Kentucky Agricultural Experiment Station UNIVERSITY OF KENTUCKY THOMAS P. COOPER, Director

COMMERCIAL FEEDS IN KENTUCKY IN 1941

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The feed industry in Kentucky, like other industries, was materially affected by war conditions, in 1941. Changes in prices were frequent, usually upward, especially of the high-protein materials such as animal by-products and oil-mill by-products, while materials carrying less protein were more stable. There was a shortage of certain ingredients, and the use of some was restricted by the government. It was difficult to overcome the shortages of some of the materials by substitutes. The result was that many special-purpose feeds, especially poultry feeds, were not properly balanced in vitamin factors, as evidenced by many complaints of feeders. Some manufacturers were quick to take advantage of the situation by loose practices in the use of substitutes and other irregularities and asked leniency because of the national emergency. The Department has taken the position that good quality feeds under normal conditions are most economical; and that at this time of emergency, when high production of meat, milk, eggs, cheese, and livestock is so essential, the most efficient and effectual control is highly desirable.

During the year, 1601 samples were analyzed chemically and microscopically and the results reported in detail with appropriate comment to those concerned.

NEW RULING ON LISTING INGREDIENTS

Making feed supplements has become a common practice within the last few years. There are two classes of supplements: one is composed of high-protein materials and materials that cannot be grown by the farmer, to strengthen home-grown feeds; the other is composed of materials carrying vitamins and minerals to add vitamins and minerals to special-purpose feeds.

Many of these supplements have merit and serve a useful purpose. On the other hand, some are highly complex in their composition and are composed of a long list of common materials. They are usually sold under extravagant claims and at exorbitant prices not commensurate with their true value. The sale of feeds containing such supplements seems to be based primarily on the effect that a long list of ingredients on the tag has on the purchaser, and on confusing him under high-pressured salesmanship as to the true value of the feed.

In order to overcome the abuses of this practice as far as possible, the Feed Control Department is requiring a simplified form of listing the ingredients; and if a purchaser will read and study the information printed on the tag and buy his feeds on quality and not on price and from a manufacturer with a good record, he will find the results most economical and satisfactory.

The new form of listing ingredients is:

First, basic ingredients, such as corn and corn by-products, wheat and wheat by-products, oil-mill by-products, meat by-products, fish meal, alfalfa meal, alfalfa leaf meal, oats, distillers and brewers dried grains, molasses, and similar ingredients, must be listed in the usual way and be present in amounts of 3 percent or more.

Second, vitamin-carriers, such as dried milk by-products, wheat germ, animal liver meal, fish oils, cod liver oil, riboflavin product, dehydrated alfalfa leaf meal and cereal grasses, yeast, and similar vitamin-carrying materials, must be correctly listed, grouped together, and the total percentage stated.

Third, mineral materials, generally regarded as dietary factors essential for the normal nutrition of animals, such as limestone, salt, potassium iodide, manganese sulfate, iron oxide, and similar materials, may be grouped together, or they may be listed separately with the

percentage of each given, but in either case the total percentage must not exceed 3 percent of the feed. Bone meal and kelp are considered minerals, but because of their organic sources, they should be listed separately with the percentage of each given. They may not be included in the amount of inorganic minerals.

Fourth, condiments and charcoal are not considered feed materials. However, they are permitted when percentage amounts are given.

Fifth, materials primarily medicinal or poisonous in nature are not permitted as ingredients in feeds.

BALANCED RATION

A ration is the quantity of feed given an animal during a day. A balanced ration is one in which the nutritive ratio is correct; that is, it furnishes digestible protein, carbohydrates and fats and the right kind of minerals and vitamins in such amounts and proportions as are necessary to nourish a given animal for a day.

The preparation of a proper feed or ration for animals requires a very complete knowledge of feed materials and their use, including their chemical analysis, the source of the materials and nutritional factors. The feed or ration must meet the following conditions if satisfactory results are to be obtained.

First, the ration must contain sufficient digestible complete protein and digestible energy-producing substances in right proportions to meet the needs of the animal. Second, it must contain the proper amount of indigestible fibrous materials, such as is found in the fibrous parts of the plant. Third, it must contain the vitamins in adequate amounts. Fourth, it must contain the right kind of mineral substances in sufficient amount. Fifth, it must be free from injurious substances such as poisons, especially cumulative poison, disease germs or anything that produces mechanical injury.

FEEDERS' GUIDE

The feeder has several aids to guide him in selecting a feed. He should never buy a feed 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 the county agricultural agent or by writing to the College of Agriculture and Home Economics, Lexington.

Minerals for Livestock. Extension Circular 360
Feeding Dairy Cows. Extension Circular 364
Feeding Laying Hens. Extension Circular 372
Raising Turkeys. Extension Circular 275
Pigs; from Birth to Market in 6 Months. Extension Circular 372
Lambing Time. Extension Circular 346
Workstock. Extension Circular 306
Distillery Slop for Hogs, Bulletin 408

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, tho 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 food quality of the nutrients and the

unwholesomeness of the feed.

SYSTEM OF TAGGING

This Department groups feeds into three general classes: "straight" feeds, "straight mixed" feeds, and "yellow tag" feeds, and labels them accordingly. (See examples of these tags, page 6.) The purpose of this system of labeling is to mark conspicuously certain important differences in the character of feeds. It is designed to aid

in the selection of feeds. The tags are printed according to a three-color scheme, as follows:

A manila tag printed in black ink means a feed made from one grain or plant. This class of feeds is known as "straight" feeds. Examples: wheat bran, hominy feed, cottonseed meal, alfalfa meal.

A manila tag printed in red ink means a feed made from the products or by-products of two or more grains, or plants, or animal by-products. This class of feeds is known as "straight mixed" feeds. Examples: a mixture of wheat bran, hominy feed, and cottonseed meal; a mixture of corn chop, crimped oats, wheat bran, and alfalfa meal; or a mixture of yellow corn meal, wheat gray shorts, ground oats, alfalfa leaf meal, soybean oil meal, meat scrap, dried buttermilk.

A yellow tag printed in black ink means a feed containing a material or materials of little or no nutritive value. Such are usually known as "yellow tag" feeds. Examples: feeds containing oat hulls, corn cobs, cottonseed hulls, screenings and screenings refuse or waste, or other similar materials containing an excessive percentage of fiber.

"YELLOW TAG" OR FILLER FEEDS

A "Yellow Tag" feed is one that contains a material or materials of little or no feed value, as a "filler". The filler material must not exceed 25 percent of the mixture. Usually, the cheapest materials that can be found are put into filler feeds. They vary widely in chemical and physical composition. They may have some value as feed, or may be worthless or even dangerous if containing poisonous weed seeds, disease germs, and other foreign material, such as dirt and sand. Often a farmer has on his place material going to waste of as much or more feed value.

The records of the Feed Control Department show that most of the violations of the feed law are concerned with "yellow tag" or filler feeds. Below are some examples of "yellow tag" feeds containing screenings and screenings waste. Besides containing unground and viable weed seeds most of these feeds were in violation of the feed law in other respects.

Laboratory No. 1437, a sample of 16% Protein Dairy Feed, contained approximately 180,800 unground and viable weed seeds to 100 pounds of feed, of which 54,240 were of noxious weeds. Other irregularities were found.

Laboratory No. 1440, a sample of 16% Protein Dairy Feed, contained approximately 54,400 unground and viable weed seeds to 100 pounds of feed.



\$100 penalty for using this tag second time

\$100 penalty for using this tag second

time

16% PROTEIN DAIRY FEED

100 POUNDS NET

20% PROTEIN LAYING MASH 100 POUNDS NET

JOHN DOE & CO., MILLVILLE, KY. MADE BY

GUARANTEED ANALYSIS

Per Cent

GUARANTEED ANALYSIS

Fat

Protein Fiber MADE FROM:

JOHN DOE & CO., MILLVILLE, KY.

MADE BY

Per Cen	20.0	4.5	Fiber 7.0
9	-	-	-
0	2	4	
2	61		-
73	- 1		
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MADE FROM:

Scrap, Soybean Oil Meal, Alfalfa Meal, Dried Buttermilk 5%, Ground Limestone 2%, Salt 1% Ground Yellow Corn, Wheat ran, Wheat Middlings, Meat Scrap, Meal, Bran,

Wheat Bran, Corn Feed Meal, Brewers Dried Grains, Cottonseed Meal, 10% Oat Hull Feed, 15% Ground Sereenings Refuse (Weed Seeds, Hulls, Chaff and Inferior Grain), Ground Limestone 1%, Salt 1%

dealer's guaranty and the sale of this package is authorized subject to the feed stuffs law.

The above is the manufacturer's or

The above is the manufacturer's or dealer's guaranty and the sale of this package is authorized subject to the feed stuffs law.

Director

Ky. Agricultural Experiment Station, Lexington, Kentucky

Director

Ky. Agricultural Experiment Station, Lexington, Kentucky



\$100 penalty for using this tag second time

100 POUNDS NET

WHEAT MIXED FEED AND SCREENINGS

JOHN DOE & CO., MILLVILLE, KY. GUARANTEED ANALYSIS

70	0	3
Protein 15.50	Fat 4.00	8.50
		:
3		
n	1	
ei		-
4		Fiber
IC	at	ib

MADE FROM:

Wheat Bran, Wheat Middlings, Ground Wheat Screenings 5%

dealer's guaranty and the sale of this package is authorized subject to the feed stuffs law. The above is the manufacturer's or

Ky. Agricultural Experiment Station, Lexington, Kentucky

"Yellow Tag" Feed

Straight Feed

Laboratory No. 1314, a sample of 16% Protein Dairy Feed, contained approximately 89,200 unground weed seeds to 100 pounds of feed.

Laboratory No. 1194, a sample of 24% Protein Dairy Feed, contained approximately 136,000 unground and viable weed seeds to 100 pounds of feed. Other irregularities were found.

Laboratory No. 1195, a sample of 16% Protein Dairy Feed, contained approximately 544,000 unground and viable weed seeds to 100 pounds of feed, many of them noxious. Many other irregularities were found also.

Laboratory No. 1413, a sample of 16% Protein Dairy Feed, contained approximately 217,600 unground and viable weed seeds to 100 pounds of feed. Other irregularities were found.

Laboratory No. 1210, a sample of 16% Protein Dairy Feed, contained approximately 44,800 unground and viable weed seeds to 100 pounds of feed. Other irregularities and deficiencies were found.

Laboratory No. 963, a sample of 16% Protein Dairy Feed, contained approximately 632,000 unground and viable weed seeds to 100 pounds of feed, about 90,000 of which were noxious. Other irregularities and deficiencies were found.

Laboratory No. 1134, a sample of 24% Protein Dairy Feed, contained approximately 180,800 unground and viable weed seeds to 100 pounds of feed.

Laboratory No. 1060, a sample of 16% Protein Dairy Feed, contained approximately 408,000 unground and viable weed seeds to 100 pounds of feed.

If feeds containing viable weed seeds are fed upon farms or about their premises, the farms are very likely to become stocked with weeds from the seeds contained in the feed. It is important that the feeder beware of feeds containing screenings and screenings waste in which there are viable weed seeds.

