

Inspection of Commercial Fertilizers—1984

By Lester Hankin

INSPECTION OF COMMERCIAL FERTILIZERS--1984

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During 1984, 258 samples of fertilizer and fertilizer ingredients were examined. Of this number and included in this Bulletin are 235 official samples collected by inspectors in the Connecticut Department of Agriculture for authenticity of label guarantee and compliance with State Regulations. The remainder of the samples tested were for farmers, Station departments, those questioned for authenticity, and miscellaneous materials. Although all label guarantees are examined, only the results for the major plant nutrients of nitrogen, phosphoric acid, and potash are presented here.

Table 1 shows individual samples from 44 manufacturers. The number designating each sample, as for example 10-10-10, indicates the guaranteed percentage for nitrogen (N), phosphoric acid (P2O5), and potash (K2O), in that order. A brand name, if available, follows. The actual content found is then shown, with deficiencies identified by an asterisk (*). Table 2 summarizes for each manufacturer the number of guarantees examined for each plant nutrient, the percentage of the samples not meeting their guarantee, and the average percentage of guarantee found. Table 3 shows distribution of mixed fertilizer sold in Connecticut. Only formulations prepared by at least three manufacturers are shown; other formulations are placed in the miscellaneous category. The tonnage of fertilizer material and mixed fertilizer sold in Connecticut is shown in Table 4.

Two types of variability affect fertilizer analysis and must be considered in judging deficiencies. The first is the variability among different batches of the same formulation from a manufacturer. This variability can be noted in Table 1 by examining the analyses of the same formulation from the same manufacturer. The second type of variability is between duplicate analyses of the same sample. The variability among duplicate analyses is shown in the statement: the mean difference between duplicates for nitrogen is four-tenths percent, for phosphoric acid it is one-fourth percent, and for potash one-fifth percent.

Fertilizer samples are deemed deficient in any nutrient if the analysis is below the guarantee by more than the values established by the Association of American Feed Control Officials. Overall, 227 guarantees for nitrogen were made and 17% were deficient, 223 guarantees for phosphoric acid and 15% were deficient, and 224 guarantees for potash and 5% were deficient.

Analyses were performed by H. Kocaba, M. Pyles, M.A. Illig, and E. Hickson. Samples were collected by J. Dippel, D. Nisely, and A. VanDyke under the direction of K. Veit. Fertilizer laws are administered by the Commissioner of Agriculture.

Lester Hankin
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Table 1. Analysis of Individual Samples of Commercial Fertilizers.

