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October 1957

# COMMERCIAL FERTILIZERS

## Report for 1957

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H. J. FISHER  
Chief Chemist

THE CONNECTICUT AGRICULTURAL EXPERIMENT  
STATION, NEW HAVEN, CONNECTICUT

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## REPORT ON INSPECTION AND ANALYSIS OF COMMERCIAL FERTILIZERS, 1957

H. J. FISHER, Chief Chemist<sup>1</sup>

### CONNECTICUT LAW AND REGULATIONS REGARDING COMMERCIAL FERTILIZERS

The term "commercial fertilizers," as used in the Connecticut fertilizer statute, includes "any and every substance imported, manufactured, prepared or sold for fertilizing or manuring or soil amendment purposes, except barnyard manure and stable manure which have not been artificially treated or manipulated, marl and lime." An amendment of the law in 1949 permitted fertilizers to be labelled with guaranties of elements other than nitrogen, phosphorus and potassium, but did not change the requirement that mixed fertilizers must contain at least 0.82 per cent of nitrogen, and 1 per cent of either phosphoric acid or potash, for guaranties of these elements to be made. Phosphorus must be declared as available phosphoric acid (except in the case of bone, tankage and other natural organic materials, where total phosphoric acid is guaranteed), and potassium as water-soluble potash; all other elements must be guaranteed in terms of percentages of the elements, not as oxides or salts. A registration fee of \$10.00, payable annually, is charged for each element guaranteed in each brand of fertilizer; there is also a six-cent tonnage tax, payable semiannually.

While manufacturers usually register their own fertilizers, if a retailer sells a fertilizer manufactured by an out-of-state firm, and that firm refuses to register, under the law the retailer is responsible for registration fees and tonnage taxes. *The retailer, therefore, should assure himself that the requirements of the law have been met by the manufacturers of the brands which he handles, or himself be prepared to meet all these requirements.*

The law exempts from registration, and from other requirements, only: (1) fertilizers passing through the State in transit; (2) fertilizers and fertilizer materials shipped to regular fertilizer factories to be used for manufacturing purposes; and (3) fertilizers and fertilizer chemicals sold to The Connecticut Agricultural Experiment Station for experimental purposes.

*Cottonseed, linseed, peanut and soybean oil meals, when sold or used for fertilizer purposes, must be registered as fertilizers and the specified fees paid thereon. For such products the registration fee is \$10.00 per brand. This fee and the tonnage tax are entirely apart from the registration fee required by the feeding stuffs law for vegetable meals used as feeds (there is no tonnage tax on feeds).*

<sup>1</sup>Analyses were made by Messrs. O. L. Nolan and Sherman Squires, Miss Helen Kocaba, Mrs. Joan Curtiss and Miss Sunrae Agostini; inspection and sampling by Mr. R. Richard Nichols; compilations by Mr. Nolan and Miss Eleanor Hopercraft.

Because manufacturers or jobbers do not know how much, if any, of their vegetable meal tonnage is sold or used as fertilizer, local dealers and purchasers report their sales or purchases to this Station. This information is not for publication but is used to inform manufacturers of the total sales of their meal as fertilizer in this State. It is expected that the fees provided for by statute will be paid by the manufacturer or other party responsible for the brands.

#### Official Definitions of Fertilizer Terms and Materials

It is expected that fertilizers sold in this state will comply with the regulations and standards of the Association of American Fertilizer Control Officials. A copy of the "Official Publication" of that Association giving these definitions and regulations may be obtained from the secretary-treasurer, B. D. Cloaninger, Drawer 392, Clemson, South Carolina, for \$2.00.

#### REGISTRATIONS

For 1957, 91 firms and individuals registered 401 brands of fertilizer at this Station for sale in the State. As required by statute, the brands are listed as follows:

##### J. & L. Adikes, Inc., 182-12 93rd Ave., Jamaica 23, N. Y.

Gro-Well Bone Meal  
Gro-Well Cottonseed Meal  
Gro-Well Cow Manure  
Gro-Well Gro-Manure  
Gro-Well Sheep Manure

##### Agricultural Supply Co., P. O. Box 57, West Haven, Conn.

Yale Special Mixture

##### Allied Chemical & Dye Corp., Nitrogen Div., P. O. Drawer 61, Hopewell, Va.

"ARCADIAN" 12-12-12 Granular Fertilizer  
"ARCADIAN" A-N-L Fertilizer Compound  
"ARCADIAN" Nitrana Solution 2  
"ARCADIAN" Nitrana Solution 3  
"ARCADIAN" Nitrana Solution 4  
"ARCADIAN" Nitrate of Soda  
"ARCADIAN" Pelleted Ammonium Nitrate  
"ARCADIAN" Uran 32 Solution  
"ARCADIAN" Urea 45 Fertilizer Compound

##### The American Agricultural Chemical Co., 285 River St., No. Weymouth, Mass.

AA Fertilizer 0-15-30  
AA Fertilizer 0-20-20  
AA Fertilizer 5-8-7  
AA Fertilizer 5-10-5  
AA Fertilizer 5-10-10  
AA Fertilizer 8-12-12  
AA Fertilizer 8-16-16  
AA Fertilizer 10-6-2  
AA Fertilizer 10-6-4  
AA Fertilizer 10-10-10  
AA Quality Ground Phosphate Rock  
Agrico Bulb Food 5-9-6  
Agrico Country Club 6-10-4  
Agrico Country Club 8-6-4

##### The American Agricultural Chemical Co., 285 River St., No. Weymouth, Mass.—Cont'd.

Agrico Country Club 10-6-4  
Agrico Rose Food 5-9-6  
Agrico for Broadleaf Evergreens 6-10-4  
Agrico for Gardens 5-10-5  
Agrico for Lawns, Trees and Shrubs 6-10-4  
Agrico for New England 5-8-7  
Agrico for New England 8-12-12  
Agrico for Potatoes 5-10-10 with 1.2 Magnesium  
Agrico for Seeding Down 3-12-12  
Agrico for Top Dressing 7-7-7  
Agrico for Top Dressing 10-10-10  
Agrico for Turf 6-8-2  
Agrico for Turf 10-6-4  
Agrinite  
Bone Meal  
Muriate of Potash  
Sheep Manure  
Superphosphate, 18% Normal  
Superphosphate, 20% Granular

##### The American Agricultural Chemical Co., 50 Church St., New York 7, N. Y.

Phos-Feed Brand Dicalcium Phosphate

##### American Bulb Co., 711 Third Ave., New York 17, N. Y.

Boost  
Bulb Food  
Pro Gro  
Rose Food

##### American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

AERO Cyanamid, Granular  
AERO Cyanamid, Special Grade  
AERO-PHOS Florida Natural Phosphate 31%  
AERO-PHOS Florida Natural Phosphate 33%  
AEROPRILLS Ammonium Nitrate Fertilizer  
Lawn and Garden Cyanamid

##### Archer-Daniels-Midland Co., P. O. Box 839, Minneapolis 2, Minn.

Archer Quality 34% Protein Solvent Extracted Linseed Oil Meal (Fertilizer)  
Archer Quality 44% Protein Solvent Extracted Soybean Oil Meal

##### Armour Fertilizer Works, Box J, Carteret, N. J.

Armour's All Organic  
Armour's Big Crop Fertilizer 0-20-20  
Armour's Big Crop Fertilizer 5-8-7  
Armour's Big Crop Fertilizer 5-10-5  
Armour's Big Crop Fertilizer 5-10-10  
Armour's Big Crop Fertilizer 7-7-7  
Armour's Big Crop Fertilizer 10-10-10  
Armour's Big Crop Superphosphate  
Armour's Bone Meal  
Armour's Camellia and Azalea Plant Food  
Armour's Gold Bond Tobacco Grower  
Armour's Pulverized Sheep Manure  
Armour's Shredded Cattle Manure  
Armour's Vertagreen Plant Food 5-10-5  
Armour's Vertagreen Plant Food for Commercial Crops 6-12-12  
Armour's Vertagreen Plant Food for Commercial Crops 8-8-8  
Armour's Vertagreen Plant Food for Turf & Trees  
Armour's Vertagreen Rose Food 5-10-5

##### Associated Seed Growers, Inc., 15 Main St., Cambridge, N. Y.

Asgrow Azalea Food 7-7-7  
Asgrow Bone Meal  
Asgrow Bulb Food 4-12-8

**Associated Seed Growers, Inc., 15 Main St., Cambridge, N. Y.—Cont'd.**

Asgrow Evergreen Food 10-6-4  
 Asgrow Lawn Food  
 Asgrow Plant Food 5-10-5  
 Asgrow Rose Food 5-10-5  
 Asgrow Sheep Manure  
 Asgrow Soluble Fertilizer 20-20-20

**Atkins & Durbrow, Inc., Box 55, Port Colborne, Ontario, Canada**

Driconure 3-2-1

**H. J. Baker & Bro., 600 Fifth Ave., New York, N. Y.**

Nitrogran

**The Baker Castor Oil Co., 120 Broadway, New York, N. Y.**

Baker's Castor Pomace (*Registered by Springfield Rendering Co., Springfield Mass.*)

**The F. A. Bartlett Tree Expert Co., 2700 Summer St., Stamford, Conn.**

Bartlett Green Tree Food

**The Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.**

Borden's "38"

**Joseph Breck & Sons, Corp., 401 Summer St., Boston 10, Mass.**

Breck's Garden Gro  
 Breck's Greenite (all organic)  
 Breck's Quick-Life  
 Breck's Turf-Gro  
 Breck's Velturf (all organic)

**Brookside Nurseries, 228 Brookside Rd., Darien, Conn.**

Brookside Raw Bone  
 Brookside Slaughter House Tankage  
 Natures Nutrients

**California Spray-Chemical Corp., Lucas & Ortho Way, Richmond, Calif.**

ORTHO-GRO Liquid Plant Food  
 ORTHO Lawn Groom

**The Carac Corporation, Fairfield Rd., Mountain View, N. J.**

Burst  
 Carac Balanced Lawn Fertilizer  
 Carac Evergreen & Shrub Fertilizer  
 Carac 46-0-0 (Hycon) Nitrogen Fertilizer  
 Carac Rose & Plant Fertilizer

**Carbola Chemical Co., Inc., Natural Bridge, New York**

CCC Triple 20 Plant Food

**Chiguano Compost Corp., Cherry St., Marion, Conn.**

Chiguano Organic Soilbuilder & Plant Food

**Chilean Nitrate Sales Corp., 120 Broadway, New York, N. Y.**

Chilean Nitrate of Soda—Champion Brand

**Coke and Company, 208 William-Oliver Bldg., Atlanta 3, Ga.**

Coke-Sure Brand 36% Protein Cottonseed Meal  
 Coke-Sure Brand 41% Protein Cottonseed Meal

**Consolidated Rendering Co., 178 Atlantic Ave., Boston, Mass.**

Corenco 0-15-30  
 Corenco 0-20-20  
 Corenco 4-12-16  
 Corenco 5-8-7  
 Corenco 5-10-5  
 Corenco 5-10-5 Home Garden

**Consolidated Rendering Co., 178 Atlantic Ave., Boston, Mass.—Cont'd.**

Corenco 5-10-10 Liquid Fertilizer Concentrate  
 Corenco 5-10-10  
 Corenco 5-10-10 with 1.2 Magnesium  
 Corenco 6-3-6 Perfection  
 Corenco 6-3-6 Premium  
 Corenco 6-8-8  
 Corenco 6-8-8 with 1.2 Magnesium  
 Corenco 7-7-7  
 Corenco 8-6-4 Landscape  
 Corenco 8-6-4 Turf Green  
 Corenco 8-16-16  
 Corenco 10-5-5 Liquid Green  
 Corenco 10-6-4  
 Corenco 10-10-10  
 Corenco Granular Superphosphate 20%  
 Corenco Ground Bone  
 Corenco Organic Turf Fertilizer  
 Corenco Sheep Manure  
 Corenco Spurz-on  
 Corenco Superphosphate 20%  
 Muriate of Potash  
 Vico Steamed Bone Meal Fertilizer (Mfd. by *The Van Iderstine Co., Long Island City, N. Y.*)

**The Davey Tree Expert Co., 117 S. Water St., Kent, Ohio**

Davey Shredded Cattle Manure  
 Davey Tree Food

**R. G. Davis & Sons, Inc., 560 Grand Ave., New Haven, Conn.**

"Organo"

**Davison Chemical Co., Div. of W. R. Grace & Co., 101 N. Charles St., Baltimore, Md.**

0-15-30 Davco Granulated Fertilizer  
 0-20-20 Davco Granulated Fertilizer  
 5-10-5 Davco Granulated 3G Fertilizer  
 5-10-10 Davco Granulated 3G Fertilizer  
 6-8-8 Davco Granulated Fertilizer with Boron and Manganese  
 7-7-7 Davco Granulated Fertilizer  
 8-16-16 Davco Granulated 3G Fertilizer  
 10-6-4 Davco Granulated Fertilizer  
 10-10-10 Davco Granulated 3G Fertilizer  
 10-10-10 Davco Granulated 3G Fertilizer with Boron and Manganese Sulphate  
 Davco Granulated 20% Superphosphate  
 DAV-GRO, High Concentrate Water Soluble Plant Food 20-20-20  
 Davison Granulated Turf & Garden Food (Prem)  
 Davison Muriate of Potash 60%

**Doughten Seed Co., 253 Brunswick St. Jersey City 2, N. J.**

Doughten's Lawn Food 9-8-3

**E. I. duPont de Nemours and Company, Wilmington, Del.**

DU PONT NU GREEN Fertilizer Compound  
 DU PONT Soluble Plant Food 19-22-16  
 DU PONT URAMITE Fertilizer Compound

**Eastern States Farmers' Exchange, Inc., 26 Central St., W. Springfield, Mass.**

Castor Pomace  
 Eastern States 0-15-30 with 0.2 Boron  
 Eastern States 0-25-25  
 Eastern States 5-10-10 with 1.2 Magnesium  
 Eastern States 8-4-8 (Tobacco) with 1.2 Magnesium  
 Eastern States 8-12-12 with 1.2 Magnesium  
 Eastern States 8-12-12 L.C. with 1.2 Magnesium  
 Eastern States 8-16-16 with 0.6 Magnesium  
 Eastern States 10-5-5 with 5.50 Magnesium  
 Eastern States 10-10-10 with 0.6 Magnesium

- Eastern States Farmers' Exchange, Inc., 26 Central St., West Springfield, Mass.—Cont'd.**  
 Eastern States 10-10-10 S.M. with 1.2 Magnesium  
 Eastern States Starter 64  
 Muriate of Potash  
 Nitrogen Solution 37  
 Superphosphate
- John W. Eshelman & Sons, 244 No. Queen St., Lancaster, Pa.**  
 41% Solvent Extracted Cottonseed Meal
- The Espoma Company, P. O. Box 431, Millville, N. J.**  
 Espoma  
 Espoma Garden Fertilizer  
 Espoma Rose Food  
 Holly-Tone
- Faesy & Besthoff, Inc., 25 East 26th St., New York 10, N. Y.**  
 F & B Broadleaf High Organic 6-10-4  
 F & B Pure Steamed Bone Meal  
 F & B Rose Food 8-10-4
- Ferro Corporation, 4150 East 56th St., Cleveland, Ohio**  
 Ferro Agricultural F.T.E. No. FN-501  
 Ferro Agricultural F.T.E. No. FN-502  
 Ferro F.T.E.
- Fiestar, Inc., 665 Fifth Ave., New York 22, N. Y.**  
 Fiestar
- Forward House, Div. Olin Mathieson Chemical Corp., 745 Fifth Ave., New York 22, N. Y.**  
 Plantrons
- G-D Garden Products, Inc., 11th & RR Ave., Huntington Sta., New York**  
 Green-D Organic
- The Garden Center Inc., 53 LaSalle Rd., West Hartford, Conn.**  
 Garden Center Lawn Fertilizer
- Garden Supply Sales Corp., 2120 Lake Ave., Rahway, N. J.**  
 Farmanure
- Geigy Agricultural Chemicals, Saw Mill River Rd., Yonkers, N. Y.**  
 Sequestrene 330 Fe Iron Chelate  
 Sequestrene NaFe Iron Chelate
- Glorion Division of Aluminum & Chemical Corp., 22 W. Putnam Ave., Greenwich, Conn.**  
 Glorion
- Goldenrod Oil Meal Sales Co., 727 Beale St., Memphis 1, Tenn.**  
 Goldenrod Brand 41% Protein Cottonseed Meal—Prime Quality
- Goulard & Olena, Inc., Skillman, N. J.**  
 Godfrey's Hi-Organic No-Filler 10-6-4  
 G & O Cottonseed Meal 41% Protein  
 G & O Ground Bone Fertilizer  
 G & O Hyganic 10-6-4  
 G & O Muriate of Potash  
 G & O Nitrate of Soda  
 G & O Prizegro 5-10-5  
 G & O Rhodo-Azalea Food  
 G & O Rose Food  
 G & O 20% Superphosphate
- Grace Chemical Co., Div. of W. R. Grace & Co., 501 Edway Bldg., Memphis, Tenn.**  
 Grace Urea Prills

