

Inspections of COMMERCIAL FERTILIZERS — 1983

By Lester Hankin

Chemical analyses of 264 official samples of fertilizer collected during 1983 by inspectors of the Connecticut Department of Agriculture are presented in this Bulletin.

Table 1 shows individual samples from 30 manufacturers. The number designating each sample, as for example 10-10-10, indicates the guaranteed percentage for nitrogen (N) phosphoric acid (P_2O_5), and potash (K_2O), in that order. A brand name, if available, follows. The actual content found in an official sample is then shown, with deficiencies in italics. Table 2 summarizes for each manufacturer the number of guarantees examined for each plant nutrient, the percentage of the samples not meeting their guarantees, and the average percentage of guarantee found. Table 3 shows distribution of mixed fertilizers sold in Connecticut. Only formulations with analyses from more than three manufacturers are shown; others 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 formulations from the same manufacturer. The second type of variability is between duplicate analyses of the same sample. The variability among duplicates is shown in the statement: the mean difference between duplicates for nitrogen and potash are one-third percent and for phosphoric acid, one-quarter percent.

Fertilizer samples are deemed deficient in any nutrient if the analysis is below the guarantee by more than values established by the Association of American Plant Food Control Officials.

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

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Chief, Analytical Chemistry

Table 1. Analysis of Individual Samples of Commercial Fertilizers.