<u>Manufacturer, guarantee, & brand</u>		<u>Nutrients found</u>			<u>Manufacturer, guarantee, & brand</u>		<u>Nutrients found</u>		
		<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>			<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>
<u>ADCO Works</u>				<u>Anderson</u>					
No guar.	ADCO Organic Plant Food	7.7	3.6	0.9	25-03-06	Hart's Prem. Crabgr. Prev/Ln Food	30.6	4.7	7.3
<u>Agrico</u>				26-04-08 Stanford's Old English Lawn Food 27.3 4.1 10.5					
05-10-05	Agrico Village Green	*2.9	11.6	5.2	28-04-12	Hart's Premium Lawn	33.0	3.4	13.7
05-10-10	Agrico	*2.8	*6.0	9.5	28-04-12	Hart's Premium Lawn Fert.	27.8	4.1	14.5
10-06-04	Agrico Village Green	*7.1	5.5	4.8	<u>Atlas Fish Fertilizer Co.</u>				
10-08-10	Agrico	*8.8	*7.0	13.7	05-01-01	Atlas Org Fish Emul Plant Food	4.7	2.0	1.0
10-10-10	Agrico Village Green	9.9	9.9	11.3	<u>BFC Chemical</u>				
10-20-10	Agrico	9.4	21.7	9.3	38-00-00	Blue Chip Nitroform Slow Rel. N	39.2		
15-08-12	Agrico	*12.4	7.8	14.1	<u>Burpee</u>				
46-00-00	Agrico Urea	47.4			18-04-07	Burpee Grow Azalea, Cam. & Rhod.	18.2	4.1	7.1
46-00-00	Agrico Urea	46.9			18-12-14	Burpee Grow Flowers	19.5	13.0	14.3
<u>Agway</u>				18-24-06 Burpee Grow Transplants 19.4 23.8 7.3					
00-10-43	Agway Blend		*7.6	44.4	18-24-06	Burpee Grow Vegetables	18.2	24.7	6.4
00-10-43	Agway Blend		10.7	44.9	20-04-08	Burpee Grow Shrubs, Trees, Evrgns	20.8	3.3	12.5
00-10-44	Bulk		10.4	42.9	<u>Cadwell & Jones</u>				
05-10-05	Agway Garden Plant Food	4.6	9.7	6.4	05-10-05	Surge	6.2	10.2	6.3
05-10-10	Agway Plant Food	5.0	10.1	9.5	05-10-05	Surge Lawn & Garden Fert.	4.5	*8.1	4.5
08-04-04	Agway Evergreen Plant Food	9.5	5.0	4.4	05-10-05	Surge Lawn & Garden Fert.	6.8	12.2	*3.7
08-16-16	Agway Super Garden	8.6	16.2	16.1	05-10-10	C & J Specialty	*3.2	*5.6	12.2
08-16-16	Agway Super Garden Plant Food	8.5	*14.5	18.0	05-10-10	C & J Specialty Fert.	*3.7	*6.8	12.6
10-10-10	Agway	11.0	12.5	10.8	05-10-10	C & J Specialty Fert.	5.5	*9.2	9.1
10-10-10	Agway Blend Rite	*8.3	10.3	9.5	05-10-10	Surge Plant Food, Veg & Flower	*4.2	*7.8	10.3
11-24-24	Bulk	15.8	23.8	*21.0	10-06-04	C & J Hi-Organic Fert.	*8.8	*4.6	4.0
12-24-24	Agway Blend	*10.9	24.0	31.0	10-06-04	Surge	*7.1	*4.6	5.4
16-32-16	Agway Start & Gro	17.1	33.6	17.9	10-06-04	Surge Lawn & Garden	*7.4	6.1	4.2
20-09-24	Agway Blend	21.0	*6.0	36.0	10-08-10	C & J Fert.	10.7	5.8	6.4
20-10-20	Agway Blend	26.9	9.3	*16.8	10-10-10	C & J Specialty	*8.5	*7.7	14.8
20-10-20	Agway Blend	22.9	10.4	20.5	10-10-10	C & J Specialty Fert.	10.3	9.7	13.9
20-13-20	Bulk	26.0	14.5	20.8	10-10-10	C & J Specialty Fert.	11.8	13.7	9.7
20-20-20	Agway Sol-U-Green	19.5	21.6	24.2	10-10-10	C & J Specialty Fert.	11.3	*8.6	8.3
22-16-16	Agway	26.9	17.9	16.7	10-10-10	C & J Specialty Fert. Pot. Nit.	*11.4		59.8
23-08-21	Bulk	28.1	8.9	23.4	15-15-15	C & J Specialty Fert.	18.1	16.3	14.0
23-11-19	Agway	34.1	9.6	*14.1	18-46-00	C & J Spec. Fert. Diamm. Phosph.	19.2	46.8	
23-12-18	Agway Blend	25.4	*9.3	22.2	20-10-10	Super Surge	20.4	10.5	11.4
23-12-18	Bulk	23.3	16.7	17.6	20-10-10	Super Surge Lawn Food	19.6	10.4	9.7
27-02-20	Agway Blend	23.8	4.1	27.5	<u>Chevron Chemical Co.</u>				
35-03-10	Agway Blend	*28.8	3.9	22.9	05-10-05	Ortho House Plant Food	5.5	11.0	6.5
<u>Alljack Co.</u>									
15-30-15	K-Gro All Purpose Plant Food	16.8	33.4	19.9					

