

Connecticut Agricultural Experiment Station

NEW HAVEN, CONN.

BULLETIN 249

APRIL, 1923

BEING THE

Report on Commercial Feeding Stuffs

1922

By E. M. BAILEY

CONTENTS

	Page
Provisions of the Statutes Relating to Feeding Stuffs	447
Classification of Samples	447
Significance of the Nutrient Groups	448
Coefficients of Digestibility, etc.	448
Inspection of 1922	449
Summary of Deficiencies	453
Miscellaneous Samples	454
Analyses of Official Samples	456
Analyses of Miscellaneous Samples	474

The Bulletins of this Station are mailed free to citizens of Connecticut who apply for them, and to other applicants as far as the editions permit.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION

OFFICERS AND STAFF

April, 1923.

BOARD OF CONTROL.

His Excellency, Charles A. Templeton, *ex-officio*, *President*.

James H. Webb, <i>Vice-President</i>	Hamden
George A. Hopson, <i>Secretary</i>	Mount Carmel
E. H. Jenkins, <i>Director and Treasurer</i>	New Haven
Joseph W. Alsop	Avon
Charles R. Treat	Orange
Elijah Rogers	Southington
Edward C. Schneider	Middletown

STAFF.

Administration.

E. H. JENKINS, PH.D., *Director and Treasurer*.
W. L. SLATE, JR., B.SC., *Vice-Director*.
MISS L. M. BRAUTLECHT, *Librarian and Stenographer*.
MISS J. V. BERGER, *Bookkeeper and Stenographer*.
WILLIAM VEITCH, *In charge of Buildings and Grounds*.

Chemistry.

Analytical Laboratory.

E. M. BAILEY, PH.D., *Chemist in Charge*.
R. E. ANDREW, M.A. }
C. E. SHEPARD } *Assistant Chemists.*
OWEN L. NOLAN }
HARRY J. FISHER, A.B. }
FRANK SHELDON, *Laboratory Assistant*.
V. L. CHURCHILL, *Sampling Agent*.
MRS. B. P. STORRS, *Clerk*.

Biochemical

Laboratory.

T. B. OSBORNE, PH.D., SC.D., *Chemist in Charge*

Botany.

G. P. CLINTON, SC.D., *Botanist in Charge*.
E. M. STODDARD, B.S., *Pomologist*.
MISS FLORENCE A. MCCORMICK, PH.D., *Pathologist*.
G. E. GRAHAM, *Assistant*.
MRS. W. W. KELSEY, *Secretary*.

Entomology.

W. E. BRITTON, PH.D., *Entomologist in Charge; State Entomologist*.
B. H. WALDEN, B.AGR., M. P. ZAPPE, B.S., } *Assistant*
PHILIP GARMAN, PH.D., } *Entomologists*
JOHN T. ASHWORTH, *Deputy in Charge of Gipsy Moth Work*.
MISS GLADYS M. FINLEY, *Stenographer*.

Forestry.

WALTER O. FILLEY, *Forester in Charge*.
A. E. MOSS, M.F., *Assistant*.
H. W. HICOCK, M.F., *Assistant*.
MISS PAULINE A. MERCHANT, *Stenographer*.

Plant Breeding.

DONALD F. JONES, S.D., *Plant Breeder in Charge*.
P. C. MANGELSDORF, B.S., *Assistant*.

Tobacco Sub-station at Windsor.

G. H. CHAPMAN, PH.D., *in Charge*.

Commercial Feeding Stuffs

By E. M. BAILEY.*

PROVISIONS OF THE STATUTES RELATING TO FEEDING STUFFS.

Under the Connecticut statutes the term "concentrated commercial feeding stuffs" covers practically all feeds excepting hay and straw, whole seed, unmixed meal made directly from any of the cereals or from buckwheat, and feed ground from whole grain and sold directly from manufacturer to consumer.

Under the new fertilizer law cottonseed meal is classed as a commercial fertilizer and, as such, is subject to analysis fees and tonnage tax. Provision is made, however, to exempt meal sold exclusively for feeding purposes.¹

Section 4775 requires that every lot or parcel of concentrated commercial feeding stuff shall bear a statement giving the name and address of the manufacturer or importer, the number of net pounds in the package, the name of the article, and the percentage of protein and fat contained in it. The law forbids the use of any metal in affixing tags.

No registration of feed or payment of analysis or license fees is required.

The penalty for violation of the statute is not more than \$100 fine for the first offense and not more than \$200 for each subsequent offense.

The law authorizes this station to take samples from any manufacturer or dealer, in a prescribed manner, and requires the station to analyze annually at least one sample of each brand which it has collected, and to publish these analyses "together with such additional information in relation to the character, composition and use thereof as may be of importance."

CLASSIFICATION OF SAMPLES.

The classification and summary of commercial feeding stuffs and other materials requiring fodder analysis which have been examined during the past year are as follows:

* Analyses are by Messrs. Shepard, Nolan, and Fisher; inspection and sampling are by Mr. Churchill; and the compilation of results for publication is largely due to Mrs. Storrs.

¹ Chapt. 204, Public Acts, 1919.

Official samples taken by the Station agent.....	163
Samples submitted by individuals.....	35
Samples examined in connection with field and other experiments at Storrs Experiment Station	160
Samples examined in connection with field experiments, this Station..	13
Total	371

Official samples taken by this Station are classified as follows:

Cottonseed Meal	12	Distillers' Products	1
Linseed Meal	7	Brewers' Products	3
Wheat Bran	11	Dried Beet Pulp	4
Wheat Middlings	22	Proprietary Stock Feed.....	55
Wheat Mixed Feed.....	10	Poultry Feed	19
Rye Products	2		
Oat Products	1	Total	163
Maize Products	16		

Only official samples collected by the Station agent and those submitted by individuals are included in this report. Other data are discussed elsewhere.

SIGNIFICANCE OF THE NUTRIENT GROUPS.

The significance of the several nutrient groups as expressed in the conventional proximate analysis has been discussed in previous bulletins¹. The terms "carbohydrate" and "nitrogen-free extract" are still confused in practice. It should be borne in mind that the term "carbohydrate" includes two of the groups as stated in a conventional fodder analysis, viz., "crude fiber" and "nitrogen-free extract". The reason for differentiating between the last named groups is that, in general, fiber is much less digestible than the remainder of the carbohydrate material or so-called "nitrogen-free extract", and it is also an aid in determining the genuineness or quality of certain feeds. If a feed tag or label bears declarations of both *fiber* and *carbohydrate*, then carbohydrate is used in the narrower sense of "nitrogen-free extract". "Carbohydrate-other-than-fiber" is less difficult to understand but more cumbersome to use.

COEFFICIENTS OF DIGESTIBILITY AND NET ENERGY VALUES.

The question of digestion coefficients and energy values of feeding stuffs has been discussed in previous reports.² These factors for most of the types of concentrates reported herein are given in Table I, and for others the reader is referred to the authorities cited.

¹ Conn. Exp. Sta., Bull. 206, 1918; Bull. 212, 1919; Bull. 221, 1920.

² Conn. Exp. Sta., Bull. 212, 1918; Bull. 221, 1919.

TABLE I. COEFFICIENTS OF DIGESTIBILITY AND NET ENERGY VALUES OF FEEDING STUFFS.¹

Feed.	Average dry matter, lbs. per hundred.	Coefficient of digestibility.				Net energy value, Therms per hundred lbs.
		Protein.	Carbohydrate.		Fat.	
			Fiber.	Nitrogen-free extract.		
Cottonseed Meal	92.2	84	37	75	95	90.0
Cottonseed Feed .....	...	58	45	61	90	...
Linseed Meal (old process)..	90.0	89	57	78	89	88.9
Linseed Meal (new process)..	90.4	86	73	87	95	85.1
Wheat Bran	89.9	76	43	74	62	53.0
Wheat Feed .....	...	77	36	76	87	...
Wheat Middlings	89.6	77	30	78	88	59.1
Red Dog Flour .....	...	88	36	88	86	...
Rye Flour .....	...	80	..	88	90	...
Barley, ground	90.7	88	70	93	86	89.9
Barley Bran .....	...	85	20	86	87	...
Corn Gluten Meal	90.9	85	55	90	93	84.2
Corn, Gluten Feed	91.3	85	76	88	85	80.7
Hominy Feed	89.9	66	76	90	91	81.3
Brewers' Grains	92.5	81	49	57	89	53.4
Malt Sprouts	92.4	77	87	80	85	72.7
Distillers' Grains, Corn	93.4	73	95	81	95	85.1
Distillers' Grains, Rye	92.8	51	..	17	77	56.0
Beet Pulp, dried	91.8	52	83	83	..	75.9
Peanut Cake, without shells..	89.3	90	9	84	90	93.6
Soybean Oil Meal	88.2	92	99	100	68	99.7
Cocoonut Cake	90.4	90	23	87	100	83.5

¹ Henry and Morrison, 18th Ed., pp. 722-723; Armsby and Putney, Penn. Exp. Sta. Bull., 142, 1916.

INSPECTION OF 1922.

REMARKS ON ANALYSES.

(Analyses on pages 456-473).

The definitions of the various feeding stuffs here given are those adopted by the Association of Feed Control Officials revised to October, 1921. The costs are those quoted when the samples were taken, mostly during November and December, 1922.

