

Bulletin 453

November, 1941

COMMERCIAL FERTILIZERS
REPORT FOR 1941



Connecticut
Agricultural Experiment Station
New Haven

COMMERCIAL FERTILIZERS

REPORT FOR 1941

E. M. BAILEY

Chemist in Charge



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VIRGIL L. CHURCHILL

Virgil L. Churchill, a valued member of the Station staff for 46 years, died on March 22, 1941.

As sampling agent for this department he was well known to farmers and to manufacturers and dealers of the fertilizer and feed industries of the State on whom he called regularly, taking official samples of their goods for analysis by the Station.

Three features are essential in any plan of inspection and analysis, and they are all equally important. The field sample must be representative of the stock examined; the analysis must be accurate; and the results must be interpreted correctly. Mr. Churchill knew the importance of his part in this program. He did his work faithfully and well, without undue show of authority, and always with consideration for the interest and convenience of those whose premises he visited.

A plain, dependable and good man, Mr. Churchill won the confidence, the trust and the friendliness of all with whom he had to deal. It is a tribute to him as a man and as a public servant that he will be missed by so many — and remembered so long.

Commercial Fertilizers Report for 1941

E. M. BAILEY
Chemist in Charge

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 that have not been artificially treated or manipulated, marl and lime.

The seller is responsible for the proper labelling of each package of fertilizer, for the registration of each brand sold or offered for sale, for the payment of the required analysis fee and for the payment of the tonnage tax. If, however, proper labelling, registration and payments of analysis fees and of tonnage tax have been provided for by the manufacturer or by another responsible person, all sellers of such brands are released from the above mentioned requirements. The retailer, therefore, should assure himself that the requirements of the law have been met by the manufacturer of the brands which he handles, or himself be prepared to meet all these requirements.

It frequently happens that a manufacturer or jobber sells fertilizer materials which are the products of, and which are registered by, another firm or individual. Distributors in such cases should sell such materials by the exact brand names under which they are registered in order that there may be no mistake as to the identity of brands. Any change in the brand names, or failure to make the identity of the brand and its manufacturer clear, makes the distributor liable for the registration of the product as his own brand.

The law exempts from registration, and from other requirements referred to, 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 and soybean 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 for each brand payable annually, and six cents per ton tonnage fee, payable semi-annually.

NOTE: Analyses reported in this bulletin were made by Messrs. Nolan, Mathis and Walden; microscopic examinations by Miss Shepard; inspection and sampling by Mr. Nichols; and compilations by Mrs. Vosburgh.

These fees are entirely apart from those required by the feeding stuffs statute.

Because manufacturers or jobbers often do not know how much, if any, of their brands are sold or used as fertilizers, local dealers report their sales to this Station. The information is not for publication but is used to inform manufacturers of the total sales of their brands as fertilizer in this State. It is expected that the fees will be paid by the manufacturers or other party responsible for the brands.

INSPECTION OF 1941

The Station Agent collected 322 official samples of fertilizer including all of the registered brands that could be located. These are summarized, together with unofficial samples submitted by farmers, in the classification list which follows, on page 48.

The tonnage data included in the summary are based on returns made to October 1 of this year and are practically complete. The tonnage represents that which is subject to the provisions of the fertilizer law; it does not include fertilizer materials distributed in the State under the Federal Agricultural Conservation program. The tonnage figures are for the period July 1, 1940 to June 30, 1941.

REGISTRATIONS

Late registrations for 1940

To the brands registered for 1940 in our last report should be added:
Ashcraft-Wilkinson Co., Atlanta, Ga.
 Cottonseed Meal—Castor Pomace Mixture

Registrations for 1941

For 1941, 61 firms and individuals registered 332 brands of fertilizers at this Station for sale in this State. As required by statute, the brands so registered are listed as follows:

The Acme Guano Co., Baltimore, Md.	American Agricultural Chemical Co., No. Weymouth, Mass.
Acme 3-10-4	AA 4-16-4 Fertilizer
Acme 3-12-6	AA 8-16-8 Fertilizer
Acme 4-8-4	AA 8-16-16 Fertilizer
Acme Vitaflor 4-8-5	AA Market Garden Fertilizer 4-8-4
Acme 4-8-10	AA Potato and Root Crop Fertilizer 4-8-10
Acme 5-8-7	AA Potato and Vegetable Fertilizer 5-8-7
Acme Plant Food 7-7-7	AA 16% Superphosphate
Acme 20% Superphosphate	AA 20% Superphosphate
Ted Alkire, Lubbock, Texas	
Kireal Cotton Hull Ash	

- AA Tobacco Starter 5-5-15
 AA Top Dresser 7-7-7
 Agrico for Aroostook with 10% Potash 5-8-10
 Agrico for Corn 3-10-6
 Agrico for Corn 4-12-6
 Agrico Country Club Fertilizer 8-6-2
 Agrico Country Club Fertilizer 8-6-4
 Agrico for Fruit 8-8-4
 Agrico for Gardens 4-10-4
 Agrico for Lawns, Trees and Shrubs 7-7-5
 Agrico for New England 4-8-10
 Agrico for Potatoes and Vegetables 5-8-7
 Agrico for Seeding Down 4-16-20
 Agrico for Tobacco 6-3-6
 Agrico for Top Dressing 7-7-7
 Agrico for Truck 5-10-5
 Agrinite (All Organic Turf Food) 8.5
 Bradley's XL Fertilizer 3-10-4
 Castor Pomace
 Fine Ground Bone
 Muriate of Potash
 Pulverized Sheep and Goat Manure
 Sanderson's Formula B 4-8-7
- American Cyanamid Co., 30 Rockefeller Plaza, New York, N. Y.**
 20.6% 'Aero' Cyanamid Granular
 21.0% 'Aero' Cyanamid Granular
 22.0% 'Aero' Cyanamid Pulverized
- American Potash & Chemical Corp., 70 Pine St., New York, N. Y.**
 Trona Muriate of Potash
- Apothecaries Hall Co., Waterbury, Conn.**
 Ammo-Phos 11-48-0
 Bone Meal 2.25
 Bone Meal 3.70
 Cal Nitro
 Castor Pomace
 Cotton Hull Ashes
 Dry Ground Fish
 Liberty Corn Fertilizer 3-12-6
 Liberty Green Gro 6-5-3
 Liberty High Analysis Fertilizer 8-16-16
 Liberty High Grade Corn Fertilizer 4-12-4
 Liberty High Grade Fertilizer for Fruit 10-5-5
 Liberty High Grade Market Gardeners 5-8-7
 Liberty High Grade Tobacco Manure 7-3-7
 Liberty High Grade Vegetable 5-10-10
 Liberty Manure Supplement 0-20-10
- Liberty Market Gardeners Spec. 4-8-4
 Liberty Potato and General Crops 4-8-10
 Liberty Special Fertilizer for Fruit and Grass 7-7-7
 Liberty Special Fertilizer for Lawns, etc. 4-4-0
 Liberty Tobacco Mixture 5-3-5
 Liberty Tobacco Mixture 6-3-6
 Liberty Tobacco Mixture 6-3-7
 Liberty Tobacco Starter 4-10-0
 Liberty Tobacco Starter with Potash 5-5-15
 Liberty Top Dresser for Grass and Grain 8-8-8
 Liberty Tree and Shrub Food 10-8-8
 Liberty Truck Garden and Onion Fertilizer 5-10-5
 Muriate of Potash
 Nitrate of Potash
 Precipitated Bone
 Sheep Manure
 Sulphate of Ammonia
 Sulphate of Potash
 Superphosphate 16%
 Superphosphate 20%
 Tankage
 Triple Superphosphate 40%
- Archer-Daniels-Midland Co., Minneapolis, Minn.**
 37% Protein Old Process Linsced Meal
 44% Protein Soybean Oil Meal
- Armour Fertilizer Works, 120 Broadway, New York, N. Y.**
 Armour's Big Crop Fertilizer 3-12-6
 Armour's Big Crop Fertilizer 4-8-4
 Armour's Big Crop Fertilizer 4-8-10
 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 8-16-20
 Armour's Big Crop Superphosphate 20%
 Armour's Big Crop Tobacco Special 5-3-5
 Armour's Big Crop Tobacco Special 6-3-6
 Armour's Big Crop Tobacco Special 7-3-7
 Armour's Big Crop Tobacco Starter 5-5-15
 Armour's Bone Meal Fertilizer 2.47-23
 Armour's Fertilizer 8-16-16
 Armour's Garden and Lawn Fertilizer 4-8-8
 Armour's Sheep and Goat Manure

- Armour's Special Putting Green
Mixture 8-5-2
Cotton Seed Meal
Muriate of Potash
- Ashcraft-Wilkinson Co., Atlanta, Ga.**
Cottonseed Meal—Castor Pomace
Mixture
Coweta Brand Cottonseed Meal
- Associated Seed Growers, Inc.,
New Haven, Conn.**
Clark's Tip Top Fertilizer 5-8-7
Clark's 5-10-5 Fertilizer
- Atkins & Durbrow, Inc.,
165 John St., New York, N. Y.**
Driconure 2-1-1
- The Barrett Co., 40 Rector St.,
New York, N. Y.**
Arcadian The American Nitrate of
Soda
Arcadian Sulphate of Ammonia
Sulphate of Ammonia
- F. A. Bartlett Tree Expert Co., Inc.,
60 Canal St., Stamford, Conn.**
Bartlett Green Tree Food 6-7-4
- The Baugh & Sons Co.,
25 S. Calvert St., Baltimore, Md.**
Baughphos, The Ideal 20%
Superphosphate
Baugh's Fish Bone and Potash
Mixture 4-8-4
Baugh's Old Dependable Potato
Grower 4-8-10
Baugh's Perfection Brand 3-10-6
Baugh's Peruvian Guano Substitute
5-8-7
Baugh's Premium Plant Food and
Soil Builder 5-10-5
Baugh's Pure Steamed Bone Meal
Baugh's Raw Bone Meal,
Warranted Pure
Baugh's Special Top Dresser 7-6-6
Baugh's Truckers Favorite 5-10-5
- Berkshire Chemical Co.,
Bridgeport, Conn.**
Berkshire Castor Pomace
Berkshire Fertilizer 4-8-4
Berkshire Fertilizer 4-8-7
Berkshire Fertilizer 4-8-10
Berkshire Fertilizer 5-8-7
Berkshire Fertilizer 5-8-10
Berkshire Fertilizer 5-10-5
Berkshire Fertilizer 5-10-10
Berkshire Fertilizer Tobacco 6-3-6
Berkshire Fertilizer Grass Special
6-6-5
- Berkshire Fertilizer 7-6-6
Berkshire Fertilizer 7-7-7
Berkshire Fertilizer 10-6-4
Berkshire Fine Ground Bone
Berkshire Golf Green Fertilizer 8-5-2
Berkshire Sheep and Goat Manure
- Bradley & Baker, 155 East 44th St.,
New York, N. Y.**
Cottonseed Meal—Castor Meal
Mixture
- Central Soya Co., Inc.,
Fort Wayne, Ind.**
Central Star Brand Soybean Oil
Meal 44%
- Chilean Nitrate Sales Corp.,
120 Broadway, New York, N. Y.**
Chilean Nitrate of Soda —
Champion Brand
Chilean Nitrate of Soda —
Original Old Style
Chilean Nitrate of Soda and Potash
- Connecticut Toro Co., 77 Wellington
St., Hartford, Conn.**
Netco 8-6-2
- Consolidated Rendering Co.,
178 Atlantic Ave., Boston, Mass.**
Corenco 3-10-4 Animal Brand
Corenco 4-8-4 Corn and Vegetable
Corenco 4-8-7 Market Garden
Corenco 4-8-10 Potato Grower
Corenco 5-5-5 Lawn and Shrub
Corenco 5-5-15 Tobacco Starter
Corenco 5-8-7 General Crop Manure
Corenco 5-8-10 Peerless Potato
Corenco 5-10-5 Super Truck
Corenco 6-3-6 Special Tobacco
Grower
Corenco 7-6-6 Complete Fruit and
Top Dressing
Corenco 7-7-7 Complete Fruit and
Top Dressing
Corenco 8-16-14 Two-in-One
Corenco Ground Bone
Corenco Raw Bone Fertilizer
Corenco Sheep Manure
Ground Tankage
Muriate of Potash
Sulphate of Ammonia 20.5%
Superphosphate 16%
Superphosphate 20%
- The Davey Tree Expert Co.,
Kent, Ohio**
Davey Shredded Cattle Manure
1-1-2
Davey Tree Food 12-4-4

- The Davison Chemical Corp.,**
Baltimore, Md.
Davco Granulated 20%
Superphosphate
- E. I. duPont de Nemours & Co., Inc.,**
Wilmington, Del.
Uramon Fertilizer Compound
- Eastern States Farmers' Exchange,**
Springfield, Mass.
Ammo-Phos, product of American
Cyanamid Co.
Eastern States 0-20-20
Eastern States 4-16-20
Eastern States 5-5-15 Tobacco
Eastern States 5-10-5
Eastern States 5-10-10
Eastern States 5-15-5
Eastern States 7-7-7
Eastern States 7-14-21
Eastern States 8-4-8 Tobacco
Eastern States 8-16-8
Eastern States 8-16-16
Eastern States 8-16-16 LCS
(Low Chlorine Special)
Eastern States 8-16-16 SM
(Soluble Magnesium)
Eastern States 8-24-8
Eastern States 10-5-5
Eastern States 10-10-10
Eastern States Agricultural Urea
Eastern States Castor Pomace
Eastern States Cottonhull Ash
Eastern States Cottonseed—
Castor Meal
Eastern States Dry Ground Fish
Eastern States Ground Steamed
Bone
Eastern States Muriate of Potash
Eastern States Sulphate of Ammonia
Eastern States Sulphate of Potash
Eastern States Superphosphate 20%
Eastern States Superphosphate 47%
Triple
- Thomas W. Emerson Co.,**
213-215 State St., Boston, Mass.
Emseco All Use Fertilizer 7-7-7
English Formula Lawn and Garden
Dressing 5-7-3
- Faesy & Besthoff, Inc.,** 22 E. 40th St.,
New York, N. Y.
Bone Meal
- Ford Motor Co.,** Dearborn, Michigan
Ford Ammonium Sulphate
- General Chemical Co.,** Mechling
Products Div., Camden, N. J.
Veget-Aid 5-10-4
- Glidden Co.,** Soya Products Div.,
5165 W. Moffat St., Chicago, Ill.
Glidden 4 Hi Brand 44% Protein
Soybean Oil Meal
- Gouldard & Olena, Inc.,** 140 Liberty St.,
New York, N. Y.
G & O Ground Bone
G & O Lawn, Garden and Flower
Fertilizer 5-8-5
G & O Sheep Manure
J. B. Golf Greens 10-4-3
- Greenlands Services, Inc.,**
Concord, N. H.
Fertilizers for Lawns and Grasses
6-8-6
Fertilizers for Rhododendrons and
Evergreens 4-6-4
- A. H. Hoffman, Inc.,** Landisville, Pa.
Hoffman's Bone Meal
Hoffman's Cow Manure
Hoffman's Sheep Manure
- Humphreys-Godwin Co.,**
Memphis, Tenn.
Bull Brand Prime 43% Protein
Cottonseed Meal
Dixie Brand Prime 41% Protein
Cottonseed Meal
- Killen & Hall, Inc.,** Darien, Conn.
Killen and Hall Tree Food 8-5-2
- Kuiper & Bolle,** 508 Produce
Exchange, New York, N. Y.
Kay-Bee Brand Linseed Meal
- L. B. Lovitt & Co.,** Memphis, Tenn.
"Lovit Brand" 41% Protein
Cottonseed Meal
- McArdle's Seed Store,** 388 Greenwich
Ave., Greenwich, Conn.
McArdle's Special Fertilizer 6-5-3
- Meader & Co., Inc.,** 10 West 33rd St.,
New York, N. Y.
"Purifine" Brand Linseed Oil Meal
- National Lead Co.,** 111 Broadway,
New York, N. Y.
Dutch Boy 32% O. P. Linseed Meal
- Old Deerfield Fertilizer Co., Inc.,**
South Deerfield, Mass.
Castor Pomace
Cotton Hull Ashes
Cottonseed Castor Mixture 41%
Protein