<u>Manufacturer, guarantee, & brand</u>	<u>Nutrients found</u>			
	<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>	
05-10-05	Ortho House Plant Food (liq)	5.7	10.7	5.6
05-10-10	Ortho Azalea, Cam. & Rhod. Food	6.1	10.5	9.6
05-10-10	Ortho Vegetable Garden Food	6.7	10.1	*8.0
05-15-05	Ortho UP START Root Stimulator	5.2	15.1	5.2
06-09-05	Ortho African Violet Food	6.6	10.7	5.2
06-09-05	Ortho Liquid African Violet Food	6.3	9.1	6.0
06-18-06	Ortho Tomato & Vegetable Food	5.6	*16.9	5.4
08-08-08	Ortho Gen. Purpose Plant Food	8.4	7.3	8.5
10-08-07	Ortho Evergreen & Azalea Food	12.2	8.3	8.1
10-08-07	Ortho Fern & Ivy Food	9.8	7.9	7.1
10-08-07	Ortho Fern & Ivy Food	11.4	8.1	8.1
12-06-06	Ortho-Gro Liquid Plant Food	12.6	6.1	6.6
<u>Chilean Nitrate Corp.</u>				
15-00-14	Champion Nitrate of Soda	*12.1		13.1
16-00-00	Champion Nitrate of Soda	*13.3		
<u>Ciba-Geigy</u>				
20-20-20	Spectrum Earth Care Pro.Plnt Food	19.2	20.4	19.5
<u>Clarel Laboratories</u>				
00-06-05	Granny's Bloomers African Violets		6.9	5.1
<u>Clinton Nurseries</u>				
04-10-10	New Era Flowering Plant Food	4.9	10.3	11.0
05-12-09	New Era African Violet Food	5.8	12.3	10.7
06-12-06	New Era Solid Plant Food	7.2	16.5	8.3
07-15-08	New Era Plant Food	7.3	15.4	8.7
08-08-08	New Era Plant Food	8.4	7.7	8.5
12-06-06	New Era 30 Day Food	14.4	7.7	8.3
12-06-06	New Era Solid Plant Food	13.8	7.7	8.9
12-06-06	New Era Solid Plant Food	13.3	8.0	7.8
<u>Crop Production Service</u>				
05-10-10	Agrico	10.0	14.2	11.3
12-15-15	Crop Production Ser.	*5.3	*13.3	15.6
15-10-10	Agrico	23.3	11.5	10.2
<u>Espoma</u>				
04-03-02	Espoma Plant-tone	6.8	5.0	2.1
04-06-06	Espoma Garden-tone	4.7	7.2	*5.1
04-10-06	Espoma Bulb-tone	6.0	13.9	6.5
09-05-04	Espoma Tree-tone	11.7	5.1	6.4

<u>Manufacturer, guarantee, & brand</u>	<u>Nutrients found</u>			
	<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>	
<u>Estech General Chemical Co.</u>				
05-10-05	Gro-Tone P.Food All Purp./50% Org	6.6	10.4	6.2
05-10-05	K-Mart Lawn & Garden Food	9.7	19.4	8.3
05-10-05	Perk-up Plant Food	11.8	15.0	11.3
05-10-05	Swift Lawn & Garden	5.5	11.1	9.1
05-10-10	Red Steer	11.1	19.2	11.8
05-10-10	Suburban	12.5	12.7	14.2
06-08-06	Grotone Evergreen Food 30% Org. N	6.5	15.5	9.0
07-10-05	Gro-Tone Rose Food	8.5	13.4	6.5
10-03-06	Blue Seal Turf Green	11.2	2.9	7.7
10-06-04	K-Mart Lawn & Garden Food	12.5	7.3	4.7
10-06-04	K-Mart Weed & Feed	10.7	11.3	5.9
10-06-04	Perk-up	10.4	9.4	4.7
10-10-10	Red Steer	13.9	13.4	11.4
10-20-10	Corn Starter w/micronutrients	10.1	24.4	15.8
15-15-15	Red Steer	20.6	*6.5	15.9
18-03-08	Vigoro Weed and Feed	18.9	*0.8	*3.6
20-10-05	K-Mart Lawn Food	24.0	13.4	7.0
21-03-16	Par-Ex Slow Release Fertilizer	21.9	2.2	18.9
22-03-08	Vigoro Lawn Food	28.9	5.3	8.2
23-05-05	Gro-tone Weed Cont. + Lawn Food	26.7	4.9	7.9
24-03-10	Par-Ex w/IBDV	24.3	4.7	13.0
24-04-12	Vigoro Weed Control + Lawn Fert.	24.8	*2.4	11.8
27-03-03	K-Mart Super K-Gro Lawn Fert.	33.0	7.8	3.2
<u>Fer Mel Corporation</u>				
20-04-08	Fer-Mel Fairway Turf Food	20.5	3.8	9.8
20-05-10	Fer-Mel Fairway Turf	22.3	*3.4	12.6
25-05-10	Fer-Mel Prem. Lawn Food	28.6	*3.8	11.6
<u>Holland Bulb Products</u>				
09-09-06	Holland Bulb Booster	12.2	12.0	6.7
09-09-06	Holland Bulb Booster	10.0	9.2	7.0
<u>Hy-Trous</u>				
04-12-04	Hy-Trous African Violet Liq. Fert	4.8	11.2	4.1
05-10-05	Hy-Trous Liquid Fert.	*3.5	9.8	5.1
05-10-05	Hy-Trous Liquid Fert.	5.7	10.4	5.3
<u>Hyponex Co.</u>				
04-10-05	Hypostyx Flowering Pl Fd Stks	4.2	10.4	5.4
05-10-05	Hyponex House Plant Food All Purp	*3.3	10.8	5.2
06-06-06	Hyponex Afr. Violet Liq. Conc.	*4.2	6.6	6.2