- Heller Greenhouse Laboratories, 218 E. Pikes Peak Ave., Colorado Springs, Colo.**  
 Heller-Gro
- A. H. Hoffman, Inc., Landisville, Pa.**  
 Hoffman Cow Manure (Dehydrated)  
 Hoffman Sheep Manure (Kiln-Dried)
- The Hubbard-Hall Chemical Co., 28 Benedict St., Waterbury, Conn.**  
 Cotton Hull Ashes  
 Dry Ground Fish  
 Granular Technical Borax, 99.5—100% Pure  
 Green-Gro All Organic  
 Green-Gro Lawn Fertilizer 6-7-4  
 Green-Gro Urea-Form  
 Gro-Fast Aluminum Sulphate  
 Gro-Fast Bone Meal  
 Gro-Fast Evergreen Food  
 Gro-Fast Plant Food  
 Gro-Fast Rose Food  
 Gro-Fast Sheep Manure  
 Gro-Fast SOL  
 Hubbard Double Strength Fertilizer 8-16-16  
 Hubbard Fertilizer 0-10-20  
 Hubbard Garden Fertilizer  
 Hubbard Golf Course Fertilizer 8-6-2  
 Hubbard Golf Course Fertilizer 10-6-4  
 Hubbard Potato Fertilizer  
 Hubbard Sulphate of Ammonia  
 Hubbard Vegetable Fertilizer  
 Hubbard Weed-Kil Lawn Food  
 Liberty Fertilizer 0-15-30  
 Liberty Fertilizer 0-20-20 with .165 Boron  
 Liberty Fertilizer 3-12-12  
 Liberty Fertilizer 5-10-5  
 Liberty Fertilizer 5-10-10  
 Liberty Fertilizer 5-10-10 with 1.2 Magnesium  
 Liberty Fertilizer 6-8-8 with 1.2 Magnesium  
 Liberty Fertilizer 8-16-16  
 Liberty Fertilizer 10-10-10  
 Liberty High Grade Market Gardeners  
 Liberty Hi-Yield Fertilizer  
 Liberty Muriate of Potash  
 Liberty Special Fertilizer for Fruit & Grass  
 Liberty Super Bacco with 1.2 Magnesium  
 Liberty Super Gro  
 Liberty Super Spud Special Potato Fertilizer with 1.2 Magnesium  
 Magnesium Sulphate Emjeo  
 Old Deerfield Green Lawn Fertilizer 8-6-4  
 Old Deerfield "Tru Organic"  
 Precipitated Bone  
 Superphosphate 20%  
 Woodruff's 5-8-7 Fertilizer  
 Woodruff's 5-10-10 Fertilizer  
 Woodruff's 6-3-6 Tobacco  
 Woodruff's 8-6-4 Fertilizer  
 Woodruff's Lawn & Tree Food
- Humphreys-Godwin Co., 2246 Park St., Memphis, Tenn.**  
 Dixie Brand 41% Cottonseed Meal
- International Minerals & Chemical Corp., P. O. Box 230, Woburn, Mass.**  
 International Mello-Green
- Kahn Bros. Co., 4425 So. Halsted St., Chicago, Ill.**  
 Kay-Bee All Organic

**Spencer Kellogg and Sons, Inc., 98 Delaware Ave., Buffalo, N. Y.**

Castor Pomace  
 Spencer Kellogg's 32% Protein Old Process (Expeller) Linseed Oil Meal  
 Spencer Kellogg's 44% Protein Toasted Soybean Oil Meal—Solvent Extracted

**Lawn-Tex Corp., 1640 W. Fulton St., Chicago, Ill.**

Organi-Green

**Lebanon Chemical Corporation, Box 532, Lebanon, Pa.**

Azalea Food  
 Bone Meal  
 Cow Manure  
 Fertilizer 5-10-10  
 Fertilizer 10-6-4  
 Hi Organic  
 Plant Food  
 Rose Food  
 Sheep Manure  
 Spray Gro  
 Sulphate of Ammonia  
 Turf Organic  
 Uni-Form 10-6-4

**Lee Patten Seed Co., 360 Ninth St., Jersey City, N. J.**

Patco Lawn Food

**Leeds Chemical Products Inc., 112 East Walton St., Chicago 11, Ill.**

Robot Gardener Fertilizer Cartridges

**L. B. Lovitt & Co., 314 Cotton Exchange Bldg., Memphis, Tenn.**

"LOVIT BRAND" 41% Protein Cottonseed Meal, Prime Quality

**McArdle's Seed Co., 388 Greenwich Ave., Greenwich, Conn.**

McArdle's Hi-Organic 10-6-4

**Maegeo Farms, Inc., Route 9, Lexington, N. C.**

Fertal-Gro Cattle Manure

**The Mamlon Co., 1089 Whalley Ave., New Haven, Conn.**

FER-MEL General Purpose Plant Food  
 FER-MEL Turf & Tree Food

**Marianna Sales Co., Memphis, Tenn.**

White Mule Brand 41% Protein Solvent Extracted Cottonseed Meal

**Natural Plant Food Co., 210 W. California St., Oklahoma City, Okla.**

Longhorn Brand Cattle Manure  
 Ramshorn Brand Sheep Manure

**Old Fox Agricultural Sales Inc., 49 Valley St., E. Providence, R. I.**

Old Fox Brand 0-12-24  
 Old Fox Brand 0-15-30  
 Old Fox Brand 0-20-20  
 Old Fox Brand 4-16-20  
 Old Fox Brand 5-8-7  
 Old Fox Brand 5-10-10  
 Old Fox Brand 5-10-10 with 1.2 Magnesium  
 Old Fox Brand 7-7-7  
 Old Fox Brand 8-16-16  
 Old Fox Brand 10-10-10  
 Old Fox Brand Bone Meal  
 Old Fox Brand Garden Food 5-10-5  
 Old Fox Brand Muriate of Potash  
 Old Fox Brand Organo  
 Old Fox Brand Turf Food 8-6-2  
 Old Fox Brand Turf Food 8-6-2 with Chlordane  
 Old Fox Brand Superphosphate

**Olds & Whipple, Inc., 168 State St., Hartford Conn.**

Muriate of Potash  
 O & W 0-20-20 Fertilizer with Borax  
 O & W 4-4-0 Nitro-Gro  
 O & W 5-3-5 Complete Tobacco Fertilizer—Potash derived from Cotton Hull Ash  
 O & W 5-5-15 High Grade Tobacco Starter  
 O & W 5-8-6 Luxura  
 O & W 5-8-7 Potato & General Purpose Fertilizer  
 O & W 5-10-5 Fertilizer  
 O & W 5-10-10 Potato Fertilizer  
 O & W 5-10-10 Potato Fertilizer with 1.2 Magnesium  
 O & W 6-3-6 Blue Label Tobacco Fertilizer (Potash derived from Cotton Hull Ashes)  
 O & W 6-3-6 Special Tobacco Fertilizer  
 O & W 6-4-7 Tobacco Fertilizer with 1.2 Magnesium  
 O & W 6-8-8 Special Potato Fertilizer  
 O & W 6-8-8 Special Potato Fertilizer with 1.2 Magnesium  
 O & W 7-7-7 Top Dressing and Grass Fertilizer  
 O & W 8-12-12 High Grade General Purpose Fertilizer  
 O & W 8-12-12 High Grade General Purpose Fertilizer with 1.8 Magnesium  
 O & W 8-16-16 Double Strength Fertilizer  
 O & W 10-6-4 Luxura  
 O & W 10-10-10 Fertilizer  
 O & W Bone Meal  
 O & W Castor Pomace  
 O & W Cotton Hull Ashes  
 O & W Horn & Hoof Meal  
 O & W Menhaden Dry Ground Fish  
 O & W Nitrate of Potash  
 O & W Sheep Manure  
 O & W Sulphate of Potash  
 O & W Superphosphate 20%  
 O & W Triple Superphosphate  
 O & W Urea  
 Precipitated Bone Phosphate  
 Sulphate of Potash Magnesia

**Plant Products Corp., Blue Point, Long Island, N. Y.**

Soluble Fertilizer 12-32-12  
 Soluble Fertilizer 32-10-2

**The Frank S. Platt Co., 484 State St., New Haven, Conn.**

Platt's Concentrated 10-5-5 Lawn Fertilizer

**Premier Peat Moss Corp., 535 Fifth Ave., New York 17, N. Y.**

Premier Dehydrated Cow Manure

**Ra-Pid-Gro Corporation, 88 Ossian St., Dansville, N. Y.**

Ra-Pid-Gro

**Rose Manufacturing Co., 160 Main St., Beacon, N. Y.**

Tri-Ogen Rose Food

**Ruhm Phosphate & Chemical Co., P. O. Box 361, Columbia, Tenn.**

Red Seal Brand Ruhm's Phosphate Rock

**St. Louis National Stockyards Co., Exchange Building, National Stock Yards, Ill.**

Wizard Brand Cow Manure  
 Wizard Brand Sheep Manure

**O. M. Scott & Sons Co., Marysville, Ohio**

Scott's Improved Turf Builder  
 Scott's New Weed & Feed  
 Scott's Organic  
 Scott's Turf Builder  
 Scott's Weed & Feed

Sears, Roebuck & Co., 925 So. Homan Ave., Chicago 7, Ill.

Cross Country Azalea Food  
 Cross Country Bone Meal  
 Cross Country Bulb Food  
 Cross Country Cattle Manure  
 Cross Country Evergreen Food  
 Cross Country Instant Plant Food  
 Cross Country Instant Rose Food  
 Cross Country Instant Tomato Food  
 Cross Country Lawn Food  
 Cross Country Plant Food  
 Cross Country Rose Food  
 Cross Country Sheep Manure  
 Cross Country Sulfate of Ammonia

Sewerage Commission of the City of Milwaukee, P. O. Box 2079, Milwaukee 1, Wis.  
 Milorganite

A. N. Shepherd & Son, 53 Mechanic St., Hartford, Conn.  
 Fertal-Gro

The Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland, Ohio  
 Sherwin-Williams 32% Linseed Oil Meal (A Blend of Expellent and Solvent  
 Extracted Meals)

M. L. Shoemaker, Div. Wilson & Co., Delaware Ave. & Venango St., Philadelphia, Pa.  
 M. L. Shoemaker's "Swift-Sure"

Sohio Chemical Co., Ft. Amanda & Adgate Rds., Lima, Ohio  
 Sohigro Urea Fertilizer Compound (coated)

Springfield Rendering Co., Springfield, Mass.  
 Baker's Castor Pomace (Mfd. by Baker Castor Oil Co., New York 5, N. Y.)

Sterling Forest Peat Humus Co., Inc., P. O. Box 608, Tuxedo Park, N. Y.  
 Sterling Forest Soil—Fertilized

Stim-U-Plant Laboratories, 2077 Parkwood Ave., Columbus 19, Ohio  
 Stim-U-Plant African Violet Food  
 Stim-U-Plant Plant Food Tablets

Swift & Co., Plant Food Division, 440 Church St., Hartford 1, Conn.

Brimm  
 Golden Vigoro  
 Instant Vigoro 19-28-14  
 Instant Vigoro 20-10-15  
 Pasturgro 2-12-12  
 Vigoro Complete Plant Food  
 Vigoro for Camellias & Azaleas  
 Vigoro Plus Chlordane  
 Vigoro Rose Food

I. P. Thomas Division, Pennsylvania Salt Manufacturing Co., Paulsboro, N. J.

Thomas Gran-Form 20% Superphosphate  
 Thomas Special Mixture 0-20-20  
 Thomas Tip Top 0-15-30  
 Thomas Tip Top 5-10-10

Town & Country Products Div., Garfield Williamson, Inc., 157 Corbin Ave., Jersey  
 City, N. J.

Green Pride Instant Soluble Lawn Food

Universal Chemical Co., Lynn, Mass.  
 Electra Plant Food

Valley Feed & Supply Co., Inc., Union Rd., Spring Valley, N. Y.  
 Adorna

The Van Iderstine Co., 37-30 Review Ave., Long Island City, N. Y.  
 Vico Steamed Bone Meal Fertilizer (Registered by Consolidated Rendering Co.,  
 Boston, Mass.)

Walker Gordon Laboratory Co., Plainsboro, N. J.  
 Bovung

Oscar F. Warner, 24 East Aurora St., Waterbury, Conn.  
 Warner's Grubedizer  
 Warner's Lawn Food  
 Warner's Tree Food

Garfield Williamson Inc., 1072 Westside Ave., Jersey City 6, N. J.  
 Plantspur  
 Wonderlawn Lawn Food

Andrew Wilson, Inc., Baltusrol Way, Springfield, N. J.  
 Wilson's Eureka Plant Food

F. H. Woodruff & Sons, Inc., 9 Depot St., Milford, Conn.  
 Gro-Sod Lawn Food  
 Weed-Nix Lawn Food

Young & Halstead Co., 3 East Main St., Mt. Kisco, N. Y.  
 Professional Tree Food 7-7-7

## FERTILIZER INSPECTION FOR 1957

The Connecticut fertilizer law does not provide for *compulsory* limitation of the grades of fertilizer that may be sold in this State. It has in fact been the belief of this Station that no farmer should be prevented from purchasing any grade of fertilizer he wished, no matter how low in plant units it might be or how ill adapted to the needs of his crops, so long as he made the purchase with his eyes open. However, because all authorities are agreed that a small number of grades can take care of all the needs of agriculture, and that standardization on a few grades will promote economy in the manufacture of fertilizer and so help to keep prices down, ever since the compulsory limitation imposed by War Food Order No. 5 of World War II was revoked (on September 30, 1945) the New England agronomists have compiled lists of *recommended* fertilizer ratios and minimum grades.

On October 7, 1952 the agronomists and fertilizer dealers of southern New England met at Storrs and agreed upon the following list for the 1952-1953 season:

Ratio	Minimum Grade
0-1-1	0-14-14
0-1-2	0-10-20
1-1-1	8- 8- 8
1-1-3	5- 5-15 (Tobacco fertilizer)
1-2-1	5-10- 5
1-2-2	5-10-10
2-1-2	6- 3- 6 (Tobacco fertilizer)
3-4-4	6- 8- 8
4-3-1	8- 6- 2 (For maintenance of established turf)
5-8-7	5- 8- 7

This list has not been changed up to the present time.

That most Connecticut farmers realize the desirability of using recommended grades is shown by the fact that 79 per cent of the mixed fertilizers sold during the 1956-1957 season were of the recommended ratios and minimum grades. A fertilizer of a recommended 1-1-1 ratio but just under the minimum grade, namely the 7-7-7, accounted for another 4 per cent.

During the past season the Station agent collected samples of all registered brands that could be found on the market. Nevertheless, while taxes were paid on 7,183 more tons than in 1955-1956, the total number of samples analyzed (678) was 213 less than the year before. That the drop in samples is partially accounted for by the recent decline in tobacco-growing in this State is shown by the fact that 23 fewer vegetable meal samples and 64 fewer samples of home mixes were submitted. The cause of the relatively large total increase in fertilizer consumption appears to be the grass-seeding operations incidental to construction of the new Connecticut Turnpike, since the two grades employed in this project (5-10-5 and 10-10-10) showed a combined increase of 9,976 tons over the quantities of those grades used in this State the previous year.

The following tabulation lists the total number of samples analyzed (both official and unofficial) of each class of fertilizer, as well as the tonnage sold in the period between July 1, 1956 and June 30, 1957 (these tonnage figures do not include fertilizer distributed under the Federal Agricultural Conservation Program):

## CLASSIFICATION OF FERTILIZER MATERIALS AND FERTILIZER TONNAGE

(Tonnage is for the period July 1, 1956 to June 30, 1957)

	Page	No. of samples	Tonnage
<b>I. Containing chiefly nitrogen:</b>			
Nitrate of ammonia .....	20	6	882
Nitrate of soda .....	20	6	427
Sulphate of ammonia .....	20	1	51
Cyanamid .....	20	3	308
Urea .....	21	7	266
Castor pomace .....	21	6	1,384
Cottonseed meal .....	21	89	5,850
Horn and hoof meal .....	22	7	18
Linseed oil meal .....	22	16	419
Soybean oil meal .....	22	4	294
Tankage .....	23	2	6
Other materials .....	23	1	389
			10,294
<b>II. Containing chiefly phosphoric acid:</b>			
Superphosphate 18% .....	24	1	412
20% .....	24	12	4,790
46% .....	24	1	35
Precipitated bone .....	25	11	177
Phosphate rock .....	25	1	108
			5,522
<b>III. Containing chiefly potash:</b>			
Muriate of potash .....	26	7	646
Sulphate of potash .....	26	7	98
Sulphate of potash-magnesia .....	26	1	100
Cottonhull ashes .....	26	9	378
			1,222
<b>IV. Containing nitrogen and phosphoric acid:</b>			
Dry ground fish .....	28	13	343
Bone meal .....	28	12	427
Other materials .....	29	1	950
			1,720
<b>V. Containing nitrogen and potash:</b>			
Nitrate of potash .....	26	3	152
			152
<b>VI. Mixed fertilizers:</b>			
Commercial mixtures .....	30	237	61,208 <sup>1</sup>
Special and home mixtures .....	18	49	2,673
			63,881
<b>VII. Miscellaneous:</b>			
Aluminum sulphate .....	54	1	2
Borax .....	54	1	49
Manganese sulphate .....	54	...	1
Sheep and cattle manure .....	44	19	997
Limestone and similar materials .....	46	15	...
Fertilizers sold in small packages .....	47	76	...
Other miscellaneous materials .....	54	30	3
Check meals and fertilizers .....	19	23	...
			1,052
<b>Totals .....</b>		<b>678</b>	<b>83,843</b>

<sup>1</sup>For distribution of this tonnage see next page.