COTTONSEED MEAL.

41.12 Per cent. Protein Cottonseed Meal, Choice Quality, must be finely ground, not necessarily bolted, perfectly sound and sweet in odor, yellow, free from excess of lint, and by analysis must contain at least 41.12 per cent. crude protein, equivalent to 8 per cent. of ammonia.

Cotton seed meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

38.56 Per cent. Protein Cottonseed Meal, Prime Quality, must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color,

yellow, not brown or reddish, free from excess of lint, and by analysis must contain at least 38.56 per cent. crude protein, equivalent to 7.5 per cent. of ammonia.

Cottonseed meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

36 Per cent. Protein Cottonseed Meal, Good Quality, must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, and by analysis must contain at least 36 per cent. crude protein equivalent to 7 per cent. of ammonia.

Cottonseed meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

Twelve samples were examined, all of which satisfied their guaranties. Two brands, **20317** and **20345**, had tags attached by means of wire, which is illegal in this State.

The average composition of all samples is protein 39.2, fiber 11.2, and fat 6.5, which is substantially the same as the average found a year ago except that fat is about one per cent. lower. The cost per ton averages about \$10 higher than last year.

The average cost per ton of the 43 per cent. protein group of meals is \$61.25, and that of the 36 per cent. group \$57.92. The average amounts of protein, nitrogen-free extract and fat, in lbs. per 100 lbs. of feed, and the amounts of these constituents purchased for \$1.00 in each of these groups are as follows:

	Protein, lbs.	Nitrogen-free extract, lbs.	Fat, lbs.	Cost per 100 lbs.
43 per cent. group, average.....	44.1	28.5	7.1	\$3.06
lbs. nutrients for \$1.00.....	14.4	9.3	2.3	
36 per cent. group, average.....	36.3	31.6	6.0	2.90
lbs. nutrients for \$1.00.....	12.5	10.8	2.1	

Protein was therefore purchased to the best advantage in 43 per cent. goods.

LINSEED MEAL.

Linseed Meal is the ground product obtained after extraction of part of the oil from ground flaxseed screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes, provided that the final product shall not contain over six per cent. of weed seeds and other foreign materials and provided further that no portion of the stated six per cent. of weed seeds and other foreign materials shall be deliberately added.

Old Process Oil Meal is the ground product obtained after extraction of part of the oil by crushing, cooking and hydraulic pressure from seeds screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the term "Old Process Oil Meal" shall be understood to designate linseed meal as defined, made by the old process. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to "old process oil meal."

Seven samples were examined, all of which exceeded their guaranties. The cost per ton was \$10 in advance of last year's cost.

WHEAT BRAN.

Wheat Bran is the coarse outer coating of the wheat kernel as separated from cleaned and scoured wheat in the usual process of commercial milling.

Eleven samples were analyzed, none of which showed deficiencies in protein or in fat. So far as fiber guaranties were given or recorded only one excess was found, viz., in **20236**, where 9.12 per cent. was found, which was 1.52 more than the maximum guaranteed. The cost of wheat bran was \$7.50 per ton more than the average price noted last year.

WHEAT MIDLINGS.

Standard Middlings (Red Shorts or Brown Shorts) consists mostly of the fine particles of bran, germ and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial process of milling.

Gray Shorts (Gray Middlings or Total Shorts) consists of the fine particles of the outer bran, the inner bran or bee-wing bran, the germ, and the offal or fibrous material obtained from the "tail of the mill." This product must be obtained in the usual process of commercial milling.

White Shorts or White Middlings consists of a small portion of the fine bran particles and the germ and a large portion of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual process of flour milling.

Twenty-two samples were analyzed and no deficiencies of protein or of fat, and no excesses of fiber, so far as statements of fiber are recorded, were found. The average composition as regards protein, fiber and fat is practically the same as observed in last year's inspection, but an advance in price of \$6.00 per ton is shown.

MIXED FEED.

Wheat Mixed Feed (Mill Run Wheat Feed) consists of pure wheat bran and the gray or total shorts of flour middlings combined in the proportions obtained in the usual process of commercial milling.

Ten samples of wheat mixed feed showed an average for protein, fiber and fat of 16.8, 7.3 and 5.1 respectively, which is substantially the composition maintained for several years past. Only one sample contained more than 8.5 per cent of fiber, the tentative standard adopted¹ for this class of wheat products, but the excess was not considerable. The cost per ton is about \$5.00 in advance of the price prevailing a year ago.

¹ By the A. F. C. O., 1921.

RYE PRODUCTS.

Rye Middlings or Rye Feed is the by-product obtained from the manufacture of ordinary "100 per cent." rye flour from cleaned and scoured rye grain.

The two samples of rye products examined exceeded their guaranties for both protein and fat.

OAT PRODUCTS.

Oat Middlings are the floury portion of the oat groat obtained in the milling of rolled oats.

One sample was analyzed which conformed fully to the guaranty.

CORN GLUTEN FEED.

Corn Gluten Feed is that portion of commercial shelled corn that remains after the separation of the larger part of the starch and the germs by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

The four samples of this feed were found to satisfy their guaranties in all respects. The average price was \$10.00 per ton more than was paid last year.

CORN GLUTEN MEAL.

Corn Gluten Meal is that part of commercial shelled corn that remains after the separation of the larger part of the starch, the germ and the bran, by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Only one sample was examined. It exceeded its guaranty in both protein and fat.

CORN MEAL.

Only one sample was examined. It was of normal composition and quality.

HOMINY FEED.

Hominy Feed, Hominy Meal or Hominy Chop is the kiln-dried mixture of the mill run bran coating, the mill run germ, with or without a partial extraction of the oil and a part of the starchy portion of the white corn kernel obtained in the manufacture of hominy, hominy grits and corn meal by the degerminating process.

Nine samples were examined and all conformed to their guaranties except 20329, which was slightly deficient (0.26 per cent.) in fat. The average price per ton was \$7.00 more than last year.

DISTILLERY AND BREWERY PRODUCTS.

One sample of distillers' grains and three of brewers' grains were analyzed. No deficiencies were found except that 20323 was found to contain 0.94 per cent. less curde fat than was claimed.

DRIED BEET PULP.

Dried Beet Pulp is the dried residue from sugar beets which have been cleaned and freed from crowns, leaves and sand, and which have been extracted in the process of manufacturing sugar.

The four samples examined were of satisfactory quality and satisfied their guaranties. The average cost per ton last year was \$33.66, while for the corresponding period this year it was over \$58.00.

PROPRIETARY STOCK FEEDS.

To this class of feeding stuffs belong mixtures which are intended to furnish ready mixed a "balanced" ration for various classes of farm animals. Although the guaranteed amounts of the several nutrients may remain constant, the ingredients which make up the mixture will vary depending upon the available supply of basic materials. When these materials are of good quality the results obtained will no doubt justify their use; many of these mixtures are approved by experienced feeders. In many cases the ingredients used in compounding such feeds are stated on the labels and, while this practice is not required in this State, it is a useful guide in feeding practice.

Fifty-five samples were examined this year, and few deficiencies in composition were noted. Three samples, **20319** Elmore, **20301** Delaware and **20290** Red Wing Dairy Ration, were deficient in protein by amounts exceeding 1 per cent. A number of others were deficient in fat, but the amounts did not exceed 0.5 per cent., except in **20340** Pennant, **20356** Davis and **20333** Red Wing Growing Feed, where the shortages were 0.63, 1.17 and 0.69 per cent. in the order named.

POULTRY FEEDS.

Nineteen samples of poultry feeds were analyzed, all of which conformed to their guaranties for protein and fat.

SUMMARY OF DEFICIENCIES.

In Table II is given a summary of those feeds found deficient in nutrients as compared with their guaranties. Only variations greater than 1 per cent. in protein and fiber and one-fourth per cent. in fat are noted.

Attention is called to two corrections which should be made in Table II of Bulletin 238 (being the Report of this Station on Commercial Feeding Stuffs for 1921).

Item under *Wheat Feed* (Mixed Feed) should read: **15722** Wirthmore, St. Albans Grain Co., St. Albans Vt.....0.30.

Item under *Poultry Feeds* should read: **18008** Chick-Chuck. Russia Cement Co., Gloucester, Mass. 5.75 0.38

These corrections have already been acknowledged and notice thereof distributed with Station Bulletin 241. They are repeated here to reach those readers more particularly interested.

MISCELLANEOUS SAMPLES.

Partial or complete analyses of feeding stuffs submitted by individuals during the past year are given in Table IV. This station is not responsible for the sampling of these materials but only for the accuracy of the analyses of the samples as received by us. We are justified in making such examinations only insofar as they may be of public interest and concern, and to this end as complete information as may be given should accompany samples thus submitted; that is to say, brand, name, manufacturer and guaranty should be stated if known. Most of the samples thus examined were for the purpose of checking guaranties or for information to be used in the compounding of rations.

Eight samples, not included in Table IV, were examined for foreign or injurious substances. Some of these were poultry feeds suspected of having caused the death of fowls or chicks. Complaints of this kind cannot be satisfactorily answered by chemical tests unless conspicuously toxic substances can be detected, which is seldom the case. In our experience such substances have been found only in cases of accidental contamination or of malicious or revengeful intent.

