

KENTUCKY
AGRICULTURAL EXPERIMENT STATION

OF THE

State College of Kentucky:

BULLETIN NO. 82.

COMMERCIAL FERTILIZERS.

LEXINGTON, KENTUCKY,

July, 1899.

KENTUCKY

Agricultural Experiment Station.

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Address of the Station—LEXINGTON, KY.

NOTICE.

The Bulletins of the Station will be mailed free to any citizen of Kentucky who sends his name and address to the Station for that purpose.

Correspondents will please notify the Director of changes in their post-office address, or of any failure to receive the Bulletins.

ADDRESS:

KENTUCKY AGRICULTURAL EXPERIMENT STATION,
LEXINGTON, KY.

BULLETIN No. 82.

COMMERCIAL FERTILIZERS.

In this bulletin are published the names of all fertilizers that have been entered for sale in the State this year up to the date of this bulletin, together with the guaranteed analysis of each, taken from the affidavit of the manufacturer, showing the lowest percentages of essential ingredients which each fertilizer will contain as put on the market. This information is published now for the use of farmers in the fall season, but at the end of the year we will publish all the analyses that have been made, side by side with the manufacturers' guaranteed analyses, and the estimated value per ton calculated from each, as required by law.

FERTILIZER LAW.

The present law regulating the sale of fertilizers has been published in Bulletin 75, copies of which will be furnished on application, but we desire again to call attention to some of its provisions which most concern purchasers of fertilizers.

FREE ANALYSES FOR FARMERS. The law provides for free analyses to be made at the Station for the benefit of purchasers in order to see that the goods sold are up to the guarantee of their manufacturers. Any purchaser of a fertilizer, *who is not an agent or dealer*, may take a sample of the same under proper regulations, and have it analyzed at the Station free, and such purchaser shall not be required to give the name of the fertilizer or of the person from whom it was bought until after the analysis has been made and reported, but after the purchaser has received the report of analysis he must give the Director all information about the fertilizer that

may be required for publication in the Station bulletins or for prosecution of the case if it appears that the law has been violated. It is desirable that the farmers of the State take advantage of this privilege as much as possible, and it is recommended that in every large purchase a sample be taken for analysis.

IMPORTANT TO CAREFULLY SAMPLE. It is very important that samples for analysis be carefully taken in such a way as to be sure that they fairly represent the fertilizer purchased, and we request that any one intending to have an analysis made will read Section 8 of the law very carefully before taking the sample. To avoid the charge of unfairness in sampling, the law provides that the person or agent who sold the fertilizer be present when the sample is taken, but if this is not possible or convenient, the sample may be taken in presence of two disinterested witnesses. It is required that the sample be taken from at least a tenth of the whole number of sacks purchased, but the more sacks sampled the better, and it is always best to take the sample from at least two or three sacks. A quantity should be taken from each of the sacks selected to be opened, and all mixed together in one pile, and a quart jar filled from the mixture. The jar should be sealed and marked with the name and address of the sender in such a way that there can be no mistake about the identity of the sample, and forwarded at once to the Director of the Station. The station will furnish blank forms for the certificate, which is to go with the sample, but if there is not time to write for them, it may be made out after the form printed herewith. (See page 17.) All such samples must be taken at, or soon after, the time of purchasing the fertilizer, as it is not intended that a fertilizer be kept for months, possibly subject to change from exposure, and then be submitted to analysis.

FORM OF CERTIFICATE. The following is the proper form of certificate to accompany samples for free analysis. The words in italics are supposed to have been written in the blanks of one of our printed forms by the sender of the sample and give an idea of how these blanks should be filled. Anyone intending to send a sample for free analysis can get these blank certificates by writing to the Station.

CERTIFICATE FOR FREE ANALYSIS.

Smithville, Ky., June 1st, 1899.

M. A. SCOVELL, Director,
LEXINGTON, KY.

This is to certify that I am not a dealer in, or agent for the sale of any fertilizer, and that the fertilizer, a sample of which I have sent by express to you for free analysis was purchased by me for my own use and not for sale.

