

BULLETIN No. 79.

The Connecticut Agricultural

EXPERIMENT STATION.

JULY, 1884.

The Connecticut Agricultural Experiment Station.

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OBSERVANCE OF THE FERTILIZER LAW.

MANUFACTURERS who have paid Analysis Fees as required by the Fertilizer Law, since the issue of the last Bulletin, and FERTILIZERS for which the Fees have thus been paid.

FIRM.	ARTICLES.	DATE.
Anderson, W. H., Putnam	Ground Bone	May 29.
Bosworth Bros., Putnam	Potato Phosphate	June 27.
Dickenson, David, Middle Haddam.	Superphosphate of Lime	July 5.
Hurtado & Co., 16 and 18 Exchange Place, New York	Peruvian Guano, Guaranteed	July 1.
	Peruvian Guano, Standard	July 1.
Lister Bros., Newark, N. J.	Standard Superphosphate	June 24.
Lombard & Mathewson, Warren- ville	Superphosphate	June 30.
Mapes' Formula & Peruvian Guano Co., 158 Front St., New York ..	Nitrate of Soda	June 30.
	Muriate of Potash	June 30.
New Haven Fertilizer Co.	Standard Ammoniated Superphos.	June 27.
Peck Bros., Northfield	Pure Ground Bone	June 24.
Read & Co., New York	Matchless Tobacco Manure	June 24.
	Farmers' Friend Fertilizer	July 3.
Slade, F. C., Oakville	Ground Bone	June 25.
Wilcox, L. & Co., Mystic Bridge...	Acidulated Fish Guano Ground...	June 25.
	Dry Ground Fish Guano	July 8.

DEALERS who up to July 10, 1884, have complied with Section 4 of the Act concerning Commercial Fertilizers, and reported to the Director of this Station their names, residences and post office addresses, and the names and brands of fertilizers sold, with the names and addresses of the manufacturers, importers or parties from whom such fertilizers were obtained.

Dealer.	Article.	Manufacturer.
Jos. S. Adam, Lime Rock,	A. A. Phosphate.	H. J. Baker & Bro., New York.
" "	Pelican Bone Phosphate.	" "
" "	Special Corn Fertilizer.	" "
" "	Special Potato Fertilizer.	" "
" "	Castor Pomace.	" "
" "	Quin. Fert. Co. Phosphate.	Quinnipiac Fertilizer Co.,
" "	Dry Ground Fish.	New London.
" "	Fish and Potash, Crossed	" "
" "	Fishes Brand.	" "
" "	Fish and Potash, Plain Brand	" "
" "	Quin. Extra Superphosphate.	" "
G. H. Alford, Winsted.	Muriate of Potash.	H. J. Baker & Bro., New York.
" "	Peck Bros. Pure Ground	Peck Bros., Northfield.
" "	Bone.	" "
" "	Pelican Bone Superphos.	H. J. Baker & Bro., New York.
" "	Baker's A. A. Superphos.	" "
John P. Barstow & Co., Norwich.	Potato Fertilizer.	Mapes' Formula & Peruvian
" "	Corn Fertilizer.	Guano Co., New York.
" "	A. Brand Complete Manure.	" "
" "	Animal Fertilizer.	L. B. Darling Fertilizer Co.,
" "	Ground Bone.	Pawtucket, R. I.
" "	Ammoniated Bone Super-	E. Frank Coe, New York.
" "	phosphate of Lime.	" "
" "	Superphosphate of Lime.	Bradley Fert. Co., Boston.
" "	Special Favorite.	Russel Coe, New York.
" "	Fish and Potash, Crossed	Quinnipiac Fertilizer Co.,
" "	Fishes Brand.	New London.
" "	"Super Phosphate."	" "
C. E. Benton, Sharon.	Cook's Dissolved Gro'd Bone.	Ed. F. Cook, Bridgeport.
" "	" Blood Guano.	" "
Birdsey & Foster, Meriden	Mapes' Potato Manure.	Mapes' Formula & Peruvian
" "	" Corn Manure.	Guano Co., New York.
" "	" Complete Manure,	" "
" "	A. Brand.	" "
" "	" Complete Manure, for	" "
" "	Light and Sandy Soils.	" "
Jacob Blakeslee, Water-	Stockbridge Grain Manure.	Bowker Fert. Co., Boston.
town.	" Forage Crop Man.	" "
" "	" Vegetable Man.	" "
" "	Bowker's Hilland Drill Phos.	" "
" "	" Fish and Potash.	" "
" "	" Dissolved Bone.	" "
" "	" Dry Fish.	" "
" "	" Kainit.	" "
E. C. Brownell, Moodus.	Miles' I. X. L. Phosphate.	G. W. Miles Co., Milford.
" "	" Fish and Potash.	" "
" "	Stockbridge Grain Manure.	Bowker Fert. Co., Boston.