| Manufacturer, guarantee, & brand | | | Nutrients found, % | | | Manufacturer, guarantee, & brand | | | Nutrients found, % | | |
|----------------------------------|---------------------------------|--|--------------------|-------------------------------|------------------|------------------------------------|--|--|--------------------|-------------------------------|------------------|
| | | | N | P ₂ O ₅ | K ₂ O | | | | N | P ₂ O ₅ | K ₂ O |
| AGRICO | | | | | | AGWAY (continued) | | | | | |
| 5-10-10 | | | 3.2 | 6.3 | 4.9 | 22-10-20 | | | 22.1 | 9.4 | 22.9 |
| 5-10-10 | | | 6.1 | 8.8 | 7.9 | 22-11-15 | Agway Blend | | 22.4 | 10.1 | 21.6 |
| 6-3-6 | | | 6.1 | 3.0 | 6.2 | 22-13-18 | Agway Blend | | 22.9 | 14.2 | 17.9 |
| 6-3-6 | | | 6.6 | 2.3 | 5.6 | 23-11-17 | | | 23.9 | 14.0 | 19.3 |
| 8-24-16 | | | 7.4 | 23.1 | 14.6 | 23-12-18 | | | 23.3 | 12.8 | 17.0 |
| 8-40-5 | | | 8.5 | 36.8 | 5.4 | 23-12-18 | Agway Blend | | 22.5 | 6.9 | 26.6 |
| 10-6-4 | Village Green | | 11.3 | 5.9 | 4.2 | 23-15-15 | | | 23.7 | 15.2 | 18.4 |
| 10-6-4 | Village Green | | 11.2 | 4.6 | 3.2 | 24-9-14 | | | 22.6 | 9.0 | 19.8 |
| 10-6-4 | | | 10.2 | 5.3 | 3.3 | 25-9-18 | Agway Blend | | 32.2 | 7.0 | 27.9 |
| 10-8-10 | | | 10.1 | 6.8 | 9.5 | 25-10-16 | | | 25.8 | 10.6 | 19.0 |
| 10-10-10 | Village Green | | 10.2 | 7.6 | 9.1 | 25-10-17 | | | 24.8 | 6.9 | 20.9 |
| 10-10-10 | | | 11.9 | 6.3 | 6.6 | 26-6-19 | | | 26.7 | 4.1 | 22.1 |
| 10-10-10 | | | 8.7 | 7.4 | 4.0 | 26-15-23 | | | 17.8 | 16.5 | 24.3 |
| 10-10-10 | | | 10.7 | 9.4 | 7.5 | 28-11-11 | | | 30.1 | 8.7 | 12.0 |
| 10-20-20 | | | 10.8 | 19.4 | 15.6 | 30-8-12 | | | 30.2 | 7.3 | 14.2 |
| 10-20-20 | | | 10.2 | 17.4 | 13.1 | 31-5-13 | | | 30.8 | 4.8 | 15.7 |
| 15-0-5 | | | 13.0 | | 6.0 | 32-10-7 | | | 31.9 | 12.6 | 9.3 |
| 15-5-15 | | | 13.6 | 4.0 | 14.1 | 33-6-9 | | | 33.5 | 10.1 | 11.2 |
| 15-10-10 | | | 15.3 | 7.7 | 9.4 | ANDERSONS LAWN FERTILIZER | | | | | |
| 15-15-15 | | | 14.5 | 14.3 | 15.9 | 25-3-6 | Crabgrass Prev. and Lawn Food | | 30.6 | 4.7 | 7.3 |
| 17-13-26 | | | 16.0 | 8.9 | 30.3 | 26-4-8 | Stanford's Old English Lawn Food | | 27.3 | 4.1 | 10.5 |
| 17-13-26 | | | 16.6 | 15.3 | 28.4 | 28-4-12 | Hart's Premium Lawn Fertilizer | | 27.8 | 4.1 | 14.5 |
| 17-13-26 | | | 15.6 | 14.4 | 26.8 | C. HART SEED CO. | | | | | |
| 17-13-26 | | | 14.3 | 15.9 | 29.9 | 10-6-4 | Hart's Lawn Food | | 10.0 | 7.4 | 4.7 |
| 17-13-26 | | | 18.5 | 15.1 | 25.3 | 20-12-8 | Hart's Professional Turf Food | | 20.1 | 11.1 | 8.1 |
| 17-13-26 | | | 19.2 | 17.3 | 24.4 | CADWELL & JONES | | | | | |
| 19-19-19 | | | 18.1 | 19.0 | 19.5 | 5-10-5 | Surge | | 3.6 | 7.9 | 5.1 |
| 19-19-19 | | | 19.2 | 17.6 | 16.6 | 5-10-10 | Specialty Fertilizer | | 5.1 | 12.3 | 11.1 |
| 38-0-0 | Nitroform SLO release nitrogen | | 37.8 | | | 5-10-10 | Specialty Fertilizer | | 5.2 | 8.3 | 9.9 |
| 46-0-0 | Urea | | 45.0 | | | 5-10-10 | Specialty Fertilizer | | 5.2 | 6.7 | 10.6 |
| AGRICULTURAL PRODUCTS CO. | | | | | | 5-10-10 | Specialty Fertilizer | | 5.3 | 8.8 | 10.8 |
| 5-10-5 | Plant food all purpose | | 4.2 | 10.4 | 5.1 | 5-10-10 | Surge | | 5.1 | 8.8 | 10.2 |