I further certify that the sample was taken at the time of purchase from at least 10 per cent. of the sacks or other packages comprising the whole lot purchased, and that it was taken as provided in Section 8 of the fertilizer law, in the following described manner, to wit: I opened four sacks of the fertilizer and took two shovels full from each and mixed them all together thoroughly on a clean floor and immediately filled a quart jar with the mixed fertilizer and labeled it "No. 1, from John Smith, Smithville, Ky."

Upon receipt of the analysis from you, I agree to furnish you with a tag taken from one of the sacks sampled, the name and address of the firm or agent of whom the fertilizer was purchased and the amount purchased.

John Smith,
(Signature.)

Smithville, Ky.
(P. O. Address)

Signature of Witnesses:

Sam Jones,

Will Brown.

SECTION PROVIDING FOR FREE ANALYSES. We print, also, the section of the Fertilizer Law relative to the taking of samples for free analysis, and we invite particular attention to it:

SEC. 8 Any person not a dealer in, or agent for the sale of any fertilizer who may purchase any commercial fertilizer in this State for his own use and not for sale, may take a sample of the same for analysis, which analysis shall be made by the said Experiment Station free of charge. Such samples for free analysis shall be taken by the purchaser in the presence of the person, company or agent selling the fertilizer, from at least ten (10) per cent. of the sacks or other packages comprising the whole lot purchased, and shall be thoroughly mixed and at least one pound of the material after mixing must be put into a jar or can, securely sealed and marked in such a way as to surely identify the sample and show by whom it was sent, without

giving the name of the fertilizer or the person from whom it was purchased, and must be forwarded to the Director of the Kentucky Agricultural Experiment Station, Lexington, Ky. The purchaser shall also send with the sample a certificate signed by himself and witness, or by two witnesses, stating that the sender has purchased the fertilizer for his own use and not for sale, and that the sample was taken in the manner prescribed in this Section. Provided, however, that if the person, company or agent shall refuse to witness the taking of the sample, then the sample may be taken at the time of the purchase in the manner already described in the presence of two witnesses who shall certify to the manner of taking the sample. The purchaser shall preserve the official label from one of the bags or other packages sampled to be sent to the Director after having received the report of analysis of the sample, and at the same time he shall furnish to the Director the name and address of the firm of whom the fertilizer was purchased and the amount purchased; and any person having sent a sample for free analysis, under the provisions of this section, who shall, after having received the report of analysis of the same, refuse to furnish the required information, shall thereafter forfeit the privilege of free analysis of fertilizers under this section. But if any sample shall have been submitted for free analysis without all the requirements of this section having been complied with, the Director shall inquire into the case and may accept the sample for free analysis if he believe that it is a fair sample of the fertilizer as it was delivered to the purchaser.

THE PROPER SELECTION OF FERTILIZERS.

In regard to the proper selection of fertilizers we can only say briefly that their profitable use will depend upon knowledge of the needs of the particular soil to which they are to be applied, and the requirements of the crop to be grown. The latter knowledge has been gained once for all for most farm crops by a scientific study of these crops, but the needs of the soil must in most cases be learned by the farmer himself, either from systematic field experiments, or by observation and experience. If it is necessary for a farmer to use commercial fertilizers, and he is working upon a kind of soil that has not already been tested, we believe it will pay him to learn its needs by carrying out systematic experiments with fertilizers. The experiments made at the Station amply illustrate this. It

would be very unprofitable to buy phosphates for use on soil like that of the Station farm, but potash salts could be profitably used there with most crops. This is because the soil is already rich in phosphates. But if it were deficient in phosphates, as is the case with many soils in this State, it would be unprofitable to use potash salts alone, and one would have to supply phosphates. It is therefore necessary in purchasing a commercial fertilizer to consider, first, what our soil needs for the crop to be raised, and then to look for that fertilizer containing most of those substances, in an available form, as shown by its chemical analysis and guaranteed by the manufacturer, at the least cost. It is well to bear in mind, also, that nitrogen compounds are the most expensive constituents of commercial fertilizers, and if we can keep up our nitrogen supply by means of clover, cow peas, or other leguminous plants, or by barnyard manure, and purchase only such phosphates and potash as may be needed, we will have accomplished a great saving.

