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Analyses of Commercial Fertilizers.

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KENTUCKY AGRICULTURAL EXPERIMENT STATION,
LEXINGTON, KY.

Bulletin No. 56.

ANALYSES OF COMMERCIAL FERTILIZERS.

For the more important principles on which the intelligent use of fertilizers depends, and for information in regard to the materials of which commercial fertilizers are made, we refer the reader to Bulletins Nos. 41, 46 and 51. This bulletin contains all the "official analyses" for the year 1895 up to the present date, with only such brief explanations as may be necessary for the right understanding of the figures.

Explanations in Regard to the Tables.

For convenience, the analyses in this bulletin are arranged in two tables:

Table I. contains ground bones.

Table II., those fertilizers whose phosphatic materials have been acted upon by sulphuric acid in order to render the phosphoric acid in them more soluble.

The finer a bone is ground the more valuable it is. For this reason we divide ground bone into "fine bone" and "medium bone" and give the phosphoric acid in each

separately in the tables; because, in computing the estimated value, the phosphoric acid in the "fine bone" is given a greater value than that in the "medium bone."

In Table II., the phosphoric acid is given under "soluble," "reverted" and "insoluble" phosphoric acid, the sum of these representing the total amount of phosphoric acid present. The sum of the "soluble" and "reverted" is "available" phosphoric acid, or the phosphoric acid that is of immediate use to plants.

In this table is also given the nitrogen, as well as its "equivalent in ammonia," or, in other words, the greatest amount of ammonia which would be possible to be made from the nitrogen; also the amount of potash either in the form of sulphate or muriate or both. As the sulphate of potash is somewhat more costly than the muriate, it is thought best to give the form in which the potash is found in the fertilizers analyzed.

The "Estimated Value Per Ton."

The fertilizer law requires that the Director shall give, along with the analysis of each fertilizer, "the money value of such fertilizer computed from its composition, as he may determine." This is the "estimated value per ton" given in the last column of the tables.

The words of the law, "the money value of such fertilizer, computed from its composition" define as nearly as possible what these "estimated values" are intended to represent; that is, they are intended to show what the phosphoric acid, nitrogen and potash in a ton of each fertilizer is actually worth in dollars and cents. In other words, they are intended to show about how much the raw materials necessary to furnish the same quantity of "essential ingredients" as is found by the analysis would cost if purchased separately and then combined. It is important to note, however, that on account of the differences in the prices of the different materials which may be used to furnish phosphoric acid, nitrogen and potash, and differences in the price of the same material at different times, as well as differences in rates of freight to different points in the state, it is practically impossible to make these "estimated values" represent exactly the money value of the fertilizers. At best they are only relatively correct.

In order to calculate these values from the analysis, the Director assigns each year a certain price per pound for each of the "essential ingredients" of fertilizers. These prices are based upon the New York prices of the principal materials of which fertilizers are made, and include an allowance for freight from New York and for cost of mixing and loss in handling.

The framers of the fertilizer law evidently intended these estimated values to be an index that would show at a glance whether the purchaser was getting the worth of his money, and in a general way they do serve this purpose. Thus, when the "estimated value per ton" is very much below the price at which a ton of the fertilizer is sold, it shows that the purchaser at this price is paying high for the plant food it contains. But the estimated value alone is not a sufficient guide in purchasing fertilizers; it is necessary to consider the analysis also.

Importance of the Analyses.

In purchasing fertilizers it is of the first importance to consider the analyses, either in the tables of this bulletin or on the tags which should always be found attached to each sack; for by the analysis only can we tell whether we are getting, in the fertilizer, the plant food that we want to supply to our crop. If we were selecting a fertilizer for corn, for instance, to be used on a soil that was rich in phosphates but deficient in potash, we certainly would not buy a so-called "Corn Grower" that contained no potash, even if it was offered at a price much lower than the "estimated value."

Let us illustrate this farther by example. Suppose that a farmer, desiring to purchase a fertilizer for his corn crop, is offered by his merchant either of two "corn growers" at $25 per ton. The price, fortunately, does not help him to decide in this case. He next looks at the tags attached to the sacks, and finds that the Director has estimated the value of each fertilizer at $25.20 per ton. He next looks at the

analyses and finds Fertilizer No. 1 to contain:

Soluble Phosphoric Acid, Reverted " "	12.0 per cent.
Potash	None.
Nitrogen	2.4 per cent.

