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Commercial fertilizers

B. H. Hite

T. F. Watson

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WEST VIRGINIA

AGRICULTURAL EXPERIMENT STATION,

MORGANTOWN, W. VA.

BULLETIN 57.

MAY, 1899

Commercial Fertilizers.

BY B. H. HITE AND T. F. WATSON.

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COMMERCIAL FERTILIZERS.

This bulletin contains the analyses and valuations of all brands of commercial fertilizers that have been registered in the State since January 1st, 1899. The bulletin also contains the manufacturers' guaranteed analyses and the Director's values, calculated from these guaranteed analyses. The values are based upon the analyses, of course, and upon the following prices of materials:

IN MIXED GOODS.

Available Phosphoric Acid	4c	per pound.
Insoluble Phosphoric Acid	1c	" "
Potash	6c	" "
Nitrogen	17c	" "

IN BONES.

Phosphoric Acid.....	2½c	per pound.
Nitrogen.....	15c	" "

Add, in all cases \$2.50 for freight and add 20% of money invested, including freight to cover agent's commission. This gives the relative commercial value per ton.

The last column in the table gives the difference between the valuation of the official sample, and the valuation calculated from the manufacturer's guaranteed analyses. Particular attention is called to the figures in the last column, as there can be no good reason for placing the minimum guaranteed analysis very much below the official sample, unless the manufacturer knows, or feels, that his goods or some part of them may fall short of the official sample to that extent. In view of this fact it is desirable to secure as many samples throughout the State as possible of these brands, showing the greatest differences in favor of the official sample, and farmers who may invest in such brands are advised to take samples of the brands and ship them to the Director of the Station in accordance

with instructions which will be furnished upon application. Such samples will be analyzed free of charge and the results promptly reported to the parties submitting them.

There are still a number of manufacturers who persist in using old tags, and agents or dealers handling such goods are being promptly reported to the prosecuting attorneys of the various counties, due notice having been given to all in the last fertilizer bulletin from this station, which contained the following: "For the information of manufacturers and dealers let it be understood that to use one year's tags for the next year's goods, is the plainest imaginable violation of the act concerning commercial fertilizers; and that fertilizers so tagged will not hereafter be regarded as tagged within the meaning of this act."