THE TABLES.

The following tables are self-explanatory. They give the minimum analyses, expressed in per cents, of all fertilizers that have been entered under the law this year up to the date of this bulletin. These tables contain the names of all brands legally on sale in the State on the date of the present issue.

		GUARANTEED MINIMUM ANALYSIS.—PER CENT.									
Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Phosphoric Acid.				Nitrogen.	Equivalent to Ammonia.	Potash.		
			Soluble.	Reverted.	Available.	Total.			From Muriate.	From Sulphate.	
5113	A. D. Adair and McCarty Bros., Atlanta, Ga. The Armour Fertilizer Works, Chicago, Ill.	See Furman Farm Improvement Co. Bone Meal.	.....	.....	.....	24.00	2.47	3.00	.....	.....
5114	Same	Acidulated Bone Meal.	.....	.....	11.00	18.00	1.65	2.00	.....	.....
5115	Same	Raw Bone Meal.	.....	.....	.....	22.00	3.71	4.50	.....	.....
5116	Same	Grain Grower.	6.00	2.00	8.00	10.00	1.65	2.00	2.00	.....
5117	Same	Ammoniated Bone, with Potash.	4.00	2.00	6.00	8.00	2.47	3.00	.....	2.00
5118	Same	Tobacco Grower.	6.00	2.00	8.00	10.00	1.65	2.00	.....	5.00
5119	Same	Bone, Blood and Potash.	6.00	2.00	8.00	10.00	4.12	5.00	.....	7.00
5120	Same	Star Phosphate.	9.00	3.00	12.00	16.00	.....	.....	.....	.....
5365	Same	White Burley and Black Tobacco	2.00	6.00	8.00	10.00	2.88	3.50	.....	4.00
5274	Geo. S. Bartlett, Cincinnati, O.	Indian Brand Tobacco and Potato Fertilizer.	.....	.....	9.00	11.00	3.29	4.00	.....	5.00

Commercial Fertilizers.

5275	Same	Indian Brand Ohio Valley Phosphate.	8.00	11.00	1.65	2.00	2.00	.....
5367	Same	Indian Brand Pure Gilead Phosphate.	9.00	11.00	2.47	3.00	2.00	.....
5368	Same	Indian Brand Phoenix Phosphate.	7.00	10.00	1.65	2.00	1.00	.....
5390	Same	Indian Brand Ky. and Tenn. Tobacco Grower.	8.00	10.00	1.65	2.00	3.00	.....
5180	The Chicago Fertilizer Co., Chicago, Ill.	No. 2 Acid Phosphate.	9.00	10.00	.....	.....	.....	.....
5181	Same	Western Bone and Potash.	12.00	13.00	.....	.....	1.00	.....
5182	Same	Bone, Blood and Potash	9.00	10.00	1.23	1.50	.....	2.00
5183	Same	Standard Truck Fertilizer.	8.00	9.00	2.47	3.00	.....	4.00
5301	The Cleveland Dryer Co., Cleveland, O.	Ohio Seed Maker.	10.00	15.00	1.65	2.00	.....	.....
5302	Same	Ohio Seed Maker with Potash	10.00	15.00	1.65	2.00	2.00	.....
5303	Same	Phospho Bone.	10.00	.....	0.82	1.00	1.00	.....
5304	Same	Horsehead Phosphate.	10.00	12.00	.....	.....	.....	.....
5371	Same	Buckeye Ammoniated Bone Superphosphate	9.00	11.00	2.47	3.00	1.00	.....
5372	Same	XXX Phosphate.	13.00	15.00	.....	.....	.....	.....
5373	Same	White Burley Tobacco Fertilizer.	9.00	11.00	2.47	3.00	1.00	1.00
5374	Same	Kentucky Tobacco Grower.	10.00	12.00	1.65	2.00	1.00	1.00
5375	Same	Potato, Tobacco and General Crop Fertilizer.	10.00	11.00	1.03	1.25	6.00	.....