| 10-6-4 | Guardian Grow Green Lawn Food | | 10.2 | 4.3 | 4.1 | 5-10-10 | Surge | | 4.9 | 6.1 | 4.7 |
| AGWAY | | | | | | 5-10-10 | Plant Food | | 5.1 | 9.2 | 4.6 |
| 0-3-54 | | | | 3.7 | 55.2 | 5-10-10 | Surge Plant and Vegetable Food | | 5.7 | 10.9 | 11.5 |
| 0-10-43 | | | | 10.8 | 45.7 | 10-2-8 | | | 9.2 | 2.5 | 8.8 |
| 0-15-30 | Alfa B | | | 17.9 | 27.6 | 10-6-4 | Surge | | 10.2 | 5.4 | 5.2 |
| 0-16-34 | | | | 17.4 | 37.1 | 10-6-4 | Surge | | 12.7 | 6.9 | 5.8 |
| 0-17-35 | Agway Blend | | | 14.0 | 36.3 | 10-6-4 | Surge | | 7.7 | 5.3 | 5.5 |
| 0-32-13 | Agway Blend | | | 35.4 | 15.5 | 10-6-4 | Surge Lawn and Garden Fertilizer | | 10.1 | 4.1 | 4.5 |
| 1-1-1 | Composted Sheep Manure | | 1.0 | 0.9 | 0.7 | 10-6-4 | Specialty Fertilizer | | 9.5 | 4.6 | 3.9 |
| 3-17-34 | | | 3.4 | 18.3 | 36.3 | 10-10-10 | Specialty Fertilizer | | 10.2 | 10.7 | 10.2 |
| 5-10-5 | Garden Plant Food | | 5.4 | 5.9 | 5.1 | 10-10-10 | Specialty Fertilizer | | 6.9 | 7.2 | 11.8 |
| 5-10-10 | | | 5.7 | 10.6 | 10.6 | 10-10-10 | Specialty Fertilizer | | 9.0 | 12.3 | 10.0 |
| 5-10-10 | Blend-Rite | | 3.7 | 7.4 | 8.9 | 10-10-10 | Specialty Fertilizer | | 10.7 | 8.1 | 10.9 |
| 5-10-10 | Agway Plant Food | | 5.0 | 10.1 | 9.5 | 10-10-10 | Specialty Fertilizer | | 9.1 | 7.9 | 9.4 |
| 6-29-17 | | | 6.6 | 33.0 | 18.7 | 10-10-10 | Specialty Fertilizer | | 10.1 | 5.6 | 10.6 |
| 8-4-4 | Evergreen Plant Food | | 9.5 | 5.0 | 4.4 | 19-19-19 | | | 19.8 | 17.7 | 21.1 |
| 8-16-16 | Agway Super Garden | | 8.6 | 16.2 | 16.1 | 20-3-10 | Specialty Fertilizer, Town of Brookfield | | 22.7 | 2.4 | 10.6 |
| 9-24-24 | | | 9.2 | 25.5 | 25.3 | 20-10-10 | Super Surge | | 19.0 | 12.7 | 10.4 |
| 10-6-4 | Turfood Special | | 10.1 | 7.2 | 4.9 | 20-10-10 | Turf Doctor | | 20.7 | 11.7 | 12.6 |
| 10-10-10 | Blend-Rite | | 11.3 | 10.7 | 13.0 | 23-6-9 | Surge | | 23.6 | 5.6 | 9.3 |
| 10-10-10 | | | 11.0 | 12.5 | 10.8 | 25-7-11 | Pro-turf Lawn Fertilizer | | 25.2 | 5.6 | 14.5 |
| 10-10-10 | | | 10.2 | 11.8 | 11.5 | 30-0-0 | Specialty Fertilizer | | 26.6 | | |
| 10-20-20 | | | 10.2 | 20.1 | 21.2 | CLAREL LABORATORIES, INC. | | | | | |
| 10-20-20 | Blend-Rite | | 8.6 | 17.1 | 20.6 | 0-6-5 | Granny's Bloomers African Violets | | | 6.9 | 5.1 |
| 10-20-10 | Corn Starter | | 11.7 | 20.2 | 10.0 | CHILEAN NITRATE CORPORATION | | | | | |
| 15-8-12 | Blend-Rite | | 14.9 | 7.8 | 11.3 | 16-0-0 | Champion Nitrate of Soda | | 13.2 | | |
| 15-15-15 | | | 16.0 | 14.2 | 15.2 | CLINTON NURSERY PRODUCTS | | | | | |
| 16-16-16 | | | 17.9 | 12.3 | 22.1 | 4-10-6 | New Era African Violet Food | | 3.8 | 10.6 | 8.8 |
| 18-12-18 | | | 18.0 | 15.6 | 22.0 | 5-1-1 | New Era Fish Emulsion | | 5.1 | 2.2 | 1.7 |
| 20-5-7 | Greenlawn plus with crab killer | | 21.4 | 8.5 | 6.8 | 5-10-5 | New Era Plant Food | | 5.2 | 11.5 | 5.9 |
| 18-14-23 | | | 18.2 | 14.0 | 27.3 | | | | | | |
| 18-18-18 | | | 18.9 | 19.9 | 20.6 | | | | | | |
| 21-5-7 | Greenlawn plus with weed killer | | 18.3 | 7.5 | 9.3 | | | | | | |
| 22-3-25 | | | 23.4 | 2.5 | 26.8 | | | | | | |
| 22-6-8 | Greenlawn plus | | 22.1 | 6.2 | 8.4 | | | | | | |
| 22-6-8 | Greenlawn plus | | 21.7 | 6.7 | 8.2 | | | | | | |