NAME AND ADDRESS OF MANUFACTURER.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation Calculated from Guaranteed Analysis.
Armour Fert. Co., Chicago, Ill.	Bone Meal	9.31	6.00	3.52	3.50	2.41	2.00	15.24	12.00	12.83	10.00	4.08	2.47	.....	32.25	36.25
" " "	Phosphate and Potash	4.99	6.00	4.23	2.00	3.19	2.00	12.41	10.00	9.22	8.00	2.38	1.65	2.77	2.00	19.35
" " "	Grain Grower	5.25	4.00	3.53	2.00	2.65	2.00	11.49	8.00	8.84	6.00	3.40	2.47	3.75	2.00	36.00
" " "	Ammoniated Bone and Pot'h. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.75
Allison & Addison, Richmond, Va....	B. P. Potash Mixture	8.15	.....	2.70	.....	.51	1.00	11.36	11.00	10.85	10.00	.....	.....	.....	.....	32.50
" " "	Star Brand Guano.	6.32	.....	1.96	.....	2.90	1.00	11.18	9.00	8.28	8.00	2.06	1.65	2.27	1.50	15.75
" " "	Little Giant Corn Grower....	6.69	.....	1.96	.....	1.73	1.00	10.38	9.00	8.65	8.00	1.14	82	2.78	2.00	23.25
" " "	Lit. Giant for Wheat & Grass ..	6.68	.....	1.99	.....	1.74	1.00	10.41	9.00	8.67	8.00	1.14	82	2.70	2.00	20.25
" " "	LXL Acid Phosphate.	10.18	.....	2.67	.....	1.00	1.00	13.85	14.00	12.85	13.00	.....	.....	.....	.....	30.25
" " "	Standard Acid Phosphate....	9.62	.....	2.89	.....	1.07	1.00	13.58	13.00	12.51	12.00	.....	.....	.....	.....	15.50
Baltimore Guano Co., Baltimore, Md	Defiance Bone.....	2.17	7.00	8.88	4.00	2.03	1.00	13.08	12.00	11.05	11.00	.....	.....	.....	.....	15.75
" " "	B. G. Ammoniated Bone.....	5.73	5.00	2.38	3.00	1.97	2.00	10.08	10.00	8.11	8.00	1.27	1.25	2.49	2.00	18.00
" " "	Farmers' Dissolved Bone....	11.16	9.00	2.99	5.00	2.25	1.00	16.40	15.00	14.15	14.00	.....	.....	.....	.....	16.75
Bradley Fertilizer Co., New York....	Alkaline Bone	5.87	6.00	5.70	5.00	2.28	1.00	13.85	12.00	11.57	11.00	.....	.....	.....	.....	17.25
" " "	Potato Fertilizer	5.35	6.00	4.13	.....	1.51	2.00	10.99	11.00	9.48	9.00	2.61	2.06	4.05	3.25	23.00
" " "	Dissolved Bone and Potash....	8.02	6.00	1.73	.....	1.70	2.00	11.51	10.00	9.81	8.00	1.11	1.00	4.68	4.00	35.25
" " "	Bean and Potato Fertilizer ..	8.15	.....	1.44	.....	1.80	2.00	11.39	10.00	9.59	8.00	1.07	1.00	3.79	3.25	21.00
" " "	Acid Phosphate	7.69	3.06	.....	.....	1.80	.....	12.55	10.00	10.75	10.00	.....	.....	.....	.....	25.00
" " "	Dissolved Bone.....	11.02	.....	3.21	.....	1.74	.....	15.97	13.00	14.23	13.00	.....	.....	.....	.....	13.75
" " "	Abattoir Bone Dnst.....	.....	.....	.....	.....	.....	.....	18.30	.....	.....	.....	.....	.....	.....	.....	12.50
" " "	Niagara Phosphate	3.24	6.00	3.77	.....	2.53	1.00	9.54	8.00	7.01	7.00	2.01	1.65	.....	.....	17.00
" " "	Indian Brand Ohio Vally Pho.	5.92	.....	2.41	.....	.91	.....	9.24	.....	8.33	8.00	1.94	1.65	2.11	2.00	15.00
" " "	Indian Brand Acidula d Bone ..	3.62	.....	7.75	.....	5.50	6.00	16.87	17.00	11.37	11.00	4.13	3.30	.....	.....	17.00