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	GUARANTEED MINIMUM ANALYSIS—PER CENT.									
			Phosphoric Acid.				Nitrogen.	Equivalent to Ammonia.	Potash.			
			Soluble.	Reverted.	Available.	Total.			From Muriate.	From Sulphate.		
5376	The Cleveland Dryer Co., Cleveland, O.	Square Bone	8.00	2.00	6.00	20.00	2.06	2.50	2.00	2.00	2.00	
5377	Same	Superior Bone Meal	8.00	2.00	6.00	20.00	2.06	2.50	2.00	2.00	2.00	
5168	Continental Fertilizer Co., Nashville, Tenn.	Bear Beef Blood and Bone	8.00	2.00	10.00	22.00	3.29	4.00	2.00	2.00	2.00	
5169	Same	Bear High Grade Dissolved Bone	8.00	6.00	14.00	15.00	1.65	2.00	2.00	2.00	2.00	
5170	Same	Bear Special Tobacco Guano	8.00	2.00	10.00	11.00	1.65	2.00	2.00	2.00	2.00	
5171	Same	Bear Special Wheat and Corn Guano	8.00	3.00	11.00	12.00	.....	.....	.....	2.00	2.00
5344	Crocker Fertilizer & Chem. Co., Buffalo, N. Y.	Crocker's Ammoniated Practical Phosphate	6.00	2.00	8.00	9.00	0.82	1.00	1.00	1.08	.....
5345	Same	Crocker's Kentucky Tobacco Phosphate	8.00	2.00	10.00	11.00	2.06	2.50	2.50	3.24	.....
5280	The Currie Fertilizer Co., Louisville, Ky.	Currie's Soluble Bone	.....	.....	9.50	11.25	0.82	1.00	1.00	1.00	.....
5281	Same	Currie's Climax Tobacco and Potato Grower	.....	.....	9.50	11.25	0.82	1.00	1.00	1.00	.....
5282	Same	Currie's Golden Leaf Tobacco and Potato Grower	.....	.....	8.00	10.50	1.23	1.50	1.50	3.00	.....

Commercial Fertilizers.

5283	Same	Currie's Corn and Wheat Special	9.50	11.00	0.41	0.50	0.50
5284	Same	Currie's Corn Grower	9.50	11.00	0.82	1.00	1.00
5285	Same	Currie's Corn and Oats Special	7.00	8.50	0.82	1.00	2.50
5286	Same	Currie's Acid Phosphate	12.00	14.00			
5287	Same	Currie's Tobacco and Potato Grower	7.00	9.00	1.65	2.00	7.50
5650	Same	Currie's Wheat Grower	10.00	12.00	1.23	1.50	1.50
5651	Same	Currie's Butchertown Raw Bone Meal	10.00	15.50	1.85	2.25	1.25
5652	Same	Currie's Fine Ground Raw Bone Meal		18.00	1.23	1.50	
5653	Same	Currie's Raw Bone Meal		20.50	3.29	4.00	
5341	Furman Farm Improvement Co., Atlanta, Ga.	Furman High Grade Fertilizer	10.00		1.65	2.00	2.00
5342	Same	Farish Furman Formula	10.00				2.00
5343	Same	Furman Soluble Bone With Ammonia and Potash	10.00		0.82	1.00	
5134	Globe Fertilizer Co., Louisville, Ky	Kentucky Standard Tobacco Grower	8.00	10.00	2.47	3.00	3.00
5212	Same	Globe Special Tobacco Grower	8.00	9.00	2.47	3.00	10.00
5213	Same	Globe Potato Grower	8.00	9.00	3.29	4.00	4.00
5259	Same	Eagle Corn and Wheat Grower	9.00	11.00	2.06	2.50	2.00
5260	Same	Big Four Tobacco Grower	8.00	10.00	1.65	2.00	2.00

GUARANTEED MINIMUM ANALYSIS.—PER CENT.