Manufacturer, guarantee, & brand	Nutrients found		
	% Nitrogen	% P2O5	% K2O
06-06-06 Hyponex Plant Food	6.5	6.8	6.4
07-06-19 Hyponex House Plant Food All Purp	7.8	6.5	22.4
08-04-02 Hyponex All Org Fish Pl Fd Stks	10.0	6.7	2.7
10-05-05 Hyponex Bug Dart plus Plant Food	10.6	5.8	6.1
10-05-05 Hypostyx Foliage Plant Fd Sticks	10.9	5.9	6.1

International Spike

08-24-08 Jobe's Fertilizer Spikes	8.5	25.8	13.2
10-10-04 Jobe's Plant Food Spikes Fl.Plnts	12.3	11.6	4.1
12-04-07 Jobe's Fert. Spikes/Evgrn. Shrubs	15.5	4.2	7.4
12-06-08 Jobe's Fert Spikes Evgrn Tr/Shr	16.3	9.0	11.6
13-04-05 Jobe's Plant Food Spikes Housepl.	13.3	4.7	5.7
13-05-07 Jobe's Fert. Spikes/Fl. Shrubs	17.7	6.9	8.1
16-08-08 Jobe's Fert. Spikes Trees/Shrubs	16.4	9.0	11.2
20-20-20 Jobe's Plant Food	*17.8	19.9	21.9
20-20-20 Jobe's Plant Food	*11.5	20.0	21.6

J. T. Baker

09-09-06 One.A.Bulb Premium Fert. Tabs.	13.4	9.3	7.0
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Lebanon Chemical Corp.

09-05-03 Lebanon Acre	12.3	7.4	5.1
09-08-08 Lebanon Rose Food	9.3	10.5	10.1
09-17-09 Greenview Green Start	9.5	18.9	11.3
10-06-04 Hart's Lawn Food	11.7	7.3	4.8
10-10-10 Lebanon Multi Purpose	10.4	*8.8	15.2
10-20-10 Greenview Garden Mate	10.8	*18.3	12.9
12-10-10 Greenview Shrub Mate	12.4	10.8	11.3
12-10-10 Greenview Shrub-mate	12.9	9.6	*8.0
18-03-12 Lebanon Country Club	18.6	3.2	12.0
18-03-12 Lebanon Country Club	19.5	3.3	14.1
22-04-04 Greenview Crabicide Green	28.7	3.8	6.6
30-04-04 Greenview Green Power	32.5	3.8	6.4

Loft's Pedigreed Seed

13-11-15 Loft's Fall Feed & Seed Starter	*11.5	11.8	20.0
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Miller Chemical & Fertilizer

15-15-15 Miller Greenhouse Spec. Fert.	16.1	14.5	15.6
15-16-17 Miller Greenhouse Spec. Sol. Fert	14.4	17.2	17.3

