CONNECTICUT

AGRICULTURAL EXPERIMENT STATION

NEW HAVEN, CONN.

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Condimental and Medicinal Cattle and Poultry Foods.

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.

CONDIMENTAL AND MEDICINAL CATTLE AND POULTRY FOODS.

While collecting commercial feeding stuffs for analysis, there were bought by our agents samples of all the brands of Condimental and Medicinal Cattle and Poultry Foods, which were found in the State.

These have been analyzed by the Station staff and have also been carefully examined microscopically by Mr. Winton to identify the materials of which they are compounded.

The results of both the chemical and microscopic analyses appear in the table on pages 4-5, and may be summarized as follows:

Of the cattle feeds, three have 24 per cent. and more of protein,—as much as is found in the gluten feeds,—four others have about the same quantity of protein as wheat bran, and one has less than corn-meal of average quality.

No one of them is a "concentrated feed" in the common acceptation of that word.

Five of the number have considerable quantities of salt, amounting in one case to more than 16 per cent., and four contain sulphur, an old-fashioned "spring medicine." The largest quantity of sulphur found was 3.90 per cent. Charcoal is an ingredient of five of the cattle foods.

The poultry foods are not very different from the cattle foods, either in composition or in the materials of which they are made.

The table also gives in detail the materials out of which these condimental foods are prepared. The list comprises the common feeds, cotton-seed meal, linseed meal, wheat feed, corn meal and malt sprouts, and the old-time remedies; sulphur, salt, Epsom salts, charcoal, cayenne, gentian, ginger, turmeric and fenugreek, to which are added mustard hulls and cocoa shells.

The poultry foods are made up of these same things (some of them containing considerable quantities of salt), and in addition, iron oxide, carbonate of lime (shells), and ground bone.

CONDIMENTAL AND MEDICINAL

Station No.	BRAND.	DEALER.	Price per package, cents.	Approximate weight of package, pounds.
	Cattle Foods.			
3013	Baum's Stock Food. Baum's Castorine Co., Syracuse, N. Y.	*Middletown.* Meech & Stoddard		
1912	Benjamin's Food for Horses and Cattle. Benjamin's Food Co., Danbury, Conn.	*Danbury.* F. C. Benjamin & Co.	25	2
1902	International Stock Food. Int. Food Co., Minneapolis	*New London.* A. C. Rogers	25	2
1905	Myer's Royal Horse and Cattle Spice. Niagara Falls, N. Y.	*Norwich.* J. P. Holloway	25	2
1906	Nutriotone. Thorley Food Co., Chicago	*Willimantic.* A. E. Buck & Co.	50	2
1909	Orange Electric Food. G. E. Vincent, Catskill, N. Y.	*Rockville.* Edward White	50	3
1901	Pratt's Animal Regulator. Philadelphia	*New London.* Beebe & Bragaw	25	1⅝
1907	Medicated Meal. F. C. Sturtevant, Hartford, Conn.	*Hartford.* W. H. Toby	25	1¼
	Poultry Foods.			
1908	Baum's Poultry Food. Baum's Castorine Co., Syracuse	*Thompsonville.* H. K. Brainard	25	2
1911	Benjamin's Poultry Food	*Danbury.* F. C. Benjamin	25	2
1910	Dr. Hess' Poultry Panacea. Dr. Hess & Clark, Ashland, O.	*South Norwalk.* G. C. Stillson	25	1½
1903	International Poultry Food. Int. Food Co., Minneapolis	*Norwich.* Norwich Grain Co.	25	2
1914	Myer's Royal Poultry Spice. Niagara Falls, N. Y.	*East Hartford.* W. J. Cox	35	2
1904	Pratt's Poultry Food. Philadelphia	*Norwich.* A. A. Beckwith	25	1⅝
1913	Triplex Poultry Food. Triplex Food Co., New Brunswick, N. J.	*Waterbury.* Spencer & Pierpont	25	1½

Cattle and Poultry Foods.

Station No.	Water.	Ash.		Free sulphur.	Protein.	Crude fiber and charcoal.	Nitrogen-free extract.	Fat.	PRINCIPAL INGREDIENTS.
		Total ash.	Common salt.						
3013	9.28	12.27*	3.59	3.90	25.84	19.37	25.19	4.15	Linseed meal, charcoal, salt, Epsom salts, sulphur.
1912	6.92	5.52	....	....	27.82	7.57	45.92	6.25	Linseed meal, wheat feed, fenugreek.
1902	6.13	12.50	8.38	....	14.31	14.51	47.88	4.67	Wheat feed, cayenne, a bitter drug,¶ salt, charcoal.
1905	6.10	20.34	16.52	....	17.81	5.84	47.86	2.05	Linseed meal, corn meal, wheat feed, mustard hulls, cocoa shells, malt sprouts, fenugreek, turmeric, salt.
1906	5.94	21.49	13.10	.83	18.97	5.10	42.23	5.44	Linseed meal, corn meal, wheat feed, cotton seed meal, fenugreek, salt, charcoal, sulphur.
1909	6.80	4.00	....	.40	15.03	7.81	58.92	7.04	Corn meal, linseed meal, charcoal, sulphur.
1901	6.67	12.40	10.11	....	9.69	3.12	63.75	4.37	Corn meal, fenugreek, a bitter drug,¶ salt, charcoal.
1907	6.34	8.94	....	2.93	24.10	10.98	39.08	7.63	Linseed meal, corn meal, ginger, fenugreek, a bitter drug, sulphur.
1908	6.95	16.68†	4.88	6.73	19.53	15.40	32.62	2.09	Linseed meal, wheat feed, cayenne, charcoal, salt, Epsom salts, iron oxide, sulphur.
1911	7.05	5.42	....	....	29.19	8.44	42.92	6.98	Linseed meal, wheat feed, corn meal, cotton seed meal, mustard hulls.
1910	6.98	35.67‡	11.65	....	11.94	5.17	37.80	2.44	Wheat feed, charcoal, salt, lime carbonate, iron oxide.
1903	6.79	7.87	2.26	....	14.88	13.97	49.69	6.80	Wheat feed, cayenne, a bitter drug, charcoal, salt.
1914	6.17	17.00	12.88	....	18.19	7.93	45.42	5.29	Linseed meal, corn meal, wheat feed, mustard hulls, cocoa shells, fenugreek, turmeric, cayenne, salt.
1904	7.01	6.28§	....	.81	14.87	6.04	56.94	8.05	Corn meal, wheat feed, a bitter drug, iron oxide, sulphur.
1913	5.76	40.87‖	....	.93	18.03	4.57	25.38	4.46	Linseed meal, wheat feed, charcoal, ground bone, lime carbonate, iron oxide, sulphur.