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Phosphoric Acid.					Nitrogen.	Equivalent to Ammonia.	Potash.	
			Soluble.	Reverted.	Available.	Total.	From Muriate.			From Sulphate.	
5261	Globe Fertilizer Co., Louisville, Ky.....	Golden Harvest Bone Meal	.....	.....	10.00	12.00	2.47	3.00	.....	.....
5262	Same.....	Progress Wheat and Corn Grower	.....	.....	9.00	10.00	1.65	2.00	.....	1.00
5263	Same.....	Globe Wheat Grower	.....	.....	9.00	11.00	2.06	2.50	.....	2.00
5264	Same.....	Bone and Potash	.....	.....	11.00	.....	.....	.....	.....	1.00
5265	Same.....	Globe Bone Dust	.....	.....	9.00	11.00	1.23	1.50	.....	.....
5266	Same.....	Globe Soluble Vegetable Manure	.....	.....	8.00	10.00	2.47	3.00	.....	3.00
5649	Same..... Greer Machinery Co., Knoxville, Tenn.....	Globe Bone Meal	.....	.....	.....	20.00	3.29	4.00	.....	.....
5383	The Jarecki Chemical Co. Sandusky, O.....	See Southern Fertilizer Co.... Lake Erie Fish Guano.....	.....	.....	10.00	11.00	1.65	2.00	.....	0.50
5384	Same.....	C. O. D. Phosphate	.....	.....	14.00	15.00	.....	.....	.....	.....
5549	Same.....	Fish and Potash Tobacco and Potato Food.....	.....	.....	9.00	10.00	0.82	1.00	.....	4.00

Commercial Fertilizers.

5550	Same	Number one Fish Guano	10.00	11.00	0.82	1.00	1.00	.....
5159	J. B. Jones, Louisville, Ky.	Corn Grower	9.00	11.00	2.47	3.00	.....	1.50
5160	Same	Tobacco and Potato Grower	10.00	12.00	2.88	3.50	.....	6.50
5269	Same	Jones' Bone Meal	.....	20.00	2.47	3.00	.....	.....
5270	Same	Ammoniated Bone Meal	.....	15.00	2.06	2.50	.....	.....
5380	Same	Raw Bone Meal	.....	21.50	3.50	4.25	.....	.....
5381	Same	Wheat Grower	9.00	11.00	1.70	2.06	.....	2.00
5125	The Jones Fertilizing Co., Cincinnati, O.	Bone Meal	.....	20.00	3.30	4.00	.....	.....
5126	Same	Acidulated Bone Meal	7.00	14.50	3.30	4.00	.....	.....
5127	Same	Ammoniated Bone	.....	15.00	4.12	5.00	.....	.....
5128	Same	Bone and Potash	8.00	10.00	1.65	2.00	.....	4.00
5129	Same	Tobacco and Potato Grower	10.00	12.00	3.71	4.50	.....	5.00
5130	Same	Miami Valley	9.00	13.00	2.47	3.00	.....	2.75
5131	Same	Jones' Reliable	8.50	10.00	1.23	1.50	.....	1.25
5132	Same	Jewel Phosphate	8.00	10.00	0.82	1.00	.....	.....
5133	Same	Acid Phosphate	8.00	10.00	.....	.....	.....	.....
5334	Same	Kentucky Tobacco Grower	8.00	10.00	1.65	2.00	.....	4.00

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	GUARANTEED MINIMUM ANALYSIS—PER CENT.								
			Phosphoric Acid.				Total.	Nitrogen.	Equivalent to Ammonia.	Potash.	
			Reverted.	Available.	Soluble.	From Muriate.				From Sulphate.	
5177	The Loudenback Fertilizer Co., Urbana O.	Urbana Bone Phosphate and Potash.	.....	9.00	.....	.....	1.23	1.50	2.00	.....	.....
5189	Louisville Fertilizer Works, Louisville, Ky.	Corn and Wheat Grower.	.....	10.00	11.00	.....	0.21	0.25	0.25	.....	.....
5190	Same.	Special Tobacco and Corn Grower.	.....	8.00	9.00	.....	0.82	1.00	.....	1.50	.....
5191	Same.	Potato and Tobacco Grower.	.....	7.00	10.00	.....	1.65	2.00	.....	4.00	.....
5218	Same.	Soluble Bone and Potash.	.....	8.00	9.00	.....	0.82	1.00	.....	1.50	.....
5268	Same.	Corn Grower.	.....	10.00	11.00	.....	.....	.....	2.00	.....	.....
5358	Same.	Dissolved Bone	.....	10.00	11.00	.....	.....	.....	.....	.....	.....
5495	A. B. Mayer Mfg. Co., St. Louis, Mo.	Anchor Brand Complete Fertilizer.	.....	8.00	12.00	.....	2.88	3.50	.....	.....	3.50
5496	Same.	Anchor Brand Corn and Wheat Grower.	4.00	9.00	12.00	.....	3.29	4.00	.....	.....	2.50
5497	Same.	Anchor Brand Pure Bone Meal.	4.00	.....	22.00	.....	3.71	4.50	.....	.....	.....
5222	Meridian Fertilizer Factory, Meridian, Miss.	Meridian Home Mixture.	7.00	9.00	10.00	.....	2.25	2.73	2.25	.....	.....

