

THE CONNECTICUT AGRICULTURAL
EXPERIMENT STATION.

BULLETIN No. 70.

JUNE 30, 1882.

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FERTILIZER ANALYSES.

POTASH SALTS.

765. Muriate of Potash 80 per cent. Sold by S. J. Hall, Meriden. Sampled and sent by Oliver Rice, Meriden.

777. Muriate of Potash. Sold by H. D. Torrey, Putnam. Sampled and sent by W. I. Bartholomew, Putnam.

ANALYSES.

	765	777
Actual Potash, - - - - -	52.13	54.14
Equivalent Muriate of Potash, - - - - -	82.57	85.70
Cost per Ton, - - - - -	\$45.00	60.00*
Cost of Actual Potash per 100 lbs., - - - - -	\$4.31	5.54

*Reckoned from price per 100 lbs.

GROUND BONE AND TANKAGE.

751. Pure Ground Bone. Sold by H. K. Brainard, Thompsonville. Sampled by the Station agent.

753. Ground Bone. Manufactured by Peck Bros., Northfield. Sold by G. Perry Bennett, Bristol. Sampled and sent by S. R. Gridley, Bristol.

764. Bone Meal. Manufactured by Williams, Clark & Co., N. Y. Sold by S. A. Weldon & Son, Bristol. Sampled and sent by S. R. Gridley, Bristol.

770. Lister Bros. Celebrated Ground Bone.

771. Mapes' Brand Extra-fine, Strictly Pure Ground Bone. The two last were sold by W. H. Smith, Norwalk. Sampled and sent by D. H. Van Hoosear, Wilton.

794. Americus Bone Meal. Manufactured by Williams, Clark & Co., New York. Sold by F. Ellsworth, Hartford. Sampled and sent by L. S. Wells, New Britain.

768. Tankage. Manufactured by Strong, Barnes, Hart & Co., New Haven. Sampled and sent by J. M. Hubbard, Middletown.

MECHANICAL ANALYSES.

	751	753	764	770	771	794
Fine, smaller than $\frac{1}{50}$ inch, -	41	6	61	42	52	59
Fine-medium, smaller than $\frac{1}{25}$ inch, -	23	9	22	19	40	18
Medium, smaller than $\frac{1}{12}$ inch, -	23	30	15	14	8	16
Coarse-medium, smaller than $\frac{1}{6}$ inch, -	10	46	2	14		7
Coarse, larger than $\frac{1}{3}$ inch, -	3	9	0	11		0
	100	100	100	100	100	100

CHEMICAL ANALYSES AND VALUATION.

	751	753	764	770	771	794	768
Nitrogen, - - -	2.84	4.04	3.76	3.22	2.49	3.14	6.99
Phosphoric acid, -	14.33	21.77	21.22	14.48	28.87	22.54	6.90
Cost per ton, - - -	\$34.00	35.00	32.00	31.00	40.00	38.00*	35.00
Estimated value per ton, -	\$24.27	31.77	36.28	25.10	40.98	35.43	41.83

*In N. Y.

No. **751** Contains 6.19 per cent. of Sulphuric Acid, equivalent to 13.31 per cent. of Gypsum or Land Plaster.

778. Sulphate of Ammonia from Bradley Fertilizer Co., Boston. Sold by H. D. Torrey, Putnam. Sampled and sent by W. I. Bartholomew, Putnam. It contains 20.56 per cent. of Nitrogen, equivalent to 96.9 per cent. of Sulphate of Ammonia. Cost, \$6.00 per 100 lbs. Nitrogen costs \$29.11 per 100 lbs.

SUPERPHOSPHATES AND SPECIAL MANURES.

724. Dry Ground Fish Guano. Sold by R. B. Bradley & Co., New Haven. Sampled by Station agent.

792. Dry Ground Fish Guano. Sold by Olds & Whipple, Hartford. Sampled and sent by Olin Wheeler, Buckland.

750. Pine Island Guano. Sold by A. W. Allen, Jr., Thompsonville. Sampled by Station agent.

747. Fish and Potash (second grade). Sold by A. W. Allen, Jr., Thompsonville. Sampled by Station agent.

762. Fish and Potash. Sold by S. A. Weldon & Son, Bristol. Sampled and sent by S. R. Gridley, Bristol.

The last five Fertilizers were made by the Quinipiac Fertilizer Co., New London.

755. Brighton Phosphate. Made by Bowker Fertilizer Co., New York and Boston. Sold by S. A. Weldon, Bristol. Sampled and sent by S. R. Gridley, Bristol.

795. Fish and Potash. Made by Bowker Fertilizer Co. Sold by W. F. Fuller, Suffield. Sampled and sent by W. H. Pomeroy, Suffield.

741. Darling's Animal Fertilizer. Made by L. B. Darling & Co., Pawtucket, R. I. Sampled and sent by J. P. Barstow, Norwich.

744. E. Frank Coe's Ammoniated Bone Superphosphate. Sampled and sent by J. P. Barstow, Norwich.

749. Bradley's XL. Superphosphate. Made by the Bradley Fertilizer Co., Boston. Sold by H. K. Brainard, Thompsonville. Sampled by the Station agent.

779. Dissolved Bone. Made by Wm. L. Bradley, Boston. Sold by H. D. Torrey, Putnam. Sampled and sent by W. I. Bartholomew, Putnam.

752. H. J. Baker & Bros. A. A. Ammoniated Superphosphate of Lime. Sold by Wilcox and Judd, Bristol. Sampled and sent by S. R. Gridley, Bristol.

