

Kentucky Agricultural Experiment Station

UNIVERSITY OF KENTUCKY

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COMMERCIAL FEEDS IN KENTUCKY IN 1937

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CONTENTS

Phosphate rock not permissible in feeds	2	Canned dog feeds	9
Poisoning by mineral mixtures containing phosphate rock.....	3	Uniform can label for dog feed..	10
Chemical standards for special- purpose feeds	4	Standards, rules and regulations for canned dog feeds	11
Table 1. Chemical standards....	5	Table 2. Analyses of dog feeds	14
Necessity of microscopical analysis	5	Summary of results of inspection and analysis, 1937	19

In addition to the regular activities of the Department in 1937, special attention was given to mineral feeds containing an excessive amount of fluorine, a standard for fiber in poultry mashes and standards for canned dog feeds. The Department has also continued its work in cooperation with the Agronomy Department in making analyses of a variety of forage plants and grains grown in Kentucky. The purpose is to furnish definite information now lacking, with particular reference to the conditions under which the products were grown, such as the type of soil and the kind of season. Forty-two samples were analyzed, including redtop, alfalfa, timothy, lespedeza sericea, bluegrass, orchard grass, barley, rye, oats and wheat.

PHOSPHATE ROCK NOT PERMISSIBLE IN FEEDS

In recent years physiological chemists and experiment station workers have proved that the presence of even a small amount of calcium fluoride in the feed is injurious to livestock. Because calcium fluoride is a regular constituent of phosphate rock and phosphatic limestone the Director has ruled that commercial feeds and mineral mixtures offered for sale in the State, for livestock, shall not contain phosphate rock or other substance containing excessive fluorine. This Department will enforce this rule strictly, as a protection to feeders of livestock in the State.

In this connection it is fair to say that before the danger from the presence of a fluoride in feeds was recognized, ground phosphate rock was used without question, in mineral mixtures for livestock, as the cheapest source of calcium and phosphorus. Because an appreciable percentage of fluorine is found in normal bones and teeth, physiologists assumed, in the absence of experimental evidence, that the presence of fluoride in the feed probably would be helpful in the formation of these tissues. Apparently, McCollum and his associates were the first to disclose the error of this teaching. (*Journal of Biological Chemistry*, 63: 553-562, 1925.) They observed that the teeth of certain albino rats in their experiments were abnormal. Under the supposition that the trouble was caused by a deficiency of fluorine, they tried adding a little sodium fluoride to the feed. This made the trouble worse, and it was found that the trouble could be prevented by diminishing the quantity of fluorine in the feed.

In the experiments, addition of 226 parts of sodium fluoride (100 parts of fluorine) per million of feed stunted the growth of the rats and caused defective teeth. Other investigators took up the subject and it is now well established that phosphate rock or other carrier of fluorine in appreciable quantity should not be added to a feed or mineral mixture for livestock. The present view is that while a minute quantity of fluorine in the diet may be necessary in the animal economy, normal feed materials and the water of streams and springs contain enough to supply the need of livestock. Those who want more information on this

subject may consult Technical Bulletin No. 105 of the Michigan Experiment Station, 1930, pages 52 and 55, and Bulletin No. 558 of the Ohio Experiment Station. In Michigan, a five-year feeding experiment with dairy cattle showed that feeding a grain mixture containing 1½ percent of rock phosphate injured the health of the cows, produced abnormal teeth which wore down badly, and produced abnormal soft, chalky bones. The Ohio Experiment Station found that when the feed of pigs contained more than 0.029 percent of fluorine as sodium fluoride or 0.033 percent as phosphate rock, the bones were thicker, lost their normal color and luster, and were weaker.

POISONING BY MINERAL MIXTURES CONTAINING PHOSPHATE ROCK

The Department of Animal Pathology of this Station has investigated, in different parts of the State, the death of sheep, hogs, cattle, horses and mules that died without having symptoms of any common disease. In many of these cases the animals had access to mineral feed mixtures containing phosphate rock. After the danger from such mixtures had been explained to the owners, and use of them had been stopped, no similar cases occurred on the same farms. In this connection, four samples of different mineral mixtures found in the hands of farmers were collected by one of the feed inspectors and were analyzed for fluorine and a feeding experiment with white rats was conducted with one of them by the Chemistry Department of the Station. The percentages of fluorine found in these samples were 0.43, 0.37, 0.43 and 0.55, respectively; average, 0.445 percent. This corresponds to about 20 to 25 percent of phosphate rock in the mixture.

One of these samples was fed to white rats in proportions of 1, 3 and 10 percent of their feed. Mottled and eroded teeth and depressed growth resulted, even with the smallest quantity of the mixture. After several weeks feeding, the rats were killed and samples of the moisture and fat-free bones and teeth were analyzed with the following results.

	Fluorine, percent	
	Bones	Teeth
Rats on normal feed ration	0.015	0.014
Same with 1 percent mineral mixture	0.074	0.066
Same with 3 percent mineral mixture	0.160	0.127
Same with 10 percent mineral mixture	0.344	0.209

These results are in accord with the findings of other investigators.

CHEMICAL STANDARDS FOR SPECIAL-PURPOSE FEEDS

In the feed industry, special-purpose feeds are becoming more specialized to meet the needs of each class of animals. With the advance in the science of animal nutrition, scientific methods of mixing rations have followed, without which the business of feeding would be less remunerative. Investigators are constantly discovering new facts in animal nutrition and manufacturers are endeavoring to adapt their products to the new ideas. However, because of keen competition in the feed business, some manufacturers overemphasize the importance of certain factors that for one reason or another are more favorable to them, such as the control of the sources of certain feed products; the control of some new factor in nutrition; utilization of certain waste by-product, and so on.

Chemical standards for special-purpose feeds have long been established by the Director. The minimum for protein is sufficiently high to assure a reasonable amount and, thereby, require a desirable source. Minimum fat requires the use of materials that have not been degermed and excludes excessive fillers of low fat content. The standard for fiber excludes excessive fillers and materials of highly fibrous nature, and assures a high percentage of nitrogen-free extract. These standards have been established for the purpose of assuring reasonable percentages of desirable protein and fat and the exclusion of excess materials of highly fibrous nature. They are subject to adjustment on sufficient experimental evidence. Some adjustments in standards for fiber in poultry mashes have been made during the year.

All standards for special-purpose feeds, including those for poultry, now in effect in Kentucky, are stated below.

TABLE 1. CHEMICAL STANDARDS

	Minimum Protein Percent	Minimum Fat Percent	Maximum Fiber Percent
Special-Purpose Mixed Feeds:			
Dairy Feed	16.00	3.50	15.00
Hog Feed (Fattening)	13.00	3.50	7.00
Hog Feed (Growing)	16.00	3.50	7.00
Horse and Mule Feed	9.00	2.50	15.00
Poultry Feeds:			
All-Mash Broiler Ration	15.00	4.00	6.00
All-Mash Growing Ration	15.00	4.00	6.00
All-Mash Laying Ration	15.00	4.00	7.00
All-Mash Poultry Ration	15.00	4.00	6.00
All-Mash Starting Ration	15.00	4.00	6.00
All-Mash Starting and Growing Ration	15.00	4.00	6.00
Chick Grains	9.00	2.50	3.50
Scratch Grains	9.00	3.00	5.00
Broiler Mash	17.00	3.50	7.00
Fattening Mash	13.00	4.00	6.00
Growing Mash	17.00	3.50	7.00
Laying Mash	18.00	3.50	8.00
Starting Mash	16.00	3.50	6.00
Starting and Growing Mash	17.00	3.50	7.00
Turkey Growing Mash	17.00	3.50	7.00
Turkey Laying Mash	18.00	3.50	8.00
Turkey Starting Mash	18.00	3.50	6.00
Turkey Starting and Growing Mash	18.00	3.50	7.00

NECESSITY OF MICROSCOPICAL ANALYSIS

Chemical analysis does not indicate the quality nor the digestibility of feed materials. So to determine whether the protein, fat, carbohydrate and mineral matter, as found by chemical analysis, are supplied by desirable vitamin-carrying digestible ingredients of good quality, it is necessary to identify them. This is not always simple. In the use of present-day grinding machinery and milling methods, and in the utilization of the many by-products for feed ingredients, the character of

the original materials becomes so altered that identification sometimes is difficult.

This depends on the materials, as some retain their characteristic physical properties, while others either have lost them or originally had little by which their identity can be readily established. Identification in general is possible because the microscopist is so familiar with the appearance of the ingredients that he recognizes them at once with the assistance of low magnification. However, most feed materials are composed of characteristic cell tissue which can be identified by means of the compound microscope. Every sample of feed received by this Department is subjected to a microscopical examination. A record is made of the nature of the ingredients that make up the feed. These various feed ingredients are sold unmixed or in mixtures varying from two to a dozen or more materials. Molasses, salt and other minerals, and vitamin-carrying materials frequently are added to these mixtures. Sometimes, they are very complex in composition.

By means of microscopical examination one is able to judge with reasonable success: first, whether the feed contains the guaranteed ingredients, and the quality of each. Second, whether it contains other ingredients and whether or not they are adulterants. Third, whether any of the ingredients are present in such small proportions that their presence does not materially affect the nature of the feed. Previous to the requirement that at least 3 percent of any essential organic ingredient must be present before it can be listed, guaranteed ingredients were added in very small amounts merely to meet the guaranty in name only. Fourth, whether excessive low-grade materials were used.

The products from which feeds are made vary not only in chemical analysis, digestibility and quality but also in palatability, laxitive property, purity and physical condition. Hence, it is not only desirable to know how much protein, fat and fiber are present in a feed, their digestibility and quality, but the character of these nutrients as well. It is desirable to know whether excessive fiber is due to the presence of alfalfa meal or

to oat hulls, or to other inferior highly-fibrous materials, and whether the protein comes from linseed oil meal, soybean oil meal, or poor-quality tankage. Again, if a feed is shown by analysis to be low in protein, the question arises as to whether this low protein is due to an inferior low-protein adulterant or to wheat flour, for example, a product low in protein but highly digestible and therefore relatively desirable. The microscopical examination is a most necessary aid in determining the products present.

If a feed diverges widely from the guaranty as to chemical constituents, it is a strong indication that some desirable ingredient has been left out, something added, or the proportions of the ingredients materially changed. The microscopical examination determines the nature of these changes.

Too much importance has been given in the past to the guaranteed chemical analysis and not enough to the declared ingredients. Because of this, unscrupulous manufacturers met their chemical guaranties, but did not use the ingredients declared and varied their percentage amounts. From the feeder's standpoint, it is highly desirable for any brand of feed to have the same percentages of ingredients over a long period of time. When a farmer buys "Red Cow Brand" 24% Protein Dairy Feed in July, 1937, and it is identical with the feed that he purchased in July, 1936, he can expect similar results, other things being equal. The microscopist can detect variations in the percentage of ingredients that may be made from time to time.

The importance of the microscopical examination becomes more pronounced each year. There are less than fifty materials in general use as feeds, and these products become more standardized each year. The better standardized the products are, the easier it is for the microscopist to classify them. It becomes increasingly pronounced that when only relatively well-standardized products are used in mixed feeds, the microscopist can determine with the aid of the chemist, within reasonable bounds, the percentage composition of the ingredients. If he goes far wrong, it is generally because of the presence of some product which has a widely variable composition. The 3 per cent requirement for the essential organic ingredients has helped the microscopist

greatly; also, the limiting of fillers or low-grade materials in feeds to not more than 25 percent. Altho some of the feed manufacturers, and even some feed officials, look with skepticism upon the ability of the microscopist to determine 3 percent of an organic ingredient in a feed, it can be done with a reasonable degree of accuracy by comparison of a self-mixed known sample with the unknown feed. The same is true for excessive fillers. And in general, it is not a difficult matter to determine whether an ingredient is left out, an inferior one added, or a substitution made.

The definitions adopted by the Association of American Feed Control Officials are a great help to both chemist and microscopist. Frequently, samples of "feed" with absolutely no data are received for analysis. If it were not for the experience of the present-day feed microscopist, these samples would be very difficult to handle; yet today we are able to estimate the amounts of ingredients present if they are materials familiarly known or classified in the definitions of the American Feed Control Officials. Another very important feature of microscopical examination is that it serves as a check on the chemical analysis, and vice versa. If the results of the chemist and microscopist do not agree, they then set about to determine the cause. It is safe to say that hundreds of duplicate analyses have been avoided thru the microscopical examinations.

Definite procedure in microscopical technic varies according to composition of feeds. Technical procedure depends upon the readiness with which the percentage of each ingredient can be estimated with reasonable accuracy. The procedure is based on experience obtained on prepared samples of more or less standardized products. The presence of screenings and waste materials of extremely variable composition makes the microscopical examination somewhat difficult.

It is desirable to obtain all information possible about the sample before analysis. This, of course, is essential in any analytical work whether in the field of chemistry, microscopy, medicine or law.

The microscopist must be so familiar with the appearance of feed materials that he readily recognizes them by sight and easily determines their percentages, even in complex mixtures. Such familiarity can only be acquired by experience. The average layman recognizes most automobiles, birds, fruits, vegetables, etc. by their general appearance. Likewise, the microscopist can recognize the feed ingredients and their quality. Only a microscopist with experience in this work can recognize and estimate the percentage amount of ingredients present with accuracy. As a check on his examination, he approximates the chemical composition of each ingredient and the estimated amount of each. A comparison is made with the actual chemical analysis. As stated before, we have found this procedure to serve as a check on the work of the chemist, also, and a great deal of duplication is avoided.