Dealer.	Article.	Manufacturer.
E. C. Brownell, Moodus.	Stockbridge Vegetable Man.	Bowker Fert. Co., Boston.
" "	" Forage Crop Man.	" "
" "	Lobos Peruvian Guano.	Furnished by Southmayd & Gardiner.
Jno. L. Butler, Torrington	Original Coe's Superphos.	Bradley Fert. Co., Boston.
G. A. Bushnell, Old Saybrook.	Americus Superphosphate.	Williams, Clark & Co., N. Y.
"	Universal Superphosphate.	" "
Brewster & Burnett, Norwich.	Bowker's Ground Bone.	Bowker Fert. Co., Boston.
" "	" Potato Manure.	" "
" "	" Grain Manure.	" "
" "	" Hill and Drill Phos.	" "
" "	" Top Dressing.	" "
" "	" Ammo. Bone Phos.	" "
S. E. Case, New Hartford.	Buffalo Potato, Hop and Tobacco Phosphate.	L. L. Crocker, Buffalo, N. Y.
" "	Buffalo Ammoniated Bone Superphosphate.	" "
" "	Quinnipiac Phosphate.	Quin. Fert. Co., New London
" "	Fish and Potash.	" "
C. E. Chapman, Westbr'k.	Bowker's Hill and Drill Phos.	Bowker Fert. Co., Boston,
" "	" Dissolved Bone.	" "
" "	" Pure Ground Bone.	" "
" "	Stockbridge Potato Manure.	" "
" "	" Grain Manure.	" "
Coburn & Gale, Hartford.	Bowker's Fish and Potash.	" "
" "	" Dissolved Bone.	" "
" "	Stockbridge Corn Manure.	" "
" "	" Potato Manure.	" "
" "	" Top Dressing.	" "
" "	Bowker's Hill and Drill Phos.	" "
J.B. Cotton, Warehouse Pt	Quinnipiac Phosphate.	Quin. Fert. Co., New London
Cochrane Brothers, West Cornwall.	Corn Manure.	H. J. Baker & Bro., New York.
" "	Potato Manure.	" "
" "	Pelican Bone Fertilizer.	" "
" "	A. A. Ammon. Superphos.	" "
F. Ellsworth, Hartford.	Castor Pomace.	St. Louis Lead & Oil Co., St. Louis, Mo.
" "	Castor Pomace.	Collier White Lead & Oil Co., St. Louis, Mo.
" "	Swift-Sure Superphosphate.	M. L. Shoemaker & Co., Philadelphia.
" "	Bone Meal.	" "
" "	Acorn Brand of Potash Salts.	Williams, Clark & Co., N. Y.
" "	Americus B'd of Superphos.	" "
" "	Bay State Superphosphate.	Clark's Cove Guano Co., New Bedford.
N. W. Foote, Danbury.	Buffalo Potato, Hop and Tobacco Phosphate.	L. L. Crocker, Buffalo, N. Y.
" "	Buffalo Ammoniated Bone Superphosphate.	" "
Alfred Gallup, Oneco.	Bowker's Hill and Drill Phos.	Bowker Fert. Co., Boston.
" "	Stockbridge Grain Manure.	" "
" "	" Forage Crop Man.	" "
" "	" Vegetable Man.	" "
H. M. Gifford, East Woodstock.	Bradley's Superphosphate.	Bradley Fert. Co., Boston.
" "	B. D.'s Sea Fowl Guano.	" "
" "	Original Coe's Superphos.	" "
Silas Griffiths, Sterling.	Bradley's X. L. Superphosphate of Lime.	" "

