

CONNECTICUT  
AGRICULTURAL EXPERIMENT STATION

NEW HAVEN, CONN.

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**Commercial Feeding Stuffs in the Connecticut  
Market.**

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#### NOTICE AS TO BULLETINS.

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

The matter of all the Bulletins of this Station, in so far as it is new or of permanent value, will be made part of the Annual Report of the Station Staff.

All Bulletins earlier than No. 71 and Nos. 72, 83, 86, 93, 100, 102, 118 and 123 are exhausted and cannot be supplied.

#### NOTICE AS TO SUPPLY OF STATION REPORTS.

The Station has no supply of its Annual Reports for the years 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1887, 1891, 1893 (Pt. II.), 1894 (Pt. I.), and 1895 (Pts. I. and II.).

The Annual Report of this Station, printed at State expense, is by law limited to an edition of 7,000 copies.

After exchanging with other Experiment Stations and Agricultural Journals, the Reports remaining at the disposal of the Station will be sent to citizens of Connecticut who shall seasonably apply for them, and to others as long as the supply lasts.

#### FORMER REPORTS WANTED.

There is frequent call for our earlier Annual Reports on the part of public libraries, students, chemists, naturalists, and station workers.

Persons who can supply copies of Reports of this Station for any of the years above named, will be likely to find purchasers by communicating with the Director.

## THE COMPOSITION OF COMMERCIAL FEEDING-STUFFS SOLD IN CONNECTICUT.\*

During the autumn of 1900, agents of this Station collected in twenty-five towns and villages of the State, one hundred and eighty-six samples of commercial feeding-stuffs, exclusive of the condimental foods referred to in a previous bulletin.

The analyses of these feeds appear in Table I on pages 14 to 29. This table shows:

(1) The chemical composition of each of the samples, as determined by the methods of analysis adopted by the Association of Official Agricultural Chemists.

(2) The average composition as determined by these analyses.

(3) The average of all the analyses of each kind of feeding-stuff, which have been made at the Experiment Stations of the New England States, and published within the past year.

(4) The digestible nutrients of these feeds. These are calculated from the average composition of the samples found in this State, by the use of the digestion coefficients given in Bulletin 77 of the Office of Experiment Stations.

The results of the analyses are summarized as follows:

## COTTON SEED MEAL.

The four samples analyzed were of usual quality; the percentage of protein ranging from 41.00 to 45.87, and of fat from 8.38 to 8.81. These percentages are considerably lower than the average of 179 analyses recently made in other New England states.

*Guarantees.*

Three of the samples were guaranteed to contain 43 per cent. of protein and 9 per cent. of fat. In all of them the percentage of fat was a fraction of 1 per cent. below the guarantee and in one case the percentage of protein was also below.

\* The microscopic work referred to in this paper was wholly done by Mr. A. L. Winton. The analyses were made by Messrs. Winton, Ogden and Langley. The discussion of the results is by the Director.

## LINSEED MEAL.

Of the six samples examined, two were apparently "new process" and four were "old process" meals.

The average percentages of protein and fat in the two kinds were as follows:

	Average per cent. of protein.	Average per cent. of fat.
New Process .....	38.43	2.35
Old Process .....	31.33	6.72

Sample 2402, sold as old process meal, is, quite evidently, new process.

*Guarantees.*

Three of the samples, Nos. 1798, 2402, and 2378, bore guarantees and contained substantially what was guaranteed.

## RED DOG FLOUR.

This is the poorest grade of flour, off color, and often sold as a cattle food and for making paste.

## WHEAT FEEDS.

In the following table the wheat products from the mills named below are classed as Winter Wheat.

Acme Milling Co., Indianapolis, Ind.	Maumee Valley Milling Co., Defiance, Ohio.
American Cereal Co., Chicago.	McDaniel & Pitman Co., Franklin, Ind.
Blish Milling Co., Seymour, Ind.	Meyer, J. T., & Co., Clinton, Mo.
Cole, H. C., Milling Co., Chester, Ill.	Miles & Son, Frankfort, Ky.
Eldred Mill Co., Jackson, Mich.	Model Roller Mills, Nashville, Tenn.
Evans, Geo. F., Hoosier Mills, Indianapolis, Ind.	Moore, R. P., Milling Co., Princeton, Ind.
Hannibal Milling Co., Hannibal, Mo.	Rex Milling Co., Kansas City, Mo.
Harter, Isaac, & Co., Galena, O.	Saginaw Milling Co., Saginaw, Mich.
Hecker-Jones-Jewell Milling Co., N. Y.	Stock, F. W., Hillsdale, Mich.
Holly Milling Co.	Stott's Flour Mills, Detroit, Mich.
Hunter Bros., St. Louis.	Taylor Bros. Milling Co., Quincy, Ill.
Jenks, J., & Co., Sand Beach, Mich.	Valley City Milling Co., Grand Rapids, Mich.
Kane Mill Co., Atchison, Kansas.	Voigt Milling Co., Grand Rapids, Mich.
Kehlor Bros., St. Louis, Mo.	Walsh De Roo Milling Co., Holland, Mich.
Lawrenceburg Roller Mills Co. "Snowflake," Lawrenceburg, Ind.	
Lexington Roller Mill Co., Lexington, Ky.	

The wheat products from the following mills are classed as from spring wheat.

Anchor Milling Co., Superior, Wis.	Moseley & Motley Milling Co., Rochester, N. Y.
Andrews & Co., Minneapolis.	North Dakota Milling Association, No. Dakota.
Bay State Milling Co., Winona, Wis.	North Western Consolidated Milling Co., Minneapolis.
Berger, Anderson Co., Milwaukee.	Pillsbury-Washburn Co., Minneapolis.
Daisy Roller Mill Co., Milwaukee, Wis.	Russell & Miller Milling Co., Superior, Wis.
Duluth Imperial Mill Co., Duluth.	Sheffield Milling Co., Faribault, Minn.
Freemen Milling Co., Superior, Wis.	Star & Crescent Milling Co., Chicago.
Grafton Roller Mills, Grafton, N. D.	Washburn-Crosby Co., Minneapolis.
Imperial Mill Co., Duluth, Minn.	Whitney & Wilson, Rochester, N. Y.
Lake Superior Mills, Superior, Wis.	Woodworth & Co., E. S., Minneapolis.
Listman, Wm., Milling Co., Superior, Wis.	
Minkota Milling Co., Superior, Wis.	

The differences between the several wheat feeds in the percentages of protein and fat which they contain are shown in the following statement, compiled from all available analyses of these products made at the New England Agricultural Stations during the last twelve months.

AVERAGE COMPOSITION OF BRAN, MIDLINGS AND MIXED WHEAT FEED.

	Bran.		Middlings.		Mixed Wheat Feed.	
	Winter.	Spring.	Winter.	Spring.	Winter.	Spring.
Protein . . . . .	16.46	15.80	17.51	18.68	17.03	16.90
Fat . . . . .	4.53	5.00	4.70	5.45	4.58	5.12

The percentages of protein and fat are very nearly alike in Winter and Spring mixed feed. Winter wheat bran shows a higher percentage of protein, but winter wheat middlings a lower percentage of protein than the corresponding spring wheat products.

All the wheat products analyzed were of good quality and apparently free from any adulteration. With three exceptions, none of them had any guarantee of composition. Three samples of mixed feed, made by the American Cereal Co., were guaranteed to contain 18.21 per cent. of protein and 4.48 per cent. of fat. The amounts of protein and fat found by analysis agreed with this guarantee.

## CORN MEAL.

Of the two samples examined, one was low grade, containing only 8.81 per cent. of protein, nearly three-fourths of 1 per cent. below the average.

## GLUTEN, GLUTEN MEAL, GLUTEN FEED.

These are all by-products of the manufacture of corn starch and glucose.

The process of manufacture was quite fully described in our last report.

*Atlantic Gluten*, made by the Atlantic Starch Works, Westport, is sold under a guarantee of 38 per cent. of protein and 2 per cent. of fat. Only one of the six samples examined contained the percentage of protein guaranteed, and only one contained 2 per cent. of fat. The per cent. of protein ranged from 25.25 to 39.75, the average being 32.88.