Commercial Fertilizers.

5223	Same.....	Meridian Corn and Wheat Grower.....	7.00	2.00	9.00	10.00	2.25	2.73	2.25	2.25
5194	Michigan Carbon Works, Detroit, Mich.....	Homestead Corn and Wheat Grower.....	.....	.....	9.00	.....	2.26	2.75	1.75	1.75
5195	Same.....	Homestead Tobacco Grower.....	.....	.....	10.00	.....	2.88	3.50	3.50	3.50
5196	Same.....	Desiccated Bone.....	.....	.....	.....	25.00	1.23	1.50	.....	.....
5197	Same.....	Acid Phosphate.....	.....	.....	14.00	15.00	.....	.....	.....	.....
5198	Same.....	Red Line Phosphate With Potash.....	.....	.....	10.00	12.00	.....	.....	3.00	3.00
5199	Same.....	Red Line Complete Manure.....	.....	.....	8.00	9.00	1.03	1.25	1.50	1.50
5200	Same.....	Red Line Crop Grower.....	.....	.....	8.00	9.00	1.65	2.00	2.00	2.00
5279	Same.....	Red Line Ammoniated Phos- phate.....	.....	.....	8.00	9.00	1.65	2.00	.....	.....
5290	Same.....	Homestead Potato Grower.....	.....	.....	8.50	10.00	1.94	2.35	5.00	5.00
5357	Same.....	Jarves Drill Phosphate.....	.....	.....	8.00	10.00	1.03	1.25	0.75	0.75
5276	National Fertilizer Co., Nashville, Tenn.....	Corn Grower.....	.....	.....	12.00	.....	0.82	1.00	1.00	1.00
5278	Same.....	Tobacco Grower.....	.....	.....	10.00	.....	1.65	2.00	2.00	2.00
5352	Same.....	Acid Phosphate.....	.....	.....	15.00	.....	.....	.....	.....	.....
5353	Same.....	Sadler's Formula.....	.....	.....	12.00	.....	.....	.....	2.00	2.00
5476	Same.....	Tobacco Fertilizer.....	.....	.....	10.00	.....	2.06	2.50	3.00	3.00
5486	Same.....	Bone Meal.....	.....	.....	.....	20.00	2.47	3.00	.....	.....

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	GUARANTEED MINIMUM ANALYSIS.—PER CENT.										
			Phosphoric Acid.					Nitrogen.	Equivalent to Ammonia.	Potash.			
			Soluble.	Reverted.	Available.	Total.	From Muriate.			From Sulphate.			
5487	National Fertilizer Co., Nashville, Tenn.....	National Dissolved Bone.....	.....	.....	12.00	.....	.....	0.82	1.00	1.00	.....	.....
5505	Same.....	Tennessee Guano.....	.....	.....	10.00	.....	.....	1.65	2.00	2.00	.....	.....
5506	Same.....	Twentieth Century Guano.....	.....	.....	12.00	.....	.....	.....	.....	4.00	.....	.....
5507	Same.....	Vegetable Grower.....	.....	.....	10.00	.....	.....	.....	.....	2.00	.....	.....
5143	North-Western Fertiliz- ing Co., Chicago, Ill.....	Horse Shoe Brand Fine Raw Bone.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5144	Same.....	H. S. B. Pure Ground Bone.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5145	Same.....	H. S. B. Raw Bone and Su- perphosphate Mixture.....	4.00	3.00	7.00	13.00	.....	.....	.....	.....	.....	0.50
5146	Same.....	H. S. B. Tobacco Grower.....	5.00	3.00	8.00	10.00	.....	.....	.....	.....	.....	.....
5147	Same.....	H. S. B. Kentucky Tobacco Grower.....	4.00	2.00	6.00	8.00	.....	.....	.....	.....	.....	.....
5148	Same.....	H. S. B. Challenge Corn Grower.....	5.00	3.00	8.00	10.00	.....	.....	.....	.....	.....	.....
5149	Same.....	H. S. B. Potato Grower.....	4.00	4.00	8.00	10.00	.....	.....	.....	.....	.....	.....
								3.29	4.00	4.00	3.50