METHOD OF CALCULATING THE ANALYSIS OF FEED MIXTURES

Requests are often received for a method for calculating the analysis of a given feed mixture. Examples are given of two classes of feed most commonly mixed by the feeder, in 1,000-pound batches, for his stock.

Example 1. 20-percent protein dairy feed

1	2	3	4
Ingredients	Percentage of protein, or pounds in 100	Hundreds of pounds of each ingredient	Pounds of protein from each ingredient
150 pounds wheat bran 200 pounds ground shelled corn	9 11 41 41 11	1.5 2 1.5 1.5 1.5 1.1	22.5 18.0 - 16.5 61.5 61.5 11.0
000 pounds		10	205.0

Then 205.0 divided by 10=20.5, the percentage of protein in this feed.

Example 2 20-percent protein laying mash

1	2	3	4
Ingredients	Percentage of protein, or pounds in 100	Hundreds of pounds of each ingredient	Pounds of protein from each ingredient
150 pounds wheat bran 200 pounds wheat middlings 200 pounds ground yellow corn 100 pounds ground oats 150 pounds meat scrap 100 pounds alfalfa meal 100 pounds soybean oil meal	16 9 11 50	1.5 2 1 1.5 1	22.5 32.0 18.0 11.0 75.0 14.0 41.0
.000 pounds		10	213.5

Then 213.5 divided by 10=21.35, the percentage of protein in this feed.

Explanation:

- 1. List the number of pounds and ingredients in column 1.
- 2. Get from the guaranty on the official tag or from the average analysis the protein content of each ingredient and put it in column 2.
- 3. Place the hundreds of pounds of each ingredient in column 3. For example, 150 pounds of an ingredient is listed as 1.5 hundred pounds.
- 4. Multiply the figure for each ingredient in column 2 by that in column 3 to get the figure in column 4. This is multiplying the number of pounds of protein in a hundred, by the number of hundred pounds of each ingredient, to get the total pounds of protein furnished by each ingredient.
- 5. Add column 3, which gives the total weight of the mixture, in hundred pounds.
- 6. Add column 4, which gives the total weight of protein in the mixture.
- 7. Divide the sum of column 4 by the sum of column 3. This gives the percentage of protein in the mixture.

The percentages of other substances such as fat or fiber can be calculated in a similar way.

MINERAL FEEDS

Certain mineral nutrients are essential to the health and growth of plants and animals. Plants get their mineral requirements from the soil. Animals, in turn, get their minerals from plant and animal sources, and if additional minerals are needed, they may be supplied by mineral supplements, such as salt and ground limestone. Most natural feeds contain the necessary minerals except salt, especially the minor ones; but if the soil is deficient in minerals, vegetation grown on it, including food plants, will also be deficient. Where there is need of additional mineral nutrients, other than salt, such requirements are usually limited to calcium, phosphorus, manganese, and iodine. Salt should be given separately. Usually it is not best to put it into the feed, except for fowls.

Purgatives, worm remedies, medicines, poisons, and tonics are prohibited in stock feeds and supplemental mineral feeds.

A list of materials generally offered in mineral mixtures, including their chemical or technical names and properties, is given in the table which follows.

TABLE 1.—MINERAL AND OTHER MATERIALS USUALLY INCLUDED IN MINERAL MIXTURES

	THIRTORED	
Common name	Chemical composition or technical name	Properties
Aniseed Ashes; hardwood ashes	Seed of the anise Same. Calcium carbonate and oxide, and potassium carbonate	Aromatic, carminative Antacid, calcium nutrient
Bone ash Bone meal steamed	Same. Tricalcium phosphate Same. Tricalcium phosphate and nitrogenous organic matter	Calcium nutrient Calcium nutrient
Bone black; animal	Same. Tricalcium phosphate	Absorbent
charcoal Blood root Blue vitriol; bluestone	and carbon Sanguinaria Copper sulfate	Irritating, emetic Irritant, emetic, poison
Calcite Capsicum; red pepper Calcium carbonate Cane molasses Caraway seed Charcoal; wood or	Calcium carbonate Dried fruit of capsicum Same Cane syrup Same Same	Antacid, calcium nutrient Aromatic, stomachic Antacid, calcium nutrient Sweetening agent, nutrient Aromatic Absorbent
animal Chile saltpeter Copperas; iron sulfate Copper sulfate	Sodium nitrate Ferrous sulfate Cupric sulfate	Diuretic, refrigerant, poison Tonic, astringent Irritant, astringent, emetic, poison
Dextrose Epsom salt	Refined corn sugar Magnesium sulfate (crystallized)	Sweetening agent, nutrient Cathartic, laxative

(Table 1 continued on following page.)

TABLE 1.—(Continued)

	TABLE 1.—(Continued)	
Common name	Chemical composition or technical name	Properties
Fennel Fenugreek seed Gentian Ginger Glauber's salt Glucose Gypsum Iron oxide	Fennel seed Same Yellow gentian root Same Sodium sulfate (crystallized) Corn syrup Hydrous calcium sulfate Ferric oxide	Aromatic Aromatic Bitter tonic Stimulant, aromatic Cathartic, laxative Sweetening agent, nutrient Inert Weak tonic
Iodized salt Kelp	Salt and potassium iodide Seaweed	Iodine, chlorine and sodium nutrients Contains iodine, calcium
Licorice Limestone Linseed oil meal Locust bean; St. John's bread	Licorice root Calcium carbonate Flaxseed meal Carob bean	Adjuvant, corrective Antacid, calcium nutrient Nutrient, laxative Nutrient
Manganese carbonate Manganese sulfate Magnesium oxide Milk sugar Mineral oil Mustard bran	Same Same Same Lactose Heavy paraffin oil Same	Manganese nutrient Manganese nutrient Antacid, laxative Nutrient Laxative, emollient Condiment, stimulant, emetic
Nux vomica Oyster shell	Same Same. Calcium carbonate	Tonic, poison Antacid, calcium nutrient
Paraffin wax Pennyroyal Petrolatum Phosphatic limestone	Same Hedeoma pulegioides Petroleum jelly Calcium carbonate, tricalcium phosphate and calcium fluoride	Inert Gentle aromatic Emollient Antacid, calcium and phosphorus nutrients
Potassium iodide	Same	Alterative, iodine nutrient
Quassia Rock phosphate	Quassia chips Tricalcium phosphate, calcium carbonate and calcium	Bitter tonic Calcium and phosphorus nutrients, poison
Salt	fluoride Sodium chloride	Sodium and chlorine nutrients, condiment, preservative
Sulfur Sodium bicarbonate Superphosphate	Same Same Same	Alterative, laxative Antacid Calcium and phosphorus nutrients
Saltpeter Sodium thiosulfate Strychnine	Potassium nitrate Same Same	Diuretic, diaphoretic, poisor Antipruritic Poison, tonic
Tankage Tobacco	Same Same	Nutrient Insecticide, sedative, anthelmintic, poison
Wormwood	Absinthium	Tonic, anthelmintic

Table 2.—Average Composition of Some Feedstuffs

(This table contains the average analyses of feed materials usually found in commercial feeds in Kentucky. Analyses of many other materials have been made, but it is not thought of sufficient importance to publish them here. The data are derived from analyses made by this Department, supplemented by other published results when found desirable.)

Feedstuff	Protein	Fat	Carbon Fiber	N.F. Ext.	Water	Ash
Concentrates	perct.	perct.	perct.	perct.	perct.	perct.
Alfalfa leaf meal Alfalfa meal Barley Beet pulp, dried Blood, dried Bone meal, raw Bone meal, steamed Brewers' dried grains Buckwheat Buttermilk, dried Buttermilk, semi-solid	14.0 11.5 8.0 82.0 24.0 7.1 24.0 10.5 32.5 13.5	3.0 2.0 2.0 0.5 0.9 3.0 3.3 6.5 2.5 5.5	16.0 30.0 5.0 20.0 0.8 15.0 10.5	42.5 46.0 69.8 60.0 4.1 4.0 3.9 42.5 62.5 49.5 16.0	8.0	12.0 9.0 2.7 3.5 3.3 61.7 81.3 3.8 2.0 8.0 2.5
Cocoanut oil meal Corn Corn-and-cob meal Crushed ear corn with husks Corn bran Corn chop Corn chop (screened) Corn feed meal Corn germ meal Corn gluten feed Corn gluten meal Cottonseed meal, 43% protein Cottonseed meal, 41% protein	$\begin{array}{c} 8.0 \\ 7.5 \\ 10.0 \\ 9.5 \\ 8.5 \\ 8.5 \\ 21.0 \\ 25.0 \\ 42.0 \\ 43.0 \\ 41.0 \end{array}$	$\begin{array}{c} 4.0 \\ 3.7 \\ 4.0 \\ 9.0 \\ 2.7 \\ 2.3 \\ 6.0 \\ 5.5 \end{array}$	10.5 2.0 8.0 7.8 10.0 2.0 2.5 4.5 9.0 7.0 2.5 10.0	45.0 72.0 68.5 68.1 61.7 72.0 72.8 70.5 50.7 49.8 42.9 29.0 30.0	$\begin{array}{c} 9.5 \\ 11.0 \\ 10.5 \\ 11.0 \\ 10.0 \\ 11.0 \\ 11.0 \\ 11.0 \\ 11.0 \\ 7.0 \\ 9.5 \\ 8.5 \\ 6.5 \\ 7.0 \\ \end{array}$	1.5 1.8 2.3 1.5 1.5 3.3
Distillers' corn dried grains Distillers' rye dried grains Fish meal Hominy meal Kafir corn Lespedeza seed Linseed oil meal	55.0 11.0	10.0 6.5 8.0 8.0 3.0 7.5 6.5	11.5 16.0 0.9 5.5 2.5 9.0 8.5	37.4 47.8 7.7 62.9 70.0 31.5 36.5	8.5 8.5 7.7 10.0 11.8 8.5 9.0	2.6 3.2 20.7 2.6 1.7 4.5 5.5
Malt sprouts Meat scrap, 50% protein Millet seed Molasses, cane	$31.0 \\ 50.0 \\ 11.5 \\ 3.2$	2.0 7.5 3.0	12.0 2.3 7.8	41.0 6.7	8.5 7.5 9.0 25.9	
Oats Oat kernels Peanut oil meal Rice bran Rye Rye middlings	16.0 42.5 12.5 11.8 15.5	6.4 7.5 12.5 1.8 3.7	1.8 5.5	59.9 66.0 28.1 44.0 73.2 61.7	9.5 8.0 6.6 9.0 9.4 9.8	3.5 2.0 6.3 9.5 2.0 3.8
Skim milk, dried Sorghum grains Soybeans (seed) Soybean oil meal (expeller) Soybean oil meal (solvent) Tankage, 60% protein Tankage, 50% protein	34.0 9.5 36.5 41.0 44.0 60.0 50.0	$ \begin{array}{r} 1.0 \\ 3.4 \\ 17.5 \\ 4.0 \\ 1.0 \\ 7.0 \\ 10.5 \end{array} $	2.0 4.3 6.5 7.0 2.0 2.5	51.0 71.2 26.5 32.8 33.2 4.5 6.5	6.0 12.0 9.9 9.5 8.4 8.0 8.0	
Whale meal	12.4 15.4 16.5	11.0 2.1 4.0 4.5 10.7 4.6 4.4 4.0 3.7 0.3	2.0 2.2 9.5 7.3 2.5 5.5 8.3 2.4 2.9	1.2 71.2 55.0 56.0 44.9 58.3 56.0 64.0 64.4 4.7	8.0 10.2 10.1 10.3 8.9 10.5 10.1 8.5 10.3 93.4	2.8 1.9 6.0 5.4 4.5 4.4 5.2 2.6 2.5

(Table 2 continued on following page.)