And Fertilizer No. 2 to contain:

Soluble Phosphoric Acid, Reverted " "	6.0 per cent.
Nitrogen	2.4 per cent.
Potash, from muriate	7.0 per cent.

He is now able to judge which of the two fertilizers to purchase. If his soil needs phosphoric acid, he will quickly decide on No. 1, for he will get twice as much for the same money, while did he purchase No. 2 he would get only half as much phosphoric acid which he needs and would be paying for potash which he does not need. But if he is in doubt whether his land needs one or all the elements of a fertilizer, or if he knows that his land needs potash, he will be wise in purchasing No. 2. For should his soil need potash, or all three of the essential elements to produce a large corn crop, and should he purchase No. 1, it is doubtful whether he would receive any benefit from it.

Values Used

The following are the values per pound adopted for use during the year 1895:

Soluble and reverted phosphoric acid in mixed fertilizers, 7 cents; in plain acid and unacidulated phosphates, 5 cents.

Insoluble phosphoric acid in mixed fertilizers, 2½ cents; in Orchilla guano, 3 cents; in plain acid phosphates, nothing.

Phosphoric acid in fine bone, 4 cents; in medium bone, 3 cents.

Nitrogen in all fertilizers, 17½ cents.

Potash in all fertilizers, from sulphate, 7 cents; from muriate, 6 cents.

TABLE I.—Raw Bone Manures.

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	POUNDS IN THE HUNDRED. PHOSPHORIC ACID. In Fine Bone.	In Medium Bone.	Total.	Equivalent to Bone Phosphate.	Nitrogen.	Equivalent to Ammonia.	Estimated Value Per Ton.
2824	Armour & Co., Chicago, Ill.....	Bone Meal	25.54	1.89	27.43	59.90	2.83	3.44	$31 47
2829	Same								
2945	Cincinnati Desiccating Co., Cincinnati, Ohio.....	Raw Bone Meal	11.12	13.21	24.33	53.14	3 98	4.83	30 76
2946	Same	Pure Raw Bone Meal.....	14.14	10 50	24.64	53 81	3.76	4.56	30 77
2913	Dunn & Backer, Troy, Ind.....	Fine Ground Bone.....	15 80	5.05	20.85	45 54	3.11	3.78	26 56
2914	Same	Clover Leaf Brand Butcher Raw Bone and Tankage Mixture..	16.82	3.50	20.32	44.37	3.99	4.84	29 53
2997	Empire Carbon Works, St. Louis, Mo.....	Clover Leaf Brand Pure Raw Bone Meal	18.34	7.02	25.36	55.38	3.83	4 65	32 29
3020	Globe Fertilizer Co., Louisville, Ky.....	"Excelsior"–A Pure Bone Meal	21.75		21.75	47.50	3.67	4.46	30 25
2997	Hudson & Logan, Eminence, Ky.	Globe Bone Meal	13.92	10.13	24.05	52.53	3.67	4 46	30 07
2817	J. B. Jones, Louisville, Ky.....	See Empire Carbon Works....							
2818	Same	Pure Raw Bone Meal.....	11.20	11.21	22.41	48.95	4.01	4.87	29 73
		Pure Ammoniated Bone Meal.	11.15	2.79	13.94	30.45	3.75	4.55	23 72

TABLE I.—Raw Bone Manures. (Concluded).

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	POUNDS IN THE HUNDRED.						
			PHOSPHORIC ACID.						
			In Fine Bone.	In Medium Bone.	Total.	Equivalent to Bone Phosphate.	Nitrogen.	Equivalent to Ammonia.	Estimated Value Per Ton.
3007	J. B. Jones, Louisville, Ky.	Ammoniated Bone Meal	11.94	3.19	15.13	33.05	3.95	4.80	$25 29
2821	Jones Fertilizing Co., Cincinnati Ohio	Fine Ground Bone	14.28	6 78	21.06	45.99	3.30	4 01	27 04
2998	Same	Pure Raw Bone Meal	7.88	14.07	21.95	47.95	3.89	4.72	28 36
2999	Same	Ammoniated Bone Meal	11.66	3.56	15.22	33.25	4.67	5 67	27 82
2993	Michigan Carbon Works, Detroit Michigan	Desiccated Bone	23.42	7.16	30 58	66 78	1.72	2.09	29 06
2866	North-Western Fertilizing Co. Chicago, Ill	Horse Shoe Brand Fine Raw Bone	16.05	7.69	23.74	51.86	4 05	4 92	31 63
2867	Same	Horse Shoe Brand Ralston's Bone Meal	11.24	6.16	17.40	38 00	4.03	4 89	26 80
2876	Same	Horse Shoe Brand Pure Ground Bone	19.10	4 34	23.44	51.19	2.78	3.37	27 61
2896	Ohio Valley Fertilizing Co., Owensboro, Ky	Corn, Wheat and Tobacco Grower, Pure Raw Bone Meal	6.02	16.80	22.82	49.84	3.99	4.84	28 87
2920	Wm. Skene & Co., Louisville, Ky.	Skene's Pure Raw Bone Dust or Meal	9.46	13.18	22.64	49.45	4.08	4.95	29 76
3030	The Standard Guano & Chemical Mfg. Co., New Orleans, La	Pure Ground Bone	10.05	10.62	20.67	45.15	4.04	4.90	28 55

