

## Kentucky Agricultural Experiment Station

UNIVERSITY OF KENTUCKY

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### COMMERCIAL FEEDS IN KENTUCKY IN 1943

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The tonnage of commercial feeds sold in Kentucky in 1943, about 630,438 tons, as estimated from the number of guaranty tax tags issued, showed an increase of 47.7 percent over 1942, the largest tonnage in the history of the feed business in the state. About 33.7 percent of the tonnage was straight byproduct feed, 18.3 percent dairy feed, 6.9 percent hog feed, 33 percent poultry feed, and the balance of a miscellaneous nature. Of the total tonnage estimated used in Kentucky for the year, 410,691 tons were special-purpose feeds of which 115,765 tons were dairy feed, 207,540 tons were poultry feed, 18,100 tons were horse and mule feed, and 43,715 tons were hog feed. A summary of estimated sales by class of feed, in tonnage, is given in Table 1.

TABLE 1.—SUMMARY OF ESTIMATED SALES BY CLASS OF FEED

	Tons
<b>Straight byproducts:</b>	
Barley, ground .....	200
Bone meal .....	500
Brewers dried grains .....	700
Corn byproduct feed .....	1,930
Corn feed meal .....	550
Corn meal .....	350
Cottonseed meal .....	6,960
Cracked corn .....	16,310
Crushed ear corn .....	125
Distillers dried grains .....	5,100
Hominy feed .....	21,900
Linseed oil meal .....	225
Meat scraps .....	2,025
Meat and bone scrap .....	250
Miscellaneous wheat feeds .....	5,155
Mixed feed (wheat byproduct feed and a small amount of corn bran) .....	24,455
Oats, ground .....	400
Soybean oil meal .....	11,555
Tankage .....	1,975
Wheat bran .....	7,870
Wheat brown middlings or shorts .....	15,602
Wheat flour middlings .....	100
Wheat gray middlings or shorts .....	24,665
Wheat, ground .....	47,497
Wheat mixed feed .....	14,999
Wheat red dog flour .....	2,325
<b>Special-purpose feeds:</b>	
Calf meal .....	1,850
Dairy feed:	
16% protein .....	69,850
20% protein .....	11,950
24% protein .....	30,090
Supplement .....	3,875
Total .....	115,765
Dog feed, dry .....	3,045
Goat feed .....	200
Hog feed:	
Fattening and growing .....	26,900
Supplement .....	16,815
Total .....	43,715
Horse and mule feed .....	18,100
Pigeon feed .....	250
<b>Poultry feed:</b>	
Grains:	
Chick .....	8,225
Scratch .....	50,165
Total .....	58,390
Mash:	
All-mash growing ration .....	5,735
All-mash laying ration .....	5,595
All-mash poultry .....	8,345
All-mash starting .....	4,470
All-mash starting and growing .....	7,290
Fattening mash .....	3,885
Growing and broiler .....	20,790
Laying mash .....	64,615
Starting mash .....	13,220
Starting and growing mash .....	7,970
Supplement mash .....	2,825
Turkey growing mash .....	3,030
Turkey laying mash .....	75
Turkey starting mash .....	1,255
Turkey supplement mash .....	50
Total .....	149,150
Rabbit feed .....	1,385
Sheep feed .....	2,305
Stock feed .....	16,535
<b>Miscellaneous feeds:</b>	
Mineral feed .....	3,615
Miscellaneous .....	2,410

### FEED CONTROL IN THE EMERGENCY

The war economy program for food in Kentucky brought many hard and complex problems to both the feed industry and the feed control department. With it all, the progress was highly satisfactory, as was evidenced by the large increase of livestock in the state and the sale of over 630,000 tons of commercial feeding stuffs this year. Increase in the number of livestock in fact outstripped available supplies of feed. The year 1943 closed under considerable confusion and 1944 entered without an orderly adjustment of available supply to the livestock.

Since livestock increased faster than feed production, manufacturers and feeders were forced to make many substitutions in feed materials and in feeding practices. This condition presented the problem of determining how little animal protein and how much plant protein can be economically used in a ration for hogs and poultry. It had been the general conclusion and practice that poultry should have at least 20 percent and hogs 20 to 25 percent animal protein, and commercial feed rations were made on this basis. However, it was shown by actual practice that greater use can be made of plant protein, especially from the oil meals—particularly soybean oil meal, than was formerly thought. When plant proteins are substituted for animal proteins, more attention must be given to the vitamin and mineral content of the feed, as the protein concentrates from animal sources contain more vitamins and minerals than do the plant protein concentrates.

This was not so much a problem with cattle feeders, because ruminants, by virtue of the nature of their stomach and the microorganisms of the paunch, are able to convert poor protein, and other nutrients as well, into wholesome food nutrients. The young ruminants because of their undeveloped paunches, cannot convert poor protein into good protein and for this reason must be fed a special diet composed of such materials as liquid milk, vitamin carriers, and plant protein.

Because of shortages in certain feed materials at different seasons of the year and more or less general shortage in all feed materials throughout the year, constant changes in feed formulas were necessary to adjust the feeds to materials available at the particular time needed. The Department has permitted manufacturers to make these changes in their feeds without reregistering provided that they requested and gave reason for the change, that the source of nutrients

used was suited to stock to which it was to be fed, and that the general quality of the feed was maintained. In many instances, no doubt, the general quality of feeds varied somewhat from the quality in the original formula, perhaps better in some cases and not quite so good in others, but analyses of inspection samples showed the farmers were well taken care of during this period of the emergency.

Many manufacturers were tempted to adulterate and misbrand feeds because of the prevailing prices, but as a whole, the feed industry cooperated with the Department wholeheartedly and cheats and frauds were kept at a minimum.

#### **GOOD PASTURE IN A FEED PROGRAM**

The use of good pasture in the feed program is important to the feeder. The kind of feed a feeder should select is determined very largely by the character of pasture available for his animals. Manufacturers have recognized this fact and as a part of their service to feeders are making feeds to meet the pasture situation. Pasture is the cheapest of all feed and requires the least labor. Pasture, hay, and other forage crops generally speaking supply about 60 percent of all the feed required by most livestock; milk cows get about 76 percent of their feed from these crops, other cattle about 80 percent, horses and mules 67 percent, and sheep 95 percent. Hogs and poultry, on the other hand, get about 95 percent of their feed from grain. It has been possible to meet the feed shortage to a large extent, with the exception of feed for poultry, by the improvement of pastures and growing more and better hay and forages. It has been shown very definitely that the proper use of fertilizer can increase the yield and quality of pasture and hay and that such increases are very desirable and profitable.

#### **BALANCED RATION**

One of the most important developments in modern research in animal nutrition is the discovery of the role of vitamins and certain minerals in the growth and development of animals.

A ration is the quantity of feed required by an animal for one day. In formulating a feed ration, it is essential that it provide the necessary nutrients for maintenance and reproduction. A balanced ration is one which furnishes digestible protein, carbohydrates, and fats, and the right kind of minerals and vitamins in such amounts and proportions as are necessary to nourish the animal for a day. The feed or ration must meet the following conditions to produce the best results: (1) The ration must contain sufficient digestible, com-

plete protein and digestible energy-producing substances in right proportions to meet the needs of the animal; (2) it must contain the proper amount of indigestible, fibrous material, such as is found in the fibrous or woody parts of plants; (3) it must contain the right kind of minerals in available forms in sufficient amounts; (4) it must contain the necessary vitamins in adequate amounts; and (5) it must be free from injurious substances such as poisons (especially cumulative poison), disease germs, or anything that produces mechanical injury.

### FEEDER'S GUIDE

The feeder has several aids to guide him in selecting a commercial feed. He should never buy one that is not registered and labeled with an official guaranty tag. He should read the tag carefully and base his selection on the information in the guaranty rather than on the claims made by the salesmen. If a feed is not labeled, he should refuse to accept it regardless of any claims made for it. He can also safeguard himself by buying from reputable manufacturers who have good records and make good, clean feeds. He should look with suspicion on all yellow-tag feeds, as such feeds contain fillers of little or no feed value. As a general rule, a feed containing a complex vitamin and mineral mixture is to be avoided, because a long list of materials has no particular merit and needed vitamins and minerals usually can be supplied at lower cost in simple materials.

The Feed Control Department constantly makes check analyses of feeds sold in Kentucky. The results are summarized and published with other valuable data on feeds and their use, in bulletins, which are sent free to any one interested. Other publications that should be of interest to feeders and are available to those who desire them, can be obtained from county agricultural agents or by writing to the College of Agriculture and Home Economics, Lexington.

### READ THE TAG

The tag should tell the truth. The best information and protection the purchaser of feeds has is the tag and the honesty of the manufacturer. The purchaser should read the tag carefully and study the guaranty. It contains the name and address of the manufacturer and his guaranty. Compare the tag with the record of the manufacturer in the summary of results in the back part of this bulletin. If his record is good, you can be reasonably sure the feed is what it is represented to be on the tag. If his record is bad, then the feed is likely to be poor.

A feeder who buys on price instead of quality, though price is always a factor to be considered, is practicing false economy. A cheap "yellow tag" feed usually is the costliest feed a farmer can buy, because of the small amount and poor quality of the nutrients and the unwholesomeness of the feed.

#### WHEAT AS A FEED

The value of wheat as a feed ingredient has long been recognized. The feeding value compares favorably with that of corn, oats, barley, and rye. Wheat is higher in protein (ranging from 12.50 to 13.50 percent) than those grains, contains about the same amount of fat as barley and rye, and about the same amount of fiber as corn and rye. It is low in minerals, as most grains are. Wheat is lacking in Vitamin A, a fact to be considered in substituting wheat for yellow corn.

When used as a feed ingredient, except for scratch grains, wheat should be ground coarse and mixed with other suitable ingredients that give bulk to the feed. If ground fine and fed alone or mixed in large amount with other fine-ground, compact feed it may be hard to digest. If fed to poultry, it may form a cake or crust on the beaks and walls of the mouths, and when fed to stock it may form a mass or cake in the stomach and cause indigestion and possibly death.

Feeders should be cautious in feeding wheat and should follow these rules: (1) grind wheat coarse; (2) do not feed it by itself; (3) do not mix fine-ground wheat in large proportions with other fine-ground, heavy, compact materials. If a large amount of wheat is used, mix it with materials that give fluffiness and bulk to the feed. The amount of wheat that can be fed without causing trouble depends more or less on the texture of the mixture.

#### FEEDS SUSPECTED OF POISONING STOCK

During the year numerous samples of various kinds of feed suspected of poisoning stock were sent to the Department. Careful examination of these showed, in most cases, that the feed was in good condition, sound, free of off-odors, and of good quality. Many of the samples were fed to chicks or rats as the sole diet, and the experimental animals receiving them were in normal, healthy condition at the end of the feeding period.

A large excess of salt was found in two samples of poultry mash which, it was reported, killed a number of chickens, and one sample of feed which was reported to have killed most of a large flock of

small chickens contained Paris green. In each case it appeared that these substances were present by accident.

It is important that we know the nature of the problem before undertaking an analysis. We suggest consulting the county agent or veterinarian first and if an analysis seems desirable, the nature of the problem should be explained and pertinent facts stated, when the sample is sent.

#### EXPLANATION OF TERMS USED IN ANALYSIS OF FEEDS

*Protein* designates the principal nitrogen compounds of a feed. Animals use protein to build and repair tissues. However, when carbohydrates and fats are deficient in the diet, protein may be used to produce heat and energy, but this is undesirable both physiologically and economically. Plants build protein from water, nitrogen compounds and certain minerals of the soil, and carbon dioxide of the air. Protein from animal sources such as milk, meat scraps, and tankage, is plant protein which has been partly broken down by the digestive processes of the animal and reconstructed into the kind of protein specific for the animal tissue. The nutritional values of proteins differ greatly; therefore, it is well to select feeds which contain several ingredients and therefore a variety of proteins. Proteins derived from animal sources, such as milk, meat and meat byproducts, are very desirable for poultry, hogs, dogs, and young animals of all kinds. Animal proteins are not so necessary for mature animals, especially the ruminants because these have the power to utilize other proteins.