Old Deerfield 4-8-7
 Old Deerfield 5-5-15 Tobacco
 Starter Bone and Potash
 Old Deerfield 5-8-7 and 2% (Potash
 other than Muriate)
 Old Deerfield 5-10-10
 Old Deerfield 6-3-7 Tobacco
 Old Deerfield 8-16-20
 Old Deerfield Dry Ground Fish
 Old Deerfield Fine Ground Bone

Olds & Whipple, Inc., Hartford, Conn.

High Grade Sulphate of Potash
 48% K₂O
 Horn and Hoof Meal
 O & W 3-10-4 Corn Special
 Fertilizer
 O & W 4-8-4 Market Garden
 Fertilizer
 O & W 4-8-7 Potato and General
 Purpose Fertilizer
 O & W 5-3-5 Complete Tobacco
 Fertilizer
 O & W 5-5-15 H. G. Tobacco
 Starter and Potash Compound
 O & W 5-8-7 Potato and General
 Purpose Fertilizer
 O & W 5-10-10 Fertilizer
 O & W 6-3-5 Blue Label Tobacco
 Fertilizer (Potash derived from
 Cotton Hull Ashes)
 O & W 6-3-6 Blue Label Tobacco
 Fertilizer
 O & W 6-3-6 Blue Label Tobacco
 Fertilizer (Potash derived from
 Cotton Hull Ashes)
 O & W 6-3-7 Special Tobacco
 Fertilizer
 O & W 7-6-6 Fertilizer
 O & W 7-7-7 Top Dressing and
 Grass Fertilizer
 O & W Bone Meal
 O & W Castor Pomace
 O & W Cotton Hull Ashes
 O & W Dry Ground Fish
 O & W Nitrate of Potash
 O & W Precipitated Bone
 Phosphate
 O & W Superphosphate 16%
 O & W Superphosphate 20%
 So. American Cottonseed Meal 95%
 —Castor Pomace 5% Mixture

**Outpost Nurseries, Inc.,
 Ridgefield, Conn.**

Outpost Plant Food 8-5-2

**Plantspur Products Co.,
 Ridgefield, N. J.**

Plantspur Fertilizer 3-3-2

Frank S. Platt Co., New Haven, Conn.

Platco 5-8-7 Fertilizer
 Platt's 10-5-5 Sp. Lawn Fertilizer

**The Pulverized Manure Co., 503 Ex-
 change Bldg., Union Stock Yard,
 Chicago, Ill.**

Wizard Brand Cow Manure
 Wizard Brand Pulverized Sheep
 Manure

**The Rogers & Hubbard Co.,
 Portland, Conn.**

Cotton Hull Ash
 Hubbard's All Soils Fertilizer 4-8-4
 Hubbard's Castor Pomace
 Hubbard's Climax Tobacco
 Fertilizer 5-3-5
 Hubbard's Corn Fertilizer 4-8-7
 Hubbard's Corn and Grain
 Fertilizer 3-10-4
 Hubbard's Dry Ground Fish Meal
 Hubbard's Fine Ground Bone
 Hubbard's Fruit Fertilizer 8-8-8
 Hubbard's Golf Course Fertilizer
 8-6-2
 Hubbard's Gro-Fast Fertilizer 5-8-6
 Hubbard's High Potash Fertilizer
 4-8-10
 Hubbard's Mus-Gro 4-14-0
 Hubbard's Potato Fertilizer 5-8-7
 Hubbard's Raw Knuckle Bone Flour
 Hubbard's Seeding Fertilizer
 Hubbard's Sheep and Goat Manure
 Hubbard's Strictly Pure Bone
 Hubbard's 16% Superphosphate
 Hubbard's 20% Superphosphate
 Hubbard's Tobacco Grower 6-3-6
 Hubbard's Top Dressing
 Hubbard's Vegetable Manure
 Red H Brand 4-8-4
 Red H Brand 4-8-7
 Red H Brand 4-8-10
 Red H Brand 5-8-7
 Red H Brand 5-10-10
 Red H Brand 7-6-6
 Red H Brand 7-7-7
 Red H Brand 8-16-14
 Yale Special Mixture 8-6-4

**Ruhm Phosphate & Chemical Co.,
 Mt. Pleasant, Tenn.**

Red Seal Brand Ruhm's Phosphate
 Rock (Washed and Ground)

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

Scott's Turf Builder 10-6-4

**Sewerage Commission of the City of
 Milwaukee, Milwaukee, Wis.**

Milorganite

M. L. Shoemaker Co., Philadelphia, Pa.
 Shoemaker's "Swift-Sure" 4-10-0
 Tobacco Starter

Soil Builders, Inc., Dunnellon, Fla.
 Min-Coll

**A. E. Staley Manufacturing Co.,
 Decatur, Ill.**
 Staley's Soy-Al-King

**Standard Wholesale Phosphate & Acid
 Works, Inc., Baltimore, Md.**
 Standard 20% Superphosphate

**Stumpp & Walter Co., 132 Church St.,
 New York, N. Y.**
 Sawco Bone Fertilizer 2.47-24.00%
 Sawco Cattle Manure
 Sawco Emerald Grass Fertilizer
 5-7-3
 Sawco General Garden Fertilizer
 5-10-5
 Sawconure 3-1-1
 Sawco Pulverized Sheep Manure
 2-1-2
 Sawco Rose Food 3-4-2

**Summers Fertilizer Co., Inc.,
 Baltimore, Md.**
 Summers "Best on Earth" 5-8-7
 Summers "Best on Earth" 8-5-2
 Summers "Best on Earth"
 20% Superphosphate
 Summers "Best on Earth"
 40% Superphosphate

**Swift & Co. Fertilizer Works,
 Baltimore, Md.**

Bone Meal Fertilizer
 Roselawn 5-8-7
 Swift's Sheep Manure 1.85-1-1.75
 Swift's Special Golf Fertilizer 6-12-4
 Swift's Special Golf Fertilizer 12-6-4
 Vigoro

Tennessee Corp., Lockland, Ohio
 Loma (5-10-4)

**I. P. Thomas & Son Co., 721 Market
 St., Camden, N. J.**

I. P. Thomas 3-10-6
 I. P. Thomas 5-8-7

**Walker-Gordon Laboratory Co., Inc.,
 Plainsboro, N. J.**

Bovert
 Bovung (Dehydrated Cow Manure)

**F. H. Woodruff & Sons, Inc.,
 Milford, Conn.**

Gro-Sod Lawn Food 10-6-4

**Woodruff Fertilizer Works, Inc.,
 Orange, Conn.**

Woodruff's Big Crop Fertilizer 5-8-7
 Woodruff's Corn Fertilizer 4-16-4
 Woodruff's Double Strength
 Fertilizer 8-16-16
 Woodruff's Market Garden
 Fertilizer 4-8-4
 Woodruff's Superphosphate 20%
 Woodruff's 3-10-6 Fertilizer
 Woodruff's Top Dresser 7-6-6
 Woodruff's Yankee Special
 Fertilizer 5-10-5

CLASSIFICATION OF FERTILIZER MATERIALS AND FERTILIZER TONNAGE

	Page No.	Number of Samples	Tonnage	
<i>I. Containing Chiefly Nitrogen</i>				
Nitrate of soda	55	6	1,285	
Ammonium sulphate	55	6	272	
Castor pomace	57	9	2,358	
Cottonseed meal (and C.S.M.-C.P.)..	57	138	11,321	
Linseed meal	58	19	474	
Soybean meal	58	11	545	
Other materials	55	17	388	16,643
<i>II. Containing Chiefly Phosphoric Acid</i>				
Superphosphate	59	34	5,328	
Precipitated bone	60	8	307	
Other materials	60	1	3	5,638
<i>III. Containing Chiefly Potash</i>				
Muriate of potash	61	5	676	
Sulphate of potash	61	5	287	
Cottonhull ashes	61	44	1,637	2,600
<i>IV. Containing Nitrogen and Potash</i>				
Nitrate of potash	51	6	158	
Nitrate of potash-soda	52	5	267	425
<i>V. Containing Nitrogen and Phosphoric Acid</i>				
Dry ground fish	62	26	1,250	
Tankage, etc.	63	3	485	
Ground bone	64	40	1,415	
Other materials	52, 63	4	176	3,326
<i>VI. Mixed Fertilizers</i>				
Commercial mixtures	66-79	195	29,775*	
Special and home mixtures	81-86	73	2,596	32,371
<i>VII. Miscellaneous</i>				
Sheep manure, etc.	87, 88	17	594	
Lime	89-92	42	.....
Other materials	93	38	.....
Check meals and fertilizers	54	42	.....	594
Totals		794		61,597

*For detailed statement of this tonnage see next page.

MIXED FERTILIZER TONNAGE

Fertilizer ratios and grades recommended for Connecticut

(University of Connecticut Extension Service, Bul. 302, Jan. 1941)

Ratio	Grade	No. of brands	Tonnage
1-1-1	7-7-7	10	1,305
	8-8-8 } 10-10-10 }	3	354
1-1-3	5-5-15	7	673
2-1-1	10-5-5	3	109
2-1-2	6-3-6	8	3,061
	7-3-7* } 8-4-8 }	3	1,261
1-2-1	5-10-5 } 8-16-8 }	14	819
1-3-1	4-12-4	3	530
	5-15-5 } 8-24-8 }	3	513
1-2-2	4-8-8 } 5-10-10 }	8	1,258
	8-16-16	8	992
	5-8-7*	21	9,030
	4-8-10* } 8-16-20* }	12	1,160
1-4-2	3-12-6	3	232
1-4-5	4-16-20	3	153
Total			21,450

Miscellaneous grades supplying 20 or more units of plant food

Ratio	Grade	No. of brands	Tonnage
.....	0-20-10 } 8-8-4 }	7	390
.....	4-16-4 }		
.....	4-12-6 }		
.....	7-14-21 }		
.....	10-8-8 } 10-8-6 }	4	50
.....	12-6-4 }		
.....	12-4-4 }		
.....	10-6-4 }		
.....	8-5-8 } 6-12-4 }	11	311
.....	5-8-10 }		
.....	8-16-14 }	8	782
.....	0-20-20 }		
Total			1,533

*Not recommended ratios but commonly used in Connecticut.

MIXED FERTILIZER TONNAGE—(Concluded)

Miscellaneous grades supplying less than 20 units of plant food

Ratio	Grade	No. of brands	Tonnage
.....	5-8-6 } 3-4-2 } 4-4-0 } 4-10-0 } 4-14-0 }	7	406
.....	3-3-2 } 6-6-5 } 6-7-4 } 7-7-5 }	5	267
.....	7-6-6	6	344
.....	6-5-3 } 8-6-2 } 8-6-4 } 10-4-3 }	8	206
.....	8-5-2	5	131
.....	5-3-5 } 5-5-5 }	6	736
.....	6-3-7	3	1,092
.....	4-8-4	11	1,923
.....	3-10-4	5	378
.....	4-8-7	9	543
.....	6-3-5 } 4-10-4 } 3-7-6 }	3	156
.....	3-10-6	6	539
.....	4-8-5 } 5-7-3 } 5-8-5 } 5-10-4 }	5	71
Total			6,792

I. RAW MATERIALS CHIEFLY VALUABLE FOR NITROGEN

Nitrate of Soda, etc.

Materials in this group are summarized in Table 1. Guaranties were substantially met or exceeded in all cases.

Samples drawn and submitted by purchasers are not included in the tabulation.

Vegetable Meals

Samples of cottonseed meal-castor pomace 904 to 909 inclusive were drawn from stock of L. B. Haas & Co. The average of 6 samples was 6.01 percent nitrogen, and 7.69 percent moisture. The average of 8 samples drawn and submitted by the purchaser was 6.11 percent nitrogen and 6.57 percent moisture. On a moisture-free basis the agreement between official samples and those submitted by the purchaser is very close, 6.51 percent and 6.54 percent nitrogen respectively. This meal was a Peruvian product.

Analyses of vegetable meals are given in Table 2.

II. RAW MATERIALS CHIEFLY VALUABLE FOR PHOSPHORIC ACID

Superphosphate formerly contained 16 percent of available phosphoric acid but in recent years 20 to 40 percent grades are common. One sample this year contained 47 percent. All samples examined met their guaranties except in two cases where slight deficiencies were noted.

One sample of precipitated bone was below guaranty. An unofficial sample from the same source, however, was not deficient. The stock was exhausted before a second official sample could be obtained.

Min-Coll is a natural phosphate valuable only as a source of total phosphoric acid. The phosphoric acid is largely in citrate-insoluble form.

Analyses of materials in this group are given in Table 3.

III. RAW MATERIALS CHIEFLY VALUABLE FOR POTASH

Official samples of potash salts and of cottonhull ashes are listed in Table 4.