† Mfg. Co., New Orleans, La.

TABLE II.—Complete Fertilizers, Superphosphates, Etc.

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	POUNDS IN THE HUNDRED.							Estimated Value Per Ton.
			PHOSPHORIC ACID.			Nitrogen.	Equivalent to Ammonia.	POTASH.		
			Soluble.	Reverted.	Insoluble.			From Sulphate.	From Muriate.	
	A. D. Adair & McCarty Bros.	See Furman Farm Improvement Co.								
2825	Armour & Co., Chicago, Ill..	Bone and Blood.....	.....	8.13	4.75	6 13	7.44	....	.....	$35 22
2826	Same	Ammoniated Bone and Potash	2 99	6 03	3.68	2.37	2.88	1.51	.....	24 88
2827	Same.....	White Burley and Black Tobacco	1.84	6 86	3.66	2 98	3.62	6.77	.....	33 92
2828	Same.....	Bone Blood and Potash	....	8.43	4.93	4.28	5 20	8.27	.....	40 83
2947	Cincinnati Desiccating Co. Cincinnati, Ohio	Pure Acidulated Bone.....	2 80	10.06	6.23	3.94	4.78	.....	.....	34 91
2948	Same	Gilead Phosphate.....	3.35	5.81	2.34	3.06	3 71	.....	2.37	27 54
2951	Same.....	Gold and Silver Phosphate.	9.98	2.60	0 38	.....	.....	.....	.....	12 58
2952	Same	Tobacco and Potato Fertilizer	3 02	5.79	3.39	4.30	5.22	5.36	.....	36 58
2953	Same	Kentucky and Tennessee Tobacco Grower.....	0.93	8.24	3 15	1.85	2.25	.....	3.51	25 11
2984	Same.....	Ohio Valley Phosphate	6.26	2.85	1.19	1.96	2.38	.....	2.03	22 65

TABLE II.—Complete Fertilizers, Superphosphates, Etc.—(Continued).

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	POUNDS IN THE HUNDRED.							Estimated Value Per Ton.
			PHOSPHORIC ACID.			Nitrogen.	Equivalent to Ammonia.	POTASH.		
			Soluble.	Reverted.	Insoluble.			From Sulphate.	From Muriate.	
2985	Cincinnati Desiccating Co., Cincinnati, Ohio	PhoenixPhosphate	4.26	3.49	1.41	1 99	2.42	.....	1.12	$19 87
2923	Cleveland Dryer Co., Cleveland, Ohio	Buckeye Ammoniated Bone Superphosphate	5 19	5 99	2.35	3.03	3 68	.....	0.25	27 74
2924	Same	Square Bone	4.25	10 53	6 19	3.04	3 69	.....	....	34 43
2925	Same	Ohio Seed Maker	5.64	5 95	2.98	1 64	1.99	.....	.....	23 46
2926	Same	Phospho Bone	7.23	3 52	3.85	0 83	1.01	.....	1.08	21 19
2927	Same	White Burley Tobacco Fertilizer	7.91	2 62	2.52	2 84	3 45	.....	3.44	30 07
2928	Same	Ammoniated Dissolved Bone	7.42	4 00	2 10	1.64	1 99	.....	.....	22 78
2833	Crocker Fertilizer and Chemical Co., Buffalo, N. Y.	Crocker's Kentucky Tobacco Fertilizer	7 82	2.99	1 41	2 06	2.50	.....	3.57	27 33
2834	Same	Crocker's Special Kentucky Tobacco Fertilizer	9.34	0 76	0.63	3.83	4 65	.....	5.70	34 71
2835	Same	Crocker's New Rival Ammoniated Superphosphate	7.62	3.21	1.23	1.46	1.77	.....	1.76	23 00