Last year this feed was the most concentrated of any on the market.

*Cream Gluten*, made by the Chas. Pope Glucose Co., Chicago, Ill., is guaranteed to contain 34.12 per cent. of protein and 3.20 per cent. of fat. The average protein found by analysis is 35.10 per cent. and the average fat 2.92 per cent.

*Chicago Gluten Meal*, made by the Glucose Sugar Refining Co., Chicago, Ill., is guaranteed to contain 36 per cent. of protein and 3.37 per cent. of fat, in the water-free material. All of the samples examined contained more than these percentages, the average of all being 38.70 per cent. of protein and 3.23 per cent. of fat, with 8.65 per cent. of water. This is equivalent to 42.3 per cent. of protein and 3.5 per cent. of fat in the water-free material.

*Waukegan Gluten Feed*, made by the U. S. Sugar Refining Co., is guaranteed to contain 27.38 per cent. of protein and 3.39 per cent. of fat. The four samples analyzed were quite uniform in composition, containing an average of 27.04 per cent. of protein and 3.89 per cent. of fat; being in substantial agreement with the guarantee.

*Davenport Gluten Feed*. The three samples analyzed showed wide differences in protein, the highest percentage being 34.94, as high as gluten meal, the lowest being 25.87.

The manufacturer's guarantee of 25.50 was made good in every case, but no one of the samples contained 4 per cent. of fat as guaranteed.

*Buffalo Gluten Feed*, made by the Glucose Sugar Refining Co., Chicago, is guaranteed to contain 25.50 per cent. of protein and 4 per cent. of fat.

Protein, in the three samples examined, ranged from 24.75 to 27.06, the average being 25.88, and the fat ranged from 3.40 to 4.17 and averaged 3.67 per cent.

*Glen Cove Gluten Feed*, made by the National Starch Manufacturing Co., Glen Cove, L. I., is guaranteed to contain 28.4 per cent. of protein and 4.3 per cent. of fat. The average of four analyses shows 28.76 per cent. of protein and 3.73 per cent. of fat.

#### GERM OIL MEAL.

Of the four samples analyzed, two are of unknown manufacture. One, made by the Glucose Sugar Refining Co., Chicago, Ill., contains 22.50 per cent. of protein and 9.39 per cent. of fat. In the *dry substance* this is equivalent to 24.7 and 10.3 per cent. respectively. The guarantee on dry substance is 25.5 and 10.5.

The sample made by the American Cereal Co. contains 22.06 per cent. of protein and 16.23 per cent. of fat. The guaranteed percentages are 23.0 and 19.5 respectively.

#### HOMINY CHOPS.

The samples examined have been of quite uniform quality, the percentage of protein ranging from 10.69 to 12.69, averaging 11.67, and that of fat ranging from 6.50 to 10.4 and averaging 8.71.

Only three of the samples bore guarantees, as follows:

	Chapin & Co. 1888	Hunter Bros. 2364	Miner-Hillard Milling Co. 2403
Protein found .....	11.94	11.69	11.62
" guaranteed .....	11.0	11.02	10.87
Fat found .....	9.48	10.04	8.12
" guaranteed .....	8.0	7.70	8.46

## GROUND OATS.

Of the two samples of the same brand, "Magnolia Ground Oats," given in the table, one has an exceptionally high percentage of protein, with a low percentage of fiber; the other has a large amount of fiber (light oats, hulls), and in consequence a low per cent. of protein.

## PROVENDER.

This name formerly applied strictly to a ground mixture of corn and oats in equal weights. The product of local mills is still made in the same way, but the commercial article too often contains an undue proportion of light-weight oats or of oat hulls, which reduces the percentage of protein.

Of the three samples analyzed, two are from local mills and one presumably ground elsewhere. The former contain on the average 10.85 per cent. of protein, while the latter contains only 9.50 per cent.

## CORN AND OAT FEEDS.

Here belong a number of feeds, all of them of very inferior feeding value to farmers, sold at a relatively high price.

*Victor Corn and Oat Feed* is made by the American Cereal Co. and guaranteed to contain 8.23 per cent. of protein and 3.0 per cent. of fat. Each of the five samples examined fully met this guarantee.

*Lenox Feed*, sold without guarantee, has about the same average composition as the Victor.

*Oat Feed "Vim,"* made by the American Cereal Co., Chicago, is guaranteed to contain only 6.30 per cent. of protein and 2.38 per cent. of fat. The sample analyzed contains more of each constituent than is guaranteed, but cannot be economically used by the dairyman.

*Friend Concentrated Dairy Food*, sold without guarantee, contains a large proportion of oat hulls and is the lowest grade feed which has been found in the Connecticut market this year. To call it "Concentrated Dairy Food," is the grossest kind of misrepresentation.

## CORN, OATS AND BARLEY.

A mixture with this name is made by the American Cereal Co., and guaranteed to contain 10.78 per cent. of protein and



3.29 per cent. of fat. Each of the three analyses made were fully up to this guarantee.

#### "RYE FEED"

is a material which shows a very considerable range of composition, depending on the process of manufacture. The sample whose analysis is given shows a much higher percentage of protein, 16.12, than is usually found in this feed.

#### BUCKWHEAT BRAN.

Attention is called to this article because of its very high percentage of protein, 33.37 per cent. Only a very limited amount of it is made, but some who have used it consider it unsurpassed as a concentrated feed for dairy stock.

#### FACTORY MIXED FEEDS.

*H-O Dairy Feed*, made by the H-O Co., Buffalo, N. Y., is a mixture of corn and oat feeds with a little wheat and some cotton seed meal, and is guaranteed to contain 18 per cent. of protein and 4.5 per cent. of fat. The three samples analyzed contained, on the average, 1 per cent. more of protein and one-half per cent. less of fat than was guaranteed.

*H-O Poultry Feed*, made by the same firm, is essentially a mixture of hulled oats, cracked corn and wheat bran or middlings, for which \$29 and \$30 per ton are charged. The average percentages of protein and fat found by analysis were 16.70 and 5.31 respectively; the percentages guaranteed are 17 and 5.50.

*H-O Horse Feed*, also made by the H-O Co., is essentially a mixture of cracked corn, oats, some wheat product with a little linseed meal, and costs from \$21 to \$23. It is guaranteed to contain 12 per cent. of protein and 4.50 per cent. of fat. Five samples contained an average of 12.73 per cent. of protein and 4.04 per cent. of fat.

*Quaker Dairy Feed*, made by the American Cereal Co., Chicago, Ill., is a mixture of ground oats, wheat and a little corn, sold for \$18 to \$22 per ton, and guaranteed to contain 12.03 per cent. of protein and 2.50 per cent. of fat. The percentages found by analysis were considerably higher, 13.77 and 3.38 respectively.

*American Poultry Food*, made by the American Cereal Co., is essentially a mixture of corn and wheat products, guaranteed to contain 13.96 per cent. of protein and 5.49 per cent. of fat. The average of two analyses gave 13.12 per cent. of protein and 6.95 per cent. of fat.

*Blatchford's Calf Meal*, made by John W. Barwell, Waukegan, Ill., is essentially a mixture of ground carob beans, linseed, a wheat product, cotton seed, and fenugreek, containing about the same percentages of protein, fat and nitrogen-free extract as the gluten feeds.

#### THE COMPOSITION OF COMMERCIAL FEEDING-STUFFS COMPARED WITH THEIR PRICES.

In the last Report of this Station, it was shown that feeding-stuffs are bought to supply a deficiency of protein in those which are usually raised on the farm.

Hay, corn fodder, ensilage and stover form the basis and make up the bulk of the cattle food and should supply all the coarse feed, as well as the starch, sugar and fat which are needed.

They are, however, deficient in protein. The feeder's aim then is, or should be, to buy *digestible protein* at as low a price as he can, in forms relished by his stock. He is not in the market to buy mixtures of cattle medicine and food, nor starchy foods, nor woody fiber, nor the many wastes of factories, where so-called "breakfast goods" for human use are made.