As the work has to do, for the most part, with feeds guaranteed to contain certain ingredients and to have a more or less definite chemical composition, one is not looking for a needle in a haystack, and the procedure is greatly simplified. When no information is at hand to guide the microscopist, necessarily valuable time is used that might be saved if something were known about the sample. Under such circumstances, the time required for analysis depends upon the nature of the material.

The microscopist's technic is based on both microscopical and macroscopical general and special methods. Official methods of the Association of Official Agricultural Chemists are used as far as possible. But most important is practical experience in feed work of a technically trained microscopist.

CANNED DOG FEEDS

The manufacture and sale of canned dog feeds have developed into a tremendous business in the past few years. The extent to which these feeds, especially the low-grade brands, meet the nutritional requirements of dogs, is questionable, as the content of recognized factors, such as proteins, fat and carbohydrates, is small and the presence of essential minerals and vitamins in adequate amount doubtful. Experimental data are

meager but such as are available indicate that the low-grade canned dog feeds are deficient in all the essential factors; that the high-grade brands are more nearly balanced and contain sufficient amounts of all the essential factors to give satisfactory results.

In our investigations for the past three years, we found that many of the canned dog feeds running as low as 4.5 percent of protein and some as high as 82.5 percent of water, were labeled and sold as balanced rations. In many, the ingredients of which they were made, both animal and vegetable, were incorrectly stated, low in food value, did not contain the essential factors and were entirely unsuited for dog feeds. Extravagant claims and statements on the labels of such feeds are common.

Fifty-five samples of dog feeds, 14 dry and 41 canned, were analyzed during the year. The results of the canned feeds showed that the protein varied from 6.2 to 16 percent, fat from 0.4 to 6.7 percent and fiber from .5 to 2 percent. The water content varied from 62 to 78.5 percent. The results showed that there was a general improvement in canned dog feeds over 1936. The detailed results are printed in Table No. 2.

UNIFORM CAN LABEL FOR DOG FEED

There is no uniform manner with manufacturers in printing their guaranties on the label. For instance, the net weight is often put in one place, the chemical guaranty in some obscure and irregular form in another and the names of the ingredients blended in with advertising matter in an entirely different place. It is very desirable for the benefit of the purchaser to have the information required by law printed in some conspicuous place on the can label in an orderly and intelligible manner. With a view of adopting a uniform manner in which the manufacturer's guaranty appears on the label, the Department is asking the manufacturers to set aside proper space on the label, apart from the advertising material, on which the required information is printed. The following form is recommended and proposed as tentative, subject to modification by suggestions of manufacturers.

1 Pound Net

POODLE DOG FEED

Made by
POODLE DOG FEED CO.,
Lexington, Ky.

GUARANTEED ANALYSIS

	Per Cent
Protein (min.)
Fat (min.)
Fiber (max.)
Water* (max.)

Made from:
Meat, meat by-products, cracked wheat, cracked rice, rolled oats, carrots, cod liver oil, salt ½%, charcoal .1%, bone meal 3%, added water to cook the product properly.

STANDARDS, RULES AND REGULATIONS FOR CANNED DOG FEEDS

A study of the value of canned dog feeds has been made for several years. On the basis of an average cost of 5 cents a can for the cheapest dog feeds, not considering the cheapness and questionable character of the contents or cost of container and other costs incidental to its manufacture and sale, the total nutrients would be worth a relatively small part of the 5 cents a can in proportion to the cost of the water.

In order to minimize economic frauds and abuses as much as possible in canned dog feeds, the Director has established minimum chemical standards and rules and regulations to govern the manufacture and sale of such feeds in Kentucky. These standards and requirements have been the subject of study for the past two years and are approved by most of the reputable manufacturers of this class of feeds. The manufacturers of the higher-grade feeds, realizing the chaotic condition of the busi-

* Tentative pending court decision.

ness, have shown a fine spirit of cooperation and have rendered a very definite and constructive service not only to the Department but to the dog-feed industry as well. These requirements, including standards, are:

1. **Minimum Chemical Standard for Canned Dog Feed:**

Protein, minimum, 10.0%; Fat, minimum, 2.0%;
Fiber, maximum, 1.5%; Water,* maximum, 74.0%.

2. **General Requirements:**

- a. Net weight of contents must not be less than 16 oz.
- b. In making registrations, care should be exercised to make the chemical guaranty reasonably close to the actual content of the feed. In other words, arbitrary guaranties will not be accepted as final.
- c. Mineral ingredients, except bone, when added to a feed must not exceed 2%. The percentage of each mineral ingredient, including bone, must be stated.
- d. The specific name of each ingredient and form used in the mixture must be stated.
- e. The statements on the manufacturer's label must agree in all essential respects with the manufacturer's guaranty in the registration. A label of each brand must be made a part of the registration. If water has been added, "water" must be named as one of the ingredients or in lieu thereof a statement in effect: "added water sufficient to cook or process the product properly".

3. The following questions are a part of the registration and must be answered completely before registration will be accepted.

a. **Kind of Animal Products.** Check kinds used.

- | | |
|---|-------------------------------|
| (1) Meat | (5) Tankage |
| (2) Fish meat | (6) Meat scraps |
| (3) Edible bone% | (7) Meat and bone scraps..... |
| (4) Raw bone Meal...% | (8) Blood meal |
| (9) Meat by-products (lungs, liver, spleen, stomach, etc.)..... | |

b. **Kind of Marine Products.**

- | | |
|-------------------------|-----------------------|
| (1) Fish meal | (4) Shrimp meal |
| (2) Crab meal | (5) Whale meal |
| (3) Cod liver oil | |

c. **Kind of Cereal Products** (Whole? Ground? Cracked? Screened?).

- | | |
|-----------|-----------|
| (1) | (4) |
| (2) | (5) |
| (3) | (6) |

d. **Kind of Vegetable Products** (Raw? Dried? Processed? etc.).

- | | |
|-----------|-----------|
| (1) | (4) |
| (2) | (5) |
| (3) | (6) |

* Tentative pending court decision.

e. **Kind of Milk Products.**

(1) (3)
(2) (4)

f. **Kind of Mineral Products.** (Salt%, Calcium Carbonate%, etc.)

(1) (3)
(2) (4)

g. **Kind of Other Products** (not listed above).

(1) (3)
(2) (4)

4. Is the plant in which this dog feed is prepared operated under the supervision of the Bureau of Animal Industry of the United States Department of Agriculture?

Table 2. Analyses of Dog Feeds.*

Manufacturer and Brand Name	Sample taken from:	Protein	Fat	Fiber	N. F. Ext.	Water	Ash	Remarks	
Allied Mills, Chicago, Ill. Wayne Dog Feed Krums	Aubrey & Co., Louisville	28.3 25.0	4.9 4.0	4.9 5.0	---	---	---	No copper sulfate found.	
Arco Packing Co., Milford, O. Arco Dog Feed	Tony Bezold, Newport	10.6 10.0	2.6 3.0	1.0 5.0	12.6 ---	71.4 ---	1.8 ---	No kelp found. Deficient in net weight. Not registered.	
Balanced Pet Foods Co., Chicago, Ill. Cooked Ration Dog Feed	Geo. C. Goode, Covington	10.1 10.0	1.6 2.0	1.1 1.5	8.3 ---	76.0 ---	2.9 ---	No carrots found. Excess water. Misbranded. Not registered.	
Calo Food Products, Inc., Oakland, Calif. Calo Dog Feed	Albers Grocery, Newport	8.6 8.0	2.5 2.2	0.8 1.0	12.6 ---	72.5 ---	3.0 ---	As guaranteed.	
Calo Cat Feed	Kroger Gro. & Baking Co., Ashland	6.4 8.0	2.5 2.2	0.6 0.5	14.3 ---	74.8 ---	1.4 ---	Deficient in protein. Excess water. Misbranded.	
Chappel Bros., Inc., Rockford, Ill. Ken-L-Ration	Carter Supply Co., Lexington King Drug Co., Newport	9.9 10.0 10.0	1.5 2.6 2.0	0.7 0.9 2.0	10.6 11.0 ---	67.4 71.7 ---	3.0 3.8 ---	Deficient in net weight. Deficient in net weight.	
Ken-L-Biskit	Albers Grocery, Covington	21.8 20.0	2.0 2.0	1.1 2.0	---	---	---	As guaranteed.	
Coast Fishing Co., Wilmington, Calif. Puss 'N Boots	Albers Grocery, Newport	16.0 12.5	3.5 6.0	0.5 1.0	4.8 ---	71.9 ---	3.3 ---	Deficient in fat. Not registered.	
Continental Packing Corporation, Morrow, O. Brownie's Dog Feed	Tony Bezold, Newport	10.7 9.5	2.8 2.5	1.1 1.2	1.1 ---	10.6 ---	70.1 ---	4.7 ---	As guaranteed.
Daily Packing Co., Chicago, Ill. Daily Dog Feed	A. & P. Tea Co., Alexandria	12.8 12.0	4.4 4.0	1.4 1.0	---	---	---	Deficient in fat.	

Commercial Feeds in Kentucky in 1937

Manufacturer	Product	12.8	4.4	5.0	1.4	1.0	Deficient in fat.
Brownie's Dog Feed		12.8	4.4	5.0	1.4	1.0	
Daily Packing Co., Chicago, Ill.	Daily Dog Feed	12.0	4.4	5.0	1.4	1.0	
The Albert Dickinson Co., Chicago, Ill.	Dickinson's Dog Feed	28.0	5.4	2.2	2.2	3.5	As guaranteed.
Dietrich & Gambrill, Frederick, Md.	D & G Dog Feed	23.3	2.7	2.1	2.1	2.0	No salt found.
Doggie Dinner, Inc., Terre Haute, Ind.	Doggie Dinner	18.0	2.5	2.0	2.0	2.0	
Doyle Packing Co., Mokenca, Ill.	Bozo Dog Feed	12.3	2.9	1.4	15.6	67.3	0.5
Square Deal Rations for Dogs and Cats		8.3	2.4	1.0	1.0	1.0	As guaranteed.
Strongheart Ration Dog and Cat Feed		8.4	0.5	1.2	10.2	78.5	1.2
Food Products Company of America, Chicago, Ill.	Dog House Dog and Cat Feed	6.5	2.5	0.5	0.5	0.5	Deficient in fat. Excess fiber. Excess water. Deficient in net weight. Misbranded.
Edw. F. Goeke Sons, Evansville, Ind.	Peggy's Feed	7.4	0.6	1.4	11.2	78.1	1.3
Harty Dog Food Co., Waynesville, O.	Harty Dog Feed	6.5	2.5	0.5	0.5	0.5	No beef, charcoal or bone found. Deficient in fat. Excess fiber. Excess water. Deficient in net weight. Misbranded. Deficient in fat.
Kroger Grocery & Baking Co., Cincinnati, O.	Don Dog Feed	6.2	1.8	1.0	1.0	0.5	Deficient in protein and fat. Deficient in net weight. Misbranded. Not registered.
		6.5	2.5	0.5	0.5	0.5	
		4.7	0.7	1.1	1.1	1.0	
		6.5	2.5	1.0	1.0	1.0	
		24.1	4.4	4.2	4.2	3.5	
		28.0	3.5	3.5	3.5	3.5	Much deficient in protein. Excess fiber. Misbranded.
		11.9	1.3	0.7	8.5	74.4	3.1
		6.0	1.0	2.0	2.0	2.0	No corn or carrots found. Not registered.
		10.9	2.9	1.3	1.3	1.3	As guaranteed.
		12.2	3.1	1.3	1.3	1.0	Same.
		10.0	3.0	1.0	1.0	1.0	

* Manufacturer's guaranty is printed in bold-face type.