2836	Crocker Fertilizer & Chemical Co., Buffalo, N. Y.	Crocker's Ammoniated Practical Superphosphate	5.69	3.44	1.41	1.13	1.37	.....	1.59	$19 36
2839	Same	Exposition Corn Grower	5 99	2.64	2.90	1.22	1.48	.....	1.72	19 86
2840	Same	Exposition Tobacco Grower	5.67	2.63	2.79	2.03	2.46	.....	2.05	22 59
3009	Same	Crocker's General Crop Phosphate	2.57	4.69	2.80	1.02	1.24	.....	1.19	16 56
3022	Same	Crocker's Universal Grain Grower	4.45	2.82	1 01	1.07	1.30	...	3.13	18 20
2902	Currie Fertilizer Co., Louisville, Ky	Currie's Dissolved Bone	4.87	3.19	2.03	1.36	1.65	3.64	.....	22 16
2903	Same	Currie's Corn Grower	5 88	2.50	3.95	2.04	2.48	2 35	1.06	25 41
2904	Same	Currie's Black Diamond Phosphate	8 52	2.65	0.96	0.78	0 95	2.71	.....	22 64
2905	Same	Currie's Tobacco Grower	6.84	2.71	3.13	2.23	2.71	7.90	.....	33 81
2906	Same	Currie's Golden Leaf Tobacco Grower	7.18	2.65	2.90	1.51	1 83	4.44	.....	26 72
2907	Same	Currie's Kentucky Phosphate	8.12	2.52	1.22	0.79	0.96	2.02	.....	21 11
2908	Dunn & Backer, Troy, Ind	Clover Leaf Brand Acidulated Bone Phosphates	13.62	4.15	1.39	.....	.....	.....	.....	17 77
2909	Same	Clover Leaf Brand Ammoniated Superphosphates	8.74	3 63	4 21	1.60	1.94	.....	.....	25 03
2910	Same	C. L. B. Ammoniated Superphosphates and Potash	8 23	3 26	3 98	1 27	1.54	.....	3 70	26 97
2911	Same	C. L. B. Super-Phosphates and Raw Bone Mixture	7.93	4.54	10.22	1 79	2.17	..	.....	28 84
2912	Same	C. L. B. Super-Phos., Raw Bone and Potash Mixture	8 70	3.43	8.39	1.29	1 57	....	2 98	29 28
2973	Furman Farm Improvement Co., Atlanta, Ga	Furman High Grade Fertilizer	6.65	2.83	2.58	2.43	2 95	.....	2 59	26 18

TABLE II.—Complete Fertilizers, Superphosphates, Etc. (Continued).

Station Number.	NAME AND ADDRESS OF MANUFACTURER	NAME OF BRAND.	POUNDS IN THE HUNDRED.							Estimated Value per Ton.
			PHOSPHORIC ACID			Nitrogen.	Equivalent to Ammonia.	POTASH.		
			Soluble	Reverted	Insoluble.			From Sulphate.	From Muriate.	
2974	Furman Farm Improvement Co., Atlanta, Ga.	Buffalo Bone Fertilizer..	6.18	2.52	2.92	2.06	2.50	.....	2.63	$24 01
2975	Same	Furman Soluble Bone with Am. and Potash ..	7.28	2.82	1 93	1.08	1.31	.....	2.50	21 89
2976	Same	Farish Furman Formula	7.69	4.82	1.56	....	.....	.....	2.90	21 77
2885	Globe Fertilizer Co., Louisville, Ky	Globe Potato Grower ...	6 26	1.40	2.47	4.50	5.46	4.46	.....	33 95
2886	Same	Kentucky Standard Tobacco Grower.....	8.29	0.70	2.28	2.67	3.24	3.26	.....	27 64
2887	Same	Big Four Tobacco Grower	8.12	1.13	2.17	1.59	1.93	2.32	.....	22 86
2888	Same	Eagle Fertilizer—Corn and Wheat Grower..	8.93	1.54	2.76	1.40	1.70	1.20	.....	22 62
2890	Same	Globe Bone Dust.....	8.84	1.96	2.21	0.70	0.85	0.68	.....	19 63
3005	Same	Golden Harvest Bone Meal.....	9.30	1.65	2.66	2.37	2.88	1.25	.....	26 71
3006	Same	Progress Corn and Wheat Grower.....	9.89	0.94	1.77	1.12	1.36	1.34	.....	21 85