*Fat* is the ether soluble nutrient in a feed and consists chiefly of fats and oils but a small percentage of waxes, resins, and coloring matter may be included. Fats can be deposited in the body tissues as such, or can be burned in the body to furnish heat and energy. The energy value of fat is high, being 2.25 times that of the nitrogen-free extract.

*Fiber* is the woody portion or structural part of plants. It consists mainly of cellulose, which has little feed value because of its low digestibility. Generally seeds and grains contain very little fiber, while the protecting hulls and husks and the supporting stems, are high in this constituent. Excessive fiber in a feed indicates that the percentage of essential nutrients is low and that their digestibility is impaired.

*Water* is present in all feeds. It adds nothing to their value because animals receive their main supply of water from other

sources. Water reduces the value of a feed by decreasing the percentages of the other nutrients, and much water lowers the keeping quality of the feed.

*Ash* is the mineral matter or residue of a feed which remains after complete burning. The ash of vegetable materials contains minerals which the plant has taken from the soil. Most of these elements are essential in the proper nutrition of an animal. The ash from different plants, and from different parts of the same plant, varies in amount and feeding value. The minerals most commonly deficient in stock feeds are calcium and phosphorus. An excessive amount of ash in a feed usually means the presence of inert matter, such as dirt or sand.

*Nitrogen-free extract.* In making the usual chemical analysis of a feed, the chemist determines the percentages of protein, fat, fiber, ash, and water and terms the remainder nitrogen-free extract. It is composed chiefly of starches, sugars, and pentosans which are easily digestible. Like fat, nitrogen-free extract in the diet of an animal is oxidized to maintain body heat and produce energy for work. Fat can be synthesized by the animal, from nitrogen-free extract.

*Vitamins* are organic food substances distinct from the more familiar nutrients (proteins, fats, carbohydrates, and minerals) but necessary in nutrition for normal growth and reproduction. Although these substances are required only in very small quantities, some feeds do not contain enough for proper growth and productiveness. Deficiency in each vitamin leads to specific disease symptoms usually first manifested by lack of growth. Frequently, the feeder does not suspect a vitamin deficiency because he notices only retarded growth. The typical symptoms usually appear only in the later stages of the disease. When the feeder uses commercial feeds, he should select feeds made by reputable manufacturers whose record for making reliable feeds is good. When he is home-mixing feed, he should select only ingredients of high quality and well-known value.

The vitamins are widely distributed in plant and animal materials commonly fed to livestock and poultry. Green feeds, legumes, and natural green hays are the principal sources of carotene (vitamin A) and riboflavin (vitamin G). All grains except yellow corn have very little vitamin-A activity, but are good sources of the vitamin B complex. Vitamin E is present chiefly in leafy materials, vegetable and animal oils, and the germs of seeds, especially the germ of wheat. No feeds are good sources of Vitamin D, the chief source for farm animals being direct sunlight and fish oils, or their equivalent.

The first principle of avoiding vitamin deficiencies in feeding is the maximum use of high-quality roughages, and direct sunlight. High-quality roughages include green pasture, legume or grass silage, corn silage, leafy and green sun-cured legume hays. Animals that normally consume large quantities of roughage of this sort will not need special vitamin supplements. Poultry and hogs consume more concentrates than roughages and therefore should be given maximum use of green pasture and direct sunlight. However, when these are not available, the animals should be given a liberal amount of milk byproducts and alfalfa leaf meal. The most practical way to supply vitamin D to confined fowls is to use biologically tested fish oil or its equivalent. Irradiated yeast as a source of vitamin D, is valuable only for four-footed animals.

#### POISONOUS WEED SEEDS AND FUNGI

Care should be exercised by farmers in feeding materials that are likely to contain poisonous weed seeds and fungi. Stock may be made sick, thrown off of feed, or die from eating them. Besides, if germination of the weed seeds is not prevented by grinding or heating to a high temperature in the manufacturing process, some of them will pass through the animals, germinate, and will introduce weeds, some of which may be noxious, on the premises.

Screenings, screenings waste, and fillers used in "yellow tag" feeds usually contain a large amount of miscellaneous weed seeds, some of which may be poisonous. In addition, these materials contain things which may be deleterious to the health of animals, such as hulls, chaff, joints, elevator dust, sand, and dirt. It is a serious question whether a feeder can afford to risk feeding such material at any price.

Though many weed seeds may cause poisoning, the most dangerous weed seeds and fungi likely to occur in feeds containing screenings, screenings waste, or filler are:

##### Seeds

- Cocklebur (*Xanthium orientale*)
- Corn cockle (*Agrostemma githago*)
- Cow cockle (*Saponaria vaccaria*)
- Castor bean (*Ricinus communis*)
- Fanweed (*Thlaspi arvense*)
- Flax (*Linum usitatissimum*)
- Field peppergrass (*Lepidium campestre*)
- Haresear mustard (*Conringia orientalis*)

(List continued on following page.)

Jimson weed (*Datura stramonium*)  
Purple jimson weed (*Datura tatula*)  
Poison hemlock (*Conium maculatum*)  
Smartweed (*Polygonum spp.*)  
Sneezeweed (*Helenium autumnale*)  
Small-seeded false flax (*Camelina microcarpa*)  
Tumble mustard (*Sisymbrium altissimum*)  
Wild mustard (*Brassica arvensis*)

**Fungi**

Barley scab (*Giberella zeae*)  
Ergot of rye and grasses (*Claviceps purpurea*)  
Molds of grain

TABLE 2.—ANALYSES OF DOG FEEDS  
(Manufacturer's guaranty is printed in **bold-face** type.)

Manufacturer and brand name	Sample taken from—	Protein	Fat	Fiber	Remarks
Allied Mills, Inc., Chicago, Ill.					
Wayne 22% Protein Dog Feed	13th Street Market, Ashland	26.3	5.7	3.9	As guaranteed.
Same	Leslie's Trading Post, Buechel	25.7	6.7	3.8	Same.
		22.0	4.0	5.0	
Ballard & Ballard Co., Louisville, Ky.					
Insurance 24% Protein Dog Feed	C. A. Burdon, Fisherville	25.9	4.0	4.0	As guaranteed.
Same	Farmers Supply Co., Danville	25.9	4.0	4.3	Same.
		24.0	3.7	5.0	
Insurance 28% Protein Dog Feed	Henderson & Hardy Co., Shepherdsville	31.2	6.1	2.5	Same.
		28.0	6.0	5.0	
Battle Creek Dog Food Co., Battle Creek, Mich.					
Miller's 15% Protein Dog Ration	Haller's Pet Shop, Louisville	16.2	2.4	1.7	As guaranteed.
		15.0	1.0	3.5	
Chappel Bros., Inc., Rockford, Ill.					
Ken-L-Biskit 20% Protein Dog Feed	Henderson & Hardy Co., Shepherdsville	19.6	2.3	2.6	Excess fiber.
		20.0	2.0	2.0	
Doyle Packing Co., Mommence, Ill.					
Strongheart 22% Protein Dog Feed	Vanfleet's Store, Okolona	23.8	4.1	2.4	As guaranteed.
		22.0	4.0	2.5	
John W. Eshelman & Sons, Lancaster, Pa.					
Eshelman Red Rose 23% Protein Dog and Puppy Feed	Union Grocery Co., Prestonsburg	20.3	6.3	2.9	Very deficient in protein.
		23.0	4.7	3.5	
Flag Pet Food Corp., New York, N. Y.					
Pussy Cat 24% Protein Feed	Kroger Grocery & Baking Co., St. Matthews	50.9	7.5	3.3	As guaranteed.
		24.0	4.0	2.0	
Gaines Food Co., Inc., Sherburne, N. Y.					
Gaines 23% Protein Dog Meal	Union Store Co., Buechel	25.0	5.7	3.5	As guaranteed.
		23.0	3.0	4.0	
General Mills, Inc., Minneapolis, Minn.					
Larro 22% Protein Dog Feed	Farmers Supply Co., Lexington	25.0	5.6	4.6	As guaranteed.
		22.0	4.5	5.5	
V. E. Herter & Co., Dayton, O.					
Vehco 25% Protein Dog Feed	Albers Grocery, Newport	24.5	4.3	2.8	As guaranteed.
		25.0	4.0	5.0	
Kasco Mills, Toledo, O.					
Kasco 23% Protein Complete Dog Ration	Myers & Clark, Ashland	22.7	5.4	4.5	As guaranteed.
		23.0	4.0	4.0	

TABLE 2.—(Continued)

Manufacturer and brand name	Sample taken from—	Protein	Fat	Fiber	Remarks
Kellogg Co., Battle Creek, Mich. Gro-Pup 22½% Protein Dog Feed	Cyclone Cash Store, Mt. Washington	21.7 22.5	3.6 3.0	2.5 5.0	Deficient in pro- tein. No corn germ meal found.
Kroger Grocery & Baking Co., Cincinnati, O. Kroger 26% Protein Dog Feed	Kroger Grocery & Baking Co., St. Matthews	27.7	4.3	4.7	As guaranteed.
Same	Kroger Grocery & Baking Co., La Grange	28.0 26.0	4.3 4.0	5.0 5.0	Same.
Loose-Wiles Biscuit Co., Long Island City, N. Y. Austin's 22% Protein Dog Feed	Albers Grocery, Covington Hardy's Cash Market, Shepherdsville	24.1 25.7	3.2 3.5	3.7 3.7	As guaranteed.
Same	Chester Porter, Buechel	24.2 22.0	3.3 2.5	4.0 4.5	Same.
Maritime Milling Co., Inc., Buffalo, New York Hunt Club 24% Protein Dog Feed	Albers Grocery, Covington C. F. Jasper & Sons, Jeffersontown	28.9 22.3 24.0	6.7 5.1 3.5	4.0 2.9 4.0	As guaranteed. Deficient in pro- tein.
S. E. Mighton Co., Bedford, O. Spot 36% Protein Dog Feed	Kroger Grocery & Baking Co., St. Matthews	44.1 36.0	6.5 0.8	5.3 5.0	As guaranteed.
Dazy 36% Protein Dog Feed	Myers-Bridges & Co., Louisville	46.0 36.0	8.0 0.8	4.4 5.0	Same.
Miller Cereal Mills, Omaha, Nebr. Miller's Bar-B-Kubes 25% Protein Dog Feed	Barr's Food Market, La Grange	23.0 25.0	7.4 4.5	3.2 5.0	Very deficient in protein.
John Morrell & Co., Ottumwa, Ia. Red Heart 36% Protein Dog Feed—Diet A	McKesson & Robbins, Louisville	37.0 36.0	10.2 6.0	2.1 2.5	As guaranteed.
National Biscuit Co., New York, N. Y. Milk Bone Brand Junior 21% Protein Dog and Puppy Biscuit	Jones' Grocery, Louisville Jeffersontown Food Market, Jeffersontown	22.5 21.2 21.0	3.1 2.8 1.5	2.1 2.2 2.5	As guaranteed. Same.
National Oats Co., Cedar Rapids, Ia. Trak 25% Protein Dog Feed	A. Wahking & Sons, Louisville	29.7 25.0	5.6 4.0	3.0 5.0	As guaranteed.
New Richmond Mills, New Richmond, Wis. New Rich 23% Protein Dog Meal	Altsheler & Co., Louisville	20.2 23.0	2.0 2.5	4.1 4.0	Very deficient in protein.