It will very rarely pay him to buy anything which contains as little protein as corn meal. Corn meal he can raise cheaper than he can buy it—and corn meal fed with hay or ensilage needs the addition of some feed richer in protein, in order to avoid waste of starchy matter in feeding.

Table II is a list of the principal commercial feeding-stuffs with the percentages of protein and fat in them, and their average prices arranged according to the per cent. of protein, the ingredient which the buyer is chiefly concerned with.

Study of the table shows that we have five or six distinct groups of feeding stuffs:

1. Cotton Seed Meal, containing over 40 per cent. of protein, and costing \$27.60 per ton.

TABLE II.—COMMERCIAL FEEDING STUFFS, ARRANGED ACCORDING TO THEIR PERCENTAGE OF PROTEIN.

	Protein. %	Fat. %	Cost per ton.
Cotton Seed Meal.....	42.8	8.5	\$27.60
Chicago Gluten Meal.....	38.7	3.2	27.60
New Process Linseed Meal.....	38.4	2.4	32.00
Cream Gluten Meal.....	35.4	2.9	28.00
Atlantic Gluten Meal.....	32.9	2.0	----
Old Process Linseed Meal.....	31.3	6.7	31.00
Davenport Gluten.....	29.3	3.1	24.50
Glen Cove Gluten Feed.....	28.8	3.7	22.00
Waukegan Gluten Feed.....	27.0	3.9	22.50
Buffalo Gluten Feed.....	25.9	3.7	25.75
Blatchford's Calf Meal.....	25.0	4.7	55.00
Spring Wheat Middlings.....	19.1	5.5	21.50
Winter Wheat Mixed Feed.....	18.1	4.7	21.00
H. O. Dairy Feed.....	18.1	4.0	22.00
Winter Wheat Middlings.....	17.7	4.7	21.75
Spring Wheat Bran.....	16.5	5.0	20.00
Winter Wheat Bran.....	16.2	4.6	21.00
Quaker Dairy Feed.....	13.5	3.1	19.50
H. O. Horse Feed.....	12.2	3.5	22.00
Hominy Chop.....	11.7	8.7	20.00
Corn, Oats and Barley.....	11.6	4.7	21.00
Ground Oats.....	11.5	5.5	17.00
Provender.....	10.9	4.6	19.00
Corn Meal.....	9.4	4.0	20.00
"Victor" Corn and Oat Feed.....	9.1	4.2	20.00
Oat Feed "Vim".....	8.6	2.5	16.00
Lenox Feed.....	8.4	3.4	17.00
Concentrated Dairy Feed.....	6.6	3.1	14.20

2. Gluten Meals and Linseed Meals, containing 30 to 40 per cent. of protein, and costing \$27.60 to \$32.

3. Gluten Feeds, containing 25 to 30 per cent. of protein, and costing \$22 to \$26.

4. The Wheat Feeds, containing 15 to 20 per cent. of protein, and costing \$20 to \$22.

5. Corn Chops, Oats, Corn, Provender, containing 9 to 12 per cent. of protein, and costing \$17 to \$20,

6. Oat Feeds, Oat Hulls and various worthless wastes, containing 6½ to 9 per cent. of protein, and costing \$14.20 to \$20.

It will also be noted that the percentages of fat in these feeds are not very unlike, ranging between 2.4 and 5.5 per cent., with exception of cotton seed meal, old process linseed meal and hominy chops, so that a rough comparison of the feeds can be made, *taking account of protein alone*, as that is the ingredient which the feeder is chiefly concerned in getting.

Such a comparison would show the following:

If twenty pounds of protein in	Cotton Seed Meal cost .....	\$0.64
Then " "	Gluten Meals cost about .....	0.85
" "	Gluten Feeds cost about .....	0.88
" "	Wheat Feeds cost about .....	1.20
" "	Oats, Corn, Provender, Corn Chop, etc., cost .....	1.77
" "	Oat Feeds and other trash cost...	2.10

The above is not intended to do more than make a rough but practically just statement of the *comparative* cost of protein in the several classes of feeding-stuffs. Of course all feeds contain other valuable food ingredients besides protein and fat, but they are not ingredients which the feeder needs to buy.

As a general rule, he cannot afford to buy anything belonging in classes 5 and 6. Home-grown corn meal makes anything in these two groups superfluous.

It is the part of economy to raise all the corn meal which is needed at home, not to buy anything to balance the cattle ration containing less protein than wheat feeds, and to let all condimental and medicinal cattle foods alone.

"Cheap" and low grade oat feeds do not contain what the feeder needs to buy for his stock, and they are therefore worthless to him.

#### THE WEIGHT OF ONE QUART OF VARIOUS FEEDING-STUFFS.

The following table gives the weight of one quart of the feeds named, and is useful to calculate the weight of grain ration fed, from the measure which is almost universally used on farms.

This table was prepared by Mr. H. G. Manchester of West Winsted.

TABLE III. THE AVERAGE WEIGHT OF ONE QUART OF EACH OF THE FEEDS NAMED.

By H. G. MANCHESTER, WEST WINSTED.

	Pounds.
Cotton Seed Meal .....	1.5
Linseed Meal, old process .....	1.1
Gluten Meal .....	1.7
Gluten Feed .....	1.2
Wheat Bran, coarse .....	0.5
Wheat Middlings, coarse .....	0.8
Wheat Middlings, fine .....	1.1
Mixed Wheat Feed .....	0.6
Corn Meal .....	1.5
Oats .....	1.2
Rye Bran .....	0.6
H. O. Dairy Feed .....	0.7
Victor Corn and Oat Feed .....	0.7

TABLE I.—ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
1793	Cotton Seed Meal.....	American Cotton Oil Co.	Hartford, Smith, Northam & Co...
2387	" Owl Brand.....	F. W. Brode & Co., Mem- phis, Tenn. ....	Suffield, Spencer Bros. ....
2845	" .....	Chapin & Co., Boston, Mass. ....	Putnam, Bosworth Bros.....
3019	" .....		New Milford, Ackley, Hatch & Marsh.....
			Average of the above 2 analyses..
			Average digestible .....
			Average of 179 recent analyses...
1798	Oil Meal, "Old Process"	American Linseed Co., Chicago .....	Hartford, Smith, Northam & Co...
2373	Linseed Meal, "		Naugatuck, Grant Grocery Co...
2402	" "		Bristol, G. W. Eaton .....
2432	Oil Meal "	Douglass & Co., Minne- apolis .....	West Winsted, Balch & Platt ....
2378	Linseed Meal.....		Derby, Peterson, Hendee Co. ....
262	" .....		Bridgeport, Wheeler & Howes ..
			Average of the above 3 analyses of Old Process Linseed Meal.....
			Average digestible .....
			Average of the above 2 analyses of New Process Linseed Meal.....
			Average digestible .....
			Average of 41 recent analyses of Old Process Linseed Meal.....
			Average of 43 recent analyses of New Process Linseed Meal ....
123	"Patent Flour Stock" No. 1.....	Pillsbury-Washburn Flour Mills Co., Min- neapolis .....	Sent by manufacturer.....
124	"Patent Flour Stock" No. 2.....	Pillsbury-Washburn Flour Mills Co., Min- neapolis .....	" " .....
125	"Patent Flour Stock" No. 3.....	Pillsbury-Washburn Flour Mills Co., Min- neapolis .....	" " .....
126	"Patent Flour Stock" No. 4.....	Pillsbury-Washburn Flour Mills Co., Min- neapolis .....	" " .....
112	"Red Dog Flour" .....	Northwestern Consoli- dated Milling Co. ....	Boston, C. M. Cox & Co. ....
			Average of 8 recent analyses.....
	<i>Bran from Winter Wheat.</i>		
1796	Bran, Winter Wheat....	Voigt Milling Co., Grand Rapids .....	Hartford, Smith, Northam & Co...
1866	" Choice .....	Hecker-Jones-Jewell Milling Co., N. Y. ....	South Norwalk, Manuel T. Hatch
1872	" Canadian .....	C. M. Cox & Co., Boston	" " "
2370	" Winter Wheat .....	Valley City Mill. Co., Grand Rapids.....	Naugatuck, Grant Grocery Co. ....
2396	" " .....	Abner Hendee, Agent, New Haven .....	Southington, Southington Lumber & Feed Co.....

## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract. (Starch, gum, etc.)	Ether Extract.	
1793	7.74	5.49	44.50	9.66	24.23	8.38	\$30.00
2387	7.79	6.89	41.00	8.83	26.93	8.56	27.00
2845	----	----	45.87	----	----	----	----
3019	6.41	----	44.19	----	----	8.81	26.00
	7.76	6.19	42.75	9.25	25.58	8.47	
	----	----	37.79	5.13	15.50	7.90	
	----	----	45.13	----	----	10.20	
1798	9.74	5.19	33.62	9.40	35.19	6.86	32.00
2373	8.95	5.38	31.75	8.23	39.16	6.53	30.00
2402	8.05	5.38	39.00	8.40	36.33	2.24	33.00
2432	9.74	5.45	28.62	8.77	40.64	6.78	40.00
2378	9.12	4.90	37.87	8.92	36.73	2.46	32.00
262	----	----	33.75	----	----	----	----
	9.48	5.34	31.33	8.80	38.33	6.72	
	----	----	27.82	5.02	29.74	5.95	
	8.89	5.14	38.43	8.66	36.53	2.35	
	----	----	34.13	4.94	28.35	2.08	
	----	----	33.06	----	----	7.27	
	----	----	38.09	----	----	2.59	
123	11.47	1.63	15.06	1.19	67.38	3.27	----
124	12.16	0.69	12.44	0.22	73.42	1.07	----
125	12.09	0.53	13.00	0.38	72.48	1.52	----
126	11.97	0.48	13.31	0.35	72.52	1.37	----
112	9.18	3.58	19.31	2.69	59.74	5.50	----
	----	----	18.69	----	----	4.88	
1796	10.37	5.68	16.50	7.37	55.60	4.48	22.00
1866	8.36	3.58	16.50	10.01	56.78	4.77	20.00
1872	8.44	6.01	15.19	10.21	55.67	4.48	23.00
2370	9.35	5.33	16.25	9.00	55.39	4.68	20.00
2396	8.58	7.05	15.75	11.07	52.18	5.37	20.00

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
2419	Bran, Coarse -----	-----	Torrington, G. W. Green ----- Average of the above 6 analyses ----- Average digestible ----- Average of 38 recent analyses -----
	<i>Bran from Spring Wheat.</i>		
1797	Bran, Spring -----	Pillsbury, Minneapolis -----	Hartford, Smith, Northam & Co. -----
1875	" " -----	" " -----	Stamford, Ingersoll Bros. -----
1881	" " -----	" " -----	Danbury, F. C. Benjamin & Co. -----
2357	" " -----	Harder & Son, Agt., Boston -----	Waterbury, Spencer, Pierpont & Co. -----
2362	" " -----	Northwestern Consolidated Mill. Co., Minneapolis -----	-----
2374	" " -----	-----	Watertown, C. W. & T. F. Atwood ----- Derby, Peterson-Hendee Co. -----
2393	" Coarse -----	Washburn-Crosby Co. -----	Plantsville, Atwater's Mill -----
2425	" "A" -----	J. S. Wolf, Agt., Pittsfield, Mass. -----	-----
	<i>Bran, unclassified.</i>		
2354	Bran, Michigan -----	Agt., Smith, Northam & Co., Hartford -----	Waterbury, Platts Mills Co. -----
2391	" -----	Agt., Abner Hendee, New Haven -----	Suffield, Spencer Bros. -----
2429	" Choice Clean -----	J. G. Davis Co., Rochester, N. Y. -----	West Winsted, Balch & Platt ----- Average of the above 3 analyses ----- Average digestible -----
	<i>Middlings, Winter Wheat.</i>		
1792	Choice -----	Voigt Milling Co., Grand Rapids -----	Hartford, Smith, Northam & Co. -----
2355	" White -----	Voigt Milling Co., Grand Rapids -----	Waterbury, Spencer, Pierpont & Co. -----
2369	" -----	Valley City Mill Co., Grand Rapids -----	-----
2397	-----	Kane Mill Co., Atchison, Kan. -----	Naugatuck, Grant Grocery Co. ----- Southington, Southington Lumber & Feed Co. -----
2416	B -----	Agt., C. M. Cox & Co., Boston -----	Torrington, E. H. Talcott -----
2420	-----	-----	" G. W. Green ----- Average of the above 6 analyses ----- Average digestible ----- Average of 18 recent analyses -----
	<i>Middlings, Spring Wheat.</i>		
113	Standard -----	Northwestern Consolidated Milling Co. -----	Boston, C. M. Cox & Co. -----
114	Improved -----	Northwestern Consolidated Milling Co. -----	" " " -----
115	Standard -----	Washburn-Crosby Co. -----	" " " -----
116	Fancy -----	" " -----	" " " -----
1794	A -----	Pillsbury, Minneapolis -----	Hartford, Smith, Northam & Co. -----
1800	Daisy -----	" " -----	" " " -----
1861	Badger Flour -----	Berger, Anderson Co., Milwaukee -----	Norwalk, Holmes, Keeler & Selleck Co. -----



## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract.	
2419	9.41	5.88	16.69	8.82	55.41	3.79	\$21.00
	9.09	5.59	16.15	9.41	55.17	4.59	
	----	----	12.56	2.69	38.29	3.12	
	----	----	16.46	----	----	4.53	
1797	9.48	6.34	16.25	10.66	52.13	5.14	22.00
1875	9.10	5.96	16.19	10.17	53.60	4.98	20.00
1881	8.27	6.15	16.50	11.33	52.98	4.77	19.00
2357	8.84	5.85	16.62	9.95	53.62	5.12	19.00
2362	8.50	6.22	16.50	10.40	53.11	5.27	19.00
2374	8.71	6.57	17.75	7.74	54.58	4.65	20.00
2393	8.43	6.08	16.06	11.45	53.54	4.44	20.00
2425	8.33	6.46	16.12	11.43	52.37	5.29	19.00
	8.71	6.20	16.50	10.39	53.24	4.96	
	----	----	12.84	2.97	36.95	3.37	
	----	----	15.80	----	----	5.00	
2354	8.81	5.33	16.12	7.51	58.24	3.99	21.00
2391	8.98	6.19	17.00	8.31	54.57	4.95	20.00
2429	9.02	6.06	16.81	8.99	53.88	5.24	21.00
	8.93	5.86	16.65	8.27	55.56	4.73	
	----	----	12.95	2.37	38.56	3.22	
1792	10.42	4.25	17.00	5.11	58.78	4.44	23.00
2355	11.09	3.71	16.37	4.69	60.13	4.01	21.00
2369	10.54	4.32	16.31	5.42	59.12	4.29	22.00
2397	9.65	4.72	19.37	4.78	56.08	5.40	21.00
2416	10.28	4.52	19.25	6.00	54.86	5.09	22.00
2420	9.98	4.13	17.94	4.82	58.29	4.84	21.50
	10.33	4.28	17.70	5.14	57.87	4.68	
	----	----	14.12	1.70	47.05	4.04	
	----	----	17.51	----	----	4.70	
	----	----	----	----	----	----	
113	9.22	5.44	17.06	5.50	56.97	5.81	----
114	9.89	3.91	20.31	4.65	55.08	6.16	----
115	9.52	4.46	18.06	9.03	53.70	5.23	----
116	9.76	3.95	17.81	6.26	57.46	4.76	----
1794	9.87	4.63	19.37	6.47	53.59	6.07	23.00
1800	10.62	3.30	20.00	2.34	58.22	5.52	23.00
1861	10.39	4.07	20.50	5.55	53.42	6.07	20.00