Guaranties were met or exceeded in all samples examined.

The Old Deerfield Fertilizer Co. registered cottonhull ashes 35 percent K_2O . No official samples were secured but several samples submitted by purchasers were analyzed and met the guaranty.

IV. RAW MATERIALS SUPPLYING NITROGEN AND POTASH

No official samples of nitrate of potash were taken, but six samples were examined for purchasers.

One official sample of nitrate of potash-soda, the same registered by the Chilean Nitrate Sales Corp., New York, and sampled from stock of Apothecaries Hall Co., was examined and found to meet the guaranties. Nitrogen found 15.06 percent, guaranteed 15; potash found 15.31 percent, guaranteed 14.

V. RAW MATERIALS SUPPLYING NITROGEN AND PHOSPHORIC ACID

Analyses of official samples of dry ground fish, of tankage and of ground bone are given in Tables 5, 6 and 7, respectively.

One sample of tankage showed a slight deficiency in nitrogen.

Sample 258, steamed bone meal, was deficient in total phosphoric acid. The sample contained 0.7 percent of nitrogen in the form of ammonium salt and some mineral phosphate was present. It was not straight steamed bone. The purchase involved only a one-quarter ton lot.

Ammono-Phos, although not an organic and not included in tabulations above named, may be included in this group as a source of nitrogen and phosphoric acid. One sample taken from stock of Apothecaries Hall Co. was guaranteed nitrogen 11 percent, available P_2O_5 48 percent. It analyzed 10.79 nitrogen and 48.82 P_2O_5 .

VI. MIXED FERTILIZERS

Analyses of 183 official samples of mixed fertilizers are given in Table 8. Results may be summarized as follows:

Total number of samples	183
Samples deficient in	
one item	38
two items	6
three items	0
Percentage of samples meeting guaranties in all items	75
Total guaranties made	547 ¹
Guaranties not met:	
nitrogen	21
phosphoric acid	14
potash	15
Percentage of guaranties met	91

¹Two samples with only two items guaranteed.

Seventy-five percent of the samples analyzed substantially met or exceeded guaranties in all respects; and 91 percent of guaranties made were fulfilled. Only three samples showed commercial deficiencies in excess of \$1.00 per ton. These were 542, Acme 4-8-4, (\$1.29); 809, Armour's 8-16-16 (\$1.62), and 676, G & O 5-8-5, (\$1.65).

The distribution of chemical deficiencies is given in Table 8a. They are notably less than in the two years previous. Deficiencies of 0.1 percent or less in nitrogen, and 0.2 percent or less in available phosphoric acid and potash are not included.

Organic nitrogen of inferior quality was indicated in 861, Plantspur 3-3-2. The nitrogen guaranty is nearly met with nitrogen from ammonium salts; but the activity of the insoluble organic nitrogen was low by both the alkaline and the neutral permanganate methods, 40 and 36 respectively.

Home Mixtures

Analyses of home mixed fertilizer are given in Table 9. For the most part these are formulas for tobacco.

State Purchases of Fertilizer

Fertilizers sold on state purchase orders for the use at state institutions are included in our regular inspection by request of the State Supervisor of Purchases. The fertilizer law provides no exemption from registration and tonnage tax for such sales; the only exemption is for fertilizer sold to the Experiment Station for experimental purposes.

State purchase orders often call for fertilizer mixtures of odd and irregular grades which puts an unwarranted burden upon the manufacturer who must register such brands. The situation would be materially improved if such orders were confined to those grades that have been adopted by agreement among agronomists as serving all practical agricultural needs for our New England area. (See p. 49 of this report).

Samples of goods sold on state purchase orders are indicated by footnotes in the several tables. A summary of them is as follows:

No. of samples	Material	Reference
7	Nitrate of soda, etc.	Table 1
5	Superphosphate, etc.	" 3
3	Potash salts	" 4
1	Bone	" 7
14	Mixed Fertilizers	" 8

All of these samples were of the substance and quality demanded and without significant commercial deficiencies, except the sample of bone which has already been commented upon, p. 52.

VII. MISCELLANEOUS

Analyses of official samples of sheep manure and similar materials are given in Table 10.

Liming materials are not required to be registered in this State but many samples have been examined for purchasers and a few official samples have been drawn. Analyses are given in Table 11.

Thirty-eight samples of other miscellaneous materials have been examined. Some of these are listed in Table 12 for reference purposes.

Sample 1138 was vegetable waste (apparently tea leaf waste) treated with liming material. Such material is sold by itinerant vendors from trucks and is usually brought in from outside the State. It is in a wet

condition and usually contains from 40 to 50 percent of water. Such material, however it may be represented, is not a "fertilizer" in the common understanding of that term, and not accepted for registration under our fertilizer law, because it supplies only an insignificant amount of plant food (nitrogen, phosphoric acid and potash). It does, however, contain a considerable amount of organic matter which has some value as a mulch and as a soil conditioner because of its moisture-holding capacity. Sample 1138, for example, in spite of the fact that it contains 840 lbs. of water to the ton, contains also, 788 lbs. of organic matter. The worth of such organic matter is fairly comparable with that in peat moss or in peat or muck from local deposits. Thus a bushel (weighing about 30 lbs.) would contain about 12 lbs. of organic matter. At 1.25 to 2 cents per pound the purchaser will pay for organic matter at about the same rate that he does when he buys peat moss or swamp muck locally. But clearly it would be better for purchasers to investigate local sources of supply than to absorb the cost of hauling such material from remote places, and assume the risk of uncertain substance and quality of material from unknown sources.

The laboratory has continued to take part in the collaborative programs of the American Oil Chemists Society and of the F. S. Royster Guano Co. and has analyzed 42 samples of cottonseed meal and mixed fertilizers. These programs are participated in by state, commercial and industrial chemists in the interest of uniformity in control work.

TABLE 1. ANALYSES OF NITRATE OF SODA, ETC.

Station No.	Manufacturer or Jobber	Sampled from stock of	Per cent nitrogen	
			Found	Guaranteed
Nitrate of Soda				
257 ¹	Arcadian The American. The Barrett Co., New York, N. Y.	Cheshire: Cheshire Reformatory	16.10	16.00
535 ¹	Arcadian The American. The Barrett Co., New York, N. Y.	Newtown: Fairfield State Hospital	16.08	16.00
739	Arcadian The American. The Barrett Co., New York, N. Y.	East Hartford: John M. Herr	16.14	16.00
785 ¹	Arcadian The American. The Barrett Co., New York, N. Y.	Mansfield Depot: Mansfield State Training School....	16.22	16.00
463	Chilean, Champion Brand. Chilean Nitrate Sales Corp., New York, N. Y.	West Haven: American Agricultural Chemical Co.	16.04	16.00
Cyanamid				
447	21% 'Aero' Granular. American Cyanamid Co., New York, N. Y.	Hamden: Henry D. Peters..	21.08	21.00
533 ¹	21% 'Aero' Granular. American Cyanamid Co., New York, N. Y.	Newtown: Fairfield State Hospital	22.00	21.00
761 ¹	20% 'Aero' Granular. American Cyanamid Co., New York, N. Y.	Middletown: Middletown State Hospital	21.00	21.00
Urea, etc.				
525	Eastern States. Eastern States Farmers' Exchange, Springfield, Mass.	So. Windsor: I. Stone	42.40	42.00
736	Uramon Fertilizer Compound. E. I. duPont de Nemours & Co., Inc., Wilmington, Del.	East Hartford: John M. Herr	42.00	42.00
Sulphate of Ammonia				
422	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	20.44	20.50
683 ¹	Arcadian. The Barrett Co., New York, N. Y.	Niantic: Seaside Sanatorium	20.84	20.60
762 ¹	Arcadian. The Barrett Co., New York, N. Y.	Middletown: Middletown State Hospital	20.94	20.60
814	Eastern States. Eastern States Farmers' Exchange, Springfield, Mass.	East Hartford: Eastern States Farmers' Exchange	20.62	20.50
766	Ford. Ford Motor Co., Dearborn, Mich.	Middletown: Longworth & Carlson	20.80	20.80

¹State purchase.

TABLE 1. ANALYSES OF NITRATE OF SODA, ETC.—(Concluded)

Station No.	Manufacturer or Jobber	Sampled from stock of	Per cent nitrogen	
			Food	Guaranteed
452	Agrinite (All Organic Turf Food). American Agricultural Chemical Co., No. Wey- mouth, Mass.	West Haven: American Agricultural Chemical Co.	9.85	8.50

TABLE 2. ANALYSES OF CASTOR POMACE, COTTONSEED MEAL, ETC.

Station No.	Manufacturer or Jobber	Sampled from stock of	Per cent nitrogen	
			Found	Guaranteed
Castor Pomace				
878	American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	5.04	4.50
428	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	5.57	4.50
740	Apothecaries Hall Co., Waterbury, Conn.	East Hartford: John M. Herr	5.81	4.50
518	O & W Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	5.76	4.50
Cottonseed Meal				
804	Cottonseed Meal-Castor Pomace Mixture. Ashcraft-Wilkinson Co., Atlanta, Ga.	So. Windsor: Cohen Bros...	6.64	6.58
424	Cottonseed Meal-Castor Pomace Mixture. Bradley & Baker, New York, N. Y.	East Windsor: Apothecaries Hall Co.	7.57	6.56
920	Dixie. Humphreys-Godwin Co., Memphis, Tenn.	Bloomfield: Bloomfield Farmers' Exchange	6.56	6.56
1119	"Lovit 41%." L. B. Lovitt & Co., Memphis, Tenn.	West Suffield: A. N. Shepard	6.41	6.56
890	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Glastonbury: E. J. Bantle..	6.62	6.56
832	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Suffield: James Davis	6.21	6.56
904	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	6.04	6.56
905	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	6.01	6.56
906	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	6.07	6.56
907	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	5.98	6.56
908	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	6.02	6.56
909	Cottonseed-Castor Mixture. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	5.93	6.56

TABLE 2. ANALYSES OF CASTOR POMACE, COTTONSEED MEAL, ETC.—(Concluded)

Station No.	Manufacturer or Jobber	Sampled from stock of	Per cent nitrogen	
			Guaranteed	Found
	Linseed Meal			
1015	Kay-Bee. Kuiper & Bolle, New York, N. Y.	Simsbury: Cullman Bros., Farm No. 2	5.47	5.12
	Soybean Meal			
1016	44%. Archer-Daniels-Midland Co., Minneapolis, Minn. ...	Simsbury: Cullman Bros., Farm No. 2	7.33	7.04
1014	Central Star. Central Soya Co., Inc., Fort Wayne, Ind.	No. Bloomfield: Consolidated Cigar Corp.	7.40	7.04
783	Glidden 4 Hi. The Glidden Co., Chicago, Ill.	Darien: Ring's End Fuel Co.	7.07	7.04

TABLE 3. ANALYSES OF SUPERPHOSPHATE, ETC.

Station No.	Manufacturer or Wholesale Dealer	Dealer or Purchaser	Phosphoric acid			
			Citrate-soluble	Tot l	"Available"	
					Form	Guara teed
	Superphosphate		%	%	%	%
545	Acme 20%. The Acme Guano Co., Baltimore, Md.	Suffield: Spencer Bros., Inc.	0.78	22.06	21.28	20.00
456	AA 16%. American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	0.40	18.20	17.80	16.00
764 ¹	AA 16%. American Agricultural Chemical Co., No. Weymouth, Mass.	Middletown: Long Lane Farm	0.71	17.51	16.80	16.00
332	AA 20%. American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	1.00	21.44	20.44	20.00
414	16%. Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co. ...	0.25	17.33	17.08	16.00
769	20%. Apothecaries Hall Co., Waterbury, Conn.	Greenwich: McArdle's Seed Store	0.47	21.40	20.93	20.00
813	Armour's Big Crop 20%. Armour Fertilizer Works, New York, N. Y.	East Windsor Hill: David Ahern	1.00	20.39	19.39	20.00
821	Baughphos, The Ideal 20%. The Baugh & Sons Co., Baltimore, Md.	Hamden: Hamden Lehigh Coal Co.	0.39	20.43	20.04	20.00
375	16%. Consolidated Rendering Co., Boston, Mass.	Branford: Collins & Freeman	0.75	17.54	16.79	16.00
538	20%. Consolidated Rendering Co., Boston, Mass.	Danbury: Barnum Feed Store	0.79	20.79	20.00	20.00
485	Davco Granulated 20%. The Davison Chemical Corp., Baltimore, Md.	Bridgeport: Berkshire Chemical Co.	0.70	22.08	21.38	20.00
521	Eastern States 20%. Eastern States Farmers' Exchange, Springfield, Mass.	East Hartford: Eastern States Farmers' Exchange	0.82	21.27	20.45	20.00

Analyses

¹State purchase.

TABLE 3. ANALYSES OF SUPERPHOSPHATE, ETC.—(Concluded)

Station No.	Manufacturer or Wholesale Dealer	Dealer or Purchaser	Phosphoric acid			
			Citric acid soluble	Total	"Available"	
					1 ind	Guaranteed
526	Eastern States 47% Triple. Eastern States Farmers' Exchange, Springfield, Mass. . . .	South Windsor: I. Stone	%	%	%	%
363	16%. Olds & Whipple, Inc., Hartford, Conn.	Manchester: C. R. Burr & Co.	0.44	47.40	46.96	47.00
517	O & W 20%. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	0.21	16.92	16.71	16.00
758	Hubbard's 16%. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	1.01	21.38	20.37	20.00
401	Hubbard's 20%. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	0.41	17.10	16.69	16.00
696 ¹	Standard 20%. Standard Wholesale Phosphate & Acid Works, Baltimore, Md.	Portland: The Rogers & Hubbard Co.	0.20	20.62	20.42	20.00
252 ¹	Summers "Best on Earth" 20%. Summers Fertilizer Co., Inc., Baltimore, Md.	Niantic: State Farm for Women	0.37	20.99	20.62	20.00
534 ¹	Summers "Best on Earth" 20%. Summers Fertilizer Co., Inc., Baltimore, Md.	Cheshire: Connecticut Reformatory	0.48	21.69	21.21	20.00
682	Woodruff's 20%. The Woodruff Fertilizer Works, Inc., Orange, Conn.	Newtown: Fairfield State Hospital	0.07	20.88	20.81	20.00
		North Haven: J. P. Beach	0.70	20.11	19.41	20.00
	Precipitated Bone					
425	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	1.31	40.32	39.01	38.00
735	O & W. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: John M. Herr	5.57	40.80	35.23	38.00
	Natural Phosphate					
697 ¹	Min-Coll. Soil Builders, Inc., Dunnellon, Fla.	Niantic: State Farm for Women . . . . .	...	22.40 ²	....	....