Commercial Fertilizers.

5150	Same.....	H. S. B. Corn and Wheat Grower.....	7.00	3.00	10.00	12.00	2.06	2.50	.....	1.00
5151	Same.....	H. S. B. Acidulated Bone and Potash.....	7.00	3.00	10.00	12.00	0.82	1.00	.....	1.50
5152	Same.....	H. S. B. Bone and Potash.....	8.00	2.00	10.00	12.00	.....	.....	.....	1.25
5153	Same.....	H. S. B. Acidulated Bone.....	7.00	3.00	10.00	12.00	0.82	1.00	.....	.....
5154	Same.....	H. S. B. Dissolved Bone Phosphate.....	8.00	3.00	11.00	13.00	1.23	1.50	.....	.....
5155	Same.....	H. S. B. Quick Acting Phos- phate.....	9.00	4.00	13.00	15.00	.....	.....	.....	.....
5156	Same.....	H. S. B. Prairie Phosphate.....	4.00	2.00	6.00	9.00	1.65	2.00	.....	1.00
5157	Same.....	H. S. B. Special High Grade Tobacco Grower.....	5.00	4.00	9.00	11.00	3.29	4.00	.....	10.00
5044	The Ohio Farmers' Fer- tilizer Co., Columbus, O.....	Acid Phosphate.....	.....	.....	9.00	10.00	.....	.....	.....	.....
5045	Same.....	Soluble Bone and Potash.....	.....	.....	12.00	13.00	.....	.....	.....	1.00
5046	Same.....	Grain and Grass.....	.....	.....	12.00	13.00	.....	.....	.....	1.00
5047	Same.....	Corn, Oats and Wheat Fish Guano.....	.....	.....	9.00	10.00	1.24	1.50	.....	2.00
5048	Same.....	Tobacco Special.....	.....	.....	8.00	9.00	2.47	3.00	.....	4.00
5049	Same.....	Fine Ground Bone Meal.....	.....	.....	.....	20.00	1.65	2.00	.....	.....
5214	Queen City Fertilizer Co., Cincinnati, O.....	High Grade Corn and Wheat Grower with Potash.....	8.00	3.00	11.00	12.00	.....	.....	2.00	.....
5207	Read Phosphate Co., Nashville, Tenn.....	High Grade Tobacco Grower.....	.....	.....	8.00	9.00	1.65	2.00	4.00	.....
5208	Same.....	Blood and Bone No. 1.....	.....	.....	8.00	9.00	1.65	2.00	2.00	.....