## MIXED FERTILIZER TONNAGE

Grades Approved for Connecticut

Grade	Tons	Grade	Tons
0-10-20	161	6-12-12	301
0-12-24	139	8- 4- 8	294
0-14-14	5	8- 6- 2	332
0-15-30	3,011	8- 8- 8	80
0-20-20	1,108	8-16-16	2,890
0-25-25	658	10-10-10	8,800
5- 5-15	83	12-12-12	145
5- 8- 7	1,887	13-13-13	1
5-10- 5	8,865	15-15-15	2
5-10-10	9,614	16-32-16	2
6- 3- 6	6,901	18-18-18	2
6- 8- 8	3,272		
		Total	48,553
Other Grades			
(50 tons or more)			
2- 2- 0	69	6- 4- 7	216
3- 2- 1	159	6- 8- 2	216
3-12-12	126	6- 8- 6	101
4- 4- 0	72	6- 7- 4	497
4.75- 4- 0	95	6-10- 4	1,768
4- 8- 8	181	7- 7- 7	2,240
4-16-20	134	8- 6- 4	803
5- 2- 3	111	8-12-12	1,531
5- 3- 5	109	9- 7- 4	683
5- 4- 0	743	10- 5- 5	528
5- 5- 0	136	10- 6- 4	1,443
5- 8- 6	58	20-10- 5	193
		Total	12,212
(Less than 50 tons)			
1- 1- 1	12	5- 6- 4	21
2- 2- 2	28	5- 9- 6	28
2-12-12	5	5-10- 4	10
3- 1- 1	22	7- 8- 5	6
3-2.5-1.5	5	7-10- 5	13
3-20- 3	5	7-11- 5	6
4- 4- 2	30	9- 8- 3	19
4- 6- 4	13	10- 6- 2	17
4- 8- 4	22	12- 4- 4	12
4- 8- 5	7	12- 6- 4	8
4-10- 0	35	23-21-17	12
4-10- 4	13	24-12-12	28
4-12-16	27	Other grades	32
		Total	436
		Grand Total	61,208

## I. Materials Chiefly Valuable for Nitrogen

Analyses of the 58 official samples of nitrogenous fertilizers are given in Table I. Fifty-three of these met their guaranties and five were deficient. The substandard samples included one each of nitrate of ammonia, cyanamid, urea, cottonseed meal and tankage.

Five out of six of the nitrate of soda samples guaranteed 26 per cent sodium as well as 16 per cent nitrogen; both nitrogen and sodium guaranties were met in every case.

## II. Materials Chiefly Valuable for Phosphoric Acid

Analyses of 10 official samples of 20 per cent superphosphate and one each of the 18 and 46 per cent grades, five samples of precipitated bone, and one sample of phosphate rock, are given in Table 2. All samples exceeded their guaranties of available phosphoric acid.

## III. Materials Chiefly Valuable for Potash

Seven official samples of muriate of potash, two of sulphate of potash, one of sulphate of potash-magnesia and four of cotton hull ashes, were analyzed as shown in Table 3. The only deficient sample was one of muriate of potash.

## IV. Materials Supplying Nitrogen and Phosphoric Acid

This group consists chiefly of dry ground fish and bone meal. Guaranties of "available" phosphoric acid are not required of such natural organic products, and most of them bear guaranties of total nitrogen and total phosphoric acid only. Seven official samples of dry ground fish, 12 of bone meal and one of "Milorganite" (a treated sewage sludge) were analyzed in 1957. All samples met their guaranties of both nitrogen and phosphoric acid, with the exception of two bone meals which were low in total phosphoric acid. Analyses are given in Table 4.

## V. Materials Supplying Nitrogen and Potash

The only fertilizer material now on the market falling into this classification is nitrate of potash. Fertilizer grade potassium nitrate is required to contain at least 12 per cent of nitrogen and 44 per cent of potash. One official sample, whose analysis is given in Table 3, exceeded its guaranties of 13 per cent nitrogen and 44 per cent potash.

## VI. Mixed Fertilizers

## Commercial Mixtures

Analyses of 221 official samples of mixed fertilizers are given in Table 5. Results are summarized as follows:

Total number of samples	221
Samples deficient in:	
one item	68
two items	7
Percentage of samples meeting all guaranties	75
Total guaranties made <sup>1</sup>	66
Guaranties not met:	632
nitrogen	59
phosphoric acid	8
potash	15
Percentage met	87

Eighty-seven per cent of all guaranties were substantially met or exceeded.

<sup>1</sup>One hundred and ninety-one samples with three guaranties, 29 with two guaranties and one with only one guaranty (guaranties of minor elements not included).

Eighteen official samples guaranteed magnesium (1.2 per cent in 14 cases, 0.6 per cent in three cases and 1.8 per cent in one case) in addition to the major components. Six samples guaranteed boron in percentages ranging from 0.10 to 0.20 per cent; one of these samples also bore a guaranty of 0.041 per cent manganese. The only one of all of these 24 samples found deficient in any minor element was the fertilizer declaring both boron and manganese, which contained only 0.07 per cent of boron as against a claimed 0.10 per cent.

#### Special and Home Mixtures

Forty-nine samples of special and home mixtures were analyzed during the year, the great majority for tobacco growers. Because the composition of these samples is not of public interest their analyses are not tabulated in this bulletin.

#### State Purchases of Fertilizer

Fertilizer materials and mixed goods supplied to State institutions on State purchase orders are regularly included in our annual inspection. Fertilizers so supplied *are not exempt from payment of registration fees and tonnage taxes unless they are furnished to this Station for experimental purposes.*

Samples representing State purchases are indicated in the several tables. They are summarized as follows:

Materials	No. of Samples	Reference
Supplying nitrogen .....	9	Table 1
Supplying phosphoric acid .....	4	Table 2
Supplying potash .....	2	Table 3
Supplying nitrogen and phosphoric acid ...	3	Table 4
Mixed fertilizers .....	33	Table 5
Aluminum sulphate .....	1	Table 9
Total	52	

#### VII. Miscellaneous

*Sheep and cattle manures.* These products must bear guaranties of nitrogen, either total or "available" phosphoric acid, and potash; most brands are now taking the "available" phosphoric acid option. Of the 19 official samples analyzed during the 1956-1957 season 17 met all guaranties and one each was deficient in nitrogen and available phosphoric acid.

*Limestone and similar materials.* Because the legal definition of "commercial fertilizers" (G.S. 6733) specifically excludes "marl and lime," no regular inspection of liming materials is made. Occasional samples of limestone, hydrated lime and gypsum ("land plaster") are analyzed for farmers or Federal or State agencies. Analyses of 10 such samples of gypsum and five of hydrated lime are given in Table 7.

*Fertilizers sold in small packages.* Fertilizers sold only in packages of 10 pounds or less net weight are not required to be registered. No attempt, therefore, is made to sample every one of the small package fertilizers on the market, but such brands as come to the attention of our agent are picked up and analyzed as a matter of public interest.

During the 1956-1957 season 76 samples were analyzed, and we believe that the field was fairly well covered. Fifty-seven of these, or 75 per cent, met all guaranties, and 90 per cent of the total of 212 guaranties were met. Analyses are given in Table 8.

*Other miscellaneous materials.* Thirty-two other miscellaneous products were examined; analyses are given in Table 9.

*Check meals and fertilizers.* Collaboration was continued with the various check analysis programs: 15 cottonseed meal samples received from the American Oil Chemists' Society were analyzed for nitrogen, and the usual fertilizer determinations were made on eight check fertilizers supplied by the F. S. Royster Guano Company.

#### MAINTENANCE OF GUARANTIES

The maintenance of guaranties as compiled from analyses of ingredient materials and mixed goods (Tables 1-6 and 8) is shown in the following tabulation. Deficiencies of 0.1 per cent or less in nitrogen or 0.2 per cent or less in phosphoric acid and potash are not counted. The proportion of guaranties substantially met was 89 per cent.

	No. of samples	No. of guaranties	Deficiencies
Nitrate of ammonia .....	5	5	1
Nitrate of soda .....	6	11	0
Sulphate of ammonia .....	1	1	0
Cyanamid .....	3	3	1
Urea .....	5	5	1
Castor pomace .....	5	5	0
Cottonseed meal .....	22	22	1
Horn and hoof meal .....	1	1	0
Linseed oil meal .....	5	5	0
Soybean oil meal .....	2	2	0
Miscellaneous nitrogenous materials	3	3	1
Superphosphate .....	12	12	0
Precipitated bone .....	5	5	0
Phosphate rock .....	1	1	0
Muriate of potash .....	7	7	2
Nitrate of potash .....	1	2	0
Sulphate of potash .....	2	2	0
Sulphate of potash-magnesia .....	1	1	0
Cotton hull ashes .....	4	4	0
Dry ground fish .....	7	14	0
Bone meal .....	12	24	2
"Milorganite" .....	1	2	0
Mixed fertilizer .....	221	632	82
Sheep and cattle manure .....	19	57	2
Small package fertilizers .....	76	212	22
Totals .....	427	1,038	115
Per cent guaranties met .....			89

TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per Cent nitrogen	
			Found	Guaranteed
<b>Nitrate of Ammonia</b>				
1287	Arcadian Pelleted, Allied Chemical & Dye Corp., New York, N. Y.	North Haven: Woodruff Fertilizer & Chemical Works	33.75	33.50
831 <sup>2</sup>	AEROPRILLS, American Cyanamid Co., New York, N. Y.	Cheshire: Connecticut Reformatory	33.50	33.50
1091 <sup>2</sup>	AEROPRILLS, American Cyanamid Co., New York, N. Y.	Southbury: Southbury Training School	33.70	33.50
1126	AEROPRILLS, American Cyanamid Co., New York, N. Y.	Willimantic: Eastern States Farmers' Exchange, Inc.	33.75	33.50
1179 <sup>2</sup>	AEROPRILLS, American Cyanamid Co., New York, N. Y.	Portland: Connecticut State Highway Dept.	<b>33.20</b>	33.50
<b>Nitrate of Soda</b>				
1391 <sup>3</sup>	Arcadian, Allied Chemical & Dye Corp., New York, N. Y.	West Suffield: H. L. Oppenheimer & Sons	16.20	16.00
728 <sup>4</sup>	Chilean, Champion Brand, Chilean Nitrate Sales Corp., New York, N. Y.	North Bloomfield: American Sumatra Tobacco Corp.	16.12	16.00
829 <sup>2,5</sup>	Chilean, Champion Brand, Chilean Nitrate Sales Corp., New York, N. Y.	Cheshire: Connecticut Reformatory	16.06	16.00
1324 <sup>2,6</sup>	Chilean, Champion Brand, Chilean Nitrate Sales Corp., New York, N. Y.	Norwich: Norwich State Hospital	16.00	16.00
1409 <sup>7</sup>	Chilean, Champion Brand, Chilean Nitrate Sales Corp., New York, N. Y.	Wilson: Christensen-Rand, Inc.	16.02	16.00
1613 <sup>8</sup>	G & O, Goulard & Olena, Inc., Skillman, N. J.	Hartford: Cadwell & Jones, Inc.	16.26	16.00
<b>Sulphate of Ammonia</b>				
1554	Hubbard, The Hubbard-Hall Chemical Co., Waterbury, Conn.	Portland: The Hubbard-Hall Chemical Co.	20.74	20.50
<b>Cyanamid</b>				
830 <sup>2</sup>	AERO, American Cyanamid Co., New York, N. Y.	Cheshire: Connecticut Reformatory	<b>20.80</b>	21.00
1323 <sup>2</sup>	AERO, American Cyanamid Co., New York, N. Y.	Norwich: Norwich State Hospital	21.16	21.00
1251	Lawn & Garden, American Cyanamid Co., New York, N. Y.	Greenwich: McArdle's Seed Co.	21.06	21.00

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>3</sup>Sodium guaranteed, 26.0%; found, 26.84%.<sup>4</sup>Sodium guaranteed, 26.0%; found, 26.32%.<sup>5</sup>Sodium guaranteed, 26.0%; found, 26.26%.<sup>6</sup>Sodium guaranteed, 26.0%; found, 26.64%.<sup>7</sup>Sodium guaranteed, 26.0%; found, 26.46%.<sup>8</sup>Sodium found, 26.35%.TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per Cent nitrogen	
			Found	Guaranteed
<b>Urea</b>				
1178 <sup>2</sup>	Arcadian, Allied Chemical & Dye Corp., New York, N. Y.	Portland: Connecticut State Highway Dept.	45.15	45.00
1243	Borden's "38", The Borden Co., New York, N. Y.	Greenwich: McArdle's Seed Co.	38.30	38.00
1471	DU PONT NU GREEN, E. I. duPont deNemours & Co., Wilmington, Del.	New Haven: New Haven Rendering Co.	<b>44.80</b>	45.00
1566	DU PONT NU GREEN, E. I. duPont deNemours & Co., Wilmington, Del.	Windsorville: The Hubbard-Hall Chemical Co.	45.15	45.00
1559	Green Gro Urea-Form, The Hubbard-Hall Chemical Co., Waterbury, Conn.	Portland: The Hubbard-Hall Chemical Co.	38.30	38.00
<b>Castor Pomace</b>				
1392	The Baker Castor Oil Co., New York, N. Y.	West Suffield: H. L. Oppenheimer & Sons	6.20	4.52
804	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.	North Bloomfield: American Sumatra Tobacco Corp.	6.14	5.55
1185 <sup>2</sup>	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.	Middletown: Long Lane School	6.08	5.50
1310	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.	Glastonbury: E. J. Bantle	5.66	5.50
1627	Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	6.22	4.50
<b>Cottonseed Meal</b>				
1343	Gro Well, J. & L. Adikes, Inc., Jamaica, N. Y.	New Canaan: Silliman's, Inc.	6.46	6.00
717	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	West Suffield: Hatheway & Steane Corp.	6.56	6.56
747	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	West Suffield: Hatheway & Steane Corp.	6.50	6.56
746	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	West Suffield: Hatheway & Steane Corp.	6.78	6.56
752	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	Bloomfield: The Hartman Tobacco Co.	6.60	6.56
753	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	Bloomfield: The Hartman Tobacco Co.	6.89	6.56
754	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	Bloomfield: The Hartman Tobacco Co.	6.52	6.56
755	Cocke-Sure 41% Cocke & Co., Atlanta, Ga.	Bloomfield: The Hartman Tobacco Co.	6.56	6.56
1548	Solvent Extracted 41%, John W. Eshelman & Sons, Lancaster, Pa.	Darien: The Gardener's Center	6.62	6.56
1197	G & O Prime 41%, Goulard & Olena, Inc., Skillman, N. J.	Hartford: Cadwell & Jones, Inc.	<b>6.29</b>	6.56

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.

TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per Cent nitrogen	
			Found	Guaranteed
706	Dixie Brand 41%. Humphreys-Godwin Co., Memphis, Tenn.	Simsbury: Cullman Bros., Inc.	6.58	6.56
707	Dixie Brand 41%. Humphreys-Godwin Co., Memphis, Tenn.	Simsbury: Cullman Bros., Inc.	6.63	6.56
710	Dixie Brand 41%. Humphreys-Godwin Co., Memphis, Tenn.	Simsbury: Cullman Bros., Inc.	6.58	6.56
711	Dixie Brand 41%. Humphreys-Godwin Co., Memphis, Tenn.	Simsbury: Cullman Bros., Inc.	6.78	6.56
1394	Dixie Brand 41%. Humphreys-Godwin Co., Memphis, Tenn.	West Suffield: H. L. Oppenheimer & Sons	6.60	6.56
712	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Granby: Cullman Bros. Inc.	6.70	6.56
713	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Granby: Cullman Bros., Inc.	6.64	6.56
715	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Granby: Cullman Bros., Inc.	6.64	6.56
748	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Hazardville: L. B. Haas & Co.	6.72	6.56
749	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Hazardville: L. B. Haas & Co.	6.83	6.56
756	"Lovit Brand" 41%. L. B. Lovitt & Co., Memphis, Tenn.	Hazardville: L. B. Haas & Co.	6.89	6.56
1350	White Mule Brand 41%. Marianna Sales Co., Memphis, Tenn.	New Canaan: Clapboard Hill Feed Co.	6.90	6.56
<b>Horn and Hoof Meal</b>				
803	Olds & Whipple, Inc., Hartford, Conn.	Hazardville: L. B. Haas & Co.	14.32	14.00
<b>Linseed Oil Meal</b>				
708	Sherwin-Williams 32%. The Sherwin-Williams Co., Cleveland, Ohio	Simsbury: Cullman Bros., Inc.	5.63	5.12
714	Sherwin-Williams 32%. The Sherwin-Williams Co., Cleveland, Ohio	Granby: Cullman Bros., Inc.	5.48	5.12
745	Sherwin-Williams 32%. The Sherwin-Williams Co., Cleveland, Ohio	Hazardville: L. B. Haas & Co.	5.50	5.12
750	Sherwin-Williams 32%. The Sherwin-Williams Co., Cleveland, Ohio	Bloomfield: The Hartman Tobacco Co.	5.43	5.12
751	Sherwin-Williams 32%. The Sherwin-Williams Co., Cleveland, Ohio	Bloomfield: The Hartman Tobacco Co.	5.40	5.12
<b>Soybean Oil Meal</b>				
1618	Archer Quality 44%. Archer-Daniels-Midland Co., Minneapolis, Minn.	East Hartford: Olds & Whipple, Inc.	7.53	7.04

<sup>1</sup>Deficiencies are in boldface type.TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per Cent nitrogen	
			Found	Guaranteed
709	Spencer Kellogg's 44%. Spencer Kellogg & Sons, Inc., Buffalo, N. Y.	Simsbury: Cullman Bros., Inc.	7.42	7.04
<b>Miscellaneous</b>				
813	Agrinite. The American Agricultural Chemical Co., No. Weymouth, Mass.	Bridgeport: Willis Distributors	7.46	7.00
1498	Slaughter House Tankage. Brookside Nurseries, Darien, Conn.	Darien: Brookside Nurseries	10.70	10.50
1640	Blood Tankage. The Hubbard-Hall Chemical Co., Waterbury, Conn.	Portland: The Hubbard-Hall Chemical Co.	<b>9.08</b>	9.50

<sup>1</sup>Deficiencies are in boldface type.