Table 2.—(Continued)

Feedstuff	Protein	Fat	Carbol	N.F. Ext.	Water	Ash
	perct.	perct.	perct.	perct.	perct.	perct.
Yeast, driedYeast, grains	45.0	$\frac{3.0}{6.3}$	$\begin{array}{c} 1.0 \\ 16.1 \end{array}$	$\frac{36.0}{47.7}$	8.0 6.3	7.0 2.8
Roughages						
Alfalfa hay Bluegrass hay Clover hay, alsike Clover hay, red Corn stover (ears removed) Corn stover (with ears) Cowpea hay Lespedeza hay Soybean hay Timothy hay	8.2 12.0 11.8 5.9 7.8 18.6 13.5 15.5	2.3 2.5 2.2 2.6 1.6 2.2 2.6 2.5 2.8	29.7 29.8 27.1 27.3 30.8 27.1 22.5 28.0 26.5 29.8	36.3 42.5 39.8 40.1 46.5 47.6 35.1 40.1 38.7 45.0	8.6 10.5 11.0 11.8 9.4 8.9 9.9 10.5 9.2 11.6	8.6 6.5 7.9 6.4 5.8 6.4 11.3 5.4 7.3
Alfalfa stem meal Buckwheat hulls Corn cob Cottonseed hulls Oat hull feed Oat hulls Screenings* Screenings refuse**	4.4 2.0 3.9 5.5 3.8	0.9 1.0 0.4 1.0 2.1 1.2	57.4 43.7 31.8 45.5 26.5 30.0	24.9 38.5 54.3 37.2 52.9 51.7	5.6 10.3 10.0 9.7 7.5 6.8	4.9 2.1 1.5 2.7 5.5 6.5

Table 3.—Average Digestibility of the Nutrients in Some Feedstuffs

(This table gives the average digestibility of the nutrients in feedstuffs taken from "Feeds and Feeding" by Morrison. The table is copyrighted and is quoted by permission of the author.)

			Carbohydrates		
Feedstuff	Protein	Fat	Fiber	N. F. Ext.	
Concentrates Alfalfa leaf meal Alfalfa meal Barley Beet pulp, dried Blood, dried Brewers' dried grains Buckwheat Buttermilk, dried Coconut oil meal Corn Corn-and-cob meal Corn bran Corn gluten feed Corn gluten meal Cottonseed meal, 43% protein Distillers' rye dried grains	79 53 86 81 75 85 85 90 76 52 58 86 81 77	percent 30 30 80 100 89 73 49 100 91 84 76 74 93 97 97 80	percent	percent 76 73 92 85 57 77 81 87 94 88 82 91 93 74 79 67	
Fish meal Hominy meal Kafir corn Linseed oil meal Malt sprouts	71 81 87	99 92 76 92 85	86 55 59 87	90 92 82 80	

^{*} Varies in quality from fair to poor.
** Varies in quality from poor to worthless and even dangerous.

Table 3.—(Continued)

			Carboh	ydrates
Feedstuff	Protein	Fat	Fiber	N. F. Ext.
	percent	percent	percent	percent
Meat scraps, 50% protein	71	98 73	53	92 90
Oats Peanut oil meal Rice bran Rye Skim milk, dried Sorghum grains Soybeans (seed) Soybean oil meal (expeller)	89 69 84 94 57	88 95 83 64 98 56 88	38 37 26 ———————————————————————————————————	81 84 74 92 98 87 67 100
Tankage, 60% protein (with swine) Wheat bran Wheat brown middlings or shorts Wheat gray middlings or shorts Wheat mixed feed Wheat red dog flour Wheat white middlings or shorts	86 83 85 85 77 80	100 83 81 85 93 87 70 89	90 53 60 54 36 60 42	100 95 79 85 89 76 83
Roughages Alfalfa hay Bluegrass hay Clover hay, alsike Clover hay, red Corn stover (ears removed) Corn stover (with ears) Cowpea hay Lespedeza hay Soybean hay Timothy hay	57 64 59 37 52 68 63 75	32 52 43 58 62 73 39 55 60 48	43 66 49 51 66 66 47 	71 61 65 69 59 71 68 61 58
Fillers Alfalfa stem meal	19	48 10 25 76 30	39 	59 62 51 50 40

Table 4.—Average Calcium, Phosphorus, and Manganese Content of Some Feedstuffs

Feedstuff	Calcium (Ca)	Phosphorus (P)	Manganese (Mn)
Grain, seeds, and other vegetable products Alfalfa leaf meal Alfalfa meal Barley Beans, navy Beet pulp, dried Bread Brewers' dried grains Buckwheat	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	percent .22 .21 .36 .45 .07 .10 .46 .43	Parts per million 30 26 16 13 23 4 20 80
Cane Molasses Cocoanut meal Corn Corn Corn bran Corn gluten feed Corn gluten meal Corn meal Cottonseed meal (41 percent protein) Cowpeas	.56 .29 .01 .03 .13 .06	.06 .64 .29 .20 .64 .40 .30 1.18	85 5 16 24 4 4 18

(Table 4 continued on following page.)

Table 4.—(Continued)

TABLE 4.—(Contin	uea)		
Feedstuff	Calcium (Ca)	Phosphorus (P)	Manganese (Mn)
Distillers' corn dried grainsFieteritaField peasFlaxseed	.02 .08 .25	percent .30 .32 .40 .66	Parts per million 20
Garden peas Grapefruit refuse, dried Hempseed meal Hominy Hominy feed	.74 $.22$ $.01$.40 .10 .87 .08 .51	 2 16
Kafir Linseed meal Malt sprouts Millet (proso) Milo	.33 .18 .01	.35 .74 .70 .33 .32	16 40 35 35 15
OatsOatmeal, or rolled oatsOrange peel, driedOrange-pulp mealPeanut kernelsPeanut oil meal	.08 .73 .64 .07	$\begin{array}{c} .36 \\ .44 \\ .11 \\ .10 \\ .39 \\ .56 \end{array}$	34 20
Red clover meal Rice (polished) Rice bran Rye Soybeans Soybean meal Sunflower seed	.01 $.10$ $.05$ $.20$ $.29$.18 .09 1.84 .36 .53 .69	40 12 280 40 31 30
Wheat bran Wheat flour Wheat flour middlings Wheat germ meal Wheat middlings, standard Wheat red dog flour Wheat shorts Yeast, dried	.11 .02 .07 .07 .08 .07	$\begin{array}{c} .39 \\ 1.21 \\ .11 \\ .69 \\ 1.01 \\ .93 \\ .59 \\ .93 \\ 1.21 \end{array}$	$\begin{array}{c} 39 \\ 119 \\ 4 \\ 11 \\ 160 \\ 119 \\ 35 \\ 60 \\ 2 \end{array}$
Animal products Beef scrap Buttermilk, liquid Buttermilk, condensed Buttermilk, dried Crab meal Fish meal (average of unindentified fish meals) Fish meal, herring Fish meal, whitefish (high ash) Fish meal, whitefish (low ash) Fish meal, sardine Fish meal, tuna	$\begin{array}{c} .18 \\ .56 \\ 1.56 \\ 13.25 \\ 6.50 \\ 3.83 \\ 9.09 \\ 5.84 \end{array}$	3.73 .10 .33 1.05 .50 3.60 2.50 4.70 3.04 2.63 3.46	5 Trace 0.2 0.4 45 40
Liver meal, Argentine Meat-and-bone scrap (50 percent protein) Meat scrap (55 percent protein) Pork liver, dried Skim milk, liquid Skim milk, dried Tankage (60 percent protein) Whey, liquid Whey, dried	8.25 .06 .13 1.27 7.16	$\begin{array}{c} .90 \\ 4.91 \\ 4.00 \\ 1.12 \\ .11 \\ .96 \\ 3.53 \\ .04 \\ .70 \\ \end{array}$	4 10 18 4 Trace 0.6 14 1
Green plants and roots Alfalfa Cabbage Carrots Kale Potatoes Rape	.06	.07 .04 .07 .07 .06 .07	7 21 ———————————————————————————————————

Table 4.—(Continued)

Feedstuff		Calcium (Ca)	Phosphorus (P)	Manganese (Mn)
		percent	percent	Parts per million
Rutabagas Turnips	<u>-</u>	.06	.04	
Minerals Bone, fresh Bonemeal Bonemeal, steamed Bonemeal, special steamed Crab shell Gypsum Limestone, high-calcium Oystershell, washed		22.95 27.00 28.80 31.30 23.74 25.00 39.20 38.00	10.42 13.00 13.34 14.49 2.55 Trace	12 13 5 2 300
Manganous sulfate, anhydrous Manganous sulfate, tetrahydrate				36.3 24.6

Reference: U. S. Department of Agriculture Yearbook, 1939.

Table 5.—Average Vitamin A, Thiamin (B_1) , and Riboflavin (G) Content of Some Feedstuffs

Feedstuff .	Vitamin A per pound	Vitamin B ₁	Vitamin G (Riboflavin) per pound
Alfalfa leaf meal, dehydrated	95,000	units 450 400	Micrograms ^a 8,000 7,000
Alfalfa meal Barley Beans, navy Beans, pinto Bread	400	400 250 250 2,270 10	5,000 400
Cane molasses Corn, yellow Corn, white Corn gluten meal (yellow)	3,180	500 	300 2,000 450 450
Cottonseed meal (41% protein) Field peas	1,360 2,720	1,800 450 450	300 350
Garden peas Hempseed meal Kafir Linseed meal Milo	4,540 	2,000	1,100
Oats Oatmeal, or rolled oats Peanuts (hulls on) Peanut kernels Peanut meal, no hulls	80	270 230 900 1,500	400
Red clover meal Rice bran Rye Soybeans Soybean oil meal	9,000	900 450 1,500 250 1,100	1,200 900 1,300
Wheat Wheat bran Wheat flour Wheat germ meal	140 150 1,900	$900 \\ 340 \\ 450 \\ 10 \\ 1,930$	$ \begin{array}{r} 1,400 \\ 400 \\ 1,000 \\ \hline 1,800 \end{array} $
Wheat flour middlings	100 120	1,000	700

(Table 5 continued on following page.)