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation calculated from Guaranteed Analyses.	Difference between Official and Guaranteed.
Bowker Fert. Co., Boston, Mass.	Wheat Grower	5.37 8.00	5.03 8.00	4.73 2.00	4.73 2.00	2.12 2.00	2.12 2.00	12.52 12.00	12.52 12.00	10.40 10.00	10.40 10.00	.....	.....	1.90	1.00	16.25 14.50	16.25 14.50	1.75
" " " " " "	Dissolved Bone Phos	8.44 8.00	4.73 2.00	4.73 2.00	4.73 2.00	1.70 2.00	1.70 2.00	14.87 12.00	14.87 12.00	13.17 10.00	13.17 10.00	.....	.....	1.98	1.00	16.50 14.50	16.50 14.50	3.00
" " " " " "	Dis. Bone Phos. with Potash	5.45 8.00	4.73 2.00	4.73 2.00	4.73 2.00	2.10 2.00	2.10 2.00	12.54 12.00	12.54 12.00	10.16 9.00	10.16 9.00	.....	.....	1.75	2.32	20.00 18.00	20.00 18.00	2.00
" " " " " "	Sure Crop Phosphate	6.64 5.00	3.52 4.00	3.52 4.00	3.52 4.00	1.52 2.00	1.52 2.00	11.68 11.00	11.68 11.00	10.16 9.00	10.16 9.00	.....	.....	1.32	1.00	19.00 15.00	19.00 15.00	4.00
" " " " " "	Harvest Bone	8.49 6.00	3.00 2.00	3.00 2.00	3.00 2.00	1.69 2.00	1.69 2.00	13.18 10.00	13.18 10.00	11.49 8.00	11.49 8.00	.....	.....	1.98	1.64	25.50 21.00	25.50 21.00	4.50
" " " " " "	Bone Meal	.....	.....	.....	.....	.....	.....	25.45 20.00	25.45 20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baugh & Sons Co., Baltimore, Md.	Pure Dis. Animal Bone	2.97	14.59	.....	14.59	1.61	1.61	19.17	17.56	15.00	15.00	2.10	1.65	1.67	1.00	21.25 15.50	21.25 15.50	5.75
" " " " " "	General Crop Grower	7.97	2.47	.....	2.47	1.27	1.27	11.71	10.44	8.00	8.00	1.36	.89	1.36	1.00	18.25 16.50	18.25 16.50	1.75
" " " " " "	H. G. & Phos. on Dis. S. C. R.	13.23	2.37	.....	2.37	1.27	1.27	16.87	15.60	13.00	13.00	.....	.....	2.39	2.00	19.25 15.50	19.25 15.50	3.75
" " " " " "	Soluble Alkaline Superphos.	10.11	2.89	.....	2.89	.97	.97	13.07	13.00	10.00	10.00	.....	.....	2.07	1.71	50.34 35.75	50.34 35.75	5.00
" " " " " "	Double Eagle Phosphate	6.38	3.29	.....	3.29	1.64	1.64	11.21	9.57	8.00	8.00	2.55	2.07	2.41	2.00	35.75 30.25	35.75 30.25	5.50
" " " " " "	Animal Bone & Potash Com'd	6.15	4.51	.....	4.51	1.85	1.85	12.51	10.66	8.00	8.00	2.10	1.65	3.83	3.30	30.00 27.75	30.00 27.75	2.25
" " " " " "	Pure Bone Meal	.....	.....	.....	.....	.....	.....	21.88 21.50	21.88 21.50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chemical Co. of Canton, Balto., Md.	Baker's St'd Ground Bone	.....	.....	.....	.....	.....	.....	20.48 18.00	20.48 18.00	.....	.....	3.49	4.00	.....	.....	29.00 28.25	29.00 28.25	.75
" " " " " "	Pure Diss. S. C. Bone	12.72 9.00	2.68 5.00	.....	2.68 5.00	.59	.59	15.99 15.00	15.99 15.00	15.40 14.00	15.40 14.00	.....	.....	3.45	2.00	18.00 16.75	18.00 16.75	1.25
" " " " " "	Soluble Bone and Potash	8.56 6.00	2.79 4.00	.....	2.79 4.00	.61	.61	11.96 11.00	11.96 11.00	10.00	10.00	.....	.....	3.82	4.25	2.00 23.00	2.00 23.00	4.75
" " " " " "	Baker's Spe 1 W. C. & G. Mix.	4.72 6.00	4.31 3.00	2.25	4.31 3.00	2.25	2.25	11.28 10.00	11.28 10.00	9.03 9.00	9.03 9.00	1.13	.82	5.37	5.00	19.00 18.25	19.00 18.25	.75
Crocker Fer. & Chem. Co., Buffalo, N. Y.	Alkaline Bone and Potash	6.20 6.00	2.38 2.00	.....	2.38 2.00	.31	.31	1.00 8.89	1.00 8.89	8.58 8.00	8.58 8.00	.....	.....	2.06	4.34	3.24 31.50	3.24 31.50	26.00
" " " " " "	Potato, Hop & Tobacco Phos	9.40 8.00	1.67 2.00	.....	1.67 2.00	.35	.35	11.02 11.00	11.02 11.00	12.73 11.00	12.73 11.00	.....	.....	3.32	3.32	15.75 14.00	15.75 14.00	1.75
" " " " " "	Erie Phosphate	10.09 9.00	2.64 2.00	.....	2.64 2.00	.23	.23	2.00 15.06	2.00 15.06	13.00 12.73	13.00 12.73	.....	.....	1.50	1.50	32.24 31.75	32.24 31.75	6.75
" " " " " "	General Crop Phosphate	6.73 5.00	2.35 2.00	.....	2.35 2.00	.27	.27	1.00 11.83	1.00 11.83	8.00 9.08	8.00 9.08	7.00	1.50	3.78	2.70	34.50 17.00	34.50 17.00	7.50
" " " " " "	Universal Grain Grower	7.00 5.00	2.43 2.00	.....	2.43 2.00	.24	.24	1.00 11.92	1.00 11.92	8.00 9.43	8.00 9.43	7.00	1.58	3.45	3.00	30.50 28.25	30.50 28.25	2.25
Cleveland Dryer Co., Cleveland, O.	Superior Bone	.....	.....	.....	.....	.....	.....	22.33 22.00	22.33 22.00	.....	.....	3.45	4.00	.....	.....	.....	.....	1.75
" " " " " "	Square Bone	3.15 6.00	9.68	.....	9.68	5.78	5.78	14.00 18.61	14.00 18.61	20.00 12.83	20.00 12.83	6.00	2.08	2.50	.....	25.25 22.25	25.25 22.25	3.00