Table 2. Analyses of Dog Feeds.*

Manufacturer and Brand Name	Sample taken from:	Protein	Fat	Fiber	N. F. Ext.	Water	Ash	Remarks
Maritime Milling Co., Buffalo, N. Y. Hunt Club Dog Feed	Tony Bezold, Newport	27.7 25.0	5.4 3.5	3.0 4.0	---	---	---	Not registered.
Geo. C. Melody, Greensburg, Pa. Dr. Melody's Dog Feed	Kroger Gro. & Baking Co., Ashland	13.2 7.2	2.6 1.3	0.7 0.8	9.8 67.9	5.8	---	Deficient in net weight.
S. E. Mighton Co., Ltd., Bedford, O. Spot Dog Feed	Piggly-Wiggly Co., Lexington King Drug Co., Newport	8.0 7.0 10.0 7.0	3.1 1.7 3.8 1.7	0.7 1.7 1.2 1.7	13.8 72.3 12.8 69.4	2.1 2.8	---	No alfalfa meal found. No carrots found. Only a trace of alfalfa meal present.
U. S. Dog, Cat and Puppy Feed	Hart Drug Co., Lexington Albers Grocery, Newport Geo. C. Goode, Covington	14.0 11.0 10.9 11.0 11.0 15.5	6.7 3.0 5.1 3.0 5.2 2.5	0.8 1.0 0.7 1.0 0.9 1.0	13.2 62.0 9.3 71.0 9.6 69.6	3.3	---	As guaranteed.
John Morrell & Co., Ottumwa, Ia. Red Heart Dog Feed—Diet A	Carter Supply Co., Lexington	25.4 20.0	1.8 1.5	1.8 2.5	---	---	---	No bone meal or calcium carbonate found.
National Biscuit Co., New York, N. Y. "Milk-Bone Brand" Dog Biscuit	Geo. C. Goode, Covington	10.1 10.0	3.1 2.0	0.5 2.0	10.5 74.3	1.5	---	As guaranteed.
Old Trusty Dog Food Co., Needham Hts., Mass. Old Trusty Bovex Dog and Cat Feed	Fox Bros., Winchester	14.5 14.0	3.0 1.0	3.4 5.0	---	---	---	As guaranteed.
Perfection Foods Co., Battle Creek, Mich. Perfection Brand Dog Feed								

Pratt Food Co., Hammond, Ind. Pratt's Dog Feed (Cubed)	T. W. Duncan, La. Grange	21.3 20.0	4.6 3.0	2.6 5.0	As guaranteed.
The Rath Packing Co., Waterloo, Ia. Dog-Gon Good Dog Feed	W. R. Moore, Lexington	10.4 10.0	3.1 2.5	1.2 0.7	1.4 As guaranteed.
Rich Products Corporation, Rockford, Ill. Evr-Redy Dog Feed	Geo. W. Hill, Covington	9.0 8.0	3.8 1.0	0.8 2.0	Deficient in net weight.
Rival Packing Co., Chicago, Ill. Rival Dog Feed	A. & P. Tea Co., Alexandria	11.6 10.0	2.3 2.5	0.7 1.0	As guaranteed.
Rival Cat Feed	Albers Grocery, Newport	10.9 9.0	2.8 3.0	0.8 1.0	0.9 Same.
G. P. Rose & Co., Nashville, Tenn. All-Breed Kibbles	Carter Supply Co., Lexington	17.2 15.0	5.1 6.0	1.8 2.0	No salt found. Deficient in fat.
Rose's Chips	Same	15.8 14.9	2.8 5.2	2.0 2.0	Deficient in fat.
Sandy's Pet Foods Co., Inc., Chicago, Ill. Sandy's Dog Feed	Kroger Gro. & Baking Co., Newport	13.0 10.5	4.1 3.5	0.8 1.0	1.2 Deficient in net weight.
Security Mills, Knoxville, Tenn. Security Dog Feed	S. T. Frazier, Whitesburg	25.0 22.0	3.2 3.5	3.1 2.5	Excess fiber.
Sprague-Warner & Co., Chicago, Ill. Ranger Brand Dog Feed	Scott Grocery Co., Pikeville	9.7 10.0	4.4 2.0	2.0 1.0	Excess fiber. but not Registered
Spratt's Patent (America) Ltd., Newark, New Jersey Spratt's Ovals No. 2	Carter Supply Co., Lexington	20.4 20.0	2.9 2.0	8.6 7.5	Excess fiber.
Swift & Co., Chicago, Ill. Pard Dog Feed	Glass Grocery, Lexington	11.7 10.5	4.3 2.5	0.7 0.5	As guaranteed.
The ThoroBread Co., Cincinnati, O. Cincy Dog Feed	Geo. C. Goode, Covington	8.2 7.0	0.7 1.2	1.0 1.5	2.0 Deficient in fat. Excess water. Deficient in net weight.
ThoroBread Dog Feed	Carter Supply Co., Lexington	12.3 10.0	3.0 2.0	1.0 1.0	2.3 No soybean meal found.
ThoroBread Dog and Puppy Feed	Renfro Supply Co., Williamsburg	17.7 17.5	4.3 3.2	3.3 3.2	Deficient in net weight. No salt or calcium car- bonate found.

* Manufacturer's guaranty is printed in bold-face type.

Table 2. Analyses of Dog Feeds.*

Manufacturer and Brand Name	Sample taken from:	Protein	Fat	Fiber	N. F. Ext.	Water	Ash	Remarks
Variety Foods, Inc., Indianapolis, Ind. Vigor Dog Feed	Hart Drug Co., Lexington Dames Food Shop, Newport	6.4	1.3	1.4	12.1	75.6	3.2	No beef by-products found. Excess water. Deficient in fat.
Victory Packing Co., Oakland, Calif. Victory Dog and Cat Feed	Oscar Rummel, Newport	6.1	1.8	1.0	0.7	---	---	No salt found.
Vimpep Foods, Inc., Cambridge, Md. Smarty Dog Feed	Jones Bros. Grocery, Danville	8.7	2.0	0.8	1.0	---	---	No soybean oil meal found.
Vitality Mills, Inc., Chicago, Ill. Vitality Dog Feed	Hart Drug Co., Lexington	27.3 25.0	4.6 3.0	3.9 4.0	---	---	---	As guaranteed.
Walgreen Co., Chicago, Ill. Po-Do Dog Feed	Walgreen Co., Louisville	14.4 10.0	4.4 3.0	0.8 1.0	---	---	---	As guaranteed.
White Cross Distributing Co., Mokenca, Ill. White Cross Dog and Cat Feed	Burke Grocery, Covington	7.8 8.0	0.4 3.0	1.4 0.7	10.1	78.7	1.6	No carrots or charcoal found. Deficient in fat. Excess fiber. Excess water. Misbranded. Registered but not labeled.
Wilson & Co., Inc., Chicago, Ill. Ideal Brand Dog Feed	Lippert Grocery, Newport	10.8 10.0	4.9 2.0	0.6 1.0	---	---	---	No ground bone found.

* Manufacturer's guaranty is printed in bold-face type.

SUMMARY OF RESULTS OF INSPECTION AND ANALYSIS, 1937

Because of the additional cost in printing the results in detail and for the further reason that the analyses in detail have been reported to persons interested, only a summary of the results of inspection and analyses is published in this bulletin.

For the year, 1,344 samples of feed were analyzed chemically and microscopically, many of them for complete analysis. Of this number, 934 were official samples for check analyses against guaranties of manufacturers. These include special-purpose feeds for all classes of livestock, including dogs, rabbits and foxes, mineral feeds and by-product feeds of all kinds. The remaining 410 samples were for investigational work by the Department, cooperative projects with other departments of the Station and check analyses for consumers and dealers.

The results of analyses of samples taken for check analyses against manufacturer's guaranties showed a marked improvement over 1936. However, there were a number of major violations which necessitated prosecution, cancellation of registration, rebates to purchasers or the removal of the feeds from sale. Most of the deficiencies and violations were found in the cheap, filler, competitive feeds where adulteration and misbranding were practiced.

For checking guaranties, 634 samples of special-purpose feeds were analyzed. Of this number, 304 were dairy feeds, 203 poultry feeds, 36 hog feeds, 55 dog feeds, 29 horse and mule feeds, 5 sheep feeds and 2 rabbit feeds. The balance of 300 official samples were straight by-product feeds.

Investigation of the wheat used by Kentucky millers was made. It was found that wheat grown in some parts of the State and other sections of states surrounding Kentucky was deficient in protein. The fat and fiber did not seem to be materially affected. The cause of the deficiency was probably the lack of sufficient sunshine and proper amount of rainfall at the critical time in the plant life. When the feeds from such crops were clean, clear and from sound grain, to which nothing had been added or taken away in their manufacture, the cause for the

deficiency was assigned to seasonal condition and the vendor was not held responsible for the deficiency.

- A. & A. Milling Co., Kevil, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein, corn meal present.
- Acme-Evans Co., Indianapolis, Ind. Inspection samples analyzed, 17.
 Acme Wheat Bran and Screenings, 1; equaled guaranty.
 Acme Wheat Middlings and Screenings, 1; equaled guaranty.
 Acme Hominy Feed, 1; equaled guaranty.
 Acme Starting Mash (With Cod Liver Oil), 2; excess fiber; 1 soybean oil meal and linseed oil meal present tho not guaranteed.
 Producer Mash (With Cod Liver Oil), 1; excess fiber.
 Acme 18% Protein Growing Mash (With Cod Liver Oil), 1; deficient in protein, no salt found.
 Acme 18% Protein Egg Mash (With Cod Liver Oil), 2; 1 linseed oil meal present tho not guaranteed.
 Acme Horse Feed, 1; no salt found.
 Producer Horse Feed, 1; equaled guaranty.
 Acme Hog Fattener, 1; no salt found.
 Acme 16% Protein Dairy Feed, 3; 1 deficient in protein; 1 brewers dried grains present tho not guaranteed; 1 no salt found.
 Acme 20% Protein Pailfill Dairy Feed, 1; equaled guaranty.
 Acme 24% Protein Sweet Dairy Feed, 1; equaled guaranty.
- The Acme Mills, Hopkinsville, Ky. Inspection sample of Wheat Shorts analyzed, 1; equaled guaranty.
- H. T. Adams & Co., Harrodsburg, Ky. Inspection samples analyzed, 2.
 "Old Fort" Egg Mash, 1; no linseed oil meal found.
 "Hopper" Stock Feed, 1; molasses and salt present tho not guaranteed.
- Albany Mills, Albany, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein and fat, ground wheat and wheat screenings present.
- Albers Brothers Milling Co., Seattle, Washington. Inspection sample of Calf Manna analyzed, 1; equaled guaranty.
- Alfocorn Milling Co., E. St. Louis, Illinois. Inspection samples analyzed, 9.
 "Quick Pork" Pig Grower, 3; 1 much deficient in protein, corn gluten meal present tho not guaranteed, no linseed oil meal or soybean oil meal found, misbranded.
 "Full Pail" 16% Protein Dairy Feed, 5; 3 corn meal present tho not guaranteed; 1 no corn gluten feed found.
 "Full Pail" 24% Protein Dairy Feed, 1; corn gluten meal present tho not guaranteed.

- E. T. Allen Co., Atlanta, Georgia. Inspection samples of "Empire" 41% Protein Cottonseed Meal analyzed, 15; 4 deficient in protein; 1 deficient in fat; 1 excess fiber.
- Allied Mills, Inc., Chicago, Ill. Inspection samples analyzed, 13.
Wayne Chick Starter, 1; excess fiber, no salt or potassium iodide found.
All-Mash Poultry Ration, 1; excess fiber.
Red Feather Egg Mash, 1; no dried buttermilk found.
Wayne 26% Protein Mash Supplement, 1; no calcium carbonate or potassium iodide found.
Wayne Pork Maker, 1; equaled guaranty.
Wayne Hog Supplement, 1; no potassium iodide or bluestone found.
Topper 16% Protein Dairy Feed, 4; 1 excess fiber, 1 no salt found, 1 no calcium carbonate found.
Empire 20% Protein Dairy Feed, 1; excess fiber.
Wayne 24% Protein Dairy Feed, 2; 1 no bone meal, calcium carbonate or potassium iodide found.
- Anderson & Spilman, Danville, Ky. Inspection samples of "Snowflake" Feed analyzed, 2; equaled guaranty.
- Arcady Farms Milling Co., Chicago, Illinois. Inspection samples analyzed, 24.
Arcady Besbet Starting and Growing Mash, 1; excess fiber.
Sunkist Egg Mash, 5; 2 excess fiber, soybean oil meal present tho not guaranteed.
Besbet 20% Protein Egg Mash, 1; equaled guaranty.
Wonder Turkey Starting Mash, 1; corn gluten meal present tho not guaranteed.
Wonder Horse and Mule Feed, 1; equaled guaranty.
Arcady Hog Meal, 1; excess fiber, wheat bran present tho not guaranteed.
Arcady Farm Flock Sheep Ration, 1; ground weed seeds present.
Arcady Sweet 16% Protein Dairy Feed, 3; 1 distillers dried grains present tho not guaranteed.
Arcady Besbet 16% Protein Dairy Feed, 6; equaled guaranty.
Producers Ready Ration, 1; equaled guaranty.
Arco 24% Protein Dairy Ration, 3; equaled guaranty.
- Archer-Daniels Midland Co., Minneapolis, Minn. Inspection sample of Old Process Soybean Oil Meal analyzed, 1; equaled guaranty.
- Ashcraft-Wilkinson Co., Atlanta, Georgia. Inspection samples of "Helmet Brand" 41% Protein Cottonseed Meal analyzed, 6; 1 deficient in protein, 5 excess fiber.
- The Great Atlantic & Pacific Tea Co., New York, N. Y. Inspection samples analyzed, 14.

- Daily Egg Scratch, 1; equaled guaranty.
Daily Growth Chick Starter, 1; excess fiber.
Daily Growth Growing Mash, 1; excess fiber.
Special Daily Egg Laying Mash Feed, 3; 1 excess fiber, 1 corn gluten feed present tho not guaranteed.
Daily Milk 16% Protein Dairy Feed, 3; 1 no wheat middlings found.
Milky Way 20% Protein Dairy Feed, 1; equaled guaranty.
Milky Way 24% Protein Dairy Feed, 4; equaled guaranty.
Aubrey & Co., Louisville, Ky. Inspection samples analyzed, 63.
Wheat Bran, 1; equaled guaranty.
Red "A" Wheat Red Dog, 2; equaled guaranty.
Red "A" Wheat Feed and Screenings, 1; equaled guaranty.
Aubrey's Ground Barley, 1; equaled guaranty.
Ground Oats, 1; deficient in fat, much excess fiber, inferior grade of oats.
Red "A" Rolled Oats, 1; deficient in fat.
Corn Feed Meal, 1; equaled guaranty.
Hominy Feed, 4; equaled guaranty.
Aubrey's 18% Protein Corn Germ Meal, 1; much deficient in fat and much excess fiber, misbranded.
Brewers 24% Protein Dried Grains, 2; 1 deficient in protein.
Aubrey's 32% Protein Linseed Oil Meal, 1; equaled guaranty.
Aubrey's 34% Protein Linseed Oil Meal, 2; equaled guaranty.
Aubrey's 41% Protein Cottonseed Meal, 4; 1 deficient in protein; 2 excess fiber.
Aubrey's 41% Protein Soybean Cake Meal, 1; equaled guaranty.
Red "A" 50% Protein Meat Scraps, 2; 1 deficient in protein; 1 excess fiber.
Aubrey's 50% Protein Digester Tankage, 1; equaled guaranty.
Monarch Poultry Scratch Feed, 1; deficient in fat, no kaffir corn found.
Red Bird Baby Chick Starting Mash (With Cod Liver Oil), 3; 1 excess fiber; 1 soybean oil meal present tho not guaranteed.
Red Bird Growing Mash (With Cod Liver Oil), 2; equaled guaranty.
Rainbow Laying Mash (With Cod Liver Oil), 1; equaled guaranty.
Red Star Laying Mash, 2; 1 excess fiber.
Red "A" Turkey Fattening Mash, 1; excess fiber.
Rainbow Turkey Mash, 2; equaled guaranty.
Supreme Rabbit Pel-ets, 1; equaled guaranty.
Dandy Horse Feed, 3; 1 excess fiber; 1 wheat bran present tho not guaranteed.
Rainbow Hog and Pig Feed, 1; excess fiber.
Red "A" Sheep Feed, 2; equaled guaranty.
Oat Hull Feed and Molasses, 1; equaled guaranty.