| Manufacturer, guarantee, & brand | | Nutrients found, % | | | Manufacturer, guarantee, & brand | | Nutrients found, % | | | |
|--------------------------------------|---|--------------------|-------------------------------|------------------|-----------------------------------|---|----------------------|-------------------------------|------------------|-----|
| | | N | P ₂ O ₅ | K ₂ O | | | N | P ₂ O ₅ | K ₂ O | |
| CLINTON NURSERY PRODUCTS (continued) | | | | | | FER-MEL | | | | |
| 5-12-9 | New Era African Violet Food, (powder) | 5.6 | 13.2 | 9.6 | 12-4-8 | Fer-Mel | 12.9 | 3.6 | 8.2 | |
| 7-15-8 | New Era Plant Food | 7.6 | 17.1 | 8.9 | 20-0-10 | Fer-Mel Turf Food | 21.0 | | 12.0 | |
| 12-6-6 | New Era Solid Plant Food | 13.3 | 8.0 | 7.8 | 20-4-8 | Fer-Mel Fairway Turf Food | 18.2 | 3.7 | 9.1 | |
| 15-30-15 | New Era Formula 70 Plant Food | 15.2 | 31.7 | 14.1 | 20-5-10 | Fer-Mel Fairway Turf Food | 21.2 | 5.1 | 10.3 | |
| ESPOMA COMPANY | | | | | | 20-12-8 | Hart's Pro Turf Food | 19.3 | 12.4 | 8.8 |
| 4-3-2 | Plant-Tone | 4.0 | 4.8 | 2.3 | 25-5-10 | Fer-Mel Premium Lawn Food | 27.0 | 4.7 | 11.0 | |
| 4-3-2 | Plant-Tone | 4.8 | 5.3 | 4.4 | 25-5-10 | Fer-Mel Lawn Food | 24.7 | 5.2 | 11.6 | |
| 4-6-4 | Holly-Tone | 4.6 | 7.7 | 4.2 | 28-7-14 | Fer-Mel | 31.2 | 6.6 | 14.7 | |
| 4-6-4 | Holly-Tone | 5.0 | 6.1 | 6.7 | GENSTAR CHEMICAL, LTD. | | | | | |
| 4-6-6 | Garden-Tone | 4.4 | 8.7 | 6.8 | 34-0-0 | Bulls Eye | 31.3 | | | |
| 6-6-4 | Rose-Tone | 5.6 | 8.8 | 4.2 | INTERNATIONAL SPIKE, INC. | | | | | |
| 6-6-4 | Rose-Tone | 5.9 | 6.8 | 5.0 | 20-20-20 | Jobe's Plant Food | 17.8 | 19.9 | 21.9 | |
| ESTECH GENERAL CHEMICAL COMPANY | | | | | | JOHN D. LYON | | | | |
| 0-20-0 | Gro-Tone Super Phosphate | | 22.1 | | 20-5-10 | Lyon Lawn Fertilizer | 19.6 | 4.5 | 10.2 | |
| 5-10-5 | Swift's Plant Food for Lawn and Garden | 12.7 | 9.3 | 10.5 | LEBANON CHEMICAL | | | | | |
| 5-10-5 | K-Mart Lawn and Garden | 3.3 | 3.9 | 5.8 | 5-10-5 | Hart's All Purpose Plant Food | 5.4 | 10.2 | 5.3 | |
| 5-10-5 | Liberty Plant Food | 5.0 | 7.1 | 3.1 | 10-6-4 | Hart's Lawn Food | 10.0 | 6.7 | 11.4 | |
| 5-10-5 | Perk Up Plant Food | 4.4 | 9.3 | 5.7 | 10-6-4 | Hart's Two for One Fertilizer and Weed Killer | 12.8 | 8.2 | 6.3 | |
| 5-10-10 | Red Steer | 4.2 | 9.3 | 9.4 | 10-6-4 | Green Gold Crab Kill and Lawn Fertilizer | 11.4 | 6.4 | 4.2 | |
| 5-10-10 | Red Steer | 5.0 | 9.1 | 9.9 | 9-5-3 | Lebanon Acre | 12.3 | 7.4 | 5.1 | |
| 5-10-10 | Suburban | 4.7 | 7.9 | 6.0 | 9-8-8 | Rose Food | 9.3 | 10.5 | 10.1 | |
| 5-10-10 | Suburban | 8.2 | 12.0 | 9.3 | 9-17-9 | Green View Green Start | 8.5 | 17.1 | 10.6 | |
| 6-2-0 | Gro-Tone Nitrogranic | 5.5 | 5.0 | | 9-17-9 | Green View Green Start | 9.5 | 18.9 | 11.3 | |
| 6-8-6 | Gro-Tone Evergreen Food | 6.1 | 7.0 | 6.1 | 10-10-10 | Lebanon Multi Purpose Fertilizer | 10.6 | 11.1 | 10.2 | |
| 6-9-5 | Vigoro Rose Food | 6.1 | 4.8 | 5.4 | 10-20-10 | Green View Garden Mate | 10.8 | 18.3 | 12.9 | |
| 6-10-4 | Vigoro All Purpose Fertilizer | 6.8 | 14.6 | 4.7 | 12-10-10 | Green View Shrub Mate | 12.4 | 10.8 | 11.3 | |
| 7-10-5 | Gro-Tone Rose Food | 6.1 | 10.3 | 6.7 | 18-3-12 | Lebanon Country Club | 18.6 | 3.2 | 12.0 | |