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	ANALYSES OF COMMERCIAL FERTILIZERS.										Valuation of Official Sample.	Valuation Calculated from Guaranteed Analysis.	Difference between Official and Guaranteed Analyses.
		Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Potash in Official Sample.	Nitrogen Guaranteed.
Cleveland Dryer Co., Cleveland, O.	P't to Gen. Crop & Tobacco F.	5.76	9.00	3.44	9.00	2.51	1.00	11.71	11.00	9.20	10.00	1.05	6.20	1.25
"	Buckeye Ammid Bone Super.	6.20	9.00	2.90	9.00	2.88	2.00	11.99	11.00	9.10	9.00	2.66	3.00	3.00
"	Phospho Bone	6.46	9.00	3.01	9.00	1.50	1.00	10.97	11.00	9.47	10.00	.93	1.00	1.00
"	Ohio Seed Maker	5.31	9.00	5.00	9.00	3.07	5.00	10.38	15.00	10.31	10.00	1.77	1.48	1.00
"	Horsehead Phos.	6.46	10.00	3.49	10.00	.80	2.00	10.71	12.00	9.91	10.00	1.00	2.00	2.00
"	XXX Phos. with Potash	7.69	12.00	3.43	12.00	1.30	2.00	12.32	14.00	11.12	12.00	1.00	5.53	5.40
"	XXX Phosphate	8.96	12.00	4.35	12.00	.74	2.00	14.05	13.00	13.31	13.00	1.00	2.14	1.00
"	Horsehead Phos. with Potash	5.28	10.00	2.98	10.00	.70	2.00	8.96	10.00	8.26	10.00	1.00	14.25	14.00
Chicago Fert. Co., Chicago, Ill.	No. 2 Acid Phosphate	6.86	9.00	2.57	9.00	4.32	1.75	13.75	11.00	9.43	9.25	1.00	13.00	12.25
"	Western Bone & Potash Dis.	7.43	9.00	3.51	9.00	5.64	1.00	16.58	13.00	10.94	12.00	1.79	1.10	1.50
"	Bone, Blood and Potash	5.62	9.00	3.85	9.00	10.23	1.80	19.70	11.00	9.47	9.20	1.77	3.25	2.00
Detrick Fert. & Chem Co., Balt., Md.	Imperial Compound	6.40	7.00	3.28	2.00	2.19	1.50	11.87	10.50	9.68	9.00	.91	.83	2.88
"	Standard Potash Fert.	6.32	6.00	3.05	2.00	2.45	1.00	11.82	9.00	9.37	8.00	1.36	5.30	4.00
"	Dissolved S. C. Bone	11.45	11.00	2.68	3.00	2.32	.75	16.45	14.75	14.13	14.00	1.75	2.75	2.17
"	Royal Crop Grower	5.33	6.00	2.04	2.00	2.80	2.00	11.17	10.00	8.37	8.00	1.79	4.12	2.00
"	Soluble Bone Phos. & Potash	2.32	8.00	7.79	2.00	2.01	2.00	12.12	12.00	10.11	10.00	3.61	2.00	18.50
"	Fine Ground Animal Bone	2.32	8.00	7.79	2.00	2.01	2.00	12.12	12.00	10.11	10.00	3.61	2.00	18.50
Detrick, Louis F., Baltimore, Md.	Bone & Potash Mixt.	1.87	8.00	8.64	2.00	2.17	2.50	12.68	12.50	10.51	10.00	4.03	2.25	39.75
"	Orehilla Guano	6.00	6.00	4.61	6.00	11.90	15.81	14.00	4.61	8.00	8.00	1.85	4.00	16.50
"	Kangaroo Komplete Komp'd	5.73	6.00	3.44	2.00	3.47	3.50	12.64	11.50	9.17	8.00	1.65	3.38	3.00
"	Sockless & Shoeless Phos.	4.45	6.00	4.26	2.00	3.07	3.00	11.78	11.00	8.71	8.00	1.17	3.29	3.25
"	XXtra Acid Phos.	11.35	11.00	2.80	3.00	2.30	.75	16.45	14.75	14.15	14.00	1.75	17.25	16.50
Eureka Fert. Co., Perryville, Md.	King's S. C. Bone	13.51	13.00	3.17	13.00	3.06	2.00	19.74	16.00	16.68	14.00	1.95	17.75	17.00