TABLE 2. ANALYSES OF SUPERPHOSPHATE, ETC.<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent phosphoric acid			
			Citra- insoluble	Total	"Available"	
		Found			Guaranteed	
<b>Superphosphate</b>						
1336	18% Normal. The American Agricultural Chemical Co., No. Weymouth, Mass. ....	Pawcatuck: The C. W. Campbell Co.	0.48	20.00	19.52	18.00
1143 <sup>2</sup>	20% Granulated. The American Agricultural Chemical Co., No. Weymouth, Mass. ....	Mansfield: Mansfield State Training School and Hospital .....	0.98	22.40	21.42	20.00
1188	Armour Big Crop Granular. Armour Fertilizer Works, Carteret, N. J. ....	Plantsville: C. A. Cowles, Inc. ....	1.38	22.00	20.62	20.00
1322 <sup>2</sup>	Corenco 20%. Consolidated Rendering Co., Boston, Mass. ....	Norwich: Norwich State Hospital ....	0.88	22.20	21.32	20.00
1475	Corenco 20%. Consolidated Rendering Co., Boston, Mass. ....	West Haven: New Haven Rendering Co. ....	0.03	20.95	20.92	20.00
862	Davco Granulated 20%. Davison Chemical Co., Baltimore, Md. ....	Norwich: Checkerboard Feed Store ...	1.10	21.90	20.80	20.00
1125	20% Granulated. Eastern States Farmers' Exchange, Inc., W. Springfield, Mass. ....	Willimantic: Eastern States Farmers' Exchange, Inc. ....	1.08	23.65	22.57	20.00
867	20%. The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	Norwich: A. P. Savage Supply Co. ....	1.15	21.45	20.30	20.00
1177 <sup>2</sup>	20%. The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	Middletown: Connecticut State Hospital .....	1.28	22.70	21.42	20.00
733	20% Granulated. Olds & Whipple, Inc., Hartford, Conn. ....	Granby: Cullman Bros., Inc. ....	0.87	21.65	20.78	20.00
1628	O & W Triple. Olds & Whipple, Inc., Hartford, Conn. ....	East Hartford: Olds & Whipple, Inc. .	0.88	48.60	47.72	46.00
1117 <sup>2</sup>	Thomas Gran-Form 20%. I. P. Thomas, Paulsboro, N. J. ....	Southbury: Southbury Training School	1.23	21.90	20.67	20.00

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**Precipitated Bone Phosphate**

1616	The American Agricultural Chemical Co., No. Weymouth, Mass. ....	East Hartford: Olds & Whipple, Inc. .	3.70	44.20 <sup>3</sup>	40.50	30.00
736	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	West Suffield: Hatheway & Steane Corp. ....	0.15	45.60	45.45	42.00
734	Olds & Whipple, Inc., Hartford, Conn. ....	Bloomfield: The Hartman Tobacco Co.	0.38	40.50	40.12	38.00
735	Olds & Whipple, Inc., Hartford, Conn. ....	Hazardville: L. B. Haas & Co. ....	0.38	40.40	40.02	38.00
737	Olds & Whipple, Inc., Hartford, Conn. ....	Simsbury: Cullman Bros., Inc. ....	0.40	42.20	41.80	38.00

**Phosphate Rock**

1249	AA Quality. The American Agricultural Chemical Co., No. Weymouth, Mass. ....	Greenwich: McArdle's Seed Co. ....	26.45	31.80 <sup>4</sup>	5.35	3.00
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<sup>1</sup>Deficiencies are in boldface type.

<sup>2</sup>State purchase.

<sup>3</sup>Guaranteed, 42.0%.

<sup>4</sup>Guaranteed, 30.0%.

Commercial Fertilizers

TABLE 3. ANALYSES OF POTASH SALTS, ETC.<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent potash	
			Found	Guaranteed
<b>Muriate of Potash</b>				
851 <sup>2</sup>	Consolidated Rendering Co., Boston, Mass. ....	Cheshire: Connecticut Reformatory .....	<b>58.92</b>	60.00
1141 <sup>2</sup>	Consolidated Rendering Co., Boston, Mass. ....	Storrs: University of Connecticut .....	61.28	60.00
1308	Eastern States Farmers' Exchange, Inc., W. Springfield, Mass. ....	North Haven: Eastern States Farmers' Exchange, Inc. ....	61.64	60.00
1612	Goulard & Olena, Inc., Skillman, N. J. ....	Hartford: Cadwell & Jones, Inc. ....	<b>57.28</b>	60.00
720	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	North Bloomfield: American Sumatra Tobacco Corp. ....	60.24	60.00
1288	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	North Haven: The Hubbard-Hall Chemical Co. ....	61.20	60.00
1629	Olds & Whipple, Inc., Hartford, Conn. ....	East Hartford: Olds & Whipple, Inc. ....	61.08	60.00
<b>Nitrate of Potash</b>				
719 <sup>3</sup>	Olds & Whipple, Inc., Hartford, Conn. ....	North Bloomfield: American Sumatra Tobacco Corp. ....	46.20	44.00
<b>Sulphate of Potash</b>				
725	Olds & Whipple, Inc., Hartford, Conn. ....	Granby: Cullman Bros., Inc. . .	51.44	48.00
727	Olds & Whipple, Inc., Hartford, Conn. ....	Simsbury: Cullman Bros., Inc. .	50.00	48.00
<b>Sulphate of Potash and Magnesia</b>				
718	Olds & Whipple, Inc., Hartford, Conn. ....	Bloomfield: The Hartman Tobacco Co. ....	22.80	21.50
<b>Cottonhull Ashes</b>				
723	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	West Suffield: Hatheway & Steane Corp. ....	39.32	unit basis
721	Olds & Whipple, Inc., Hartford, Conn. ....	North Bloomfield: American Sumatra Tobacco Corp. ....	42.24	35.00
722	Olds & Whipple, Inc., Hartford, Conn. ....	Bloomfield: The Hartman Tobacco Co. ....	42.12	35.00
724	Olds & Whipple Inc., Hartford, Conn. ....	Simsbury: Cullman Bros., Inc. .	38.56	35.00

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>3</sup>Nitrogen guaranteed, 13.0%; found, 13.34%.

TABLE 4. ANALYSES OF GROUND FISH, BONE, ETC.<sup>1</sup>

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent nitrogen			Per cent phosphoric acid		Mechanical analyses (in percentage)	
			Ammoniacal	Total found	Total guaranteed	Total found	Total guaranteed	Finer than 1/50 inch	Coarser than 50/1 inch
<b>Dry Ground Fish</b>									
742	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	West Suffield: Hatheway & Stearns Corp. ....	...	10.40	9.50	7.55	5.00	...	...
743	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	Granby: Cullman Bros., Inc. ....	...	10.35	9.50	7.80	5.00	...	...
744	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	Simsbury: Cullman Bros., Inc. ....	...	10.59	9.50	7.75	5.00	...	...
738	Olds & Whipple, Inc., Hartford, Conn. ..	Bloomfield: The Hartman Tobacco Co. ....	...	10.37	9.00	7.70	5.00	...	...
739	Olds & Whipple, Inc., Hartford, Conn. ..	Bloomfield: The Hartman Tobacco Co. ....	...	10.50	9.00	7.60	5.00	...	...
740	Olds & Whipple, Inc., Hartford, Conn. ..	Hazardville: L. B. Haas & Co. ..	...	10.50	9.00	8.15	5.00	...	...
741	Olds & Whipple, Inc., Hartford, Conn. ..	Hazardville: L. B. Haas & Co. ..	...	10.29	9.00	7.90	5.00	...	...
<b>Bone Meal</b>									
1340	Gro-Well, J. & L. Adikes, Inc., Jamaica, N. Y. ....	New Canaan: Silliman's Inc. ....	0.05	2.65	2.25	27.30	21.25	54.0	46.0
1400	The American Agricultural Chemical Co., No. Weymouth, Mass. ....	East Granby: Henry Adams ....	0.00	2.30	1.50	28.60	25.00	50.0	50.0
1191	Armour Fertilizer Works, Carteret, N. J. ....	Plantsville: C. A. Cowles, Inc. ....	0.04	2.88	2.30	25.60	23.00	55.0	45.0
1497	Brookside Nurseries, Darien, Conn. ....	Darien: Brookside Nurseries ....	0.02	5.33	... <sup>3</sup>	<b>21.35</b>	22.00	4.0	96.0
948	Consolidated Rendering Co., Boston, Mass.	New Haven: The Jackson-Marvin Hardware Co., Inc. ....	0.04	2.93	2.00	24.00	22.00	43.0	57.0
1184 <sup>2</sup>	Consolidated Rendering Co., Boston, Mass.	Middletown: Long Lane School ..	0.06	2.62	2.00	24.40	22.00	41.0	59.0
1321 <sup>2</sup>	Consolidated Rendering Co., Boston, Mass.	Norwich: Uncas-on-Thames Sanatorium ....	0.00	2.14	2.00	29.70	22.00	50.0	50.0
1193	Faesy & Besthoff, Inc., New York, N. Y.	Plainville: Sunshine Feed Store .	0.04	2.90	2.47	26.80	23.00	57.0	43.0
1236	Goulard & Olena, Inc., Skillman, N. J. ..	Hartford: Cadwell & Jones, Inc. .	0.03	2.80	2.40	22.20	20.00	48.0	52.0
1478	The Hubbard-Hall Chemical Co., Waterbury, Conn. ....	Milford: Associated Seed Growers, Inc. ....	0.02	2.12	2.00	27.90	23.00	51.0	49.0
1242 <sup>2</sup>	Olds & Whipple, Inc., Hartford, Conn. ..	Hartford: Connecticut State Library ....	0.03	2.38	2.47	28.20	22.00	51.0	49.0
1476	The Van Iderstine Co., Long Island City, N. Y. ....	West Haven: New Haven Rendering Co. ....	0.00	2.45	0.80	<b>27.20</b>	27.50	56.0	44.0
<b>Milorganite</b>									
935	Sewerage Commission of the City of Milwaukee, Milwaukee, Wis. ....	Hamden: Hamden Garden Center	0.04	6.00	5.50	4.56	...	...	...

<sup>1</sup>Deficiencies are in boldface type.

<sup>2</sup>State purchase.

<sup>3</sup>Nitrogen not guaranteed.

<sup>4</sup>"Available" phosphoric acid: Guaranteed, 4.0%; found, 3.81%.

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
<b>Agricultural Supply Co., West Haven, Conn.</b>		
936	Yale Special Mixture 8-6-2	Hamden
1470	Yale Special Mixture 8-6-2	West Haven
<b>Allied Chemical &amp; Dye Corp., Nitrogen Div., Hopewell, Va.</b>		
1558	"Arcadian" 12-12-12 Granular Fertilizer	Portland
<b>The American Agricultural Chemical Co., North Weymouth, Mass.</b>		
1635	AA Fertilizer 0-15-30	Woodbridge
1139 <sup>2</sup>	AA Fertilizer 0-20-20	Storrs
1320 <sup>2</sup>	AA Fertilizer 5-8-7	Norwich
1138 <sup>2</sup>	AA Fertilizer 5-10-5	Storrs
1402	AA Fertilizer 5-10-10 with 1.2 Magnesium	East Granby
1630	AA Fertilizer 8-16-16	Woodbridge
1194 <sup>2</sup>	AA Fertilizer 10-6-2	New Britain
1084 <sup>2</sup>	AA Fertilizer 10-10-10	Newtown
1398	Agrico Country Club Fertilizer 8-6-4	East Granby
854	Agrico Country Club Fertilizer 10-6-4	Manchester
1405	Agrico Rose Food 5-9-6	East Granby
820	Agrico for Broadleaf Evergreens 6-10-4	Bridgeport
1248	Agrico for Gardens 5-10-5	Greenwich
1631	Agrico for Gardens 5-10-5	Woodbridge
1247	Agrico for Lawns, Trees & Shrubs 6-10-4	Greenwich
1404	Agrico for New England 5-8-7	East Granby
1403	Agrico for Potatoes 5-10-10 with 1.2 Magnesium	East Granby
1634	Agrico for Seeding Down 3-12-12	Woodbridge
1399	Agrico for Top Dressing 7-7-7	East Granby
1632	Agrico for Top Dressing 10-10-10	Woodbridge
1633	Agrico for Turf 6-8-2	Woodbridge
1357	Agrico for Turf 10-6-4	Stamford
<b>Armour Fertilizer Works, Carteret, N. J.</b>		
1314	Armour All Organic 5-5-0	South Windsor
1313	Armour Big Crop Fertilizer 0-20-20	South Windsor
1145	Armour Big Crop Fertilizer 5-8-7	Bolton Notch
1575	Armour Big Crop Fertilizer 5-10-5	South Windsor
1576	Armour Big Crop Fertilizer 5-10-10 with 1.2 Magnesium	South Windsor
1570	Armour Big Crop Fertilizer 5-10-10	South Windsor
1572	Armour Big Crop Fertilizer 7-7-7	South Windsor
1317	Armour Big Crop Fertilizer 10-10-10	South Windsor
1574	Armour Camellia & Azalea Plant Food 5-10-10	South Windsor
1144	Armour Vertagreen Plant Food 5-10-5	Bolton Notch
1316	Armour Vertagreen Plant Food for Commercial Crops 3-12-12	South Windsor
1571	Armour Vertagreen Plant Food for Commercial Crops 6-12-12	South Windsor
1146	Armour Vertagreen Plant Food for Turf & Trees 10-6-4	Bolton Notch

<sup>1</sup>Deficiencies are in boldface type.

<sup>2</sup>State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Magnesium per cent
0.00	4.80	2.73	0.47	8.00	0.20	6.38	6.18	1.98	2.69	...
9.00	4.56	2.68	0.44	<b>7.68</b>	0.18	6.40	6.22	2.10	2.88	...
4.50	6.72	0.00	0.06	<b>11.28</b>	0.45	13.75	13.30	9.39	12.27	...
...	...	...	...	...	0.30	15.20	14.90	23.66	<b>29.68</b>	...
...	...	...	...	...	0.33	21.00	20.67	6.92	21.05	...
0.36	4.60	0.60	0.11	5.67	0.45	9.85	9.40	6.59	8.83	...
0.00	4.92	0.01	0.23	5.16	0.53	11.20	10.67	4.69	5.28	...
0.00	4.84	0.11	0.13	5.08	0.95	11.10	10.15	8.37	9.76	1.57
1.91	5.60	0.34	0.08	7.93	0.63	17.00	16.37	15.17	16.57	...
0.16	9.14	0.20	0.13	<b>9.63</b>	0.45	7.10	6.65	2.03	2.75	...
0.59	8.68	0.14	0.12	<b>9.53</b>	0.33	11.60	11.27	9.39	10.08	...
0.14	5.36	0.76	1.46	<b>7.72</b>	0.40	6.80	6.40	4.20	4.78	...
0.00	9.00	0.46	0.28	<b>9.74</b>	0.35	6.78	6.43	3.85	4.59	...
0.57	2.28	0.84	1.65	5.34	0.55	9.60	9.05	6.08	6.52	...
0.27	4.56	0.26	1.00	6.09	0.70	11.08	10.38	4.05	4.55	...
0.14	4.16	0.52	0.12	4.94	0.63	11.30	10.67	4.33	5.07	...
0.47	4.36	0.10	0.10	5.03	1.13	11.35	10.22	3.31	5.57	...
0.10	4.84	0.44	0.42	<b>5.80</b>	0.65	10.93	10.28	4.09	4.97	...
0.00	4.72	0.48	0.09	5.29	0.45	8.75	8.30	6.85	7.40	...
0.44	3.92	0.40	0.07	<b>4.83</b>	0.55	9.95	<b>9.40</b>	8.99	11.39	1.65
0.60	0.86	1.96	0.08	3.50	0.95	16.13	15.18	9.40	<b>11.52</b>	...
1.53	3.03	2.43	0.11	7.10	0.38	8.38	8.00	5.21	8.12	...
0.27	9.00	0.10	0.19	<b>9.56</b>	0.88	11.95	11.07	6.35	10.33	...
0.00	2.66	1.15	2.19	6.00	0.63	8.85	8.22	2.16	2.62	...
0.63	2.90	2.86	3.42	<b>9.81</b>	0.68	6.90	6.22	3.36	4.24	...
0.00	0.40	0.16	4.71	5.27	...	6.50	...	...	...	...
...	...	...	...	...	0.72	20.38	<b>19.66</b>	18.68	20.07	...
0.40	4.00	0.24	0.06	<b>4.70</b>	1.03	11.65	10.62	6.25	7.68	...
0.61	3.80	0.04	0.04	<b>4.59</b>	0.95	11.30	10.35	4.61	5.47	...
0.12	3.88	0.54	0.12	<b>4.66</b>	1.18	11.85	10.67	9.11	<b>9.43</b>	1.21
0.00	4.20	0.33	0.19	<b>4.72</b>	1.63	12.50	10.87	8.57	10.04	...
0.00	5.44	1.61	0.13	7.18	0.83	8.75	7.92	6.12	7.10	...
0.37	6.30	0.36	0.00	<b>7.03</b>	1.00	11.83	10.83	9.07	9.86	...
0.00	3.56	0.78	1.10	5.44	1.30	11.63	10.33	8.83	10.51	...
0.00	4.06	0.40	0.20	<b>4.66</b>	1.18	12.55	11.37	2.22	6.04	...
0.31	2.62	0.24	0.10	3.27	1.30	13.93	12.63	9.23	11.96	...
0.47	4.40	0.62	0.13	<b>5.62</b>	1.53	14.13	12.60	9.40	<b>10.25</b>	...
0.26	8.20	0.08	1.46	10.00	0.60	11.03	10.43	5.16	5.16	...



TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
1315	Armour Vertagreen Plant Food for Turf & Trees 10-6-4	South Windsor
1573	Armour Vertagreen Rose Food 5-10-5	South Windsor
	Associated Seed Growers, Inc., Cambridge, N. Y.	
1477	Asgrow Lawn Food 10-6-4	Milford
	H. J. Baker & Bro., New York, N. Y.	
1282	Nitrogenic 5-4-0	Stamford
	The F. A. Bartlett Tree Expert Co., Stamford, Conn.	
1601	Bartlett Green Tree Food 6-8-6	Danbury
	Joseph Breck & Sons Corp., Boston, Mass.	
1356	Breck's Turf-Gro 8-6-2	Stamford
1355	Breck's Velturf 10-6-4	Stamford
	Brookside Nurseries, Darien, Conn.	
1496	Natures Nutrients 5-6-8	Darien
	Chiguano Compost Corp., Marion, Conn.	
1192	Chiguano Organic Soil Builder & Plant Food 2-2-2	Plainville
	Consolidated Rendering Co., Boston, Mass.	
1473	Corenco 0-15-30 Fertilizer	West Haven
1474	Corenco 0-20-20 Fertilizer	West Haven
1393	Corenco 4-12-16 Fertilizer	West Suffield
1027	Corenco 5-8-7 Fertilizer	New Haven
1118 <sup>2</sup>	Corenco 5-8-7 Fertilizer	Southbury
824	Corenco 5-10-5 Fertilizer	Shelton
1598	Corenco 5-10-5 Fertilizer	Torrington
1390	Corenco 5-10-5 Home Garden Fertilizer	Thompsonville
866	Corenco 5-10-10 Fertilizer	Norwich
1469	Corenco 5-10-10 Fertilizer with 1.2 Magnesium	West Haven
1578	Corenco 5-10-10 Liquid Fertilizer Concentrate	West Haven
1563	Corenco 6-3-6 Perfection	Springfield, Mass.
1124 <sup>2</sup>	Corenco 6-8-8 Fertilizer	Willimantic
1318	Corenco 6-8-8 Fertilizer	East Windsor Hill
1319	Corenco 6-8-8 Fertilizer with 1.2 Magnesium	East Windsor Hill
916	Corenco 7-7-7 Fertilizer	New Haven
1090 <sup>2</sup>	Corenco 7-7-7 Fertilizer	Southbury
726 <sup>2</sup>	Corenco 8-6-2 Fertilizer	New Haven
825	Corenco 8-6-4 Landscape	Derby
822	Corenco 8-6-4 Turf Green	Bridgeport
1472	Corenco 8-16-16 Fertilizer	West Haven
1577	Corenco 10-5-5 Liquid Green	West Haven
1148 <sup>2</sup>	Corenco 10-6-4 Fertilizer	New Haven

<sup>1</sup>Deficiencies are in boldface type.  
<sup>2</sup>State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Magnesium per cent
0.40	7.68	0.58	1.22	<b>9.88</b>	0.73	6.75	6.02	4.30	4.62	...
0.17	4.20	0.18	0.45	5.00	1.10	11.30	10.20	3.21	5.50	...
0.86	3.72	4.48	2.10	11.16	0.40	8.05	7.65	3.56	4.02	...
0.00	0.08	0.22	4.36	<b>4.66</b>	0.78	5.26	4.48	...	...	...
0.00	4.44	0.84	0.81	6.09	1.05	10.20	9.15	5.95	7.23	...
0.00	5.32	0.97	1.45	<b>7.74</b>	0.53	7.20	6.67	0.15	2.12	...
0.32	0.44	1.44	7.48	<b>9.68</b>	0.48	7.23	6.75	3.98	4.36	...
0.00	0.10	0.85	5.55	6.50	4.85	11.90	7.05	1.43	8.49	...
0.00	0.44	0.32	1.28	2.04	0.58	2.44	1.86	0.40	1.93	...
...	...	...	...	...	0.18	16.00	15.82	22.56	29.88	...
...	...	...	...	...	0.15	20.50	20.35	14.81	20.20	...
0.76	2.92	0.62	0.10	4.40	0.35	12.53	12.18	11.90	15.93	...
0.55	3.68	0.64	0.29	5.16	0.28	9.40	9.12	6.93	7.54	...
0.83	3.90	0.42	0.14	5.29	0.18	9.33	9.15	6.68	7.57	...
0.92	3.40	0.76	0.16	5.24	0.53	10.85	10.32	3.93	5.87	...
0.50	4.00	1.22	0.22	5.94	0.23	10.13	9.90	6.84	8.08	...
1.34	3.64	0.18	0.17	5.33	0.50	11.50	11.00	2.66	5.57	...
1.07	3.68	0.68	0.10	5.53	0.45	11.10	10.65	9.71	10.12	...
0.00	3.48	1.65	0.23	5.36	0.25	10.50	10.25	6.40	10.12	1.82
0.00	3.18	1.60	0.00	<b>4.78</b>	0.00	9.63	<b>9.63</b>	8.69	10.04	...
0.00	0.32	3.00	3.60	6.92	0.30	5.54	5.24	0.46	8.22	...
1.22	4.28	0.12	0.17	<b>5.79</b>	0.20	9.05	8.85	7.50	8.35	...
0.25	5.06	1.36	0.14	6.81	0.20	9.00	8.80	8.21	8.49	...
0.00	4.52	1.35	0.13	6.00	0.03	8.55	8.52	0.29	8.42	1.81
0.83	5.32	0.28	0.21	<b>6.64</b>	0.58	8.20	7.62	6.16	7.71	...
0.64	5.40	0.38	0.23	<b>6.65</b>	0.25	7.98	7.73	6.02	7.40	...
0.17	4.90	2.58	0.41	8.06	0.10	6.40	6.30	2.44	2.53	...
0.00	4.80	2.74	0.46	8.00	0.20	6.50	6.30	3.76	4.65	...
0.00	4.00	1.35	2.20	<b>7.55</b>	0.25	6.43	6.18	4.59	4.68	...
0.78	5.68	1.12	0.15	<b>7.73</b>	0.40	16.25	15.85	14.22	17.17	...
0.00	1.85	7.98	0.00	<b>9.83</b>	0.00	5.23	5.23	4.57	5.73	...
0.00	5.66	2.89	1.15	<b>9.70</b>	0.30	7.33	7.03	5.03	5.63	...

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
1493	Corenco 10-6-4 Fertilizer	Manchester
865	Corenco 10-10-10 Fertilizer	Norwich
933 <sup>2</sup>	Corenco 10-10-10 Fertilizer	Mt. Carmel
1597	Corenco 10-10-10 Fertilizer	Waterbury
1122	Corenco Organic Turf Fertilizer 4.75-4.0	Willimantic
1388	Corenco Spurz-on 3-2.5-1.5	Thompsonville
<b>The Davey Tree Expert Co., Kent, Ohio</b>		
1280	Davey Tree Food 12-4-4	Old Greenwich
1944	Davey Tree Food 12-4-4	Old Greenwich
1945	Davey Tree Food 12-4-4	Old Greenwich
<b>R. G. Davis &amp; Sons, Inc., New Haven, Conn.</b>		
1026	Organo 10-5-5	New Haven
<b>The Davison Chemical Co., Baltimore, Md.</b>		
1599	0-15-30 Davco Granulated Fertilizer	New Milford
860	0-20-20 Davco Granulated Fertilizer	Norwich
861	5-10-5 Davco Granulated Turf & Garden Food (Prem)	Norwich
859	5-10-10 Davco Granulated 3G Fertilizer	Norwich
1406 <sup>3</sup>	6-8-8 Davco Granulated Fertilizer with Boron and Manganese	Wilson
1121	7-7-7 Davco Granulated Fertilizer	Willimantic
1120	10-6-4 Davco Granulated Fertilizer	Willimantic
1600	10-10-10 Davco Granulated 3G Fertilizer	New Milford
<b>Eastern States Farmers' Exchange, Inc., West Springfield, Mass.</b>		
1087 <sup>4</sup>	Eastern States 0-15-30 with 0.2 Boron	Bethel
929	Eastern States 0-25-25	Norwich
874	Eastern States 5-10-10 with 1.2 Magnesium	Norwich
1490	Eastern States 8-4-8 (Tobacco) with 1.2 Magnesium	Buckland
1088	Eastern States 8-12-12 L.C. with 1.2 Magnesium	Bethel
1123	Eastern States 8-16-16	Willimantic
1086	Eastern States 10-5-5 with 1.2 Magnesium	Bethel
1307	Eastern States 10-10-10 with 0.6 Magnesium	North Haven
<b>The Espoma Co., Millville, N. J.</b>		
1031	Espoma 3-2-1	Branford
1032	Espoma Garden Fertilizer 4-6-6	Branford
1033	Holly-Tone 4-6-4	Branford
<b>Fiestar, Inc., New York, N. Y.</b>		
947	Fiestar 2-2-0	New Haven

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>3</sup>Boron guaranteed, 0.10%; found, 0.073%; Manganese guaranteed, 0.041%; found, 0.084%.<sup>4</sup>Boron found, 0.28%.CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Nitrate	Per cent nitrogen			Total	Per cent phosphoric acid			So-called "available"	As muriate	Total	Magnesium per cent
	Ammoniacal	Organic water-soluble	Organic water-insoluble		Citrate-insoluble	Total					
0.69	8.32	0.64	0.15	<b>9.80</b>	0.13	6.85	6.72	0.53	4.27	...	
1.11	8.56	0.16	0.22	10.05	0.48	10.60	10.12	9.52	10.55	...	
1.12	8.36	0.20	0.28	9.96	0.23	11.43	11.20	8.67	10.08	...	
0.49	7.84	1.16	0.19	<b>9.68</b>	0.20	11.78	11.58	8.20	10.04	...	
0.00	0.00	0.31	5.46	5.77	1.15	8.20	7.05	...	...	...	
0.00	0.76	1.42	1.72	3.90	...	3.64	...	...	2.59	...	
1.11	8.20	0.80	0.86	<b>10.97</b>	0.65	6.46	5.81	1.73	4.30	...	
0.96	8.32	1.00	0.92	<b>11.20</b>	0.63	5.88	5.25	1.99	4.27	...	
1.61	8.00	1.64	0.83	12.08	0.63	5.04	4.41	1.50	4.36	...	
0.00	6.00	3.07	1.17	10.24	0.28	5.42	5.14	4.85	5.54	...	
...	...	...	...	...	0.83	17.50	16.67	25.34	<b>26.68</b>	...	
...	...	...	...	...	0.83	22.10	21.27	17.13	<b>18.50</b>	...	
0.98	3.76	0.36	0.07	5.17	0.20	10.35	10.15	4.34	5.66	...	
1.32	3.60	0.20	0.10	5.22	0.20	10.50	10.30	10.23	10.63	...	
1.74	4.00	0.12	0.07	5.93	0.43	8.95	8.52	8.35	8.93	...	
1.63	5.00	0.42	0.04	7.09	0.45	10.60	10.15	3.12	7.30	...	
0.00	8.58	0.78	0.08	<b>9.44</b>	0.35	11.15	10.80	5.38	5.80	...	
2.42	6.42	0.32	0.00	<b>9.16</b>	0.38	10.95	10.57	9.38	10.30	...	
...	...	...	...	...	0.43	16.43	16.00	26.20	30.62	...	
...	...	...	...	...	0.05	25.25	25.20	21.87	25.78	...	
0.94	3.76	0.00	0.14	<b>4.84</b>	0.33	11.85	11.52	9.42	10.55	2.59	
2.29	0.12	3.84	2.28	8.53	0.15	4.28	4.13	0.17	8.93	3.03	
2.05	6.00	0.32	0.08	8.45	0.25	12.05	11.80	2.06	12.43	2.19	
2.32	6.00	0.14	0.04	8.50	0.28	17.50	17.22	12.34	16.73	...	
1.06	2.16	2.48	4.90	10.60	0.20	5.85	5.65	3.17	5.80	2.79	
2.22	7.52	0.40	0.09	10.23	0.30	11.20	10.90	10.27	10.55	1.03	
0.00	2.38	0.45	1.63	4.46	0.45	4.67	4.22	1.06	2.72	...	
0.00	4.00	0.46	1.15	5.61	0.43	6.40	5.97	7.01	8.01	...	
0.00	3.14	0.24	1.76	5.14	0.55	7.70	7.15	4.44	4.59	...	
0.00	0.52	0.19	1.52	2.23	0.23	2.91	2.68	...	...	...	

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
<b>The Garden Center, Inc., West Hartford, Conn.</b>		
1608	Garden Center Lawn Fertilizer 10-6-4	West Hartford
<b>Glorion Div. of Aluminum &amp; Chemical Corp., Greenwich, Conn.</b>		
1250	Glorion 4-8-8	Greenwich
<b>Goulard &amp; Olena, Inc., Skillman, N. J.</b>		
1339	G & O Hyganic 10-6-4	New Canaan
1344	G & O Prizegro 5-10-5	New Canaan
1342	G & O Rhodo-Azalea Food 3-20-3	New Canaan
1341	G & O Rose Food 7-8-5	Fairfield
1552	Godfrey's Hi-Organic No-Filler 10-6-4	New Canaan
<b>The Hubbard-Hall Chemical Co., Waterbury, Conn.</b>		
868	Green-Gro All-Organic 5-4-0	Norwich
1547	Green-Gro All-Organic 5-4-0	Darien
807	Green-Gro Lawn Fertilizer 6-7-4	Winsted
1546	Gro-Fast Evergreen Food 4-10-4	Darien
1068	Gro-Fast Plant Food 5-10-5	Centerbrook
1639	Gro-Fast Rose Food 7-10-5	Portland
1066	Hubbard Garden Fertilizer 5-10-5	Centerbrook
1183 <sup>2</sup>	Hubbard Garden Fertilizer 5-10-5	Middletown
852 <sup>2</sup>	Hubbard Garden Fertilizer 5-10-10	Cheshire
1186 <sup>2</sup>	Hubbard Garden Fertilizer 5-10-10	Meriden
1556	Hubbard Golf Course Fertilizer 8-6-2	Portland
1545	Hubbard Golf Course Fertilizer 10-6-4	Darien
1638 <sup>2</sup>	Hubbard Golf Course Fertilizer 10-6-4	Portland
827 <sup>2</sup>	Hubbard Potato Fertilizer 6-8-8	Cheshire
1561	Liberty Fertilizer 0-15-30	Portland
809 <sup>5</sup>	Liberty Fertilizer 0-20-20 with 0.165% Boron	Canaan
931 <sup>2,6</sup>	Liberty Fertilizer 0-20-20 with 0.165% Boron	Mt. Carmel
1284	Liberty Fertilizer 0-20-20	North Haven
1567	Liberty Fertilizer 3-12-12	Windsorville
934 <sup>2</sup>	Liberty Fertilizer 5-10-10	Mt. Carmel
1062	Liberty Fertilizer 5-10-10	Guilford
1555	Liberty Fertilizer 5-10-10 with 1.2 Magnesium	Portland
1286	Liberty Super Gro 6-12-12 with 1.2 Magnesium	North Haven
810	Liberty Fertilizer 8-16-16	Canaan
1149 <sup>2</sup>	Liberty Fertilizer 8-16-16	Middletown
811	Liberty Fertilizer 10-10-10	Canaan
1637 <sup>2</sup>	Liberty Fertilizer 10-10-10	Portland
806	Liberty High Grade Market Garden Fertilizer 5-8-7	Winsted

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>5</sup>Boron found, 0.19%.<sup>6</sup>Boron found, 0.22%.CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Magnesium per cent
0.17	6.60	0.92	2.34	10.03	0.85	7.25	6.40	3.87	4.39	...
0.48	2.88	0.44	0.66	4.46	1.35	9.75	8.40	7.21	8.63	...
0.52	6.06	2.32	1.13	10.03	0.45	7.25	6.80	4.38	5.00	...
0.41	3.56	0.40	1.08	5.45	0.73	11.70	10.97	4.17	5.22	...
0.00	2.32	0.53	1.11	3.96	0.53	20.60	20.07	3.98	4.68	...
0.45	5.32	0.36	0.97	7.10	0.85	9.30	8.45	5.94	5.94	...
0.71	6.36	1.58	1.25	9.90	0.28	6.65	6.37	3.84	4.91	...
0.00	0.16	0.29	4.64	5.09	1.30	7.04	5.74	...	...	...
0.00	0.40	2.53	2.31	5.24	0.95	6.01	5.06	...	...	...
0.28	4.52	0.74	0.84	6.38	0.78	8.45	7.67	3.74	4.49	...
0.00	1.96	1.27	1.32	4.55	0.43	11.63	11.20	3.17	5.07	...
0.00	2.76	1.73	1.41	5.90	0.75	11.60	10.85	5.48	5.90	...
0.40	3.36	2.36	0.94	7.06	1.35	12.55	11.20	0.80	5.87	...
0.99	3.68	0.54	0.12	5.33	0.73	11.70	10.97	4.41	5.60	...
0.76	3.80	0.58	0.15	5.29	0.70	11.65	10.95	4.20	5.28	...
0.33	3.90	0.86	0.10	5.19	0.43	10.85	10.42	7.86	10.51	...
0.54	3.80	0.80	0.18	5.32	0.70	11.05	10.35	10.11	10.12	...
1.85	3.74	0.88	1.58	8.05	0.45	6.40	5.95	1.87	2.37	...
1.76	4.28	2.46	1.28	9.78	0.55	6.95	6.40	2.80	5.00	...
0.00	4.96	3.08	1.86	9.90	0.50	6.65	6.15	3.44	4.52	...
1.18	4.60	0.06	0.16	6.00	0.45	9.60	9.15	2.28	8.39	...
...	...	...	...	...	0.48	15.90	15.42	22.36	29.78	...
...	...	...	...	...	0.48	21.45	20.97	10.74	21.25	...
...	...	...	...	...	0.53	21.40	20.87	19.24	20.80	...
...	...	...	...	...	0.63	20.80	20.17	19.12	19.68	...
0.38	2.42	0.46	0.10	3.36	0.63	13.65	13.02	10.09	13.47	...
0.57	3.72	0.48	0.27	5.04	0.90	11.60	10.70	8.35	10.89	...
0.72	3.86	0.60	0.22	5.40	0.60	11.70	11.10	8.58	9.87	...
0.88	3.96	0.36	0.11	5.31	0.75	11.01	10.26	8.92	10.51	1.68
0.18	4.40	0.88	0.54	6.00	0.65	12.40	11.75	8.76	10.74	2.16
1.05	5.96	0.78	0.10	7.89	0.70	16.60	15.90	11.10	14.85	...
1.46	6.38	0.22	0.18	8.24	0.60	16.90	16.30	14.71	15.90	...
0.14	8.86	0.74	0.07	9.81	0.60	11.50	10.90	10.23	10.70	...
3.98	2.17	1.59	1.82	9.56	0.63	10.90	10.27	8.11	9.98	...
0.61	4.34	0.20	0.33	5.48	0.40	8.70	8.30	6.57	7.68	...