TABLE 2.—(Continued)

Manufacturer and brand name	Sample taken from—	Protein	Fat	Fiber	Remarks
Perfection Foods Co., Battle Creek, Mich. Perfection Brand 14% Protein Dog Feed	John B. Penn & Son, Georgetown	17.1	3.4	3.9	As guaranteed.
Same	Fox Bros., Winchester	13.9	4.0	4.3	Same.
Same	I. L. Hancock, Louisville	14.9	3.0	4.1	Same.
		14.0	2.0	5.0	
The Quaker Oats Co., Ken-L-Products Division, Rockford, Ill.	Carl Yeager, Jeffersontown	20.0	3.1	2.2	As guaranteed.
Ken-L-Biskit 20% Protein Dog Feed		20.0	2.0	2.0	
G. P. Rose & Co., Nashville, Tenn. Triumph 22% Protein Dog Feed	Vick Smith, Bowling Green	22.3	7.4	4.3	Deficient in fat.
		22.0	8.0	5.0	
Swift & Co., Chicago, Ill. Swift's Fard 22% Protein Dog Feed	Haller's Pet Shop, Louisville	22.3	5.9	2.3	As guaranteed.
		22.0	6.0	5.0	
Variety Foods, Inc., Indianapolis, Ind. Vigor 30% Protein Dog Feed	Steiden Stores, St. Matthews	38.2	3.9	2.5	As guaranteed.
		30.0	2.7	4.0	
Wilson & Co., Chicago, Ill. Ideal Brand 34% Protein Dog Feed	Kroger Grocery & Baking Co., St. Matthews	35.0	9.2	3.1	As guaranteed.
		34.0	7.0	4.0	

**SUMMARY OF RESULTS OF INSPECTION AND ANALYSIS, 1943**

The results of analyses of inspection samples of feeds for 1943 showed a wider variation in irregularities in both the chemical and microscopical analyses than in previous years. This was due mainly to shortages of feed materials at certain seasons, necessitating the substitution of other feed materials of similar nature not listed in the original formulas. It has been the custom of the Department, when requested and when proper explanation is given, to permit such changes of ingredients to be made in the formulas during the emergency. These changes have been contingent upon the manufacturer maintaining the same chemical standards of quality in his feeds. Only such irregularities, therefore, of a flagrant nature and those not due to the interchange of ingredients of like nature, are reported in this summary of analytical results.

- Acme-Evans Co., Indianapolis, Ind. Inspection samples analyzed, 10.  
Acme Wheat Red Dog Flour (Soft Wheat), 1; deficient in fat.  
Acme Ground Barley, 1; excess fiber.  
Producer Brand 17% Protein Starting and Growing Mash, 2; equaled guaranty.  
Acme 18% Protein Egg Mash, 2; 1 no dried milk byproduct found.  
Acme Horse Feed, 1; equaled guaranty.  
Producer Horse Feed, 1; equaled guaranty.  
Acme 24% Protein Dairy Feed, 1; equaled guaranty.  
Producer 24% Protein Dairy Feed, 1; equaled guaranty.
- Albers Milling Co., Seattle, Wash. Inspection samples of Manna Brand 25% Protein Calf Feed analyzed, 2; 1 deficient in protein.
- Alfocorn Milling Co., E. St. Louis, Ill. Inspection samples analyzed, 4.  
Alfocorn's Dollar Mark Horse Feed, 1; equaled guaranty.  
Dollar Mark 40% Protein Hog Supplement, 1; equaled guaranty.  
Full Pail Brand 16% Protein Dairy Feed, 2; equaled guaranty.
- Allied Mills, Chicago, Ill. Inspection samples analyzed, 33.  
Wayne 18% Protein Chick Starter, 1; equaled guaranty.  
Wayne 17% Protein Growing Mash, 1; equaled guaranty.  
Wayne 17% Protein Starter and Grower With Sardine Oil, 1; equaled guaranty.  
Wayne 19% Protein Broiler Ration, 2; equaled guaranty.  
Wayne 13% Protein Poultry Fattener, 1; equaled guaranty.  
Economy 18% Protein Laying Mash, 1; equaled guaranty.  
Wayne 20% Protein Egg Mash, 1; equaled guaranty.  
Wayne 20% Protein Egg Mash With Sardine Oil, 2; equaled guaranty.  
Wayne 25% Protein Turkey Starting Mash, 1; deficient in protein.  
Wayne 20% Protein Turkey Growing Mash With Sardine Oil, 1; equaled guaranty.

- Wayne 26% Protein Poultry Mash Supplement With Sardine Oil, 1; equalled guaranty.
- Wayne Horse Feed, 1; equalled guaranty.
- Wayne 14% Protein Pork Maker, 1; equalled guaranty.
- Wayne 20% Protein Pig and Sow Meal, 1; equalled guaranty.
- Wayne Victory 35% Protein Hog Supplement, 1; equalled guaranty.
- Wayne 36% Protein Hog Supplement, 1; equalled guaranty.
- Wayne 13% Protein Rabbit Feed, 1; equalled guaranty.
- Wayne 12% Protein Fitting Ration, 1; equalled guaranty.
- Wayne 27% Protein Sweet Mix Stock Supplement, 1; equalled guaranty.
- Wayne Complete 16% Protein Calf Feed, 2; equalled guaranty.
- Wayne 24% Protein Calf Meal, 2; equalled guaranty.
- Wayne 16% Protein Dairy Feed, 3; 1 deficient in fat.
- Wayne 18% Protein Dairy Feed, 1; equalled guaranty.
- Wayne 20% Protein Dairy Feed, 1; equalled guaranty.
- Wayne 24% Protein Dairy Feed, 1; equalled guaranty.
- Wayne 32% Protein Dairy Feed Supplement, 2; equalled guaranty.
- Anderson & Spilman, Danville, Ky. Inspection samples analyzed, 2.
- Snow Flake Feed, 1; equalled guaranty.
- Stock Feed, 1; deficient in fat; ground wheat substituted for wheat bran and wheat shorts.
- Arcady Farms Milling Co., Chicago, Ill. Inspection samples analyzed, 15.
- Sunkist 18% Protein Complete Chick Starter, 1; excess fiber; ground weed seeds present.
- Sunkist 17% Protein Growing Mash, 2; equalled guaranty.
- Arcady 18% Protein Complete Broiler Ration, 2; equalled guaranty.
- Wonderfat Brand 15% Protein Station Feed, 1; excess fiber.
- Sunkist 20% Protein Egg Mash, 1; ground weed seeds present.
- Arcady 18% Protein Turkey Growing Mash, 1; equalled guaranty.
- Sunkist 34% Protein Poultry Supplement, 1; equalled guaranty.
- Arcady 35% Protein Hog Supplement, 1; deficient in protein, no corn oil meal found; fish meal and molasses present tho not guaranteed.
- Sunkist 40% Protein Hog Supplement, 1; excess fiber; ingredients not as guaranteed; misbranded.
- Atlantic Besbet 16% Protein Dairy Feed, 1; deficient in fat; ground wheat present tho not guaranteed.
- Arcady 24% Protein Dairy Ration, 2; 1 deficient in protein.
- Arcady 32% Protein Dairy Supplement, 1; equalled guaranty.
- Aubrey & Co., Louisville, Ky. Inspection samples analyzed, 51
- Ground Wheat, 2; equalled guaranty.
- Soft Wheat Mixed Feed and Screenings, 1; equalled guaranty.
- Hominy Meal, 2; deficient in fat.
- Red Bird 17% Protein Starting Mash, 2; equalled guaranty.
- Red Bird 18% Protein Growing Mash, 1; equalled guaranty.

- Red A 17% Protein Starting, Growing and Developing Mash, 2; deficient in protein.
- Red A 17% Protein All-Mash Starter-Grower-Broiler Ration, 2; 1 excess fiber
- Rainbow 14% Protein Poultry Fattening Mash, 2; equaled guaranty.
- Rainbow 18% Protein Laying Mash, 1; equaled guaranty.
- Red A 20% Protein Laying Mash, 6; equaled guaranty.
- Supreme Brand 32% Protein Mash Supplement, 1; equaled guaranty.
- Monarch Horse Feed, 4; 1 excess fiber.
- Supreme Brand 95% Grain Horse Feed, 1; excess fiber.
- Rainbow 18% Protein Hog and Pig Feed, 1; equaled guaranty.
- Red A 18% Protein Hog and Pig Feed, 1; equaled guaranty.
- Red A 40% Protein Hog Supplement, 4; equaled guaranty.
- Red A 16% Protein Sheep Feed, 1; equaled guaranty.
- Red A 16½% Protein Dairy Feed, 5; 2 deficient in protein.
- Monarch 16½% Protein Dairy Feed, 3; 1 deficient in protein.
- Red A 20% Protein Dairy Feed, 2; deficient in protein; 1 corn gluten product present tho not guaranteed; 1 no cottonseed meal, brewers dried grains or molasses found.
- Jewell's 24% Protein Dairy Feed, 1; equaled guaranty.
- Ful-O-Cream Brand 24% Protein Dairy Feed, 2; equaled guaranty.
- Supreme Brand 24% Protein Dairy Feed, 2; equaled guaranty.
- Rainbow 34% Protein Dairy Supplement, 2; 1 deficient in fat, no cottonseed meal, linseed oil meal, molasses or salt found, excess soybean oil meal present, misbranded.
- The Auburn Mills, Auburn, Ky. Inspection sample of Corn Byproduct Feed analyzed, 1; equaled guaranty.
- Ballard & Ballard Co., Louisville, Ky. Inspection samples analyzed, 35.
- Ballard's Wheat Red Dog, 1; equaled guaranty.
- Ballard's Wheat Bran, 1; equaled guaranty.
- Ballard's Kentucky Farm Feed and Screenings, 2; equaled guaranty.
- Insurance Brand Scratch Grains, 1; equaled guaranty.
- Insurance Brand 18% Protein Chick Starting Mash, 3; equaled guaranty.
- Ballard's 18% Protein Starting Mash, 1; equaled guaranty
- Insurance Brand 18% Protein Growing Mash, 2; equaled guaranty.
- Insurance Brand 18% Protein Broiler Ration, 1; equaled guaranty.
- Ballard's 20% Protein Laying Mash, 1; equaled guaranty.
- Ballard's 18% Protein Laying Mash and Pullet Grower, 2; equaled guaranty.
- Insurance Brand 20% Protein Egg and Breeder Mash, 2; equaled guaranty.
- Insurance Brand 26% Protein Turkey Starter, 1; equaled guaranty.
- Insurance Brand 20% Protein Turkey Growing Mash, 1; equaled guaranty.
- Ballard's Heavy Grain Horse Feed, 1; equaled guaranty.
- Ballard's Big Value Brand Horse Feed, 1; equaled guaranty.

Special Insurance Brand Horse Feed, 1; equaled guaranty.  
Insurance Brand 16% Protein Pig and Hog Ration, 2; equaled guaranty.  
Insurance Brand 36% Protein Pig and Hog Feed Supplement, 1; excess fiber.  
Insurance Brand 13½% Protein Sheep Feed, 2; equaled guaranty.  
Insurance Bulky Feed, 1; equaled guaranty.  
Ballard's 16% Protein Sweet Dairy Feed, 5; equaled guaranty.  
Milk Insurance Brand 18% Protein Dairy Feed, 2; equaled guaranty.

Baughman Milling Co., Stanford, Ky. Inspection samples analyzed, 2.  
Banner Stock Feed, 1; excess fiber.  
Barley Malt Screenings, 1; equaled guaranty.

Beaver Dam Milling Co., Beaver Dam, Ky. Inspection samples analyzed, 5.  
Eureka Brand 17% Protein Growing Mash, 1; equaled guaranty.  
Eureka Brand 17% Protein All-Mash Starting and Growing Ration, 1; equaled guaranty.  
Eureka Brand 21% Protein Laying Mash, 1; equaled guaranty.  
Eureka Brand 60% Grain Horse and Mule Feed, 1; equaled guaranty.  
Beaver Brand 16% Protein Dairy Feed, 1; equaled guaranty.

Bi-County Farm Bureau Co-operative Association, Devon, Ky. Inspection samples analyzed, 4.  
Co-op Mermash Brand 17% Protein Starting Mash, 1; no kelp found.  
Co-op Economy Brand 18% Protein Laying Mash, 1; equaled guaranty.  
Co-op Special Brand 20% Protein Laying Mash, 1; steamed bone meal present tho not guaranteed.  
Co-op Milkmaker Brand 20% Protein Dairy Feed, 1; equaled guaranty.

The Big Four Mills, Ltd., Covington, Ky. Inspection samples analyzed, 14.  
O. K. Brand 18% Protein Starter and Grower Mash, 1; equaled guaranty.  
Big Four 20% Protein Starter and Grower Mash, 2; 1 excess fiber.  
O. K. Brand 20% Protein Egg Mash, 2; equaled guaranty.  
Hi-Lo Horse Feed, 1; equaled guaranty.  
Big Four 19% Protein Pig and Hog Feed, 1; much deficient in fat; ground barley present tho not guaranteed.  
Big Four 16% Protein Dairy Feed, 1; corn gluten feed, brewers dried grains and screenings present tho not guaranteed; adulterated with about 180,000 unground weed seeds to 100 pounds of feed, misbranded.  
Big Four 18% Protein Dairy Feed, 1; deficient in protein; no distillers dried grains found, barley hulls present tho not guaranteed; misbranded.