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation Calculated from Guaranteed Analysis.	Difference between Official and Guaranteed Analyses.
Great Eastern Fert. Co., Rutland, Vt.	G. E. Soluble Bone & Potash.	8.07	9.00	3.48	2.00	1.64	1.39	13.19	11.55	11.00	11.00	1.30	2.06	2.00	2.00	17.50	13.50	4.00
" " " " " "	G. E. Corn.	6.59	6.00	2.16	2.00	1.74	1.00	10.49	8.75	8.00	8.00	.82	4.08	4.00	4.00	13.00	19.75	3.25
" " " " " "	G. E. Dissolved Bone.	11.12	11.00	3.28	3.00	.84	15.24	15.24	14.40	14.00	14.00	1.30	1.30	1.30	1.30	17.00	16.50	.50
" " " " " "	G. E. Wheat Special.	7.11	6.00	2.24	2.00	2.23	11.58	11.58	9.35	8.00	8.00	1.73	1.64	2.42	2.00	23.00	20.25	2.75
" " " " " "	G. E. English Wheat Grower	7.00	6.00	2.30	2.00	1.96	11.26	11.26	9.30	8.00	8.00	.85	.82	2.13	2.00	19.25	17.00	2.25
" " " " " "	G. E. Pure Bone	6.90	6.00	2.55	2.00	1.30	22.18	22.18	9.45	8.00	8.00	4.19	1.64	2.06	4.39	31.50	22.00	9.50
" " " " " "	G. E. Vegetable, Vine & Tob.	6.90	6.00	2.55	2.00	1.30	10.75	10.75	9.45	8.00	8.00	2.24	2.06	4.39	3.25	27.75	23.75	4.00
Hess, S. M. & Bro., Philadelphia, Pa.	Emperor Phosphate.	8.75	9.00	3.19	2.00	1.22	2.00	13.16	10.00	11.94	8.00	.84	2.10	1.00	1.00	17.75	12.50	5.25
" " " " " "	Keystone Bone Phos.	5.54	9.00	2.24	2.00	1.89	4.00	9.67	11.00	7.78	7.00	1.30	4.69	1.00	2.10	21.50	15.50	6.00
" " " " " "	Soluble Bone.	10.23	12.00	4.14	2.00	1.52	15.89	14.00	14.37	14.00	14.00	.84	2.10	1.00	1.00	17.25	16.50	.75
Jarecki Chem. Co., Sandusky, Ohio.	C. O. D. Phosphate.	12.72	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	.52	.40	.97	.50	13.00	11.25	1.75
" " " " " "	O. K. Fertilizer.	4.96	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	1.17	.86	1.29	1.00	20.25	17.75	2.50
" " " " " "	No. 1 Fish Guano.	11.74	10.00	3.30	4.50	.54	1.00	15.58	15.50	15.04	14.50	.52	.40	.97	.50	13.00	11.25	1.75
Md. Fert. & M'g Co., Balt. Md.	Dissolved Phosphate.	12.17	9.00	2.50	5.00	.67	.50	15.34	14.50	14.67	14.50	.52	.40	.97	.50	13.00	11.25	1.75
" " " " " "	Dissolved S. C. Bone.	5.19	7.00	5.75	4.00	1.09	1.00	12.03	12.00	10.94	11.00	.56	.41	3.65	2.50	18.25	17.50	.75
" " " " " "	Linden Superphos.	9.67	7.25	2.18	3.75	.88	1.00	12.73	12.00	11.85	11.00	.56	.41	3.65	2.50	22.25	20.25	2.00
" " " " " "	Tomato Fertilizer.	6.00	6.00	3.12	3.00	3.32	1.00	12.44	10.00	9.16	9.00	1.71	1.65	2.20	1.50	22.75	20.75	2.00
" " " " " "	Globe Complete Manure.	6.40	6.00	3.04	3.00	3.40	1.00	12.84	10.00	9.44	9.00	1.96	1.85	2.39	1.50	24.25	21.50	2.75
" " " " " "	Ammoniated Bone.	5.77	5.00	3.39	3.00	1.83	2.00	10.99	10.00	9.16	8.00	2.52	2.50	1.79	.54	25.00	22.25	2.75
North Western Fert. Co., Chi., Ill.	Garden City Superphos.	6.20	7.00	4.55	3.00	2.95	2.00	13.70	12.00	10.75	10.00	1.58	1.00	1.00	1.00	20.50	17.25	3.25
" " " " " "	Acidulated Bone	6.47	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	1.71	1.65	2.20	1.50	22.75	20.75	2.00
Ohio F'm'r's Fert. Co., Columbus, O.	Acid Phosphate.	5.82	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	1.71	1.65	2.20	1.50	22.75	20.75	2.00
" " " " " "	Corn, Oats & Wh'at Fish Gua.	13.25	12.00	13.84	10.00	9.76	9.00	13.84	10.00	9.76	9.00	1.71	1.65	2.20	1.50	22.75	20.75	2.00
" " " " " "	Corn, Oats & Wh'at Fish Gua.	13.25	12.00	13.84	10.00	9.76	9.00	13.84	10.00	9.76	9.00	1.71	1.65	2.20	1.50	22.75	20.75	2.00