Dealer.	Article.	Manufacturer.
H. L. Hall, Jr., Wallingford.	Soluble Pacific Guano.	Pacific Guano Co., Boston.
" " "	Stockbridge Grain Manure.	Bowker Fert. Co., Boston.
" " "	" Forage Crop Man.	" "
" " "	" Vegetable Man.	" "
" " "	Bowker's Hill and Drill Phos.	" "
W. Burr Hall, Wallingford.	Dry Ground Fish Guano.	Quin. Fert. Co., New London
" " "	Phosphate.	" "
" " "	Fish and Potash, Crossed Fishes Brand.	" "
" " "	Fish and Potash, Plain Brand	" "
Heaton & Thurber, Waterbury.	Ammoniated Fertilizer.	L. L. Crocker, Buffalo, N. Y.
Jos. W. Holcomb, Simsbury.	Buffalo Ammoniated Bone Superphosphate.	" "
A. A. Hubbard, Canaan.	Bradley's Superphosphate.	Bradley Fert. Co., Boston.
" " "	Americus Brand Superphos.	Williams, Clark & Co., N. Y.
" " "	Soluble Pacific Guano.	Pacific Guano Co., Boston.
" " "	Stockbridge Potato Manure.	Bowker Fert. Co., N. Y.
" " "	Nova Scotia Land Plaster.	H. C. Higginson, Newburgh, N. Y.
J. H. Ives, Danbury.	H. J. Baker's Superphosphate, A. A. Brand.	H. J. Baker & Bro., New York.
" " "	H. J. Baker's Pure Ground Bone.	" "
" " "	H. J. Baker's Potato Manure.	" "
M. V. B. Lamb, Norwich.	Farmer's Friend Phosphate.	Read & Co., New York.
" " "	Soluble Pacific Guano.	Pacific Guano Co., Boston.
J. E. Leonard, Jewett City	Mitchell's Standard Phos.	A. Mitchell, Linden, N. J.
" " "	Bay State Fertilizer.	Clark's Cove Guano Co., New Bedford.
" " "	Stearns Eagle Brand Fish and Potash.	Stearns & Co., Fall River.
" " "	Stearns Dry Ground Menhaden Fish Guano.	" "
" " "	Buffalo Ammoniated Bone Super-Phosphate.	L. L. Crocker, Buffalo, N. Y.
F. M. Loomis, No. Granby	" " "	" "
" " "	Potato, Hop and Tobacco Phosphate.	" "
J. A. Lewis, Willimantic.	Fish and Potash.	Williams, Clark & Co., N. Y.
" " "	Pure Bone Meal.	" "
" " "	Americus Ammo. Superphos.	" "
" " "	L. L. Crocker's Ammoniated Superphosphate.	Buffalo Fertilizer Co., Buffalo, N. Y.
" " "	Darling's Fine Ground Bone.	L. B. Darling Fertilizer Co., Pawtucket, R. I.
" " "	" Animal Fertilizer.	" "
" " "	Bowker's Dry Ground Fish.	Bowker Fert. Co., Boston.
" " "	" Ammoniated Bone Superphosphate.	" "
" " "	" Fish and Potash.	" "
" " "	Stockbridge Manure for Potatoes.	" "
" " "	Stockbridge Man. for Corn.	" "
" " "	Dole Common Sense Fert.	Dole Common Sense Fertilizer Co., Boston.

Dealer.	Article.	Manufacturer.
J. A. Lewis, Willimantic.	Russell Coe's Ammoniated Bone Superphosphate.	Russell Coe, New York.
" "	Russell Coe's Potato Manure.	" "
" "	Bay State Fertilizer.	Clark's Cove Guano Co., New Bedford.
" "	Wilcox Prepared Fertilizer.	L. Wilcox & Co., Mystic Bridge.
" "	Acidulated Fish Guano, Fine Ground.	" "
" "	Acidulated Fish Guano.	" "
" "	Twice pressed Crude Fish Guano.	" "
" "	Dry Ground Fish.	" "
J. B. Merrow & Sons, Merrow.	Preston's Superphosphate.	Preston Fertilizer Co., Greenpoint, L. I.
" "	" Ground Bone.	" "
" "	Mapes' Potato Manure.	Mapes' Formula & Peruvian Guano Co., New York.
" "	" Corn Manure.	" "
" "	" Complete Manure for Light and Sandy Soils.	" "
" "	" Tobacco Manure, Conn. Brand.	" "
" "	" Tobacco Manure, for use with stems.	" "
" "	" Complete Manure, A. Brand.	" "
" "	" Grass and Grain Spring Top Dressing.	" "
" "	" Plain Superphosphate	" "
" "	" Complete Manures.	" "
S. A. Munson, Riverton.	Double Sulph. of Magnesia.	H. J. Baker & Bro., New York.
" "	Baker's A. A. Ammoniated Super-Phosphate.	" "
" "	" Pelican " Bone Fertilizer.	" "
" "	Nova Scotia Land Plaster.	G. H. Alford, Winsted.
Oscar Munyan, Thompson	Bradley's Superphosphate.	Bradley Fert. Co., Boston.
H. P. Nichols, Nichols.	Fish and Potash, Crossed Fishes Brand.	Quin. Fert. Co., New London
" "	Quinnipiac Phosphate.	" "
John A. Paine, Danielsonville.	Russell Coe's Ammoniated Superphosphate.	Russell Coe, Linden, N. J.
" "	Russell Coe's Spec'l Favorite.	" "
" "	Bowker's Hill and Drill Phos. Fish and Potash.	Bowker Fert. Co., Boston.
" "	" Fish and Potash.	" "
" "	Bosworth Bros'. Superphosphate of Lime.	Bosworth Bros., Putnam.
" "	Bosworth Bros'. Potato Phos.	" "
" "	Mitchell's Standard Phos.	A. Mitchell, Linden, N. J.
" "	Soluble Pacific Guano.	Pacific Guano Co., Boston.
" "	" Americus Brand " Ammoniated Bone Superphos.	Williams, Clark & Co., N. Y.
L. Eckford Post, Westbrook.	Quinnipiac Phosphate.	Quin. Fert. Co., New London
" "	" Fish and Potash.	" "
C. M. Pratt, Westbrook.	Americus Ammoniated Bone Superphosphate.	Williams, Clark & Co., N. Y.
" "	Universal Ammoniated Dissolved Bone.	" "