763. Powell's Prepared Chemicals. Made by the Brown Chemical Co., Baltimore, Md. Sold by A. Hinchleff, Bristol. Sampled and sent by S. R. Gridley, Bristol.

773. Americus Brand Ammoniated Bone Superphosphate. Made by Williams, Clark & Co., N. Y. Sold by O. F. Strunz, Bristol. Sampled and sent by S. R. Gridley, Bristol.

793. Americus Brand Ammoniated Bone Superphosphate. Made by Williams, Clark & Co., N. Y. Sold by F. Ellsworth, Hartford. Sampled and sent by L. S. Wells, New Britain.

790. Lombard and Matthewson's Superphosphate. Sold by Buck, Durkee and Stiles, Willimantic. Sampled and sent by N. P. Perkins, Willimantic.

791. Geo. H. Harris & Son's Superphosphate. Made by Geo. H. Harris & Son, Eagleville. Sampled and sent by W. H. Barrows, Willimantic.

739. Stockbridge Manure for Corn and Grain.

761. Stockbridge Manure for Corn and Grain.

740. Stockbridge Manure for Potatoes and Vegetables.

756. Stockbridge Manure for Potatoes and Vegetables. The last four are made by the Bowker Fertilizer Co., N. Y. and Boston. 739 and 740 were Sampled and sent by J. P. Barstow, Norwich. 761 and 756 were sold by S. A. Weldon & Son, Bristol. Sampled and sent by S. R. Gridley, Bristol.

760. H. J. Baker & Bro's Corn Manure. Sold by Wilcox and Judd, Bristol. Sampled and sent by S. R. Gridley, Bristol.

781. H. J. Baker & Bro's Potato Manure. Sold by Olds and Whipple, Hartford. Sampled and sent by J. F. Phelps, Bloomfield.

783. Phoenix Guano. Sold by W. C. Staples & Son, Westport. Sampled and sent by W. L. Coley, Westport.

CORRECTION.—The sample of H. J. Baker & Bro's A. A. Ammoniated Superphosphate **730** reported in last Bulletin has been re-examined at the request of the Manufacturers, the Station Analysis showing a composition inferior to the guarantee in respect to Phosphoric Acid. This ingredient has therefore been the subject of several new analyses. The results have varied somewhat owing to the circumstances that this fertilizer contains a good many lumps as large as coarse shot, that readily separate from the finer material on handling, and also partly consists of a tough substance very difficult to reduce to a powder. The average of all our analyses agrees closely with the result previously given for soluble and insoluble Phosphoric Acid. We obtain, however, one-fifth of a per cent. more of reverted Phosphoric Acid. The valuation is accordingly raised by 44 cents. The corrected analysis and valuation are as follows :

Organic Nitrogen, - - - - -	3.14
Soluble Phosphoric Acid, - - - - -	6.57
Reverted Phosphoric Acid, - - - - -	2.45
Insoluble Phosphoric Acid, - - - - -	.55
Potash, - - - - -	2.15
Estimated Value, - - - - -	\$38.71

ANALYSES AND VALUATIONS.

	724	792	750	747	762	755	795	741	744	749	779	752
Nitrogen as Nitrates,-----	1.45	0.20	2.84	2.72	2.00	2.18	4.20	2.63	2.67	3.29		
Organic Nitrogen,-----	5.11	2.84	1.15	.27	4.88	4.11	0.70	8.11	8.33	8.44		
Soluble Phosphoric Acid,---	.48	4.58	3.95	4.33	2.38	1.19	7.46	1.34	1.38	1.12		
Reverted Phosphoric Acid,--	5.18	2.62	3.90	5.23	4.96	2.16	5.11	2.80	1.75	.62		
Insoluble Phosphoric Acid,--	4.16	2.69	3.41	4.93	4.75	5.44	5.95	1.74	1.75	3.29		
Potash,-----	2.50	3.19	9.08	6.60	33.00	35.00	45.00*	37.00	42.00	40.00		
Chlorine,-----	5.15	36.00	33.48	33.17	33.10	30.91	47.41	38.67	39.97	37.44		
Cost per Ton,-----	\$48.00	50.00	42.08									
Estimated Value per Ton,---	\$43.54											

*Reckoned from the cost per bag, viz: \$3.75 for 167 lbs.

ANALYSES AND VALUATIONS.

	763	773	793	790	791	739	761	740	756	760	781	783
Nitrogen as Nitrates,-----	1.76	2.90	2.81	2.46	3.08	.67	1.35	.70	.88	4.95	3.57	
Organic Nitrogen,-----	3.83	10.82	9.13	4.34	4.43	3.15	2.49	2.56	2.67	4.54	4.66	
Soluble Phosphoric Acid,---	.90	.92	1.02	8.08	6.26	6.29	5.02	6.02	5.40	.89	.22	16.52
Reverted Phosphoric Acid,--	1.62	1.05	.63	.69	3.81	1.12	1.35	1.58	1.95	.19	.05	6.52
Insoluble Phosphoric Acid,--	8.78	2.82	2.95	.26	.35	3.87	2.76	2.31	2.65	9.51	9.99	
Potash,-----	6.90	1.91	2.26	4.57	4.00	3.53	6.02	4.62	4.85	5.03	11.13	
Chlorine,-----	\$46.15*	\$40.00	\$38.00	\$40.00	\$37.00	50.00	50.00	50.00	50.00	50.00	50.00	40.00
Cost per Ton,-----	\$50.37	46.71	41.87	38.42	42.81	41.16	43.90	41.54	42.44	46.45	39.24	33.65
Estimated Value per Ton,---												

*Figured from the cost per bbl., viz: \$6.00 for 250 lbs. †In N. Y. ‡In bags. §In bulk.