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
1037	Liberty High Grade Market Garden Fertilizer 5-8-7	Guilford
1560	Liberty Hi Yield Fertilizer 8-12-12	Portland
1063	Liberty Special Fertilizer for Fruit & Grass 7-7-7	Guilford
828 <sup>a</sup>	Liberty Special Fertilizer for Fruit & Grass 7-7-7	Cheshire
1147 <sup>a</sup>	Liberty Special Fertilizer for Fruit & Grass 7-7-7	New Haven
1564	Liberty Super Bacco Fertilizer 6-4-7 with 1.2 Magnesium	Windsorville
1569	Liberty Super Bacco Fertilizer 6-4-7 with 1.2 Magnesium	Windsorville
1641	Liberty Super Spud Special Potato Fertilizer 6-8-8 with 1.2 Magnesium	Portland
1568	Old Deerfield Green Lawn Fertilizer 8-6-4	Windsorville
1553	Old Deerfield "True Organic" 5-4-0	Portland
1187 <sup>a,7</sup>	Special Mixture for Conn. State 0-20-20 with 0.11% Boron	Meriden
1285	Woodruff's 5-8-7 Fertilizer	North Haven
1312	Woodruff's 5-8-7 Fertilizer	Glastonbury
1557	Woodruff's Tobacco Fertilizer 6-3-6	Portland
1562	Woodruff's Tobacco Fertilizer 6-3-6	Portland
1565	Woodruff's Tobacco Fertilizer 6-3-6	Windsorville
1289	Woodruff's 8-6-4 Fertilizer	North Haven
930 <sup>a</sup>	Woodruff's Lawn & Tree Food 10-5-5	Mt. Carmel
1283	Woodruff's Lawn & Tree Food 10-5-5	North Haven
<b>International Minerals &amp; Chemical Corp., Woburn, Mass.</b>		
943	International Mello-Green 5-4-0	Hamden
<b>Lebanon Chemical Corp., Lebanon, Pa.</b>		
1237	Fertilizer 5-10-10	Hartford
1195	Fertilizer 10-6-4	Hartford
1238	Hi-Organic 8-8-8	Hartford
1198	Plant Food 5-10-5	Hartford
1602	Rose Food 7-7-7	Hartford
1200	Turf Organic 5-4-0	Hartford
1199	Uni-Form 10-6-4	Hartford
<b>Lee Patten Seed Co., Jersey City, N. J.</b>		
869	Patco Lawn Food 9-8-3	Norwich
<b>McArdle's Seed Co., Greenwich, Conn.</b>		
1244	McArdle's Hi-Organic 10-6-4	Greenwich
<b>The Mamlon Co., New Haven, Conn.</b>		
1581	Fer-Mel General Purpose Plant Food 18-18-18	New Haven
1580	Fer-Mel Turf & Tree Food 24-12-12	New Haven

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>7</sup>Boron found, 0.14%.CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Per cent nitrogen				Per cent phosphoric acid			Per cent potash			
Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Magnesium per cent
0.39	4.08	0.92	0.11	5.50	0.93	9.20	8.27	4.77	8.18	...
0.54	6.14	1.12	0.26	8.06	0.60	12.58	11.98	9.39	12.27	...
0.83	5.86	0.26	0.20	7.15	0.40	8.40	8.00	6.59	7.71	...
0.00	4.72	1.87	0.41	7.00	0.35	8.03	7.68	6.12	7.16	...
0.67	6.18	0.48	0.05	7.38	0.43	8.05	7.62	6.33	7.10	...
0.93	0.16	2.14	3.16	6.39	0.28	4.84	4.56	...	8.08	2.56
0.87	0.18	2.00	3.26	6.31	0.33	4.40	4.07	0.16	8.49	3.29
0.34	5.06	0.44	0.55	6.39	0.40	8.70	8.30	0.72	8.79	2.13
0.28	2.52	4.32	1.17	8.29	0.78	7.53	6.74	3.73	4.43	...
0.00	0.10	0.21	4.24	4.55	0.88	5.60	4.72	...	...	...
...	...	...	...	...	0.18	22.00	21.82	16.60	18.54	...
0.00	4.00	0.57	0.57	5.14	0.53	9.05	8.52	7.24	7.57	...
0.57	4.20	0.56	0.29	5.62	0.38	9.25	8.87	7.20	7.40	...
0.96	0.30	1.12	3.27	5.65	0.18	4.10	3.92	0.24	7.23	...
0.76	0.46	1.90	3.04	6.16	0.20	3.85	3.65	0.44	6.55	...
0.52	0.24	2.08	3.16	6.00	0.23	3.98	3.75	...	7.33	...
0.00	2.70	3.78	1.28	7.76	0.58	6.75	6.17	4.05	4.75	...
0.21	2.28	5.54	0.97	9.00	0.65	7.04	6.39	4.77	5.13	...
0.13	2.38	6.32	1.21	10.04	0.70	6.42	5.72	5.03	5.03	...
0.00	0.04	0.46	4.64	5.14	0.63	5.84	5.21	...	...	...
0.85	3.40	0.66	0.09	5.00	0.43	10.70	10.27	4.33	11.08	...
0.00	4.14	2.24	2.19	8.57	0.70	7.08	6.38	4.17	4.43	...
0.00	2.88	2.31	2.30	7.49	0.78	8.75	7.97	7.24	8.39	...
0.60	3.68	0.78	0.15	5.21	0.75	11.58	10.83	4.37	4.87	...
1.07	4.32	0.10	1.20	6.69	0.48	7.70	7.22	7.37	9.04	...
0.00	0.04	0.16	4.80	5.00	1.20	6.50	5.30	...	...	...
3.09	2.04	0.34	4.21	9.68	0.68	6.80	6.12	4.46	4.59	...
0.84	5.20	1.24	1.52	8.80	0.53	8.40	7.87	3.08	3.83	...
0.13	6.88	1.12	1.10	9.23	0.43	7.50	7.07	5.39	6.18	...
1.66	4.24	11.92	0.18	18.00	0.10	18.70	18.60	4.70	20.40	...
1.32	3.44	19.36	0.12	24.24	0.07	12.55	12.48	7.60	15.77	...

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen				Per cent phosphoric acid			Per cent potash		Magnesium per cent
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	
<b>Old Fox Agricultural Sales, Inc., East Providence, R. I.</b>												
864	Old Fox Brand 0-20-20	Norwich	...	...	...	...	0.43	18.40	<b>17.97</b>	15.04	22.60	...
1328	Old Fox Brand 0-20-20	Pawcatuck	...	...	...	...	0.38	18.40	<b>18.02</b>	16.29	20.27	...
863	Old Fox Brand 5-8-7	Norwich	0.37	3.88	0.52	0.06	<b>4.83</b>	0.28	9.75	9.47	6.32	7.84
1142 <sup>2</sup>	Old Fox Brand 5-10-10	Mansfield	0.04	4.06	0.78	0.12	5.00	0.65	11.70	11.05	6.96	10.04
1325 <sup>2</sup>	Old Fox Brand 5-10-10	Norwich	0.69	4.00	0.44	0.06	5.19	0.65	11.55	10.90	7.25	10.12
1329	Old Fox Brand 5-10-10	Pawcatuck	0.73	3.94	0.36	0.05	5.08	0.83	11.55	10.72	8.87	9.97
1140 <sup>2</sup>	Old Fox Brand 7-7-7	Storrs	0.00	5.72	1.44	0.18	7.34	0.43	8.20	7.77	6.60	7.47
1326	Old Fox Brand 7-7-7	Pawcatuck	0.32	6.36	0.32	0.00	7.00	0.30	8.40	8.10	6.60	7.54
1327	Old Fox Brand Turf Food 8-6-2	Pawcatuck	0.36	5.00	1.68	1.06	8.10	0.55	7.20	6.65	2.54	3.64
1338	Old Fox Brand Turf Food 8-6-2	Pawcatuck	0.42	6.20	0.54	1.00	8.16	0.50	7.35	6.85	3.88	4.43
<b>Olds &amp; Whipple, Inc., Hartford, Conn.</b>												
826 <sup>2</sup>	O & W 0-20-20 Fertilizer	Cheshire	...	...	...	...	0.33	21.85	21.52	9.35	20.98	...
1460	O & W 4-4-0 Nitro-Gro	East Hartford	0.00	0.40	0.07	4.44	4.91	0.80	6.32	5.52	...	...
1465	O & W 5-3-5 Complete Tobacco Fertilizer	East Hartford	0.00	0.36	1.76	3.60	5.72	0.10	3.84	3.74	0.21	5.25
1614	O & W 5-5-15 High Grade Tobacco Starter	East Hartford	0.00	0.16	3.85	1.44	5.45	0.50	6.10	5.60	1.25	16.02
1461	O & W 5-8-6 Luxura	East Hartford	0.00	2.70	1.08	1.28	5.06	0.50	8.73	8.23	7.16	7.16
853	O & W 5-8-7 Potato & General Purpose Fertilizer	Manchester	0.65	4.10	0.62	0.05	5.42	0.23	8.45	8.22	6.76	7.47
1464	O & W 5-10-5 Fertilizer	East Hartford	0.00	4.40	0.75	0.25	5.40	0.38	11.50	11.12	1.99	5.73
1457	O & W 5-10-10 Potato Fertilizer	East Hartford	0.88	3.60	0.74	0.00	5.22	0.53	10.80	10.27	8.50	10.48
1455	O & W 5-10-10 Potato Fertilizer with 1.2 Magnesium	East Hartford	0.78	3.72	0.54	0.10	5.14	0.50	11.00	10.50	4.74	10.26
1462	O & W 5-10-10 Potato Fertilizer with 1.2 Magnesium	East Hartford	1.03	3.68	0.44	0.10	5.25	0.35	10.90	10.55	0.66	10.40
1456	O & W 6-3-6 Blue Label Tobacco Fertilizer	East Hartford	0.62	0.22	1.68	3.57	6.09	0.23	4.08	3.85	0.73	6.82
1615	O & W 6-3-6 Blue Label Tobacco Fertilizer	East Hartford	2.65	0.08	1.52	1.88	6.13	0.25	3.64	3.39	0.46	6.48
1463	O & W 6-3-6 Special Tobacco Fertilizer	East Hartford	1.04	0.34	1.74	3.32	6.44	0.10	4.02	3.92	0.58	6.62
1617	O & W 6-4-7 Tobacco Fertilizer	East Hartford	3.09	0.00	1.00	2.05	6.14	0.18	4.38	4.20	0.17	8.56
1309	O & W 6-8-8 Special Potato Fertilizer	Glastonbury	0.84	5.16	0.04	0.26	6.30	0.33	9.10	8.77	6.48	8.49
855	O & W 7-7-7 Top Dressing & Grass Fertilizer	Manchester	0.57	6.06	0.62	0.06	7.31	0.15	7.55	7.40	6.14	7.16
1466	O & W 8-12-12 High Grade General Purpose Fertilizer	East Hartford	1.16	6.60	0.06	0.08	7.90	0.28	13.55	13.27	7.44	<b>11.51</b>
1468	O & W 8-12-12 High Grade General Purpose Fertilizer with 1.8 Magnesium	East Hartford	0.91	4.86	0.48	0.10	<b>6.35</b>	0.40	12.50	12.10	7.68	<b>11.20</b>
1467	O & W 8-16-16 Double Strength Fertilizer	East Hartford	1.22	6.34	0.20	0.24	8.00	0.38	17.00	16.62	16.32	17.33
1459	O & W 10-6-4 Luxura	East Hartford	0.00	4.64	3.92	1.72	10.28	0.93	6.95	6.02	3.72	4.75
1454	O & W 10-10-10 Fertilizer	East Hartford	1.37	8.60	0.02	0.11	10.10	0.30	10.95	10.65	8.76	10.44
<b>Plant Products Corp., Blue Point, L. I., N. Y.</b>												
1181 <sup>2</sup>	Soluble Fertilizer 12-32-12	Portland	3.89	8.14	0.10	0.21	12.34	0.05	<b>30.10</b>	30.05	8.14	14.29
1182 <sup>2</sup>	Soluble Fertilizer 32-10-2	Portland	3.40	4.88	<b>23.82</b>	0.04	32.14	0.05	10.55	10.50	2.88	2.88
<b>Rose Manufacturing Co., Beacon, N. Y.</b>												
1252	Tri-Ogen Rose Food 5-10-5	Greenwich	0.67	3.52	0.60	0.19	4.98	0.98	10.85	9.87	1.90	6.89

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen				Per cent phosphoric acid			Per cent potash		Magnesium per cent
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	
<b>Old Fox Agricultural Sales, Inc., East Providence, R. I.</b>												
864	Old Fox Brand 0-20-20	Norwich	...	...	...	...	0.43	18.40	<b>17.97</b>	15.04	22.60	...
1328	Old Fox Brand 0-20-20	Pawcatuck	...	...	...	...	0.38	18.40	<b>18.02</b>	16.29	20.27	...
863	Old Fox Brand 5-8-7	Norwich	0.37	3.88	0.52	0.06	<b>4.83</b>	0.28	9.75	9.47	6.32	7.84
1142 <sup>2</sup>	Old Fox Brand 5-10-10	Mansfield	0.04	4.06	0.78	0.12	5.00	0.65	11.70	11.05	6.96	10.04
1325 <sup>2</sup>	Old Fox Brand 5-10-10	Norwich	0.69	4.00	0.44	0.06	5.19	0.65	11.55	10.90	7.25	10.12
1329	Old Fox Brand 5-10-10	Pawcatuck	0.73	3.94	0.36	0.05	5.08	0.83	11.55	10.72	8.87	9.97
1140 <sup>2</sup>	Old Fox Brand 7-7-7	Storrs	0.00	5.72	1.44	0.18	7.34	0.43	8.20	7.77	6.60	7.47
1326	Old Fox Brand 7-7-7	Pawcatuck	0.32	6.36	0.32	0.00	7.00	0.30	8.40	8.10	6.60	7.54
1327	Old Fox Brand Turf Food 8-6-2	Pawcatuck	0.36	5.00	1.68	1.06	8.10	0.55	7.20	6.65	2.54	3.64
1338	Old Fox Brand Turf Food 8-6-2	Pawcatuck	0.42	6.20	0.54	1.00	8.16	0.50	7.35	6.85	3.88	4.43
<b>Olds &amp; Whipple, Inc., Hartford, Conn.</b>												
826 <sup>2</sup>	O & W 0-20-20 Fertilizer	Cheshire	...	...	...	...	0.33	21.85	21.52	9.35	20.98	...
1460	O & W 4-4-0 Nitro-Gro	East Hartford	0.00	0.40	0.07	4.44	4.91	0.80	6.32	5.52	...	...
1465	O & W 5-3-5 Complete Tobacco Fertilizer	East Hartford	0.00	0.36	1.76	3.60	5.72	0.10	3.84	3.74	0.21	5.25
1614	O & W 5-5-15 High Grade Tobacco Starter	East Hartford	0.00	0.16	3.85	1.44	5.45	0.50	6.10	5.60	1.25	16.02
1461	O & W 5-8-6 Luxura	East Hartford	0.00	2.70	1.08	1.28	5.06	0.50	8.73	8.23	7.16	7.16
853	O & W 5-8-7 Potato & General Purpose Fertilizer	Manchester	0.65	4.10	0.62	0.05	5.42	0.23	8.45	8.22	6.76	7.47
1464	O & W 5-10-5 Fertilizer	East Hartford	0.00	4.40	0.75	0.25	5.40	0.38	11.50	11.12	1.99	5.73
1457	O & W 5-10-10 Potato Fertilizer	East Hartford	0.88	3.60	0.74	0.00	5.22	0.53	10.80	10.27	8.50	10.48
1455	O & W 5-10-10 Potato Fertilizer with 1.2 Magnesium	East Hartford	0.78	3.72	0.54	0.10	5.14	0.50	11.00	10.50	4.74	10.26
1462	O & W 5-10-10 Potato Fertilizer with 1.2 Magnesium	East Hartford	1.03	3.68	0.44	0.10	5.25	0.35	10.90	10.55	0.66	10.40
1456	O & W 6-3-6 Blue Label Tobacco Fertilizer	East Hartford	0.62	0.22	1.68	3.57	6.09	0.23	4.08	3.85	0.73	6.82
1615	O & W 6-3-6 Blue Label Tobacco Fertilizer	East Hartford	2.65	0.08	1.52	1.88	6.13	0.25	3.64	3.39	0.46	6.48
1463	O & W 6-3-6 Special Tobacco Fertilizer	East Hartford	1.04	0.34	1.74	3.32	6.44	0.10	4.02	3.92	0.58	6.62
1617	O & W 6-4-7 Tobacco Fertilizer	East Hartford	3.09	0.00	1.00	2.05	6.14	0.18	4.38	4.20	0.17	8.56
1309	O & W 6-8-8 Special Potato Fertilizer	Glastonbury	0.84	5.16	0.04	0.26	6.30	0.33	9.10	8.77	6.48	8.49
855	O & W 7-7-7 Top Dressing & Grass Fertilizer	Manchester	0.57	6.06	0.62	0.06	7.31	0.15	7.55	7.40	6.14	7.16
1466	O & W 8-12-12 High Grade General Purpose Fertilizer	East Hartford	1.16	6.60	0.06	0.08	7.90	0.28	13.55	13.27	7.44	<b>11.51</b>
1468	O & W 8-12-12 High Grade General Purpose Fertilizer with 1.8 Magnesium	East Hartford	0.91	4.86	0.48	0.10	<b>6.35</b>	0.40	12.50	12.10	7.68	<b>11.20</b>
1467	O & W 8-16-16 Double Strength Fertilizer	East Hartford	1.22	6.34	0.20	0.24	8.00	0.38	17.00	16.62	16.32	17.33
1459	O & W 10-6-4 Luxura	East Hartford	0.00	4.64	3.92	1.72	10.28	0.93	6.95	6.02	3.72	4.75
1454	O & W 10-10-10 Fertilizer	East Hartford	1.37	8.60	0.02	0.11	10.10	0.30	10.95	10.65	8.76	10.44
<b>Plant Products Corp., Blue Point, L. I., N. Y.</b>												
1181 <sup>2</sup>	Soluble Fertilizer 12-32-12	Portland	3.89	8.14	0.10	0.21	12.34	0.05	<b>30.10</b>	30.05	8.14	14.29
1182 <sup>2</sup>	Soluble Fertilizer 32-10-2	Portland	3.40	4.88	<b>23.82</b>	0.04	32.14	0.05	10.55	10.50	2.88	2.88
<b>Rose Manufacturing Co., Beacon, N. Y.</b>												
1252	Tri-Ogen Rose Food 5-10-5	Greenwich	0.67	3.52	0.60	0.19	4.98	0.98	10.85	9.87	1.90	6.89