¹State purchase. ²Guaranteed 22% total phosphoric acid.

TABLE 4. ANALYSES OF POTASH SALTS, ETC.

Station No.	Manufacturer and Brand	Sampled from stock of	Potash	
			Found	Guaranteed
Muriate of Potash			%	%
448	American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	50.06	50.00
256 ¹	Consolidated Rendering Co., Boston, Mass.	Cheshire: Connecticut Reformatory	60.54	50.00
532 ¹	Consolidated Rendering Co., Boston, Mass.	Newtown: Fairfield State Hospital	58.74	50.00
788 ¹	Consolidated Rendering Co., Boston, Mass.	Mansfield Depot: Mansfield State Training School	59.78	50.00
815	Eastern States. Eastern States Farmers' Exchange, Springfield, Mass.	East Hartford: Eastern States Farmers' Exchange	60.62	60.00
Sulphate of Potash				
427	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	52.15	48.00
524	Eastern States. Eastern States Farmers' Exchange, Springfield, Mass.	So. Windsor: I. Stone	52.08	52.00
737	High Grade. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: John M. Herr	49.84	48.00
Cottonhull Ashes²				
392	Kireal. Ted Alkire, Lubbock, Texas	East Hartford: Eastern States Farmers' Exchange	42.16	33.00
738	Kireal. Ted Alkire, Lubbock, Texas	East Hartford: John M. Herr	43.12	33.00
520	O & W. Olds & Whipple, Inc., Hartford, Conn.	So. Windsor: I. Stone	33.43	30.00

¹State purchase.

²Old Deerfield Fertilizer Co., unofficial samples, see p. 51.

TABLE 5. ANALYSES OF DRY GROUND FISH, ETC.

Station No.	Manufacturer and Wholesale Dealer	Sampled from stock of	Nitrogen		Phosphoric acid	
			Total found	Total guaranteed	Total found	Total guaranteed
			%	%	%	%
426	Apothecaries Hall Co., Waterbury, Conn...	East Windsor: Apothecaries Hall Co. ...	9.26	9.00	6.71	5.00
523	Eastern States. Eastern States Farmers' Exchange, Springfield, Mass.	South Windsor: I. Stone	9.93	9.00	6.34	5.00
519	O & W. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc. ...	9.50	9.00	7.66	5.00
843	Hubbard's. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co. ...	10.04	9.46	7.06	5.00

TABLE 6. ANALYSES OF TANKAGE AND SIMILAR MATERIALS

Station No.	Manufacturer and Wholesale Dealer	Sampled from stock of	Nitrogen		Phosphoric acid		Mechanical analysis	
			Total found	Total guaranteed	Total found	Total guaranteed	Finer than 1-50 inch	Coarser than 1-50 inch
364	Apothecaries Hall Co., Waterbury, Conn.	Manchester: C. R. Burr & Co.	2	8.22	10.45	0	41.8	58.2
837	Ground. Consolidated Rendering Co. Boston, Mass.	New Haven: L. T. Frisbie Co.	6	7.40	10.02	9.15	53.0	47.0
922	Milorganite. Sewerage Commission, Milwaukee, Wis.	Saugatuck: L. H. Gault & Son	8	6.00	9 ¹	...	...	..

¹'Available' found 2.62%; guaranteed 2.00%.

Analyses

TABLE 7. ANALYSES OF GROUND BONE

Station No.	Manufacturer and Brand	Sampled from stock of	Nitrogen		Phosphoric acid		Mechanical analysis	
			Total found	Total guaranteed	Total found	Total guaranteed	Finer than 1-50 inch	Coarser than 1-50 inch
			%	%	%	%	%	%
537	Fine Ground. American Agricultural Chemical Co., No. Weymouth, Mass.	Danbury: Barnum Feed Store	2.62	2.47	27.50	23.00	52.7	47.3
679	Apothecaries Hall Co., Waterbury, Conn....	New Britain: Stanley Svea Coal Co.	2.84	2.25	24.24	22.00	49.6	50.4
685	Apothecaries Hall Co., Waterbury, Conn....	New London: New London Grain Co.	3.71	3.70	22.11	20.00	28.7	71.3
806	Armour's. Armour Fertilizer Works, New York, N. Y.	East Windsor Hill: David J. Ahern	2.59	2.47	28.64	23.00	64.5	35.5
824	Baugh's Pure Steamed. The Baugh & Sons Co., Baltimore, Md.	Hamden: Hamden Lehigh Coal Co.	3.03	2.47	24.93	23.00	48.0	52.0
822	Baugh's Raw, Warranted Pure. The Baugh & Sons Co., Baltimore, Md.	Hamden: Hamden Lehigh Coal Co.	4.00	3.70	21.80	20.50	37.7	62.3
486	Berkshire Fine Ground. Berkshire Chemical Co., Bridgeport, Conn.	Bridgeport: Berkshire Chemical Co.	2.18	2.05	29.20	25.00	63.6	36.4
391	Corenco Ground. Consolidated Rendering Co., Boston, Mass.	Danielson: Dayville Grain & Feed Co.	2.48	2.47	23.31	23.00	63.3	36.7
836	Corenco Raw. Consolidated Rendering Co., Boston, Mass.	New Haven: L. T. Frisbie Co.	3.96	3.70	22.78	20.00	29.5	70.5

399	Eastern States Ground Steamed. Eastern States Farmers' Exchange, Springfield, Mass.	East Hartford: Eastern States Farmers' Exchange	2.62	2.30	29.71	23.00	68.7	31.3
674	G & O Ground. Goulard & Olena, Inc., New York, N. Y.	New Britain: Rackliffe Bros., Inc.	2.48	2.40	26.54	22.75	53.6	46.4
513	O & W Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	3.32	2.47	25.77	22.00	51.3	48.7
672	Hubbard's Fine Ground. The Rogers & Hubbard Co., Portland, Conn.	New Britain: C. W. Lines Co.	2.48	2.47	28.64	23.00	66.6	33.4
831	Hubbard's Raw Knuckle Bone Flour. The Rogers & Hubbard Co., Portland, Conn.	Meriden: Church & Morse ...	4.12	3.70	25.20	24.70	79.0	21.0
258 ¹	Steamed. Standard Wholesale Phosphate & Acid Works, Inc., Baltimore, Md.	Cheshire: Conn. Reformatory..	2.83 ²	2.47	20.57	23.00	53.5	46.5
880	Sawco. Stumpp & Walter Co., New York, N. Y.	Stamford: Stumpp & Walter Co.	2.80	2.47	26.10	24.00	57.5	42.5
694	Swift & Co. Fertilizer Works, Baltimore, Md.	New London: Aben Hardware Co.	2.94	2.47	25.90	23.00	58.5	41.5

Analyses

¹State purchase.

²Nitrogen in ammonia 0.7%.

TABLE 8. ANALYSES OF MIXED FERTILIZER

Station No.	Manufacturer and Brand	Place of sampling
The Acme Guano Co., Baltimore, Md.		
543	Acme 3-10-4	Suffield
544	Acme 3-12-6	Suffield
542	Acme 4-8-4	Suffield
980	Acme 4-8-4	Bloomfield
981	Acme Vitaflor 4-8-5	Bloomfield
1232	Acme Vitaflor 4-8-5	Bloomfield
1233	Acme Vitallor 4-8-5	Bloomfield
546	Acme 4-8-10	Middletown
541	Acme 5-8-7	Suffield
966	Acme Plant Food 7-7-7	Bloomfield
American Agricultural Chemical Co., North Weymouth, Mass.		
786 ¹	AA 8-16-8 Fertilizer	Mansfield Depot
331	AA Market Garden Fertilizer 4-8-4	West Haven
457	AA Potato and Root Crop Fertilizer 4-8-10 ..	West Haven
378 ¹	AA Potato and Vegetable Fertilizer 5-8-7	Portland
460	Agrico for Aroostook with 10% Potash 5-8-10	West Haven
461	Agrico for Corn 3-10-6	West Haven
695 ¹	Agrico for Corn 3-10-6	Niantic
451	Agrico for Corn 4-12-6	West Haven
454	Agrico Country Club 8-6-2	West Haven
453	Agrico Country Club Fertilizer 8-6-4	West Haven
459	Agrico for Fruit 8-8-4	West Haven
771	Agrico for Gardens 4-10-4	Greenwich
770	Agrico for Lawns, Trees and Shrubs 7-7-5 ...	Greenwich
462	Agrico for New England 4-8-10	West Haven
330	Agrico for Potatoes and Vegetables 5-8-7	West Haven
877	Agrico for Seeding Down 4-16-20	West Haven
876	Agrico for Tobacco 6-3-6	West Haven
450	Agrico for Top Dressing 7-7-7	West Haven
458	Agrico for Truck 5-10-5	West Haven
455	Bradley's XL Fertilizer 3-10-4	West Haven
Apothecaries Hall Co., Waterbury, Conn.		
412	Liberty Corn Fertilizer 3-12-6	East Windsor
420	Liberty Green Gro 6-5-3	East Windsor
792	Liberty High Analysis Fertilizer 8-16-16	East Windsor
418	Liberty High Grade Corn Fertilizer 4-12-4 ...	East Windsor
416	Liberty High Grade Market Gardener's 5-8-7	East Windsor
854	Liberty High Grade Tobacco Manure 7-3-7 ..	East Windsor
790	Liberty High Grade Vegetable 5-10-10	East Windsor
791	Liberty Manure Supplement 0-20-10	East Windsor
413	Liberty Market Gardener's Special 4-8-4	East Windsor
415	Liberty Potato and General Crops 4-8-10	East Windsor

¹State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Nitrogen					Phosphoric acid			Potash		No.
In nit rates	In ammonia	Organic water-sol ble	Organic water-insol ble	Total	Citra c-insol ble	Total	So-called (available)	As muri te	Total	
%	%	%	%	%	%	%	%	%	%	
0.00	1.98	0.67	0.53	3.18	0.94	10.59	9.65	2.83	4.40	543
0.00	2.40	0.43	0.40	3.23	0.97	12.91	11.94	4.29	6.78	544
0.00	2.34	0.95	0.38	3.67	0.71	8.05	7.34	2.90	4.45	542
0.00	3.06	0.69	0.16	3.91	0.41	8.85	8.44	3.46	4.57	980
0.24	1.88	0.32	2.43	4.87	1.40	15.69	14.29	5.96	5.96	981
0.00	0.92	0.92	2.74	4.58	1.25	11.00	9.75	5.09	7.82	1232
0.00	1.72	0.41	2.50	4.63	1.65	15.50	13.85	5.09	5.86	1233
0.14	2.82	0.42	0.48	3.86	0.40	8.94	8.54	6.65	9.36	546
0.88	2.80	1.20	0.79	5.67	0.55	8.21	7.66	4.98	7.28	541
2.04	3.10	0.58	0.89	6.61	0.30	7.86	7.56	4.81	7.22	966
0.88	5.20	0.80	0.59	7.47	0.74	18.02	17.28	8.00	8.00	786
0.59	2.64	0.22	0.47	3.92	0.80	8.22	7.42	4.61	4.61	331
0.43	2.94	0.22	0.41	4.00	0.57	9.00	8.43	10.06	10.06	457
0.56	4.00	0.42	0.48	5.46	0.52	8.75	8.23	8.49	8.49	378
0.58	3.88	0.14	0.41	5.01	0.64	8.81	8.17	9.93	9.93	460
0.00	2.52	0.24	0.40	3.16	0.81	11.45	10.64	5.94	5.94	461
0.65	1.96	0.08	0.27	2.96	1.04	11.16	10.12	5.79	5.79	695
0.55	2.82	0.32	0.40	4.09	1.16	13.52	12.36	6.14	6.14	451
0.82	3.06	1.10	2.93	7.91	0.65	7.32	6.67	2.20	2.20	454
0.52	6.66	0.22	0.60	8.00	0.61	6.84	6.23	3.70	3.70	453
0.47	6.76	0.36	0.50	8.09	0.54	9.55	9.01	4.35	4.35	459
0.00	3.00	0.21	1.16	4.37	0.95	11.60	10.65	4.22	4.22	771
0.82	4.56	0.44	1.46	7.28	0.69	7.90	7.21	5.16	5.16	770
0.25	3.00	0.44	0.43	4.12	0.84	9.58	8.74	10.09	10.09	462
0.44	4.00	0.38	0.36	5.18	0.82	9.43	8.61	7.33	7.33	330
0.93	3.32	0.18	0.15	4.58	0.73	19.49	18.76	17.41	17.41	877
1.23	0.14	0.94	3.76	6.07	0.23	4.07	3.84	0.27	6.04	876
0.56	5.76	0.06	0.41	6.79	0.63	7.70	7.07	7.08	7.08	450
0.70	4.00	0.00	0.28	4.98	0.78	11.17	10.39	5.43	5.43	458
0.28	2.06	0.30	0.33	2.97	0.86	10.86	10.00	4.48	4.48	455
0.47	1.96	0.54	0.57	3.54	0.64	13.20	12.56	7.02	7.02	412
0.82	1.72	1.28	2.96	6.78	0.24	6.71	6.47	4.15	4.90	420
0.40	0.44	6.64	0.55	8.03	0.26	19.20	18.94	13.04	13.04	792
1.90	1.82	0.44	0.56	4.72	0.66	12.79	12.13	5.00	5.00	418
0.69	3.48	0.14	0.93	5.24	0.36	8.94	8.58	7.46	7.46	416
1.29	0.66	1.72	3.62	7.29	0.35	5.00	4.65	0.43	8.02	854
1.23	3.22	0.12	0.75	5.32	0.41	11.23	10.82	8.01	9.95	790
.....	.....	.....	.....	.....	0.38	18.94	18.56	11.49	11.49	791
0.49	3.00	0.34	0.52	4.35	0.26	8.59	8.33	4.01	4.01	413
0.99	2.56	0.16	0.75	4.46	0.31	9.20	8.89	10.44	10.44	415