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	GUARANTEED MINIMUM ANALYSIS—PER CENT.											
			Phosphoric Acid.					Nitrogen.	Equivalent to Ammonia.	Potash.				
			Soluble.	Reverted.	Available.	Total.	From Muriate.			From Sulphate.				
5209	Read Phosphate Co. Nashville, Tenn.	Alkaline Bone.					11.00						2.00	
5210	Same.	Farmers' Special Manure.					11.00	0.82	1.00				3.00	
5211	Same.	X. X. X. Dissolved Bone.					13.00							
5382	Same.	Vegetable, Fruit and Vine Fertilizer.					6.00	1.65	2.00				8.00	
5677	Same.	Read's Wheat and Clover Grower.					10.00	0.82	1.00				2.00	
5386	John S. Reese & Co. Agts. Baltimore, Md.	Reese's Pacific Guano.	3.50	5.00			10.50	1.85	2.25				1.20	
5369	The J. & F. Schroth Pkg. Co., Cincinnati, O.	Corn and Wheat Grower Schroth's Special Phosphate.					9.00	3.29	4.00				4.00	
5370	Same.						7.00	1.65	2.00				1.00	
5307	Southern Fertilizer Co., Atlanta, Ga.	Greer's Compound Fertilizer.	9.00	3.00			14.00						2.00	
5308	Same.	Greer's Challenge Fertilizer.	7.50	2.50			12.00	1.65	2.00				2.00	
5247	Swift & Co., Chicago, Ill.	Raw Bone Meal.					23.00	3.71	4.50					

Commercial Fertilizers.

5248	Same.....	Ground Steamed Bone.....	.....	.....	25.00	2.47	3.00	.....	.....
5249	Same.....	Bone and Potash 3%.....	.....	.....	23.50	2.47	3.00	.....	3.00
5250	Same.....	Superphosphate.....	6.00	2.00	12.00	2.47	3.00	.....	2.00
5251	Same.....	Potato and Tobacco Grower.....	8.00	2.00	11.00	3.29	4.00	.....	5.00
5252	Same.....	Bone Tankage.....	.....	.....	17.00	4.94	6.00	.....	.....
5253	Same.....	Acid Phosphate.....	10.00	6.00	17.00	.....	.....	.....	.....
5254	Same.....	Bone Tankage and Potash 3%.....	.....	.....	16.00	4.74	5.75	.....	3.00
5255	Same.....	Complete Fertilizer.....	6.00	2.00	11.00	1.03	1.25	.....	1.00
5256	Same.....	Phosphate and Potash.....	8.00	4.00	13.00	.....	.....	.....	2.00
5257	Same.....	Diamond [S] Phosphate.....	7.00	3.00	11.00	.....	.....	.....	.....
5258	Same.....	Vegetable Grower.....	6.00	3.00	10.00	3.29	4.00	.....	10.00
5139	Tennessee Chemical Co., Nashville, Tenn.....	Ox Alkaline Bone.....	9.00	3.00	13.00	.....	.....	2.00	.....
5140	Same.....	Ox Special Tobacco Guano.....	8.00	2.00	11.00	1.65	2.00	.....	.....
5141	Same.....	Ox Bone and Potash.....	7.00	5.00	13.00	.....	.....	.....	.....
5142	Same.....	Ox High Grade Dissolved Bone.....	8.00	6.00	15.00	.....	.....	.....	.....
5192	Same.....	Ox Bone with Ammonia and Potash.....	6.00	4.00	11.00	0.82	1.00	.....	.....
5317	Same.....	Ox Special Wheat and Corn Guano.....	9.00	3.00	13.00	0.82	1.00	.....	.....

Station Number.	NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	GUARANTEED MINIMUM ANALYSIS—PER CENT.									
			Phosphoric Acid.					Nitrogen.	Equivalent to Ammonia.	Potash.		
			Soluble.	Reverted.	Available.	Total.	From Muriate.			From Sulphate.		
5104	S. W. Travers & Co., Branch, Richmond, Va	Beef, Blood and Bone Fer- tilizer	5.00	2.00	7.00	8.00	1.65	2.00	.....	.....	2.00
5105	Same	National Tobacco Fertilizer.	5.00	2.00	7.00	8.00	1.85	2.25	.....	.....	4.00
5106	Same	Capital Truck Fertilizer.....	6.00	2.00	8.00	9.00	3.30	4.00	.....	.....	3.00
5107	Same	Capital Bone Potash Com- pound.....	8.00	2.00	10.00	11.00	.....	.....	.....	.....	2.00
5108	Same	Capital Dissolved S. C. Bone..	9.00	3.00	12.00	.....	.....	.....	.....	.....	.....
5158	Same	Champion Corn Grower.....	6.00	2.00	8.00	9.00	0.82	1.00	.....	.....	2.00

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

July 20, 1899.