic	1	0	110
	Aspon	1	0	99
	Benomyl	1	0	99
	Captan	5	0	101
	Carbaryl	12	0	103
	Copper	4	0	90
	Chlordane	2	0	104
	2,4-D	2	1	87
	DDVP	1	0	98
	Diazinon	2	0	103
	DiSyston	1	0	105
	Folpet	1	1	79
	Karathane	2	0	108
	Kelthane	6	0	103
	Lethane	2	2	50
	Lindane	1	0	100
	Malathion	8	0	104
	Maneb	1	0	108
	Methoxychlor	3	0	100
	Pentachlorophenol	1	0	104
	Rotenone	2	0	97
	Ryania Speciosa	2	0	101
Sulfur	1	0	101	

Pesticide Manufacturer	Pesticide	Number Of Claims	Number Not Met	Average % Of Claims
Boyle-Midway, Inc. (4)	Allethrin	1	0	97
	Arsenic	1	0	100
	Baygon	1	0	104
	Metaldehyde	1	0	97
Carter-Wallace, Inc. (1)	Baygon	1	0	100
Chemagro-Baychem Co. (1)	Co-Ral	1	0	100
Chevron Chemical Co. (35)	Ammonium sulfamate	1	0	99
	Arsenic	1	0	105
	Baygon	2	0	106
	Captan	3	0	138
	Carbaryl	4	0	104
	Chlordane	3	0	109
	2,4-D	2	0	104
	Dalapon	1	0	101
	Diazinon	2	0	102
	Dyrene	1	0	102
	Folpet	2	0	100
	Isobornylthiocyanoacetate	1	0	108
	Kelthane	2	0	101
	Lindane	1	0	99
	Malathion	3	0	103
	Mesuroil	1	0	106
	Metaldehyde	1	0	92
	Meta-Systox-R	1	0	100
	Methoxychlor	3	0	96
	Paradichlorobenzene	1	0	100
	Paraquat	1	0	109
	Prometone	1	0	106
	Pyrethrins	3	0	102
Resmethrin	4	0	132	
Rotenone	2	0	105	
Silvex + 2,4-D	2	0	104	
Ciba-Geigy Corp. (3)	Diazinon	3	0	108
Creative Chemical (1)	Hydrogen chloride	1	0	99
Jim Dandy Co. (1)	N,N-Diethyl-M-toluamide	1	0	110
The d-Con Co. (2)	Pyrethrins	1	0	107
	Resmethrin	1	0	96
DeMert and Dougherty, Inc. (1)	Diazinon	1	0	110
	Pyrethrins	1	0	92
Diamond Shamrock Corp. (1)	Dylox	1	0	103
	Meta-Systox	1	0	100
Faesy and Besthoff, Inc. (2)	Chlordane	1	0	97
	Nicotine	1	0	152
Farmingdale Garden Laboratories (7)	Carbaryl	3	0	100
	Diazinon	1	0	104
	Kelthane	2	0	103
	Lindane	1	0	100
	Malathion	2	0	103
	Maneb	1	0	102
	Methoxychlor	1	0	103
Sulfur	1	0	103	

Pesticide Manufacturer	Pesticide	Number Of Claims	Number Not Met	Average % Of Claims
Farnum Companies (9)	N,N-Diethyl-m-toluamide	2	0	105
	Dipterex	1	0	105
	Pyrethrins	5	1	91
	Rotenone	1	0	102
First National Stores (1)	Allethrin	1	0	100
	Methoxychlor	1	0	95
The Great Atlantic & Pacific Tea Co. (2)	Baygon	1	0	100
	Pyrethrins	2	1	84
The Hartz Mountain Corp. (3)	Carbaryl	1	0	102
	Pyrethrins	2	0	110
Heritage House Products (1)	Pyrethrins	1	0	95
Hopkins Agricultural Chemical Co. (1)	Mesuroil	1	0	118
S. C. Johnson and Son, Inc. (8)	Allethrin	1	0	105
	Carbaryl	1	0	100
	DDVP	2	0	100
	N,N-Diethyl-m-toluamide	2	0	103
	Folpet	1	0	97
	Perthane	1	0	105
	Pyrethrins	2	0	104
S. S. Kresge Co. (2)	Carbaryl	1	0	106
	Maneb	1	0	103
	Silvex	1	0	96
Lethelin Products Co. (1)	Lindane	1	0	99
Miller-Morton Co. (6)	Baygon	2	0	106
	Carbaryl	1	0	104
	Methoxychlor	1	0	98
	Pyrethrins	1	0	114
	Rotenone	1	0	Present
John Opitz, Inc. (1)	Kepone	1	0	104
The Parrott Chemical Co. (5)	Captan	1	0	99
	Carbaryl	2	0	103
	Chlordane	1	0	102
	Copper	2	0	114
	Rotenone	2	0	103
Pennwalt Corp. (1)	Endothal	1	0	105
Plantabbs Corp. (1)	Malathion	1	0	130
	Pyrethrins	1	0	115
Plant Marvel Laboratories (2)	Pyrethrins	2	0	97
B. G. Pratt Div., Gabriel Chemical Ltd. (36)	Amitrol	2	0	102
	Arsenic	2	0	101
	Baygon	1	0	100
	Benomyl	1	0	100
	Captan	1	1	75
	Carbaryl	3	0	101
	Chlordane	3	0	100
	Copper	2	0	100