- Hi-Lo 24% Protein Dairy Feed, 3; 1 deficient in protein, no brewers dried grains found, ground corn present tho not guaranteed, adulterated with about 62,000 unground weed seeds to 100 pounds of feed, misbranded.
- Big Four 24% Protein Dairy Feed, 1; excess fiber; no corn gluten feed found; ground wheat substituted for wheat bran.
- Big Four 32% Protein Dairy Supplement, 1; deficient in fat; no corn gluten feed, corn gluten meal or brewers dried grains found; malt sprouts present tho not guaranteed; misbranded.
- Binns Milling Co., Herndon, Ky. Inspection sample of Binn's Do-Mor Brand 18% Protein Laying Mash analyzed, 1; equaled guaranty.
- Bisbee Linseed Co., Philadelphia, Pa. Inspection sample of Bisbee Brand 34% Protein Linseed Meal analyzed, 1; equaled guaranty.
- Blanton Milling Co., Indianapolis, Ind. Inspection samples analyzed, 2.  
Blanton Wheat Brown Middlings and Screenings, 1; equaled guaranty.  
Perfect Brand 14% Protein Hog Fattener, 1; equaled guaranty.
- Blish Milling Co., Seymour, Ind. Inspection samples analyzed, 3.  
Woodstock Wheat Bran, 1; equaled guaranty.  
Woodstock Wheat Gray Shorts and Screenings, 1; deficient in fat; corn meal present; misbranded.  
Bull's Eye Wheat Brown Middlings and Screenings, 1; equaled guaranty.
- Boonville Mills, Inc., Broonville, Ind. Inspection samples analyzed, 2.  
Boone 40% Protein Hog Supplement, 1; equaled guaranty.  
Liberty 16% Protein Dairy Feed, 1; equaled guaranty.
- W. H. Brock & Co., Maysville, Ky. Inspection samples analyzed, 2.  
Distillers Wheat Dried Grains, 1; equaled guaranty.  
CCC Ground Wheat, 1; equaled guaranty.
- The Brode Corporation, Memphis, Tenn. Inspection sample of Owl Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.
- Bryant's Mill, Caneyville, Ky. Inspection samples analyzed, 2.  
Kentucky Farm 17% Protein Starter and Grower, 1; equaled guaranty.  
Kentucky Farm 18% Protein Laying Mash, 1; equaled guaranty.
- The Buckeye Cotton Oil Co., Cincinnati, O. Inspection samples analyzed, 2.  
Buckeye 41% Protein Soybean Oil Meal, 1; equaled guaranty.  
Buckeye 44% Protein Solvent Process Soybean Oil Meal, 1; equaled guaranty.
- Buffalo Roller Mills, Buffalo, Ky. Inspection sample of Sea Foam Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein.

- The Buhner Feed Co., Seymour, Ind. Inspection samples analyzed, 3.  
Buhner's Happy Farmer 18% Protein Chick Starter Mash, 1; deficient in protein and fat; no alfalfa meal found; linseed meal, soybean oil meal and ground barley present tho not guaranteed.  
Buhner's Happy Farmer 20% Protein Laying Mash, 1; equaled guaranty.  
Buhner's Special Brand 16% Protein Dairy Feed, 1; equaled guaranty.
- Bundy Bros. Mill Co., Medora, Ind. Inspection samples analyzed, 4.  
Monarch 18% Protein Laying Mash, 3; equaled guaranty.  
Medora 17% Protein Poultry Mash, 1; much deficient in protein; no dried buttermilk or alfalfa leaf meal found; misbranded.
- Bunton Seed Co., Inc., Louisville, Ky. Inspection sample of Bunton's Quality Brand 24% Protein Dairy Feed analyzed, 1; deficient in protein; excess fiber; no corn gluten feed, distillers dried grains or kelp found; soybean hulls present tho not guaranteed; misbranded.
- Burnside Milling Co., Burnside, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein.
- Cairo Meal & Cake Co., Cairo, Ill. Inspection sample of Miss Cairo Brand 41% Protein Cottonseed Meal analyzed, 1; deficient in protein and excess fiber.
- Campbellsville Milling Co., Campbellsville, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein.
- Cape County Milling Co., Jackson, Mo. Inspection sample of Capco Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Central Kentucky Milk Producers Association, Lexington, Ky. Inspection samples analyzed, 11.  
Co-op 19% Protein Starting and Growing Mash, 2; equaled guaranty.  
Co-op 24% Protein Dairy Feed, 6; equaled guaranty.  
Special 24% Protein Dairy Feed, 3; equaled guaranty.
- Central Soya Co., Ft. Wayne, Ind. Inspection samples of Central 41% Protein Soybean Oil Meal analyzed, 3; equaled guaranty.
- City Roller Mills, Vevay, Ind. Inspection samples analyzed, 2.  
Blue Ribbon 17% Protein Starting and Growing Mash, 1; equaled guaranty.  
Blue Ribbon Special 18% Protein Dairy Feed, 1; equaled guaranty.
- Clarkson Milling Co., Clarkson, Ky. Inspection sample of Special Mixed Feed analyzed, 1; equaled guaranty.
- Clell Coleman & Sons, Burgin, Ky. Inspection sample of Big Blue Stock Feed analyzed, 1; deficient in fat.
- Colonial Milling Co., Nashville, Tenn. Inspection sample of Colonial's Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

- Community Flour Mills, Greenup, Ky. Inspection samples analyzed, 3.  
Best Yet Brand Mixed Feed, 1; equaled guaranty.  
Farmer's Friend 16% Protein Dairy Feed, 1; equaled guaranty.  
Two-Way 16% Protein Dairy Feed, 1; equaled guaranty.
- Geo. Couch & Sons, New Harmony, Ind. Inspection sample of Harmony Brand 18% Protein Pork Maker analyzed, 1; equaled guaranty.
- Crescent Roller Mills Co., Taylorsville, Ky. Inspection sample of Crescent Stock Feed analyzed, 1; equaled guaranty.
- Cumberland Chemical Co., Hopkinsville, Ky. Inspection sample of Cumberland Bone Builder analyzed, 1; excess salt.
- Dearborn Mills, Aurora, Ind. Inspection samples analyzed, 10.  
Dearborn Wheat Bran and Screenings, 1; equaled guaranty.  
Dearborn 20% Protein Layer Mash, 1; equaled guaranty.  
Success Brand Horse and Mule Feed, 1; deficient in protein; no alfalfa meal or distillers dried grains found.  
Dearborn Horse and Mule Feed, 1; equaled guaranty.  
Dearborn 16% Protein Pig and Hog Ration, 1; equaled guaranty.  
Dearborn 13½% Protein Sheep Feed, 1; equaled guaranty.  
Dearborn 16% Protein Dairy Feed, 2; equaled guaranty.  
Dearborn 20% Protein Dairy Feed, 1; equaled guaranty.  
Success Brand 24% Protein Dairy Feed, 1; deficient in protein.
- Decatur Milling Co., Decatur, Ill. Inspection samples of Homco Hominy Feed analyzed, 3; equaled guaranty.
- The Dewey Bros. Co., Blanchester, O. Inspection samples analyzed, 5.  
Dewco 17% Protein Starter and Grower, 1; equaled guaranty.  
Dewco 18% Protein Egg Mash, 1; equaled guaranty.  
Dewco 15% Protein Pig and Hog Feed, 1; equaled guaranty.  
Dewey's 20% Protein Dairy Feed, 2; equaled guaranty.
- W. C. Dicken, Mentor, Ky. Inspection samples analyzed, 6.  
Sunny Grain Brand 17% Protein Chick Starter, 1; equaled guaranty.  
Sunny Grain Brand 18% Protein Chick Grower, 1; deficient in fat.  
Sunny Grain Brand 18% Protein Laying Mash, 1; deficient in fat.  
Sunny Grain Brand 20% Protein Laying Mash, 1; equaled guaranty.  
Sunny Grain Brand 18% Protein Dairy Feed, 1; equaled guaranty.  
Sunny Grain Brand 24% Protein Dairy Feed, 1; equaled guaranty.
- Dixie Mills Co., E. St. Louis, Ill. Inspection samples analyzed, 8.  
Dixie 17% Protein Starter and Grower Mash, 1; equaled guaranty.  
Dixie 16% Protein All-Purpose Poultry Mash, 1; deficient in fat  
Dixie 20% Protein Laying Mash, 2; equaled guaranty  
Dixie 15% Protein Hog Feed, 1; equaled guaranty.  
Dixie 16% Protein Dairy Feed, 1; excess fiber; brewers dried grains and cottonseed meal present tho not guaranteed.  
Dixie 24% Protein Dairy Feed, 1; equaled guaranty.  
Dixie 32% Protein Dairy Supplement, 1; equaled guaranty

- The Drackett Products Co., Cincinnati, O. Inspection sample of Drackett 44% Protein Solvent Soybean Oil Meal analyzed, 1; equaled guaranty.
- Dunlop Milling Co., Inc., Clarksville, Tenn. Inspection samples analyzed 3.  
Challenger 20% Protein Pig Starter, 1; equaled guaranty.  
Challenger 36% Protein Hog Supplement, 2; much deficient in protein; ingredients not as guaranteed; misbranded.
- The Early & Daniel Co., Cincinnati, O. Inspection samples analyzed, 27.  
Ground Wheat, 1; equaled guaranty.  
Tuxedo Chick Grains, 1; equaled guaranty.  
Tuxedo 17½% Protein Starting and Growing All-Mash, 1; equaled guaranty.  
Tuxedo 17½% Protein Starter, Grower and Developer Mash, 2; no alfalfa meal found, ground wheat present tho not guaranteed; 1 deficient in fat, no meat scraps found.  
Tuxedo 20% Protein Egg Mash, 1; equaled guaranty.  
Tuxedo Special 20% Protein Egg Mash, 1; equaled guaranty.  
Tuxedo 30% Protein Poultry Mash Supplement, 1; equaled guaranty.  
Tuxedo Chop, 1; equaled guaranty.  
Tuxedo 14½% Protein Pig Meal, 2; equaled guaranty.  
Tuxedo 19% Protein Hog Ration, 1; much deficient in protein and fat; ingredients not as guaranteed; misbranded.  
Tuxedo Big 35% Protein Hog Supplement, 2; 1 deficient in fat, no cottonseed meal or fish meal found.  
Economy Special 16% Protein Dairy Feed, 1; equaled guaranty.  
Tuxedo Special 16% Protein Dairy Feed, 2; equaled guaranty.  
Tuxedo 20% Protein Dairy Feed, 1; equaled guaranty.  
Tuxedo Special 20% Protein Dairy Feed, 2; 1 excess fiber, no corn gluten feed or distillers dried grains found.  
Tuxedo 24% Protein Dairy Feed, 3; 1 deficient in protein and fat, ground wheat substituted for wheat bran and wheat middlings, no corn gluten feed or cottonseed meal found.  
Tuxedo Special 24% Protein Dairy Feed, 2; 1 deficient in protein, no corn gluten feed or cottonseed meal found, ground wheat substituted for wheat bran and wheat middlings.  
Our Pride Special 24% Protein Dairy Feed, 1; equaled guaranty.  
Tuxedo 33% Protein Dairy Supplement, 1; equaled guaranty.
- The F. L. Emmert Co., Cincinnati, O. Inspection samples analyzed, 2.  
Buffalo Brand 24% Protein Brewers Dried Grains, 1; equaled guaranty.  
Molasso-Malt Brand 22% Protein Brewers Dried Grains and Molasses, 1; equaled guaranty.
- John W. Eshelman & Sons, Lancaster, Pa. Inspection samples analyzed, 10.  
Eshelman Red Rose 16% Protein All-Mash Starter and Grower With A and D Oil, 1; equaled guaranty.