* Of which, magnesia 1.57, sulphuric acid 2.03, lime 0.80 and carbonic acid 0.85 per cent.

† Of which, magnesia 0.66, sulphuric acid 1.82, lime 0.63, carbonic acid 1.62, phosphoric acid 1.22, oxide of iron 1.89 and sand 1.50 per cent.

‡ Of which, lime 6.00, carbonic acid 5.98, phosphoric acid 1.09, oxide of iron 2.97 and sand 0.88 per cent.

§ Of which, oxide of iron 1.12 per cent.

‖ Of which, lime 19.29, magnesia 0.54, phosphoric acid 11.67, and carbonic acid 5.33 per cent.

¶ Corresponds with gentian in microscopic structure.

In the condimental foods examined no injurious drugs have been found. They are for the most part old-time simple remedies which most farmers buy very cheaply at the village grocery or drug store and keep in the house for use.

There are only two things which call for further notice.

The Claims made for these Feeds. The special claims made for these feeds in advertisements and on the containing packages are very numerous and are of two rather distinct kinds: First, that they are appetizers, giving an agreeable odor and taste to the feed, thus inducing stock to eat more of it, and also making them digest it better than they otherwise would. Secondly, that the foods have great medicinal value.

The claims made under this latter head are as extravagant as those made for patent medicines sold for human use and are supported in some cases by testimonials about as valuable. For example:

One, "cures hog cholera, makes pigs grow quickly, dairy cows produce more butter and milk, stops slinking of calves . . . and regulates horses."

This takes the place of another article made by the same firm and is "much more highly concentrated." This highly concentrated feed, which cures hog cholera, contains less protein than any other of the condimental foods and consists of corn meal, salt, charcoal, fenugreek and a bitter drug, probably gentian.

Another, which "is the most effectual and economical remedy known for diseases of cattle," guaranteed to cure "scowers" in calves, consists of corn meal, linseed meal, charcoal and sulphur.

Still another "is composed of laxatives and tonics in abundance, aromatics in just proportion, diuretics, expectorants and alteratives."

This beneficial mixture is made of linseed meal, corn meal, ginger, fenugreek, a bitter drug and sulphur.

Other brands of condimental food with less remarkable claims for medicinal value are advertised as food "auxiliaries," "appetizers," and flesh and milk producers.

It is interesting to note that the Poultry Feeds are very like the Cattle Feeds, both in chemical composition and in materials used, so that were the claims of the manufacturers all valid, a condimental feed which would cure gapes in chickens might

be expected to increase the flow of milk of cows and also to cure hog cholera.

The mildly curative properties of the various drugs used in these feeds are well understood by most dairy farmers, as well as their limitations.

The claims that by the use of condiments and spices the digestibility of food can be increased and in this way a saving of feed can be effected, have no basis in fact. No experiments have demonstrated or made even probable such an effect. Stock feeders will be very slow to believe that cotton-seed meal, linseed meal, wheat feeds, or corn products can be made more easily digestible or even more acceptable to healthy cattle by mixing with them Epsom salts, charcoal, ginger or fenugreek.

The Prices of Condimental Feeds. The cheapest of those collected in this State cost about 12½ cents per pound, the most expensive 20 cents.

As foods, pure and simple, such prices are ridiculous and prohibitive. If in large lots they can be bought at half or a quarter of the rates for small packages, even such a discount would make them twice as costly as our most expensive standard feeds, and no one of them is as concentrated a feed as either cotton-seed meal, linseed meal or gluten meal.

In buying medicines mixed at a drug store one pays very much more in proportion than he would for the ingredients singly, in bulk, and in much larger quantity. He pays for the convenience of having all of them accessible in one place in as small amount as he desires, mixed accurately according to his written directions and put up to be conveniently carried.

There is, however, absolutely no sense in buying at a very high price a lot of drugs of rather mild medicinal properties, of unknown kinds and in unknown proportions, which claim to take the place of a part of the food and to cure almost every ill and defect that cattle and fowls are heir to.

Salt, charcoal, Epsom salts, sulphur, fenugreek, gentian, cayenne and ginger:—they can all be bought probably in any village in Connecticut, they are already in the stables of many dairy farmers and are used by them, their value is well known, and also their uselessness for the treatment of serious illnesses.