| 10-3-6 | Blue Seal Turf Green | 10.6 | 3.9 | 6.5 | 22-4-4 | Green View Crabicide Green | 26.1 | 4.7 | 5.9 | |
| 10-6-4 | Deerfield Lawn Food | 10.3 | 4.6 | 4.5 | 25-3-3 | Sears Superfine Weed and Feed | 25.9 | 2.7 | 3.4 | |
| 10-6-4 | Perk Up Lawn Food | 8.2 | 4.8 | 4.9 | 30-4-4 | Green View Green Power | 30.2 | 3.8 | 4.4 | |
| 10-6-4 | Perk Up Lawn Food | 10.0 | 5.0 | 5.7 | 30-4-4 | Green View Green Power | 31.6 | 3.6 | 4.7 | |
| 10-6-4 | Park Ridge All Purpose | 9.8 | 6.7 | 2.3 | 30-4-4 | Green View Green Power | 30.9 | 4.3 | 4.2 | |
| 10-6-4 | Liberty Lawn Food | 10.4 | 4.5 | 3.8 | 30-4-4 | Green View Green Power | 32.0 | 3.8 | 4.1 | |
| 10-6-4 | Liberty Lawn Food | 9.5 | 4.2 | 5.0 | LOFT'S SEED, INC. | | | | | |
| 10-6-4 | Lawn Craft Turf Food | 10.2 | 3.9 | 2.0 | 13-11-15 | Loft's Fall Feed and Seed Starter | 11.5 | 11.8 | 20.0 | |
| 10-10-20 | Gro-Tone Fall Fertilizer | 10.0 | 8.4 | 21.0 | 28-3-8 | Loft's Lawn Food | 32.1 | 3.7 | 10.6 | |
| 10-10-20 | Gro-Tone Fall Fertilizer | 9.1 | 10.7 | 16.5 | LOTT'S RED SEAL COMPANY | | | | | |
| 10-10-10 | Park Ridge All Purpose | 7.3 | 4.6 | 7.3 | 28-3-3 | Lott's Lawn Food | 27.4 | 3.3 | 10.4 | |
| 10-10-10 | Suburban | 10.1 | 7.6 | 17.1 | MILWAUKEE METRO SEWERAGE DISTRICT | | | | | |
| 12-4-8 | Gro-Tone Turf and Tree Food | 10.4 | 4.6 | 7.1 | 6-2-0 | Milorganite Activated Sewage Sludge | 6.7 | 3.2 | | |
| 15-8-12 | Red Steer | 15.4 | 13.3 | 14.1 | NEW ENGLAND FARMS, INC. | | | | | |
| 20-0-16 | Par-Ex | 11.9 | | 17.7 | 1-3-0.5 | Mother Nature 100% Natural Organic Plant Food | 0.8 | 0.6 | 0.7 | |
| 20-0-16 | Par-Ex Slow Release | 20.1 | | 16.2 | 1-3-0.5 | Organic Plant Food — 100% Natural | 0.9 | 0.8 | 0.7 | |
| 20-5-5 | Vigoro Lawn Fertilizer for North Lawn | 21.6 | 3.8 | 4.9 | NORSK HYDRO | | | | | |
| 20-3-10 | Terre Weed and Feed | 21.0 | 4.7 | 8.3 | 15.5-0-0 | Viking Ship Calcium Nitrate | 13.9 | | | |
| 20-5-10 | Liberty | 20.3 | 7.9 | 10.0 | NUTRICO, INC. | | | | | |
| 20-10-5 | K-Mart Lawn Food | 17.1 | 7.3 | 2.3 | 10-6-4 | Nutrigo Lawn Food—50% organic | 10.5 | 5.5 | 4.1 | |
| 20-3-10 | | 16.6 | 2.7 | 7.3 | O.M. SCOTT | | | | | |
| 20-3-10 | Terre Super Lawn Spur | 18.5 | 3.6 | 11.8 | 18-24-6 | Scott's Starter Fertilizer | 18.9 | 25.8 | 6.0 | |
| 22-3-11 | Gro-Tone Crab Pre and Lawn Fertilizer | 22.1 | 3.3 | 19.3 | 18-24-6 | Scott's Grow Transplants | 18.1 | 27.6 | 6.0 | |
| 23-5-5 | Gro-Tone Weed Control and Lawn Fertilizer | 17.1 | 4.5 | 3.5 | 25-3-3 | Scott's Turf Builder + Halts | 23.8 | 3.7 | 2.7 | |
| 23-5-5 | Gro-Tone Weed Control and Lawn Fertilizer | 23.3 | 8.3 | 5.1 | | | | | | |
| 23-5-5 | Gro-Tone Lawn Food | 23.3 | 5.5 | 5.1 | | | | | | |
| 24-4-12 | Par-Ex | 24.6 | 6.1 | 13.4 | | | | | | |
| 24-4-12 | Vigoro Lawn Fertilizer | 24.6 | 7.4 | 13.2 | | | | | | |
| 24-4-12 | Vigoro Lawn Fertilizer | 24.2 | 7.7 | 13.8 | | | | | | |
| 24-4-12 | Weed Control and Lawn Fertilizer | 24.8 | 2.4 | 11.8 | | | | | | |
| 25-3-3 | Gro-Tone Lawn Food | 25.3 | 3.6 | 8.2 | | | | | | |
| 25-3-3 | Super K-Gro Weed Feed | 26.3 | 2.2 | 4.2 | | | | | | |
| 26-3-5 | Par-Ex Slow Release Weed Feed | 23.2 | 5.1 | 3.0 | | | | | | |
| 29-3-10 | Par-Ex Slow Release | 30.1 | 3.2 | 10.0 | | | | | | |