- Eshelman Red Rose 14% Protein Fattening Mash, 1; equaled guaranty.
- Eshelman Red Rose 18½% Protein Laying Mash with A and D Oil, 1; equaled guaranty.
- Eshelman Red Rose 18% Protein Pig and Hog Meal, 2; 1 much excess fiber.
- Eshelman Red Rose 15% Protein Sheep Feed, 1; equaled guaranty.
- Eshelman Pennsy 16% Protein Dairy Feed, 2; 1 excess fiber.
- Eshelman Red Rose 24% Protein Dairy Feed, 1; equaled guaranty.
- Eshelman Challenge 24% Protein Dairy Feed, 1; much excess fiber.
- Evans Milling Co., Indianapolis, Ind. Inspection samples of Emco Hominy Feed analyzed, 1; equaled guaranty.
- Excelsior Milling Co., Minneapolis, Minn. Inspection sample of Camel Wheat Mixed Feed analyzed, 1; excess fiber.
- Exchange Milling Co., Sturgis, Ky. Inspection sample of Smith's Special Horse Feed analyzed, 1, equaled guaranty.
- Oscar Farmer & Sons, Louisville, Ky. Inspection sample of We Kno Ground Oats analyzed, 1; equaled guaranty.
- Farmers & Merchants Milling Co., Brooksville, Ky. Inspection samples of Wheat Mixed Feed and Screenings analyzed, 2; equaled guaranty.
- Farmers Mill Co., Columbia, Ky. Inspection samples of Shipstuff analyzed, 1; deficient in protein.
- Farmers Supply Co., Danville, Ky. Inspection sample of Farmo 16% Protein Hog and Pig Feed analyzed, 1; ingredients not as guaranteed; misbranded.
- Farmers Union Mill, Versailles, Ky. Inspection samples analyzed, 2.  
Mixed Feed, 1; equaled guaranty.  
15½% Protein Sheep Feed, 1; equaled guaranty.
- J. H. Fedders' Sons, Covington, Ky. Inspection sample of Hominy Feed analyzed, 1; equaled guaranty.
- Ferncliff Feed & Grain Co., Louisville, Ky. Inspection samples analyzed, 12.  
Cracker Jack 41% Protein Soybean Oil Cake Meal, 1; equaled guaranty.
- P. D. Q. 17% Protein Starting and Growing Mash, 2; equaled guaranty.
- Cracker Jack 18% Protein Egg Mash, 2; equaled guaranty.
- P. D. Q. 18% Protein Egg Mash, 1; equaled guaranty.
- Cracker Jack 40% Protein Pig and Hog Supplement, 1; equaled guaranty.
- P. D. Q. Special 16% Protein Dairy Feed, 1; excess fiber.
- P. D. Q. Special 24% Protein Dairy Feed, 1; much excess fiber.
- Cracker Jack 24% Protein Sweet Dairy Ration, 1; equaled guaranty.
- Ferncliff 24% Protein Dairy Ration, 2; 1 excess fiber.

- Flaherty Roller Mills, Vine Grove, Ky. Inspection samples of Golden Grain 18% Protein Starter Mash analyzed, 1; equaled guaranty.
- Henry Fruechtenicht, Louisville, Ky. Inspection samples analyzed, 9.  
Producer Brand 17% Protein Starting and Growing Mash, 1; equaled guaranty.  
Producer Brand 20% Protein Laying Mash, 1; equaled guaranty.  
Blue Grass 95% Grain Horse and Mule Feed, 1; equaled guaranty.  
Producer Brand 16% Protein Dairy Feed, 5; 1 excess fiber; 1 ingredients not as guaranteed, misbranded.  
Blue Grass 24% Protein Dairy Feed, 1; deficient in protein, ground wheat substituted for wheat bran and wheat middlings.
- Fuhrer-Ford Milling Co., Mt. Vernon, Ind. Inspection sample of Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.
- Garden Street Mill & Elevator Co. (Aubrey & Co.), Louisville, Ky. Inspection samples analyzed, 4.  
Garden Horse Feed, 1; much excess fiber; excess oat hulls present; misbranded.  
Garden 16% Protein Dairy Feed, 2; equaled guaranty.  
Garden 24% Protein Dairy Feed, 1; equaled guaranty.
- General Mills, Inc., Minneapolis, Minn. Inspection samples analyzed, 12.  
Washburn's Gold Medal Adrian Hard Wheat Red Dog, 1; equaled guaranty.  
Ben Hur Wheat Gray Shorts and Screenings, 1; equaled guaranty.  
Sonny South Wheat Gray Shorts and Screenings, 1; equaled guaranty.  
Larro 19% Protein Chick Builder, 1; equaled guaranty.  
Larro 20% Protein Broiler Feed, 1; equaled guaranty.  
Larro 18% Protein Egg Mash, 1; equaled guaranty.  
Larro 20% Protein Turkey Breeder Mash, 1; equaled guaranty.  
Larro 19% Protein Turkey Finisher, 1; equaled guaranty.  
Larro 17½% Protein Sow and Pig Builder, 1; equaled guaranty.  
Larro 18% Protein Dairy Feed, 2; equaled guaranty.  
Larro 32% Protein Dairy Supplement, 1; equaled guaranty.
- Germantown Milling Co., Germantown, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- The Glidden Co., Indianapolis, Ind. Inspection samples analyzed, 14.  
Glidden 17% Protein Starter and Grower, 1; equaled guaranty.  
Capitol 18% Protein Egg Mash, 4; 1 deficient in fat; 2 excess fiber, ingredients not as guaranteed, misbranded; 2 much excess fiber, adulterated with soybean hulls, misbranded.  
Glidden 30% Protein Hog Supplement, 1; deficient in fat.  
Solvent Soybean Meal Byproduct, Soybean Hulls, Molasses and Minerals (16½% Protein), 2; equaled guaranty.  
Solvent Soybean Meal Byproduct, Soybean Hulls, Molasses and Minerals (24% Protein), 1; equaled guaranty.

- Capitol 16½% Protein Dairy Feed, 2; deficient in fat and much excess fiber; no ground corn or soybean oil meal found; adulterated with soybean hulls; misbranded.
- Capitol 24% Protein Dairy Feed, 2; no wheat bran or ground corn found; 1 much deficient in fat, no ground oats found, misbranded; 1 excess fiber, cottonseed meal present tho not guaranteed, excess soybean byproduct present, adulterated and misbranded.
- Glidden 32% Protein Dairy Supplement, 1; much deficient in protein and much excess fiber; ingredients not as guaranteed; misbranded.
- Edw. F. Goeke Sons, Evansville, Ind. Inspection samples analyzed, 4.
- Goeke's Ultra-Lifed Brand 16% Protein All-Mash Poultry Ration, 1; excess fiber.
- Big Gee 20% Protein Hog Feed, 1; equaled guaranty.
- Goeke's 35% Protein Hog Supplement, 1; equaled guaranty.
- Goeke's 40% Protein Hog Supplement, 1; equaled guaranty.
- The Goldcamp Mill Co., Ironton, O. Inspection samples analyzed, 4.
- Gold-Co Egg-O Brand 18% Protein Laying Mash, 1; no fish meal found; corn gluten meal and screenings present tho not guaranteed.
- 17% Protein Pig and Hog Grower, 1; equaled guaranty.
- Gold-Co 16% Protein Dairy Feed, 1; adulterated with about 108,000 unground weed seeds to 100 pounds of feed; misbranded.
- Cream Flow Brand 24% Protein Dairy Feed, 1; equaled guaranty.
- Grain & Feed Mills Co., St. Louis, Mo. Inspection sample of Ground Wheat analyzed, 1; equaled guaranty.
- Green River Milling Co., S. Carrollton, Ky. Inspection samples analyzed, 2.
- Green River 15½% Protein All-Mash Grower, 1; deficient in fat and much excess fiber; ingredients not as guaranteed; misbranded.
- Green River 16% Protein Dairy Feed, 1; equaled guaranty.
- Gwinn Bros. & Co., Huntington, W. Va. Inspection samples analyzed, 14.
- Ground Wheat, 1; equaled guaranty.
- Gwinn's Wheat Brown Middlings and Screenings, 2; 1 deficient in protein, corn byproduct present.
- Merit Brand 18% Protein Laying Mash, 2; 1 adulterated with about 307,000 unground weed seeds to 100 pounds of feed, misbranded; 1 screenings present tho not guaranteed.
- Gwinn's 18% Protein Pig and Hog Feed, 1; no ground oats found; ground weed seeds present.
- Merit Brand 16% Protein Dairy Feed, 5; 1 deficient in protein; 1 deficient in fat; 1 adulterated with about 4,987,000 unground weed seeds to 100 pounds of feed; 1 adulterated with about 171,000 unground weed seeds to 100 pounds of feed; 4 ingredients not as guaranteed; misbranded.

Gwinn's Make Milk 20% Protein Dairy Feed, 1; deficient in fat and excess fiber; ingredients not as guaranteed; misbranded.

Merit Brand 20% Protein Dairy Feed, 1; ingredients not as guaranteed; adulterated with about 907,000 unground weed seeds to 100 pounds of feed; misbranded.

Gwinn's Grade A Brand 24% Protein Dairy Feed, 1; deficient in protein and fat and excess fiber; ingredients not as guaranteed; adulterated and misbranded.

Hales & Hunter Co., Chicago, Ill. Inspection samples analyzed, 14.

Red Comb 18% Protein Chick Starter, 1; equaled guaranty.

Morning Glory 17% Protein Growing Mash, 1; equaled guaranty.

Red Comb 18% Protein Broiler Mash, 2; equaled guaranty.

Red Comb 13% Protein Crate Fattener, 1; equaled guaranty.

Red Comb 18% Protein Universal Poultry Mash, 1; equaled guaranty.

Red Comb 18% Protein Egg Mash, 1; equaled guaranty.

Morning Glory 20% Protein Egg Mash, 1; equaled guaranty.

Pioneer 15% Protein Hog Fattener, 1; equaled guaranty.

Pioneer 20% Protein Pig and Hog Feed, 1; equaled guaranty.

Pioneer V 30% Protein Hog Supplement, 1; equaled guaranty.

Victoria 12% Protein Rabbit Feed, 1; equaled guaranty.

Gold Flake 16½% Protein Dairy Feed, 2; no corn germ meal or cottonseed meal found; 1 no linseed oil meal found; 1 brewers dried grains present tho not guaranteed.

Hancock & Franklin Mills (Henry Fruechtenicht), Louisville, Ky. Inspection sample of Shield Brand 24% Protein Dairy Feed analyzed, 1; equaled guaranty.

Hanson Roller Mills, Hanson, Ky. Inspection samples of White Frost 16% Protein Poultry All-Mash analyzed, 1; deficient in protein; no meat scrap found.

R. L. Harrison & Son, Bagdad, Ky. Inspection samples analyzed, 7.

CCC Ground Wheat, 1; excess fiber.

Harrison's 20% Protein Laying Mash, 1; equaled guaranty.

Harrison's 95% Grain Horse and Mule Feed, 1; equaled guaranty.

Harrison's Stock Feed, 2; equaled guaranty.

Harrison's Nat-Ur-Way Brand 16% Protein Dairy Feed, 1; equaled guaranty.

Bulky 16½% Protein Dairy Feed, 1; deficient in protein; no soybean oil meal found; adulterated with about 1,500,000 unground weed seeds to 100 pounds of feed; misbranded.

The P. H. Harsha Milling Co., Portsmouth, O. Inspection samples analyzed, 5.

Harsha's 18% Protein Laying Mash, 2; 1 deficient in protein, no dried buttermilk or soybean oil meal found, ground wheat substituted for wheat middlings

Superior Brand Horse and Mule Feed, 1; equaled guaranty.

Harsha's Special Brand 16% Protein Dairy Feed, 2; deficient in protein; 1 no distillers dried grains found, corn meal present tho not guaranteed, ground wheat substituted for wheat bran.

G. M. Haycraft & Sons, Leitchfield, Ky. Inspection sample of Haycraft's 20% Protein Summer Laying Mash analyzed, 1; equaled guaranty.

Haydon Mill & Grain Co., Springfield, Ky. Inspection samples analyzed, 3.

Economy Brand Mixed Feed, 1; deficient in fat.

Grow Quick 18% Protein Starting Mash, 1; equaled guaranty.

Economy Brand 19% Protein Laying Mash, 1; very deficient in protein; corn gluten feed present tho not guaranteed.

Dr. Heinz Co., Cincinnati, O. Inspection samples analyzed, 5.

Heinz Nu-Way Brand 18% Protein Laying Mash, 1; deficient in protein; no corn oil meal found.