- Alfalfa Meal, Oat Hull Feed, Cottonseed Hulls and Molasses, 1; equaled guaranty.
- Monarch 16½% Protein Dairy Feed, 4; 1 deficient in fat, excess fiber.
- Dandy 20% Protein Dairy Feed, 3; 1 deficient in protein; 1 corn gluten meal present tho not guaranteed.
- Supreme Brand 24% Protein Dairy Feed, 1; equaled guaranty.
- Ful-O-Cream Brand 24% Protein Dairy Feed, 7; 3 deficient in protein; 1 deficient in fat; 1 no corn feed meal found.
- Rainbow 34% Protein Dairy Supplement, 1; deficient in protein.
- The Auburn Mills, Auburn, Ky. Inspection samples of Wheat Shorts analyzed, 3; 1 deficient in protein, wheat bran and corn feed meal present, misbranded.
- Auburn Roller Mills, Auburn, Ky. Inspection sample of "Kentucky Star" Dairy Feed analyzed, 1; much deficient in protein and fat, misbranded.
- Aurora Flour & Feed Co., Aurora, Ind. Inspection samples analyzed, 8.
- Dearborn Hominy Feed, 2; equaled guaranty.
- Success Layer, 1; equaled guaranty.
- Dearborn Layer, 1; equaled guaranty.
- Success 16% Protein Dairy Feed, 1; equaled guaranty.
- Dearborn 24% Protein Dairy Feed, 2; equaled guaranty.
- Success 24% Protein Dairy Feed, 1; deficient in protein.
- Ballard & Ballard Co., Louisville, Ky. Inspection samples analyzed, 40.
- Ballard's Kentucky Farm Feed and Screenings, 2; 1 deficient in protein.
- Ballard's Bran, 1; equaled guaranty.
- Ballard's Wheat Mixed Feed and Screenings, 1; equaled guaranty.
- Ballard's Corn Feed Meal, 1; equaled guaranty.
- Ground Oats, 1; excess fiber.
- Dried Buttermilk, 1; equaled guaranty.
- Dried Skim Milk, 1; equaled guaranty.
- Guardian Growing Mash, 1; excess fiber.
- Chick Insurance All-Mash Starting and Growing Feed, 1; equaled guaranty.
- Insurance Three-in-One Ration, 1; equaled guaranty.
- Ballard's Insurance Fattening Mash, 1; equaled guaranty.
- Egg Insurance and Breeder Mash, 1; equaled guaranty.
- Guardian Laying Mash, 1; excess fiber.
- Insurance Egg Mash, 2; equaled guaranty.
- Insurance Turkey Starter, 1; equaled guaranty.
- Insurance Turkey Growing Mash, 1; equaled guaranty.
- Insurance Horse Feed, 1; linseed oil meal present tho not guaranteed.

- Balco Sweet Mule Feed, 2; 1 much excess fiber.
Insurance Hog Ration, 1; linseed oil meal present tho not guaranteed.
- Sheep Insurance Feed, 1; equaled guaranty.
Balco 16% Protein Sweet Dairy Feed, 5; 2 deficient in protein; 1 excess fiber; 1 excess cottonseed hulls present.
Guardian 16% Protein Sweet Dairy Feed, 2; equaled guaranty.
Pioneer 16% Protein Sweet Dairy Feed, 3; equaled guaranty.
Pioneer 20% Protein Sweet Dairy Feed, 2; 1 no soybean oil meal found.
Milk Insurance 20% Protein Sweet Dairy Feed, 1; equaled guaranty.
Guardian 24% Protein Sweet Dairy Feed, 1; equaled guaranty.
Milk Insurance 24% Protein Sweet Dairy Feed, 3; equaled guaranty.
- Banner Mill Co., Greenville, Tenn. Inspection sample of Banner Mixed Feed analyzed, 1; corn gluten meal and meat scraps present tho not guaranteed.
- Bardstown Mills, Bardstown, Ky. Inspection samples of Royal Mill Feed analyzed, 4; 2 deficient in fat, no corn bran found.
- Baughman Milling Co., Stanford, Ky. Inspection samples analyzed, 4.
Banner Mixed Feed, 1; deficient in protein, corn meal and alfalfa leaf meal present tho not guaranteed, excess screenings present, no salt found, misbranded.
Baughman Special Mixed Feed, 1; deficient in protein.
Baughman Special X Mixed Feed, 2; 1 too low in protein.
- Beaty Bros., Science Hill, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- The Big Four Mills Co., Ltd., Covington, Ky. Inspection samples analyzed, 27.
Hominy Feed, 1; equaled guaranty.
Wheat Middlings, 2; equaled guaranty.
"O. K. Brand" Scratch, 1; deficient in fat.
Big Four Starting Mash, 1; excess fiber.
Big Four Growing Mash, 1; equaled guaranty.
Big Four All-Mash, 1; excess fiber, no charcoal found.
Big Four Laying Mash, 3; excess fiber, 2 no charcoal found.
Big Four Hog Feed (Supplement), 1; deficient in fat, excess fiber, no charcoal found.
"Hi-Lo Brand" Steer Fattener, 1; corn gluten meal, corn gluten feed and soybean oil meal present tho not guaranteed; no linseed oil meal present; misbranded.
"O. K. Brand" Special 16% Protein Dairy Feed, 3; misbranded;

1 deficient in fat; 2 excess fiber; 2 ingredients not as guaranteed.

"O. K. Brand" 17½% Protein Dairy Feed, 3; 1 excess fiber, alfalfa meal present tho not guaranteed.

"O. K. Brand" 20% Protein Dairy Feed, 1; corn gluten feed present tho not guaranteed.

"Hi-Lo Brand" 20% Protein Dairy Feed, 1; equaled guaranty.

"Hi-Lo Brand" 24% Protein Dairy Feed, 2; 1 deficient in fat, 1 malt sprouts present tho not guaranteed.

Big Four Dairy Feed, 3; equaled guaranty.

Big Four Dairy Supplement, 2; 1 no linseed oil meal found.

Binns Milling Co., Herndon, Ky. Inspection sample of Eclipse Hog Feed analyzed, 1; deficient in fat.

Blatchford Calf Meal Co., Waukegan, Ill. Inspection sample of Blatchford's Calf Meal analyzed, 1; deficient in protein.

Blish Milling Co., Seymour, Ind. Inspection samples analyzed, 2.

Bull's Eye Wheat Middlings and Screenings, 1; equaled guaranty.

Colonial Wheat Mixed Feed and Screenings, 1; equaled guaranty.

Blue Grass Feed Co., Lexington, Ky. Inspection sample of Peerless Dairy Feed analyzed, 1; equaled guaranty.

Bowling Green Milling Co., Bowling Green, Ky. Inspection samples analyzed, 4.

Monroe's Wheat Gray Shorts and Screenings, 1; deficient in protein.

Ideal Brand Feed, 1; deficient in fat.

Corn Byproducts Feed, 1; deficient in protein and fat.

Pork Maker (Fattening), 1; deficient in fat.

Bowling Green Sweet Feed Mill Co., Bowling Green, Ky. Inspection samples of "Ace B G Brand" 16% Protein Dairy Feed analyzed, 2; much deficient in protein and fat—misbranded; 1 excess fiber.

Bristol Milling Co., Bristol, Tenn. Inspection sample of Rusco Feed analyzed, 1; deficient in protein, wheat flour present.

W. H. Brock & Co., Winchester, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; equaled guaranty.

The Brode Corporation, Memphis, Tenn. Inspection samples of Owl Brand 41% Protein Cottonseed Meal analyzed, 5; equaled guaranty.

Chas. Broeker & Co., Owensboro, Ky. Inspection samples analyzed, 2.

Hominy Feed, 1; equaled guaranty.

XX Mixed Feed, 1; equaled guaranty.

Browder Milling Co., Fulton, Ky. Inspection samples analyzed, 7.

Wheat Middlings, 1; equaled guaranty.

Mixed Feed, 2; equaled guaranty.

"Biddie's Choice" Laying Mash, 1; excess fiber.

"Big Sixteen" Dairy Feed, 2; 1 no linseed oil meal found; 1 no salt found.

"Sweet" 16% Protein Dairy Feed, 1; equaled guaranty.

The Buckeye Cotton Oil Co., Cincinnati, Ohio. Inspection samples analyzed, 2.

Buckeye 41% Protein Cottonseed Meal, 1; deficient in protein.

Buckeye 41% Protein Soybean Oil Meal, 1; equaled guaranty.

Buffalo Springs Distilling Co., Stamping Ground, Ky. Inspection sample of Distillers Corn Dried Grains analyzed, 1; equaled guaranty.

Buhner Fertilizer Co., Seymour, Ind. Inspection sample of Buhner's Feeding Bone analyzed, 1; equaled guaranty.

Bundy Bros. Mill Co., Medora, Ind. Inspection samples analyzed, 7.

Hominy Feed, 4; equaled guaranty.

Medora Poultry Mash, 1; equaled guaranty.

Jumbo Laying Mash, 1; deficient in protein.

Combination Stock Feed, 1; no ground oats found.

Cadick Milling Co., Grandview, Ind. Inspection sample of Shipstuff analyzed, 1; equaled guaranty.

Cairo Meal & Cake Co., Cairo, Ill. Inspection samples of "Miss Cairo Brand" 41% Protein Cottonseed Meal analyzed, 2; 1 excess fiber.

Campbellsville Milling Co., Campbellsville, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

Cape County Milling Co., Jackson, Mo. Inspection sample of Capeo Soft Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

Cecilian Milling Co., Elizabethtown, Ky. Inspection sample of "Purity Brand" Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

Charleston Milling Co., Charleston, W. Va. Inspection samples analyzed, 3.

"Quality Brand" Wheat Middlings and Screenings, 1; deficient in protein.

"Standard Brand" Wheat Middlings and Screenings, 1; deficient in protein.

Corn Feed Meal, 1; equaled guaranty.

Cherokee Mills, Nashville, Tenn. Inspection sample of Tip Top Hen Feed analyzed, 1; no sunflower seed found.

The Cincinnati Grain & Hay Co., Cincinnati, Ohio. Inspection samples analyzed, 8.

Wheat Mixed Feed, 1; equaled guaranty.

Hominy Feed, 1; equaled guaranty.

"No Better" Starting Mash, 1; excess fiber; wheat bran, soybean

oil meal and salt present tho not guaranteed; no linseed oil meal found.

"No Better" Egg Mash, 1; no linseed oil meal or ground barley found.

Standard Brand 16% Protein Dairy Sweets, 1; deficient in fat, oat groats present tho not guaranteed.

"No Better" Sweet Dairy Feed, 2; 1 no linseed oil meal found.

"No Better" Dry Dairy Ration, 1; deficient in protein and fat, no soybean oil meal found.

Citizens Milling Co., Somerset, Ky. Inspection sample of "Wild Rose" Mixed Feed analyzed, 1; equaled guaranty.

City Roller Mills, Vevay, Ind. Inspection sample of "Blue Ribbon" Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein, corn meal present—misbranded.

Climax Roller Mills, Shelbyville, Ky. Inspection sample of Climax Farm Feed analyzed, 1; deficient in protein, no corn bran found.

Clinton Hatchery, Clinton, Ky. Inspection sample of New Deal Laying Mash analyzed, 1; equaled guaranty.

Clell Coleman & Sons, Burgin, Ky. Inspection samples analyzed, 4.

Coleman's White Middlings and Shorts, 1; deficient in fat.

"Coleman's Favorite" Mixed Feed, 3; deficient in protein and excess fiber.

The Columbus Rendering Co., Columbus, Ohio. Inspection samples analyzed, 4.

Coreco 50% Protein Meat and Bone Scraps, 2; 1 deficient in fat.

Coreco 60% Protein Digester Tankage, 2; equaled guaranty.

Community Milling Co., Irvington, Ky. Inspection sample of Soft Wheat Mixed Feed analyzed, 1; deficient in protein, wheat flour present.

Corn Products Refining Co., New York, N. Y. Inspection sample of Corn Gluten Meal analyzed, 2; equaled guaranty.

Crescent Mills, Cynthiana, Ky. Inspection sample of Crescent Mixed Feed analyzed, 1; equaled guaranty.

Crescent Roller Mills Co., Taylorsville, Ky. Inspection samples analyzed, 2.

Wheat Bran, 1; equaled guaranty.

Shipstuff, 1; equaled guaranty.

Crofton Milling Co., Crofton, Ky. Inspection sample of Richfeed analyzed, 1; deficient in fat.