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	ANALYSES OF COMMERCIAL FERTILIZERS.															Difference between Official and Guaranteed Analyses.
		Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.		Valuation Calculated from Guaranteed Analysis.
Jno. S. Reese & Co., Baltimore, Md.	Half & Half.....	.92	4.00	8.47	4.00	1.55	1.00	10.94	9.00	9.89	8.00	1.16	.82	1.59	1.00	19.50	15.75
"	Elm Phosphate.....	13.62	12.00	4.49	2.00	1.18	1.00	19.29	15.00	18.11	14.00	....	....	....	....	20.75	16.75
Rasin Monumental Fert Co. Balt. Md.	Wm. Penn Crop Grower.....	7.85	5.50	2.33	2.50	1.00	1.00	11.18	9.00	10.18	8.00	1.12	.82	3.28	1.00	22.25	15.75
"	Bone & Potash.....	12.05	9.00	2.60	3.00	.29	1.00	15.03	13.00	14.74	12.00	....	....	3.75	1.00	22.75	16.25
"	Dissolved Bone.....	7.10	7.20	3.20	2.50	1.39	1.00	11.69	11.00	10.30	10.00	2.45	1.64	....	....	23.25	19.50
"	Monumental Acid Phos.....	12.55	11.50	3.26	2.50	.37	1.00	16.18	15.00	15.81	14.00	....	....	....	....	18.25	16.75
"	Arundel Complete.....	7.80	5.50	2.00	2.50	.92	1.00	10.72	9.00	8.00	8.00	2.00	1.64	2.75	2.00	24.75	20.50
"	Empire Guano.....	8.24	5.00	1.52	3.00	.59	1.00	10.35	9.00	9.76	8.00	2.65	2.06	2.46	1.50	26.75	21.50
"	Acid. Phos. or Siss S. C. Bone	10.99	11.50	4.87	2.50	.36	1.00	16.22	15.00	15.86	14.00	....	....	....	....	18.25	16.75
Susquehannah Fert. Co., Baltimore Md.	Dissolved S. C. Bone.....	14.02	....	2.41	....	.93	2.00	17.36	15.00	16.43	14.00	....	....	....	....	19.00	17.00
"	XXV Phosphate.....	4.70	....	4.39	....	2.21	2.00	11.30	10.00	9.09	8.00	1.16	1.00	2.76	1.00	21.00	16.75
Southern Fertilizer Co., York, Pa...	Ox Brand Pure Ground Bone	....	....	....	....	....	....	20.39	18.30	....	....	3.75	3.20	....	....	28.75	25.50
"	" Diss. Bone Phos.....	10.09	12.00	4.52	2.00	1.28	1.00	15.89	15.00	14.61	14.00	....	....	....	....	17.25	16.75
"	" Farmers Choice.....	6.91	6.00	2.52	3.00	1.78	1.00	11.21	10.00	9.43	9.00	1.03	.82	2.61	2.00	20.50	18.00
"	" Gen. Crop Grower.....	3.63	5.50	5.06	2.50	1.24	1.00	9.93	9.00	8.69	8.00	1.04	.41	2.65	2.00	19.75	15.50
"	" Sol. Bone & Potash	7.88	9.00	3.87	2.00	1.45	1.00	13.20	12.00	11.75	11.00	....	....	2.42	2.00	18.00	16.75
Slingluff & Co., Baltimore, Md...	Ammoniated Bone.....	8.24	7.00	1.96	2.00	3.25	1.00	13.45	10.00	10.20	9.00	2.12	2.05	4.25	2.50	28.25	23.75
"	Magic Guano.....	9.10	7.00	2.26	2.00	3.26	1.00	14.62	10.00	11.36	9.00	1.18	.82	3.05	2.00	24.00	18.00
"	Diss. South Carolina.....	10.75	11.00	3.66	3.00	2.39	1.00	16.80	15.00	14.44	14.00	....	....	....	....	17.50	16.75
"	Bone & Potash.....	8.67	8.00	4.23	2.00	3.19	1.00	16.09	11.00	12.90	10.00	....	....	3.25	2.00	20.75	15.75
Sheldon & Co., Baltimore, Md....	Dissolved Bone.....	9.26	5.00	3.45	5.00	.63	1.00	13.34	11.00	12.71	10.00	....	....	....	....	15.25	12.75
"	Sheldon's Guano.....	3.88	3.50	3.25	3.50	1.70	1.00	8.83	8.00	7.13	7.00	1.65	1.65	3.54	1.00	22.00	18.00
"	Pure Bone Meal.....	....	....	....	....	....	....	22.58	22.00	....	....	4.25	2.70	....	....	31.75	26.00