3013	Globe Fertilizer Co., Louisville, Ky	Globe Wheat Grower	9.47	1.54	2.61	2.09	2.54	1.11	....	25 59
2819	J. B. Jones, Louisville, Ky	Bromophyte	0.55	2.21	0.68	1.12	1.36	0.20	....	8 40
2820	Same	Tobacco and Potato Grower	1.38	5.29	2.39	2.78	3.37	4.72	....	26 88
2937	Same	Kentucky Phosphate	1.55	3.83	4.14	3 64	4.42	....	2.95	25 88
3008	Same	Kentucky Phosphate	1.29	4.29	3.72	3.20	3.88	....	2.56	23 94
3000	Jones Fertilizing Co., Cincinnati, Ohio	Acidulated Bone	2.25	6 92	6.05	4.74	5.75	....	....	32 46
3002	Same	Miami Valley Phosphate	1.82	4.87	2.64	3.19	3.87	....	2.51	24 87
3003	Same	Jones' Reliable	0.86	4.94	2.64	2.74	3.33	....	1.56	20 90
3017	Same	Tobacco and Potato Grower	1.42	5.20	4.55	4.12	5.00	6.03	....	34 41
2857	S. Kaufman & Son, Indianapolis, Ind	Celebrated Potash Fertilizer	....	0.46	0.49	....	....	0.99	....	2 28
2858	Loudenback Fertilizer Co., Urbana, Ohio	Urbana Prize Potato and Tobacco Grower	7.28	2.43	2.65	2.31	2.80	3.58	3.07	31 70
2859	Same	Urbana Ammoniated Bone	4.77	4.19	3.28	2.27	2.76	1.43	2.58	27 23
2860	Same	Urbana Sweepstakes Bone	3.21	5.18	3 67	1.46	1.77	1.81	2.37	24 07
2861	Same	Urbana Bone Phosphate and Potash	2.20	5.73	3.67	1.47	1.78	....	3.48	22 27
2851	P. B. Mathiason & Co., St. Louis, Mo	Increscent Acidulated Bone Meal with Potash	2.37	8.25	6.78	2.35	2.85	1.59	....	28 72
2852	Same	Increscent Tobacco Grower	3.15	6.64	4.61	4.22	5.12	5.79	....	38 90
2856	Michigan Carbon Works, Detroit, Mich	Homestead Vegetable Grower	4.64	0.61	0.24	5.81	7.05	7.67	....	38 55

TABLE II.—Complete Fertilizers, Superphosphates, Etc. (Continued).

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	POUNDS IN THE HUNDRED.							Estimated Value Per Ton.
			PHOSPHORIC ACID.			Nitrogen.	Equivalent to Ammonia.	POTASH.		
			Soluble.	Reverted.	Insoluble.			From Sulphate.	From Muriate.	
2929	Michigan Carbon Works, Detroit, Mich	Homestead Corn and Wheat Grower	8.61	2 61	1.88	2.44	2.96	2.43	.....	$28 59
2930	Same	Homestead Potato Grower	8 67	1.38	1.14	2.22	2.70	4 13	.....	28 19
2931	Same	Homestead Tobacco Grower	9.27	0 96	0.68	3.53	4.29	4.07	....	32 72
2932	Same	Jarves' Drill Phosphate	7.66	2.24	1.59	1.62	1.97	.....	.....	20 33
2933	Same	Jarves' Tobacco Fertilizer	6 79	1.31	1.39	2.03	2.46	.....	1.85	21 37
2956	Same	Homestead Tobacco Grower	9.40	0.14	0.90	3.73	4.53	.....	5.61	33 60
2897	National Fertilizer Co., Nashville, Tenn	Acid Phosphate with Potash	9 95	3.97	7.38	.....	.....	.....	2.65	26 36
2898	Same	Corn Grower	10.23	3.25	1.46	0 94	1.14	.....	1.33	24 49
2899	Same	Tobacco Grower	6.88	2.59	1.61	1.82	2.21	.....	2.25	23 15
2917	Nolte & Dolch Fertilizer Co., St. Louis, Mo	Bone Black Crop Multiplier	5.80	3.74	2.92	2.57	3.12	.....	2.02	26 24