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
<b>O. M. Scott &amp; Sons Co., Marysville, Ohio</b>		
1067	Scott's Improved Turf Builder 20-10-5	Centerbrook
937	Scott's New Weed & Feed 25-0-0	Hamden
1028	Scott's Organic 5-2-3	New Haven
1486	Scott's Turf Builder 9-7-4	Manchester
1494	Scott's Weed & Feed 7-11-5	Darien
<b>Sears, Roebuck &amp; Co., Chicago, Ill.</b>		
942	Cross Country Plant Food 5-10-5	Hamden
<b>M. L. Shoemaker Co., Philadelphia, Pa.</b>		
1311	M. L. Shoemaker "Swift-Sure" 4-10-0	Glastonbury
<b>Swift &amp; Co., Plant Food Div., Hartford, Conn.</b>		
1337	Golden Vigoro 6-10-4	Pawcatuck
1482	Vigoro Complete Plant Food 6-10-4	Norwalk
<b>I. P. Thomas Div., Paulsboro, N. J.</b>		
1093 <sup>a</sup>	Thomas Special Mixture 0-20-20 with 0.11% Boron	Southbury
1083 <sup>a</sup>	Thomas Tip Top 0-15-30	Newtown
1092 <sup>a</sup>	Thomas Tip Top 5-10-10	Southbury
<b>Universal Chemical Co., Lynn, Mass.</b>		
1254	Electra 5-10-3	Greenwich
<b>Oscar F. Warner, Waterbury, Conn.</b>		
1596	Warner's Grubedizer 8-6-4	Waterbury
1579	Warner's Lawn Food 8-6-4	Waterbury
1595	Warner's Tree Food 12-6-4	Waterbury
<b>Garfield Williamson, Inc., Jersey City, N. J.</b>		
814	Plantspur 4-4-2	Bridgeport
<b>Andrew Wilson Inc., Springfield, N. J.</b>		
1253	Eureka Plant Food 4-8-5	Greenwich
<b>F. H. Woodruff &amp; Sons Inc., Milford, Conn.</b>		
1071	Gro-Sod Lawn Food 10-6-4	Newtown
1480	Gro-Sod Lawn Food 10-6-4	Milford
1481	Weed-Nix Lawn Food 6-10-4	Milford

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>State purchase.<sup>3</sup>Boron found, 0.11%.CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH<sup>1</sup>

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Magnesium per cent
0.00	1.14	9.19	8.83	<b>19.16</b>	0.73	11.75	11.02	4.54	5.00	...
2.30	0.68	12.04	10.98	26.00	...	...	...	...	...	...
0.00	1.00	0.86	3.22	5.08	0.28	3.42	3.14	2.26	4.27	...
0.00	7.60	0.22	1.48	9.30	0.25	6.75	<b>6.50</b>	3.52	4.02	...
0.00	4.60	0.24	2.74	7.58	0.43	12.65	12.22	4.06	5.31	...
0.77	3.66	0.44	0.16	5.03	0.48	10.75	10.27	4.97	5.54	...
0.73	3.00	0.04	0.59	4.36	1.13	12.58	11.45	...	...	...
0.43	1.48	1.04	2.85	<b>5.80</b>	1.33	11.60	10.27	0.27	4.08	...
0.24	5.28	0.22	0.24	5.98	0.63	11.30	10.67	1.09	4.68	...
...	...	...	...	...	1.33	21.85	20.52	18.03	<b>19.78</b>	...
...	...	...	...	...	0.65	17.20	16.55	23.92	<b>28.88</b>	...
0.66	4.06	0.26	0.02	5.00	0.75	11.50	10.75	2.46	11.05	...
0.38	2.80	0.20	2.10	5.48	0.43	10.68	10.25	2.86	3.10	...
0.31	2.04	2.50	2.15	<b>7.00</b>	1.05	8.13	7.08	4.45	4.91	...
1.19	4.12	0.78	1.29	<b>7.38</b>	0.95	7.60	6.65	4.45	4.84	...
1.09	1.74	7.56	1.91	12.30	0.95	7.80	6.85	3.92	4.33	...
0.00	2.94	0.33	1.45	4.72	0.18	6.08	5.90	2.99	3.48	...
0.00	2.40	0.35	1.85	4.60	0.38	9.60	9.22	3.82	5.60	...
0.27	4.44	2.74	2.05	<b>9.50</b>	0.55	6.90	6.35	4.65	4.65	...
0.00	4.32	3.43	2.09	<b>9.84</b>	0.48	6.90	6.42	3.65	4.46	...
0.61	4.76	0.24	0.84	6.45	0.40	9.90	<b>9.50</b>	3.92	4.97	...

TABLE 6. ANALYSES OF SHEEP MANURE, ETC.<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling
1353	Gro-Well Sheep Manure. J. & L. Adikes, Inc., Jamaica, N. Y.	Stamford: Leon Ezzell, Inc.
1401	Pulverized Sheep Manure. The American Agricultural Chemical Co., No. Weymouth, Mass.	East Granby: Henry Adams
1189	Armour Sheep Manure. Armour Fertilizer Works, Carteret, N. J.	Plantsville: C. A. Cowles, Inc.
1190	Armour Shredded Cattle Manure. Armour Fertilizer Works, Carteret, N. J.	Plantsville: C. A. Cowles, Inc.
1196	Driconure. Atkins & Durbrow, Inc., Port Colborne, Ontario, Canada	Hartford: Cadwell & Jones, Inc.
823	Corenco Sheep Manure. Consolidated Rendering Co., Boston, Mass.	Shelton: Wolf Savitsky & Sons, Inc.
1281	Davey Shredded Manure. The Davey Tree Expert Co., Kent, Ohio	Old Greenwich: The Davey Tree Expert Co.
1246	Farmanure. Garden Supply Sales Corp., Rahway, N. J.	Greenwich: McArdle's Seed Co.
812	Gro-Fast Sheep Manure. The Hubbard-Hall Chemical Co., Waterbury, Conn.	Bridgeport: Willis Distributors
1234	Lebanon Cow Manure. Lebanon Chemical Corp., Lebanon, Pa.	Hartford: Cadwell & Jones, Inc.
1235	Lebanon Sheep Manure. Lebanon Chemical Corp., Lebanon, Pa.	Hartford: Cadwell & Jones, Inc.
1636	Fertal-Gro Cow Manure. Maegeo Farms, Inc., Lexington, N. C.	West Suffield: A. N. Shepard & Son
1349	Ramshorn Brand Sheep Manure. Natural Plant Food Co., Oklahoma City, Okla.	New Canaan: Clapboard Hill Feed Co.
1458	O & W Sheep Manure. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.
1354	Premier Dehydrated Cow Manure. Premier Peat Moss Corp., New York, N. Y.	Stamford: Leon Ezzell, Inc.
941	Cross Country Sheep Manure. Sears, Roebuck & Co., Chicago, Ill.	Hamden: Sears, Roebuck & Co.
1387	Wizard Pulverized Cow Manure. St. Louis National Stockyards Co., National Stock Yards, Ill.	Thompsonville: Brainard Seed Co.
1389	Wizard Pulverized Sheep Manure. St. Louis National Stockyards Co., National Stock Yards, Ill.	Thompsonville: Brainard Seed Co.
1335	Bovung. Walker-Gordon Laboratory Co. Plainsboro, N. J.	Pawcatuck: The C. W. Campbell Co.

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>Guaranteed, 1.0%.<sup>3</sup>Guaranteed, 2.0%.TABLE 6. ANALYSES OF SHEEP MANURE, ETC.<sup>1</sup>

Per cent nitrogen					Per cent phosphoric acid				Per cent potash		
Ammoniacal	Organic water-soluble	Organic water-insoluble	Total found	Total guaranteed	Citrate-insoluble	Total found	Total guaranteed	So-called "available" found	Total found	Total guaranteed	Sand per cent
0.08	0.35	1.07	1.50	1.00	...	1.62	1.00	...	4.18	1.00	42.50
0.00	0.32	1.14	1.46	1.25	0.38	1.80	...	1.42 <sup>2</sup>	4.62	2.00	<b>32.19</b>
0.06	0.20	1.06	1.32	1.25	0.30	1.73	1.00	1.43	3.99	2.00	38.92
0.00	1.25	1.19	2.44	2.00	0.30	1.36	...	1.06 <sup>2</sup>	2.25	2.00	21.49
0.62	0.72	2.19	3.53	3.00	0.83	3.70	...	2.87 <sup>3</sup>	2.59	1.00	6.84
0.20	0.04	1.12	1.36	1.25	0.38	1.50	...	1.12 <sup>2</sup>	4.21	2.00	40.59
0.72	1.59	1.94	4.25	2.00	0.43	3.40	...	2.97 <sup>2</sup>	2.69	1.00	12.42
1.00	1.11	1.74	3.85	2.00	0.48	3.52	...	3.04 <sup>2</sup>	2.49	1.00	15.19
0.16	0.28	1.06	1.50	1.25	0.75	1.93	...	1.18 <sup>2</sup>	4.12	2.00	39.54
0.10	0.22	1.94	2.26	1.50	0.30	1.55	...	1.25 <sup>2</sup>	3.20	2.00	35.86
0.10	0.48	1.74	2.32	1.50	0.35	1.68	...	1.33 <sup>2</sup>	2.94	2.00	45.04
0.22	0.23	0.71	1.16	1.00	0.20	0.74	...	<b>0.54<sup>2</sup></b>	3.64	1.00	7.04
0.04	0.18	1.89	2.11	2.00	...	1.70	1.00	...	3.04	2.00	21.71
0.08	0.21	1.91	2.20	1.25	0.43	1.86	...	1.43 <sup>2</sup>	3.20	2.00	19.39
0.28	0.30	1.06	<b>1.64</b>	2.00	0.28	1.74	...	1.46 <sup>2</sup>	1.61	1.00	9.04
0.10	0.05	1.94	2.09	1.50	0.20	1.19	1.10	0.99 <sup>2</sup>	3.10	2.00	22.17
0.00	0.44	1.72	2.16	2.00	0.25	1.52	...	1.27 <sup>2</sup>	2.37	2.00	22.84
0.02	0.32	1.69	2.03	2.00	0.33	1.38	...	1.05 <sup>2</sup>	2.75	2.00	21.51
0.10	0.67	1.46	2.23	2.00	0.23	1.58	...	1.35 <sup>2</sup>	2.59	1.00	3.43

TABLE 7. ANALYSES OF LIMESTONE AND SIMILAR MATERIALS<sup>1</sup>

Station No.	Manufacturer or dealer and brand	Sampled from stock of or sent by	Calcium oxide, per cent		Magnesium oxide, per cent	
			Guaranteed	Found	Guaranteed	Found
<b>Adams Hydrate Co. Inc., Adams, Mass.</b>						
1119	"Fertility" Hydrated Land Lime .....	Willimantic: Checkerboard Feed Store ..	60.00	60.68	0.50	1.14
<b>The Hubbard-Hall Chemical Co., Waterbury, Conn.</b>						
189	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.01	....	....
201	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	32.64	....	....
294	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.13	....	....
295	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	32.02	....	....
438	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	32.98	....	....
439	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.67	....	....
637	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.46	....	....
638	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.19	....	....
<b>Lee Lime Corporation, Lee, Mass.</b>						
9947	Agricultural Hydrate Lime .....	Simsbury: Cullman Bros., Inc. ....	45.00	46.18	31.00	32.16
9948	Lee Double Strength Agricultural Lime .	Simsbury: Cullman Bros., Inc. ....	43.00	46.29	30.00	32.20
9949	Lee Double Strength Agricultural Lime .	Simsbury: Cullman Bros., Inc. ....	43.00	46.51	30.00	32.42
9950	Lee Double Strength Agricultural Lime .	Simsbury: Cullman Bros., Inc. ....	43.00	45.27	30.00	32.62
<b>United States Gypsum Co., Chicago, Ill.</b>						
158	Land Plaster .....	Simsbury: Cullman Bros., Inc. ....	30.00	33.27	....	....
9289	Land Plaster .....	Suffield: The Hatheway-Steane Corp. ...	30.00	32.95	....	....

<sup>1</sup>Deficiencies are in boldface type.

Connecticut Experiment Station

Bulletin 607

TABLE 8. ANALYSES OF SMALL PACKAGE FERTILIZERS<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen				Per cent phosphoric acid			Per cent potash		
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available" <sup>2</sup>	As muriate	Total
<b>A-M-R Chemical Co., Inc., Brooklyn, N. Y.</b>												
1351	Kem Liquid Plant Food .08-16-10 ..	New Canaan ...	0.00	0.00	0.06	0.00	0.06	0.00	0.80	<b>0.80</b>	....	<b>0.15</b>
<b>J. &amp; L. Adikes, Inc., Jamaica, N. Y.</b>												
1500 <sup>a</sup>	Gro-Well Cow Manure 1-1-1 .....	Darien .....	0.00	0.12	0.32	1.32	1.76	0.35	1.68	1.33	....	3.29
1549	Gro-Well Normal Superphosphate 18% .....	Darien .....	....	....	....	....	....	0.60	21.60	21.00	....	....
<b>The American Agricultural Chemical Co., North Weymouth, Mass.</b>												
1352	Agrico for Broadleaf Evergreens 6-10-4 .....	New Canaan ...	0.40	4.68	0.44	0.90	6.42	0.83	11.85	11.02	3.86	4.06
821	Agrico for Gardens 5-10-5 .....	Bridgeport .....	0.37	4.36	0.12	0.15	5.00	0.58	11.10	10.52	4.95	5.50
1501	Agrico for Lawns, Trees & Shrubs 6-10-4 .....	Darien .....	0.76	5.00	0.24	0.42	6.42	0.83	11.55	10.72	3.29	4.43
1610	Agrico Rose Food 5-9-6 .....	West Hartford .	0.00	2.40	1.23	1.87	5.50	0.85	10.45	9.60	3.57	5.52
<b>American Chemical Paint Co., Amber, Pa.</b>												
1255	Gro-Stuf 20-20-20 .....	Greenwich .....	0.53	0.84	18.76	0.03	20.16	0.13	21.00	20.87	6.87	21.53
<b>American Cyanamid Co., New York, N. Y.</b>												
1082	Lawn & Garden Cyanamid 21-0-0 ..	Newtown .....	....	....	....	....	21.08	....	....	....	....	....

<sup>1</sup>Deficiencies are in boldface type.<sup>2</sup>Sand, 14.39%.