Crown Jewel Milling Co., Cynthiana, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.

The Dewey Bros. Co., Blanchester, Ohio. Inspection sample of Marion 24% Protein Dairy Ration analyzed, 1; equaled guaranty.

W. C. Dicken, Mentor, Ky. Inspection samples analyzed, 6.

- Sunny Grain Brand Laying Mash, 2; 1 excess fiber.
 Sunny Grain Brand Horse and Mule Feed, 1; equaled guaranty.
 Sunny Grain Brand Hog Feed, 1; equaled guaranty.
 Sunny Grain Brand 24% Protein Dairy Feed, 2; equaled guaranty.
 Dixie Mills Co., E. St. Louis, Ill. Inspection samples analyzed, 12.
 Dixie Egg Mash, 1; equaled guaranty.
 Dixie 35% Protein Mixer Mash Supplement, 1; equaled guaranty.
 Dixie Turkey Starter and Developing Mash, 1; no dried milk found.
 Dixota Brand Horse and Mule Feed, 1; equaled guaranty.
 Dixie Horse and Mule Feed, 1; equaled guaranty.
 Dixie Pig Feed, 1; excess fiber.
 "Holsum Brand" 16½% Protein Dairy Feed, 2; deficient in fat, no salt or calcium carbonate found.
 "Holsum Brand" 20% Protein Dairy Feed, 1; equaled guaranty.
 "Holsum Brand" 24% Protein Dairy Feed, 2; equaled guaranty.
 Dixie 24% Protein Dairy Feed, 1; equaled guaranty.
 The Dorsel Co., Newport, Ky. Inspection sample of Dorsel's Wheat Gray Middlings analyzed, 1; ground wheat screenings present tho not guaranteed.
 Dunlop Milling Co., Clarksville, Tenn. Inspection sample of Wheat Middlings and Screenings analyzed, 1; excess fiber.
 The Early & Daniel Co., Cincinnati, Ohio. Inspection samples analyzed, 39.
 Alfalfa Meal, 1; equaled guaranty.
 Tuxedo Barley Malt, 1; equaled guaranty.
 Tuxedo Starting Mash, 1; no potassium iodide found.
 Tuxedo Growing Mash, 1; no potassium iodide found.
 Tuxedo Broiler Mash, 1; equaled guaranty.
 Tuxedo Starting and Growing All-Mash, 1; deficient in fat.
 Tuxedo Starter-Grower-Developer Mash, 1; no dried milk products or potassium iodide found, corn gluten feed present tho not guaranteed.
 Tuxedo Special Egg Mash 20% Protein, 6; equaled guaranty.
 Tuxedo Egg Mash, 1; equaled guaranty.
 Tuxedo Turkey Growing and Developing Mash, 1; equaled guaranty.
 Cincy Chop, 3; 1 excess fiber.
 Tuxedo Chop, 1; equaled guaranty.
 Tuxedo Rabbit Feed, 1; equaled guaranty.
 Tuxedo Steer Fattening Feed, 1; corn gluten meal present tho not guaranteed.
 Tuxedo Sheep Feed, 1; equaled guaranty.
 Tuxedo Porkmaker, 2; equaled guaranty.
 Tuxedo Pig Meal, 1; equaled guaranty.

- Tuxedo Hog Ration 19% Protein, 1; excess fiber.
Tuxedo Big Forty, 1; equaled guaranty.
Tuxedo Special 16% Protein Dairy Feed, 6; 1 no ground oats found.
Tuxedo 20% Protein Dairy Feed, 1; equaled guaranty.
Tuxedo Special 20% Protein Dairy Feed, 2; 1 no corn meal found.
Tuxedo 24% Protein Dairy Feed, 2; equaled guaranty.
Tuxedo Special Twenty-Four Protein Dairy Feed, 1; no salt found.
- Emge & Sons, Ft. Branch, Ind. Inspection sample of Emge's 60% Protein Tankage analyzed, 1; deficient in protein.
- The F. L. Emmert Co., Cincinnati, Ohio. Inspection sample of Buffalo Brand Brewers Dried Grains analyzed, 1; equaled guaranty.
- John W. Eshelman & Sons, Lancaster, Pa. Inspection samples analyzed, 16.
- Eshelman Red Rose All-Mash Starter, 1; no dried buttermilk found.
- Eshelman Red Rose All-Mash Starter and Grower (With Cod Liver Oil), 1; excess fiber, corn gluten meal present tho not guaranteed.
- Eshelman Red Rose Growing Mash (With Cod Liver Oil), 1; excess fiber.
- Eshelman Red Rose Fattening Mash, 1; corn gluten meal present tho not guaranteed.
- Eshelman Red Rose Laying Mash, 1; equaled guaranty.
- Eshelman Maintenance 20% Protein Laying Mash, 1; equaled guaranty.
- Eshelman Red Rose Pig and Hog Meal, 2; 1 excess fiber.
- Eshelman 32% Protein Mixing Ration (Supplement), 1; equaled guaranty.
- Eshelman 16% Protein Dairy Feed, 2; excess fiber.
- Red Cow Dairy Feed, 2; 1 excess fiber; 1 deficient in fat, no soybean oil meal or bone meal found.
- Eshelman Red Rose 24% Protein Dairy Feed, 2; equaled guaranty.
- Eshelman Challenge Dairy Feed, 1; excess fiber.
- Estes Milling Co., Science Hill, Ky. Inspection sample of Estes Wheat Mixed Feed analyzed, 1; equaled guaranty.
- Evans Milling Co., Indianapolis, Ind. Inspection samples analyzed, 2.
- Evans 41% Protein Soybean Cake Meal, 1; equaled guaranty.
- Evans 18% Protein Corn Germ Meal, 1; equaled guaranty.
- Ewing Von-Allmen Dairy Co., Louisville, Ky. Inspection sample of Dried Skim Milk analyzed, 1; equaled guaranty.
- Excelsior Milling Co., Minneapolis, Minn. Inspection samples analyzed, 2.
- Zebra Special Middlings, 1; equaled guaranty.

- "Camel Fancy Brand" Wheat Mixed Feed and Screenings, 1; deficient in fat.
- Exchange Milling Co., Sturgis, Ky. Inspection samples analyzed, 4.
Wheat Shorts, 2; 1 deficient in fat.
Mixed Feed, 1; no corn bran or wheat screenings found.
Smith's Special Stock Feed, 1; equaled guaranty.
- Farmers Mill, Clay, Ky. Inspection sample of Winter Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Farmers Milling Co., Somerset, Ky. Inspection samples analyzed, 2.
Mixed Feed, 1; equaled guaranty.
Farmers Stock Feed, 1; equaled guaranty.
- Farmers & Merchants Milling Co., Brooksville, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Farmers Union Mill, Versailles, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- J. H. Fedders' Son, Covington, Ky. Inspection samples analyzed, 2.
Hominy Feed, 1; equaled guaranty.
Ground Oats, 1; equaled guaranty.
- Fenley Model Dairy, Louisville, Ky. Inspection sample of Dried Buttermilk analyzed, 1; equaled guaranty.
- Ferncliff Feed & Grain Co., Louisville, Ky. Inspection samples analyzed, 11.
Cracker Jack Hominy Feed, 1; equaled guaranty.
P. D. Q. Scratch Feed, 1; equaled guaranty.
P. D. Q. Starting and Growing Mash, 1; equaled guaranty.
P. D. Q. Egg Mash, 1; equaled guaranty.
Cracker Jack Egg Mash, 1; no alfalfa meal found.
Sweet Sixteen Dairy Feed, 1; equaled guaranty.
P. D. Q. 16% Protein Dairy Feed, 2; excess fiber; 1 excess cottonseed hulls.
Ferncliff 24% Protein Dairy Ration, 2; equaled guaranty.
Cracker Jack 24% Protein Sweet Dairy Ration, 1; equaled guaranty.
- Henry Fischer Packing Co., Louisville, Ky. Inspection samples analyzed, 7.
50% Protein Ground Cracklings, 1; much deficient in protein.
"Mellwood Brand" 60% Protein Digester Tankage, 6; much deficient in protein, misbranded, withdrawn from sale.
- Flaherty Roller Mills Co., Vine Grove, Ky. Inspection sample of Flavo Egg Mash analyzed, 1; deficient in protein.
- Flemingsburg Hatchery, Flemingsburg, Ky. Inspection samples analyzed, 3.
"Paymaster" Egg Mash, 1; equaled guaranty.

- "Paymaster" 26% Protein Supplement Mash, 1; excess fiber.
- "Paymaster" 40% Protein Hog Supplement, 1; equaled guaranty.
- Flemingsburg Mills, Flemingsburg, Ky. Inspection samples analyzed, 2.
Supreme Brand Growing Mash, 1; equaled guaranty.
Supreme Brand 18% Protein Laying Mash, 1; equaled guaranty.
- Henry Fruechtenicht, Louisville, Ky. Inspection samples analyzed, 2.
41% Protein Cottonseed Meal, 1; excess fiber.
Producer 16% Protein Dairy Feed, 1; no ground oats or alfalfa meal found.
- Fuhrer-Ford Milling Co., Mt. Vernon, Ind. Inspection samples analyzed, 2.
Wheat Bran, 1; equaled guaranty.
Wheat Shorts and Screenings, 1; excess fiber.
- Garden Street Mill & Elevator Co. (Aubrey & Co.), Louisville, Ky. Inspection samples of Garden Brand 16% Protein Dairy Feed analyzed, 5; 2 deficient in fat; 1 excess fiber; 1 excess cottonseed hulls present.
- Garland Milling Co., Greensburg, Ind. Inspection sample of Garland Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Garrard Mills, Lancaster, Ky. Inspection sample of Glen Lily Mixed Feed analyzed, 1; excess fiber.
- General Mills, Minneapolis, Minn. Inspection sample of Washburn's Gold Medal Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.
- Georgia Distributing Co., Atlanta, Ga. Inspection samples of "Gold Dust Brand" 41% Protein Cottonseed Meal analyzed, 9; 1 deficient in protein; 4 excess fiber
- Germantown Milling Co., Germantown, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein, wheat flour present.
- Edw. F. Goeke Sons, Evansville, Ind. Inspection samples analyzed, 9.
Big Gee Wheat Shorts and Screenings, 1; deficient in protein and fat, ground wheat present.
"Superior Brand" All-Mash Poultry Ration, 1; much excess fiber; cottonseed meal, ground soybeans, charcoal and molasses present tho not guaranteed—misbranded.
Big Gee Egg Mash, 1; excess fiber.
Big Gee Egg Mash (With Cod Liver Oil), 1; deficient in protein and excess fiber.
"New Deal" 16% Protein Dairy Ration, 4; much excess fiber—misbranded; 1 deficient in fat; 1 no wheat bran found, cottonseed hulls present tho not guaranteed.
Big Gee Dairy Ration, 1; deficient in protein and fat, no linseed oil meal found.

- Goff Milling Co., Hiseville, Ky. Inspection samples of Mixed Feed analyzed, 2; 1 no corn bran found.
- Goldcamp Mill Co., Ironton, Ohio. Inspection samples analyzed, 4.
G. M. C. Feed, 1; equaled guaranty.
"Gold-Co" 16% Protein Dairy Feed, 1; no soybean oil meal found, alfalfa meal and weed seeds present tho not guaranteed.
"Milk-O Brand" 24% Protein Dairy Feed, 2; 1 deficient in protein.
- Grayson Milling Co., Grayson, Ky. Inspection samples analyzed, 8.
"K-Y" Soft Winter Wheat Middlings and Screenings, 1; much deficient in protein, excess fiber, corn bran present—misbranded.
Wheat Red Dog Flour, 1; much deficient in protein and fat, excess fiber, corn bran and corn meal present—misbranded.
"K-Y" 20% Protein Egg Mash, 1; equaled guaranty.
"K-Y" Stock Feed, 2; equaled guaranty.
"K-Y" 16½% Protein Dairy Feed, 2; corn meal present tho not guaranteed; 1 wheat bran present tho not guaranteed, no soybean oil meal found.
"K-Y" 24% Protein Dairy Feed, 1; no soybean oil meal found.
- Green River Milling Co., S. Carrollton, Ky. Inspection sample of Green River Mixed Feed analyzed, 1; deficient in protein.
- Gwinn Brothers & Co., Huntington, W. Va. Inspection samples analyzed, 4.
Gwinn's Wheat Mixed Feed, 1; equaled guaranty.
"Grade A" Dairy Feed, 2; 1 no soybean oil meal found.
"Make Milk" Dairy Feed, 1; deficient in fat.
- The Gwinn Milling Co., Columbus, Ohio. Inspection sample of Gwinn's Wheat Feed and Screenings analyzed, 1; equaled guaranty.
- Hales & Hunter Co., Chicago, Ill. Inspection samples analyzed, 10.
Standard Wheat Feed and Screenings, 1; equaled guaranty.
Red Comb Chick Starter, 1; equaled guaranty.
Red Comb Crate Fattener, 2; 1 deficient in fat; 1 excess fiber, soybean oil meal present tho not guaranteed.
Morning Glory Egg Mash, 2; equaled guaranty.
Pioneer Hog Fattener, 2; equaled guaranty.
Pioneer Pig and Hog Feed, 1; equaled guaranty.
Gold Flake Dairy Feed, 1; equaled guaranty.
- Hall Milling Co., St. Louis, Mo. Inspection sample of Rex Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Happy Mills, Memphis, Tenn. Red Cross sample of Pilot Dairy Feed analyzed, 1; deficient in fat, excess fiber, adulterated with flax plant by-product—misbranded.
- J. C. Harris & Co., Atlanta, Ga. Inspection samples of 41% Protein Cottonseed Meal analyzed, 8; 7 excess fiber; 1 deficient in protein; 1 deficient in fat.