2922	Nolte & Dolch Fertilizer Co., St. Louis, Mo	Phosphate and Potash	0.87	5.65	2.41	....	.....	.....	1.61	$12 27
2868	North-Western Fertilizing Co. Chicago, Ills	Horse Shoe Brand Tobacco Grower	6.40	2.41	2.88	3.53	4.29	3.17	.....	30 57
2869	Same	Horse Shoe Brand Challenge Corn Grower	6.54	2.18	3.65	2.95	3.58	2.84	.....	28 35
2870	Same	Horse Shoe Brand Twenty-six Dollar Phosphate	4.32	2.18	4.41	1.89	2.29	1.02	.....	19 36
2871	Same	Horse Shoe Brand Prairie Phosphate	4.23	2.11	4.53	1.80	2.19	0 97	.....	18 81
2872	Same	Horse Shoe Brand Ky. Corn and Tobacco Grower	4.35	2.33	4.12	2.45	2.97	1.99	.....	22 78
2873	Same	Horse Shoe Brand Potato Grower	5.03	2.58	3.80	3.02	3.67	2.51	.....	26 63
2874	Same	Horse Shoe Brand Ky-Ana Phosphate	4.73	2.04	4.95	1.26	1.53	.....	0.58	17 07
2877	Same	Horse Shoe Brand Raw Bone and Phosphate Mixture	3.40	4.54	7.55	3.09	3.75	0.60	.....	26 56
2878	Same	Horse Shoe Brand High Grade Truck Manure	5.51	2.50	3.12	3.62	4.39	4.52	.....	31 77
2916	Same	Horse Shoe Brand National Bone Dust	5.09	2.97	5 97	2.31	2.80	1.05	.....	23 83
2996	Same	Horse Shoe Brand Acid Phosphate	11.49	5.96	0.41	....	.....	.....	....	17 45
2915	Jno. S Reese & Co., Baltimore, Md	Reese's Pacific Guano	3.91	5.63	2.43	1.77	2.15	.....	1.19	22 21
2921	Wm. Skene & Co., Louisville, Ky	Skene's Louisville Superphosphate	3.36	2.86	3.26	1.96	2.38	.....	5 08	23 29
2960	Same	Skene's Compl'e Pl't Food or Perfect Tob. & Pot. Grower	1.85	5.00	3.90	3 27	3.97	12.34	.....	40 27
2900	Thompson and Edwards Fertilizer Co., Chicago, Ill	World of Good Raw Bone Corn Grower	.....	3.61	6.10	4.37	5.31	8 60	0 75	36 34
2810	S. W. Travers & Co., Richmond, Va	Capital Tobacco Fertilizer	6.05	1.97	1.10	3.46	4.20	.....	4.61	29 42

TABLE II.—Complete Fertilizers, Superphosphates, Etc. (Concluded).

Station Number.	NAME AND ADDRESS OF MANUFACTURER,	NAME OF BRAND.	POUNDS IN THE HUNDRED.							Estimated Value Per Ton.
			PHOSPHORIC ACID.			Nitrogen.	Equivalent to Ammonia.	POTASH.		
			Soluble.	Reverted.	Insoluble.			From Sulphate.	From Muriate.	
2811	S. W. Travers & Co., Richmond, Va.....	National Tobacco Fertilizer	5.01	2.68	1.69	1.89	2.29	.....	3.98	$23 02
2812	Same	Beef Blood and Bone Fertilizer	4.95	2.90	1.42	1.86	2.26	.....	2.08	20 71
2813	Same	Travers' Dissolved Bone Phosphate	12.63	1.97	0.75	.....	.....	.....	.....	14 60
2814	Same	Capital Dissolved S. C. Bone	9 58	2.33	1 33	....	.....	.....	.....	11 91
2853	Same	Champion Corn Grower....	7 23	1.75	1.15	1.04	1.26	.....	3 74	21 28
2854	Same	Capital Bone-Potash Compound	4.31	5.17	0.79	.....	.....	.....	2.95	17 21
2884	Same	Orchilla Guano	.....	5.02	11 07	.....		.....	..	11 66

August 10, 1895.

M. A. SCOVELL, Director.
A. M. PETER.
H. E. CURTIS.