TABLE II. FEEDS NOT CONFORMING TO GUARANTIES OR OTHERWISE ILLEGAL.

Station No.	Manufacturer and Brand	Protein Deficiency	Fat Deficiency	Fiber Excess	Remarks
	COTTONSEED MEAL.	%	%	%	
20317	Paramount. Ashcraft-Wilkinson Co., Atlanta, Ga. ....	...	..	...	Wire tags, illegal.
20345	Owl. F. W. Brode & Co., Memphis, Tenn. ....	...	...	...	Wire tags, illegal.
	WHEAT BRAN.				
20236	Bell Cow. The Quaker Oats Co., Chicago, Ill. ....	...	...	1.52	.....
	HOMINY.				
20329	Plymouth. Plymouth Milling Co., Lemars, Iowa ....	...	0.26	...	.....
	BREWERS' PRODUCTS.				
20323	Dried Grains. Fleischmann Co., Peekskill, N. Y. ....	...	0.94	...	.....
	PROPRIETARY MIXED FEEDS.				
20322	Elmore Calf Meal. Elmore Milling Co., Oneonta, N. Y. ....	...	0.33	...	.....
20319	Elmore Horse Feed. Elmore Milling Co., Oneonta, N. Y.	1.25	...	...	.....
20272	Riverdale Dairy Ration. Arcady Farms Milling Co., Chicago, Ill. ....	...	0.34	...	.....
20249	Basic Dairy Ration. R. G. Davis & Sons, New Haven. ....	...	0.45	...	.....
20301	Delaware Dairy Feed. Delaware Mills, Deposit, N. Y.	1.50	...	...	.....
20290	Red Wing Dairy Ration. Meech & Stoddard, Inc., Middletown.	1.94	...	...	.....
20340	Pennant Stock Feed. E. W. Bailey & Co., Swanton, Vt. ....	...	0.63	...	.....
20356	Davis Stock Feed. R. G. Davis, New Haven. ....	...	1.17	...	.....
20372	Haskell's Stock Feed. Haskell Mills, Toledo, Ohio. ....	...	0.35	...	.....
20333	Red Wing Growing Feed. Meech & Stoddard, Inc., Middletown. ....	...	0.69	...	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
OIL SEED PRODUCTS.		
<i>Cottonseed Meal.</i>		
20367	Longhorn. American Cotton Oil Co., Memphis, Tenn.	<i>Willimantic</i> : Willimantic Grain Co... Guaranty
20227	Surety. American Cotton Oil Co., Memphis, Tenn.	<i>East Haven</i> : F. A. Forbes
20280	Monarch. Ashcraft-Wilkinson Co., Atlanta, Ga.	<i>New Milford</i> : Geo. E. Ackley Co... Guaranty
20317	†Paramount. Ashcraft-Wilkinson Co., Atlanta, Ga.	<i>Rockville</i> : Rockville Grain & Coal Co Guaranty
20345	†Owl Brand 43. F. W. Brode & Co., Memphis, Tenn.	<i>Winsted</i> : E. Manchester & Sons ... Guaranty
20370	Bull. Humphreys-Godwin Co., Mem- phis, Tenn.	<i>Yantic</i> : Yantic Grain & Products Co. Guaranty
20330	Danish. Humphreys - Godwin Co., Memphis, Tenn.	<i>Hartford</i> : Garber-Northam Grain Co. Guaranty
20267	Dixie. Humphreys-Godwin Co., Mem- phis, Tenn.	<i>Danbury</i> : H. E. Meeker
20189	Thirty-Six. L. B. Lovitt & Co., Mem- phis, Tenn.	<i>Storrs</i> : Conn. Agr. College
20335	Thirty-Six. L. B. Lovitt & Co., Mem- phis, Tenn.	<i>Middletown</i> : Meech & Stoddard, Inc. Guaranty
20297	Economy. Lyle & Lyle, Huntsville, Ala.	<i>Plantsville</i> : C. A. Cowles
20305	Marianna. Marianna Cotton Oil Co., Marianna, Ark.	<i>Bristol</i> : Goodsell Bros. Guaranty
		Average guaranty
		Average of analyses
		Average digestible
<i>Linseed Meal, Old Process.</i>		
20276	American Linseed Co., Buffalo, N. Y.	<i>New Milford</i> : Geo. T. Soule
20315	Amco. American Milling Co., Peoria, Ill.	<i>Rockville</i> : Rockville Grain & Coal Co. Guaranty
20294	Archer Daniels Linseed Co., Buffalo, N. Y.	<i>West Cheshire</i> : G. W. Thorpe
20257	Kellogg & Miller, Amsterdam, N. Y...	<i>Norwalk</i> : C. E. Slauson Co. Guaranty
20233	Mann Bros. Co., Buffalo, N. Y.	<i>Guilford</i> : F. C. Morse
20253	Midland Linseed Products Co., To- ledo, O.	<i>Southport</i> : C. Buckingham & Co... Guaranty
20328	Spencer Kellogg & Sons, Buffalo, N. Y.	<i>Thompsonville</i> : Geo. S. Phelps & Co. Guaranty
		Average guaranty
		Average of analyses
		Average digestible

† Wire tags.

INSPECTION OF 1922.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20367	6.27	6.43	45.00	7.96	27.14	7.20	\$61.00
.....	...	...	43.00	12.00	25.00	6.00	.....
20227	6.93	5.96	36.00	13.52	30.82	6.77	57.00
.....	...	...	36.00	14.00	27.00	5.50	.....
20280	5.19	7.04	44.00	7.50	28.62	7.65	60.00
.....	...	...	43.00	10.00	18.00	6.00	.....
20317	6.66	6.02	37.63	12.65	31.24	5.80	62.00
.....	...	...	36.00	14.00	27.00	5.50	.....
20345	5.83	7.01	42.56	10.02	27.66	6.92	60.00
.....	...	...	43.00	10.00	22.00	6.00	.....
20370	7.00	6.69	45.00	7.88	26.67	6.76	64.00
.....	...	...	43.00	10.00	26.00	5.00	.....
20330	6.73	5.75	35.63	14.42	31.33	6.14	62.00
.....	...	...	36.00	15.00	25.00	5.00	.....
20267	7.22	6.62	40.44	9.01	20.15	7.56	59.00
.....	...	...	41.00	10.00	26.00	5.00	.....
20189	6.93	5.85	35.81	12.50	32.97	5.04	.....
.....	...	...	36.00	.....	.....	5.00	.....
20335	6.60	5.55	36.31	13.80	32.22	5.52	55.50
.....	...	...	36.00	14.00	28.50	5.00	.....
20297	7.92	5.85	35.75	12.71	31.83	5.04	55.00
.....	...	...	36.00	14.00	27.00	5.00	.....
20305	6.89	6.12	36.25	12.06	31.84	5.04	56.00
.....	...	...	36.00	14.00	28.50	5.75	.....
.....	...	...	38.75	12.44	25.45	5.39	.....
.....	6.68	6.24	39.20	11.24	30.13	6.51	59.22
.....	...	...	33.0	4.2	22.6	6.2	.....
20276	8.60	5.68	35.00	7.16	37.89	5.67	55.00
.....	...	...	32.00	.....	.....	5.00	.....
20315	8.99	5.70	33.00	8.36	37.72	6.23	62.00
.....	...	...	30.00	.....	.....	5.00	.....
20294	9.12	4.90	34.63	8.13	36.99	6.23	62.00
.....	...	...	34.00	.....	.....	5.00	.....
20257	7.61	6.03	33.31	7.81	38.10	7.14	65.00
.....	...	...	30.00	.....	.....	4.00	.....
20233	9.12	5.87	33.06	7.46	36.88	7.61	58.00
.....	...	...	31.00	10.00	.....	6.00	.....
20253	9.62	5.70	34.31	7.26	36.63	6.48	62.00
.....	...	...	30.00	.....	.....	5.00	.....
20328	8.25	5.75	34.13	7.43	38.62	5.82	64.00
.....	...	...	31.00	.....	.....	5.00	.....
.....	...	...	31.14	.....	.....	5.00	.....
.....	8.76	5.66	33.92	7.66	37.55	6.45	61.14
.....	...	...	30.2	4.4	29.3	5.8	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
WHEAT PRODUCTS.		
<i>Wheat Bran.</i>		
20342*	Cataract City Milling Co., Niagara Falls, N. Y.	Granby: E. H. Rollins Guaranty
20289*	Choice. Hecker-Jones-Jewell Milling Co., New York	Meriden: Meriden Grain & Coal Co. Guaranty
20293*	Lakewood's. Lake of the Woods Milling Co., Montreal, Can.	West Cheshire: G. W. Thorpe Guaranty
20366	Maple Leaf Milling Co., Toronto, Can.	Willimantic: Willimantic Grain Co... Guaranty
20303	Niagara. Niagara Falls Milling Co., Niagara Falls, N. Y.	Bristol: Goodsell Bros. Guaranty
20231	Ogilvie Flour Mills Co., Montreal, Can.	Branford: S. V. Osborn Guaranty
20369*	Pillsbury Mills, Minneapolis, Minn....	Willimantic: Willimantic Grain Co... Guaranty
20236	Bell Cow. Quaker Oats Co., Chicago	Hamden: I. W. Beers Guaranty
20337*	Red Wing. Red Wing Milling Co., Red Wing, Minn.	Middletown: Meech & Stoddard, Inc. Guaranty
20188*	Red Wing Special. Red Wing Milling Co., Red Wing, Minn.	Storrs: Conn. Agr. College Guaranty
20381*	Washburn-Crosby Co., Minneapolis, Minn.	Mystic: Mystic Grain Co. Guaranty
		Average guaranty
		Average of analyses
		Average digestible
<i>Wheat Middlings.</i>		
20281*	E-A-Co. Everett Aughenbaugh & Co., Waseca, Minn.	North Haven: Wm. L. Thorpe Guaranty
20226*	Dominion Flour Mills, Montreal, Can.	East Haven: F. A. Forbes Guaranty
20338*	Dominion Flour Mills, Montreal, Can.	Middletown: Meech & Stoddard, Inc. Guaranty
20321	Snow. Elmore Milling Co., Oneonta, N. Y.	Somers: W. C. Everett Guaranty
20288*	Hecker-Jones-Jewell Milling Co., New York	Meriden: Meriden Grain & Coal Co. Guaranty
20348*	W. J. Jennison Co., Minneapolis, Minn.	Winsted: E. Manchester & Sons.... Guaranty
20246*	Rex Grey. Kehlor Flour Mills Co., St. Louis, Mo.	Ansonia: Ansonia Flour & Grain Co. Guaranty
20244*	Lakewood's. Lake of the Woods Milling Co., Montreal, Can.	Ansonia: Ansonia Flour & Grain Co. Guaranty