Heinz Nu-Way Brand 14% Protein Hog Maker, 1; deficient in fat; ground rye substituted for ground barley.

Heinz Nu-Way Brand 16% Protein Dairy Feed, 2; 1 very deficient in protein, ingredients not as guaranteed, misbranded; 1 much excess fiber, no corn germ meal found, cocoanut oil meal and oat hulls present tho not guaranteed, misbranded.

Heinz Nu-Way Brand 24% Protein Dairy Ration, 1; very deficient in protein; ingredients not as guaranteed; misbranded.

Henderson Elevator Co., Inc., Henderson, Ky. Inspection samples analyzed, 3.

Bullitt's Best Brand 18% Protein Chick Starter, 1; deficient in protein.

Bullitt's Ideal Brand 18% Protein Growing Mash, 1; equaled guaranty.

Bullitt's 17% Protein All-Purpose Poultry Mash, 1; equaled guaranty.

V. E. Herter & Co., Dayton, O. Inspection samples analyzed, 10.

Economy Brand 17% Protein Growing Mash, 1; equaled guaranty.

Eagle 16% Protein Starting and Growing All-Mash, 1; equaled guaranty.

Yankee 20% Protein Laying Mash, 2; equaled guaranty.

Curly Tail 17% Protein Pig Feed, 1; equaled guaranty.

Yankee 15% Protein Hog Feed, 1; adulterated with about 272,000 unground weed seeds to 100 pounds of feed; misbranded.

Economy Brand 16% Protein Dairy Feed, 3; 1 adulterated with excess screenings containing about 952,000 unground weed seeds to 100 pounds of feed, misbranded.

Eagle 24% Protein Dairy Feed, 1; deficient in protein.

Home Milling Co., Greenville, Ky. Inspection sample of Happy Home Mixed Feed analyzed, 1; equaled guaranty.

- Hopkinsville Milling Co., Hopkinsville, Ky. Inspection samples analyzed, 3.  
Sunflower Wheat Gray Shorts and Screenings, 2; 1 excess fiber.  
Sunflower 40% Protein Hog Supplement, 1; equaled guaranty.
- Humphreys-Godwin Co., Memphis, Tenn. Inspection sample of Dixie Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.
- Igleheart Bros., Evansville, Ind. Inspection samples analyzed, 3.  
Winter Wheat Gray Shorts and Screenings, 2; equaled guaranty.  
Champion Stock Feed, 1; deficient in fat.
- Illinois Cereal Mills, Inc., Paris, Ill. Inspection samples of Hominy Feed analyzed, 1; equaled guaranty.
- J. F. Imbs Milling Co., Belleville, Ill. Inspection sample of Charm Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Independent Oil Mill, Inc., Jackson, Tenn. Inspection samples of Independent Brand 41% Protein Cottonseed Meal analyzed, 2; equaled guaranty
- Jackson Cotton Oil Mill, Jackson, Tenn. Inspection sample of Bell Cow Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.
- Jellico Grocery Co., Corbin, Ky. Inspection samples analyzed, 2.  
CCC Ground Wheat, 1; equaled guaranty.  
Daisy Feed, 1; equaled guaranty
- J. E. M. Milling Co., (Lexington Roller Mills), Frankfort, Ky. Inspection samples analyzed, 2.  
Capitol Stock Feed, 1; very deficient in protein; ingredients not as guaranteed; misbranded.  
Capitol 16% Protein Dairy Feed, 1; deficient in protein and fat; screenings refuse substituted for screenings; misbranded.
- Kansas Flour Mills Co., Kansas City, Mo. Inspection sample of Ground Wheat Feed analyzed, 1; deficient in fat.
- Kasco Mills, Toledo, O. Inspection samples analyzed, 23.  
Kasco 15% Protein Farm Feed, 2; 1 deficient in protein.  
Kasco 18% Protein All-Mash Chick Starter, 1; equaled guaranty.  
Apex 15% Protein All-Mash Grower, 1; equaled guaranty.  
Apex 15% Protein All-Mash Starter and Grower, 1; deficient in fat.  
Kasco 18% Protein Broiler-Starter Ration, 1; equaled guaranty.  
Apex 18% Protein Egg Mash, 3; equaled guaranty.  
Kasco 20% Protein Egg Producer Mash, 1; equaled guaranty.  
Kasco 20% Protein Turkey Grower, 1; deficient in protein.  
Kasco Horse and Mule Feed, 1; equaled guaranty.  
Apex 16% Protein Hog Feed, 2; equaled guaranty.  
Kasco 17% Protein Pig and Hog Feed, 1; equaled guaranty.  
Apex 24% Protein Dairy Feed, 1; equaled guaranty.  
Kasco Sweet 16% Protein Dairy Feed, 3; equaled guaranty.

- Beatsall Brand 18% Protein Dairy Feed, 1; ingredients not as guaranteed; misbranded.
- Apex 24% Protein Dairy Feed, 1; equaled guaranty.
- Kasco Mormilk Brand 24% Protein Dairy Ration, 2; 1 no corn gluten feed, corn gluten meal, soybean oil meal, or ground oats found.
- Keco Milling Co., McKenzie, Tenn. Inspection samples analyzed, 3.
- Keco 18% Protein Laying Mash, 1; equaled guaranty.
- Keco 18% Protein Pig and Hog Feed, 1; deficient in protein; no corn gluten feed or soybean oil meal found.
- Keco 24% Protein Dairy Feed, 1; equaled guaranty.
- Keller Hay & Grain Co., Newport, Ky. Inspection sample of Hominy Feed analyzed, 1; equaled guaranty.
- Spencer Kellogg & Sons, Inc., Buffalo, N. Y. Inspection samples analyzed, 3.
- Kellogg's 34% Protein Linseed Meal, 2; equaled guaranty.
- Kellogg's 41% Protein Soybean Oil Meal, 1; equaled guaranty.
- The Kentucky Rendering Co., Taylorsville, Ky. Inspection samples analyzed, 3.
- Blue Grass 60% Protein Tankage, 3; 1 deficient in protein.
- Blue Grass 50% Protein Meat Scrap and Calcium Carbonate, 1; equaled guaranty.
- H. C. Knoke & Co., Chicago, Ill. Inspection sample of Knoke's Special Farm Feed analyzed, 1; equaled guaranty.
- The Kroger Grocery & Baking Co., Cincinnati, O. Inspection samples analyzed, 8.
- Kroger's Wesco 17% Protein Starting and Growing Mash, 1; equaled guaranty.
- Kroger's Wesco 20% Protein Special Egg Mash, 3; equaled guaranty.
- Kroger's Wesco 16% Protein Dairy Feed, 2; equaled guaranty.
- Kroger's Wesco 20% Protein Dairy Feed, 1; equaled guaranty.
- Kroger's Wesco 24% Protein Dairy Feed, 1; equaled guaranty.
- Lake County Oil Mill, Tiptonville, Tenn. Inspection samples of 41% Protein Cottonseed Meal analyzed, 2; equaled guaranty.
- Lewisport Mill Co., Lewisport, Ky. Inspection samples analyzed, 2.
- Farmers Choice Feed, 1; equaled guaranty.
- Le-Mi-Co 20% Protein Laying Mash, 1; no corn gluten feed or vitamin carriers found; fish meal present tho not guaranteed.
- Lexington Roller Mills, Lexington, Ky. Inspection samples analyzed, 13.
- Kentucky Queen 18% Protein Starting and Growing All-Mash, 2; equaled guaranty.
- Kentucky Queen 19% Protein Broiler Ration, 1; excess fiber.
- Kentucky Queen 13½% Protein Crate Fattener, 1; equaled guaranty.
- Kentucky Queen 20% Protein Double X Egg Mash, 1; equaled guaranty.

- Thoroughbred 16% Protein Hog Ration, 1; equaled guaranty.  
Bossie Stock Feed, 3; 1 excess fiber; 1 very deficient in protein, no corn gluten feed, soybean oil meal or alfalfa meal found, misbranded.  
Thoroughbred 16% Protein Dairy Feed, 2; deficient in fat; ingredients not as guaranteed; misbranded.  
Thoroughbred 20% Protein Dairy Feed, 1; equaled guaranty.  
Thoroughbred 24% Protein Dairy Feed, 1; equaled guaranty.
- Lindsborg Milling & Elevator Co., Lindsborg, Kans. Inspection sample of Wheat Gray Shorts analyzed, 1; equaled guaranty.
- G. W. Lofton & Son., Providence, Ky. Inspection samples analyzed, 3.  
Lofton's Special Horse and Mule Feed, 2; equaled guaranty.  
Lofton's 16% Protein Special Dairy Feed, 1; adulterated with about 108,800 unground weed seeds to 100 pounds of feed; misbranded.
- Loretto Mill Co., Loretto, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein and fat; ground corn present.
- The Loudonville Milling Co., Loudonville, O. Inspection sample of Le-Grande Soft Winter Wheat Brown Middlings and Screenings analyzed, 1; equaled guaranty.
- Louisville Fertilizer and Feed Co., Louisville, Ky. Inspection sample of Soybean Byproduct analyzed, 1; equaled guaranty.
- L. B. Lovitt & Co., Memphis, Tenn. Inspection samples of Lovit Brand 41% Protein Cottonseed Meal analyzed, 3; equaled guaranty.
- Magnolia Roller Mills, Magnolia, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein and fat.
- Mayfield Milling Co., Mayfield, Ky. Inspection sample of Big Chief 16% Protein All-Mash Grower analyzed, 1; equaled guaranty.
- Mayfield Sweet Feed Mill, Mayfield, Ky. Inspection samples analyzed, 2.  
Mayfield 18% Protein Pig Grower, 1; equaled guaranty.  
State Leader 16% Protein Dairy Feed, 1; equaled guaranty.
- Gentry McCauley Seed Co., Versailles, Ky. Inspection sample of Pleez-U 16% Protein Sheep Feed analyzed, 1; equaled guaranty.
- McMillen Feed Mills, Ft. Wayne, Ind. Inspection sample of Master Mix 26% Protein Calf Pellets analyzed, 1; equaled guaranty.
- The Mennel Milling Co., Toledo, O. Inspection sample of Ground Wheat analyzed, 1; equaled guaranty.
- Middlesboro Milling Co., Middlesboro, Ky. Inspection samples analyzed, 4.  
Hi-Grade Brand Feed, 1; equaled guaranty.  
Hard-to-Beat Feed, 1; deficient in fat.  
Good Value Brand 16% Protein Dairy Feed, 1; equaled guaranty.  
Reliable Brand 24% Protein Dairy Feed, 1; equaled guaranty.

- Model Mills, Georgetown, Ky. Inspection samples of "Best Brand" Mixed Feed analyzed, 2; 1 deficient in protein.
- Monarch Milling Co., Mt. Sterling, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- Mountain City Mill Co., Chattanooga, Tenn. Inspection samples analyzed, 4.  
Signal 17½% Protein Growing Mash, 1; much deficient in protein; ground wheat substituted for wheat bran and wheat shorts; kaffir corn present tho not guaranteed; misbranded.  
Prize Winner Brand 14% Protein Hog Feed, 1; deficient in fat; no soybean oil meal found.  
Blue Stock Mixed Feed, 1; equaled guaranty.  
Blue Cow 16% Protein Feed, 1; deficient in protein.
- Mt. Vernon Milling Co., Mt. Vernon, Ind. Inspection sample of Poco Hominy Feed analyzed, 1; equaled guaranty.
- Munfordville Milling Co., Munfordville, Ky. Inspection samples analyzed, 2.  
Mixed Feed, 1; equaled guaranty.  
XXX Mixed Feed, 1; equaled guaranty.
- Murphy Grain & Milling Co., Owensboro, Ky. Inspection sample of Airo-lite 15½% Protein All Purpose Poultry Mash analyzed, 1; ingredients not as guaranteed; misbranded.
- Murray Milling Co., Murray, Ky. Inspection sample of Special Exclusive 16% Protein Dairy Feed analyzed, 1; equaled guaranty.
- Myers & Clark, Ashland, Ky. Inspection samples analyzed, 8.  
Ideal Brand 18% Protein All-Mash Starter and Grower, 1; deficient in protein.  
Ideal Brand 20% Protein Laying Mash, 1; very deficient in protein; no ground oats or distillers dried grains found; misbranded.  
Ideal Brand Stock Feed, 1; equaled guaranty.  
Ideal Brand 16½% Protein Dairy Feed, 1; deficient in protein; no cottonseed meal, brewers dried grains, or distillers dried grains found; corn gluten feed present tho not guaranteed; misbranded.  
Vim Brand 16% Protein Dairy Feed, 2; ingredients not as guaranteed, misbranded; 1 deficient in fat.  
Victory 20% Protein Dairy Feed, 1; very deficient in protein and fat; ingredients not as guaranteed; adulterated and misbranded.  
Pomco 24% Protein Dairy Feed, 1; very deficient in protein; ingredients not as guaranteed; misbranded.
- National Milling Branch of National Biscuit Co. Toledo, O. Inspection sample of Namico Wheat Gray Middlings and Screenings analyzed, 1; equaled guaranty.
- National Oats Co., E. St. Louis, Ill. Inspection samples analyzed, 10.  
Corno 17% Protein Growing Mash, 1; equaled guaranty.