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

In i r t e s	Nitrogen				Phosphoric acid			Potash		Station No.
	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-soluble	Total	So-called (available)	As muriate	Total	
%	%	%	%	%	%	%	%	%	%	
0.33	5.52	0.54	0.75	7.14	0.24	7.67	7.43	6.88	7.44	365
0.00	0.04	0.51	4.59	5.14	1.74	8.39	6.65	.....	.....	789
1.61	0.08	0.50	3.21	5.40	0.18	5.02	4.84	0.29	6.52	856
0.40	0.78	1.22	3.88	6.28	0.31	4.75	4.44	0.32	7.11	855
0.69	0.12	1.88	3.60	6.29	0.38	4.51	4.13	0.39	8.27	857
0.77	6.14	0.28	0.84	8.03	0.28	8.86	8.58	8.31	8.31	417
0.41	7.88	0.46	1.06	9.81	0.24	8.81	8.57	9.48	9.48	421
1.10	3.20	0.24	0.70	5.24	0.41	11.36	10.95	5.50	5.50	853
0.39	2.00	0.20	0.49	3.08	0.81	13.19	12.38	6.27	6.27	812
0.50	2.96	0.06	0.54	4.06	0.35	8.41	8.06	4.23	4.23	796
0.53	2.00	0.88	0.68	4.09	0.57	8.58	8.01	9.86	9.86	794
0.43	3.44	0.50	0.66	5.03	0.58	8.84	8.26	7.05	7.05	793
0.45	4.00	0.14	0.62	5.21	0.95	11.50	10.55	5.49	5.49	811
0.58	3.42	0.40	0.72	5.12	0.71	10.77	10.06	10.13	10.13	808
0.71	5.30	0.18	0.77	6.96	0.30	8.06	7.70	7.05	7.05	795
0.62	6.82	0.20	0.14	7.78	0.28	16.79	16.51	19.02	19.02	810
1.26	0.26	1.44	3.29	6.25	0.26	4.42	4.16	0.47	6.44	859
0.89	6.48	0.04	0.18	7.59	0.37	16.49	16.12	15.36	15.36	809
0.77	4.70	0.36	2.42	8.25	0.74	6.23	5.49	2.98	2.98	858
0.46	2.54	0.76	1.09	4.85	0.47	8.58	8.11	7.50	7.50	340
0.00	5.58	0.31	0.84	6.73	1.29	10.15	8.86	5.19	5.19	782
0.30	2.86	0.66	0.24	4.06	0.60	8.76	8.16	5.82	5.82	826
0.00	2.86	1.06	0.29	4.21	0.64	8.92	8.28	9.65	9.65	465
0.00	2.84	0.96	0.20	4.00	0.66	8.89	8.23	9.62	9.62	894
0.00	2.20	0.76	0.23	3.19	0.91	10.94	10.03	6.57	6.57	823
0.46	3.46	0.72	0.30	4.94	0.75	9.21	8.46	7.00	7.00	825
0.21	3.62	0.94	0.27	5.04	0.76	10.91	10.15	5.41	5.41	827
3.54	2.92	0.64	0.21	7.31	0.52	6.97	6.45	6.33	6.33	464
0.00	3.78	0.56	0.39	4.73	0.67	10.72	10.05	5.29	5.29	466

TABLE 8. ANALYSES OF MIXED FERTILIZER

Station No.	Manufacturer and Brand	Place of sampling
Berkshire Chemical Co., Bridgeport, Conn.		
336	Berkshire Fertilizer 4-8-4	Milford
334	Berkshire Fertilizer 4-8-7	Milford
734 ¹	Berkshire Fertilizer 4-8-10	Cheshire
765 ¹	Berkshire Fertilizer 4-8-10	Middletown
335	Berkshire Fertilizer 5-8-7	Milford
536 ¹	Berkshire Fertilizer 5-8-7	Newtown
733 ¹	Berkshire Fertilizer 5-8-7	Cheshire
255 ¹	Berkshire Fertilizer 5-8-10	Cheshire
852	Berkshire Fertilizer 5-8-10	Simsbury
480	Berkshire Fertilizer 5-10-5	Bridgeport
530 ¹	Berkshire Fertilizer 5-10-5	Newtown
898	Berkshire Fertilizer 5-10-10	Bridgeport
899	Berkshire Fertilizer Tobacco 6-3-6	Bridgeport
254 ¹	Berkshire Fertilizer 7-6-6	Cheshire
763 ¹	Berkshire Fertilizer 7-6-6	Middletown
482	Berkshire Fertilizer 7-7-7	Bridgeport
531 ¹	Berkshire Fertilizer 10-6-4	Newtown
484	Berkshire Golf Green Fertilizer 8-5-2	Bridgeport
483	Berkshire Grass Special 6-6-5	Bridgeport
Connecticut Toro Co., Hartford, Conn.		
910	Netco Greens Formula 8-6-2	Manchester
Consolidated Rendering Co., Boston, Mass.		
326	Corenco 3-10-4 Animal Brand	New Haven
1037	Corenco 3-10-4 Animal Brand	New Haven
325	Corenco 4-8-4 Corn and Vegetable	New Haven
324	Corenco 4-8-7 Market Garden	New Haven
329	Corenco 4-8-10 Potato Grower	New Haven
838	Corenco 5-5-5 Lawn and Shrub	New Haven
376	Corenco 5-8-7 General Crop Manure	Branford
839	Corenco 5-8-10 Peerless Potato	New Haven
684 ¹	Corenco 5-10-5 Super Truck	Niantic
328	Corenco 6-3-6 Special Tobacco Grower	New Haven
802	Corenco 7-6-6 Complete Fruit and Top Dressing	New Haven
1116	Corenco 7-6-6 Complete Fruit and Top Dressing	New Haven
390	Corenco 7-7-7 Complete Fruit and Top Dressing	Danielson
1117	Corenco 7-7-7 Complete Fruit and Top Dressing	New Haven

¹State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

I nitrates	Nitrogen				Phosphoric acid			Potash		Station No.
	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citric acid soluble	Total	So-called (available)	As muriate	Total	
%	%	%	%	%	%	%	%	%	%	
0.00	2.84	1.08	0.30	4.22	0.36	8.94	8.58	3.91	5.05	336
0.00	2.80	0.97	0.24	4.01	0.50	8.56	8.06	7.25	7.25	334
0.00	2.86	1.09	0.28	4.23	0.49	8.76	8.27	9.75	9.75	734
0.00	2.86	1.02	0.21	4.09	0.37	8.37	8.00	10.31	10.31	765
0.00	3.82	0.99	0.19	5.00	0.21	8.16	7.95	7.45	7.45	335
0.00	3.66	1.16	0.14	4.96	0.30	8.37	8.07	7.40	7.40	536
0.13	3.74	1.06	0.20	5.13	0.20	7.90	7.70	7.50	7.50	733
0.00	4.00	1.03	0.24	5.27	0.49	8.78	8.29	10.03	10.03	255
0.00	3.56	1.22	0.28	5.06	0.84	9.83	8.99	2.28	10.17	852
0.00	3.96	0.97	0.37	5.30	0.70	10.84	10.14	5.15	5.15	480
0.00	4.00	0.85	0.31	5.16	0.65	10.56	9.91	5.36	5.36	530
0.00	3.60	1.01	0.29	4.90	0.24	11.06	10.82	9.01	9.90	898
0.64	0.30	1.64	3.21	5.79	0.22	3.78	3.56	0.68	6.59	899
0.00	5.88	1.14	0.16	7.18	0.08	6.80	6.72	6.62	6.62	254
0.00	5.76	1.21	0.20	7.17	0.29	8.12	7.83	7.46	7.46	763
0.00	5.70	1.27	0.27	7.24	0.21	7.86	7.65	7.05	7.05	482
0.00	7.58	2.43	0.17	10.18	0.19	6.30	6.11	4.19	4.19	531
0.00	2.06	2.78	4.11	8.95	0.62	6.37	5.75	2.13	2.13	484
0.00	4.66	1.04	0.21	5.91	0.37	7.00	6.63	5.46	5.46	483
0.18	4.58	0.52	2.32	7.60	0.51	7.58	7.07	2.17	2.17	910
0.84	1.40	0.60	0.08	2.92	0.45	9.91	9.46	4.40	4.40	326
0.81	1.52	0.76	0.06	3.15	0.50	10.58	10.08	4.44	4.44	1037
0.95	2.54	0.52	0.07	4.08	0.21	8.55	8.34	4.05	4.05	325
0.91	2.44	0.50	0.10	3.95	0.60	8.24	7.64	7.02	7.02	324
0.97	2.52	0.48	0.06	4.03	0.36	8.21	7.85	10.31	10.31	329
0.86	1.60	0.42	2.10	4.98	0.35	6.54	6.19	5.36	5.36	838
0.76	3.64	0.56	0.09	5.05	0.40	8.42	8.02	7.10	7.10	376
1.04	2.58	1.08	0.22	4.92	0.31	8.91	8.60	10.21	10.21	839
1.04	3.58	0.52	0.10	5.24	0.36	10.76	10.40	5.17	5.17	684
0.80	0.14	2.20	3.12	6.26	0.42	4.81	4.39	0.71	6.71	328
1.10	3.68	1.88	0.07	6.73	0.21	6.77	6.56	6.18	6.18	802
1.16	4.92	0.94	0.08	7.10	0.11	6.60	6.49	4.92	6.27	1116
0.96	5.20	0.40	0.07	6.63	0.42	7.71	7.29	7.40	7.40	390
0.90	5.14	0.86	0.12	7.02	0.08	7.55	7.47	7.03	7.03	1117

TABLE 8. ANALYSES OF MIXED FERTILIZER

Station No.	Manufacturer and Brand	Place of sampling
The Davey Tree Expert Co., Kent, Ohio		
886	Davey Tree Food 12-4-4	Old Greenwich
Eastern States Farmers' Exchange, Springfield, Mass.		
925	Eastern States 0-20-20	Bethel
522	Eastern States 4-16-20	East Hartford
395	Eastern States 5-10-10	East Hartford
396	Eastern States 5-15-5	East Hartford
397	Eastern States 7-7-7	East Hartford
803	Eastern States 8-4-8 Tobacco	South Windsor
924	Eastern States 8-16-8	Bethel
398	Eastern States 8-16-16	East Hartford
393	Eastern States 8-24-8	East Hartford
926	Eastern States 10-5-5	Bethel
394	Eastern States 10-10-10	East Hartford
Thomas W. Emerson Co., Boston, Mass.		
1143	Emseco All Use Fertilizer 7-7-7	Branford
General Chemical Co., Mechling Products Division, Camden, N. J.		
768	Veget-Aid 5-10-4	Greenwich
Goulard & Olena, Inc., New York, N. Y.		
676	G & O Lawn, Garden and Flower 5-8-5	New Britain
1118	G & O Lawn, Garden and Flower 5-8-5	New Britain
677	J-B Golf Green 10-4-3	New Britain
Greenlands Services, Inc., Concord, N. H.		
1121	Fertilizer for Lawns and Grass 6-8-6	Hartford
1120	Fertilizer for Rhododendrons 4-6-4	Hartford
Killen & Hall, Inc., Darien, Conn.		
888	Killen and Hall Tree Food 8-5-2	Darien
McArdle's Seed Store, Greenwich, Conn.		
767	McArdle's Special Fertilizer 6-5-3	Greenwich

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

In nit at s	Nitrogen				Phosphoric acid			Potash		St tion No.
	In an monia	Organic water-soluble	Organic water-insoluble	Total	Ci ra e-i soluble	Total	So-called (availabl)	As muri te	T tal	
%	%	%	%	%	%	%	%	%	%	
1.13	9.94	0.18	0.95	12.20	0.31	4.91	4.60	2.65	4.00	886
.....	.....	.....	.....	.....	0.49	19.21	18.72	22.83	22.83	925
1.15	3.00	0.22	0.11	4.48	0.73	15.40	14.67	23.38	23.38	522
0.67	4.26	0.32	0.21	5.46	0.50	11.00	10.50	10.45	10.45	395
0.00	3.46	1.35	0.22	5.03	0.71	16.01	15.30	5.33	6.02	396
1.43	5.22	0.26	0.20	7.11	0.38	8.20	7.82	7.77	7.77	397
0.62	0.72	2.58	3.37	8.29	0.41	5.74	5.33	0.70	8.76	803
1.73	6.10	0.18	0.25	8.26	0.46	16.40	15.94	8.46	8.46	924
1.06	6.92	0.04	0.17	8.19	0.37	16.69	16.32	16.81	16.81	398
0.00	5.34	2.46	0.20	8.00	0.83	26.19	25.36	8.15	8.15	393
2.11	7.78	0.06	0.23	10.18	0.25	6.49	6.24	3.55	5.39	926
2.12	7.30	0.28	0.23	9.93	0.25	11.29	11.04	10.31	10.31	394
1.53	4.46	0.50	0.31	6.80	0.33	7.31	6.98	7.23	7.75	1143
0.81	4.64	0.36	0.37	6.18	0.65	11.46	10.81	0.82	4.83	768
0.51	3.40	0.16	0.65	4.72	0.75	7.77	7.02	5.21	5.21	676
0.77	3.46	0.14	0.58	4.95	0.76	8.96	8.20	5.22	5.22	1118
0.31	1.64	1.24	6.31	9.50	1.94	7.63	5.69	3.91	3.91	677
3.78	0.52	0.26	1.86	6.42	0.47	9.15	8.68	6.28	6.28	1121
0.00	1.60	0.31	2.85	4.76	0.39	8.00	7.61	4.78	5.43	1120
0.00	2.46	2.26	3.91	8.63	0.49	6.35	5.86	1.22	2.03	888
0.62	1.50	1.30	3.34	6.76	0.19	6.83	6.64	3.64	4.26	767