TABLE 5.—(Continued)

TABLE 5.—(C	Jointinued)		•
Feedstuff	Vitamin A per pound	Vitamin B ₁ per pound	Vitamin G (Riboflavin) per pound
Wheat red dog flour Wheat shorts Yeast, brewers, dried	120	nternational units 1,000 4,500	Microgramsa 450 900 16,000
Animal products			
Buttermilk, liquid	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40 400 400	1,200 9,000 14,000
Fish meal, white Fish meal, sardine Fish meal, menhaden Liver meal, Argentine Meat scrap Pork liver, dried		170	4,500 $3,200$ $2,250$ $18,500$ $2,700$ $45,360$
Sardine (pilchard) oil	130	40 400	1,000 9,500 800 12,000
Green plants and roots			
Alfalfa	181,400	$\begin{array}{c} 225 \\ 100 \\ 100 \\ 100 \\ 80 \\ 70 \\ \end{array}$	$\begin{array}{c} 2,000 \\ 100 \\ 120 \\ 2,240 \\ 55 \\ 45 \end{array}$

*A microgram is one-millionth of a gram; it is equal to approximately one twenty-eight millionth of an ounce. Its symbol is the Greek letter, gamma, T.

*b Cod liver oil, if it is to be sold legally as such in interstate commerce, must contain at least 272,150 International Units of vitamin A and 38,590 International Units of vitamin D per pound. The vitamin A content of cod liver oil varies from 272,150 to about 1,000,000 International Units per pound and the vitamin D content from 38,590 to about 160,000 units per pound. Cod liver oil and other vitamin-bearing fish oils should be purchased only from reliable sources and should be used according to the manufacturer's guaranty of vitamin potency. Vitamin D is omitted from this list since the principal natural sources are from the fish oils. Sunshine is very important for animals since it can cause certain sterols in the animal body to have vitamin D activity.

Reference—U. S. Department of Agriculture Yearbook, 1939.

TONNAGE IN 1941

The tonnage of commercial feeds sold in Kentucky in 1941, approximately 350,000 tons, as estimated from the number of tax tags issued, was about the average for Kentucky in normal years. Of this amount, 178,860 tons were special-purpose feeds. About 36 percent of the special-purpose feeds were dairy feed, 46 percent poultry feed, 5 percent horse feed, 6 percent hog feed, and 3 percent dog feed. The balance of the tonnage was made up of miscellaneous feeds and straight feed materials.

The feeds are classified as straight by-product feeds, 164,630 tons; special-purpose feeds, 178,860 tons; and miscellaneous 3,565 tons.

Straight by-products Alfalfa meal Barley, ground Bone meal Brewers' dried grains and cane molasses Corn by-product feed Corn feed meal Corn gluten feed Corn gluten meal Corn meal Corn meal Corn meal Corn meal Corn deed meal Corn meal Corn meal Corn dried grains Distillers' corn dried grains Distillers' corn dried grains Distillers' corn dried grains and cane molasses Dried beet pulp Dried skimmed milk Dried whey Hominy feed Hominy meal Linseed oil meal Meat scraps Miscellaneous wheat feeds Mixed feed (wheat by-product with small amount of corn Oats, ground Rye middlings and screenings Soybean oil meal Tankage Wheat bran Wheat brown middlings or shorts Wheat flour middlings Wheat gray middlings or shorts	bran)	42E 47E 500 725 2,425 1,250 690 275 270 11,300 16,910 200 1,425 25 8,875 4,575 800 1,000 2,140 2,140 2,140 1,755 4,575 4,575
Wheat gray middlings or shorts Wheat mixed feed		1,575 15,825
Wheat mixed feed Wheat red dog flour		27,125 1,705
Special-purpose feeds Calf meal		
Dairy feed: 16% Protein 20% Protein 24% Protein	34,975 3,825	970
Supplement	1,700	63,075
Dog and cat feed: Canned Dry	4,240	
Goat feed		5,770
Hog feed: Fattening and growing Supplement	4,100 6,615	
Horse and mule feed Pigeon feed		8,475 175
Poultry grains: Chick	4 770	
Poultry mash: All-mash growing ration All-mash laying ration All-mash poultry ration All-mash starting ration All-mash starting ration All-mash starting and growing Fattening mash Growing and broiler mash Laying mash Starting mash Starting and growing mash Starting and growing mash Turkey growing mash Turkey growing mash Turkey starting mash Turkey starting mash Turkey starting mash Turkey supplement mash Turkey supplement mash Turkey supplement mash Turkey supplement mash	$\begin{array}{c} 2,610 \\ 1,715 \\ 2,590 \\ 2,185 \\ 9,475 \\ 23,100 \\ 7,570 \\ 2,350 \\ 3,050 \\ 1,505 \\ 275 \\ 705 \\ 200 \\ \end{array}$	21,925 59,015

Rabbit feed	565 1.575
Sheep feedStock feed	6,525
Miscellaneous feeds:	
Mineral feedMiscellaneous	1,795 1,370
Oat hull feed and cane molasses	400

DOG FEEDS

Dog feeds are of two kinds: dry and canned feeds. The dry feeds are made up mostly of cereals and cereal by-products, supplemented by meat and meat by-products. In addition, certain vitamin- and mineral-carrying materials are usually added to make up any deficiency of these substances in the basic ingredients, to balance the ration. They are made of a variety of low-fiber and highly digestible materials. Their use is increasing as their value and the method of feeding them are better understood by dog owners. Canned dog feeds are made up of meat and meat by-products, supplemented by cereals and cereal by-products and vegetables. Much of this kind of feed is made of inferior meat and meat by-products and vegetables, and contains an excess of water, as shown by the analysis of the inspection samples in the accompanying table.

A total of 82 samples was collected and analyzed. Of this number 24 samples were dry feed and 58 were canned feed. Of the 24 samples of dry feed, only one was below guaranty in protein and fat, and four were higher in fiber. Of the 58 samples of canned feed analyzed, 10 were below guaranty in protein, 18 in fat, 18 contained excess water, 13 were short in net weight, 13 were irregular as to ingredients, and 18 were considered poor enough to be classed as misbranded.

The average water content of dry dog feed is about 10 percent; that of canned feed is between 70 and 75 percent. The cost of the better grades of dry dog feed at the present market is \$6.50 to \$7.50 per hundred pounds. If the cost of canned feed of the better grades at the present price is calculated on a 10 percent water basis, the cost is \$28.40 per hundred pounds, or about four times as much as the dry feed.

The popularity of canned dog feed over dry feed is not due to quality and economy in cost but apparently to convenience in handling and feeding.

TABLE 6.—ANALYSES OF DOG FEEDS (Manufacturer's guaranty is printed in **bold-face** type)

Manufacturer and brand name				Country !	120			
		Pro-		Carbony- drates				
	Sample taken irom—		Fat F	Fiber 1	N. F. Ext.	Water	Asn	Kemarks
Allied Mills, Inc., Chicago, Ill. Wayne 25% Protein Dog Feed KrumsF	E. C. Miller, Buechel	29.5	5.8	5.0			10.9	As guaranteed.
Chicago, III.	Carl Yaeger, Jeffersontown	10.01	2.0	1.0	10.6	75.0	1.7	Excess water.
, Tenn.	Mountain Wholesale Co., Lothair	11.5	2.5	1.0	8.3	74.8	1.9	Excess water. Deficient in net weight.
Armour & Co., Chicago, Ill. Armour's Dog Feed	Armour & Co.,	12.9	2.3	7.0	12.3	69.4	2.4	As guaranteed.
	Red Front Store, Owensboro	12.6 12.0	3.0	1.2	11.9	68.8	2.9	Same.
The Great Atlantic & Pacific Tea Co.,								
	A. & P. Super Market, Newport	27.0	3.0	2.5				Much deficient in fat.
Ballard & Ballard Co., Louisville, Ky. Insurance 28% Protein Dog Feed	Buechel Produce Ex-	31.6	7.7	4.0			1.	As guaranteed.
Same	change, Buecher Baehr's Market, Lexington	29.0	6.7	3.0				Same.
Chappel Bros., Inc., Rockford, Ill. Ken-L-Biskit 20% Protein Dog Feed!	Haller's Pet Shop,	20.9	2.3	2.1				As guaranteed.
SameC	Carter Supply Co.,	20.1	1.8	0.0	-	-	-	Same.
Ken-L-Ration Dog Feed	Miller's Cash Store,	11.2	3.80	0.0	13.6	9.69	1.9	As guaranteed.
	Kroger Grocery & Baking Co.,	11.4	20.00	1.4	9.5	71.4	3.0	Excess water.
Coast Fishing Co., Wilmington, Calif. Balto Dog and Cat Feed.	Bushemyer & Ogden, St. Matthews	15.3	6.8	1.0	5.6	68.4	3.4	Deficient in net weight.

TABLE 6.—(Continued)

	KENTUCKY AGRICULTURAL EXPERIMENT STATION
Remarks	As guaranteed. As guaranteed. As guaranteed. Corn product present tho not guaranteed. Much deficient in protein and fat. Misbranded. No meat byproducts found. Misbranded. Deficient in protein, fat and net weight. Excess water. Misbranded. Same. Much deficient in protein and fat. Deficient in protein and fat. Deficient in net weight. Excess water. Misbranded. As guaranteed. Same. Oeficient in protein, fat and fat. Weight. Excess water. Misbranded. Deficient in protein and net weight. Excess water. Misbranded. Deficient in protein and net weight. Excess water. Misbranded. Deficient in protein and net weight. Excess water. Misbranded.
Ash	2.5 2.6 2.7 2.4 2.0 1.4 1.4 2.2 2.6
Water	72.9 74.0 71.6 74.0 74.0 74.0 74.0 74.0 74.0 74.0 74.0
	8.3 9.5 9.3 11.5 11.5 12.4 13.6 12.7 12.6 10.0
Carbohy-drates Fiber N. 1	24 47 82 11. 01. 01. 01. 02. 88 88 88 88 88 88 88 88 88 88 88 88 88
Fat 1	6.4. 8.6. 8.6. 8.6. 8.6. 8.6. 8.6. 8.6.
Pro- tein	11.8 12.1 12.1 12.0 12.0 12.0 10.0 10.0 10.0
Sample taken from—	A. & P. Super Market, Newport A. & P. Super Market, St. Matthews A. & P. Super Market, Lexington Carter Supply Co., Lexington Carter Supply Co., Lexington Geo. W. Maraman & Son, Shepherdsville Red Front Store, Earlington Albers Grocery, Newport Steiden Stores, St. Matthews C. A. Burdon, O. Tony Bezold, Newport Same Albers Grocery, Newport Same Albers Grocery, Newport
Manufacturer and brand name	Daily Packing Co., Chicago, Ill. Daily Cat Feed Daily Dog Feed Same Dietrich & Gambrill, Frederick, Md. D& G 20% Protein Dog Feed Big Ben Dog and Cat Feed Smoky Dog Feed Smoky Dog Feed Strongheart Rations Dog Feed White Cross Dog and Cat Feed White Cross Dog and Cat Feed The Early & Daniel Co., Cincinnati, Tuxedo Meat-Cereal Brand 24% Proppy Feed Tuxedo Meat-Cereal Brand 24% Foster Canning Co., Napoleon, O. Tuffy Dog Feed Snappy Dog Feed Snappy Dog Feed

TABLE 6.—(Continued)