- Nutro 17% Protein Growing Mash, 1; deficient in fat.  
Corno 18% Protein Laying Mash, 2; equaled guaranty.  
Corno 15% Protein Hog Fattener, 1; equaled guaranty.  
Corno 20% Protein Sow and Pig Feed, 2; equaled guaranty.  
Corno 36% Protein Hog Supplement, 1; equaled guaranty.  
Corno 16% Protein Dairy Feed, 1; equaled guaranty.  
Corno 24% Protein Dairy Feed, 1; equaled guaranty.
- The New Era Milling Co., Arkansas City, Kans. Inspection samples analyzed, 2.  
Polar Bear Wheat Gray Shorts and Screenings, 1; equaled guaranty.  
Polar Bear Wheat Mixed Feed and Screenings, 1; equaled guaranty.
- North American Feed Co., Louisville, Ky. Inspection samples analyzed, 5.  
Ground Whole Wheat, 1; equaled guaranty.  
Nafco 30% Protein Solvent Soybean Byproduct, 1; equaled guaranty.  
Nafco Complete Brand 18% Protein Hog Fattener and Grower, 2;  
1 deficient in fat and excess fiber, ground soybean byproduct present tho not guaranteed; 1 much excess fiber, ingredients not as guaranteed, misbranded.  
Nafco 35% Protein Hog Supplement, 1; equaled guaranty.
- Chas. Nunn & Sons Milling Co., Evansville, Ind. Inspection samples analyzed, 6.  
Nunn-Better Brand 17% Protein Poultry All-Mash, 1; equaled guaranty.  
Nunn-Better Brand 20% Protein Egg Mash, 2; equaled guaranty.  
Nunn-Better Brand 30% Protein Hog Supplement, 2; equaled guaranty.  
Sweet Sixteen 16% Protein Dairy Feed, 1; equaled guaranty.
- Ohio Valley Mills, Lebanon Junction, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein and fat.
- Ohio Valley Soybean Cooperative, Henderson, Ky. Inspection samples of Cardinal 41% Protein Soybean Oil Meal analyzed, 2; equaled guaranty.
- Owensboro Grain Co., Owensboro, Ky. Inspection samples analyzed, 5.  
Greendale 41% Protein Soybean Oil Meal, 3; equaled guaranty.  
39% Protein Soybean Oil Meal and Mineral, 2; equaled guaranty.
- Owensboro Milling Co., Owensboro, Ky. Inspection samples analyzed, 9.  
TruTest Brand Hominy Feed, 1; equaled guaranty.  
TruTest Brand 19% Protein Starting All-Mash, 1; equaled guaranty.  
TruTest Brand 19% Protein Growing Mash, 1; equaled guaranty.  
TruTest Brand 21½% Protein Laying Mash, 1; equaled guaranty.  
TruTest Brand Horse Feed, 1; equaled guaranty.  
D. & H. Stock Feed, 2; 1 deficient in fat.  
Star Brand 16½% Protein Dairy Feed, 1; equaled guaranty.  
TruTest Brand 24% Protein Dairy Feed, 1; deficient in fat.

- Pan-American Mills, Bowling Green, Ky. Inspection samples of Mixed Feed analyzed, 2; 1 deficient in protein, corn meal present tho not guaranteed; 1 deficient in fat.
- Pendleton County Mills, Falmouth, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in fat.
- Peoples Milling Co., Kevil, Ky. Inspection sample of Pee-M-Cee 16% Protein Dairy Feed analyzed, 1; equaled guaranty.
- Pillsbury Flour Mills Co., Minneapolis, Minn. Inspection sample of Palisade M F Feed analyzed, 1; equaled guaranty.
- Princeton Mills, Princeton, Ky. Inspection sample of Big K Mixed Feed analyzed, 1; equaled guaranty.
- Proviso Feeds & Concentrates, Cincinnati, O. Inspection samples analyzed, 8.  
Proviso 20% Protein Starter and Developer, 1; equaled guaranty.  
Proviso 20% Protein Broiler Mash, 1; equaled guaranty.  
Proviso 20% Protein Layer and Breeder, 1; equaled guaranty.  
Big V 20% Protein Egg Mash, 1; equaled guaranty.  
Proviso 20% Protein Pig and Hog Feed, 1; equaled guaranty.  
Proviso 40% Protein Hog Supplement, 1; deficient in protein; no peanut oil meal found.  
Tankene Brand 50% Protein Feed Blend Supplement, 1; equaled guaranty.  
16% Protein Dairy Feed, 1; no corn gluten feed, cottonseed meal, or soybean oil meal found; alfalfa product present tho not guaranteed.
- Purcell Seed Co., Inc., Evansville, Ind. Inspection samples analyzed, 3.  
Purcell's 16% Protein All-Mash Poultry Ration, 1; deficient in fat.  
Judge 40% Protein Shoat and Hog Supplement, 1; equaled guaranty.  
Purcell's 18% Protein Dairy Feed, 1; equaled guaranty.
- The Quaker Oats Co., Chicago, Ill. Inspection samples analyzed, 23.  
Ful-O-Pep 19% Protein Growing Mash, 1; equaled guaranty.  
Ful-O-Pep 19% Protein Broiler Mash, 1; equaled guaranty.  
Big Egg 20% Protein Laying Mash, 2; equaled guaranty.  
Ful-O-Pep 20% Protein Laying Mash, 2; equaled guaranty.  
Ful-O-Pep 20% Protein Egg-Breeder Mash, 1; equaled guaranty.  
Quaker Brand Green Cross Horse Feed 2; equaled guaranty.  
Quaker 16% Protein Pig-N-Hog Feed, 1; equaled guaranty.  
Quaker Shumacher Sweet Feed, 3; 1 deficient in protein, no linseed oil meal, or soybean oil meal found, wheat bran present tho not guaranteed; 1 excess fiber.  
White Diamond Stock Feed, 1; equaled guaranty.  
Ful-O-Pep 14% Protein Cattle Range Breeder Cubes, 1; equaled guaranty.  
Ful-O-Pep 20% Protein Calf Meal, 1; equaled guaranty.

Quaker 16% Protein Dairy Feed, 3; 1 deficient in protein, no cottonseed meal found, corn gluten meal present tho not guaranteed.  
Victor Economy Brand 16% Protein Dairy Feed, 3; 1 deficient in protein.

Ful-O-Pep 18% Protein Dairy Ration, 1; equaled guaranty

Ralston Purina Co., St. Louis, Mo. Inspection samples analyzed, 30.

Purina 18% Protein Chick Startena, 2; equaled guaranty.

Purina 17% Protein Chick Growena All-Mash, 1; equaled guaranty.

Purina 18% Protein Broiler Chow, 2; equaled guaranty.

Purina 15½% Protein All-Mash Layena (Complete Ration), 1; equaled guaranty.

Purina 18% Protein Lay Chow, 2; equaled guaranty.

Purina 22% Protein Lay Chow, 1; equaled guaranty.

Purina 18% Protein Turkey Growena, 1; equaled guaranty.

Purina 23% Protein Turkey Breeder Chow, 1; equaled guaranty.

Grainola Blue Checker Horse and Mule Feed, 1; equaled guaranty.

Purina Omolene, 1; equaled guaranty.

Purina 14% Protein Hog Fatena, 2; 1 deficient in fat.

Purina War Time 35% Protein Hog Chow Supplement, 2; equaled guaranty.

Purina 36% Protein Hog Chow Supplement, 2; 1 bone meal present tho not guaranteed.

Protana Brand 12% Protein Cattle and Sheep Feed, 1; equaled guaranty.

Purina 12½% Protein Dry and Freshening Chow, 1; equaled guaranty.

Purina 19½% Protein Calf Startena, 1; equaled guaranty.

Protana Brand 16% Protein Dairy Feed (Southern States), 1; equaled guaranty.

Purina 16% Protein Milk Chow, 3; equaled guaranty.

Purina 18% Protein Cow Chow, 1; equaled guaranty.

Purina 24% Protein Cow Chow, 2; equaled guaranty.

Purina 34% Protein Cow Chow Supplement, 1; equaled guaranty.

Randolph Milling Co., Bandana, Ky. Inspection samples of Nu-Joy 16% Protein Dairy Feed analyzed, 2; equaled guaranty.

R. D. Riedling, Louisville, Ky. Inspection samples analyzed, 2.

Magnolia 40% Protein Hog Supplement, 1; equaled guaranty.

Magnolia 24% Protein Dairy Feed, 1; much deficient in protein; no corn gluten feed, cottonseed meal, linseed oil meal, or alfalfa meal found; misbranded.

Robbins Bros., Auburn, Ky. Inspection sample of Mixed Feed analyzed, 1; much deficient in protein; excess corn product present.

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

- 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, 2.  
Ribbon Sweet Feed, 1; no cottonseed meal found; screenings substituted for oat hulls; malt sprouts present tho not guaranteed.  
Bell Cow 16% Protein Dairy Feed, 1; ingredients not as guaranteed; adulterated with about 72,000 unground weed seeds to 100 pounds of feed; misbranded.
- Rush County Mills, Rushville, Ind. Inspection samples analyzed, 7.  
RCM 16% Protein All-Mash, 1; equaled guaranty.  
Imperial Brand 18% Protein Egg Mash, 1; equaled guaranty.  
RCM 14% Protein Sheep Feed, 1; equaled guaranty.  
RCM 16% Protein Dairy Feed, 2; ingredients not as guaranteed; adulterated and misbranded; 1 deficient in protein; 1 much excess fiber.  
RCM 24% Protein Dairy Feed, 2; 1 coffee substitute present; 1 ingredients not as guaranteed; misbranded.
- Salt Lick Roller Mills, Salt Lick, Ky. Inspection samples of Perfect Brand X Mixed Feed analyzed, 1; deficient in protein; no salt found.
- Sandusky Bros., Harrodsburg, Ky. Inspection samples of Mixed Feed analyzed, 1; equaled gauranty
- Sandy Valley Grocery Co., Ashland, Ky. Inspection samples analyzed, 3.  
Economy Special 16% Protein Dairy Feed, 1; equaled guaranty.  
Our Pride 24% Protein Dairy Feed, 1; deficient in protein; no distillers dried grains or soybean oil meal found; linseed oil meal present tho not guaranteed.  
Our Pride Special 24% Protein Dairy Feed, 1; very deficient in protein; no corn gluten feed, cottonseed meal, or distillers dried grains found; misbranded.
- Schultz, Baujan & Co., Beardstown, Ill. Inspection samples analyzed, 7.  
Critic 18% Protein Starting and Growing Mash, 1; equaled guaranty.  
Honest Brand 18% Protein Egg Mash, 1; equaled guaranty.  
Critic 20% Protein Egg Mash, 1; equaled guaranty.  
Critic Horse and Mule Feed, 1; equaled guaranty.  
Critic 15% Protein Pork Maker, 1; equaled guaranty.  
Critic 35% Protein Hog Supplement, 1; equaled guaranty.  
Critic 24% Protein Dairy Feed, 1; equaled guaranty.
- The Scott County Milling Co., Sikeston, Mo. Inspection samples analyzed, 2.  
Gristo 16½% Protein Milk Maker, 1; equaled guaranty.  
Semo 16% Protein Dairy Feed, 1; equaled guaranty.
- Sebree Milling Co., Sebree, Ky. Inspection sample of Korb's Heavy Mixed Feed analyzed, 1; deficient in protein; ground wheat substituted for wheat bran and shorts.