Dealer.	Article.	Manufacturer.
Quinnebaug Store, Dan-ielsonville.	Common Sense Fertilizer.	Common Sense Fertilizer Co., Boston.
" "	Darling's Animal Fertilizer.	L. B. Darling & Co., Paw-tucket, R. I.
" "	Mapes' Complete Manures.	Mapes' F. & P. G. Co., N. Y.
" "	Bradley's Superphos. of Lime	Bradley Fert. Co., Boston.
Raymond Bros., South Norwalk.	Lister Bros. Ground Bone.	Lister Bros., Newark, N. J.
" "	Mapes' Fertilizers.	Mapes' F. & P. G. Co., N. Y.
" "	Pacific Guano.	Pacific Guano Co., Boston.
" "	Bradley's Superphos. of Lime	Bradley Fert. Co., Boston.
" "	Buffalo Honest Fertilizer.	
" "	John H. Wilson's Gr. Bone.	John H. Wilson.
" "	Geo. W. Miles' Fish & Potash.	Geo. W. Miles Co., Milford.
C. O. Richardson, Ster-ling.	A. A. Phosphate.	H. J. Baker & Bro., New York.
" "	Potato Manure.	" "
" "	Pelican Bone Fertilizer.	" "
W. H. Scott & Co., Pe-quabuck.	Stockbridge Grain Manure.	Bowker Fert. Co., Boston.
" "	" Forage Crop Man.	" "
" "	" Vegetable Man.	" "
" "	Bradley's Superphosphate.	Bradley Fert. Co., Boston.
" "	Peck Bros. Ground Bone.	Peck Bros. Northfield.
N. E. Sears, Elmwood.	Ammoniated Bone Phos.	David Dickinson, Middle Haddam.
Southmayd & Gardiner, Middletown.	Ground Bone—Grade Meal.	Rogers & Hubbard Co., Mid-dletown.
" "	" —Grade A.	" "
" "	Chittenden's Fish & Potash.	Nat'l Fert. Co., Bridgeport.
" "	Russell Coe's Phosphate.	Russell Coe, Linden, N. J.
" "	H. J. Baker's Special Corn Fertilizer.	H. J. Baker & Bro., New York.
" "	H. J. Baker's Special Potato Fertilizer.	" "
" "	Bowker's Fish and Potash.	Bowker Fert. Co., Boston.
" "	N. Soda—M. Potash—Crude Saltpeter.	
" "	S. Potash—Sul. Magnesia, Ground Plaster.	
" "	Castor Pomace and several kinds of salt.	
J. F. Silliman, New Ca-naan.	Bowker's Ammo. Bone Phos.	Bowker Fert. Co., Boston.
" "	" Grain Fertilizer.	" "
" "	" Potato Manure.	" "
" "	" Fish and Potash.	" "
" "	Quinnipiac " "	" "
" "	" Phosphate.	" "
V. B. Sterling, New Mil-ford.	Mapes' Complete Manure for light soils.	Mapes' F. & P. G. Co., N. Y.
" "	Mapes' Complete Manure, A Brand.	" "
B. E. Smith, East Granby	Hill and Drill Phosphate.	Bowker Fert. Co., Boston.
" "	Bowker's Fish and Potash.	" "
" "	Stockbridge Manure.	" "
Rich. H. Tucker, Saybr ^k	Soluble Pacific Guano.	Pacific Guano Co., Boston.