	Ash Remarks	2.4 As guaranteed.	As guaranteed.	2.0 Ground soybeans substituted for soybean oil meal. Deficient in fat. Excess water.	2.2 Corn grits present the not surranteed.	1.6 Deficient in fat and net weight. Excess water. Misbranded.			4.9 Deficient in fat.		As guaranteed.		As guaranteed.	Same.	2.5 As guaranteed.
	Water A	71.1		74.7	73.6	75.3	7.08	74.0	67.5						70.0
	ا الناعا			10.7	10.9	9.9	8.7	8.7	12.1						12.0
	Carbohy-drates Fiber N. 1	1.0	4.7	1.4	1.3	1.5	1.0	1.1	11.3	1.2	57.53		0.9	1.1	1.1.
	Fat F	2.0	4.8	1.3	1.8	1.5	0.3	0.7	4.0	3.0	5.0		1.7	2.3	3.2
,	Pro- tein	10.5	33.2	9.9	10.2	10.7	9.0	10.4	11.8	10.0	24.2		23.1	22.4	10.0
	Sample taken from—	Manufacturer's	Albers Grocery,	Miller's Grocery, Buechel	Abbott Bros., La Grange	Red Front Store, Henderson	.C. F. Jasper & Son, Jeffersontown	Glass Store, Lexington	Kroger Gro. & Bak.	Kroger Gro. & Bak. Co., Lexington	Mountain Wholsale Co., Lothair		Albers Grocery,	_Same	Miller's Drug Store, Owensboro
	Manufacturer and brand name	Haller's Pet Shop, Louisville, Ky. Haller's Redi-Cooked Brand Dog Feed. Manufacturer's	V. E. Herter & Co., Dayton, O. Vehco 25% Protein Dog Feed	Hi-Life Packing Co., Chicago, Ill. Hi-Life Dog Feed	Same	Hoosier Dog Food Co., Indianapolis, Ind. Spiffy Dog Feed	Interstate Foods of America, Bedford, O. ABC Dog Feed	Same	The Kroger Grocery & Baking Co., Cincinnati. O. Kroger Dog Feed	Same	Larrowe Milling Co., Detroit, Mich. Larro 241/2% Protein Dog Feed	Loose-Wiles Biscuit Co., Long Island City, New York	Austin's Brek-Fest 20% Frotein Dog Feed	Austin's 20% Protein Dog Feed (Nibbles)	The Loudon Packing Co., Terre Haute, Ind. Doggie Dinner

TABLE 6.—(Continued)

		Pro-		Carbohy-drates	ny-			
Manufacturer and brand name	Sample taken from—		Fat F	Fiber D	N. F. Ext.	Water	Ash	Remarks
Maritime Milling Co., Buffalo, N. Y. Hunt Club 25% Protein Dog Feed	U. B. Sellers,	24.6	4.6	7.0			-	As guaranteed.
Same	Shelby Feed & Seed	27.9	5.0	3.9	-	-	-	Same.
Same Same Redford O	-Albers Grocery, Covington	23.2	3.5	2.5			11	Deficient in protein.
Spot Dog Feed	-Kroger Gro. & Bak. Co., Taylorsville	10.1	6.0	1.1	8.9	8.77	1.2	No fish found. Deficient in fat. Much excess water.
Same	Kroger Gro. & Bak. Co., Midway	9.8	0.7	1.1	8.0	78.8	1.6	Adulterated and misoranded. No salt found. Deficient in fat. Much excess water.
Red Heart Dog Feed-Diet A.	Glass Store,	11.5	3.0	0.7	10.7	71.6	2.5	As guaranteed.
Same	Bauer Bros.,	11.0	2.9	0.7	10.5	72.3	2.6	No soybean grits found.
red freatt Dog Feed—Diet B	Market,	11.3	3.4	8.0	10.8	71.7	3.0	No fish found.
	Jenersontown —Kroger Gro. & Bak. Co., Lexington	10.4	3.1	0.8	10.5	73.0	2.5	Same.
Fido Dog Feed	-E. C. Miller, Buechel	11.7	4.0	1.5	11.2	2.99	4.9	No carrots found. Ground corn present the not guar-
Same National Biscuit Co., New York, N. Y.	-La Grange Grocery, La Grange	11.4	3.5	1.2	11.8	67.9	4.5	No carrots found.
Biscuit Biscuit Traction Dog and Puppy	Glass Grocery, Lexington	20.0	1.0	1.7				As guaranteed.
Milk-Bone Brand 21% Frotein Junior Dog and Puppy Biscuit	Albers Grocery, Latonia	22.8	1.2	2.1				No salt found.
BiscuitBiscuit	Roby & Clemens, St. Matthews	23.5	1.5	2.4				As guaranteed.

TABLE 6.—(Continued)

	TABLE O.	-(communed)	mann,					
		Pro-		Carbohy				Ę
Manufacturer and brand name	Sample taken from—	tein	Fat 1	Fiber	N. F. Ext.	Water	Ash	кетагкѕ
Milk-Bone Brand 21% Protein Dog Biscuit Old Trusty Dog Food Co., Needham	Kroger Gro. & Bak. Co., Lexington	22.3	1.2	2.5		-		Same.
Old Trusty 22% Protein Dog Cakes	Geo. C. Goode, Covington	22.5	1.9	1.0				Excess fiber.
Ferrection Foods Co., Battle Creek, Mich. Perfection Brand Dog Feed (Canned)	Fox Bros., Winchester	10.8	6.1	0.6	11.7	69.5	1.3	No carrots found. Corn gluten meal present the not
Perfection Brand 14% Protein Dog FeedSame	.Same	15.5	2.9	3.6				Buaranteed.
Same	St. Matthews Feed	16.3	2.9	4.1	1	1		Same.
Same	John B. Penn & Sons,	16.4	4.0	3.5		-		Same.
Same	I. L. Hancock, Louisville	16.4	2.4	5.0				Same.
Fratt's 22% Protein Dog Feed	Edgewood Feed Store, Louisville	23.4	9.9	5.0				As guaranteed.
	J. A. Bennett, Taylorsville	24.8	7.0	8.8				As guaranteed.
Rival Cat Feed	Albers Grocery,	10.1	4.6	0.7	13.1	73.1	9.0	Deficient in net weight.
Rival Dog Feed	Union Store Co.,	10.4	.80	0.0	10.5	74.0	1.8	As guaranteed.
Same	Kroger Gro. & Bak. Co., Midway	11.1	2.0	1.0	11.4	74.0	0.8	Deficient in fat.
Honest Brand 25% Protein Dog Feed	Louisa Supply Co., Louisa	25.2	30.00 01.00	5.0				Excess fiber.
Security Mills, Knoxville, Tenn. Security Brand 24% Protein Dog Feed Spratt's Patent, Ltd., Newark, N. J.	Middlesboro Feed Co., Middlesboro	25.4	83.83 10.10	3.0				Excess fiber.
Spratts 20% Frotein Challenge Terrier Feed	Albers Grocery, Covington	25.0	3.0	1.7				As guaranteed.

TABLE 6.—(Continued)

			MANAGEMENT OF					
				Carbohy-drates	ly-			
Manufacturer and brand name	Sample taken from—	tein	Fat	Fiber N	N. F. Ext.	Water	Ash	Remarks
Sweet Feed Mills, Inc., Bowling Green, Ky. Ace Brand 20% Protein Dog Feed	Manufacturer's Warehouse	24.2	3.5	3.51				Excess fiber.
Swift & Co., Chicago, Ill. Swift's Pard Dog Feed	Kroger Gro. & Bak. Co., St. Matthews Brown Super Market, Maysville	11.5	20.03	0.00	8.8	72.7	2.5	As guaranteed. Same.
	_Albers Grocery,	22.2	3.5	9.00				As guaranteed.
The Ubiko Milling Co., Cincinnati, O. Life Guard 24% Protein Dog Feed	Lewis Wholesale Co., Whitesburg	23.0	3.0	3.0				Deficient in protein.
Variety Foods, Inc., Indianapolis, Ind. Woof Dog Feed	Frankel-Obrecht Drug Co.,	11.11	1.6		10.5	74.1	1.6	
Your Pal Dog Feed	St. MatthewsReese Cash Store, Owensboro	10.0	2.0	1.1.1.1.5	10.5	75.0	1.4	In fat. No carrots found. Deficient in fat and net weight. Ex-
Vigor Dog Feed	-Albers Grocery, Newport	10.7	2.0	1.0	10.0	74.9	1.2	No cracked corn found. Much deficient in net weight. Ex-
Viking Dog Feed	Hardesty's Trading Post, Buechel	10.4	1.8	1.2	9.1	75.8	1.7	Excess water. Misbranded.
Bobbie Dog Feed	Cecil Crouch, Louisville	11.1	1.6	1.0	9.5	75.4	1.7	Deficient in fat and net weight. Excess water. Mis- branded.
Louisville, Ky. Fluffy Dog Feed	Frankel-Obrecht Drug Co., St. Matthews	9.6	1.5	1.5	11.9	74.6	1.5	Deficient in protein and fat and excess water.
Wilson & Co., Inc., Chicago, III. Ideal Brand Dog Feed	A. & P. Tea Co.,	11.6	3.57	0.7	11.5	6.07	1.8	Corn gluten meal substituted
Same	A. & P. Super Market, St. Matthews	10.8	6.4	1.0	11.4	69.8	1.4	Corn gluten meal substituted for ground corn. Much de- ficient in net weight.

SUMMARY OF RESULTS OF INSPECTION AND ANALYSIS, 1941

Inasmuch as the analysis with appropriate comments, in detail, have been reported directly to persons interested, only a summary of the results of inspection and analysis is published in this bulletin.

A & A Milling Co., Kevil, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein; excess wheat flour present.

Acme-Evans Co., Indianapolis, Ind. Inspection samples analyzed, 17.
Acme Wheat Red Dog Flour (Soft Wheat), 1; equaled guaranty.

Acme Ground Corn, 1; equaled guaranty. Acme Hominy Feed, 1; equaled guaranty.

Acme Ground Oats, 1; equaled guaranty.

Producer Brand 17% Protein Starting and Growing Mash, 1; equaled guaranty.

Acme 18% Protein Egg Mash, 3; 1 ground barley present the not guaranteed.

Acme 24% Protein Turkey Starting and Growing Mash, 1; deficient in fat.

Acme Horse Feed, 2; equaled guaranty.

Producer Horse Feed, 1; screenings substituted for oat hull feed.

Acme 16% Protein Dairy Feed, 2; 1 no cottonseed meal found.

Acme 24% Protein Dairy Feed, 1; equaled guaranty. Producer 24% Protein Dairy Feed, 2; equaled guaranty.

The Acme Mills, Hopkinsville, Ky. Inspection sample of Wheat Brown Shorts analyzed, 1; equaled guaranty.

H. T. Adams & Co., Harrodsburg, Ky. Inspection sample of Hopper Stock Feed analyzed, 1; no cottonseed meal found; soybean oil meal present tho not guaranteed.

Albers Bros. Milling Co., Seattle, Wash. Inspection samples of Manna Brand 25% Protein Calf Feed analyzed, 2; equaled guaranty.