| Manufacturer, guarantee, & brand | | Nutrients found, % | | | Manufacturer, guarantee, & brand | | Nutrients found, % | | |
|----------------------------------|---|--------------------|-------------------------------|------------------|----------------------------------|----------------------------------|--------------------|-------------------------------|------------------|
| | | N | P ₂ O ₅ | K ₂ O | | | N | P ₂ O ₅ | K ₂ O |
| O.M. SCOTT (continued) | | | | | OLD FOX (continued) | | | | |
| 26-3-3 | Scott's Turf Builder + 2 | 26.3 | 3.1 | 3.3 | 19-19-19 | Old Fox | 19.3 | 15.8 | 21.0 |
| 27-3-3 | Scott's Turf Builder | 25.0 | 2.7 | 3.7 | 20-4-8 | Old Fox Green Gro | 21.2 | 4.6 | 9.2 |
| 27-3-3 | Scott's Turf Builder | 26.6 | 2.8 | 2.9 | 20-10-10 | Old Fox | 20.7 | 7.5 | 11.8 |
| 36-4-4 | Scott's Super Turf Builder | 35.3 | 4.7 | 4.0 | 20-10-10 | Old Fox | 18.5 | 8.1 | 14.4 |
| OLD FOX | | | | | 30-3-10 | Old Fox Power Green | 28.6 | 3.4 | 10.3 |
| 3-12-10 | Old Fox | 3.6 | 10.2 | 11.0 | 46-0-0 | Old Fox | 44.1 | | |
| 5-10-5 | Garden Pride Garden Food | 4.2 | 8.4 | 6.3 | OPTIFLORA, INC. | | | | |
| 5-10-10 | Old Fox | 4.7 | 8.4 | 11.1 | 14-12-14 | Optimara Violet Food | 13.7 | 12.1 | 14.7 |
| 5-10-10 | Old Fox | 4.6 | 10.3 | 10.8 | PLANT MINDER, INC. | | | | |
| 5-10-10 | Old Fox | 5.0 | 8.4 | 13.2 | 3-3-1.5 | Plant Minder Root Juice | 3.3 | 3.5 | 1.6 |
| 5-10-10 | Old Fox | 5.9 | 7.9 | 10.1 | PLANT RESEARCH LABS | | | | |
| 5-10-10 | Old Fox | 4.1 | 8.0 | 10.3 | 1-2-1 | Oxygen Plus Indoor Plant Food | 1.2 | 2.2 | 1.2 |
| 5-10-10 | Vegetable Pride | 5.4 | 8.5 | 10.2 | ROSS DANIELS | | | | |
| 6-4-6 | Old Fox | 5.4 | 3.0 | 7.3 | 3-8-8 | Ross—Special Evergreen Stakes | 12.4 | 19.3 | 11.1 |
| 10-6-4 | Old Fox Estate Green | 8.6 | 9.7 | 9.4 | 16-10-9 | Ross-Gro Stakes Trees and | | | |
| 10-6-4 | Old Fox Turf Green | 8.8 | 5.0 | 6.5 | | Shrubs | 16.7 | 10.1 | 9.7 |
| 10-6-4 | Old Fox Turf Green | 11.7 | 4.8 | 7.3 | 16-10-9 | Ross Super Stakes | 16.4 | 7.0 | 9.9 |
| 10-8-10 | Old Fox Tobacco Fertilizer | 10.4 | 5.0 | 12.1 | STANFORD SEED COMPANY | | | | |
| 10-10-10 | Old Fox | 8.7 | 10.1 | 10.8 | 18-3-5 | Old English Soil Insecticide and | | | |
| 10-10-10 | Old Fox | 8.8 | 10.5 | 13.3 | | Fertilizer with Diazinon | 20.2 | 5.7 | 9.3 |
| 10-20-20 | Old Fox | 8.9 | 17.2 | 20.2 | W.R. GRACE COMPANY | | | | |
| 12-1-6 | Old Fox Green and Tee | 12.1 | 0.9 | 6.2 | 12-36-14 | Peter's African Violet Special | 12.7 | 38.6 | 14.0 |
| 12-2-8 | Old Fox Fair Gran | 9.9 | 1.5 | 11.2 | 33.5-0-0 | Grace Nitrex | 29.3 | | |
| 12-2-8 | Old Fox Turf Gran | 12.5 | 3.0 | 10.6 | | | | | |
| 15-4-8 | Holdridge Super Lawn Care | 15.3 | 4.9 | 8.0 | | | | | |
| 15-4-8 | Old Fox Super Lawn Gro | 13.4 | 4.2 | 10.0 | | | | | |
| 15-4-8 | Old Fox Super Lawn Gro—40% N organic | 15.6 | 4.3 | 12.1 | | | | | |
| 15-10-10 | Old Fox | 13.8 | 11.3 | 8.4 | | | | | |
| 15-15-15 | Old Fox | 14.3 | 15.4 | 13.2 | | | | | |