- The P. H. Harsha Milling Co., Portsmouth, Ohio. Inspection samples analyzed, 4.
Harsha's Middlings and Screenings, 1; deficient in protein and fat.
Magnolia Mixed Feed, 1; equaled guaranty.
Special 16% Protein Dairy Feed, 2; adulterated with buckwheat hulls, no brewers dried grains or soybean oil meal found, misbranded; 1 deficient in protein.
- Edwin C. Hawkins, Paducah, Ky. Inspection samples analyzed, 2.
Wheat Mixed Feed and Screenings, 1; equaled guaranty.
"Topsy" Mixed Feed, 1; equaled guaranty.
- Haydon Mill & Grain Co., Springfield, Ky. Inspection samples analyzed, 2.
Economy Feed, 1; equaled guaranty.
"Lay Quick" Economy Laying Mash, 1; equaled guaranty.
- Haynes Milling Co., Portland, Ind. Inspection sample of Common Sense Brand Dairy Feed analyzed, 1; equaled guaranty.
- Henderson Elevator Co., Henderson, Ky. Inspection samples analyzed, 6.
Bullitt's All-Purpose Poultry Mash, 2; 1 deficient in protein.
Bullitt's "Best Brand" Chick Starter, 1; equaled guaranty.
Bullitt's Special Dairy Feed, 2; deficient in fat.
Bullitt's 24% Protein Dairy Feed, 1; much deficient in protein and fat.
- Hermitage Feed Mills, Nashville, Tenn. Red Cross samples of "Best Yet" 16% Protein Dairy Feed analyzed, 2; excess fiber, misbranded; no corn feed meal or soybean oil meal found.
- V. E. Herter & Co., Dayton, Ohio. Inspection samples analyzed, 11.
Eagle Starting and Growing All-Mash, 1; excess fiber, soybean oil meal and corn gluten feed present tho not guaranteed, no buttermilk found.
Yankee Laying Mash, 1; no buttermilk found, charcoal present tho not guaranteed.
Yankee Horse Feed, 1; excess fiber, no wheat bran found, adulterated with screenings refuse, misbranded.
"Our Economy" Dairy Feed, 6; 1 deficient in protein; 1 deficient in fat; 2 corn gluten meal present tho not guaranteed; 2 excess screenings refuse present—misbranded; 1 cottonseed meal and distillers dried grains present tho not guaranteed; 1 no calcium carbonate found.
Eagle Dairy Feed, 2; 1 wheat bran and ground oats present tho not guaranteed.
- Home Mill & Grain Co., Mt. Vernon, Ind. Inspection sample of Winter Wheat Bran analyzed, 1; equaled guaranty.
- Home Milling Co., Greenville, Ky. Inspection sample of Happy Home

- Mixed Feed analyzed, 1; equaled guaranty.
- Hook Milling Co., Hardinsburg, Ky. Inspection sample of "White Swan" Wheat Mixed Feed analyzed, 1; equaled guaranty.
- Hopkinsville Milling Co., Hopkinsville, Ky. Inspection sample of Sunflower Wheat Shorts and Screenings analyzed, 1; excess fiber.
- Horse Cave Mills, Horse Cave, Ky. Inspection sample of "Superior Brand" Mixed Feed analyzed, 1; deficient in protein.
- Humphreys-Godwin Co., Memphis, Tenn. Inspection samples of "Dixie Brand" 41% Protein Cottonseed Meal analyzed, 3; equaled guaranty.
- Igleheart Bros., Evansville, Ind. Inspection samples analyzed, 3.
Wheat Bran, 1; equaled guaranty.
Winter Wheat Shorts and Screenings, 2; 1 deficient in protein and fat.
- Illinois Cereal Mills, Paris, Ill. Inspection samples of 11% Protein Hominy Feed analyzed, 4; 1 deficient in protein and fat.
- J. F. Imbs Milling Co., Belleville, Ill. Inspection sample of "Charm" Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.
- Independent Oil Mill, Inc., Jackson, Tenn. Inspection sample of Independent Brand 41% Protein Cottonseed Meal analyzed, 1; deficient in fat, excess fiber.
- Jackson Cotton Oil Mill, Jackson, Tenn. Inspection samples of Bell Cow Brand 41% Protein Cottonseed Meal analyzed, 3; 1 deficient in protein.
- Jellico Grocery Co., Corbin, Ky. Inspection samples of Daisy Feed analyzed, 2; 1 excess fiber—corn cockle present.
- J. E. M. Milling Co. (Lexington Roller Mills Co.), Frankfort, Ky. Inspection samples analyzed, 7.
Capitol Egg Mash, 2; 1 ground barley present tho not guaranteed, 1 no molasses present.
Capitol Stock Feed, 1; equaled guaranty.
Capitol 16% Protein Dairy Feed, 2; equaled guaranty.
Capitol 24% Protein Dairy Feed, 2; equaled guaranty.
- C. L. Jewell & Son, Louisville, Ky. Inspection samples analyzed, 2.
Distillers Corn Dried Grains, 1; equaled guaranty.
Soybean Oil Meal, 1; equaled guaranty.
- Joslin-Schmidt Corporation, Cincinnati, Ohio. Inspection samples analyzed, 2.
Abattoir Brand 60% Protein Digester Tankage, 1; equaled guaranty.
Abattoir Brand Ground Steamed Bone, 1; equaled guaranty.
- Joy Milling Co., Elkton, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein.
- Kasco Mills, Toledo, Ohio. Inspection samples analyzed, 16.

- Apex Starter and Grower, 1; excess fiber.
- Kasco Growing Mash, 1; excess fiber, corn gluten meal present tho not guaranteed.
- Oc-Sak Laying Mash, 2; no dried skim milk found; 1 corn gluten feed present tho not guaranteed.
- Kasco Farm Feed, 1; equaled guaranty.
- Kasco Bulky Sweet Feed, 1; corn meal and corn gluten feed present tho not guaranteed.
- Oc-Sak Hog Meal, 1; deficient in protein, excess fiber, corn gluten meal present tho not guaranteed, no corn germ meal found.
- Kasco Sweet 16% Protein Dairy Feed, 4; 1 excess fiber; 2 cottonseed hulls present tho not guaranteed.
- Kasco 20% Protein Milk Maker, 1; no calcite found.
- Kasco Apex 24% Protein Dairy Feed, 2; 1 no calcite found.
- Kasco Mormilk 24% Protein Dairy Ration, 1; deficient in fat.
- Oc-Sak 24% Protein Dairy Feed, 1; equaled guaranty.
- Keco Milling Co., McKenzie, Tenn. Inspection samples analyzed, 6.
- “Acro” Wheat Bran, 1; equaled guaranty.
- Keco Laying Mash, 1; equaled guaranty.
- Keco Pig and Hog Feed, 1; molasses present tho not guaranteed.
- Keco 16% Protein Dairy Feed, 2; equaled guaranty.
- Keco 24% Protein Dairy Feed, 1; equaled guaranty.
- Keller Hay & Grain Co., Newport, Ky. Inspection sample of Hominy Feed analyzed, 1; equaled guaranty.
- Kemo Mills (Kasco Mills), Toledo, Ohio. Inspection sample of Kayo 24% Protein Dairy Feed analyzed, 1; equaled guaranty.
- The Kentucky Chemical Manufacturing Co., Covington, Ky. Inspection samples analyzed, 2.
- K-C Special 50% Protein Meat and Bone Scraps, 1; equaled guaranty.
- K-C 60% Protein Digester Tankage, 1; equaled guaranty.
- Kentucky Hatchery, Lexington, Ky. Inspection sample of Slade's All-Mash Starter analyzed, 1; equaled guaranty.
- Kentucky Milling Co. (Acme Mills), Hopkinsville, Ky. Inspection samples of “Silver Bar Brand” 16% Protein Dairy Feed analyzed, 4; excess fiber; ingredients not as guaranteed—adulterated and misbranded; 2 deficient in fat.
- The Kroger Grocery & Baking Co., Cincinnati, Ohio. Inspection samples analyzed, 11.
- Wesco Scratch Feed, 1; equaled guaranty.
- Wesco Starting and Growing Mash, 1; equaled guaranty.
- Wesco Egg Mash, 3; equaled guaranty.
- Wesco 16% Protein Dairy Feed, 3; 1 excess oat hull feed present, no linseed oil meal or soybean oil meal found; 1 no salt found.

- Wesco 20% Protein Dairy Feed, 2; 1 no salt found.
Wesco 24% Protein Dairy Feed, 1; no linseed oil meal found.
- Lake County Oil Mill, Tiptonville, Tenn. Inspection samples of 41% Protein Cottonseed Meal analyzed, 3; 1 excess fiber.
- Lancaster Milling Co., Lancaster, Ky. Inspection samples analyzed, 5.
"Old Mill" Mixed Feed, 3; 1 deficient in protein.
Lamico Mixed Feed, 1; equaled guaranty.
20% Protein Egg Mash, 1; only trace of ground barley present.
- The Larabee Flour Mills Co., Kansas City, Mo. Inspection sample of "Sunfed" Winter Wheat Gray Shorts and Screenings analyzed, 1; excess fiber.
- The Larrowe Milling Co., Detroit, Mich. Inspection samples analyzed, 8.
Dried Beet Pulp, 2; equaled guaranty.
Larro Chick Builder, 1; excess fiber.
Larro Egg Mash, 1; equaled guaranty.
Larro Pig Builder, 1; equaled guaranty.
Larro—The Ready Ration for Dairy Cows, 2; equaled guaranty.
Larrowe's 32% Protein Dairy Feed (Supplement), 1; equaled guaranty.
- Laswell Milling Co., Brodhead, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; equaled guaranty.
- Lawrenceburg Roller Mills Co., Lawrenceburg, Ind. Inspection samples analyzed, 3.
"Farm King" Gray Shorts and Screenings, 1; equaled guaranty.
"Snowflake" Wheat Middlings and Screenings, 1; equaled guaranty.
"Town Talk" Flour Middlings and Screenings, 1; deficient in protein, excess fiber.
- Lewisport Mill Co., Lewisport, Ky. Inspection sample of "Farmer's Choice" Feed analyzed, 1; deficient in protein.
- Lexington Roller Mills Co., Lexington, Ky. Inspection samples analyzed, 14.
Thoroughbred Mill Feed, 1; deficient in protein.
Kentucky Queen Starting Mash, 1; equaled guaranty.
Kentucky Queen Starting and Growing All-Mash, 1; equaled guaranty.
Kentucky Queen Crate Fattener, 1; excess fiber.
Kentucky Queen Double X Egg Mash, 1; excess fiber; no dried skim milk, distillers dried grains or molasses found.
Kentucky Queen 32% Protein Supplement Mash, 1; equaled guaranty.
- Bossie Feed, 1; equaled guaranty.
Thoroughbred Hog Ration, 1; equaled guaranty.
Thoroughbred 16% Protein Dairy Feed, 1; no salt found.

Thoroughbred 20% Protein Dairy Feed, 3; 1 no salt found.

Thoroughbred 24% Protein Dairy Feed, 2; 1 deficient in fat, 1 excess fiber.

G. W. Lofton & Son, Providence, Ky. Inspection sample of Lofton's Mixed Feed analyzed, 1; equaled guaranty.

London Roller Mills, London, Ky. Inspection sample of Kentucky Pride Dairy Feed analyzed, 1; equaled guaranty.

The Loudonville Milling Co., Loudonville, Ohio. Inspection sample of Soft Winter Wheat Middlings and Screenings analyzed, 1; equaled guaranty.

Louisa Supply Co., Louisa, Ky. Inspection samples of Standard Feed analyzed, 2; deficient in protein; 1 excess corn product present.

Louisville Cereal Mill Co., Louisville, Ky. Inspection samples analyzed, 7.

Nonesuch Hominy Feed, 1; equaled guaranty.

Nonesuch Feed, 6; deficient in protein.

Louisville Mineral Products Co., Louisville, Ky. Inspection sample of Concentrated Success Minerals (For Sheep) analyzed, 1; deficient in calcium and phosphorus, excess salt, misbranded.

L. B. Lovitt & Co., Memphis, Tenn. Inspection samples of Lovit Brand 41% Protein Cottonseed Meal analyzed, 10; 1 deficient in protein; 1 excess fiber.

Lynn Grove Milling Co., Lynn Grove, Ky. Inspection sample of Wheat Bran and Shorts analyzed, 1; equaled guaranty.

Lyon & Greenleaf Co., Ligonier, Ind. Inspection sample of Waseo Wheat Middlings analyzed, 1; equaled guaranty.

Magnolia Roller Mills, Magnolia, Ky. Inspection sample of Mill Run Feed analyzed, 1; equaled guaranty.

Marianna Sales Co., Memphis, Tenn. Inspection samples of "White Mule" 41% Protein Cottonseed Meal analyzed, 4; equaled guaranty.

Marion Milling Co., Marion, Ky. Inspection sample of "Big 3" Poultry Mash analyzed, 1; equaled guaranty.

Mayfield Milling Co., Mayfield, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein, corn meal present.

Mayfield Sweet Feed Mill, Mayfield, Ky. Inspection samples analyzed, 4.

41% Protein Cottonseed Meal, 1; deficient in fat, excess fiber.

"State Leader" 16% Protein Dairy Feed, 3; equaled guaranty.

Mayflower Mills, Ft. Wayne, Ind. Inspection sample of Mayflower Wheat Middlings and Screenings analyzed, 1; equaled guaranty.