* With screenings.

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20342	7.49	6.08	16.75	9.05	55.39	5.24	33.00
.....	.....	.....	14.00	.....	.....	4.20	.....
20289	9.03	6.20	14.88	9.56	55.11	5.22	38.00
.....	.....	.....	14.50	14.00	48.50	3.50	.....
20293	10.20	5.91	16.13	9.96	51.99	5.81	35.00
.....	.....	.....	15.00	.....	.....	3.50	.....
20366	8.75	5.01	18.00	9.51	52.71	6.02	36.00
.....	.....	.....	15.00	.....	.....	4.50	.....
20303	8.70	6.33	16.94	9.37	53.30	5.36	36.00
.....	.....	.....	15.00	.....	.....	3.50	.....
20231	9.79	5.50	16.88	9.51	52.71	5.61	35.00
.....	.....	.....	14.00	10.00	.....	3.00	.....
20369	9.19	6.19	16.75	9.97	53.00	4.90	36.00
.....	.....	.....	14.00	.....	.....	4.00	.....
20236	9.46	5.72	16.00	9.12	54.26	5.44	37.00
.....	.....	.....	15.30	7.60	56.00	5.50	.....
20337	7.20	6.03	15.63	9.68	55.79	5.67	36.00
.....	.....	.....	13.50	.....	.....	4.00	.....
20188	9.16	6.86	16.25	9.13	53.25	5.35	.....
.....	.....	.....	13.50	.....	.....	4.00	.....
20381	9.12	5.84	15.94	9.65	53.91	5.54	.....
.....	.....	.....	14.00	.....	.....	4.00	.....
.....	.....	.....	14.35	.....	.....	3.97	.....
.....	8.92	5.97	16.38	9.50	53.76	5.47	35.78
.....	.....	.....	12.4	4.1	39.8	3.4	.....
20281	8.70	4.66	16.50	8.46	56.89	4.79	38.00
.....	.....	.....	15.00	.....	.....	3.00	.....
20226	10.20	4.19	17.50	7.01	55.36	5.74	37.00
.....	.....	.....	15.00	8.00	.....	4.00	.....
20338	9.85	4.14	18.56	7.17	53.96	6.32	37.00
.....	.....	.....	15.00	.....	.....	4.00	.....
20321	9.11	4.10	17.50	5.91	58.26	5.12	40.00
.....	.....	.....	17.00	.....	.....	4.00	.....
20288	8.38	4.66	16.63	8.47	56.04	5.82	38.00
.....	.....	.....	15.50	10.00	52.30	4.50	.....
20348	9.55	3.84	16.63	5.76	58.77	5.45	43.00
.....	.....	.....	16.50	.....	.....	4.50	.....
20246	10.21	3.94	18.25	4.45	59.30	3.85	40.00
.....	.....	.....	16.00	5.50	56.00	3.50	.....
20244	10.40	4.20	18.38	6.88	54.32	5.82	40.00
.....	.....	.....	16.00	.....	.....	5.00	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	<i>WHEAT PRODUCTS—Continued.</i> <i>Wheat Middlings—Concluded.</i>	
20252*	Rex. Maple Leaf Milling Co., Toronto, Can.	<i>Southport</i> : C. Buckingham & Co. Guaranty
20384*	Millbourne Mills, Philadelphia, Pa.	<i>New London</i> : P. Swartz Co. Guaranty
20235*	National Milling Co., Toledo, Ohio.	<i>Guilford</i> : F. C. Morse
20327*	Niagara. Niagara Falls Milling Co., Niagara Falls, N. Y.	<i>Thompsonville</i> : Geo. S. Phelps & Co. Guaranty
20232*	Ogilvie Flour Mills Co., Montreal, Can.	<i>Branford</i> : S. V. Osborn
20373*	Pembroke Milling Co., Pembroke, Ont.	<i>Yantic</i> : Yantic Grain & Products Co. Guaranty
20275	A. Pillsbury Mills, Minneapolis, Minn.	<i>New Milford</i> : Geo. T. Soule
20237	B. Pillsbury Mills, Minneapolis, Minn.	<i>Hamden</i> : I. W. Beers
20357	XX Daisy. Pillsbury Mills, Minneapolis, Minn.	<i>New Haven</i> : R. G. Davis & Sons, Inc. Guaranty
20240*	Bell Cow. Quaker Oats Co., Chicago, Ill.	<i>Orange</i> : E. D. Meade & Co. Guaranty
20263	Red Wing. Red Wing Milling Co., Red Wing, Minn.	<i>Stamford</i> : W. L. Crabb
20352*	Blue Moose Robin Hood Mills, Calgary, Can.	<i>Torrington</i> : F. L. Wadhams & Sons. Guaranty
20295*	Gold Medal. Washburn-Crosby Co., Minneapolis, Minn.	<i>West Cheshire</i> : G. W. Thorpe
20286*	Standard. Washburn-Crosby Co., Minneapolis, Minn.	<i>Wallingford</i> : A. E. Hall
		Guaranty
		Average guaranty
		Average of analyses
		Average digestible
	<i>Wheat Feed (Mixed Feed).</i>	
20354*	Fancy. Bay State Milling Co., Winoona, Minn.	<i>Torrington</i> : D. L. Talcott
20344*	C. W. Brister & Son, Auburn, N. Y.	Guaranty
20316	Boston. Duluth Superior Mills, Duluth, Minn.	<i>Granby</i> : E. H. Rollins
20239	National Milling Co., Toledo, Ohio.	Guaranty
20243	Niagara. Niagara Falls Milling Co., Niagara Falls, N. Y.	<i>Rockville</i> : Rockville Grain & Coal Co. Guaranty
20251*	Fancy. Pillsbury Mills, Minneapolis, Minn.	<i>Orange</i> : E. D. Mead & Co. Guaranty
		<i>Derby</i> : Peterson & Hendee
		Guaranty
		<i>Southford</i> : H. R. Stone
		Guaranty

* With screenings.