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation Calculated from Guaranteed Analyses.	Difference between Official and Guaranteed Analyses.
Smith Emery J. & Co. Columbus, O.	Acid Phosphate.....	6.69	.....	3.13	.....	4.16	1.00	13.98	10.00	9.82	9.00	.....	.....	.....	.....	13.50	12.00	1.50
" " " "	Acidulated Bone.....	3.17	.....	4.77	.....	9.65	1.00	17.53	13.00	7.94	8.00	1.27	1.46	3.80	1.00	18.00	17.25	.75
" " " "	Ammdt Bone and Potash....	.....	.....	.....	.....	.....	.....	17.50	9.00	.....	.....	.....	.....	.....	.....	21.25	15.75	8.50
Travers S. W. & Co. Richmond, Va.	National Tobacco Fert.	3.90	6.50	4.91	2.00	1.80	1.00	10.61	9.50	8.81	8.50	1.98	1.86	2.48	2.95	23.50	22.25	1.25
" " " "	Champion Corn Grower.....	5.50	6.00	4.23	2.00	.81	1.00	10.60	9.00	9.71	8.00	1.10	1.82	2.40	2.00	20.75	17.25	3.50
" " " "	Beef Blood and Bone.....	4.32	6.00	4.08	2.00	1.91	1.00	10.31	9.00	8.40	8.00	1.92	1.65	3.50	1.00	24.50	19.00	5.00
" " " "	Diss. Bone Phosphate.....	12.10	11.00	2.50	3.00	1.34	1.00	15.94	15.00	14.00	14.00	.....	.....	.....	.....	17.25	16.75	.50
" " " "	Capital Diss. S. C. Bone.....	5.76	8.00	6.67	4.00	1.54	1.00	13.97	13.00	12.45	12.00	.....	.....	.....	.....	15.25	14.75	.50
Wheeling Bumcher's As. Wheeling, Ohio	Valley Bone Dust.....	.....	.....	.....	.....	.....	.....	14.33	17.00	.....	.....	3.22	3.13	.....	.....	23.25	24.50	-1.25
Williams & Clark, New York, N. Y.	Acorn Brand Acid Phos.....	11.09	12.00	2.99	2.00	1.70	1.00	15.78	15.00	14.08	14.00	.....	.....	.....	.....	17.00	16.75	.25
" " " "	10 p c. Plain Superphos.....	7.73	7.00	2.83	3.00	1.91	2.00	12.47	12.00	10.56	10.00	.....	.....	.....	.....	13.50	13.00	.50
" " " "	Diss. Bone and Potash.....	5.85	.....	4.37	.....	2.42	.....	13.24	.....	10.82	10.00	.....	.....	2.08	2.00	17.00	15.50	1.50
" " " "	Royal Bone Phosphate.....	7.70	6.00	1.97	1.00	1.65	1.00	11.32	8.00	9.67	7.00	1.48	1.25	2.55	2.00	22.50	18.00	4.50
" " " "	Good Grower Potato Phos...	5.63	5.00	1.41	1.00	1.70	1.00	8.74	7.00	7.04	6.00	1.49	1.49	5.77	5.00	24.50	.....	.....
" " " "	Prolific Crop Producer.....	3.52	4.00	3.48	2.00	2.62	1.00	9.62	7.00	7.00	6.00	1.25	1.00	1.65	1.00	17.75	14.50	3.25
" " " "	Pure Bone Meal.....	.....	.....	.....	.....	.....	.....	20.53	.....	.....	.....	3.20	.....	.....	.....	26.75	.....	.....
" " " "	Cartaret Ground Bone.....	.....	.....	.....	.....	.....	.....	18.20	.....	.....	.....	2.08	1.65	.....	.....	21.50	.....	.....
Wooldr'ge, Robt. A. Fert. Co. Balt. Md	Florida Acid Phosphate.. ...	9.54	.....	4.74	.....	2.00	.....	16.28	.....	14.28	14.00	.....	.....	.....	.....	17.25	16.50	.75
" " " "	Triumph.....	6.96	.....	1.20	.....	2.20	.....	10.36	.....	8.16	8.00	1.55	1.50	5.38	4.00	25.25	22.50	2.75
" " " "	Little Giant	5.82	.....	3.36	.....	1.98	.....	11.16	.....	9.18	9.00	1.02	1.00	3.00	2.00	20.75	18.50	2.25
" " " "	Chieftain.....	6.68	.....	2.83	.....	2.26	.....	11.77	.....	9.51	9.00	1.86	2.00	3.18	2.00	24.75	22.75	2.00
" " " "	Liberty Bell	8.33	.....	3.72	.....	1.29	.....	13.25	.....	12.05	11.00	.....	.....	3.03	2.00	19.25	16.50	2.75
" " " "	Old Sledge.....	5.94	.....	3.47	.....	1.23	.....	10.64	.....	9.41	8.00	1.01	1.00	2.18	1.00	19.50	16.25	3.25