McCarley & Richardson, Russellville, Ky. Inspection sample of "Big John" Horse and Mule Feed, 1; equaled guaranty.

- Gentry McCauley, Versailles, Ky. Inspection samples analyzed, 2.
"Pleez-U" Sheep Feed, 1; deficient in protein, cottonseed meal and soybean oil meal present tho not guaranteed, ground oats substituted for rolled oats.
"Pleez-U" Dairy Feed, 1; soybean oil meal present tho not guaranteed.
- McKenzie Milling Co., McKenzie, Tenn. Inspection samples analyzed, 2.
"My-T-Good Brand" 41% Protein Cottonseed Meal, 1; deficient in protein, excess fiber.
"My-T-Good Brand" 16% Protein Dairy Feed, 1; deficient in fat, much excess fiber, ingredients not as guaranteed, adulterated and misbranded.
- The Mennel Milling Co., Toledo, Ohio. Inspection sample of Memo Wheat Middlings and Screenings analyzed, 1; equaled guaranty.
- Middlesboro Milling Co., Middlesboro, Ky. Inspection samples analyzed, 5.
"Hard To Beat" Mixed Feed, 1; no minerals found.
"Hi-Grade Brand" Mixed Feed, 1; corn gluten meal present tho not guaranteed, excess screenings present.
"Good Value Brand" 16% Protein Dairy Feed, 2; equaled guaranty.
"Reliable Brand" Hog Feed, 1; no calcium carbonate found.
- The Midland Flour Milling Co., Kansas City, Mo. Inspection sample of Town Crier Wheat Bran analyzed, 1; excess fiber.
- Mississippi Valley Grain Co., Memphis, Tenn. Inspection sample of "Sweet Sixteen" Dairy Feed analyzed, 1; no soybean oil meal, peanut oil meal or rice bran found; misbranded.
- Missouri Cotton Oil Co., Cairo, Ill. Inspection sample of "Mo-Co Brand" 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.
- Model Mills, Georgetown, Ky. Inspection samples of "Best Brand" Mixed Feed analyzed, 2; deficient in protein.
- Monarch Milling Co., Mt. Sterling, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein, excess corn product present.
- Moorman Manufacturing Co., Quincy, Ill. Inspection samples analyzed, 5.
Moorman's Poultry Minerals No. 1, 1; equaled guaranty.
Moorman's Hog Minerals No. 1, 1; equaled guaranty.
Moorman's Hog Block Minerals, 1; excess salt.
Moorman's Grostrong Minerals No. 1 (For Horses and Mules), 1; equaled guaranty.
Moorman's Top-Kream Minerals No. 1 (For Dairy Cows and Calves), 1; equaled guaranty.
- Moseley Chemical Co., Lexington, Ky. Inspection samples of Mose-

- ley's "Big 12" Minerals analyzed, 2; deficient in calcium and phosphorus, excess salt, ingredients not as guaranteed, adulterated and misbranded.
- Mountain City Mill Co., Chattanooga, Tenn. Inspection samples of Blue Stock Feed analyzed, 5; 3 deficient in protein.
- Mount Vernon Milling Co., Mt. Vernon, Ind. Inspection samples of "Poco" Hominy Feed analyzed, 2; equaled guaranty.
- Mouton Rice Milling Co., Harrisburg, Ark. Inspection sample of Rice Bran analyzed, 1; equaled guaranty.
- Munfordville Milling Co., Munfordville, Ky. Inspection samples of Mixed Feed analyzed, 2; equaled guaranty.
- Mutual Cotton Oil Co., Ozark, Ala. Inspection samples of 41% Protein Peanut Meal analyzed, 2; excess fiber.
- Nashville Cotton Oil Mill, Nashville, Tenn. Inspection sample of 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.
- National Milling Branch of National Biscuit Co., Toledo, O. Inspection sample of Tolio Wheat Flour Middlings and Screenings analyzed, 1; deficient in protein and fat.
- National Oats Co., E. St. Louis, Ill. Inspection samples analyzed, 11.
Corno Growing Mash, 1; equaled guaranty.
Corno Broiler Ration, 1; equaled guaranty.
Corno Laying Mash, 1; equaled guaranty.
Corno Turkey Starter All-Mash Ration, 1; equaled guaranty.
Nutro 16% Protein Dairy Feed, 3; 1 deficient in protein and fat.
Corno 24% Protein Dairy Feed, 3; 2 deficient in fat.
Corno 34% Protein Dairy Supplement, 1; equaled guaranty.
- New Concord Milling Co., Murray, Ky. Inspection samples of Ship-stuff analyzed, 2; equaled guaranty.
- Newsome Feed & Grain Co., Pittsburgh, Pa. Inspection sample of Palmo Midds analyzed, 1; equaled guaranty.
- Nicholson Mills, Henderson, Ky. Inspection samples analyzed, 2.
"Numix" 16% Protein Dairy Feed, 1; equaled guaranty.
"Numix" 24% Protein Sweet Dairy Feed, 1; deficient in protein, soybean oil meal present tho not guaranteed, no linseed oil meal found.
- Nolin Milling Co., Nolin, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein, excess corn bran present.
- North American Fertilizer Co., Louisville, Ky. Inspection samples of Nafco 16% Protein Dairy Feed analyzed, 2; 1 excess fiber, no malt sprouts found; 1 cottonseed hulls substituted for oat hulls.
- Northern Illinois Cereal Co., Lockport, Ill. Inspection samples analyzed, 2.
Gold Medal Fine Ground Feeding Oatmeal, 1; deficient in fat and excess fiber.

- Ground Oat Hulls, 1; equaled guaranty.
- Nowak Milling Corporation, Hammond, Ind. Inspection samples analyzed, 10.
- Domino Ground Barley, 1; excess fiber.
- Domino All-Mash Starter and Grower, 1; equaled guaranty.
- Domino All-Mash Ration, 1; equaled guaranty.
- Domino Laying Mash, 2; 1 deficient in protein, no soybean oil meal found.
- Domino All-In-One Rab-ets, 1; equaled guaranty.
- Domino 40% Protein Hog Supplement, 1; no copper sulphate found.
- Domino Butterine Dairy Feed, 1; equaled guaranty.
- Cream-O-Lene Dairy Feed, 2; 1 alfalfa meal present tho not guaranteed.
- Chas. Nunn & Sons Milling Co., Evansville, Ind. Inspection samples analyzed, 2.
- Wheat Shorts and Screenings, 1; equaled guaranty.
- "Nunn-Better Brand" All-Mash (With Cod Liver Oil), 1; equaled guaranty.
- Ohio Farm Bureau Service Co., Lucasville, Ohio. Inspection sample of Dixie Feed analyzed, 1; equaled guaranty.
- Omaha Flour Mills Co., Omaha, Nebr. Inspection sample of "Corn-husker" Wheat Shorts and Screenings analyzed, 1; equaled guaranty.
- Owensboro Milling Co., Owensboro, Ky. Inspection samples analyzed, 10.
- O-Mil-Co Red Dog, 1; equaled guaranty.
- "Tru-Test" Wheat Feed, 2; equaled guaranty.
- O-Mil-Co Starting All-Mash, 1; excess fiber.
- "Tru-Test" Laying Mash, 2; equaled guaranty.
- D and H Stock Feed, 2; 1 excess fiber.
- Star Dairy Feed, 1; equaled guaranty.
- "Tru-Test" 24% Protein Dairy Feed, 1; equaled guaranty.
- Paramount Feed Mills (Ferncliff Feed & Grain Co.), Louisville, Ky. Inspection samples analyzed, 5.
- Paramount Egg Mash, 1; equaled guaranty.
- Paramount 16% Protein Dairy Feed, 1; equaled guaranty.
- Paramount No. 2 16% Protein Dairy Feed, 1; excess fiber; excess cottonseed hulls.
- Paramount 24% Protein Dairy Feed, 2; equaled guaranty.
- Philip R. Park, Inc., San Pedro, Calif. Inspection samples analyzed, 2.
- Manamar, 1; equaled guaranty.
- Cattle Manamar (Supplement), 1; equaled guaranty.

- I. E. Payne, Eubank, Ky. Inspection sample of Farmer's Choice Feed analyzed, 1; equaled guaranty.
- Pembroke Roller Mills, Pembroke, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- Pendleton County Mills, Falmouth, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; equaled guaranty.
- Penick & Ford, Ltd., Inc., Cedar Rapids, Iowa. Inspection samples analyzed, 2.
Douglas Corn Gluten Meal, 1; equaled guaranty.
Douglas Corn Oil Meal, 1; equaled guaranty.
- Perkins Oil Co., Memphis, Tenn. Inspection sample of Golden Rod Brand 41% Protein Cottonseed Meal analyzed, 1; excess fiber.
- Phoenix Flour Mills, Evansville, Ind. Inspection samples analyzed, 2.
Wheat Shorts and Screenings, 1; equaled guaranty.
Wheat Mixed Feed and Screenings, 1; equaled guaranty.
- Phoenix Milling Co., Providence, Ky. Inspection samples of Mixed Feed analyzed, 2; 1 deficient in fat, excess fiber; 1 deficient in protein and fat, excess fiber, withdrawn from sale.
- Pickerington Creamery Co., Pickerington, Ohio. Inspection sample of Dried Buttermilk analyzed, 1; equaled guaranty.
- The R. C. Poage Milling Co., Ashland, Ky. Inspection samples analyzed, 12.
Pomco Wheat Middlings and Screenings, 1; deficient in protein.
Pomco All-Mash Starter and Grower (With Cod Liver Oil), 1; soybean oil meal present tho not guaranteed.
Pomco Complete Growing Mash, 1; excess fiber, soybean oil meal present tho not guaranteed.
"Vim Brand" 18% Protein Laying Mash (With Cod Liver Oil), 1; deficient in protein.
Pomco 20% Protein Laying Mash (With Cod Liver Oil), 1; deficient in protein.
Pomco Hog and Pig Feed (Complete Ration), 1; no charcoal found.
"Ideal Brand" Stock Feed, 1; deficient in protein, hominy feed present tho not guaranteed.
Pomco 16% Protein Dairy Feed, 1; equaled guaranty.
Vim 16% Protein Dairy Feed, 1; equaled guaranty.
Vim 24% Protein Dairy Feed, 2; deficient in protein; 1 excess fiber.
Pomco 24% Protein Dairy Feed, 1; equaled guaranty.
- The H. E. Pogue Distilling Co., Maysville, Ky. Inspection sample of Distillers Corn Dried Grains analyzed, 1; equaled guaranty.
- Poole Milling Co., Poole, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- Pratt Food Co., Hammond, Ind. Inspection samples analyzed, 3.

- Utility Growing Mash, 1; no dried buttermilk or calcium phosphate found.
- Pratts Cak-Cak Egg Mash, 1; no dried buttermilk found.
- Pratts Laying Mash, 1; deficient in fat.
- Purcell Seed Co., Evansville, Ind. Inspection sample of "New Idea" All-Mash Poultry Ration (With Cod Liver Oil) analyzed, 1; excess fiber.
- The Quaker Oats Co., Chicago, Ill. Inspection samples analyzed, 4.
- Quaker Ful-O-Pep Egg Mash, 3; equaled guaranty.
- Quaker Schumacher Sweet Feed, 1; equaled guaranty.
- Ralston Purina Co., St. Louis, Mo. Inspection samples analyzed, 34.
- Purina Chick Startena, 1; equaled guaranty.
- Purina Chick Growena (All-Mash), 1; equaled guaranty.
- Purina Chicken Fatena, 1; excess fiber.
- Purina Broiler Chow, 1; equaled guaranty.
- Purina Lay Chow, 3; equaled guaranty.
- Purina Layena (Complete Ration), 1; equaled guaranty.
- Purina Family Flock Chow, 1; equaled guaranty.
- Purina Turkey Growena, 1; equaled guaranty.
- Good Luck Horse and Mule Feed, 1; equaled guaranty.
- Purina Omolene, 2; equaled guaranty.
- Purina Hog Fatena, 2; equaled guaranty.
- Purina Pig and Hog Chow (Supplement), 1; equaled guaranty.
- Purina Steer Fatena, 1; equaled guaranty.
- Purina Calf Starting Chow, 1; equaled guaranty.
- Purina Calf Startena, 1; equaled guaranty.
- Purina Dry and Freshening Cow Chow, 3; equaled guaranty.
- Protena Brand 16% Protein Dairy Feed (Southern States), 7; 1 deficient in fat; 1 cottonseed hulls present tho not guaranteed.
- Purina Milking Cow Chow 20% Protein, 2; equaled guaranty.
- Purina Milking Cow Chow 24% Protein, 2; equaled guaranty.
- Protena 24% Protein Dairy Feed, 1; equaled guaranty.
- R. D. Riedling, Louisville, Ky. Inspection samples analyzed, 4.
- Corn Feed Meal, 1; equaled guaranty.
- R. D.'s Feed, 1; equaled guaranty.
- Distillers 28% Protein Corn Dried Grains, 1; deficient in fat.
- Magnolia Scratch Feed, 1; deficient in fat, no kaffir or oats found.
- Ripy Bros. Distillers, Lawrenceburg, Ky. Inspection sample of Distillers Corn Dried Grains analyzed, 1; deficient in fat.
- Riverdale Products Co., Chicago, Ill. Inspection sample of Chapman's Red Top 60% Protein Digester Tankage analyzed, 1; equaled guaranty.