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20252	10.15	4.51	17.88	8.23	53.61	5.62	\$36.00
.....	...	...	16.00	.....	.....	5.50	.....
20384	10.60	3.98	16.13	4.92	60.10	4.27	40.00
.....	...	...	15.00	8.00	.....	4.00	.....
20235	8.56	4.65	17.63	6.19	57.59	5.38	36.00
.....	...	...	17.00	.....	.....	3.50	.....
20327	10.05	4.19	17.75	6.76	55.77	5.48	37.00
.....	...	...	15.50	.....	.....	3.50	.....
20232	9.72	4.05	18.25	7.69	54.65	5.64	36.00
.....	...	...	15.00	.....	.....	4.00	.....
20373	10.79	4.47	17.69	5.63	56.01	5.41	36.00
.....	...	...	15.00	8.00	.....	4.00	.....
20275	9.10	3.82	17.25	5.24	59.47	5.12	40.00
.....	...	...	16.00	.....	.....	4.00	.....
20237	9.70	5.08	17.25	8.21	54.95	4.81	38.00
.....	...	...	15.00	.....	.....	4.00	.....
20357	10.50	3.03	19.25	2.85	60.26	4.11	43.00
.....	...	...	16.00	.....	.....	4.00	.....
20240	9.69	3.77	17.81	6.41	56.97	5.35	37.00
.....	...	...	16.00	.....	.....	4.00	.....
20263	10.49	4.66	17.88	6.98	53.88	6.11	34.00
.....	...	...	15.00	.....	.....	5.00	.....
20352	8.75	4.83	19.75	7.59	52.75	6.33	36.00
.....	...	...	17.00	.....	.....	4.50	.....
20295	10.40	4.72	17.63	6.87	54.91	5.47	35.00
.....	...	...	15.00	.....	.....	4.00	.....
20286	10.24	4.32	18.00	6.68	55.41	5.35	34.00
.....	...	...	15.00	.....	.....	4.00	.....
.....	...	...	15.66	.....	.....	4.11	.....
.....	9.78	4.26	17.73	6.56	56.34	5.33	37.77
.....	...	...	13.7	2.0	43.9	4.7	.....
20354	7.50	4.94	16.38	6.21	59.92	5.05	41.00
.....	...	...	14.60	.....	.....	4.30	.....
20344	10.37	4.77	16.00	6.80	58.14	3.92	35.00
.....	...	...	12.00	10.00	.....	3.00	.....
20316	8.84	5.01	18.06	7.02	55.88	5.19	38.00
.....	...	...	15.00	.....	.....	4.00	.....
20239	9.89	6.11	16.31	7.86	55.40	4.43	39.00
.....	...	...	15.00	.....	.....	3.75	.....
20243	9.41	5.02	16.88	7.17	56.97	4.55	39.00
.....	...	...	14.50	.....	.....	2.50	.....
20251	9.43	4.46	17.13	6.43	57.41	5.14	37.00
.....	...	...	15.00	.....	.....	4.00	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	WHEAT PRODUCTS—Concluded.	
	<i>Wheat Feed (Mixed Feed)—Concluded.</i>	
20326*	Richardton Milling Co., Richardton, No. Dakota	<i>Thompsonville:</i> Geo. S. Phelps & Co. Guaranty
20268	Occident. Russell Miller Milling Co., Minneapolis, Minn.	<i>Danbury:</i> H. E. Meeker
20245	Gold Mine. Sheffield King Milling Co., Minneapolis, Minn.	Guaranty
20309*	Washburn-Crosby Co., Minneapolis, Minn.	<i>Ansonia:</i> Ansonia Flour & Grain Co. Guaranty
		<i>Manchester:</i> Little & McKinney..... Guaranty
		Average guaranty
		Average of analyses
		Average digestible
	RYE PRODUCTS.	
20353	Rye Middlings. Washburn - Crosby Co., Minneapolis, Minn.	<i>Torrington:</i> F. L. Wadhams & Sons. Guaranty
20300	Irving Mills Rye Feed. Van Vechten Milling Co., Rochester, N. Y.	<i>Plantsville:</i> C. A. Cowles
		Guaranty
	OAT PRODUCTS.	
20346	Oat Middlings. Armour Grain Co., Chicago, Ill.	<i>Winsted:</i> E. Manchester & Sons.... Guaranty
	MAIZE PRODUCTS.	
	<i>Corn Gluten Feed.</i>	
20277	Buffalo. Corn Products Refining Co., New York	<i>New Milford:</i> Geo. T. Soule
20363	KKK. J. C. Hubinger Bros. Co., Keokuk, Iowa	Guaranty
20307	Douglas. Penick & Ford, Inc., Cedar Rapids, Iowa	<i>New Haven:</i> Crittenden-Benham Co. Guaranty
20242	A. E. Staley Mfg. Co., Decatur, Ill.	<i>Plainville:</i> Eaton Bros. Guaranty
		<i>Derby:</i> Peterson & Hendee
		Guaranty
		Average guaranty
		Average of analyses
		Average digestible
	<i>Corn Gluten Meal.</i>	
20313	Diamond. Corn Products Refining Co., New York	<i>Rockville:</i> Rockville Milling Co.... Guaranty
	<i>Corn Meal.</i>	
20190	Meech & Stoddard, Inc., Middletown.	<i>Storrs:</i> Conn. Agr. College
	<i>Hominy Feed.</i>	
20282	Homco. American Hominy Co., Indianapolis, Ind.	<i>North Haven:</i> Wm. L. Thorpe Guaranty

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20326	7.30	5.78	19.69	8.07	53.37	5.79	\$37.00
.....	...	...	15.00	....	....	4.00	.....
20268	9.24	5.04	16.38	7.62	55.68	6.04	40.00
.....	...	...	15.00	....	....	4.50	.....
20245	10.01	5.19	15.38	8.85	55.09	5.48	38.00
.....	...	...	15.00	....	....	4.50	.....
20309	10.04	4.77	16.00	7.01	57.26	4.92	38.00
.....	...	...	15.00	....	....	4.00	.....
.....	...	...	14.61	....	....	3.86	.....
.....	9.20	5.11	16.82	7.30	56.52	5.05	38.20
.....	...	...	13.0	2.6	43.0	4.4	.....
20353	10.14	4.20	17.25	5.16	59.86	3.39	38.00
.....	...	...	14.00	....	....	3.00	.....
20300	9.72	3.50	15.50	3.27	65.08	2.93	35.00
.....	...	...	13.00	....	....	2.00	.....
20346	6.98	4.32	15.00	9.82	58.07	5.81	44.00
.....	...	...	15.00	10.00	....	5.00	.....
20277	8.73	5.07	26.25	6.84	50.15	2.96	48.00
.....	...	...	23.00	....	....	1.00	.....
20363	5.85	1.70	23.88	7.37	56.01	5.19	50.00
.....	...	...	23.00	7.50	....	2.40	.....
20307	7.17	4.55	29.50	5.61	50.48	2.69	48.00
.....	...	...	23.00	....	....	1.00	.....
20243	6.87	4.55	26.94	5.63	53.42	2.59	49.00
.....	...	...	23.00	....	....	1.00	.....
.....	...	...	23.00	....	....	1.32	.....
.....	7.16	3.97	26.64	6.36	52.52	3.35	48.75
.....	...	...	22.6	4.8	46.2	2.8	.....
20313	9.56	1.87	40.63	2.32	43.63	1.99	58.00
.....	...	...	40.00	....	....	1.00	.....
20190	11.59	1.48	9.88	1.88	71.41	3.78	.....
20282	6.71	2.73	12.25	4.15	65.65	8.51	40.00
.....	...	...	10.00	6.00	....	6.00	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	MAIZE PRODUCTS— <i>Concluded.</i>	
	<i>Hominy Feed—Concluded.</i>	
20359	Yellow. Armour Grain Co., Chicago, Ill.	<i>New Haven:</i> R. G. Davis & Sons, Inc. Guaranty
20250	Aunt Jemima Mills. St. Joseph, Mo..	<i>Southford:</i> H. R. Stone
20258	B.C. Kellogg Toasted Corn Flake Co., Battle Creek, Mich.	<i>Norwalk:</i> C. E. Slauson Co.
20265	Maizco. Miller Cereal Mills, Omaha, Neb.	Guaranty
20284	Choice Steam Cooked. Miner-Hillard Milling Co., Wilkes-Barre, Pa.	<i>Stamford:</i> W. L. Crabb
20374	National Feed Co., St. Louis, Mo.	Guaranty
20329	Plymouth Milling Co., Lemars, Iowa.	<i>Wallingford:</i> A. E. Hall
20229	Burt's. Postum Cereal Co., Inc., Battle Creek, Mich.	Guaranty
		<i>Yantic:</i> Yantic Grain & Products Co. Guaranty
		<i>Hartford:</i> Garber-Northam Grain Co. Guaranty
		<i>Branford:</i> S. V. Osborn
		Average guaranty
		Average of analyses
		Average digestible
	<i>Miscellaneous.</i>	
20349	Dried Corn Flake Feed. Kellogg Toasted Corn Flake Co., Battle Creek, Mich.	<i>Winsted:</i> E. Manchester & Sons
		Guaranty
	DISTILLERS' PRODUCTS.	
20347	Distillers' Dried Grains. Rossville Co., Lawrenceburg, Ind.	<i>Winsted:</i> E. Manchester & Sons
		Guaranty
	BREWERS' PRODUCTS.	
20362	Malt Feed. Clover Leaf Milling Co., Buffalo, N. Y.	<i>New Haven:</i> Crittenden-Benham Co. Guaranty
20325	Bull. Farmers Feed Co., Buffalo, N. Y.	<i>Thompsonville:</i> Geo. S. Phelps & Co. Guaranty
20323	Dried Grains. Fleischmann Co., Peekskill, N. Y.	<i>Hazardville:</i> A. D. Bridge's Sons... Guaranty
	DRIED BEET PULP.	
20383	The Larrowe Milling Co., Detroit, Mich.	<i>New London:</i> P. Swartz Co.
20336	Meech & Stoddard, Inc., Middletown.	Guaranty
20365	The Ubiko Milling Co., Cincinnati, Ohio	<i>Middletown:</i> Meech & Stoddard, Inc. Guaranty
20376	Yantic Grain & Products Co., Yantic	<i>Willimantic:</i> Willimantic Grain Co. Guaranty
		<i>Yantic:</i> Yantic Grain & Products Co. Guaranty
		Average guaranty
		Average of analyses
		Average digestible

ANALYSES.