ANALYSES OF COMMERCIAL FERTILIZERS.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation Calculated from Guaranteed Analysis.	Difference between Official and Guaranteed Analyses.
Zell Guano Co., Baltimore, Md.....	Amnid Bone Superphos	8.70	.....	2.11	.....	1.88	.....	12.64	20.00	10.81	8.00	2.05	2.00	2.58	2.00	25.75	21.75	4.00
" " " " " "	Pure Ground Raw Bone..	8.87	.....	1.52	.....	54	.....	20.89	20.00	10.39	8.00	4.95	4.00	.....	.....	33.25	28.50	3.75
" " " " " "	Little Giant	10.69	.....	2.73	.....	2.02	.....	15.44	.....	13.42	12.00	1.25	1.00	1.49	1.00	20.25	16.35	4.00
" " " " " "	Diss. Bone Phos & Potash...	11.82	.....	3.87	.....	.95	.....	16.64	.....	15.69	14.00	.....	.....	2.24	1.00	19.50	16.00	3.50
" " " " " "	Diss. S. C. Phosphate	11.01	.....	2.60	.....	1.20	.....	14.81	.....	13.61	12.00	.....	.....	.....	.....	18.25	16.50	1.75
Va.-Carolina Chem. Co., Rich'd, Va..	14 per cent. Acid Phos..	11.69	10.00	2.83	4.00	1.41	1.00	15.93	15.00	14.52	14.00	.....	.....	.....	.....	17.95	16.75	.50
" " " " " "	Str. Bone & Potash....	6.65	6.00	3.74	4.00	.92	1.00	11.31	11.00	10.39	10.00	.....	.....	2.14	2.00	16.25	15.75	.50
" " " " " "	Special Compound for Wheat	4.99	5.00	4.44	3.00	1.54	1.00	10.97	9.00	9.43	8.00	1.08	.82	1.41	1.00	18.75	15.75	3.00
Chemical Co. of Canton, Balt., Md...	Harrow Brand Crop Grower.	4.04	5.00	4.23	3.00	2.30	1.00	10.57	9.00	8.27	8.00	1.17	.82	2.19	1.00	19.50	15.75	3.75