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
1862	Snow's Cream Flour.....	E. S. Woodworth & Co., Minneapolis	Norwalk, Holmes, Keeler & Sel- leck Co.....
1869	Fancy .....	Andrews & Co., Minne- apolis	South Norwalk, Manuel T. Hatch
1877	A .....	Pillsbury, Minneapolis	New Canaan, C. H. Fairty.....
1892	Flour .....	Washburn-Crosby Co.	New Milford, F. R. Green .....
1896	" .....	Sheffield Milling Co., Faribault, Minn.	" Ackley, Hatch & Marsh
1900	Snow's Cream Flour.....	E. S. Woodworth & Co., Minneapolis	Waterbury, Platts Mills Co.....
2379	.....	Bay State Milling Co., Winona, Minn.	Ansonia, Ansonia Flour & Grain Co.
2382	B .....	Pillsbury, Minneapolis	Hartford, Smith, Northam & Co.
2386	Standard .....	Washburn-Crosby Co.	East Hartford, G. M. White & Co.
2388	Flour .....	" "	Suffield, Spencer Bros.
2394	A .....	Pillsbury, Minneapolis	Plantsville, Atwater's Mill.....
2426	A .....	Pillsbury, Minneapolis	Canaan, Ives & Pierce.....
2430	.....	Northwestern Consoli- dated Mill Co.....	West Winsted, Balch & Platt .....
	<i>Middlings, unclassified.</i>		Average of the above 20 analyses.....
1885	Dexter .....	Chapin, Boston .....	Danbury, F. C. Benjamin.....
2375	.....	.....	Derby, Peterson, Hendee Co., (Caroline St.) .....
2377	.....	.....	Derby, Peterson, Hendee Co., (Main St.).....
2405	H .....	.....	Bristol, G. W. Eaton.....
2412	.....	Agt., Hollister, Chase & Co., N. Y. ....	" W. O. Goodsell.....
	<i>Mixed Feed from Winter Wheat.</i>		Average of the above 5 analyses..
147	Snow Flake .....	Lawrenceburg Roller Mills Co., Lawrence- burg, Ind.	East Hartford, G. M. White & Co.
1799	Sunshine .....	Hunter Bros., St. Louis, Mo.	Hartford, Smith, Northam & Co.
1871	Buckeye Wheat Feed.....	American Cereal Co.	South Norwalk, Manuel T. Hatch
1879	" " " .....	" " "	Danbury, F. C. Benjamin & Co.
1894	Snow Flake.....	Lawrenceburg Roller Mills Co.	New Milford, Ackley, Hatch & Marsh .....
2351	Acme Feed.....	Acme Milling Co., In- dianapolis	Waterbury, Platts Mill Co.....
2356	Mixed Feed .....	Rex Mill Co.	" Spencer, Pierpont & Co.
2363	" .....	Isaac Hunter Co., Tole- do, Ohio	Watertown, C. W. & T. F. Atwood
2366	Buckeye Wheat Feed.....	American Cereal Co.	" " "
2368	Farmers' Favorite Mixed Winter Wheat.....	Valley City Mill Co., Grand Rapids	Naugatuck, Grant Grocery Co....
2380	Snow Flake.....	Lawrenceburg Roller Mills Co.	Ansonia, Ansonia Flour & Grain Co.
2381	Hoosier Mill Feed .....	Geo. F. Evans, Indianap- olis	Ansonia, Ansonia Flour & Grain Co.

SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract. (Starch, gum, etc.)	Ether Extract.	
1862	10.75	3.11	20.25	2.61	58.09	5.19	\$21.00
1869	10.34	3.21	19.87	2.73	58.98	4.87	22.00
1877	10.10	4.49	19.50	6.43	53.31	6.17	21.00
1892	10.00	4.51	19.85	6.81	53.49	5.34	21.00
1896	9.60	4.62	19.44	5.98	54.39	5.97	20.00
1900	10.52	3.23	19.31	2.30	59.77	4.87	22.00
2379	9.40	4.74	19.50	6.59	53.94	5.83	20.00
2382	10.73	4.97	18.00	7.82	53.17	5.31	22.00
2386	9.97	4.53	18.81	7.51	53.94	5.24	21.00
2388	9.53	4.62	17.94	7.02	55.47	5.42	22.00
2394	9.56	4.30	19.37	6.21	54.84	5.72	20.00
2426	9.93	4.38	19.44	6.55	54.15	5.55	21.00
2430	9.69	4.67	18.12	8.80	53.44	5.28	22.00
	9.97	4.25	19.12	5.85	55.28	5.52	
	----	----	15.27	1.94	44.94	4.76	
	----	----	18.68	----	----	5.45	
1885	10.80	4.62	18.87	5.91	55.36	4.44	21.00
2375	10.36	4.19	18.12	5.57	57.06	4.70	21.00
2377	10.19	3.41	19.19	2.12	59.73	5.36	21.00
2405	9.08	5.08	17.25	7.30	56.24	5.05	23.00
2412	9.84	4.05	18.62	6.78	55.63	5.08	21.00
	10.05	4.27	18.41	5.54	56.80	4.93	
	----	----	14.69	1.83	46.18	4.25	
147	----	----	17.06	----	----	4.01	----
1799	9.26	5.82	16.50	8.16	55.81	4.45	23.00
1871	9.09	5.50	18.56	8.08	54.15	4.62	21.00
1879	9.23	5.37	18.12	6.79	55.76	4.73	20.00
1894	8.84	5.61	17.94	7.84	54.72	5.05	20.50
2351	8.77	5.53	17.94	6.95	56.13	4.68	22.00
2356	8.63	5.92	17.75	7.18	55.78	4.74	20.00
2363	9.64	5.57	16.75	7.74	55.48	4.82	21.00
2366	9.63	5.09	18.12	7.38	54.92	4.86	20.00
2368	9.58	5.05	19.75	7.95	53.18	4.49	21.00
2380	8.23	5.86	20.31	7.26	53.42	4.92	20.00
2381	9.10	4.22	18.19	6.85	56.91	4.73	20.00

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
2390	Acme Feed.....	Acme Mill Co., Indian- apolis.....	Suffield, Spencer Bros.....
2411	".....	Acme Mill Co., Indian- apolis.....	Bristol, W. O. Goodsell.....
2414	Sunshine Mixed Feed ..	Hunter Bros., St. Louis, Mo.....	Torrington, E. H. Talcott.....
2422	Farmers' Favorite Mixed Winter Wheat, Cow Feed.....	Valley City Mill Co., Grand Rapids.....	Canaan, Ives & Pierce..... Average of the above 15 analyses.. Average digestible..... Average of 68 recent analyses....
	<i>Mixed Feed from Spring Wheat.</i>		
1791	Fancy Mixed Feed.....	Pillsbury, Minneapolis..	Hartford, Smith, Northam & Co..
1891	Superior ".....	Washburn-Crosby Co., Minneapolis.....	New Milford, F. R. Green.....
2367	Hiawatha ".....	Wm. Listman Mill Co., Superior, U. S. A.....	Watertown, C. W. & T. F. Atwood
2392	Fancy ".....	Pillsbury, Minneapolis..	Plantsville, Atwater Mills.....
2400	".....	".....	Bristol, Geo. W. Eaton.....
2410	Boston ".....	Imperial Mill Co., Du- luth, Minn.....	" W. O. Goodsell..... Average of the above 6 analyses.. Average digestible..... Average of 36 recent analyses....
	<i>Mixed Feed, unclassified.</i>		
1893	N. E. Mixed Feed.....	U. S. Flour Milling Co..	New Milford, Ackley, Hatch & Marsh.....
2352	N. Y. ".....	Agt., Hollister, Chase & Co., N. Y.....	Waterbury, Platts Mills Co.....
2365	Boston ".....	Imperial Mill Co., Du- luth, Minn.....	Watertown, C. W. & T. F. Atwood
2395	Kauffman's ".....	Agt., Chapin, Boston...	Southington, Southington Lumber & Feed Co.....
2421	Mixed Feed.....	.....	Torrington, G. W. Green..... Average of the above 5 analyses.. Average digestible.....
2409	Corn Meal.....	W. O. Goodsell, Bristol.	Bristol, W. O. Goodsell.....
3056	".....	Berkshire Mills, Bridge- port.....	W. I. Lobdell, Stratford..... Average of 15 recent analyses.... Average digestible.....
734	Atlantic Gluten Meal ..	Atlantic Starch Works, Westport, Ct.....	Middletown, Sent by F. B. Ashton
1002	Atlantic Gluten Meal ..	.....	" Meech & Stoddard..
1003	Atlantic Gluten Meal ..	.....	" " ".....
1786	Atlantic Gluten Meal ..	.....	" F. B. Ashton.....
1787	Atlantic Gluten Meal ..	.....	" ".....
1840	Atlantic Gluten Meal ..	.....	Sent by manufacturer..... Average of 6 analyses.....

## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract. (Starch, gum, etc.)	Ether Extract.	
2390	9.03	5.42	18.00	6.92	56.04	4.59	\$21.00
2411	8.95	5.25	18.75	7.10	55.48	4.47	20.00
2414	8.89	5.27	18.50	7.58	55.29	4.47	21.00
2422	10.06	5.19	16.56	7.43	56.37	4.39	20.00
	9.13	5.37	18.12	7.41	55.31	4.66	
	----	----	14.46	2.45	44.97	4.02	
	----	----	17.03	----	----	4.58	
1791	8.52	5.31	17.75	7.00	56.02	5.40	23.00
1891	8.73	5.60	17.78	9.08	53.72	5.09	20.00
2367	8.92	5.13	17.12	8.86	54.66	5.31	20.00
2392	9.69	4.96	18.37	7.06	54.59	5.33	20.00
2400	8.70	5.42	17.50	6.40	56.69	5.29	22.00
2410	8.60	5.21	17.00	7.60	56.35	5.24	20.00
	8.86	5.27	17.58	7.67	55.34	5.28	
	----	----	14.03	2.54	44.99	4.56	
	----	----	16.90	----	----	5.12	
1893	8.90	5.39	17.00	8.51	54.89	5.31	20.00
2352	9.50	5.03	14.37	7.90	58.46	4.74	20.00
2365	9.16	4.88	16.69	8.32	55.75	5.20	21.00
2395	8.43	4.49	17.94	6.21	58.73	4.20	20.00
2421	8.00	5.83	17.69	8.66	55.47	4.35	21.00
	8.79	5.12	16.74	7.92	56.67	4.76	
	----	----	13.36	2.62	46.07	4.11	
2409	10.71	1.20	9.94	1.65	72.53	3.97	20.00
3056	----	----	8.81	----	----	----	----
	----	----	9.54	----	----	3.83	
	----	----	6.75	----	68.61	3.66	
734	9.40	1.90	25.25	----	----	1.55	----
1002	----	----	34.75	----	----	1.70	----
1003	----	----	33.44	----	----	1.40	----
1786	----	----	36.31	----	----	1.77	----
1787	----	----	27.75	----	----	3.78	----
1840	8.23	----	39.75	----	----	1.82	----
	----	----	32.88	----	----	2.00	----

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
1790	Cream Gluten Meal ----	Chas. Pope Glucose Co., Chicago, Ill. -----	Hartford, Smith, Northam & Co.---
2359	" " "	Chas. Pope Glucose Co., Chicago, Ill. -----	Waterbury, D. L. Dickinson ----
2903	" " "	-----	Hartford, C. A. Pease & Co. ---- Average of 3 analyses ----- Average digestible ----- Average of 48 recent analyses----
1795	Chicago Gluten Meal---	Glucose Sugar Refining Co., Chicago -----	Hartford, Smith, Northam & Co.---
1856	" " " ----	Glucose Sugar Refining Co., Chicago -----	Norwalk, Holmes, Keeler & Sel- leck Co.-----
1889	" " " ----	Glucose Sugar Refining Co., Chicago -----	New Milford, F. R. Green -----
2361	" " " ----	Glucose Sugar Refining Co., Chicago -----	Watertown, C. W. & T. F. Atwood
2415	" " " ----	Glucose Sugar Refining Co., Chicago -----	Torrington, E. H. Talcott ----- Average of the above 5 analyses-- Average digestible ----- Average of 60 recent analyses----
3020	Atlas Gluten Meal ----	Made at Peoria, Ill. ----	Sent by F. S. Truesdell, Nauga- tuck -----
3071	King Gluten -----	Nat'l Starch Mfg. Co., Indianapolis -----	S. E. Brown, Collinsville ----- Average of 22 recent analyses----
118	Waukegan Gluten Feed	U. S. Sugar Refinery Co., Waukegan, Ill. -----	Sent by manufacturer-----
2371	" " "	U. S. Sugar Refinery Co., Waukegan, Ill. -----	Naugatuck, Grant Grocery Co.---
2372	" " "	U. S. Sugar Refinery Co., Waukegan, Ill. -----	" " " " ----
2401	" " "	U. S. Sugar Refinery Co., Waukegan, Ill. -----	Bristol, Geo. W. Eaton ----- Average of the above 4 analyses-- Average digestible ----- Average of 14 recent analyses----
1852	Davenport Gluten Feed	Glucose Sugar Refg. Co., Chicago, Ill. -----	Bridgeport, Standard Feed Co.---
2418	" " "	Glucose Sugar Refg. Co., Chicago, Ill. -----	Torrington, G. W. Green-----
2428	" " "	Glucose Sugar Refg. Co., Chicago, Ill. -----	W. Winsted, Balch & Platt----- Average of the above 3 analyses-- Average digestible ----- Average of 8 recent analyses----
1863	Buffalo Gluten Feed----	Glucose Sugar Ref'g Co., Chicago, Ill. -----	So. Norwalk, Manual T. Hatch---
2353	" " " ----	Glucose Sugar Ref'g Co., Chicago, Ill. -----	Waterbury, Platts Mills Co.-----
2404	" " Meal----	Glucose Sugar Ref'g Co., Chicago, Ill. -----	Bristol, G. W. Eaton ----- Average of the above 3 analyses-- Average digestible ----- Average of 17 recent analyses----

## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract, (Starch, gum, etc.)	Ether Extract.	
1790	9.25	1.02	35.94	2.49	48.87	2.43	\$29.00
2359	9.03	0.97	34.87	2.44	49.27	3.42	27.00
2903	8.77	----	34.50	----	----	2.91	----
	9.14	1.00	35.10	2.46	49.08	2.92	
	----	----	31.22	----	44.07	2.76	
	----	----	35.50	----	----	2.70	
1795	8.77	0.93	37.25	1.80	48.01	3.24	29.00
1856	9.02	0.94	39.50	1.87	44.47	4.20	25.00
1889	8.10	1.14	39.56	2.11	46.08	3.01	27.00
2361	9.13	0.95	38.00	1.97	46.90	3.05	27.00
2415	8.24	0.97	39.19	2.08	46.87	2.65	30.00
	8.65	0.98	38.70	1.97	46.47	3.23	
	----	----	34.13	----	41.73	3.06	
	----	----	36.97	----	----	2.98	
3020	----	----	33.75	----	----	14.06	----
3071	----	----	25.94	----	----	----	----
	----	----	33.70	----	----	3.70	----
118	8.59	1.23	27.75	7.15	50.88	4.40	----
2371	8.99	0.99	26.75	7.37	51.99	3.91	23.00
2372	8.55	0.96	26.06	5.90	55.06	3.47	23.00
2401	9.14	1.13	27.62	6.38	51.97	3.76	21.00
	8.82	1.08	27.04	6.70	52.47	3.89	
	----	----	23.15	5.22	46.80	3.28	
	----	----	26.46	----	----	3.41	
1852	8.81	1.68	34.94	6.53	44.60	3.44	22.50
2418	9.21	0.86	27.00	6.95	52.52	3.46	24.00
2428	10.06	1.57	25.87	5.53	54.48	2.49	27.00
	9.36	1.37	29.27	6.33	50.54	3.13	
	----	----	25.05	4.94	45.08	2.54	
	----	----	25.77	----	----	3.48	
1863	8.52	3.46	25.81	6.56	52.25	3.40	24.00
2353	8.27	2.60	24.75	6.68	54.27	3.43	22.00
2404	7.85	2.24	27.06	6.32	52.36	4.17	21.00
	8.21	2.77	25.88	6.52	52.95	3.67	
	----	----	22.15	5.09	47.23	2.10	
	----	----	25.66	----	----	2.73	