Nitrochem

34-00-00 Bull's Eye Ammonium Nitrate	*31.0		
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Manufacturer, guarantee, & brand	Nutrients found		
	% Nitrogen	% P2O5	% K2O
<u>O. M. Scott & Sons</u>			
18-24-06 Burpee Grow Vegetables	19.2	25.7	6.2
18-24-06 Scott's Starter Fertilizer	18.2	24.6	7.2
18-24-06 Scott's Transplants	19.9	24.1	7.5
18-26-06 Scott's Starter Fertilizer	19.1	23.6	7.1
27-03-03 Scott's Turf Builder	29.5	3.1	3.8
27-03-03 Scott's Turf Builder	28.4	2.8	4.5
31-03-10 Scott's Lawn Pro Step 4 Lawn Fert	32.9	3.1	11.5
32-03-04 Scott's Step 1 Crabgr. Prev/Fert.	34.2	4.7	6.0

Old Fox Chemical Co.

00-00-60 Old Fox Bulk			64.9
05-10-10 Old Fox	5.9	*7.9	10.1
05-10-10 Old Fox	5.2	*9.1	10.2
05-10-10 Old Fox	4.6	10.3	10.8
10-06-04 Old Fox Turffood W/Natural Org. N	10.5	6.8	6.8
10-10-10 Old Fox	9.5	*9.2	11.6
10-10-10 Old Fox	*4.7	*7.8	11.3
10-10-10 Old Fox	10.0	*8.9	12.7
12-02-08 Old Fox Fair Gran	12.8	2.1	14.4
12-15-15 Old Fox Bulk	12.6	20.2	*12.0
14-14-28 Old Fox Bulk	*12.2	17.3	34.8
15-04-08 Holdridge Farm Nurs. Super Lawn	*13.5	*2.7	9.4
15-15-15 Old Fox	*14.0	*12.0	20.4
18.05-11-17.1 Old Fox	19.0	*6.1	23.0
18.05-11-17.1 Old Fox	18.2	11.3	21.7
19-19-19 Old Fox	19.0	19.9	21.4
20-04-08 Old Fox Gro Green W/Organic N	21.5	4.3	9.6

Optiflora

14-12-14 Optimara Violet Food	13.7	12.1	14.7
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Plant Research Labs

01-02-01 Oxygen Plus Indoor Plant Food	1.1	2.5	1.1
01-03-02 Oxygen Plus African Violet Food	1.5	3.1	2.3
01-04-02 Roger's Gardens Oxygen+ Pl. Food	1.1	4.0	2.3
04-04-04 Roger's Gardens Oxygen+ Pl. Food	*1.5	3.6	4.2

Plantabbs Corp.

11-15-20 Plantabbs African Violet	12.6	15.4	26.7
11-15-20 Plantabbs House Plant Food	*9.2	16.0	21.5

Ra-Pid-Gro

30-12-11 Ra-pid-gro Acidloving Plants	30.7	12.4	11.3
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<u>Manufacturer, guarantee, & brand</u>		<u>Nutrients found</u>		
		<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>
32-10-10	Ra-pid-gro Evergree & Azalea Food	32.2	10.2	12.6
<u>Ross Daniels</u>				
05-35-10	Ross Plant Food Cart For Iron Def	5.7	37.7	12.8
08-08-08	Ross Special Evergreen Stakes	12.4	19.3	11.1
08-16-16	Ross Gro-Stakes Fr/Orna/Tr/Shrubs	12.3	17.1	18.8
08-16-16	Ross Gro-Stakes Fruit & Ornament.	9.9	17.8	20.5
09-46-15	Ross Cartridges Fruits, Nuts, Tom	11.2	50.3	17.5
10-10-10	Ross Gro-Stakes Evergreen	12.4	14.9	13.7
10-20-10	Ross Planter's Punch Starter Fert	10.3	19.2	9.3
10-20-20	Ross Evergreens	12.2	26.5	31.5
10-25-15	Ross Cart Tree & Shrub Starter	13.4	28.3	17.1
16-04-08	Ross Grow Stakes Ev/Azal/Cam/Rhod	16.7	5.2	9.0
16-10-09	Ross Gro-Stakes Trees & Shrubs	17.5	10.5	9.1
<u>Schultz Co.</u>				
10-15-10	Schultz-Instant Liq. Plant Food	10.2	*14.1	10.3
10-15-10	Schultz-Instant Liq. Plant Food	11.5	14.0	11.0
<u>Sierra Chemical Co.</u>				
14-04-06	Agriform Container Tablets	17.4	5.1	10.8
14-14-14	Osmocote Cont. Rel. Gert.	13.6	14.2	14.7
14-14-14	Osmocote Cont. Rel. Gert	13.6	14.2	14.7
<u>Stern's Nurseries</u>				
15-30-15	Stern's Miracle-Gro Conc. Pl. Fd.	15.7	29.5	16.4
30-10-10	Stern's Miracid Soil Acid/Pl. Fd.	31.4	11.2	9.9
<u>Sudbury Laboratory</u>				
00-00-44	Sudbury Potash 0-0-44			52.1
00-44-00	Sudbury Phosphorus 0-44-0		45.3	
44-00-00	Sudbury Nitrogen 44-0-0	50.3		
<u>Swift Agricultural Chemicals</u>				
10-05-05	Vigoro Liquid Plant Food	10.0	6.6	5.5
<u>Swiss Farms</u>				
04-12-08	Swiss Farms Plant Food	4.9	13.1	16.2
<u>Unifeed Div./Diamond Crystal Salt</u>				
10-20-05	Unifeed Plant Food	13.0	22.1	6.7