Dealer.	Article.	Manufacturer.
Usher & Tinker, Plainville	Americus Brand Ammoniated Bone Superphosphate	Williams, Clark & Co., N. Y.
" "	Universal Brand of Ammoniated Dissolved Bone.	" "
" "	Bradley's Superphosphate of Lime.	Bradley Fert. Co., Boston.
" "	Quinnipiac Fish and Potash.	Quin. Fert. Co., New London
" "	" Phosphate.	" "
" "	Ammon. Bone Superphos.	L. L. Crocker, Buffalo, N. Y.
" "	Kainit.	Bowker Fert. Co., Boston.
" "	Fish and Potash.	" "
" "	Pure Fish.	" "
E. A. Watrous, Meriden.	Bradley's Fertilizer.	Bradley Fert. Co., Boston.
" "	Chittenden's Fish & Potash.	Nat'l Fert. Co., Bridgeport.
" "	" Grass Fertilizer.	" "
" "	" Grain Fertilizer.	" "
" "	" Root Fertilizer.	" "
" "	" Fine Animal Bone.	" "
D. B. Warner & Son, East Haddam.	Quinnipiac Fert. Co's Phos.	Quin. Fert. Co., New London
" "	Dry Ground Fish.	" "
" "	Fish and Potash, Crossed Fishes Brand.	" "
" "	Fish and Potash, Plain Brand	" "
" "	Quinnipiac Extra Superphos.	" "
Wilson & Burr, Middletown.	Mapes' Complete Manure, "A" Brand.	Mapes' F. & P. G. Co., N. Y.
" "	Mapes' Complete Manure, for general use.	" "
" "	Mapes' Corn Manure.	" "
" "	" Potato Manure.	" "
" "	Nitrate of Soda.	" "
" "	Muriate of Potash.	" "
" "	Fish Guano.	Preston Fert. Co., Greenpoint
" "	Ammon. Bone Superphos.	E. Frank Coe, New York.
" "	Ground Bone Meal.	Roger's & Hubbard Co., Middletown.
" "	" " A. Brand.	" "
" "	" " A. X. "	" "
" "	No. 1 Quinnipiac Fish and Potash.	Quin. Fert. Co., New London
" "	Stockbridge Potato Manure.	Bowker Fert. Co., New York

Since the foregoing list was printed, J. A. Lewis wrote that he does not sell Wilcox & Co.'s "Acidulated Guano" and "Twice Pressed Crude Fish Guano." S. A. Munson, that he erroneously reported himself as agent for "Double Sulphate of Magnesia." E. A. Watrous, that he sells Chittenden's Fine Animal Bone, not as a fertilizer but as chicken feed. G. H. Alford wrote that Muriate of Potash was not sold by him. C. E. Chapman, that he has not sold and will not sell Bowker's Ground Bone. J. H. Ives, that he does not sell Baker's Ground Bone.

FERTILIZER ANALYSES.

GROUND BONE.

See pp. 10 and 11.

The first three analyses in the table, Nos. **1185**, **1237** and **1246**, are of ground steamed bone, from which the nitrogenous matter, grease and water have been largely removed, leaving the material dry and fine. They contain from 7 to 8 per cent. more phosphoric acid and $2\frac{1}{2}$ per cent. less nitrogen than raw ground bone.

Nos. **1146** and **1194** contain a considerable amount (about 40 per cent.) of water and are sold at a low price on that account.

The quoted prices of The Rogers & Hubbard Co's brands of Bone are f. o. b. at Middletown in bbls., allowing 10 lbs. tare and no charge for bbls. The prices asked by J. P. Barstow & Co., Norwich, were \$45 for Bone "Meal" and \$42 for "A Fine."

The price of Peck Brothers' Pure Ground Bone is \$35.00 at the mill. In the case of this brand as well as of some others, it has been noticed that dealers' retail prices were sometimes several dollars per ton higher than the retail price at the mill.

Nos. **1238** and **1239** it is understood are not brands entered for sale, but are ground and mixed to make the "Pure Ground Bone," No. **1200**.

The low valuation of Quinnipiac Bone No. **1158** is due both to the small amount of nitrogen and phosphoric acid in it and also to its mechanical condition. More than $\frac{3}{4}$ of it by weight is in pieces that will not pass a $\frac{1}{8}$ in. mesh.