465

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20359	8.80	3.13	12.25	5.42	62.36	8.04	\$42.00
.....	...	...	9.50	5.00	68.00	5.00	.....
20250	9.50	2.77	11.44	4.06	67.26	4.97	38.00
.....	...	...	10.00	.....	.....	5.00	.....
20258	7.08	2.55	11.63	4.16	66.78	7.80	45.00
.....	...	...	10.00	5.00	55.00	6.00	.....
20265	7.87	2.79	12.00	4.89	64.30	8.15	38.00
.....	...	...	10.00	.....	.....	7.00	.....
20284	9.06	2.28	11.88	3.79	67.71	5.28	39.00
.....	...	...	10.00	.....	.....	4.00	.....
20374	7.51	2.79	11.38	3.46	66.38	8.48	40.00
.....	...	...	10.00	19.00	.....	5.00	.....
20329	8.39	2.35	11.38	3.83	65.81	8.24	46.00
.....	...	...	10.00	.....	.....	8.50	.....
20229	9.62	2.66	12.00	3.85	65.64	6.23	37.00
.....	...	...	10.00	5.00	60.00	6.00	.....
.....	...	...	9.94	.....	.....	5.83	.....
.....	8.29	2.67	11.80	4.18	65.78	7.28	40.55
.....	...	...	7.8	3.2	59.2	6.6	.....
20349	5.47	3.77	9.88	1.42	75.90	3.56	34.00
.....	...	...	6.91	0.42	78.62	2.15	.....
20347	4.96	3.65	31.31	8.95	39.94	11.19	59.00
.....	...	...	30.00	13.00	.....	10.00	.....
20362	4.29	3.00	26.38	9.95	49.22	7.16	47.00
.....	...	...	26.00	12.50	46.50	5.20	.....
20325	5.30	3.66	25.50	9.23	49.20	7.11	45.00
.....	...	...	21.00	12.00	.....	5.30	.....
20323	5.73	2.70	17.63	18.05	50.83	5.06	30.00
.....	...	...	17.00	21.00	.....	6.00	.....
20383	8.82	3.31	9.75	18.65	57.98	1.49	58.00
.....	...	...	8.00	20.00	58.00	0.50	.....
20336	6.79	4.55	8.06	19.42	60.56	0.62	55.00
.....	...	...	8.00	.....	.....	0.50	.....
20365	4.55	2.27	10.13	19.47	62.72	0.86	60.00
.....	...	...	8.00	20.00	60.00	0.50	.....
20376	7.58	3.68	8.19	18.45	61.46	0.64	60.00
.....	...	...	8.00	.....	.....	0.50	.....
.....	...	...	8.00	.....	.....	0.50	.....
.....	6.93	3.45	9.03	18.99	60.70	0.90	58.22
.....	...	...	4.7	15.8	50.4	.....	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	PROPRIETARY MIXED FEEDS. <i>Horse, Dairy and Stock Feeds.</i>	
20332	Blatchford's Calf Meal. Blatchford Calf Meal Co., Wauregan, Ill.	Hartford: Meech Grain Co. Guaranty
20322	Elmore Calf Meal. Elmore Milling Co., Oneonta, N. Y.	Somers: W. C. Everett
20311	Ryde's Cream Calf Meal. Ryde & Co., Chicago, Ill.	Guaranty
20261	Armour's Horse Feed. Armour Grain Co., Chicago, Ill.	Manchester: Little & McKinney Guaranty
20273	Iroquois Horse Feed. Armour Grain Co., Chicago, Ill.	Stamford: W. L. Crabb
20319	Elmore Horse Feed. Elmore Milling Co., Oneonta, N. Y.	Guaranty
20271	Arcady Dairy Feed. Arcady Farm Milling Co., Chicago, Ill.	Danbury: F. C. Benjamin
20272	Riverdale Dairy Ration. Arcady Farms Milling Co., Chicago, Ill. ...	Guaranty
20377	Dairy Feed. C. W. Campbell Co., Westerly, R. I.	Danbury: F. C. Benjamin
20270	Ajax Dairy Ration. Chapin & Co., Hammond, Ind.	Guaranty
20283	Paragon. Chas. M. Cox Co., Boston.	North Haven: Wm. L. Thorpe Guaranty
20249	Basic Dairy Ration. R. G. Davis & Sons, Inc., New Haven, Conn.	Southford: H. R. Stone
20301	Delaware Dairy Feed. Delaware Mills, Deposit, N. Y.	Guaranty
20318	Elmore Milk Grain. Elmore Milling Co., Oneonta, N. Y.	Plantsville: C. A. Cowles
20247	Eshelman's 20 Dairy Feed. John W. Eshelman & Son, Lancaster, Pa. ...	Guaranty
20355	Eshelman's 25 Dairy Feed. John W. Eshelman & Son, Lancaster, Pa. ...	Somers: W. C. Everett
20368	Grandin's Twin Six Dairy Feed. D. H. Grandin, Jamestown, N. Y.	Guaranty
20299	H-O Algrane Feed. The H-O Cereal Co., Inc., Buffalo, N. Y.	Seymour: Seymour Grain & Coal Co. Guaranty
20302	Kramco Dairy Ration. C. A. Krause Milling Co., Milwaukee, Wis.	Torrington: D. L. Talcott
20260	Larro Ready Ration. Larro Milling Co., Detroit, Mich.	Guaranty
20350	Red Star Dairy Feed. E. Manchester & Sons, Winsted	Willimantic: Willimantic Grain Co. ... Guaranty
20334	Barford's Balanced Dairy Ration. Meech & Stoddard, Inc., Middletown	Plantsville: C. A. Cowles
		Guaranty
		Norwalk: C. E. Slauson Co. Guaranty
		Winsted: E. Manchester & Sons Guaranty
		Middletown: Meech & Stoddard, Inc. Guaranty

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20332	9.63	5.90	24.44	5.99	48.93	5.11	\$96.00
.....	...	...	24.00	.....	.....	5.00	.....
20322	9.33	4.05	24.56	2.74	54.65	4.67	95.00
.....	...	...	24.00	.....	.....	5.00	.....
20311	8.68	5.21	24.75	6.95	49.60	4.81	95.00
.....	...	...	25.00	.....	.....	5.00	.....
20261	7.78	4.90	12.31	9.11	60.69	5.21	39.00
.....	...	...	11.00	.....	.....	4.00	.....
20273	5.65	4.85	10.38	9.84	66.23	3.05	45.00
.....	...	...	10.00	.....	.....	2.00	.....
20319	8.16	4.18	8.75	12.00	63.61	3.30	38.00
.....	...	...	10.00	12.00	.....	3.00	.....
20271	7.63	8.27	17.63	11.70	49.19	5.58	38.00
.....	...	...	16.00	.....	.....	3.50	.....
20272	7.64	4.62	25.13	7.42	50.53	4.66	52.00
.....	...	...	24.00	.....	.....	5.00	.....
20377	9.35	3.61	21.00	5.88	55.07	5.09	46.00
.....	...	...	20.00	8.00	.....	4.00	.....
20270	8.49	5.79	27.06	8.13	44.05	6.48	51.00
.....	...	...	20.00	.....	.....	5.00	.....
20283	7.92	4.16	24.50	9.80	49.62	4.00	46.00
.....	...	...	22.00	.....	.....	4.00	.....
20249	9.31	5.48	21.00	8.11	51.55	4.55	46.00
.....	...	...	20.00	9.00	50.00	5.00	.....
20301	8.10	5.16	21.50	8.72	51.51	5.01	52.00
.....	...	...	23.00	.....	.....	4.00	.....
20318	7.55	4.58	25.13	9.28	47.48	5.98	52.00
.....	...	...	25.00	11.00	.....	6.00	.....
20247	5.42	6.99	22.63	8.12	52.91	3.93	45.00
.....	...	...	20.00	.....	.....	4.00	.....
20355	7.92	5.37	27.19	7.76	46.35	5.41	54.00
.....	...	...	25.00	12.00	.....	5.00	.....
20368	8.34	4.76	22.00	8.93	50.60	5.37	53.00
.....	...	...	22.00	.....	.....	5.00	.....
20299	6.79	5.43	18.44	10.81	54.53	4.00	39.00
.....	...	...	16.00	15.00	.....	4.00	.....
20302	8.24	5.68	21.75	9.35	50.18	4.80	52.00
.....	...	...	20.00	.....	.....	4.00	.....
20260	7.98	5.71	21.00	10.65	50.10	4.56	57.00
.....	...	...	20.00	.....	.....	3.50	.....
20350	6.95	5.13	23.00	7.98	51.42	5.52	49.00
.....	...	...	23.00	10.00	.....	4.00	.....
20334	7.60	4.42	20.38	8.63	51.29	7.68	53.50
.....	...	...	19.00	.....	.....	5.50	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	PROPRIETARY MIXED FEEDS—Continued.	
	<i>Horse, Dairy and Stock Feeds—Continued.</i>	
20191	Dairy Ration. Meech & Stoddard, Inc., Middletown	Storrs: Conn. Agr. College
20290	Red Wing Dairy Ration. Meech & Stoddard, Inc., Middletown	Meriden: Meriden Grain & Coal Co. Guaranty
20324	Stevens 44 Dairy Ration. Park & Poland Co., Boston	Hazardville: A. D. Bridge's Sons... Guaranty
20266	Pillsbury's Dairy Ration. Pillsbury Mills, Minneapolis, Minn.	New Canaan: C. H. Fairty Co. Guaranty
20234	Pillsbury's 24 Dairy Feed. Pillsbury Mills, Minneapolis, Minn.	Guilford: Fred C. Morse
20351	Purina Cow Chow Feed. Purina Mills, St. Louis, Mo.	Torrington: F. L. Wadhams & Sons. Guaranty
20312	Big Q Dairy Ration. Quaker Oats Co., Chicago, Ill.	Rockville: Rockville Milling Co. Guaranty
20314	Our Own Dairy Feed. Rockville Grain & Coal Co., Rockville	Rockville: Rockville Grain & Coal Co. Guaranty
20341	Syracold Dairy Feed. Syracuse Milling Co., Syracuse, N. Y.	Granby: E. H. Rollins
20255	Red Brand Ti-O-Ga Dairy Feed. Tioga Mill & Elevator Co., Waverly, N. Y.	Southport: C. Buckingham & Co.... Guaranty
20298	Unicorn Dairy Ration. Chapin Co., Hammond, Ind.	Plantsville: C. A. Cowles
20371	Biles Ready Dairy Ration. Ubico Milling Co., Cincinnati, Ohio	Guaranty
20380	Favorite Dairy Ration. Westerly Grain & Flour Co., Westerly, R. I.	Yantic: Yantic Grain & Products Co. Guaranty
20262	Armour's Steam Cooked Feed. Armour Grain Co., Chicago	Mystic: Mystic Grain Co.
20340	Pennant Stock Feed. E. W. Bailey & Co., Swanton, Vt.	Guaranty
20274	Wirthmore. Chas. M. Cox Co., Boston	Stamford: W. L. Crabb
20356	Davis Stock Feed. R. G. Davis & Sons, Inc., New Haven	Guaranty
20269	Grandin's Stock Food. D. H. Gradin Milling Co., Jamestown, N. Y.	New Milford: Geo. T. Soule
20372	Haskell's Stock Feed. Haskell Mills, Toledo, Ohio	Guaranty
20379	H-O New England Stock Feed. H-O Cereal Co., Inc., Buffalo, N. Y.	New Haven: R. G. Davis & Sons, Inc. Guaranty
20375	Homestead Stock Feed. Illinois Feed & Elev. Co., Bloomington, Ill.	Danbury: H. E. Meeker
		Guaranty
		Yantic: Yantic Grain & Products Co. Guaranty
		Mystic: J. L. Manning
		Guaranty
		Yantic: Yantic Grain & Products Co. Guaranty

