

The Connecticut Agricultural Experiment Station.

BULLETIN No. 86.

JANUARY, 1886.

NOTICE.

The Station is now revising the list of those to whom its Bulletins are sent, in order to avoid waste. The Bulletins will be sent without further special request to those periodicals and public institutions which have received them hitherto.

All others who now receive the Bulletins and who wish to continue to receive them, and all others in the State who desire them should send their names and addresses to the Station at once.

The Bulletins and Report of the Station for 1886 will be sent free of charge to any citizen of Connecticut who desires them. Citizens of other States may receive them by remitting fifty cents to cover cost of mailing, etc. Such orders should be sent in at once.

As required by law, a package of each Bulletin is mailed to every post-office in the State. The package is directed to the Postmaster, with a request to distribute to farmers. The number sent will be increased in any case on application.

TO MANUFACTURERS AND DEALERS IN COMMERCIAL FERTILIZERS IN CONNECTICUT.

Attention is called to the requirements of the Fertilizer Law now in force in this State. A prompt and full compliance with its requirements by manufacturers and dealers next season will save them and the Station much annoyance. The full text of the law has been printed and circulated in the Station Bulletins and copies will be sent on application.

Section 2 requires manufacturers to send a sealed sample of each fertilizer to the director of the Station, and section 9 requires the director to make and publish annually one or more analyses of each brand; but the law does not require that an analysis shall be made on the sample sent by the manufacturer, nor is this commonly done. Such samples are preserved as manufacturers' standards and are only analyzed in exceptional cases, as for instance, when the agents of the Station have not found and drawn samples of the goods from dealers in the State during the season. In such cases it is necessary for the Station, in order to comply with the law, to make the analyses of those brands on the manufacturers' samples. If, however, the manufacturer has neglected to deposit a sample as required by law or has not deposited one during the current year, it may happen that although the analysis fee has been paid, the Station cannot make an analysis of the goods on which it has been paid.

FERTILIZER ANALYSIS.

1502. Mapes Tobacco Manure for use with Stems. Made by Mapes Formula and Peruvian Guano Co., 158 Front St., N. Y. Sampled from Mapes Branch, Hartford, by Station agent.

1540. Chittenden's Fish and Potash. Made by the National Fertilizer Co., Bridgeport. Sampled from stock of J. S. Kirkham, Newington, by T. R. Atwood, Newington.

ANALYSIS AND VALUATION.

	1502		1540	
	Found.	Guaranteed.	Found.	Guaranteed.
Nitrogen	6.15	5.35	4.72	3.30
Soluble Phosphoric Acid	7.80	----	3.81	
Reverted Phosphoric Acid ...	3.46	----	3.16	
Insoluble Phosphoric Acid ...	2.69	----	.80	
Total Phosphoric Acid	13.95	10.50	7.77	6.00
Potash	3.90	3.50	4.90	4.00
Chlorine82	----	----	
Cost per ton	\$50.00		\$35.00	
Valuation	48.88		\$33.71	

FODDER ANALYSES.

CORN MEAL.

CCIV. Stock of Ansel Arnold & Co. Cost \$23.60 per ton.

CLXXXIX. Cost \$23.20 per ton.

CXCIII. High mixed corn, ground by E. A. Buck & Co., Willimantic. Cost \$23.20 per ton.

CCIII. Ground at Swanton, Vt., for J. C. Bugby & Co. Cost \$23.60 per ton.

The above were sampled from stock of Willimantic dealers and sent by N. P. Perkins. The prices were quoted in June.

ANALYSES OF CORN MEAL.

	Average of 34 Analyses.	CCIV.	CLXXXIX.	CXCIII.	CCIII.
Water	15.03	12.04	13.12	13.29	14.24
Ash	1.45	1.38	1.42	1.43	1.55
Protein	9.09	10.19	10.00	9.81	9.50
Fiber	1.85	1.88	1.75	2.71	1.28
N.-free Extract	68.86	70.14	69.21	68.20	70.80
Fat	3.72	4.37	4.50	4.56	2.63
	100.00	100.00	100.00	100.00	100.00
Ash	1.71	1.57	1.63	1.65	1.80
Protein	10.70	11.58	11.51	11.32	11.06
Fiber	2.18	2.13	2.00	3.12	1.52
N.-free Extract	81.04	79.75	79.68	78.66	82.56
Fat	4.37	4.97	5.18	5.25	3.06
	100.00	100.00	100.00	100.00	100.00
Percentage digestibility of					
Protein	84.0	82.8	80.6	86.0	85.5
Comparative Valuation* ..	\$24.00	\$25.46	\$25.12	\$25.48	\$23.84

As regards their chemical composition all the samples are above the average of corn meal excepting CCIII, which has four tenths per cent. more protein but more than a per cent. less fat than average corn meal.

HOMINY MEAL.

CXCII. From Stock of Ansel Arnold & Co., Willimantic. Cost \$22.00 per ton in June. Sent by N. P. Perkins, Willimantic.

ANALYSIS.

		Water free.
Water	9.22	
Ash	3.12	3.44
Protein	11.20	12.34
Fiber	4.02	4.43
N.-free Extract	62.88	69.26
Fat	9.56	10.53
	100.00	100.00

* The method on which this comparative valuation is based will be explained in the forthcoming Report in the discussion on wheat feed. The figures show that if corn meal of average composition is selling at \$24.00 per ton, the feeding value of the other samples in comparison with average meal would be about as indicated.

This by-product of the hominy manufacture consists largely of the hull and the chit or germ of maize. It has considerably more protein than maize meal and more than two and a half times as much fat. The presence of so much fat makes the material more liable than maize meal to become rancid and unpalatable. Mr. Perkins has used it in past years in place of maize meal for milk-cows. The daily ration per cow was 4 quarts of hominy meal, 2 quarts wheat bran and 2 quarts "fine feed," well mixed and fed wet. He states that the cows kept in excellent condition and gave more milk than on yellow corn meal. In Mr. Perkins' experience it cannot be fed to fattening cattle quite so freely as maize meal.

RYE BRAN.

CCX. New York State Rye Bran, Stock of D. B. Crittenden & Co., New Haven. Sampled by the seller.

ANALYSIS.		Water-free.
Water	12.31	
Ash	4.35	4.91
Protein	16.06	18.30
Fiber	4.09	4.66
N.-free Extract	60.15	68.67
Fat	3.04	3.46
	<u>100.00</u>	<u>100.00</u>

NEW PROCESS LINSEED MEAL.

CCIX. From lot purchased by T. S. Gold, West Cornwall.

		Water-free.
Water	12.70	
Ash	5.14	5.88
Protein	33.25	38.09
Fiber	8.08	9.36
N.-free Extract	37.19	42.51
Fat	3.64	4.16
	<u>100.00</u>	<u>100.00</u>

GLUTEN FEED.

CCVIII. Sold by Holmes and Keeler, Norwalk. Cost \$25.00 per ton. Sampled and sent by D. H. Van Hoosear, Wilton.

ANALYSIS.		Water-free.
Water	8.86	
Ash	1.01	1.10
Protein	29.12	31.93
Fiber86	.94
N.-free Extract	53.91	59.20
Fat	6.24	6.83
	<u>100.00</u>	<u>100.00</u>