Nos. **1241**, **1242**, **1240**, **1145** and **1229** all contain very considerable amounts of sand and other worthless matter insoluble in strong acids. "Kitchen Bones" gathered by bone-pickers would naturally have some sand adhering to them but when the ground bone contains over 5 per cent. of insoluble matter consisting of sand, soil, coal-ashes and like "dirt," or when the amount of phosphoric acid falls below 20 per cent., there is reason to complain of adulteration, unless as in the case of Lister's Ground Bone, No. **1145**, the guarantee indicates that the article is not pure ground bone.

1229 is a sample with regard to which conflicting statements have reached the Station. The sender claims to have sold to the grinder "7600 lbs. of pure raw Bone at one cent per lb., with the

BONE MANURES.

Station No.	Name of Brand.	Manufacturer.	Dealer from whom the Sample was taken.	Sampled by.
1185	Flour of Bone.			
1237	Anderson's Ground Bone	W. H. Anderson, Putnam	G. W. Miller, Middlefield	M. W. Terrill, Middlefield.
1246	Peter Cooper's Ground Bone	Peter Cooper's Ghee Factory	Manufacturer	Manufacturer.
1146	Rogers & Hubbard Co.'s Damp Bone Saw Dust.	Rogers & Hubbard Co., Middleto'n	H. K. Brainard, Thompsonville	J. M. Milbank, Greenfield Hill. Station Agent.
1194	Damp Bone Saw Dust.	Rogers & Hubbard Co., Middleto'n	Manufacturer	Manufacturer.
1195	Pure Ground Raw Knuckle Bone, Grade "Meal"	Rogers & Hubbard Co., Middleto'n	J. P. Barstow & Co., Norwich	Station Agent.
1196	Pure Ground Bone, Grade A.	Rogers & Hubbard Co., Middleto'n	Wilson & Burr, Middletown	Station Agent.
1197	Pure Gro'd Raw Knuckle Bone, "Grade 'A,' Extra Fine"	Rogers & Hubbard Co., Middleto'n	J. P. Barstow & Co., Norwich	Station Agent.
1200	Peck Brothers' Pure Ground Bone	Peck Brothers, Northfield	Manufacturer	C. H. Cables, Thomaston.
1238	Raw Kitchen Bone	Peck Brothers, Northfield	Manufacturer	Manufacturer.
1239	Boiled Bone	Peck Brothers, Northfield	Manufacturer	Manufacturer.
1230	P. W. Bennett's Ground Bone.	P. W. Bennett, Rockfall	Manufacturer	Manufacturer.
1231	E. Smith's Ground Bone	E. Smith, South Canterbury	Manufacturer	Manufacturer.
1158	Quinnipiac Bone	Quinnipiac Co., Wallingford	S. J. Hall, Meriden	Station Agent.
1241	F. C. Slade's Bone	F. C. Slade, Oakville	Manufacturer	C. C. Churchill, Torrington.
1199	Atwood Bros' Bone	Atwood Brothers, Oakville	Manufacturer	C. H. Cables, Thomaston.
1242	Atwood Bros' Ground Bone	Atwood Brothers, Oakville	Manufacturer	Station Agent.
1240	Atwood Bros' Ground Bone	Atwood Brothers, Oakville	Manufacturer	C. C. Churchill, Torrington.
1145	Lister Bros' Celebrated Gro. Bone	Lister Brothers, Newark, N. J.	R. B. Bradley & Co., New Haven	Station Agent.
1229	Ground Bone.			

BONE MANURES.—ANALYSES AND VALUATIONS.