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
63	Glen Cove Gluten Feed	Nat'l Starch Mfg. Co., Glen Cove, L. I.	Sent by A. Cullen & Co., N. Y.
1851	" " "	Nat'l Starch Mfg. Co., Glen Cove, L. I.	Bridgeport, Taylor & Clark
1853	" " "	Nat'l Starch Mfg. Co., Glen Cove, L. I.	" Wm. M. Terry Co.
1854	" " "	Nat'l Starch Mfg. Co., Glen Cove, L. I.	" Berkshire Mills
			Average of the above 4 analyses
			Average digestible
3062	Marshalltown Gluten Feed	Chapin & Co., Boston, Mass.	
2904	Gluten Meal		Middletown, Cowles Co.
2376	Gluten Feed		Derby, Peterson, Hendee Co., Main St.
146	Oil Cake Germ Meal		Sent by J. W. Beers, Hamden
541	Oil Germ Meal		" E. A. Bradley, "
2406	Germ Oil Meal	Glucose Sugar Rfg. Co., Chicago	Bristol, G. W. Eaton
2849	" " "	American Cereal Co., Chicago	Putnam, Bosworth Bros.
	<i>Hominy Chop.</i>		
137	Yellow Hominy Chop	Miner, Hillard Milling Co., Wilkesbarre, Pa.	New Haven, R. G. Davis
1867	Hominy Feed	Diamond Elevator Mill- ing Co., Minneapolis.	So. Norwalk, Manuel T. Hatch
1873			Stamford, E. E. Scofield
1874			" Ingersoll Bros.
1888	Hominy Feed	Chapin & Co., St. Louis, Mo.	Danbury, O. A. Meeker
1895	" " "	Diamond Elevator Mill- ing Co.	New Milford, Ashley, Hatch & Marsh
1899	" " "	Miner, Hillard Milling Co.	Waterbury, Platts Mills Co.
2364	" " "	Hunter Bros., St. Louis, Mo.	Watertown, C. W. & T. F. Atwood
2403	" Meal	Miner, Hillard Milling Co.	Bristol, G. W. Eaton
2433			W. Winsted, Balch & Platt
			Averages of the above 10 analyses
			Average digestible
			Average of 33 recent analyses
1883	Cerealine Feed No. 2	Cerealine Mfg. Co., Indianapolis	F. C. Benjamin, Danbury
59	"Magnolia" Ground Oats	R. J. Hardy & Sons, Boston	
62	"Magnolia" Ground Oats	R. J. Hardy & Sons, Boston	
			Average of the above 2 analyses
			Average digestible
			Average of 6 recent analyses
1836	Provender		Sent by Smith, Northam & Co., Hartford
2408	"	W. O. Goodsell, Bristol	Bristol, W. O. Goodsell
2427	"	Ives & Pierce, Canaan	Canaan, Ives & Pierce
			Average of the 2 analyses
			Average of 14 recent analyses



## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract (Starch, gum, etc.)	Ether Extract.	
63	8.17	0.36	27.12	4.49	56.00	3.86	----
1851	9.07	0.68	29.69	3.78	53.86	2.92	\$22.00
1853	9.00	0.65	28.50	4.43	53.30	4.12	22.00
1854	9.65	0.62	29.75	4.08	51.88	4.02	21.50
	8.97	0.58	28.76	4.19	53.77	3.73	
	----	----	24.62	3.26	47.96	3.15	
3062	----	----	28.75	----	----	----	----
2904	8.97	----	27.87	----	----	4.68	22.00
2376	8.32	1.14	25.31	6.83	55.26	3.14	23.00
146	----	----	25.87	----	----	----	24.00
541	----	----	25.25	----	----	9.16	----
2406	9.02	2.34	22.50	10.70	46.05	9.39	25.00
2849	6.34	----	22.06	----	----	16.23	23.00
137	9.37	2.50	11.56	4.84	62.83	8.90	18.50
1867	9.11	2.08	11.06	4.24	66.45	7.06	21.00
1873	8.75	2.69	12.69	4.83	61.90	9.14	20.00
1874	8.18	2.80	11.87	4.66	63.13	9.36	20.00
1888	7.90	2.84	11.94	6.50	61.34	9.48	20.00
1895	10.60	1.95	10.69	3.40	66.86	6.50	20.00
1899	8.55	2.53	11.56	5.20	63.31	8.85	20.00
2364	8.25	3.17	11.69	6.00	60.85	10.04	20.00
2403	8.61	2.57	11.62	4.59	64.49	8.12	20.00
2433	7.24	2.88	12.00	5.46	62.72	9.70	20.00
	8.66	2.60	11.67	4.97	63.39	8.71	
	----	----	7.92	----	59.96	8.02	
	----	----	11.19	----	----	8.39	
1883	8.50	2.77	12.31	3.44	63.51	9.47	----
59	7.75	4.35	9.62	17.16	56.25	4.87	17.00
62	8.10	2.47	13.37	7.17	62.70	6.19	17.00
	7.92	3.41	11.49	12.17	59.48	5.53	
	----	----	8.96	8.51	45.20	4.59	
	----	----	11.31	----	----	4.69	
1836	----	----	9.50	----	----	4.07	----
2408	9.58	2.06	10.75	3.91	69.08	4.62	----
2427	9.73	2.07	10.94	4.20	68.51	4.55	----
	9.65	2.07	10.85	4.06	68.79	4.58	
	----	----	9.73	----	----	3.74	

TABLE I.—Continued. ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
58	Star Chop -----	Miner, Hillard Co., Wilkesbarre, Pa. ....	So. Norwalk, Manuel T. Hatch...
67	Mixed Feed -----	-----	Sent by Crow & Williams, Sing Sing, N. Y. ....
	<i>Corn and Oat Feed.</i>		
1868	Victor -----	American Cereal Co., Chicago -----	So. Norwalk, Manuel T. Hatch...
1878	" -----	American Cereal Co., Chicago -----	New Canaan, C. H. Fairty.....
1882	" -----	American Cereal Co., Chicago -----	Danbury, F. C. Benjamin & Co...
1898	" -----	American Cereal Co., Chicago -----	Waterbury, Platts Mills Co. ....
2385	" -----	American Cereal Co., Chicago -----	E. Hartford, W. J. Cox ----- Average of the above 5 analyses... Average digestible ----- Average of 21 recent analyses....
60	"Lenox Feed" -----	R. G. Hardy & Sons, Boston -----	-----
61	" " -----	R. G. Hardy & Sons, Boston -----	-----
			Average of the 2 analyses ----- Average of 6 recent analyses....
1880	Oat Feed—"Vim"-----	American Cereal Co., Chicago -----	Danbury, F. C. Benjamin & Co... Average of 4 recent analyses....
144	Friends Concentrated Dairy Food -----	Muscatine Oat Meal Co., Muscatine, Iowa -----	Hartford, The Blodgett & Clapp Co. ....
1876	Barley Feed -----	Agt., Chapin & Co., N.Y.	New Canaan, C. H. Fairty ----- Average of 4 recent analyses....
2417	Rye Feed -----	A. D. Stone & Co., Roch- ester, N. Y. ....	Torrington, E. H. Talcott .....
1845	Buckwheat Bran -----	Quinnebaug Mill, Dan- ielson -----	Danielson, Quinnebaug Store....
1887	Corn, Oats and Barley..	American Cereal Co., Chicago -----	Danbury, O. H. Meeker .....
1897	Corn, Oats and Barley— Kiln Dried -----	American Cereal Co., Chicago -----	Waterbury, Platts Mills Co.....
2384	Corn, Oats and Barley..	American Cereal Co., Chicago -----	E. Hartford, W. J. Cox ----- Average of the above 3 analyses... Average of 10 recent analyses...
	<i>Factory Mixed Feeds.</i>		
1857	H-O Dairy Feed -----	H-O Co., Buffalo, N. Y.	Norwalk, Holmes, Keeler & Sel- leck Co. ....
1864	" " " -----	" " "	So. Norwalk, Manuel T. Hatch...
2398	" " " -----	" " "	Southington, Southington Lumber & Feed Co. .... Average of the above 3 analyses... Average of 9 recent analyses....
1859	H-O Poultry Feed -----	H-O Co., Buffalo, N. Y.	Norwalk, Holmes, Keeler & Sel- leck Co. ....

## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract. (Starch, gum, etc.)	Ether Extract.	
58	9.98	2.63	8.25	11.52	63.94	3.68	\$19.00
67	----	----	10.37	----	----	4.92	----
1868	7.88	3.84	9.00	12.72	61.66	4.90	20.00
1878	9.01	2.80	8.75	9.44	66.67	3.33	20.00
1882	7.93	3.11	8.50	11.26	66.20	3.00	19.00
1898	7.90	3.63	9.50	10.12	64.10	4.75	20.00
2385	8.67	3.72	9.81	9.99	62.89	4.92	22.00
	8.28	3.42	9.11	10.71	64.30	4.18	
	----	----	6.45	5.17	53.37	3.63	
	----	----	8.86	----	----	3.06	
60	9.23	2.75	8.37	8.67	67.72	3.26	17.00
61	10.24	2.37	8.50	6.93	68.46	3.50	17.00
	9.73	2.56	8.43	7.80	68.10	3.38	
	----	----	8.66	----	----	2.90	
1880	5.93	5.65	8.62	23.32	54.02	2.46	16.00
	----	----	6.01	----	----	2.16	
144	----	----	6.62	----	----	3.06	14.20
1876	7.36	5.36	13.37	15.12	54.87	3.92	19.00
	----	----	13.20	----	----	3.37	
2417	10.79	3.02	16.12	3.63	63.41	3.03	21.00
1845	13.50	----	33.37	----	----	8.49	18.00
1887	7.02	4.39	11.44	10.77	61.53	4.85	21.00
1897	7.48	4.11	11.87	10.53	60.94	5.07	21.00
2384	7.51	4.27	11.75	10.27	61.14	5.06	22.00
	7.34	4.26	11.68	10.52	61.21	4.99	
	----	----	11.61	----	----	4.69	
1857	8.52	3.69	18.75	12.65	52.80	3.59	21.00
1864	7.31	4.05	19.31	12.69	52.03	4.61	23.00
2398	8.02	3.73	19.00	12.12	53.42	3.71	23.00
	7.95	3.82	19.02	12.49	52.75	3.97	
	----	----	18.06	----	----	4.01	
1859	9.28	2.52	16.50	5.14	61.07	5.49	29.00

TABLE I.—*Concluded.* ANALYSES OF COMMERCIAL FEEDS.

Station No.	Name of Feed.	Manufacturer or Jobber.	Retail Dealer.
1870	H-O Poultry Feed -----	H-O Co., Buffalo, N. Y.	So. Norwalk, Manuel T. Hatch---
2407	" " " -----	" " "	Bristol, G. W. Eaton ----- Average of the above 3 analyses-- Average of 8 recent analyses----
1855	H-O Horse Feed -----	H-O Co., Buffalo, N. Y.	Bridgeport, Berkshire Mills -----
1858	" " " -----	" " "	Norwalk, Holmes, Keeler & Sel- leck Co.-----
1865	" " " -----	" " "	So. Norwalk, Manuel T. Hatch---
2399	" " " -----	" " "	Southington, Southington Lumber & Feed Co.----- Average of the above 4 analyses-- Average of 12 recent analyses----
1860	Quaker Dairy Feed ----	American Cereal Co., Chicago -----	Norwalk, Holmes, Keeler & Sel- leck Co.-----
1884	" " " -----	American Cereal Co., Chicago -----	Danbury, F. C. Benjamin & Co.--
1890	" " " -----	American Cereal Co., Chicago -----	New Milford, F. R. Green -----
2358	" " " -----	American Cereal Co., Chicago -----	Waterbury, Spencer, Pierpont & Co.-----
2383	" " " -----	American Cereal Co., Chicago -----	Hartford, Smith, Northam & Co.--
2389	" " " -----	American Cereal Co., Chicago -----	Suffield, Spencer Bros. -----
2424	" " " -----	American Cereal Co., Chicago -----	Canaan, Ives & Pierce ----- Average of the above 7 analyses-- Average of 28 recent analyses----
2360	American Poultry Food	American Cereal Co., Chicago -----	Waterbury, D. L. Dickenson -----
2423	" " " -----	American Cereal Co., Chicago -----	Canaan, Ives & Pierce ----- Average of the above 2 analyses-- Average 9 recent analyses -----
1886	Gem Poultry Feed -----	F. C. Benjamin & Co. ---	Danbury, F. C. Benjamin & Co.--
2431	Blatchford's Calf Meal..	E. W. Blatchford, Chi- cago, Ill.-----	W. Winsted, Balch & Platt.----- Average of 6 recent analyses ----
1916	Animal Meal -----	Bowker Co., Boston, Mass. -----	New Haven, C. J. Benham -----
2413	" " -----	Bowker Co., Boston, Mass. -----	Bristol, W. O. Goodsell ----- Average of the above 2 analyses-- Average of 10 recent analyses----
122	Corn Feed -----	The Marsden Co., Owensboro, Ky. -----	Sent by manufacturer -----

## SAMPLED IN 1900.

Station No.	ANALYSES.						Price per ton.
	Water.	Ash.	Protein.	Fiber.	Nitrogen-free Extract. (Starch, gum, etc.)	Ether Extract.	
1870	9.26	2.66	16.87	5.13	61.10	4.98	\$29.00
2407	8.52	2.70	16.75	4.45	62.11	5.47	
	9.02	2.63	16.70	4.91	61.43	5.31	
	----	----	<b>16.96</b>	----	----	<b>5.36</b>	
1855	8.93	3.35	12.75	9.30	61.69	3.98	23.00
1858	9.38	3.23	13.06	9.69	60.90	3.74	21.00
1865	8.25	3.58	13.12	10.58	59.76	4.71	23.00
2399	8.44	3.36	12.00	9.39	63.08	3.73	22.00
	8.75	3.38	12.73	9.74	61.36	4.04	
	----	----	<b>12.19</b>	----	----	<b>3.48</b>	
1860	7.00	4.79	13.87	15.02	55.58	3.74	20.00
1884	6.88	5.30	13.75	15.84	54.66	3.57	19.00
1890	7.19	3.99	12.62	15.34	58.03	2.83	18.00
2358	7.55	5.31	13.50	14.93	54.91	3.80	19.00
2383	7.09	4.33	13.62	15.28	56.65	3.03	21.00
2389	7.45	4.73	14.50	15.14	55.04	3.14	22.00
2424	6.95	5.02	14.50	15.62	54.37	3.54	18.00
	7.16	4.78	13.77	15.31	55.60	3.38	
	----	----	<b>13.53</b>	----	----	<b>3.13</b>	
2360	9.41	2.67	13.06	4.33	63.47	7.06	27.00
2423	8.93	2.80	13.19	4.91	63.33	6.84	25.00
	9.17	2.74	13.12	4.62	63.40	6.95	
	----	----	<b>13.20</b>	----	----	<b>6.20</b>	
1886	6.82	27.00*	12.12	7.55	43.02	3.49	20.00
2431	9.15	4.45	25.00	4.30	52.45	4.65	55.00
	----	----	<b>24.45</b>	----	----	<b>4.62</b>	
1916	4.64	43.54	38.50	----	----	10.25	----
2413	5.95	41.76	38.87	----	----	9.79	40.00
	5.29	42.65	38.69	----	----	10.02	
	----	----	<b>42.55</b>	----	----	<b>9.63</b>	
122	6.52	5.28	4.37	37.03	46.06	0.74	----

\* Chiefly shells, with a little sand.