Alfocorn Milling Co., E. St. Louis, Ill. Inspection samples analyzed, 3.

Wishbone 18% Protein Egg Mash, 1; equaled guaranty. Dollar Mark 20% Protein Pig Grower, 1; equaled guaranty.

Full Pail Brand 16% Protein Dairy Feed, 1; ground corn present tho not guaranteed.

Allied Mills, Inc., Chicago, Ill. Inspection samples analyzed, 28.

Wayne 18% Protein Chick Starter, 3; equaled guaranty.

Wayne 17% Protein Growing Mash With Fortified Sardine Oil, 2; 1 deficient in protein.

Wayne 18% Protein Laying Mash With Fortified Sardine Oil, 1; equaled guaranty.

Economy 18% Protein Laying Mash, 1; equaled guaranty.

Economy 18% Protein Laying Mash With Fortified Sardine Oil, 1; equaled guaranty.

Wayne 20% Protein Egg Mash With Fortified Sardine Oil, 1; equaled guaranty.

Wayne 20% Protein Breeder Mash, 1; equaled guaranty.

Wayne 20% Protein Egg and Breeder Mash, 1; linseed oil meal present tho not guaranteed.

Wayne 20% Protein Turkey Growing Mash With Fortified Sardine Oil, 1; equaled guaranty.

Wayne 26% Protein Poultry Mash Supplement, 1; equaled guaranty.

Wayne Horse Feed, 1; equaled guaranty.

Wayne 40% Protein Hog Supplement, 3; equaled guaranty.

Wayne 12% Protein Fitting Ration (For Young and Dry Cows), 2; equaled guaranty.

Super Soy Brand 37% Protein Feed Supplement, 1; equaled guaranty. Wayne 24% Protein Calf Meal, 1; equaled guaranty.

Topper 16% Protein Dairy Feed, 3; 1 malt sprouts present the not guaranteed, screenings substituted for oat hull feed.

Sugarine 20% Protein Dairy Feed, 1; equaled guaranty.

Wayne 20% Protein Dairy Feed, 1; oat hull product present the not guaranteed.

Wayne 24% Protein Dairy Feed, 1; equaled guaranty.

Wayne 32% Protein Dairy Feed Supplement, 1; equaled guaranty. Always-A-Head Mills, E. St. Louis, Ill. Inspection samples analyzed, 3. Do-Mor Brand Special Horse and Mule Feed, 2; ingredients not as guaranteed; misbranded.

Do-Mor Brand 16% Protein Dairy Feed, 1; ground corn present tho

not guaranteed.

Anderson & Spilman, Danville, Ky. Inspection sample of Snow Flake Feed analyzed, 1; screenings refuse substituted for wheat screenings; misbranded.

Arcady Farms Milling Co., Chicago, Ill. Inspection samples analyzed, 11. Sunkist Complete Brand 18% Protein Chick Starter, 1; excess fiber; screenings present tho not guaranteed.

Wonderfat Brand 15% Protein Station Feed, 1; deficient in fat.

Sunkist 20% Protein Egg Mash, 1; screenings present tho not guaranteed; no peanut oil meal or linseed oil meal found; misbranded.

"Beats-Oats Brand" Horse and Mule Feed, 1; equaled guaranty.

Oat Hull Clips, Soybean Oil Meal and Cane Molasses, 2; equaled guaranty.

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

Besbet 16% Protein Dairy Feed, 3; 1 ingredients not as guaranteed, adulterated with approximately 90,000 unground weed seeds to 100 pounds of feed, misbranded.

Arco 24% Protein Dairy Ration, 1; linseed oil meal present the not guaranteed.

Archer-Daniels-Midland Co., Minneapolis, Minn. Inspection samples analyzed, 7.

32% Protein Linseed Oil Meal, 4; equaled guaranty.

41% Protein Soybean Oil Meal, 3; equaled guaranty.

Ashcraft-Wilkinson Co., Atlanta, Ga. Inspection samples of Helmet Brand 41% Protein Cottonseed Meal analyzed, 4; equaled guaranty.

The Great Atlantic & Pacific Tea Co., New York, N. Y. Inspection samples analyzed, 12.

Daily-Egg Scratch Feed, 1; no oats found.

Daily Growth $16\frac{1}{2}$ % Protein Chick Starter, 1; excess fiber; no fish meal found.

Daily Growth 17½% Protein Growing Mash, 1; equaled guaranty. Daily Growth 18% Protein Broiler Mash, 1; equaled guaranty.

Special Daily Egg 20% Protein Laying Mash, 1; no linseed oil meal found.

Daily Growth 24% Protein Turkey Grower, 1; equaled guaranty.

Daily Milk 16% Protein Dairy Feed, 1; equaled guaranty.

Milky Way 20% Protein Dairy Feed, 2; equaled guaranty.

Milky Way 24% Protein Dairy Feed, 2; equaled guaranty.

Milky Way 32% Protein Dairy Supplement, 1; equaled guaranty.

lubrey & Co., Louisville, Ky. Inspection samples analyzed, 52.

Rainbow Wheat Gray Shorts and Screenings, 1; equaled guaranty. Soft Wheat Mixed Feed, 1; equaled guaranty.

Red A Wheat Mixed Feed and Screenings, 1; equaled guaranty.

Hominy Meal, 3; equaled guaranty.

Aubrey's Ground Barley, 1; equaled guaranty.

24% Protein Brewers Dried Grains, 1; deficient in protein.

Red A 28% Protein Distillers Corn Dried Grains, 1; equaled guaranty.

Aubrey's 41% Protein Cottonseed Meal, 1; equaled guaranty.

Aubrey's 34% Protein Linseed Oil Meal, 1; equaled guaranty.

Aubrey's 41% Protein Soybean Cake Meal, 2; equaled guaranty.

Red Bird 17% Protein Baby Chick Starting and Growing Mash, 2; no dried buttermilk found.

Red A 17% Protein All-Mash Starter-Grower-Broiler Ration, 1; equaled guaranty.

Red Bird 18% Protein Growing Mash (With Cod Liver Oil), 1; equaled guaranty.

Rainbow 14% Protein Poultry Fattening Mash, 1; equaled guaranty. Rainbow 18% Protein Laying Mash (With Cod Liver Oil), 1; equaled guaranty.

Red A 20% Protein Laying Mash, 2; 1 no dried buttermilk found.

Red Star 20% Protein Laying Mash, 1; equaled guaranty.

Rainbow 25% Protein Turkey Mash, 1; equaled guaranty.

Supreme Brand 32% Protein Mash Supplement, 1; equaled guaranty. Supreme Brand 95% Grain Horse Feed, 1; equaled guaranty.

Red A Horse Feed, 1; excess fiber.

Dandy Horse Feed, 3; equaled guaranty.

Red A 16% Protein Sheep Feed, 1; equaled guaranty.

Rainbow 18% Protein Hog and Pig Feed, 2; equaled guaranty.

Red A 40% Protein Hog Supplement, 1; equaled guaranty.

Red A Stock Feed, 1; equaled guaranty.

Alfalfa Meal, Oat Hull Feed and Molasses, 1; equaled guaranty.

Monarch 16½% Protein Dairy Feed, 3; 1 deficient in protein; 1 deficient in fat.

Red Star 16% Protein Dairy Feed, 1; distillers dried grains present tho not guaranteed.

Red A 16% Protein Dairy Feed, 2; equaled guaranty. Dandy 20% Protein Dairy Feed, 5; 1 deficient in protein.

Ful-O-Cream Brand 24% Protein Dairy Feed, 4; 1 no corn gluten feed found.

Supreme Brand 24% Protein Dairy Feed, 1; equaled guaranty. Rainbow 34% Protein Dairy Supplement, 1; equaled guaranty.

The Auburn Mills, Auburn, Ky. Inspection samples analyzed, 5. Wheat Gray Shorts, 2; deficient in protein; 1 corn product present, misbranded.

Mixed Feed, 3; 1 deficient in protein.

Ballard & Ballard Co., Louisville, Ky. Inspection samples analyzed, 40. Ballard's Wheat Bran, 1; equaled guaranty.

Ballard's Kentucky Farm Feed and Screenings, 2; equaled guaranty. Ballard's Wheat Red Dog (Soft Wheat), 2; equaled guaranty.

Ballard's Insurance Pigeon Feed No. 1, 1; equaled guaranty.

Chick Insurance 18% Protein Starting Mash, 3; equaled guaranty.

Ballard's 18% Protein Starting Mash, 1; equaled guaranty.

Insurance 18% Protein Growing Mash, 1; excess fiber

Insurance 18% Protein Broiler Ration, 2; 1 no fish meal found.

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

Insurance 20% Protein Egg and Breeder Mash, 3; equaled guaranty.

Insurance 26% Protein Turkey Starter, 1; equaled guaranty.

Insurance 20% Protein Turkey Growing Mash, 1; equaled guaranty. Insurance 32% Protein Poultry Mash Supplement, 1; equaled guaranty.

Ballard's Heavy Grain Horse Feed, 1; equaled guaranty.

Insurance 16% Protein Pig and Hog Ration, 1; equaled guaranty. Insurance 40% Protein Pig and Hog Feed Supplement, 1; equaled

guaranty. Insurance 13½% Protein Sheep Feed, 1; equaled guaranty.

Ballard's 16% Protein Sheep Feed, 2; equaled guaranty.

Insurance Sweet Feed, 1; equaled guaranty.

Ballard's 16% Protein Sweet Dairy Feed, 3; 1 deficient in fat.

Milk Insurance 20% Protein Sweet Dairy Feed, 1; equaled guaranty. Ballard's 24% Protein Sweet Dairy Feed, 2; 1 deficient in fat.

Milk Insurance 24% Protein Sweet Dairy Feed, 6; equaled guaranty. Insurance 34% Protein Sweet Dairy Feed Supplement, 1; equaled guaranty.

Bardstown Mills, Bardstown, Ky. Inspection samples of Royal Mixed Feed analyzed, 2; deficient in protein; 1 deficient in fat, excess wheat flour present.

Baughman Milling Co., Stanford, Ky. Inspection samples of Banner Stock Feed analyzed, 2; 1 deficient in fat; 1 excess fiber.

Beaver Dam Milling Co., Beaver Dam, Ky. Inspection sample of Beaver Brand 16% Protein Dairy Feed analyzed, 1; equaled guaranty.

Bi-County Farm Bureau Co-operative Association, Erlanger, Ky. Inspection samples analyzed, 5.

Co-op Mermash Brand 17% Protein Starting Mash, 1; equaled guaranty.

Co-op Special Brand 20% Protein Laying Mash, 1; equaled guaranty. Co-op Mermash Brand 23% Protein Turkey Starting Ration, 1; equaled guaranty.

Co-op Pailfiller Brand 20% Protein Dairy Feed, 1; no bone meal found.

Co-op Pailfiller Brand 24% Protein Dairy Feed, 1; equaled guaranty. The Big Four Mills, Ltd., Covington, Ky. Inspection sambles analyzed, 38.

Big Four 16% Protein All-Mash Starter and Grower, 2; 1 distillers dried grains present the not guaranteed; 1 corn gluten product present the not guaranteed.