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

| Company | No. Samples | Number of Claims | | | % Not Meeting Claim | | | Average % of Claim | | |
|-----------------------------|-------------|------------------|-------------------------------|------------------|---------------------|-------------------------------|------------------|--------------------|-------------------------------|------------------|
| | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| AGRICO | 30 | 30 | 27 | 28 | 30.0 | 59.3 | 42.9 | 100 | 91 | 91 |
| AGRICULTURAL PRODUCTS CO. | 2 | 2 | 2 | 2 | 50.0 | 50.0 | 0 | 93 | 88 | 102 |
| AGWAY | 52 | 46 | 52 | 52 | 8.7 | 21.2 | 1.9 | 103 | 104 | 112 |
| ANDERSONS LAWN FERT. | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 107 | 121 | 125 |
| C. HART SEED COMPANY | 2 | 2 | 2 | 2 | 0 | 50.0 | 0 | 100 | 108 | 109 |
| CADWELL & JONES | 28 | 28 | 27 | 27 | 28.6 | 51.9 | 0 | 99 | 91 | 110 |
| CLAREL LABORATORIES | 1 | 0 | 1 | 1 | — | 0 | 0 | — | 115 | 102 |
| CHILEAN NITRATE CORPORATION | 1 | 1 | 0 | 0 | 100 | — | — | 83 | — | — |
| CLINTON NURSERY PRODUCTS | 7 | 7 | 7 | 7 | 0 | 0 | 0 | 105 | 129 | 125 |
| ESPOMA COMPANY | 7 | 7 | 7 | 7 | 0 | 0 | 0 | 109 | 139 | 136 |
| ESTECH GENERAL CHEM. CO. | 48 | 47 | 46 | 46 | 28.3 | 41.3 | 26.1 | 101 | 107 | 109 |
| FER-MEL | 8 | 8 | 7 | 8 | 12.5 | 0 | 0 | 105 | 97 | 110 |
| GENSTAR CHEM | 1 | 1 | 0 | 0 | 100.0 | — | — | 92 | — | — |
| INTERNATIONAL SPIKE | 1 | 1 | 1 | 1 | 50.0 | 0 | 0 | 89 | 100 | 100 |
| JOHN D. LYON | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 98 | 90 | 102 |
| LEBANON CHEMICAL | 18 | 18 | 18 | 18 | 0 | 5.6 | 0 | 108 | 109 | 130 |
| LOFT'S SEED | 2 | 2 | 2 | 2 | 50.0 | 0 | 0 | 102 | 115 | 133 |
| LOTT'S RED SEAL | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 98 | 110 | 130 |
| MILWAUKEE METRO SEWERAGE | 1 | 1 | 1 | 0 | 0 | 0 | — | 112 | 160 | — |
| NEW ENGLAND FARMS | 2 | 2 | 2 | 2 | 0 | 100.0 | 0 | 85 | 23 | 140 |
| NORSK HYDRO | 1 | 1 | 0 | 0 | 100.0 | — | — | 90 | — | — |
| NUTRICO | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 105 | 92 | 103 |
| O.M. SCOTT | 7 | 7 | 7 | 7 | 28.6 | 0 | 0 | 99 | 107 | 103 |
| OLD FOX | 30 | 30 | 29 | 29 | 43.3 | 44.8 | 6.9 | 97 | 96 | 123 |
| OPTIFLORA | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 98 | 101 | 105 |
| PLANT MINDER | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 110 | 117 | 107 |
| PLANT RESEARCH LABORATORIES | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 120 | 110 | 120 |
| ROSS DANIELS | 3 | 3 | 3 | 3 | 0 | 50.0 | 0 | 121 | 137 | 119 |
| STANFORD SEED COMPANY | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 112 | 190 | 186 |
| W.R. GRACE | 2 | 2 | 1 | 1 | 50.0 | 0 | 0 | 97 | 107 | 100 |