TABLE 8. ANALYSES OF MIXED FERTILIZER

Station No.	Manufacturer and Brand	Place of sampling
Old Deerfield Fertilizer Co., Inc., South Deerfield, Mass.		
897	Old Deerfield 5-5-15 Tobacco Starter, Bone and Potash	Suffield
851	Old Deerfield 5-8-7 + 2	Simsbury
	(Potash other than Muriate)	
Olds & Whipple, Inc., Hartford, Conn.		
515	O&W 3-10-4 Corn Special Fertilizer	East Hartford
489	O&W 4-8-4 Market Garden Fertilizer	East Hartford
492	O&W 5-3-5 Complete Tobacco Fertilizer ...	East Hartford
494	O&W 5-5-15 High Grade Tobacco Starter and Potash Compound	East Hartford
490	O&W 5-8-7 Potato and General Purpose Fertilizer	East Hartford
805	O&W 5-10-10 Fertilizer	East Hartford
514	O&W 6-3-5 Blue Label Tobacco Fertilizer ...	East Hartford
	(Potash derived from Cottonhull Ashes)	
512	O&W 6-3-6 Blue Label Tobacco Fertilizer ...	East Hartford
511	O&W 6-3-6 Blue Label Tobacco Fertilizer ...	East Hartford
	(Potash derived from Cottonhull Ashes)	
493	O&W 6-3-7 Special Tobacco Fertilizer	East Hartford
379 ¹	O&W 7-6-6 Fertilizer	Portland
491	O&W 7-7-7 Top Dressing and Grass Fertilizer	East Hartford
Outpost Nurseries, Inc., Ridgefield, Conn.		
923	Outpost Plant Food 8-5-2	Ridgefield
Plantspur Products Co., Ridgefield, N. J.		
861	Plantspur Fertilizer 3-3-2	New Haven
Frank S. Platt Co., New Haven, Conn.		
444	Platco 5-8-7 Fertilizer	New Haven
445	Platt's 10-5-5 Lawn Fertilizer	New Haven
The Rogers & Hubbard Co., Portland, Conn.		
743	Hubbard's All Soils Fertilizer 4-8-4	Portland
841	Hubbard's Climax Tobacco Fertilizer 5-3-5 ...	Portland
400	Hubbard's Corn Fertilizer 4-8-7	Portland
1039	Hubbard's Corn Fertilizer 4-8-7	Portland
671	Hubbard's Corn and Grain Fertilizer 3-10-4 ...	New Britain

¹State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Nitrogen					Phosphoric acid			Potash		Station No.
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citra e-insol ble	Total	So-called (available)	As muriate	Total	
%	%	%	%	%	%	%	%	%	%	
0.83	0.90	2.30	1.47	5.50	0.51	7.65	7.14	1.48	15.97	897
0.77	1.88	1.76	0.80	5.21	0.50	10.50	10.00	1.33	8.08	851
0.25	2.22	0.14	0.97	3.58	0.58	11.27	10.69	4.31	4.31	515
0.47	2.88	0.26	0.63	4.24	0.27	8.97	8.70	4.33	4.33	489
0.65	0.04	1.20	3.40	5.29	0.35	4.40	4.05	0.44	5.71	492
1.95	0.08	2.08	1.60	5.71	0.45	6.74	6.29	0.80	15.31	494
0.54	3.22	0.58	0.98	5.32	0.36	8.66	8.30	7.37	7.37	490
1.04	1.78	2.04	1.27	6.13	0.19	11.66	11.47	11.38	14.35	805
0.82	0.06	2.38	3.33	6.59	0.28	4.31	4.03	0.68	6.50	514
0.76	0.02	1.68	3.94	6.40	0.29	4.37	4.08	0.39	6.76	512
0.85	0.10	1.96	3.54	6.45	0.30	4.65	4.35	0.52	6.86	511
0.61	0.04	1.64	4.04	6.33	0.35	4.12	3.77	0.40	7.47	493
0.63	3.02	2.38	1.23	7.26	0.27	6.72	6.45	6.35	6.35	379
2.98	3.38	0.30	0.87	7.53	0.13	8.04	7.91	7.64	7.64	491
0.20	2.18	2.54	3.79	8.71	0.69	6.50	5.81	1.26	2.03	923
0.00	2.88	0.04	0.47	3.39	0.23	3.64	3.41	1.38	1.38	861
0.69	3.62	0.66	0.11	5.08	0.40	8.91	8.51	7.17	7.17	444
0.00	4.34	3.13	2.76	10.23	0.48	6.83	6.35	5.58	5.58	445
0.47	1.70	1.54	0.69	4.40	0.78	8.87	8.09	4.17	4.17	743
0.45	0.56	1.00	3.25	5.26	0.51	3.96	3.45	0.32	5.74	841
0.00	2.00	0.80	1.54	4.34	0.75	9.31	8.56	7.20	7.20	400
0.40	1.58	1.21	1.43	4.62	0.70	9.17	8.47	8.14	8.14	1039
0.49	2.12	0.20	0.77	3.58	0.80	10.91	10.11	4.72	4.72	671

TABLE 8. ANALYSES OF MIXED FERTILIZER

Station No.	Manufacturer and Brand	Place of sampling
732	Hubbard's Fruit Fertilizer 8-8-8	Portland
744	Hubbard's Golf Course Fertilizer 8-6-2	Portland
747	Hubbard's Gro-Fast Fertilizer 5-8-6	Portland
402	Hubbard's High Potash Fertilizer 4-8-10	Portland
1040	Hubbard's Mus-Gro 4-14-0	Portland
381	Hubbard's Potato Fertilizer 5-8-7	Portland
759	Hubbard's Seeding Fertilizer	Portland
840	Hubbard's Tobacco Grower 6-3-6	Portland
746	Hubbard's Top Dressing	Portland
842	Hubbard's Vegetable Manure	Portland
380	Red H Brand 4-8-4	Portland
1038	Red H Brand 4-8-7	Portland
384	Red H Brand 4-8-10	Portland
383	Red H Brand 5-8-7	Portland
760	Red H Brand 5-10-10	Portland
745	Red H Brand 7-6-6	Portland
844	Red H Brand 7-7-7	Portland
382	Red H Brand 8-16-14	Portland
O. M. Scott & Sons Co., Marysville, Ohio		
673	Scott's Turf Builder 10-6-4	New Britain
M. L. Shoemaker Co., Inc., Philadelphia, Pa.		
833	Shoemaker's "Swift Sure" 4-10-0 Tobacco Starter	Granby
Stumpp & Walter Co., New York, N. Y.		
879	Sawco Emerald Grass Fertilizer 5-7-3	Stamford
881	Sawco General Garden Fertilizer 5-10-5	Stamford
885	Sawco Rose Food 3-4-2	Stamford
Summers Fertilizer Co., Inc., Baltimore, Md.		
487	Summer's Fertilizer 8-5-2	Bridgeport
Swift & Co. Fertilizer Works, Baltimore, Md.		
678	Vigoro 4-12-4	New Britain
Tennessee Corp., Lockland, Ohio		
781	Loma (5-10-4)	Greenwich

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

In nitrate	Nitrogen				Phosphoric acid			Potash		Station No.
	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called (available)	As muriate	Total	
%	%	%	%	%	%	%	%	%	%	
2.23	5.54	0.18	0.16	8.11	0.35	9.00	8.65	6.38	8.12	732
0.00	2.86	3.20	2.94	9.00	0.17	7.05	6.88	2.15	2.61	744
0.00	2.58	0.55	2.37	5.50	0.24	8.92	8.68	4.98	6.00	747
0.87	1.66	1.58	0.62	4.73	0.68	8.89	8.21	9.52	9.52	402
0.60	1.98	1.22	1.00	4.80	4.37	16.97	12.60	....	....	1040
0.19	1.92	1.84	1.22	5.17	0.47	9.07	8.60	6.92	6.92	381
0.00	1.32	0.37	1.63	3.32	1.95	10.96	9.01	6.17	6.17	759
1.01	0.72	1.34	3.18	6.25	0.34	4.11	3.77	0.60	6.39	840
7.52	0.10	0.28	0.44	8.24	0.60	7.39	6.79	8.17	8.17	746
0.72	1.84	1.04	1.20	4.80	0.91	10.79	9.88	1.66	9.60	842
0.48	2.78	0.66	0.39	4.31	0.44	9.85	9.41	4.44	4.44	380
0.63	2.62	0.56	0.49	4.30	0.74	9.37	8.63	7.04	7.04	1038
0.27	2.58	0.74	0.47	4.06	0.40	8.96	8.56	10.43	10.43	384
0.58	3.72	0.68	0.42	5.40	0.32	8.93	8.61	7.56	7.56	383
0.65	3.66	0.74	0.53	5.58	0.30	10.78	10.48	10.64	10.64	760
0.23	5.92	0.36	0.49	7.00	0.15	6.71	6.56	5.92	5.92	745
0.45	3.56	2.20	0.44	6.65	0.18	8.25	8.07	6.81	6.81	844
0.26	5.96	1.96	0.20	8.38	0.30	16.32	16.02	13.36	13.36	382
0.10	6.16	0.62	3.40	10.28	0.15	5.95	5.80	3.39	4.44	673
0.77	2.26	0.16	0.75	3.94	1.87	12.50	10.63	....	....	833
0.47	2.56	1.02	1.11	5.16	1.42	8.59	7.17	3.36	3.36	879
0.79	4.04	0.05	0.37	5.25	0.81	11.25	10.44	4.96	4.96	881
0.11	0.26	0.62	2.88	3.87	4.94	13.61	8.67	2.71	2.71	885
0.14	3.88	3.20	1.28	8.50	0.58	5.26	4.68	1.58	2.15	487
0.32	3.50	0.20	0.18	4.20	0.77	12.77	12.00	4.15	4.15	678
0.32	3.92	0.16	0.60	5.00	0.45	10.63	10.18	4.11	4.11	781

TABLE 8. ANALYSES OF MIXED FERTILIZER

St u No.	Manufacturer and Brand	Place of sampling
I. P. Thomas & Son Co., Camden, N. J.		
446	I. P. Thomas 3-10-6	Hamden
680	I. P. Thomas 5-8-7	Wallingford
F. H. Woodruff & Sons, Inc., Milford, Conn.		
333	Gro-Sod Lawn Food 10-6-4	Milford
Woodruff Fertilizer Works, Inc., Orange, Conn.		
338	Woodruff's Big Crop Fertilizer 5-8-7	Orange
819	Woodruff's Corn Fertilizer 4-16-4	Orange
339	Woodruff's Double Strength 8-16-16	Orange
681	Woodruff's Market Garden Fertilizer 4-8-4 ...	North Haven
337	Woodruff's Top Dresser 7-6-6	Orange
820	Woodruff's 3-10-6 Fertilizer	Orange
488	Woodruff's Yankee Special Fertilizer 5-10-5 ..	Orange

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

I nit at s	Nitrogen				Phosphoric acid			Potash		St tion No.
	In amm nia	Organic water- l ble	Organic water-insoluble	To l	Citra c-ins l ble	Total	So-called (available)	As mu i te	Total	
%	%	%	%	%	%	%	%	%	%	
0.18	1.88	1.06	0.31	3.43	1.24	10.89	9.65	6.32	6.32	446
0.36	3.78	0.44	0.42	5.00	0.68	8.68	8.00	7.16	7.16	680
0.20	5.16	3.26	1.80	10.42	0.24	6.34	6.10	4.31	4.31	333
0.74	2.46	0.56	1.06	4.82	0.52	8.49	7.97	7.09	7.09	338
1.12	2.26	0.14	0.65	4.17	0.85	17.16	16.31	4.18	4.18	819
0.00	3.04	4.33	0.63	8.00	0.68	16.74	16.06	15.78	15.78	339
0.65	2.46	0.20	0.68	3.99	0.51	8.60	8.09	4.33	4.33	681
0.93	4.46	0.46	0.71	6.56	0.33	6.16	5.83	7.08	7.08	337
0.00	2.30	0.15	0.65	3.10	0.76	11.09	10.33	6.59	6.59	820
0.64	2.92	0.34	1.12	5.02	0.66	10.84	10.18	5.73	5.73	488

TABLE 8a. CHEMICAL DEFICIENCIES

Manufacturer or Dealer	Number of amples	Number of guara ties	Deficiencies in			
			Nitrogen	Available P ₂ O ₅	Pot sh	T t 1
Acme Guano Co., The	10	30	3	3	1	7
American Agricultural Chemical Co.	20	60	2	1	3	6
Apothecaries Hall Co.	18	53	1	1	1	3
Armour Fertilizer Works	11	33	2	0	2	4
Associated Seed Growers, Inc.	1	3	1	0	0	1
Bartlett, F. A., Tree Expert Co., Inc.	1	3	0	0	0	0
Baugh & Sons Co., The	8	24	1	0	2	3
Berkshire Chemical Co.	19	57	1	1	1	3
Connecticut Toro Co.	1	3	1	0	0	1
Consolidated Rendering Co.	14	42	2	2	0	4
Davey Tree Expert Co., The	1	3	0	0	0	0
Eastern States Farmers' Exchange.	11	33	0	2	0	2
Emerson, Thos. W., Co.	1	3	1	0	0	1
General Chemical Co., Mechling Products Div.	1	3	0	0	0	0
Goulard & Olena, Inc.	3	9	2	1	0	3
Greenlands Services, Inc.	2	6	0	0	0	0
Killan & Hall, Inc.	1	3	0	0	0	0
McArdle's Seed Store	1	3	0	0	0	0
Old Deerfield Fertilizer Co., Inc. ..	2	6	0	0	0	0
Olds & Whipple, Inc.	12	36	0	0	0	0
Outpost Nurseries, Inc.	1	3	0	0	0	0
Plantspur Products Co.	1	3	0	0	1	1
Platt, Frank S., Co.	2	6	0	0	0	0
Rogers & Hubbard Co., The	23	69	2	1	3	6
Scott, O. M. & Sons Co.	1	3	0	0	0	0
Shoemaker, M. L. Co.	1	2	0	0	0	0
Stumpp & Walter Co.	3	9	0	0	0	0
Summers Fertilizer Co., Inc.	1	3	0	1	0	1
Swift & Co., Fertilizer Works	1	3	0	0	0	0
Tennessee Corp.	1	3	0	0	0	0
Thomas, I. P., & Son Co.	2	6	0	1	0	1
Woodruff, F. H., & Sons, Inc.	1	3	0	0	0	0
Woodruff Fertilizer Works, Inc., The	7	21	2	0	1	3
	<u>183</u>	<u>547</u>	<u>21</u>	<u>14</u>	<u>15</u>	<u>50</u>