Pesticide Manufacturer	Pesticide	Number Of Claims	Number Not Met	Average % Of Claims
B. G. Pratt Div., Gabriel Chemical Ltd. (36)	2,4-D	1	0	93
	Diazinon	2	0	103
	Dimethoate	1	0	101
	DiSyston	1	0	96
	Kelthane	3	0	106
	Lindane	1	0	96
	Malathion	3	1	95
	Methoxychlor	5	0	101
	Methylnonyl ketone	1	0	101
	Mexacarbate	1	0	104
	Pyrethrins	5	1	92
	Resmethrin	1	0	124
	Rotenone	4	0	101
	Simazine	1	0	100
	Sulfur	2	0	102
	Thiram	1	0	100
Ralston Purina Co. (17)	Baygon	1	0	132
	Captan	1	0	101
	Carbaryl	3	0	104
	Chlordane	2	0	100
	Ciodrin	1	0	101
	2,4-D + 2,4,5-T	1	0	104
	DDVP	1	0	104
	Diazinon	1	0	101
	Dimethoate	1	0	100
	Dipterex	1	0	104
	Karathane	1	0	160
	Malathion	2	1	86
	Perthane	1	0	99
	Pyrethrins	2	0	106
	Sulfur	1	0	100
	Warfarin	1	0	104
Realex Corp. (1)	2,4-D + dicamba	1	0	100
Rexall Drug Co. (2)	Pyrethrins	1	0	108
	Resmethrin	1	0	144
Rite-Off Corp. (4)	Carbaryl	1	0	101
	Diazinon	1	0	100
	Pyrethrins	3	0	105
	Tetramethrin	1	0	102
Rockland Chemical Co. (9)	Ammonium sulfamate	1	0	102
	Baygon	1	0	106
	Chlordane	2	0	100
	Ferbam	1	0	100
	Folpet	1	0	99
	Pyrethrins	4	0	97
	Tetramethrin	1	0	116
Rohm and Haas Corp. (1)	Maneb	1	0	99
Science Products Co. (4)	Kelthane	2	0	107
	Maneb	1	0	99
	Methoxychlor	1	0	103

Pesticide Manufacturer	Pesticide	Number Of Claims	Number Not Met	Average % Of Claims
O. M. Scott & Sons, Inc. (2)	Arsenic	1	0	97
	Diazinon	1	0	102
Seacoast Laboratories, Inc. (12)	Captan	1	0	100
	Carbaryl	5	0	100
	Chlordane	1	0	102
	Diazinon	1	0	104
	Folpet	1	0	98
	Kelthane	2	0	99
	Malathion	4	0	100
	Methoxychlor	2	0	101
	Rotenone	1	0	100
	Zineb	1	0	109
Sears, Roebuck & Co. (9)	Arsenic	1	0	100
	Benomyl	1	0	106
	2,4-D + dicamba + Methylchloropropoxy propionic acid	1	0	113
	Diazinon	1	0	107
	Dicamba + Methylchloropropoxy propionic acid	1	0	104
	Dylox	2	0	102
	Methylnonyl ketone	1	0	100
	Zineb-maneb	1	0	102
	Shell Chemical Co. (4)	Allethrin	2	0
Chloropyrifos		1	0	96
DDVP		1	0	102
Methoxychlor		1	0	100
Pyrethrins		1	0	103
Sherwin Williams Co. (1)	Captan	1	0	97
	Karathane	1	0	100
	Malathion	1	0	108
	Methoxychlor	1	0	98
Starbar (1)	DDVP	1	0	98
Sudbury Laboratory, Inc. (1)	Thiram	1	0	97
Tuco Div. of Upjohn Co. (1)	Thiram	1	0	103
Union Carbide Corp. (3)	N,N-diethyl-m-toluamide	3	0	98
Virginia Chemical, Inc. (1)	Diazinon	1	0	99
	Pyrethrins	1	0	98
F. W. Woolworth Co. (1)	Methoxychlor	1	0	98
Zodiac Pet Products (2)	Carbaryl	1	0	100
	Ronnel	1	0	106
(285)		386	11	102

Percent of claims deficient: 2.8

THE CONNECTICUT
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Paul E. Waggoner
Director

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