Station No.	Brand.	Nitro-gen.	Phos-phoric Acid.	Sand, &c. In-soluble in Acctd.	FINER THAN				Coarser than $\frac{1}{8}$ inch.	Valua-tion per ton.	Cost per ton.
					$\frac{3}{16}$ inch.	$\frac{1}{4}$ inch.	$\frac{3}{8}$ inch.	$\frac{1}{2}$ inch.			
1185	Flour of Bone	1.50	30.03	----	87	13	0	0	\$40.97	----	
1237	Anderson's Ground Bone	2.15	30.31	1.26	77	22	1	0	43.19	\$40.00	
1246	Peter Cooper's Ground Bone	1.48	31.65	1.47	50	15	24	11	39.71	27.00*	
1146	Rogers & Hubbard Co's Damp Bone Saw Dust	2.11	16.54	----	93	6	1	0	27.26	25.00	
1194	Damp Bone Saw Dust	2.49	17.09	----	93	6	1	0	29.23	25.00	
1195	Pure Ground Raw Knuckle Bone Grade "Meal"	4.02	23.64	.30	34	34	32	0	38.94	40.00	
1196	Pure Ground Bone Grade A X	4.04	21.27	2.70	26	23	37	14	34.87	36.00	
1197	Pure Ground Raw Knuckle Bone "Grade A' Ex. Fine"	4.12	24.19	1.13	30	23	47	0	39.10	38.00	
1200	Peck Bros' Bone	3.97	22.21	1.76	15	21	42	18	34.29	35.00	
1238	Peck Bros' Raw Kitchen Bones	4.03	20.80	1.07	10	15	28	35	30.40	35.00	
1239	Peck Bros' Boiled Bone	4.15	22.46	.85	14	15	30	35	33.95	35.00	
1230	P. W. Bennett's Ground Bone	3.51	23.90	1.71	10	14	24	43	32.80	36.00	
1231	E. Smith's Ground Bone	3.93	20.59	2.31	32	38	24	6	35.08	34.00	
1158	Quinnipiac Bone	3.38	18.71	1.50	5	5	11	11	23.96	35.00	
1241	F. C. Slade's Bone	3.65	17.38	5.10	20	20	22	26	27.97	35.00	
1199	Atwood Bros' Bone	3.91	19.60	2.58	8	14	23	20	28.46	35.00	
1242	Atwood Bros' Ground Bone	3.74	18.59	7.07	12	20	26	24	28.58	35.00	
1240	Atwood Bros' Ground Bone	3.17	15.81	10.98	9	12	22	22	22.95	35.00	
1145	Lister Bros' Celebrated Ground Bone	3.25	13.81	3.55	44	20	18	17	25.31	33.00	
1229	Ground Bone	2.34	13.39	33.49	24	16	16	12	19.77	35.00	

* In New York. Freight to Southport \$1.50 per ton.

agreement that he would take 1000 lbs. of ground Bone as part payment, the balance to be cash." The sender writes that the grinder "makes it a part of his business to grind and sell Bone to the farmers of this vicinity." He also writes, "The price I paid — for the ground Bone was \$35.00 per ton."

The grinder of this Bone, in verbal statement, was understood to say on the other hand, that he does "not sell bone but grinds bone for those who bring it," that "this bone was brought by and ground for the sender of the sample, and that it was so very sandy as to greatly injure the mill."

That Bones should carry so much as *one-third their weight* of sand, coal, and coal-ashes is difficult to understand. That various matters are often thrown into bone-mills to clear the grinding surfaces is well-known. That the sample 1229 fairly represents the lot from which it was taken the Station cannot assert. Under these circumstances the results of the analysis are given but the names of the parties concerned are withheld.

Messrs. Peck Brothers, Northfield, whose Ground Bone was valued in 1881 within \$0.76 and in 1882 within \$0.05 of cost, consider that injustice was done them in 1883 when their Bone was valued at \$10.30 below cost.

In explanation, it should be said, that in 1883 the selling price (\$40.00) with which the valuation (\$29.68) was compared, was the bag-price of their agent at Winsted and was \$5.00 more than the retail price at the mill (\$35.00).* Messrs. Peck further believe the sample of 1883, having $\frac{1}{2}$ per cent. nitrogen and $1\frac{1}{2}$ per cent. phosphoric acid less than their former average, did not fairly represent their goods—was either too small or not carefully taken. The samples 1238 and 1239 sent by them this year, were lots of 25 lbs. each and were accompanied with Manufacturer's affidavit. They show good quality.

When the Station Agent visited Northfield and Oakville, Peck Bros. and F. C. Slade had no stock on hand. Nos. 1241 and 1240 were large samples and were accompanied by affidavit of Mr. Churchill.

* Retail price in 1882 was \$32.00.

SUPERPHOSPHATES AND SPECIAL MANURES.

See pp. 14 and 15.

No. 1198 is a "manufacturer's sample" which under the requirements of the fertilizer law is deposited at the Station by the manufacturer with a statement that it is a fair average sample of the brand.

The law requires this Station to make one analysis annually of every brand sold in the State and when the Station agents have not found the goods on sale, it becomes necessary to analyze the sample deposited here by the manufacturer.

Comparison of the Guaranteed (G) and Actual (A) Composition of the goods whose analyses are reported in this bulletin.

SUPERPHOSPHATES.