- Security Mills, Knoxville, Tenn. Inspection samples analyzed, 2.  
Big S 20% Protein Laying Mash, 1; equaled guaranty.  
Security Milk Booster Brand 16% Protein Dairy Feed, 1; ingredients not as guaranteed; adulterated with about 452,800 unground weed seeds to 100 pounds of feed; misbranded.
- The Shellabarger Mill & Elevator Co., Salina, Kans. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.
- Sherwin-Williams Co., Cleveland, O. Inspection sample of Sherwin-Williams 34% Protein Linseed Oil Meal analyzed, 1; equaled guaranty.
- Shipp & Buckner Feed Mills, Campbellsville, Ky. Inspection samples analyzed, 3.  
Economy Brand 18% Protein Laying Mash, 1; very deficient in protein; no corn germ meal or fish meal found; corn gluten feed and linseed oil meal present tho not guaranteed; misbranded.  
Economy Brand 17% Protein Pig and Hog Feed, 1; very deficient in protein; alfalfa meal present tho not guaranteed; misbranded.  
Economy Brand 16% Protein Dairy Feed, 1; very deficient in protein; misbranded.
- Sikeston Cotton Oil Mill, Sikeston, Mo. Inspection samples of Sikeston Brand 41% Protein Cottonseed Meal analyzed, 2; equaled guaranty.
- J. Allen Smith & Co., Knoxville, Tenn. Inspection samples of Peerless Brand Feed analyzed, 1; equaled guaranty.
- Smithfield Milling Co., Smithfield, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.
- Woodford Spears & Sons, Paris, Ky. Inspection samples analyzed, 2.  
Spears' Feed, 1; deficient in fat.  
Bourbon 18% Protein Dairy Feed, 1; equaled guaranty.
- Sphar & Co., Winchester, Ky. Inspection sample of Spartan Ewe Mineral Feed analyzed, 1; much excess salt.
- The Springfield Flour Mills, Springfield, Mo. Inspection sample of Ground Wheat Feed analyzed, 1; equaled guaranty.
- The George T. Stagg Co., Frankfort, Ky. Inspection sample of 28% Protein Distillers Wheat Dried Grains analyzed, 1; equaled guaranty.
- A. E. Staley Manufacturing Co., Decatur, Ill. Inspection sample of Staley's 41% Protein Soybean Oil Meal analyzed, 2; equaled guaranty.
- Staley Milling Co., Kansas City, Mo. Inspection sample of Staley's Record Brand 15% Protein Egg All-Mash analyzed, 1; deficient in fat; no corn germ meal, ground barley, or bone meal found; only traces of meat scraps and ground oats present; misbranded.

Standard Milling Co., Elkton, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.

Star Milling Co., Inc., Clinton, Ky. Inspection samples analyzed, 3;  
Mixed Feed, 1; equaled guaranty.  
None-Better Brand 18% Protein Laying Mash, 1; equaled guaranty.  
Tenn. Special Brand 16% Protein Dairy Feed, 1; equaled guaranty.

Sun-Ray Feed Mills, Lexington, Ky. Inspection samples analyzed, 15.  
Booster 16% Protein Starting and Growing All-Mash, 1; equaled guaranty.  
Sun-Ray 18% Protein Starting and Growing All-Mash, 1; equaled guaranty.  
Sun-Ray 18% Protein Broiler Ration, 1; equaled guaranty.  
Sun-Ray 20% Protein Laying Mash, 1; equaled guaranty.  
Sun-Ray 20% Protein Turkey Growing Mash, 1; equaled guaranty.  
Sun-Ray 17% Protein Hog Ration, 1; equaled guaranty.  
Sun-Ray 40% Protein Hog Supplement, 1; equaled guaranty.  
Sun-Ray 17% Protein Stock Feed, 2; deficient in fat; no corn germ meal or ground barley found; 1 adulterated with about 44,800 unground weed seeds to 100 pounds of feed, misbranded; 1 deficient in protein, ground wheat substituted for wheat bran and wheat middlings.  
Booster 13% Protein Mixed Feed, 1; deficient in fat.  
Booster Stock Feed, 1; equaled guaranty.  
Booster 16% Protein Dairy Feed, 1; excess fiber.  
Sun-Ray 20% Protein Dairy Ration, 1; equaled guaranty.  
Sun-Ray 24% Protein Dairy Feed, 1; equaled guaranty.  
Booster 24% Protein Dairy Feed, 1; equaled guaranty.

Sunshine Feed Store, Louisville, Ky. Inspection samples analyzed, 4  
Sunshine 16% Protein Dairy Feed, 1; equaled guaranty.  
Derby City 18% Protein Dairy Feed, 1; equaled guaranty.  
Derby City 24% Protein Dairy Feed, 2; equaled guaranty.

Sunup Mill Feed Co. (Joe Schafer & Sons, Springfield, Ill.), E. St. Louis, Ill. Inspection sample of Sunup Brand 16% Protein Dairy Feed analyzed, 1; no ground oats, brewers dried grains, or alfalfa meal found; adulterated with screenings and rice hulls; misbranded.

D. B. Sutherland & Sons, Bloomfield, Ky. Inspection samples analyzed, 5.  
Sutherland's Wheat Mixed Feed and Screenings, 1; deficient in fat.  
Corn Byproduct Feed, 1; deficient in protein and fat.  
Kentucky Star 17% Protein Starter and Grower, 1; equaled guaranty.  
Kentucky Star 18% Protein Laying Mash, 1; equaled guaranty.  
Kentucky Star 15% Protein Hog Feed, 1; equaled guaranty.

Sweet Feeds, Inc., Hopkinsville, Ky. Inspection samples of Sweet Mix 24% Protein Dairy Feed analyzed, 1; deficient in protein; no linseed oil meal found.

Sweet Feed Mills, Bowling Green, Ky. Inspection samples analyzed, 4.  
Ace Brand 44% Protein Hog Supplement, 1; much deficient in protein and fat; no fish meal found; distillers dried grains present tho not guaranteed; misbranded.

Ace Brand 16% Protein Dairy Feed, 2; 1 excess fiber.

Ace Brand 24% Protein Dairy Feed, 1; equaled guaranty.

Swift & Co., Chicago, Ill. Inspection samples analyzed, 3.

Swift's Mineral Supplement, 2; equaled guaranty.

Swift's 16% Protein Dairy Feed, 1; equaled guaranty.

Swift & Co., Soybean Mills, Cairo, Ill. Inspection samples of Swift's 43% Protein Soybean Oil Meal analyzed, 2; equaled guaranty.

Tell City Flouring Mills, Tell City, Ind. Inspection sample of Hoosier 15% Protein All-Mash Poultry Ration analyzed, 1; equaled guaranty.

Thomson's Mill, Madisonville, Ky. Inspection samples analyzed, 4.

"AP" 16% Protein All-Purpose Poultry Mash, 1; deficient in fat; no meat scraps or alfalfa meal found.

Sixty-six Horse and Mule Feed, 1; equaled guaranty.

Thomson's Ideal Brand 16% Protein Dairy Feed, 1; equaled guaranty.

Yellow Tag 16% Protein Dairy Feed, 1; ingredients not as guaranteed; adulterated with about 252,800 unground weed seeds to 100 pounds of feed, misbranded.

The Topeka Flour Mills Corporation, Salina, Kans. Inspection sample of K-Y Wheat Bran and Screenings analyzed, 1; equaled guaranty.

The Ubiko Milling Co., Cincinnati, O. Inspection samples analyzed, 25.

Ubiko 18% Protein All-Mash Starter, 1; equaled guaranty.

Ubiko 15% Protein All-Mash Developer, 1; equaled guaranty.

Ubiko 18% Protein Broiler Ration, 1; equaled guaranty.

Ubiko 16% Protein All-Mash Complete Laying Ration, 1; equaled guaranty.

Ubiko 20% Protein Egg and Breeder Mash, 1; equaled guaranty.

Ubiko 20% Protein Turkey Growing Mash, 1; deficient in protein.

Ubiko 16% Protein Turkey All-Mash Growing Ration, 1; equaled guaranty.

Ubiko 32% Protein Poultry Mash Supplement, 1; very deficient in protein.

Crusader Horse Feed, 1; equaled guaranty.

Honeycomb Brand Sweet Feed, 1; equaled guaranty.

Ubiko 12% Protein Rabbit Pellets, 1; equaled guaranty.

Sunbeam 14% Protein Pig and Hog Meal, 1; equaled guaranty.

Ubiko 14% Protein Pig and Sow Ration, 3; 1 deficient in fat.

Ubiko 30% Protein Hog Supplement, 2; equaled guaranty.

Ubiko 17% Protein Calf Starter, 1; equaled guaranty.

Clover Bloom Sweet 16% Protein Dairy Feed, 3; 1 deficient in protein, no malt sprouts found, ground wheat and ground corn present tho not guaranteed.

- Union Grains 20% Protein Sweet Dairy Ration, 2; equaled guaranty.  
Union Grains 24% Protein Sweet Dairy Ration, 2; equaled guaranty.
- The Union National Mill, Springfield, O. Inspection sample of William Tell Wheat Feed and Screenings analyzed, 1; equaled guaranty.
- Van Meter-Terrell Feed Co., Lexington, Ky. Inspection sample of Viola 20% Protein Cow Feed analyzed, 1; equaled guaranty.
- C. F. Vissman & Co., Louisville, Ky. Inspection sample of Vissman's 50% Protein Ground Meat Scrap analyzed, 1; equaled guaranty.
- Walton Feed Mills, Walton, Ky. Inspection sample of Big Bone 14½% Protein Fattening Mash analyzed, 1; deficient in protein; no cocoanut oil meal found.
- Weisenberger Sanitary Flour Mills, Midway, Ky. Inspection samples of Repeater Feed analyzed, 2; 1 deficient in protein.
- Wiedlocher & Sons, Springfield, Ill. Inspection samples analyzed, 8.  
Faultless Brand Kentucky 17% Protein Growing Mash, 1; equaled guaranty.  
Faultless Brand Kentucky 17% Protein All-Mash Starting and Growing, 1; equaled guaranty.  
Faultless Brand 17% Protein All-Mash Broiler Ration, 1; much excess fiber.  
Faultless Brand 20% Protein Egg Mash, 1; equaled guaranty.  
Red Bird 18% Protein Egg Mash, 1; equaled guaranty.  
Faultless Brand 20% Protein Pig and Hog Feed, 1; no corn germ meal or fish meal found; alfalfa meal present tho not guaranteed.  
Congress 16% Protein Dairy Feed, 2; 1 adulterated with about 198,-400 unground weed seeds to 100 pounds of feed, misbranded.
- Williams Grocery Co., Paintsville, Ky. Inspection sample of CCC Ground Wheat analyzed, 1; equaled guaranty.
- Williamstown Roller Mills, Williamstown, Ky. Inspection samples analyzed, 2.  
Mixed Feed, 1; equaled guaranty.  
Our Own 16% Protein Dairy Feed, 1; deficient in protein; adulterated with excess crushed cob; misbranded.
- Winchester Milling Co., Winchester, Ky. Inspection samples analyzed, 3.  
Ground Wheat, 1; equaled guaranty.  
Perfection Brand Feed, 2; deficient in protein; excess corn product present.
- Winn Milling Co., Greensburg, Ky. Inspection samples analyzed, 3.  
Daisy 17% Protein Starter and Grower, 1; equaled guaranty.  
Daisy 18% Protein Laying Mash, 2; 1 deficient in protein, no corn germ meal found, corn gluten meal and distillers dried grains present tho not guaranteed.

Winn & Tobin Milling Co., Marion, Ky. Inspection samples of Daisy 18% Protein Laying Mash analyzed, 2; equaled guaranty.

Woolcott Flour Mills, Lexington, Ky. Inspection sample of Woolcott's Best Brand Mixed Feed analyzed, 1; equaled guaranty.

Woolcott Milling Co., Harrisburg, Ill. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.

Yukon Mill & Grain Co., Yukon, Okla. Inspection sample of Wheat Gray Shorts analyzed, 1; equaled guaranty.

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