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20191	9.64	4.40	18.94	7.32	54.76	4.94	.....
20290	7.64	5.48	22.06	7.78	30.10	6.94	\$50.00
.....	...	...	24.00	.....	.....	6.00	.....
20324	6.04	7.10	25.63	10.44	44.61	6.18	53.00
.....	...	...	24.00	.....	.....	5.00	.....
20266	8.07	6.40	20.25	9.39	50.70	5.19	52.00
.....	...	...	20.00	.....	.....	4.00	.....
20234	8.46	4.93	24.88	8.99	47.04	5.70	50.00
.....	...	...	24.00	.....	.....	5.00	.....
20351	8.43	6.04	24.75	8.87	46.13	5.78	54.00
.....	...	...	24.00	.....	.....	4.30	.....
20312	7.21	6.38	22.13	9.54	50.07	4.67	50.00
.....	...	...	21.00	.....	.....	4.50	.....
20314	9.08	5.74	20.88	8.73	51.12	4.45	51.00
.....	...	...	20.00	.....	.....	4.00	.....
20341	8.57	4.72	25.13	7.67	49.03	4.88	49.00
.....	...	...	24.00	.....	.....	4.50	.....
20255	8.12	6.05	25.63	7.76	46.45	5.99	50.00
.....	...	...	23.00	10.00	.....	3.50	.....
20298	7.95	6.59	25.00	8.40	46.42	5.64	52.00
.....	...	...	24.00	.....	.....	5.00	.....
20371	8.89	5.05	23.75	7.05	49.52	5.74	54.00
.....	...	...	24.00	10.00	50.00	5.00	.....
20380	8.28	3.62	21.06	6.31	54.74	5.99	45.00
.....	...	...	18.00	9.50	.....	4.50	.....
20262	7.33	3.67	10.06	9.79	62.76	6.39	38.00
.....	...	...	9.00	.....	.....	4.00	.....
20340	8.69	2.92	9.31	8.07	66.64	4.37	37.00
.....	...	...	9.00	10.00	.....	5.00	.....
20274	7.70	3.14	10.56	7.03	65.80	5.77	38.00
.....	...	...	9.00	.....	.....	4.00	.....
20356	8.52	4.89	9.75	12.36	61.65	2.83	36.00
.....	...	...	10.50	.....	.....	4.00	.....
20269	7.83	3.48	9.88	10.14	63.35	5.32	39.00
.....	...	...	9.00	.....	.....	3.00	.....
20372	8.30	4.04	10.50	6.32	65.19	5.65	40.00
.....	...	...	8.00	.....	.....	6.00	.....
20379	8.36	3.99	12.06	9.58	60.81	5.20	40.00
.....	...	...	9.50	9.75	.....	4.00	.....
20375	9.21	2.86	9.13	9.93	65.61	3.26	40.00
.....	...	...	9.00	.....	.....	3.50	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	PROPRIETARY MIXED FEEDS— <i>Concluded.</i> <i>Horse, Dairy and Stock Feeds—Concluded.</i>	
20248	Lancaster Stock Feed. Lancaster Mill & Elev. Co., Lancaster, Pa.	<i>Seymour</i> : Seymour Grain & Coal Co. Guaranty
20279	M. & S. Stock Feed. Meech & Stoddard, Inc., Middletown	<i>New Milford</i> : Geo. E. Ackley Co.... Guaranty
20333	Red Wing Growing Feed. Meech & Stoddard, Inc., Middletown	<i>Hartford</i> : Meech Grain Co. Guaranty
20339	Red Wing Stock Feed. Meech & Stoddard, Inc., Middletown	<i>Middletown</i> : Meech & Stoddard, Inc. Guaranty
20241	Fidelity Stock Feed. Nowak Milling Corp., Buffalo, N. Y.	<i>Derby</i> : Peterson & Hendee
20308	Bison Stock Feed. Park & Pollard Co., Boston	Guaranty
20331	Growing Feed. Park & Pollard Co., Boston	<i>Plainville</i> : Eaton Bros. Guaranty
20228	Schumacher Feed. Quaker Oats Co., Chicago, Ill.	<i>Hartford</i> : Meech Grain Co. Guaranty
20285	Schumacher Sugared Feed. Quaker Oats Co., Chicago, Ill.	<i>East Haven</i> : F. A. Forbes
20291	Richford White Diamond Stock Feed. Quaker Oats Co., Chicago, Ill.	Guaranty
20256	White Star Stock Feed. Quaker Oats Co., Chicago, Ill.	<i>Wallingford</i> : A. E. Hall
20254	Syracuse Stock Feed. Syracuse Milling Co., Syracuse, N. Y.	Guaranty
	POULTRY FEEDS.	
20264	Cak-Cak Laying Mash. Armour Grain Co., Chicago, Ill.	<i>New Britain</i> : Stanley Svea Grain Co. Guaranty
20360	Iroquois Poultry Mash. Armour Grain Co., Chicago, Ill.	Guaranty
20378	Nobotheration Dry Mash. C. W. Campbell Co., Westerly, R. I.	<i>Norwalk</i> : C. E. Slauson Co. Guaranty
20296	Dry Mash. C. A. Cowles, Plantsville	<i>Southport</i> : C. Buckingham & Co.... Guaranty
20230	Wirthmore Buttermilk Mash Feed. Chas. M. Cox Co., Boston	<i>Stamford</i> : W. L. Crabb
20358	Davis Buttermilk Mash Feed. R. G. Davis & Sons, Inc., New Haven...	Guaranty
20310	Delaware Laying Mash with Milk. Delaware Mills, Deposit, N. Y.	<i>New Haven</i> : R. G. Davis & Sons, Inc. Guaranty
20320	Elmore's Egg Mash. Elmore Milling Co., Oneonta, N. Y.	<i>Mystic</i> : J. L. Manning
		Guaranty
		<i>Plantsville</i> : C. A. Cowles
		Guaranty
		<i>Branford</i> : S. V. Osborn
		Guaranty
		<i>Manchester</i> : Little & McKinney
		Guaranty
		<i>Somers</i> : W. C. Everett
		Guaranty