<u>Manufacturer, guarantee, & brand</u>		<u>Nutrients found</u>		
		<u>% Nitrogen</u>	<u>% P2O5</u>	<u>% K2O</u>
14-07-07	Unifeed Plant Food	17.9	10.4	12.1
<u>W. R. Grace Co.</u>				
05-11-26	Peters Prof. H2O Sol. Hyd/Sol.	7.2	13.7	27.9
07-40-06	MagAmp Plus K	7.2	47.2	5.5
12-36-14	Peters Prof Sol Pl Fd Afr Violet	12.3	40.3	14.0
15-10-30	Peters Prof. H2O Sol. Fert/Mum Sp	*10.3	10.4	34.0
15-16-17	Peters Prof. H2O Sol.Fert./Peat	*12.8	16.0	20.6
15-30-15	Peters Soluble Plant Food	15.0	30.4	19.8
18-18-18	Peters Special Soluble Plant Food	*12.6	21.4	*16.7
20-10-20	Peters Pro. H2O Sol. Fert/Peat Sp	19.8	*8.2	*17.0
20-20-20	Peters Prof Gen Purp Plant Food	*12.0	20.2	20.7
20-20-20	Peters Prof Sol Pl Fd Gen Purp	*12.6	19.6	22.1
<u>WGM/Hydro</u>				
15.5-00-00	Vikingship Calcium Nitrate	17.5		
<u>Woolfolk Chemical</u>				
14-14-14	Security Osmocote Fol&Pot Pl Fd	*7.6	14.2	14.4

Table 2. Summary for Each Manufacturer of Number of Claims for Individual Plant Nutrients, Percentage of Claims Not Meeting Guarantee, Average Percentage of Guarantee for Each Nutrient.