Commercial Fertilizers



TABLE 8. ANALYSES OF SMALL PACKAGE FERTILIZERS<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen				Per cent phosphoric acid			Per cent potash		
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total
<b>Armour Fertilizer Works, Carteret, N. J.</b>												
1386 <sup>3</sup>	Armour Sheep Manure 1.25-1-2	Stamford	...	0.18	0.19	1.25	1.62	...	2.22	...	...	4.43
<b>Associated Seed Growers, Inc., Cambridge, N. Y.</b>												
952 <sup>4</sup>	Asgrow Steamed Bone Meal 2-16-23	New Haven	...	0.04	...	...	2.75	11.50	27.10	15.60	...	...
<b>Atlas Fish Fertilizer Co., San Francisco, Calif.</b>												
1396	Atlas Fish Emulsion Fertilizer 5-1-1	Thompsonville	0.00	0.38	4.94	0.42	5.74	0.05	1.15	1.10	1.61	1.61
<b>Bonide Chemical Co., Utica, N. Y.</b>												
1395	Bonide Quick-Green 46-0-0	Thompsonville	...	...	...	...	46.80	...	...	...	...	...
<b>Brookside Nurseries, Darien, Conn.</b>												
1499	Nature's Nutrients 5-6-8	Darien	0.49	0.00	0.72	6.40	7.61	4.13	10.48	6.35	1.05	6.08
<b>California Spray-Chemical Corp., Richmond, Calif.</b>												
1491	Ortho-Gro Fertilizer 7-9-5	Manchester	0.00	0.18	0.21	6.90	7.29	1.50	10.50	9.00	0.74	5.34
856	Ortho-Gro Liquid Plant Food 10-5-5	Manchester	0.00	1.45	9.69	0.00	11.14	0.00	5.66	5.66	...	5.22
1544	Ortho Lawn Groom 7-11-5	Darien	0.00	4.16	1.89	1.35	7.40	0.60	13.93	13.33	0.90	2.22
<b>Clinton Nurseries, Clinton, Conn.</b>												
1064	New Era African Violet Food 5-12-9	Clinton	3.06	3.68	0.00	0.08	6.82	0.13	14.03	13.90	...	10.04
1256 <sup>5</sup>	New Era Cow Manure 2-1-1	Greenwich	0.00	0.12	-0.13	0.83	1.08	0.20	1.16	0.96	...	1.00
1065	New Era Vitamin Plant Food 7-15-8	Clinton	3.10	3.18	1.20	0.15	7.63	0.10	15.85	15.75	...	8.25

<b>Consolidated Rendering Co., Boston, Mass.</b>												
950 <sup>6</sup>	Corenco Ground Bone Fertilizer 2-22-0	New Haven	...	0.02	...	...	2.50	...	29.90	...	...	...
939	Corenco Home Garden Fertilizer 5-10-5	Hamden	1.33	3.94	0.02	0.21	5.50	0.45	11.05	10.60	5.47	6.07
1397	Corenco Rhododendron-Azalea & Blueberry Special 7-7-7	Thompsonville	0.67	6.00	0.32	0.17	7.16	0.20	8.13	7.93	5.91	7.88
949	Corenco Rose Special Fertilizer 5-10-5	New Haven	1.08	2.22	0.10	1.35	4.75	0.85	11.65	10.80	4.65	5.70
1089 <sup>7</sup>	Corenco Sheep Manure 2-1-2	Bethel	0.00	0.08	0.58	1.75	2.41	0.43	2.02	1.59	...	3.51
<b>Eastern States Farmers' Exchange, Inc., W. Springfield, Mass.</b>												
1127	Eastern States Starter 64, 16-32-16	Willimantic	4.68	8.00	3.16	0.00	15.84	0.05	32.70	32.65	0.45	16.04
<b>Faesy &amp; Besthoff, Inc., New York, N. Y.</b>												
1489	F & B Broadleaf High Organic 6-10-4	Manchester	0.37	4.44	1.04	1.15	7.00	0.70	10.78	10.08	3.52	4.75
<b>Forward House, Div. of Olin-Mathieson Chemical Corp., New York, N. Y.</b>												
871	Plantrons 12-24-12	Norwich	0.00	11.02	1.05	0.19	12.26	0.13	24.50	24.37	11.99	12.12
1487	Plantrons 12-24-12	Manchester	0.00	11.36	0.39	0.17	11.92	0.10	25.40	25.30	1.94	12.24
<b>Garden Supply Sales Corp., Rahway, N. J.</b>												
858 <sup>8</sup>	Farmanure 2-1-1	Manchester	0.00	0.28	1.22	1.71	3.21	0.55	3.05	2.50	...	2.22
<b>General Chemical Co., Miami, Florida</b>												
1609	Planter's Punch Fertilizer .18-30-10	West Hartford	0.00	0.08	0.04	0.00	0.12	0.00	0.20	0.20	...	0.32
<b>Glorion Div. of Aluminum &amp; Chemical Corp., Greenwich, Conn.</b>												
1035	Glorion 4-8-8	Branford	0.39	3.16	0.74	0.48	4.77	1.45	11.08	9.63	5.76	7.77

<sup>1</sup>Deficiencies are in boldface type.

<sup>2</sup>Sand, 32.39%.

<sup>3</sup>Mechanical analysis: Fine, 58.0%; coarse, 42.0%.

<sup>4</sup>Sand, 60.19%.

<sup>6</sup>Mechanical analysis: Fine, 49.0%; coarse, 51.0%.

<sup>7</sup>Sand, 10.19%.

<sup>8</sup>Sand, 17.54%.

TABLE 8. ANALYSES OF SMALL PACKAGE FERTILIZERS<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen					Per cent phosphoric acid			Per cent potash	
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total
<b>Goulard &amp; Olena, Inc., Skillman, N. J.</b>												
1347 <sup>a</sup>	G & O Ground Bone 2-40-20-0	New Canaan	...	0.17	...	...	2.60	...	24.90	...	...	...
1551	G & O Prizegro 5-10-5	Fairfield	0.17	3.96	0.22	0.94	5.29	0.73	12.05	11.32	3.47	5.19
1279	G & O Special Food for Bulbs 5-6-15	Greenwich	0.00	3.64	0.00	2.14	5.78	0.40	7.70	7.30	8.69	14.42
1345 <sup>10</sup>	G & O Superfine Aluminum Sulphate	New Canaan	...	...	...	...	...	...	...	...	...	...
1611	G & O Superphosphate 20%	West Hartford	...	...	...	...	...	0.90	21.20	20.30	...	...
1348	G & O Tomato Food 3-12-13	New Canaan	0.46	2.28	0.30	0.77	3.81	1.33	14.90	13.57	11.59	11.89
1550	Mr. Strawberry Big 3-13-7	Fairfield	0.00	1.00	1.43	1.04	3.47	1.35	15.00	13.65	5.14	8.18
<b>Heller Greenhouse Laboratories, Colorado Springs, Colo.</b>												
1257	Heller-Gro 15-15-15	Greenwich	4.06	0.81	12.29	0.31	17.47	0.00	14.40	14.40	...	17.76
<b>The Hubbard-Hall Chemical Co., Waterbury, Conn.</b>												
1128 <sup>11</sup>	Gro-Fast Bone Meal 2-23-0	Willimantic	...	0.00	...	...	2.34	...	29.00	...	...	...
1069 <sup>12</sup>	Gro-Fast Cow Manure 2-1-2	Centerbrook	0.00	0.04	0.57	1.48	2.09	0.23	1.51	1.28	...	2.56
870	Gro-Fast Evergreen Food 4-10-4	Norwich	0.00	1.58	1.65	1.30	4.53	0.43	11.93	11.50	3.84	4.49
1030	Gro-Fast Rose Food 7-10-5	New Haven	0.00	3.02	2.46	1.57	7.05	1.25	12.65	11.40	0.40	6.35
873 <sup>13</sup>	Gro-Fast Sheep Manure 1.25-1-2	Norwich	0.00	0.02	0.54	1.09	1.65	0.25	1.10	0.85	...	3.29
<b>Hydroponic Chemical Co. Inc., Copley, Ohio</b>												
1072	Hyponex Plant Food 7-6-19	Newtown	5.95	1.36	0.08	0.02	7.41	0.07	7.75	7.68	...	20.63
<b>The Hy-Trous Corp., Boston, Mass.</b>												
1070	Hy-Trous 4-8-4	Centerbrook	0.88	1.88	1.46	0.00	4.22	0.00	8.03	8.03	...	4.71
<b>Lebanon Chemical Corp., Lebanon, Pa.</b>												
1241	Lebanon Azalea Food 7-7-7	Hartford	0.21	4.96	0.52	1.71	7.40	0.45	7.30	6.85	6.65	8.53
1607	Lebanon Hi-Organic 8-8-8	West Hartford	0.80	4.12	0.00	2.46	7.38	0.35	8.95	8.60	6.48	7.00
1604	Lebanon Rose Food 7-7-7	West Hartford	0.67	4.80	0.44	1.12	7.03	0.43	7.70	7.27	6.48	8.05
<b>Miller Chemical &amp; Fertilizer Corp., Baltimore, Md.</b>												
1479	VHPF 6-25-15	Milford	5.18	1.80	0.36	0.14	7.48	0.05	27.20	27.15	...	17.40
<b>Natural Plant Food Co., Oklahoma City, Okla.</b>												
1036 <sup>14</sup>	Ramshorn Brand Sheep Manure 2-1-2	Branford	0.00	0.05	0.08	1.79	1.92	0.23	1.40	1.17	...	2.06
<b>Nutritional Concentrates, Inc., Pittsburgh, Pa.</b>												
1029	Fertilize Soluble Plant Food 20-10-20	New Haven	2.90	0.76	17.28	0.06	21.00	0.05	11.05	11.00	0.20	18.68
<b>Olds &amp; Whipple, Inc., Hartford, Conn.</b>												
857 <sup>15</sup>	O & W Bone Meal 2-47-22-0	Manchester	...	0.04	...	...	2.52	...	27.70	...	...	...
<b>Parks-Barnes, Inc., Hermosa Beach, Calif.</b>												
1358	Black Magic African Violet Blossom Booster 4-10-10	Stamford	0.00	0.16	4.59	0.00	4.75	0.00	10.53	10.53	...	10.01
872	Black Magic Liquid Fertilizer 10-5-5	Norwich	0.00	0.61	9.93	0.00	10.54	0.00	6.08	6.08	...	5.66
1492	Black Magic Plant Food 2-3-2	Manchester	0.00	0.00	0.04	2.36	2.40	0.35	4.02	3.67	0.49	4.46
<b>Plantabbs Corp. Baltimore, Md.</b>												
951	Plantabbs 11-15-20	New Haven	6.56	3.52	1.20	0.00	11.28	0.05	18.40	18.35	...	27.15
<b>RA-PID-GRO Corporation, Dansville, N. Y.</b>												
1239	RA-PID-GRO 23-21-17	Hartford	4.40	4.00	14.72	0.00	23.12	...	19.73	...	...	17.22
<b>The Renard Co., New York, N. Y.</b>												
1603	Plant Pen 5-0-0	West Hartford	0.25	0.04	0.88	5.91	7.08	...	...	...	...	...

<sup>1</sup>Deficiencies are in boldface type.  
<sup>9</sup>Mechanical analysis: Fine, 33.0%; coarse, 67.0%.  
<sup>10</sup>Aluminum found, 9.81%.  
<sup>11</sup>Mechanical analysis: Fine, 46.0%; coarse, 54.0%.

<sup>12</sup>Sand, 2.0%.  
<sup>13</sup>Sand, 35.54%.  
<sup>14</sup>Sand, 23.66%.  
<sup>15</sup>Mechanical analysis: Fine, 74.0%; coarse, 26.0%.

TABLE 8. ANALYSES OF SMALL PACKAGE FERTILIZERS<sup>1</sup>

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen					Per cent phosphoric acid			Per cent potash	
			Nitrate	Ammoniacal	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available" <sup>2</sup>	As muriate	Total
<b>Ross Daniels, Inc., Des Moines, Iowa</b>												
1606	Ross Root Feeder Acid Plant Food 10-20-20 .....	West Hartford .	5.29	4.70	0.38	0.17	10.54	0.55	20.60	20.05	....	25.65
1605	Ross Root Feeder All-Purpose Plant Food 8-16-8 .....	West Hartford .	6.58	1.74	0.22	0.00	8.54	0.10	19.70	19.60	....	9.60
<b>O. M. Scott &amp; Sons Co., Marysville, Ohio</b>												
1495	Scott's Weed & Feed 7-11-5 .....	Darien .....	0.18	6.00	0.04	2.28	8.50	0.25	10.05	<b>9.80</b>	3.39	<b>4.30</b>
<b>Sears, Roebuck &amp; Co., Chicago, Ill.</b>												
1484	Cross Country Bulb Food 4-12-8 ....	Norwalk .....	0.29	3.24	0.46	0.10	4.09	0.45	13.05	12.60	4.85	8.87
944 <sup>16</sup>	Cross Country Cattle Manure 1.5-75-2 .....	Hamden .....	0.00	0.00	0.39	1.37	1.76	0.53	1.00	<b>0.47</b>	....	2.34
945	Cross Country Evergreen Food 10-6-4	Hamden .....	0.20	8.32	1.02	0.22	<b>9.76</b>	0.30	7.13	6.83	4.00	4.81
1483	Cross Country Plant Food 5-10-5 ..	Norwalk .....	0.52	3.94	0.50	0.28	5.24	0.88	11.30	10.42	2.74	5.66
1485	Cross Country Rose Food 5-10-5 ...	Norwalk .....	0.50	4.00	0.30	0.14	4.94	0.53	11.35	10.82	2.74	5.73
<b>Stern's Nurseries, Inc., Geneva N. Y.</b>												
1346	Stern's Miracid 30-10-10 .....	New Canaan ....	0.00	5.36	24.69	0.15	30.20	0.03	11.55	11.52	3.40	11.16
<b>Stim-U-Plant Laboratories, Columbus, Ohio</b>												
1488	Stim-U-Plant African Violet Food 5-8-7 .....	Manchester .....	2.26	4.16 <sup>17</sup>	0.00	0.29	6.71	0.08	10.30	10.22	....	8.56
<b>Swift &amp; Co., Plant Food Division, Hartford, Conn.</b>												
1240	Instant Vigoro 19-28-14 .....	Hartford .....	3.98	5.76	9.26	0.00	19.00	0.10	28.25	28.15	....	13.86
1034	Vigoro 6-10-4 .....	Branford .....	0.28	4.76	0.68	0.28	6.00	0.75	11.45	10.70	2.67	4.59
1073	Vigoro Rose Food 6-10-4 .....	Newtown .....	0.24	3.10	0.66	1.87	<b>5.87</b>	1.13	12.00	10.87	2.18	4.68
<b>Van Camp Laboratories, Terminal Island, Calif.</b>												
940	Sea Pep Fortified Liquid Plant Food 10-5-5 .....	Hamden .....	0.00	0.90	10.09	0.00	10.99	0.00	5.43	5.43	0.46	6.01
<b>Walker-Gordon Laboratory Co., Plainsboro, N. J.</b>												
938 <sup>17</sup>	Bovung 2-1-1 .....	Hamden .....	0.00	0.04	0.37	1.75	2.16	0.75	1.52	<b>0.77</b>	....	2.56
<b>Andrew Wilson, Inc., Springfield, N. J.</b>												
1278	Wilson's Orchid Fertilizer 10-10-10 .	Greenwich .....	6.70	2.84	0.12	0.40	10.06	0.03	11.25	11.22	....	10.51

<sup>1</sup>Deficiencies are in boldface type.

<sup>16</sup>Sand, 35.98%.

<sup>17</sup>Sand, 4.84%.

TABLE 9. ANALYSES OF OTHER MISCELLANEOUS MATERIALS

Station No.	Material	Total nitrogen per cent	Total phosphoric acid, per cent	Water-soluble potash, per cent	Moisture per cent	Ash per cent	Organic matter per cent	Magnesium per cent	Sodium per cent	Calcium per cent	Manganese per cent	pH
1180	Aluminum Sulphate, standard-ground <sup>1,2</sup>	0.18	0.13	0.09	0.80	77.54	21.66					8.10
1293	"Buss-Bed-Ding"	0.22	0.20	0.38								
1780	Carbon By-product <sup>3</sup>	1.85	4.66	1.80								
1622	Cedar Swamp Peat Moss	1.20	2.88	0.70								
8715	Fertilizer	3.57	3.28	3.28								
9989	Fertilizer	5.13	9.40	7.88								
586	Fertilizer	1.40	4.85	5.84								8.80
759	Fertilizer	1.46	5.35	4.81								9.01
763	Fertilizer	2.44	2.58	2.09								7.90
1258	Fertilizer	6.00	5.48	5.66								
1377	Fertilizer	22.76 <sup>5</sup>										
805	Fertilizer Borate, Fine Mesh <sup>4</sup>	0.74	0.43	0.41	42.40	19.92	37.68					6.33
1943	Gold Medal Plant Food											
188	Humure											7.70
1303	"Indiana's Best" <sup>6</sup>							8.54 <sup>7</sup>				
729	Magnesium Sulphate Emjico	0.88	3.01	0.27	76.00				0.047			
8440	Mink Manure								0.007			
1381	Peat								0.044			
1382	Peat											
1411	Peat	3.83	3.76	2.81								
850	Poultry Manure	0.77	0.95	0.13				0.10		0.36	0.007	
8775	Poultry Manure Compost	0.91	2.18	0.40				0.23		2.09	0.013	
8776	Poultry Manure Compost	1.31	1.59	1.12				0.46		1.64	0.018	
8777	Poultry Manure Compost	0.60	3.08	0.37				0.27		2.75	0.014	
8778	Poultry Manure Compost	1.02	5.71	0.21				0.48		5.72	0.119	
8779	Slime Fraction of Mine Tailings											
655	Sewage Sludge	1.17	1.23	0.12	43.50							
9111	Sewage Sludge	1.31	1.23	0.04	51.30							
9112	Sewage Sludge	1.83	7.80	1.65	7.31	66.59	26.10					
1783	Stimulawn											
8793	Trap Rock Screenings											
9630	White Powder	0.00	0.10	0.00								

<sup>1</sup>Aluminum guaranteed, 9.00%; found, 9.97%.  
<sup>2</sup>State Purchase.  
<sup>3</sup>Acid soluble iron, approximately 10% (by spectrograph).  
<sup>4</sup>Boron guaranteed, 13.6%; found, 13.6%.  
<sup>5</sup>Nitrate nitrogen, 3.19; Ammonia nitrogen, 4.24  
<sup>6</sup>Identified as Ammonium Sulphate.  
<sup>7</sup>Guaranteed, 16.29%.  
<sup>8</sup>Sand, 6.61%.  
<sup>9</sup>Total Potash, 1.30%.  
<sup>10</sup>Total Potash, 0.52%.

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