TABLE 9. ANALYSES OF SPECIAL AND HOME MIXTURES

Station No.	Name of Mixture	Sampled or submitted by	Total nitrogen	Phosphoric acid			Potash			Station No.
				Citrate-insoluble	Total	So-called (available)	As muriate	Total	Chlorine	
			%	%	%	%	%	%		
1013	Fertilizer Sample X	Bloomfield: American Sumatra Tobacco Corp.	5.90	0.36	4.14	3.78	0.58	7.21	0.44	1013
107	Formula C—Welch Division ..	Bloomfield: American Sumatra Tobacco Corp.	5.59	0.28	3.70	3.42	0.48	8.29	0.36	107
108	Formula C—Sanford Division..	Bloomfield: American Sumatra Tobacco Corp.	5.65	0.25	3.83	3.58	0.45	7.94	0.34	108
9995	Fertilizer 1941 Formula A HU	Hartford: Consolidated Cigar Corp.	6.00	0.50	3.95	3.45	0.31	6.78	0.23	9995
9996	Fertilizer Formula 1941 A P...	Hartford: Consolidated Cigar Corp.	6.04	0.40	3.90	3.50	0.31	7.93	0.23	9996
9997	Fertilizer 1941 Formula A with 1940 A	Hartford: Consolidated Cigar Corp.	6.00	0.58	3.95	3.37	0.35	6.77	0.26	9997
109	Fertilizer 1941 Formula B with 1940 B P	Hartford: Consolidated Cigar Corp.	6.11	0.33	3.55	3.22	0.35	6.49	0.26	109
435	Fertilizer Formula B Gn. Cono. 1941	Hartford: Consolidated Cigar Corp.	5.92	0.25	3.29	3.04	0.47	6.22	0.35	435
436	Fertilizer Formula A M 1941...	Hartford: Consolidated Cigar Corp.	5.75	0.21	3.82	3.61	0.65	7.19	0.49	436
437	Fertilizer Formula B Gr. 1941..	Hartford: Consolidated Cigar Corp.	6.25	0.30	3.51	3.21	0.53	5.97	0.40	437
438	Fertilizer Formula A Gr. 1941..	Hartford: Consolidated Cigar Corp.	6.03	0.40	4.31	3.91	0.70	7.79	0.53	438
439	Fertilizer Formula B M 1941...	Hartford: Consolidated Cigar Corp.	5.78	0.28	3.43	3.15	0.48	6.41	0.36	439
440	Fertilizer Formula A De 1941..	Hartford: Consolidated Cigar Corp.	6.16	0.27	3.85	3.58	0.56	8.12	0.42	440
441	Fertilizer Dee 40-41B 1941	Hartford: Consolidated Cigar Corp.	5.76	0.25	3.40	3.15	0.56	5.93	0.42	441
442	Fertilizer Formula B Dee 1941..	Hartford: Consolidated Cigar Corp.	5.88	0.21	3.29	3.08	0.58	6.33	0.44	442
443	Fertilizer Formula C M 1941...	Hartford: Consolidated Cigar Corp.	7.69	0.35	4.26	3.91	0.25	1.54	0.19	443
214	Home Mixed Fertilizer Formula 3-S-3-41	Simsbury: Cullman Bros., Inc.	4.72	0.29	4.41	4.12	0.68	6.23	0.51	214

Analyses

TABLE 9. ANALYSES OF SPECIAL AND HOME MIXTURES—Continued

Station No.	Name of Mixture	Sampled or submitted by	Total nitrogen	Phosphoric acid			Potash			Station No.
				Citric acid soluble	Total	So-called (available)	As muriate	Total	Chlorine	
			%	%	%	%	%	%	%	
230	Home Mixed Fertilizer Formula 2-KS-4-41	Simsbury: Cullman Bros., Inc.	4.28	0.33	6.07	5.74	1.24	10.64	0.93	230
231	Home Mixed Fertilizer Formula 2-K-5-41	Simsbury: Cullman Bros., Inc.	5.00	0.34	4.78	4.44	1.08	8.53	0.81	231
232	Home Mixed Fertilizer Formula 2-KW-4-41	Simsbury: Cullman Bros., Inc.	4.24	0.27	18.31	18.04	0.27	1.24	0.20	232
233	Home Mixed Fertilizer Formula 2-KS-4-41-X	Simsbury: Cullman Bros., Inc.	5.92	0.20	6.09	5.89	0.69	5.31	0.52	233
234	Home Mixed Fertilizer Formula 4-2-41	Simsbury: Cullman Bros., Inc.	6.57	0.84	4.11	3.27	0.52	6.40	0.39	234
347	Home Mixed Fertilizer Formula 5-4-41	Simsbury: Cullman Bros., Inc.	3.88	0.28	4.15	3.87	1.37	12.36	1.03	347
348	Home Mixed Fertilizer Formula 5-3-41	Simsbury: Cullman Bros., Inc.	4.37	0.26	4.96	4.70	1.00	8.74	0.75	348
349	Home Mixed Fertilizer Formula 5-6-41	Simsbury: Cullman Bros., Inc.	5.00	0.16	4.33	4.17	1.00	8.38	0.75	349
350	Home Mixed Fertilizer Formula 5-8-41	Simsbury: Cullman Bros., Inc.	4.94	0.30	4.83	4.53	0.74	6.72	0.56	350
351	Home Mixed Fertilizer Formula 2-SJ-41	Simsbury: Cullman Bros., Inc.	4.88	0.26	6.11	5.85	0.93	8.25	0.70	351
352	Home Mixed Fertilizer Formula 2-N-1-41	Simsbury: Cullman Bros., Inc.	5.10	0.34	6.83	6.49	0.70	6.36	0.53	352
353	Home Mixed Fertilizer Formula 5-5-41	Simsbury: Cullman Bros., Inc.	5.43	0.21	5.12	4.91	0.78	6.59	0.59	353

354	Home Mixed Fertilizer Formula 4-3-41	Simsbury: Cullman Bros., Inc.	6.53	0.21	4.14	3.93	0.32	4.78	0.24	354
355	Home Mixed Fertilizer Formula 3-H-1-41	Simsbury: Cullman Bros., Inc.	5.46	0.28	5.22	4.94	0.45	5.22	0.34	355
603	Home Mixed Fertilizer Formula 2-H-2-41	Simsbury: Cullman Bros., Inc.	5.27	0.33	6.44	6.11	0.72	7.67	0.54	603
604	Home Mixed Fertilizer Formula 2-N-2-41	Simsbury: Cullman Bros., Inc.	4.65	0.27	5.21	4.94	0.85	5.35	0.64	604
605	Home Mixed Fertilizer Formula 2-N-3-41	Simsbury: Cullman Bros., Inc.	5.16	0.32	5.26	4.94	0.88	9.11	0.66	605
606	Home Mixed Fertilizer Formula 2-HAL-3-41	Simsbury: Cullman Bros., Inc.	5.09	0.29	5.20	4.91	0.65	6.14	0.49	606
607	Home Mixed Fertilizer Formula 2-H-1-41	Simsbury: Cullman Bros., Inc.	5.35	0.31	6.00	5.69	0.90	6.18	0.68	607
608	Home Mixed Fertilizer Formula 1-A-6-41	Simsbury: Cullman Bros., Inc.	5.84	0.28	4.35	4.07	0.47	4.78	0.35	608
609	Home Mixed Fertilizer Formula 1-A-7-41	Simsbury: Cullman Bros., Inc.	6.11	0.25	4.04	3.79	0.68	6.18	0.51	609
610	Home Mixed Fertilizer Formula 1-A-8-41	Simsbury: Cullman Bros., Inc.	6.19	0.25	4.22	3.97	0.60	5.84	0.45	610
611	Home Mixed Fertilizer Formula 1-A-4-41	Simsbury: Cullman Bros., Inc.	4.94	0.26	6.04	5.78	0.68	4.95	0.51	611
612	Home Mixed Fertilizer Formula 1-A-5-41	Simsbury: Cullman Bros., Inc.	5.64	0.25	4.96	4.71	0.40	6.22	0.30	612

Analyses

TABLE 9. ANALYSES OF SPECIAL AND HOME MIXTURES—Continued

Station No.	Name of Mixture	Sampled or submitted by	Total nitrogen	Phosphoric acid			Potash			No.
				Citrate-in table	Total	So-called (available)	A urite	Total	Chlorine	
613	Home Mixed Fertilizer Formula 1-A-3-41	Simsbury: Cullman Bros., Inc.	4.73	0.28	7.32	7.04	0.43	6.25	0.32	613
616	Home Mixed Fertilizer Formula 2-H1A-41	Simsbury: Cullman Bros., Inc.	4.59	0.26	5.79	5.53	0.56	6.66	0.42	616
617	Home Mixed Fertilizer Formula 2-LB-41	Simsbury: Cullman Bros., Inc.	4.71	0.26	4.76	4.50	0.52	6.88	0.39	617
630	Home Mixed Fertilizer Formula 4-6-41	Simsbury: Cullman Bros., Inc.	6.17	0.27	4.52	4.25	0.24	6.67	0.18	630
631	Home Mixed Fertilizer Formula 1-SH-41	Simsbury: Cullman Bros., Inc.	4.69	0.29	5.03	4.74	0.24	7.58	0.18	631
632	Home Mixed Fertilizer 1-B-3-41	Simsbury: Cullman Bros., Inc.	5.34	0.20	5.15	4.95	0.20	5.74	0.15	632
633	Home Mixed Fertilizer 1-MOS-2-41	Simsbury: Cullman Bros., Inc.	4.72	0.34	6.41	6.07	0.27	8.64	0.20	633
634	Home Mixed Fertilizer 1-M-1-41	Simsbury: Cullman Bros., Inc.	5.20	0.20	4.69	4.49	0.36	7.47	0.27	634
722	Home Mixed Fertilizer Formula 1-PAST-41	Simsbury: Cullman Bros., Inc.	5.32	0.36	5.72	5.36	0.47	5.74	0.35	722
723	Home Mixed Fertilizer Formula 1-B-2-41	Simsbury: Cullman Bros., Inc.	4.91	0.28	4.88	4.60	0.70	7.00	0.53	723
724	Home Mixed Fertilizer Formula 1-B-4-41	Simsbury: Cullman Bros., Inc.	5.37	0.35	5.80	5.45	0.51	5.58	0.38	724
725	Home Mixed Fertilizer Formula 1-MC-1-41	Simsbury: Cullman Bros., Inc.	5.55	0.28	4.26	3.98	0.32	3.44	0.24	725

860	Home Mixed Fertilizer Formula 3-H-3-41	Simsbury: Cullman Bros., Inc.	5.52	0.23	4.23	4.00	0.62	5.67	0.47	860
615	5-8-7 Mixture from O. D. Fertilizer Co., Inc.	Simsbury: Cullman Bros., Inc.	5.50	0.50	10.31	9.81	0.56	7.90	0.42	615
614	Special Potato Mixture with Sulphate of Potash (Apothecaries Hall)	Simsbury: Cullman Bros., Inc. ..	5.48	0.32	9.44	9.12	0.40	11.56	0.30	614
757	Special Potato Mixture with Sulphate of Potash (Apothecaries Hall)	Simsbury: Cullman Bros., Inc.	5.44	0.15	9.15	9.00	0.62	10.85	0.47	757
967	Home Mixed Fertilizer No. 1..	Marion: Daigle Bros.	6.61	0.32	11.86	11.54	11.63	11.63	...	967
968	Home Mixed Fertilizer No. 2..	Marion: Daigle Bros.	6.53	0.35	12.25	11.90	10.94	10.94	...	968
969	Home Mixed Fertilizer No. 3..	Marion: Daigle Bros.	7.11	0.33	12.16	11.83	9.91	9.91	...	969
369	Mixed Fertilizer, Formula 41-B No. 31 Hazardville Farm	Hartford: L. B. Haas & Co., Inc...	6.35	0.21	4.78	4.57	0.70	6.43	0.53	369
370	Mixed Fertilizer, Formula 41-A No. 32 Hazardville Farm	Hartford: L. B. Haas & Co., Inc...	6.32	0.33	4.80	4.47	0.76	6.67	0.57	370
371	Mixed Fertilizer, Formula 41-B No. 33 Hazardville Farm	Hartford: L. B. Haas & Co., Inc...	6.26	0.18	4.87	4.69	0.72	6.32	0.54	371
372	Mixed Fertilizer, Formula 41-A No. 34 Hazardville Farm	Hartford: L. B. Haas & Co., Inc...	6.31	0.25	4.88	4.63	0.66	6.61	0.50	372
373	Mixed Fertilizer (with Lime) No. 35 — Huntington Bros., Windsor, Conn.	Hartford: L. B. Haas & Co., Inc...	6.19	0.21	5.17	4.96	0.68	6.47	0.51	373

Analyses

¹Sampled by Station Agent.

TABLE 9. ANALYSES OF SPECIAL AND HOME MIXTURES—(Concluded)

Station No.	Name of Mixture	Sampled or submitted by	Total nitrogen	Phosphoric acid			Potash			Station No.
				Citrate-insoluble	Total	So-called (available)	As muriate	Total	Chlorine	
			%	%	%	%	%	%		
374	Mixed Fertilizer No. 36—Huntington Bros., Windsor, Conn.	Hartford: L. B. Haas & Co., Inc...	6.53	0.25	5.66	5.41	0.72	6.71	0.54	374
8769	Fertilizer Mixture	So. Windsor: Leslie W. Newberry	5.86	0.53	8.40	7.87	0.31	9.37	0.23	8769
637 ¹	Tobacco Mixture	So. Windsor: Leslie W. Newberry	7.00	0.21	2.51	2.30	0.51	9.38	0.39	637
164	Fertilizer, 1941 Formula A — 2nd P	Hartford: Silberman & Kahn Corp.	6.12	0.25	3.91	3.66	0.37	7.93	0.28	164
165	Fertilizer, 1941 Formula—B. P.	Hartford: Silberman & Kahn Corp.	6.00	0.25	3.58	3.33	0.47	7.06	0.35	165
166	Fertilizer, 1941 Formula — B.H. B + C	Hartford: Silberman & Kahn Corp.	6.10	0.21	3.74	3.53	0.64	6.42	0.48	166
638	Home Mixed Fertilizer, 1941 Formula A — Dee	Hartford: Silberman & Kahn Corp.	6.08	0.20	3.75	3.55	0.31	6.99	0.23	638
639	Home Mixed Fertilizer, 1941 Formula A — With 40 A	Hartford: Silberman & Kahn Corp.	5.95	0.26	3.90	3.64	0.31	6.51	0.23	639
90	8-4-8 Tobacco Fertilizer Mixture (Apothecaries Hall)	Windsor: Tobacco Station Dr. T. R. Swanback	8.50	0.35	6.03	5.68	0.54	8.77	0.41	90

¹Calcium (CaO) 6.65%; magnesium (MgO) 3.82%.

TABLE 10. ANALYSES OF SHEEP MANURE, ETC.