Company	No. Samples	Number of Claims			% Not Meeting Claim			Average % of Claim		
		N	P205	K20	N	P205	K20	N	P205	K20
Adco Works	1	0	0	0	-	-	-	-	-	-
Agrico	9	9	7	7	56	29	0	84	94	111
Agway	25	22	25	25	14	16	12	110	109	113
Alljack	1	1	1	1	0	0	0	112	111	133
Anderson	4	4	4	4	0	0	0	111	112	122
Atlas Fish Fertilizer	1	1	1	1	0	0	0	94	200	100
BFC Chemical	1	1	0	0	0	-	-	103	-	-
Burpee	5	5	5	5	0	0	0	104	99	118
Cadwell & Jones	20	20	19	19	40	47	5	98	92	107
Chevron	13	13	13	13	0	8	8	110	103	107
Chilean Nitrate	2	2	0	1	100	-	0	82	-	94
Ciba-Geigy	1	1	1	1	0	0	0	96	102	108
Clarel Laboratories	1	0	1	1	-	0	0	-	115	102
Clinton Nurseries	8	8	8	8	0	0	0	114	116	125
Crop Production Ser.	3	3	3	3	33	33	0	133	115	106
Espoma	4	4	4	4	0	0	25	142	132	115
Estech	23	23	23	23	0	13	4	136	133	129
FerMel	3	3	3	3	0	67	0	109	80	122
Holland Bulb	2	2	2	2	0	0	0	123	118	114
Hy-Trous	3	3	3	3	33	0	0	101	98	104
Hyponex	8	8	8	8	25	0	0	100	118	115
International Spike	9	9	9	9	22	0	0	109	116	123
J.T. Baker	1	1	1	1	0	0	0	149	103	117
Lebanon Chemical	12	12	12	12	0	17	8	111	109	130
Loft's Pedigreed Seed	1	1	1	1	100	0	0	89	107	133
Miller Chem. & Fert.	2	2	2	2	0	0	0	102	102	103
Nitrochem	1	1	0	0	100	-	-	91	-	-
O.M. Scott	8	8	8	8	0	0	0	107	107	126
Old Fox	17	16	16	17	25	50	6	97	95	122
Optiflora	1	1	1	1	0	0	0	98	101	105
Plant Research Labs.	4	4	4	4	25	0	0	110	105	111
Plantabbs	2	2	2	2	50	0	0	99	105	121
Ra-Pid-Gro	2	2	2	2	0	0	0	102	103	114
Ross Daniels	11	11	11	11	0	0	0	124	128	122
Schultz	2	2	2	2	0	50	0	109	94	107
Sierra Chemical	3	3	3	3	0	0	0	111	115	143
Stern's Nurseries	2	2	2	2	0	0	0	105	105	104
Sudbury Labs.	3	1	1	1	0	0	0	114	103	118
Swift Agric. Chem.	1	1	1	1	0	0	0	100	132	110
Swiss Farms	1	1	1	0	0	0	0	123	109	203
Unifeed/Diamond Cryst.	2	2	2	2	0	0	0	129	130	154
W.R. Grace	10	10	10	10	50	10	20	90	106	106
WGM/Hydro	1	1	0	0	0	-	-	113	-	-
Woolfolk Chemical	1	1	1	1	100	0	0	54	101	103

Table 3. Distribution of Mixed Fertilizer Sold in Connecticut July 1, 1983-June 30, 1984

GRADE	TONS
0-15-30	181
0-18-36	103
5-10 -5	1382
5-10-10	1046
6-24-24	18
10 -6 -4	1902
10-10-10	5701
10-16-20	60
10-20-10	381
10-20-20	360
12 -4 -8	31
14-14-14	32
15 -8-12	889
15-10-10	1446
15-15-15	716
18-46 -0	1388
20 -4-10	60
20 -8 -8	74
20-10-10	394
20-10-15	94
20-10-20	18
20-20-20	58
22 -4 -4	10
25 -3 -3	336
25 -5-10	184
26 -3 -3	519
27 -3 -3	197
28 -7-14	74
30 -0 -0	764
30 -4 -4	42
32 -4 -4	21
36 -4 -4	34
46 -0 -0	2235
TOTAL	20750
MISCELLANEOUS	21551
GRAND TOTAL	42301

Table 4. Tonnages of Fertilizer Materials and Mixed Fertilizers Sold in Connecticut July 1, 1983-June 30, 1984

COMMODITY	TONS
CHEMICAL NITROGEN	
Ammonium nitrate	386
Anhydrous ammonia	86
Calcium nitrate	93
Nitrogen solutions	1293
Sodium nitrate	7
Urea	256
Ureaform	512
Other nitrogen materials	25
TOTAL	2658
PHOSPHATES	
Bone meal	127
Phosphate rock	8
Superphosphate 20%	18
Superphosphate 46%	402
Other phosphate materials	545
TOTAL	1100
POTASH	
Muriate of potash	1206
Potassium sulfate	11
TOTAL	1217
NATURAL ORGANICS	
Composted cow manure	1183
Cottonseed meal	92
Dried blood	10
Dried manure	4403
Linseed meal	8
Sewage sludge	389
Gelatin	7
TOTAL	6092
SECONDARY AND MICRONUTRIENTS	
Aluminum	3
Borax	17
Iron	1
Magnesium	59
Sulfur	2
Miscellaneous	186
TOTAL	268
TOTAL-COMMODITIES	11355
TOTAL-COMMERCIAL FERTILIZERS	42301
GRAND TOTAL	53636