No.	Brand.	Nitrogen.		Phos. Acid, solub. and rev.		Phos. Acid, insoluble.		Potash.	
		G	F	G	F	G	F	G	F
1177	Bradley's Superph.	2.3-3.0	2.6	9-11	9.5	2-3	3.2	1.5-2.5	3.1
1136	Baker's Corn Man.	4.1	3.6	6	6.4		0.6	7	7.7
1139	" Potato "	3.3	3.4	5	5.9		0.7	10	9.8
1142	Lister's Potato "	3.3-4.1	3.7	8-10	9.1		0.1	7-8	6.7

GROUND BONE.

No.	Brand.	Nitrogen.		Phos. Acid.	
		G	F	G	F
1194	Rogers & Hubbard Co.'s Damp Bone Saw Dust, -----	2.0	2.5	15.9	17.1
1195	Rogers & Hubbard Co.'s Ground Bone "Meal,"	3.9	4.0	23.4	23.6
1197	Rogers & Hubbard Co.'s Ground Bone "A." Extra fine, -----	3.9	4.1	23.6	24.2
1196	Rogers & Hubbard Co.'s Ground Bone "A X,"	3.9	4.0	22.5	21.3
1246	Peter Cooper's Bone, -----	2.1	1.5	27.7	31.7
1145	Lister Brothers' Bone, -----	2.4-2.5	3.3	11-13	13.8

SUPERPHOSPHATES AND SPECIAL MANURES.

Station No.	Name or Brand.	Manufacturer.	Dealers from whom the Sample was taken.	Sampled by.
1248	Home Made Phosphate	J. J. Webb, Hamden	-----	J. J. Webb, Hamden.
1191	Home Made Fertilizer for Potatoes	M. S. Baldwin, Naugatuck	-----	M. S. Baldwin, Naugatuck.
1243	Navassa Superphosphate	Jno. Reed, 12 Cliff St., N. Y.	-----	J. M. Milbank, Greenfield Hill.
1186	Raw Bone Phosphate	G. W. Miller, Middlefield	-----	M. W. Terrill, Middlefield.
1198	Curtis' Reliable Phosphate	J. G. Curtis, Elliott	-----	Manufacturer.
1228	Standard Superphosphate	N. H. Fertilizer Co., New Haven	-----	Station Agent.
1177	Bradley's Superphosphate	Bradley Fertil. Co., Boston, Mass.	-----	C. H. Cables, Thomaston.
1136	Special Corn Manure	H. J. Baker & Bro., N. Y. City	-----	Station Agent.
1139	Complete Potato Manure	H. J. Baker & Bro., N. Y. City	-----	Station Agent.
1142	Potato Manure	Lister Brothers, Newark, N. J.	-----	Station Agent.

SUPERPHOSPHATES AND SPECIAL MANURES, ANALYSES AND VALUATIONS.

Station No.	Brand.	Nitrogen of Nitrates.	Nitrogen of Ammonia Salts.	Nitrogen of Organic Matters.	Soluble Phosphoric Acid.	Reverted Phosphoric Acid.	Insoluble Phosphoric Acid.	Potash.	Chlorine.	Valuation per ton.	Cost per ton.
1248	Home Made Phosphate	---	3.52	---	9.21	2.44	1.02	9.91	---	\$47.36	----
1191	Home Made Fertilizer for Potatoes	3.79	---	2.86	7.06	.65	.05	9.92	1.02	53.95	\$50.00
1243	Navassa Superphosphate	---	---	---	10.97	.52	2.67	---	---	24.08	23.00
1186	Miller's Raw Bone Phosphate	---	---	1.86	5.21	5.59	2.46	6.04	6.28	35.26	43.00
1198	J. G. Curtis' Reliable Phosphate	---	---	1.60	2.69	1.80	3.06	---	---	17.77	----
1228	New Haven Fertilizer Co's Standard Superphosphate	---	---	3.16	3.63	1.22	4.78	2.87	.60	29.22	----
1177	Bradley's Superphosphate	.05	.98	1.61	8.14	1.37	3.22	3.09	2.65	35.05	42.00
1186	Baker's Special Corn Manure	---	3.08	.55	5.95	.46	.55	7.70	7.66	35.53	*50.00
1139	Baker's Complete Potato Manure	---	2.82	.54	5.30	.58	.67	9.79	9.51	35.34	47.50
1142	Lister Bros. Potato Manure	---	2.69	1.05	8.88	.25	.14	6.72	4.00	40.93	50.00

* Reckoned from cost per bag of 200 pounds.