Big Four 18% Protein Starting Mash, 1; equaled guaranty.

Big Four 19% Protein Broiler Mash, 2; distillers dried grains present tho not guaranteed.

O. K. Brand 18% Protein Growing Mash, 1; equaled guaranty.

Big Four 18% Protein Growing Mash, 1; deficient in protein; distillers dried grains present tho not guaranteed; misbranded.

Big Four 20% Protein Laying Mash, 1; equaled guaranty. O. K. Brand 20% Protein Egg Mash, 1; equaled guaranty.

Hi-Lo 20% Protein Egg Mash, 1; distillers dried grains present tho not guaranteed.

Big Four 24% Protein Turkey Grower, 2; much deficient in protein, distillers dried grains present the not guaranteed, misbranded; 1 excess fiber, ground oats substituted for oat groats; 1 no bone meal found.

Big Four 19% Protein Pig and Hog Feed, 1; corn gluten product present the not guaranteed.

Big Four 25% Protein Hog Feed, 1; much deficient in protein; misbranded.

Big Four 38% Protein Hog Supplement, 2; no peanut meal found; corn gluten product present the not guaranteed.

Big Four 15% Protein Sheep Feed, 1; deficient in protein.

O. K. Brand 16% Protein Dairy Feed, 9; 1 deficient in fat; 1 excess fiber; 1 cottonseed meal present tho not guaranteed; 2 ground corn present tho not guaranteed; 4 ingredients not as guaranteed, misbranded; 1 adulterated with approximately 544,000 unground weed seeds to 100 pounds of feed, misbranded.

O. K. Brand 20% Protein Dairy Feed, 3; ingredients not as guaranteed; 2 adulterated with approximately 100,000 unground weed

seeds to 100 pounds of feed; misbranded.

Hi-Lo 24% Protein Dairy Feed, 5; 1 no salt or corn gluten feed found; 3 ingredients not as guaranteed, misbranded; 1 adulterated with approximately 136,000 unground weed seeds to 100 pounds of feed, misbranded.

Big Four 24% Protein Dairy Feed, 3; 1 linseed oil meal present tho not guaranteed; 1 unground weed seeds present.

Big Four 32% Protein Dairy Supplement, 1; no linseed oil meal found.

Binns Milling Co., Herndon, Ky. Inspection samples analyzed, 6. Eclipse Mixed Feed, 4; 1 deficient in protein. Eclipse 18% Protein Laying Mash, 1; equaled guaranty. Eclipse 15½% Protein Hog Feed, 1; deficient in protein.

Bisbee Linseed Co., Chicago Hts., Ill. Inspection samples analyzed, 2. Bisbee Brand 34% Protein Linseed Meal, 1; equaled guaranty. Bisbee Brand 37% Protein Linseed Meal, 1; equaled guaranty.

Blanton Milling Co. (Acme-Evans Co.), Indianapolis, Ind. Inspection samples analyzed, 3.

Blanton Wheat Brown Middlings and Screenings, 1; equaled

guaranty.

protein.

Perfect Brand 24% Protein Turkey Starting and Growing Mash, 1; excess fiber.

Perfect Brand 40% Protein Hog Supplement, 1; deficient in protein.

Blish Milling Co., Seymour, Ind. Inspection samples analyzed, 3.
Woodstock Wheat Gray Shorts and Screenings, 1; equaled guaranty.
Bull's Eye Wheat Brown Middlings and Screenings, 2; 1 deficient in

Boonville Mills, Boonville, Ind. Inspection sample of Wheat Gray Shorts

analyzed, 1; deficient in protein. Broadway Roller Mills, Bowling Green, Ky. Inspection sample of Mixed

Feed analyzed, 1; deficient in fat.

The Brode Corporation, Memphis, Tenn. Inspection sample of Owl Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.

Chas. Broeker & Co., Owensboro, Ky. Inspection sample of Broeker's Red Dog Flour analyzed, 1; much deficient in protein and fat.

Browder Milling Co., Fulton, Ky. Inspection samples analyzed, 5.
Biddie's Choice 20% Protein Laying Mash, 1; excess fiber.
Browder's Special Horse and Mule Feed, 1; equaled guaranty.
Hog's Delight 15% Protein Sweet Feed, 1; equaled guaranty.
Economy Brand 17½% Protein Hog Feed, 1; equaled guaranty.
Big Sixteen (16% Protein) Dairy Feed, 1; equaled guaranty.

The Buckeye Cotton Oil Co., Cincinnati, O. Inspection samples of Buckeye 41% Protein Soybean Oil Meal analyzed, 4; equaled guaranty.

Buffalo Roller Mills, Buffalo, Ky. Inspection samples of Sea Foam Mixed Feed analyzed, 1; deficient in protein; excess corn product present.

Buffalo Springs Distilling Co., Stamping Ground, Ky. Inspection sample of 30% Protein Distillers Corn Dried Grains analyzed, 1; equaled guaranty.

The Buhner Fertilizer Co., Seymour, Ind. Inspection samples analyzed, 3. Buhner's 40% Protein Hog Supplement, 2; 1 excess fiber; 1 deficient in protein, excess salt, soybean oil meal present tho not guaranteed.

16% Protein Dairy Feed, 1; deficient in fat.

Bundy Bros. Mill Co., Medora, Ind. Inspection samples analyzed, 7.
Monarch 18% Protein Laying Mash, 4; equaled guaranty.
Champion Stock Feed, 2; equaled guaranty.
Combination Stock Feed, 1; equaled guaranty.

Burnside Milling Co., Burnside, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein; excess wheat flour present.

Cadick Milling Co., Grandview, Ind. Inspection samples analyzed, 2. Wheat Gray Shorts, 1; deficient in protein.

Wheat Mixed Feed, 1; deficient in protein; corn feed meal present; misbranded.

Cadiz Milling Co., Cadiz, Ky. Inspection samples of Sunbeam Wheat Mixed Feed and Screenings analyzed, 3; 2 deficient in protein.

Cairo Meal & Cake Co., Cairo, Ill. Inspection samples of Miss Cairo Brand 41% Protein Cottonseed Meal analyzed, 4; 1 deficient in fat and excess fiber.

Campbellsville Milling Co., Campbellsville, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein.

Central Soya Co., Ft. Wayne, Ind. Inspection samples analyzed, 10. Central 41% Protein Soybean Oil Meal, 9; equaled guaranty. Central Star Brand 44% Protein Soybean Oil Meal, 1; equaled guaranty.

Chemical Products Corporation, Cincinnati, O. Inspection samples analyzed, 4.

Abattoir Brand 50% Protein Meat and Bone Scraps, 2; equaled guaranty.

Abattoir Brand 60% Protein Digester Tankage, 2; 1 excess fiber.

The Cincinnati Grain & Hay Co., Cincinnati, O. Inspection samples analyzed, 9.

Alfalfa Meal, 1; equaled guaranty Hominy Feed, 1; deficient in fat

Whole Ground Oats, 1; ground corn and weed seeds present; misbranded.

No-Better Brand 15½% Protein Sweet Sheep Feed, 1; much deficient in protein; misbranded.

No-Better Brand 16% Protein Sweet Dairy Feed, 2; 1 distillers dried grains substituted for brewers dried grains.

No-Better Brand 20% Protein Sweet Dairy Feed, 1; equaled guaranty. No-Better Brand 24% Protein Dry Dairy Ration, 1; distillers dried grains substituted for brewers dried grains.

No-Better Brand 24% Protein Sweet Dairy Ration, 1; equaled guaranty.

Citizens Milling Co., Somerset, Ky. Inspection samples of Cumberland Special Mixed Feed analyzed, 2; 1 deficient in protein; 1 no cotton seed meal found, corn bran present tho not guaranteed.

City Roller Mills, Vevay, Ind. Inspection sample of Blue Ribbon Wheat Mixed Feed and Screenings analyzed, 1; much deficient in protein.

Clarkson Milling Co., Clarkson, Ky. Inspection sample of Special Mixed Feed analyzed, 1; equaled guaranty

Clell Coleman & Son, Burgin, Ky. Inspection samples of Coleman's Favorite Feed analyzed, 2; equaled guaranty.

Colonial Milling Co., Nashville, Tenn. Inspection sample of Colonial Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

The Columbus Rendering Co., Columbus, O. Inspection samples analyzed, 3.

Coreco 50% Protein Meat and Bone Scraps, 1; equaled guaranty. Coreco 60% Protein Digester Tankage, 2; equaled guaranty.

Community Flour Mills, Greenup, Ky. Inspection samples analyzed, 6. Best Yet Brand Mixed Feed, 2; 1 corn meal and ground corn cob present the not guaranteed, misbranded.

Two-Way 16% Protein Dairy Feed, 1; lespedeza meal substituted

for alfalfa meal.

Farmers' Friend 16% Protein Dairy Feed, 2; deficient in protein. 24% Protein Dairy Feed, 1; equaled guaranty.

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

Corn Products Refining Co., New York, N. Y. Inspection sample of Diamond Corn Gluten Meal analyzed, 1; equaled guaranty.

Geo. Couch & Sons, New Harmony, Ind. Inspection sample of Harmony Wheat Gray Shorts and Screenings analyzed, 1; much deficient in protein and fat; excess wheat flour present; misbranded.

Crescent Roller Mills Co., Taylorsville, Ky. Inspection samples of Crescent Stock Feed analyzed, 3; 1 deficient in protein; 1 deficient in

fat.

Crittenden Milling Co., Marion, Ky. Inspection sample of Wheat Mixed Feed analyzed, 1; deficient in protein and fat; excess wheat flour present.

Dearborn Mills, Aurora, Ind. Inspection samples analyzed, 6.
Dearborn Wheat Gray Middlings and Screenings, 1; equaled guaranty.
Dearborn 41% Protein Soybean Oil Meal, 1; equaled guaranty.
Dearborn 16% Protein Pig and Hog Ration, 1; equaled guaranty.
Success Special Brand 16% Protein Dairy Feed, 1; deficient in fat.
Dearborn 20% Protein Dairy Feed, 1; equaled guaranty.
Success Brand 24% Protein Dairy Feed, 1; equaled guaranty.

The Dewey Bros. Co., Blanchester, O. Inspection samples analyzed, 5. Soft Winter Wheat Gray Middlings, 1; equaled guaranty.

Marion 20% Protein Egg Mash, 1; no dried buttermilk found.

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

Dew-Co 16% Protein Dairy Feed, 1; equaled guaranty.

Marion 24% Protein Dairy Ration, 1; equaled guaranty.

W. C. Dicken, Mentor, Ky. Inspection samples analyzed, 7.

Sunny Grain Brand 17% Protein Chick Starter, 1; no dried buttermilk found.

Sunny Grain Brand 18% Protein Chick Grower, 1; equaled guaranty. Sunny Grain Brand 20% Protein Laying Mash, 2; equaled guaranty. Sunny Grain Brand 17% Protein Hog Feed, 1; equaled guaranty. Sunny Grain Brand 24% Protein Dairy Feed, 2; deficient in protein.