Station No.	Manufacturer and Brand	Place of sampling	Nitrogen		Total phosphoric acid		Potash		Station No.
			Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	
449	Pulverized Sheep and Goat Manure. American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	%	%	%	%	%	%	449
429	Sheep Manure. Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	1.36	1.25	1.91	1.00	2.79	2.00	449
807	Armour's Sheep and Goat Manure. Armour Fertilizer Works, New York, N. Y.	East Windsor Hill: David J. Ahern	1.44	1.25	2.21	1.00	5.85	2.00	807
921	Driconure. Atkins & Durbrow, Inc., New York, N. Y.	New Canaan: Clapboard Hill Co. ..	2.22	2.00	3.03	....¹	1.39	1.00	921
539	Berkshire Sheep and Goat Manure. Berkshire Chemical Co., Bridgeport, Conn.	Danbury: Benjamin Grain Co.	1.43	1.25	2.54	1.00	3.10	2.00	539
377	Corenco Sheep Manure. Consolidated Rendering Co., Boston, Mass.	Branford: Collins & Freeman	1.83	1.25	1.50	1.00	2.97	2.00	377
887	Davey Shredded Cattle Manure. The Davey Tree Expert Co., Kent, Ohio	Old Greenwich: The Davey Tree Expert Co.	2.28	1.00	2.44	....²	2.26	2.00	887
675	G & O Sheep Manure. Goulard & Olena, Inc., New York, N. Y.	New Britain: Rackliffe Bros., Inc. .	2.00	1.00	3.76	....³	3.62	2.00	675
692	Wizard Brand Cow Manure. The Pulverized Manure Co., Chicago, Ill.	New London: Aben Hardware Co.	2.20	2.00	1.53	....⁴	2.20	1.00	692

¹Guaranteed "available" phosphoric acid 1.00%; found 2.75%.²Guaranteed "available" phosphoric acid 1.00%; found 2.17%.³Guaranteed "available" phosphoric acid 1.00%; found 2.53%.⁴Guaranteed "available" phosphoric acid 1.00%; found 1.22%.

TABLE 10. ANALYSES OF SHEEP MANURE, ETC.— (Concluded)

Station No.	Manufacturer and Brand	Place of sampling	Nitrogen		Total phosphoric acid		Potash		Station No.
			Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	
693	Wizard Brand Pulverized Sheep Manure. The Pulverized Manure Co., Chicago, Ill.	New London: Aben Hardware Co.	%	%	%	%	%	%	693
742	Hubbard's Sheep and Goat Manure. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	2.05	2.00	1.85	....⁵	3.13	2.00	742
884	Sawco Cattle Manure. Stumpp & Walter Co., New York, N. Y.	Stamford: Stumpp & Walter Co. ...	1.61	1.25	2.30	1.00	3.70	2.00	884
882	Sawconure. Stumpp & Walter Co., New York, N. Y.	Stamford: Stumpp & Walter Co. ...	2.24	1.80	2.20	1.00	1.78	1.00	882
883	Sawco Pulverized Sheep Manure. Stumpp & Walter Co., New York, N. Y.	Stamford: Stumpp & Walter Co. ...	2.48	3.00	2.72	....⁶	1.30	1.00	883
690	Swift's Sheep Manure. Swift & Co. Fertilizer Works, Baltimore, Md. ...	New London: G. M. Williams	2.50	2.00	1.59	....⁷	2.53	2.00	690
691	Bovung (Dehydrated Cow Manure). Walker-Gordon Laboratory Co., Inc., Plainsboro, N. J.	New London: G. M. Williams	2.10	1.85	1.60	1.00	3.10	1.75	691
			2.06	2.00	2.58	2.00	2.40	2.00	691

⁵Guaranteed "available" phosphoric acid 1.00%; found 1.58%.

⁶Guaranteed "available" phosphoric acid 1.00%; found 2.49%.

⁷Guaranteed "available" phosphoric acid 1.00%; found 1.37%.

TABLE 11. ANALYSES OF LIMESTONE AND SIMILAR MATERIALS

Station No.	Manufacturer and Brand	Sampled from stock of or sent by	Chemical analysis				Total oxides	Mechanical analysis		Station No.
			Lime (CaO)		Magnesia (MgO)			20 ne 1	100 mesh	
			Fo nd	Guarante e	Fo nd	Guarante e				
	Sampled by Station Agent		%	%	%	%	%	%		
253	Coe Lime Works, Durham, Conn. Agricultural Limestone	Cheshire: Connecticut Reformatory	50.35	....	0.99	....	51.34	94.5	41.0	253
741	New England Lime Co., Adams, Mass. Agricultural Limestone	East Hartford: John M. Herr	30.60	30.00	21.54	21.00	52.14	100.0	95.0	741
346	U. S. Gypsum Co., Falls Village, Conn. Agricultural Limestone	Manchester: C. R. Burr & Co.	30.44	30.00	20.97	20.00	51.41	100.0	45.8	346
	Sampled by purchaser or manufacturer									
8397	American Limestone Quarry Corp., Wingdale, N. Y. Ground Limestone	Hartford: Agricultural Conservation Program	30.33	30.00	21.89	20.00	52.22	100.0	78.6	8397
957	Ground Limestone	Hartford: Agricultural Conservation Program	30.32	30.30	21.76	21.50	52.08	100.0	...	957
958	Ground Limestone	Hartford: Agricultural Conservation Program	30.32	30.30	21.71	21.50	52.03	100.0	...	958
959	Ground Limestone	Hartford: Agricultural Conservation Program	30.37	30.30	21.92	21.50	52.29	100.0	...	959

Analyses

TABLE 11. ANALYSES OF LIMESTONE AND SIMILAR MATERIALS—*Continued*

No.	Manufacturer and Brand	Sampled from stock of or sent by	Chemical analysis				Total oxides	Mechanical analysis		Station No.
			Lime (CaO)		Magnesia (MgO)			20 mesh	100 mesh	
			Found	Guaranteed	Found	Guaranteed				
	Coe Lime Works, Durham, Conn.		%	%	%	%	%	%		
8731	Limestone	Durham: R. S. Coe	49.39	....	0.83	....	50.22	97.3	53.6	8731
818	Limestone	Durham: R. S. Coe	48.89	....	0.67	....	49.56	96.0	44.0	818
	Conklin Lime Co., Canaan, Conn.									
629	Lime	Hartford: Agricultural Conservation Program	28.61	....	19.88	....	48.49	99.9	58.1	629
954	Ground Limestone	Hartford: Agricultural Conservation Program	29.38	30.00	20.47	21.00	49.85	100.0	...	954
962	Ground Limestone	Hartford: Agricultural Conservation Program	29.88	30.00	20.82	21.00	50.70	....	...	962
	Connecticut Agstone Co., Danbury, Conn.									
8396	Ground Limestone	Hartford: Agricultural Conservation Program	34.39	44.00	9.14	6.00	43.53	93.7	66.2	8396
900	Ground Limestone	Hartford: Agricultural Conservation Program	42.81	42.00	5.49	6.00	48.30	95.5	...	900
901	Ground Limestone	Hartford: Agricultural Conservation Program	42.54	42.00	4.62	6.00	47.16	95.5	...	901
902	Ground Limestone	Hartford: Agricultural Conservation Program	38.35	42.00	7.14	6.00	45.49	92.0	...	902
	Hitchcock Bros., Canaan, Conn.									
8776	Hydrated Lime	Bloomfield: American Sumatra Tobacco Corp.	45.74	....	30.20	....	75.94	....	...	8776
9749	Hydrated Lime	Bloomfield: American Sumatra Tobacco Corp.	46.63	....	32.88	....	79.51	....	...	9749

	Lee Lime Co., Lee, Mass.									
9796	Hydrated Lime	Simsbury: Cullman Bros., Inc.	47.33	....	33.07	....	80.40	....	...	9796
9797	Hydrated Lime	Simsbury: Cullman Bros., Inc.	47.08	....	33.32	....	80.40	....	...	9797
9900	Hydrated Lime	Simsbury: Cullman Bros., Inc.	73.07	70.00	0.81	0.50	73.88	....	...	9900
9899	Lime	Simsbury: Cullman Bros., Inc.	47.95	47.00	33.93	31.00	81.88	....	...	9899
	D. U. Smith, Ashley Falls, Mass.									
8398	Ground Limestone	Hartford: Agricultural Conservation Program	30.64	18.00	21.56	25.00	52.20	100.0	40.7	8398
956	Ground Limestone	Hartford: Agricultural Conservation Program	30.58	30.00	21.60	21.00	52.18	100.0	...	956
960	Ground Limestone	Hartford: Agricultural Conservation Program	30.52	30.00	21.56	21.00	52.08	100.0	...	960
961	Ground Limestone	Hartford: Agricultural Conservation Program	29.82	30.00	20.96	21.00	50.78	100.0	...	961
	U. S. Gypsum Lime Co., Falls Village, Conn.									
8395	Ground Limestone	Hartford: Agricultural Conservation Program	31.22	30.00	20.92	20.00	52.14	100.0	36.6	8395
955	Ground Limestone	Hartford: Agricultural Conservation Program	32.10	30.00	21.02	21.00	53.12	100.0	...	955
1124	Ground Limestone	Falls Village: U. S. Gypsum Co. ...	30.00	....	21.98	....	51.98	100.0	51.3	1124
	Manufacturer Unknown									
7701	Limestone Flour, Frank's	Hartford: Central Connecticut Co-op. Farmers Asso., Inc.	54.25	....	0.51	....	54.76	....	...	7701
7702	Limestone Flour, Bennie's	Hartford: Central Connecticut Co-op. Farmers Asso., Inc.	54.00	....	0.43	....	54.43	....	...	7702

TABLE 11. ANALYSES OF LIMESTONE AND SIMILAR MATERIALS—(Concluded)

Station No.	Manufacturer and Brand	Sampled from stock of or sent by	Chemical analysis				Al- s- ites	Mechanical analysis		Station No.
			Lime (CaO)		Magnesia (MgO)			20 mesh	100 mesh	
			Found	Guarant ed	Found	Guarant ed				
9802	Agricultural Hydrated Lime — Portland Farm	Hartford: Consolidated Cigar Corp.	47.31	....	32.52	....	79.83	....	...	9802
9851	Calcic Lime	Simsbury: Cullman Bros., Inc., Farm No. 2	73.92	....	0.62	....	74.54	....	...	9851
9854	Hydrated Lime	Simsbury: Cullman Bros., Inc., Farm No. 1	73.03	70.00	0.85	0.50	73.88	....	...	9854
9902	Land Plaster — Car Redd. 4720	Simsbury: Cullman Bros., Inc., Farm No. 1	33.41	....	0.23	....	33.64	....	...	9902
1061	Spray Lime	Simsbury: Cullman Bros., Inc., Farm No. 1	71.01	....	0.56	....	71.57	....	...	1061
9843	Lime No. 25	Hartford: L. B. Haas & Co., Inc. ...	46.40	....	32.79	....	79.19	....	...	9843
245	Hydrated Lime	Hartford: The Hartman Tobacco Co., Buckland Farm	47.20	....	32.95	....	80.15	....	...	245
235	Land Plaster	Hartford: The Hatheway-Steane Corp.	33.51	....	0.20	....	33.71	....	...	235
505	Land Plaster	Hartford: A. N. Shepard & Son ...	34.04	....	0.07	....	34.11	....	...	505
503	Hydrated Lime	Hartford: A. N. Shepard & Son ...	46.08	....	31.63	....	77.71	....	...	503
88	Hydrated Magnesium Lime ...	Windsor: Dr. T. R. Swanback, Tobacco Station	37.66	....	26.30	....	63.96	....	...	88
91	Dolomitic Limestone	Windsor: Dr. T. R. Swanback, Tobacco Station	30.44	....	21.59	....	52.03	100.0	56.0	91

TABLE 12. ANALYSES OF MISCELLANEOUS MATERIALS

Station No.	Material	Moisture	Ash	Organic and volatile	Nitrogen	Phosphoric acid	Potash
698-703	Wool Waste, Broad Brook Co., Broad Brook, Conn. ...	%	%	%	%	%	%
	Burr and breast waste ....	....	....	....	8.2	...	...
	Flyings and sweepings ....	....	....	....	8.0	...	...
	Card strippings .....	....	....	....	7.0	...	...
	Fulling mill flocks .....	....	....	....	7.4	...	...
	Dirt from waste duster ....	....	....	....	4.0	...	...
	Shear and napper flocks ...	....	....	....	14.1	...	...
8554	Beetle-ware waste .....	....	....	....	18.98 ¹	...	...
602 ²	Barnyard manure + lime and phosphate	76.2	....	....	0.27	0.34	0.42
7676 ³	Incinerator ash, United Aircraft Co., East Hartford ...	....	....	....	....	0.75	0.49
7641	Maine peat moss, R. Cohen, Hartford	19.61	2.66	77.73	1.27	1.08	0.08
6738	Poultry manure	(dry)	29.14	70.86	3.24	4.35	1.71
8360	Sewage deposit (City of Meriden) No. 1 ..	3.76	63.59	32.65	1.60	0.65	...
8361	Sewage deposit (City of Meriden) No. 2 ..	12.75	43.25	44.00	1.77	0.60	...
8362	Sewage deposit (City of Meriden) No. 3 ..	69.80	9.14	21.06	0.71	0.25	...
903	Sewage sludge (City of Torrington)	28.90	44.02	27.08	1.24	0.95	0.36
1138 ⁴	Tea leaf waste + lime (Lawn dressing)	42.00	18.60	39.40	1.46	0.48	0.91
1099	Furnace soot .....	....	....	....	0.06	0.61	0.25
9953 ⁵	Tobacco dust	(air-dry)	....	....	2.94	...	3.73
8141 ⁶	Tobacco stems, Canadian No. 1, (Tobacco Station) ..	(air-dry)	....	....	2.42	...	6.78
8142 ⁷	Tobacco stems, American No. 2, (Tobacco Station) ..	(air-dry)	....	....	1.34	...	4.54
8143 ⁸	Tobacco stems, Canadian No. 3, (Tobacco Station) ..	(air-dry)	....	....	0.99	...	4.05
21	Tobacco stems (Thompsonville) Tobacco Station	(air-dry)	....	....	3.07	...	8.62
1006	Tobacco stems (85% Penn., 15% Ohio and Wisconsin)	29.70	....	....	1.93	0.50	4.60
1027	Tobacco stems (all Penn.) ..	24.10	....	....	1.89	0.70	4.90

¹NO₃ none, NH₃ none, organic water-insol. 18.88, activity alk. permanganate 41%, neutral permanganate 66%.

²Cl 0.13%.

³Cl 0.11%, CaO 8.96%, MgO 3.55%

⁴New Jersey source, CaO 9.02%.

⁵Nicotine 0.96%.

⁶Nicotine 0.77%.

⁷Nicotine 0.41%.

⁸Nicotine 0.28%.

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