Table 3. Distribution of Mixed Fertilizer Sold in Connecticut July 1, 1982-June 30, 1983

| GRADE | TONS | GRADE | TONS |
|----------|------|----------------------|--------------|
| 4-6-4 | 585 | 20-5-10 | 436 |
| 5-10-5 | 1231 | 20-10-10 | 375 |
| 5-10-10 | 1080 | 20-20-20 | 59 |
| 5-20-20 | 13 | 22-4-4 | 86 |
| 6-24-24 | 30 | 24-12-18 | 194 |
| 7-7-7 | 29 | 25-3-3 | 642 |
| 9-5-3 | 12 | 25-3-5 | 81 |
| 9-17-9 | 20 | 25-5-10 | 302 |
| 10-6-4 | 2632 | 26-4-6 | 80 |
| 10-10-10 | 5059 | 27-3-3 | 1083 |
| 10-20-10 | 491 | | |
| 10-20-20 | 365 | 30-4-4 | 322 |
| 12-4-8 | 73 | 46-0-0 | 519 |
| 12-10-10 | 18 | Total | 18288 |
| 15-8-12 | 670 | Miscellaneous | 16552 |
| 15-10-10 | 1396 | Total | 34840 |
| 15-30-15 | 94 | | |
| 16-8-8 | 51 | | |
| 19-4-4 | 157 | | |
| 19-19-19 | 76 | | |
| 20-4-4 | 27 | | |

Table 4. Tonnages of Fertilizer Materials and Mixed Fertilizers Sold in Connecticut During the Period July 1, 1982-June 30, 1983

| | Tons |
|-------------------------------------|--------------|
| <i>Commodity</i> | |
| <i>Chemical Nitrogen</i> | |
| Ammonium nitrate | 131 |
| Calcium nitrate | 130 |
| Nitrogen solutions | 72 |
| Sodium nitrate | 64 |
| Urea | 1963 |
| Ureaform | 24 |
| Other nitrogen materials | 33 |
| Total | 2417 |
| <i>Phosphates</i> | |
| Ammonium phosphate | 8 |
| Bonemeal | 133 |
| Phosphate rock | 15 |
| Superphosphate 20% | 18 |
| Superphosphate 46% | 61 |
| Other phosphate materials | 34 |
| Total | 269 |
| <i>Potash</i> | |
| Muriate of potash | 565 |
| Potassium carbonate | 8 |
| Potassium magnesium sulfate | 4 |
| Potassium nitrate | 60 |
| Potassium sulfate | 9 |
| Other potassium materials | 11 |
| Total | 657 |
| <i>Natural Organics</i> | |
| Cottonseed meal | 216 |
| Dried blood | 12 |
| Dried manure | 3584 |
| Linseed meal | 6 |
| Sewage Sludge | 510 |
| Gelatin | 5 |
| Miscellaneous organics | 862 |
| Total | 5195 |
| <i>Secondary and Micronutrients</i> | |
| Aluminum | 11 |
| Borax | 17 |
| Gypsum | 84 |
| Iron | 74 |
| Magnesium | 7 |
| Sulfur | 3 |
| Total | 196 |
| Total—commodities | 8734 |
| Total commercial fertilizers | 34840 |
| Grand total | 45574 |