- Robinson Milling Co., Somerset, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- Rocky Hill Milling Co., Rocky Hill, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- P. M. Rountree, Benton, Ky. Inspection sample of Wheat Bran, Shorts and Screenings analyzed, 1; deficient in fat.
- Royal-Stafolife Mills, Memphis, Tenn. Inspection samples analyzed, 5.
"Old Maud" Mule Feed, 3; 1 deficient in fat; 1 barley present tho not guaranteed.
"Bell Cow" 16% Protein Dairy Feed, 1; ingredients not as guaranteed, adulterated and misbranded.
"Royal Maid" 24% Protein Dairy Feed, 1; excess fiber, no peanut oil meal, brewers dried grains or malt sprouts found—misbranded.
- Rush County Mills, Rushville, Ind. Inspection samples analyzed, 3.
"RCM" 16% Protein Dairy Feed, 1; no salt found.
Ground Corn, Alfalfa Meal, Wheat Screenings, Corn Screenings, Cottonseed Hulls and Molasses, 2; deficient in fat; 1 no salt found, corn gluten feed and cottonseed meal present tho not guaranteed.
- Sacramento Milling Co., Sacramento, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; equaled guaranty.
- Salt Lick Roller Mills, Salt Lick, Ky. Inspection samples analyzed, 2.
Perfect Brand X Mixed Feed, 1; deficient in protein.
Perfect Brand Wheat Mixed Feed, 1; equaled guaranty.
- Sandy Valley Grocery Co., Ashland, Ky. Inspection sample of Economy Special 16% Protein Dairy Feed analyzed, 1; equaled guaranty.
- Saunders Mills, Inc., Toledo, Ohio. Inspection samples analyzed, 2.
Alfalfa Leaf Meal, 1; deficient in protein, excess fiber, misbranded.
Alfalfa Meal, 1; deficient in protein, excess fiber, misbranded.
- Saxony Mills, St. Louis, Mo. Inspection samples analyzed, 2.
Wheat Bran and Screenings, 1; equaled guaranty.
Wheat Mixed Feed and Screenings, 1; deficient in protein.
- Schultz, Baujan & Co., Beardstown, Ill. Inspection samples analyzed, 13.
Sunbeam Wheat Middlings and Screenings, 1; deficient in protein and excess fiber, misbranded.
Sunbeam Wheat Mixed Feed and Screenings, 1; equaled guaranty.
"Honest Brand" Starting and Growing Mash, 1; excess fiber.
"Critic Brand" Poultry Fattening Feed, 1; equaled guaranty.
"Honest Brand" Egg Mash, 1; excess fiber.
"Critic Brand" Turkey Starting Mash, 1; excess fiber.
"Critic Brand" Pork Maker, 1; equaled guaranty.

"Honest Brand" 16% Protein Dairy Feed, 2; 1 deficient in protein.

Sweet Clover Brand 16% Protein Dairy Feed, 3; equaled guaranty.

"Critic Brand" 24% Protein Dairy Feed, 1; no brewers dried grains or corn feed meal found.

Scientific Milling Co., (Dixie Mills Co.), E. St. Louis, Ill. Inspection sample of Scientific Brand Laying Mash analyzed, 1; equaled guaranty.

Scioto Farm Bureau Cooperative Association, Lucasville, Ohio. Inspection sample of Scioto Feed analyzed, 1; equaled guaranty.

Sebree Milling Co., Sebree, Ky. Inspection samples analyzed, 3.

Cream Patent Feed, 1; equaled guaranty.

3 in 1 Feed, 1; wheat bran present tho not guaranteed.

Korb's Heavy Mixed Feed, 1; deficient in protein, excess corn bran present.

Security Mills, Knoxville, Tenn. Inspection samples analyzed, 9.

Security Chick Ration, 1; excess fiber, no beet pulp found.

Security Egg Mash, 1; equaled guaranty.

Blue Jay Laying Mash, 1; excess fiber.

Big S Horse Feed, 1; equaled guaranty.

Security Rabbit Ration, 1; excess fiber, salt present tho not guaranteed.

Security Dairy Feed, 2; equaled guaranty.

Blue Eagle Dairy Feed, 2; 1 no soybean oil meal found.

Sedalia Roller Mills, Sedalia, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

Shellabarger Grain Products Co., Decatur, Ill. Inspection sample of Shellabarger's Cooked 41% Protein Soybean Oil Meal analyzed, 1; equaled guaranty.

Simpson County Mills, Franklin, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.

J. Allen Smith & Co., Knoxville, Tenn. Inspection samples analyzed, 2.
Butter Fat Feed, 1; equaled guaranty.

"Peerless Brand" Feed, 1; equaled guaranty.

Smithfield Milling Co., Smithfield, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein.

Smith's Grove Milling Co., Smith's Grove, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein.

Somerset Creamery Co., Somerset, Ky. Inspection sample of Dried Skim Milk analyzed, 1; equaled guaranty.

The Southern Cotton Oil Co., Decatur, Ala. Inspection sample of High Grade Brand 41% Protein Cottonseed Meal analyzed, 1; excess fiber.

- Woodford Spears & Sons, Paris, Ky. Inspection samples of Bourbon Mixed Feed analyzed, 2; 1 deficient in protein.
- Star Milling Co., Clinton, Ky. Inspection sample of "Star Brand" Dairy Feed analyzed, 1; much deficient in protein, no corn gluten feed found, misbranded.
- Star Roller Mills, Cloverport, Ky. Inspection sample of Mixed Feed analyzed, 1; no corn hearts found.
- St. Louis Mills Co. (Alfocorn Milling Co.), E. St. Louis, Ill. Inspection samples analyzed, 2
Gilt Edge Fancy Scratch Feed, 1; equaled guaranty.
Gilt Edge 16% Protein Dairy Feed, 1; equaled guaranty.
- Summer Shade Roller Mills, Summer Shade, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein and fat, wheat flour present.
- Sunnyside Milling Co., Evansville, Ind. Inspection sample of Winter Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- The Superior Feed Co. (Royal-Stafolife Mills), Memphis, Tenn. Inspection sample of "Laymo Brand" Egg Mash analyzed, 1; equaled guaranty.
- D. B. Sutherland & Sons, Bloomfield, Ky. Inspection sample of Sutherland's Mixed Feed analyzed, 1; deficient in protein.
- Swift & Co., Chicago, Ill. Inspection samples of Swift's 60% Protein Digester Tankage analyzed, 2; 1 deficient in protein.
- Swift & Co. Oil Mill, Memphis, Tenn. Inspection samples of "Cotton Bloom" 41% Protein Cottonseed Meal analyzed, 3; excess fiber.
- J. H. Tate & Co., Monticello, Ky. Inspection sample of J. H. Tate & Co.'s Feed analyzed, 1; deficient in protein, no corn bran found.
- Tell City Flouring Mills, Tell City, Ind. Inspection samples analyzed, 4.
Hoosier Special Shorts and Screenings, 1; deficient in protein.
Hoosier Egg Mash, 1; equaled guaranty.
Hoosier Special-Mix-Feed, 2; 1 deficient in fat.
- Thomson's Sweet Feed Mill, Madisonville, Ky. Inspection sample of "New Ideal Brand" 16% Protein Dairy Feed analyzed, 1; much excess fiber; adulterated with excess cottonseed hulls; misbranded.
- Topeka Flour Mills Corporation, Topeka, Kans. Inspection sample of K-Y Brand Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.
- Trenton Cotton Oil Co., Trenton, Tenn. Inspection sample of "Trenton Brand" 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty
- Triple-Bridge Mills, Franklin, Ky. Inspection sample of Wheat Bran analyzed, 1; equaled guaranty.

- Ubiko Milling Co., Cincinnati, Ohio. Inspection samples analyzed, 23.
Fourex Distillers Corn Dried Grains, 1; equaled guaranty.
Old Process 34% Protein Linseed Oil Meal, 1; equaled guaranty.
Ubiko All-Mash Starter, 1; equaled guaranty.
Ubiko All-Mash Developer, 1; equaled guaranty.
Ubiko Fattening Mash, 1; equaled guaranty.
Ubiko All-Mash Complete Laying Ration, 1; equaled guaranty.
Sunbeam Laying Mash, 1; equaled guaranty.
Ubiko Egg Mash, 1; equaled guaranty.
Ubiko Mash Balancer, 1; equaled guaranty.
Ubiko Turkey Starter and Grower, 1; no copper sulphate or potassium iodide found.
Turkey Growing Pellets, 1; equaled guaranty.
"Honeycomb" Sweet Feed, 2; equaled guaranty.
Ubiko Pig and Sow Ration, 1; excess fiber, corn gluten feed present tho not guaranteed, no cocoanut oil meal found.
Clover Bloom Sweet 16% Protein Dairy Feed, 2; equaled guaranty.
24% Protein Sweet Union Grains Dairy Ration, 2; equaled guaranty.
24% Protein Dry Union Grains Dairy Ration, 2; equaled guaranty.
24% Protein Sunbeam Dairy Ration, 3; 1 no wheat middlings or hominy feed found.
- The Union National Mill, Springfield, Ohio. Inspection samples analyzed, 2.
William Tell Wheat Middlings and Screenings, 1; deficient in protein.
William Tell Scratch Feed, 1; equaled guaranty.
- United Mills Co., Kansas City, Kans. Inspection sample of U. M. C. Wheat Middlings and Screenings analyzed, 1; equaled guaranty.
- The United Supply Co., Lynch, Ky. Inspection samples analyzed, 4.
Usco Egg Mash, 1; excess fiber.
Usco Horse Feed, 1; equaled guaranty.
Usco 16% Protein Dairy Ration, 1; equaled guaranty.
Usco 24% Protein Dairy Feed, 1; equaled guaranty.
- Upton Roller Mills, Upton, Ky. Inspection samples of Mixed Feed analyzed, 3; 1 deficient in protein.
- Van Meter-Terrell Feed Co., Lexington, Ky. Inspection sample of Viola Cow Feed analyzed, 1; equaled guaranty.
- Vevay Flour Mills, Vevay, Ind. Inspection samples of Mixed Feed analyzed, 2; deficient in protein.
- Vitamax Mills, Inc., St. Louis, Mo. Inspection sample of "Max-Lay" Brand Egg Mash analyzed, 1; excess fiber, malt sprouts present tho not guaranteed.

23. Wabash Elevator Co., Uniontown, Ky. Inspection samples of Wheat Gray Shorts analyzed, 2; equaled guaranty.
- James Walsh & Co., Lawrenceburg, Ind. Inspection sample of Walsh Distillers Corn Dried Grains analyzed, 1; equaled guaranty.
- Walton Feed Mills, Walton, Ky. Inspection samples analyzed, 4.
Big Bone Starting and Growing Mash, 1; excess fiber, corn bran present tho not guaranteed.
"Unique" Egg Mash, 1; equaled guaranty.
Big Bone Hog Ration, 2; equaled guaranty.
- Washburn Crosby Co. (General Mills), Louisville, Ky. Inspection samples analyzed, 4.
"Sonny South" Wheat Gray Shorts and Screenings, 1; equaled guaranty.
"Sonny South" Wheat Brown Shorts and Screenings, 1; equaled guaranty.
"Sonny South" Wheat Red Dog, 1; equaled guaranty.
"Sonny South" Wheat Mixed Feed and Screenings, 1; equaled guaranty.
- Weisenberger Sanitary Flour Mills, Midway, Ky. Inspection samples analyzed, 7.
Repeater Feed, 3; 1 deficient in protein, corn meal present tho not guaranteed.
Repeater Laying Mash, 1; no ground oats found.
Repeater 16% Protein Dairy Feed, 1; deficient in protein.
Repeater 24% Protein Dairy Feed, 2; 1 deficient in protein, 1 excess fiber.
- Wiedlocher & Sons, Springfield, Ill. Inspection samples analyzed, 8.
"Faultless Brand" Starting and Growing Mash, 1; excess fiber.
"Faultless Brand" Egg Mash, 2; 1 no linseed oil meal found.
Congress 16% Protein Dairy Feed, 3; 1 deficient in fat.
"Faultless Complete Brand" Hog Feed, 1; excess fiber; soybean oil meal, corn gluten meal and cottonseed meal present tho not guaranteed; no linseed oil meal found, misbranded.
"Faultless Brand" 24% Protein Dairy Ration, 1; deficient in fat.
- Williamstown Roller Mills, Williamstown, Ky. Inspection samples of Mixed Feed analyzed, 4; equaled guaranty.
- Wilson Feed & Seed Co., Wilson, Ark. Inspection samples of Wilson's Alfalfa Leaf Meal analyzed, 2; excess fiber.
- Winchester Roller Mills, Winchester, Ky. Inspection samples of "Perfection Brand" Mixed Feed analyzed, 2; 1 deficient in protein.
- Woolcott Milling Co., Harrisburg, Ill. Inspection sample of Mixed Feed analyzed, 1; deficient in fat.
- Yopp Seed Co., Paducah, Ky. Inspection samples analyzed, 2.
Ground Soybeans, 1; equaled guaranty.

Yopp's Laying Mash, 1; equaled guaranty.

J. W. Zaring Grain & Mill Co., Richmond, Ky. Inspection sample of Bonanza Feed analyzed, 1; deficient in protein, wheat flour present.

Ziliak & Schafer Milling Co., Evansville, Ind. Inspection samples analyzed, 5.

Wheat Shorts and Screenings, 1; equaled guaranty.

Target Egg Mash, 1; equaled guaranty.

Lamey's Three-In-One All-Mash, 1; deficient in protein.

Lamey's Special Dairy Feed, 2; 1 deficient in fat; 1 soybean oil meal and brewers dried grains present tho not guaranteed.