INSPECTION OF 1922—Continued.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20248	8.26	3.77	10.13	10.40	62.13	5.31	\$38.00
.....	...	...	10.00	....	....	3.00	.....
20279	7.45	5.53	10.50	10.35	61.62	4.55	36.00
.....	...	...	8.00	....	....	3.00	.....
20333	8.35	11.77	20.75	5.32	48.50	5.31	64.00
.....	...	...	10.00	....	....	6.00	.....
20339	6.56	4.72	10.50	9.59	63.15	5.48	39.00
.....	...	...	9.00	....	....	3.00	.....
20241	8.59	4.04	10.63	11.81	60.75	4.18	38.00
.....	...	...	8.00	....	....	3.00	.....
20308	7.79	5.92	9.63	14.69	58.21	3.76	38.00
.....	...	...	8.00	14.00	....	2.00	.....
20331	9.12	7.95	15.50	5.44	57.50	4.49	64.00
.....	...	...	10.00	....	....	1.50	.....
20228	7.78	4.18	10.50	10.42	62.90	4.22	39.00
.....	...	...	10.00	12.00	58.00	3.25	.....
20285	7.11	4.23	10.56	9.47	64.56	4.07	37.00
.....	...	...	10.00	12.00	58.00	3.25	.....
20291	6.91	4.35	9.50	12.73	61.76	4.75	41.00
.....	...	...	8.00	14.00	60.00	3.00	.....
20256	7.53	4.25	8.81	12.89	63.33	3.19	35.00
.....	...	...	8.00	....	....	3.00	.....
20254	8.07	4.98	10.19	11.94	60.97	3.85	37.00
.....	...	...	9.00	....	....	3.00	.....
20264	8.51	6.10	21.38	3.68	54.74	5.59	57.00
.....	...	...	20.00	....	....	3.00	.....
20360	8.61	3.71	17.38	6.12	58.40	5.78	55.00
.....	...	...	15.00	....	....	4.00	.....
20378	7.02	10.20	20.38	7.53	48.39	6.48	60.00
.....	...	...	18.00	....	....	2.00	.....
20296	8.54	8.69	20.19	5.68	50.71	6.19	55.00
.....	...	...	18.00	....	....	5.00	.....
20230	9.33	8.17	20.75	6.13	49.86	5.76	58.00
.....	...	...	20.00	8.50	....	4.00	.....
20358	8.88	7.79	20.50	6.15	50.68	6.00	57.00
.....	...	...	18.00	....	....	5.00	.....
20310	9.54	4.55	16.94	5.49	58.22	5.26	60.00
.....	...	...	16.00	....	....	3.00	.....
20220	7.86	8.72	20.69	6.45	50.76	5.52	58.00
.....	...	...	18.00	8.00	....	4.00	.....

TABLE III. ANALYSES OF COMMERCIAL FEEDS,

Station No.	Manufacturer and Brand	Retail Dealer
	<i>POULTRY FEEDS—Concluded.</i>	
20364	Grandin's Poultry Dry Mash with Buttermilk. D. H. Grandin, Jamestown, N. Y.	<i>Willimantic:</i> Willimantic Grain Co. Guaranty
20292	Red Comb Egg Mash with Buttermilk. Hales & Hunter Co., Chicago, Ill.	<i>New Britain:</i> Stanley Svea Grain Co. Guaranty
20304	H-O Laying Mash. H-O Cereal Co., Inc., Buffalo, N. Y.	<i>Bristol:</i> Goodsell Bros. Guaranty
20382	Kasco. Kasco Mills, Waverly, N. Y.	<i>New London:</i> Conn. Grain Corp. Guaranty
20278	Jersey Dry Mash. Maritime Milling Co., Buffalo, N. Y.	<i>New Milford:</i> Geo. E. Ackley Co. Guaranty
20287	Red Wing Dry Mash. Meech & Stoddard, Inc., Middletown	<i>Meriden:</i> Meriden Grain & Coal Co. Guaranty
20259	Vitality Egg Mash. Rosenbaum Bros., Chicago, Ill.	<i>Norwalk:</i> C. E. Slauson Co. Guaranty
20306	Lay or Bust Dry Mash. Park & Pollard Co., Boston	<i>Bristol:</i> Goodsell Bros. Guaranty
20361	Purina Chicken Chowder. Purina Mills, St. Louis, Mo.	<i>New Haven:</i> Crittenden-Benham Co. Guaranty
20238	Full-O-Pep Dry Mash. Quaker Oats Co., Chicago, Ill.	<i>Hamden:</i> I. W. Beers
20343	Syracgold Egg Mash. Syracuse Milling Co., Syracuse, N. Y.	<i>Granby:</i> E. H. Rollins

INSPECTION OF 1922—Concluded.

Station No.	Pounds per Hundred.						Price per ton
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract (Crude fat)	
20364	7.67	8.58	22.19	6.55	50.07	4.94	\$56.00
.....	...	...	20.00	.....	.....	3.00	.....
20292	7.89	11.56	20.50	4.52	49.77	5.76	66.00
.....	...	...	20.00	.....	.....	4.50	.....
20304	7.69	10.47	19.13	5.11	52.18	5.42	46.00
.....	...	...	17.00	6.00	.....	4.50	.....
20382	8.53	8.11	24.06	6.60	46.60	6.10	60.00
.....	...	...	20.00	.....	.....	3.50	.....
20278	7.85	7.86	19.00	6.13	53.57	5.59	60.00
.....	...	...	18.00	.....	.....	5.00	.....
20287	8.17	9.18	15.69	5.30	56.36	5.30	58.00
.....	...	...	12.00	.....	.....	3.00	.....
20259	8.15	8.53	19.13	6.40	51.90	5.89	75.00
.....	...	...	20.00	.....	.....	4.00	.....
20306	8.44	10.13	23.44	5.86	47.01	5.12	58.00
.....	...	...	18.00	.....	.....	1.50	.....
20361	8.54	6.81	20.50	7.40	51.66	5.09	71.00
.....	...	...	18.00	.....	.....	4.00	.....
20238	7.04	9.79	22.25	7.98	46.97	5.97	68.00
.....	...	...	20.00	10.00	.....	4.00	.....
20343	8.59	6.61	10.75	6.87	53.26	4.92	55.00
.....	...	...	18.00	.....	.....	3.00	.....

TABLE IV. ANALYSES OF FEEDING STUFFS

Station No.	Material	Submitted by
ENSILAGE, ETC.		
18793	Ensilage, millet	<i>Watertown</i> : Birch Farm
18794	Ensilage, corn	Birch Farm
18736	Ensilage	<i>New Haven</i> : Fairlea Farm
18737	Ensilage	Fairlea Farm
CORN PRODUCTS.		
19134	White Hominy Feed	<i>Torrington</i> : F. L. Wadhams & Sons.
19322	Hominy Meal	<i>Hartford</i> : Rodney J. Hardy & Sons.
COTTONSEED PRODUCTS.		
20765	Cottonseed Meal	<i>Middletown</i> : The Coles Co.
18738	Sweet Gluten	<i>New Haven</i> : Fairlea Farm
18739	Sour Gluten	Fairlea Farm
BREWERS' GRAINS.		
19063	Brewers' Dried Grains	<i>Mt. Carmel</i> : Russell Harned
STOCK FEED, POULTRY FEED, ETC.		
20771	Uncle John 24% Cream Pot Dairy Ration	<i>Middletown</i> : The Coles Co.
19673	Dairy Ration	Conn. State Hospital
19674	Dairy Ration	Conn. State Hospital
18740	Fairlea Dairy Ration	<i>New Haven</i> : Fairlea Farm
18863	Dairy Feed	<i>Norwich</i> : H. F. Johnson (County Agent)
18782	Par-ex Dry Mash	<i>Putnam</i> : Bosworth Bros.
18783	Par-ex Scratch Feed	Bosworth Bros.
18784	Par-ex Stock Feed	Bosworth Bros.
19098	Dairy Feed	<i>Rockville</i> : Rockville Grain & Coal Co.
19049	Feed	<i>South Manchester</i> : Greenway Farm.
19255	Cattle Feed	<i>Waterbury</i> : E. D. Curtis
19256	Cattle Feed	E. D. Curtis
19257	Cattle Feed	E. D. Curtis
19258	Cattle Feed	E. D. Curtis
19259	Cattle Feed	E. D. Curtis
19260	Cattle Feed	E. D. Curtis
18817	Dry Mash	<i>Hartford</i> : C. A. Pease

SUBMITTED BY INDIVIDUALS.

Station No.	Pounds per Hundred						Remarks
	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract Crude fat)	
18793	76.56	1.82	1.93		19.01	0.68	
18794	69.75	1.31	2.20		25.96	0.78	
18736	65.09	...	2.60	8.30	....	0.66	
18737	70.53	...	2.19	7.69	....	0.72	
19134	....	...	10.63	...	....	3.88	Guaranty: protein 8.50, fat 4.0
19322	....	...	10.13	...	....	...
20765	....	...	34.75	...	....	...	Guaranty: protein 36.0
18738	8.45	...	18.19	6.55	....	4.58	
18739	9.15	...	24.25	7.35	....	2.53	
19063	7.47	4.81	18.63	...	....	6.05	
20771	....	...	23.88	...	....	...	Guaranty: protein 24.0
19673	11.85	5.65	22.00	8.20	45.51	6.79	
19674	11.33	5.54	22.44	7.97	45.71	7.01	
18740	8.89	...	18.81	7.99	....	5.11	
18863	8.61	4.75	21.38		59.53	5.73	
18782	6.54	7.40	19.00	6.96	54.74	5.36	Guaranty: protein 18.0, fat 4.00
18783	7.91	1.83	11.25	2.81	72.60	3.60	Guaranty: protein 10.00, fat 1.50
18784	7.26	3.46	9.50	10.93	65.56	3.29	Guaranty: protein 9.00, fat 3.25
19098	7.75	...	21.38	...	....	4.71	Guaranty: protein 19.00, fat 6.00
19049	....	...	12.94	...	....	...
19255	....	...	21.19	...	....	...
19256	....	...	22.00	...	....	...
19257	....	...	19.50	...	....	...
19258	....	...	23.00	...	....	...
19259	....	...	21.25	...	....	...
19260	....	...	22.63	...	....	...
18817	5.84	...	25.94	...	....	5.51	