Dixie Mills Co., E. St. Louis, Ill. Inspection samples analyzed, 13.

Dixie 16% Protein All-Mash, 1; equaled guaranty.

Dixie 17% Protein Starter and Grower Mash, 1; equaled guaranty.

Dixie 18% Protein Broiler Mash, 1; equaled guaranty.

Dixie 18% Protein Egg Mash, 2; equaled guaranty.

Dixie 20% Protein Laying Mash, 1; equaled guaranty.

Dixie 15% Protein Hog Feed, 1; equaled guaranty.

Dixie 20% Protein Pig and Sow Feed, 1; deficient in fat.

Dixie 40% Protein Hog Feed Supplement, 1; equaled guaranty.

Dixe 16% Protein Dairy Feed, 2; equaled guaranty.

Dixie 24% Protein Dairy Feed, 2; equaled guaranty.

Duncan & Theiss, La Grange, Ky. Inspection samples analyzed, 3.

Dairy Maid 16% Protein Dairy Feed, 1; equaled guaranty.

Dairy Maid 24% Protein Dairy Feed, 1; equaled guaranty.

Dairy Maid 32% Protein Dairy Feed Supplement, 1; equaled guaranty.

The Early & Daniel Co., Cincinnati, O. Inspection samples analyzed, 37. Feeding Rolled Oats, 1; deficient in protein.

Tuxedo 17½% Protein Starting and Growing All-Mash, 1; equaled guaranty.

Tuexdo 17½% Protein Starter, Grower and Developer Mash, 1; equaled guaranty.

Tuxedo 17% Protein Growing and Developing Mash, 1; equaled guaranty.

Tuxedo 181/2% Protein Broiler Mash, 1; equaled guaranty.

Tuxedo 20% Protein Special Egg Mash, 2; equaled guaranty.

Eadan 20% Protein Egg Mash, 2; 1 no fish meal found.

Tuxedo 21% Protein Turkey Growing and Developing Mash, 1; no fish meal found.

Tuxedo 30% Protein Supplement Mash, 1; equaled guaranty.

Tuxedo Special Chop, 1; equaled guaranty.

Tuxedo 18% Protein Goat Pellets, 1; equaled guaranty.

Tuxedo 141/2 % Protein Pig Meal, 1; equaled guaranty.

Tuxedo 151/2% Protein Porkmaker, 1; equaled guaranty.

Tuxedo 19% Protein Hog Ration, 1; equaled guaranty.

Tuxedo Big Forty 40% Protein Hog Supplement, 2; equaled guaranty.

Tuxedo 131/2 % Protein Sheep Feed, 2; deficient in protein.

Economy Special 16% Protein Dairy Feed, 1; equaled guaranty.

Eadan 16% Protein Dairy Feed, 4; 1 adulterated with approximately 225,600 unground weed seeds to 100 pounds of feed, misbranded.

Edco 16% Protein Dairy Feed, 1; no distillers dried grains found; adulterated with approximately 270,400 unground weed seeds to 100 pounds of feed; misbranded

Tuxedo Special 16% Protein Dairy Feed, 1; equaled guaranty.

Tuxedo 20% Protein Dairy Feed, 2; equaled guaranty.

Eadan 24% Protein Dairy Feed, 2; equaled guaranty.

Tuxedo 24% Protein Dairy Feed, 1; equaled guaranty.

Tuxedo Special 24% Protein Dairy Feed, 2; equaled guaranty. Tuxedo 33% Protein Dairy Supplement, 3; equaled guaranty.

The F. L. Emmert Co., Cincinnati, O. Inspection sample of Molasso-Malt Brand 22% Protein Brewers Dried Grains and Molasses analyzed, 1;

equaled guaranty.

John W. Eshelman & Sons, Lancaster, Pa. Inspection samples analyzed, 13. Eshelman Red Rose 16% Protein All-Mash Starter and Grower (With Cod Liver Oil), 1; excess fiber.

Eshelman Red Rose 17% Protein Growing Mash (With Cod Liver Oil), 1; equaled guaranty.

Eshelman Red Rose 14% Protein Fattening Mash, 1; equaled

Eshelman Red Rose 20% Protein Laying Mash (With Cod Liver Oil), 1; equaled guaranty.

Eshelman Maintenance 20% Protein Laying Mash, 2; 1 linseed oil meal present tho not guaranteed; 1 dried buttermilk present tho not guaranteed.

Eshelman Red Rose 18% Protein Pig and Hog Meal, 1; excess fiber. Eshelman Red Rose 15% Protein Sheep Feed, 2; equaled guaranty. Eshelman Red Rose 32% Protein Mixing Supplement, 1; equaled guaranty.

Eshelman Red Cow 16% Protein Dairy Feed, 2; 1 deficient in fat. Eshelman Challenge 24% Protein Dairy Feed, 1; excess fiber.

Evans Milling Co., Indianapolis, Ind. Inspection samples of Emco Hominy Feed analyzed, 2; equaled guaranty.

Ewing-Von Allmen Dairy Co., Louisville, Ky. Inspection sample of Dried Skimmed Milk analyzed, 1; equaled guaranty.

Excelsior Milling Co., Minneapolis, Minn. Inspection samples of Camel Wheat Mixed Feed analyzed, 5; equaled guaranty.

Exchange Milling Co., Sturgis, Ky. Inspection sample of Smith's Special 16% Protein Dairy Feed analyzed, 1; deficient in protein.

Farmers & Merchants Milling Co., Brooksville, Ky. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

Farmers Supply Co., Danville, Ky. Inspection sample of Farmo 16% Protein Sheep Feed analyzed, 1; deficient in fat; soybean oil meal and ground barley present the not guaranteed.

Farmers Union Mill, Versailles, Ky. Inspection samples analyzed, 3.

Mixed Feed, 1; equaled guaranty.

15½% Protein Sheep Feed, 1; equaled guaranty. 20% Protein Dairy Feed, 1; equaled guaranty.

J. H. Fedders' Son, Covington, Ky. Inspection sample of Hominy Feed analyzed, 1; equaled guaranty.

Ferncliff Feed & Grain Co., Louisville, Ky. Inspection samples analyzed, 15.

Cracker Jack Hominy Feed, 1; deficient in fat.

32% Protein Linseed Oil Meal, 1; equaled guaranty.

P. D. Q. 17% Protein Starting and Growing Mash, 2; equaled guaranty.

P. D. Q. 18% Protein Egg Mash, 2; equaled guaranty.

Cracker Jack 18% Protein Egg Mash, 1; equaled guaranty.

P. D. Q. No. 1 Brand 85% Grain Horse and Mule Feed, 1; cottonseed meal present tho not guaranteed.

Cracker Jack Wheat Middlings and Hominy Feed, 1; equaled guaranty.

Cracker Jack Special Feed No. 2, 1; no wheat bran or salt found. P. D. Q. 16% Protein Dairy Feed, 1; equaled guaranty.

Cracker Jack 24% Protein Sweet Dairy Ration, 2; equaled guaranty. Ferncliff No. 1 Brand 24% Protein Dairy Ration, 2; equaled guaranty.

Henry Fischer Packing Co., Inc., Louisville, Ky. Inspection samples of Mellwood Brand 60% Protein Digester Tankage analyzed, 2; equaled guaranty.

Flaherty Roller Mills, Vine Grove, Ky. Inspection sample of Golden Grain Mixed Feed analyzed, 1; deficient in protein and fat; excess wheat flour present.

Flemingsburg Mills, Flemingsburg, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein; excess wheat flour present.

Fonthill Milling Co., Fonthill, Ky. Inspection sample of Fonthill's Best Brand Wheat Mixed Feed analyzed, 1; deficient in protein and fat; excess wheat flour present.

Henry Fruechtenicht, Louisville, Ky. Inspection samples, analyzed, 12.

Brewers Dried Grains, 1; deficient in protein; excess barley hulls present.

Hominy Feed, 1; equaled guaranty.

Producer Brand 20% Protein Laying Mash, 1; ground barley present tho not guaranteed.

Producer 16% Protein Dairy Feed, 5; equaled guaranty.

Blue Grass 24% Protein Dairy Feed, 4; 2 deficient in protein; 1 no linseed oil meal found.

Fuhrer-Ford Milling Co., Mt. Vernon, Ind. Inspection sample of Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

W. C. Gambel, Indianapolis, Ind. Inspection samples analyzed, 2.
"Gambel's Idea" 16% Protein Sweet Feed, 1; equaled guaranty.
Gambel's 37% Protein Hog Supplement, 1; equaled guaranty.

Garden Street Mill & Elevator Co. (Aubrey & Co.), Louisville, Ky. Inspection samples of Garden 16% Protein Dairy Feed analyzed, 2; 1 excess fiber.

Garrard Mills, Lancaster, Ky. Inspection samples of Glen Lily Mixed Feed analyzed, 2; 1 deficient in protein; 1 corn cob present, misbranded.

General Mills, Minneapolis, Minn. Inspection samples analyzed, 5.
Washburn's Gold Medal Adrian Hard Wheat Red Dog, 1; equaled guaranty.

Sonny South Red Dog, 1; equaled guaranty.

Sonny South Wheat Brown Shorts and Screenings, 2; equaled guaranty.

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

Georgia-Carolina Oil Co., Atlanta, Ga. Inspection sample of Cheehaw Brand 45% Protein Peanut Meal analyzed, 1; deficient in fat.

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

Glass Milling Co., Wilmore, Ky. Inspection sample of Bouquet Mixed Feed analyzed, 1; deficient in protein; excess wheat flour present.

Glenmore Distilleries Co., Inc., Owensboro, Ky. Inspection sample of Glenmore Distillers Corn Dried Grains analyzed, 1; equaled guaranty.

Edw. F. Goeke Sons, Evansville, Ind. Inspection samples analyzed, 8. Goeke's Ultra-Lifed Brand 16% Protein All-Mash Poultry Ration, 1; equaled guaranty.

Eg-go 18% Protein Egg Mash, 1; no dried buttermilk found.

Goeke's 40% Protein Hog Supplement, 1; deficient in fat and excess fiber.

A-1 Brand 16% Protein Dairy Feed, 2; deficient in fat and excess fiber, misbranded; 1 deficient in protein, wheat bran present tho not guaranteed; 1 no cottonseed meal found.

New A-1 Brand 16% Protein Dairy Feed, 3; no corn gluten feed found.

The Goldcamp Mill Co., Ironton, O. Inspection samples analyzed, 8. Gold-Co Egg-O Brand 18% Protein Laying Mash, 2; ground barley present the not guaranteed; 1 deficient in protein; 1 no linseed oil meal or skimmed milk found

17% Protein Pig and Hog Grower, 1; no fish meal found; corn gluten product present tho not guaranteed.

Gold-Co 16% Protein Dairy Feed, 2; 1 excess fiber.

Cream Flow Brand 24% Protein Dairy Feed, 1; deficient in protein. Mil-Co 24% Protein Dairy Feed, 2; 1 adulterated with approximately 89,600 unground weed seeds to 100 pounds of feed, misbranded.

Grayson Milling Co., Grayson, Ky. Inspection samples analyzed, 6. Corn By-product Feed, 1; excess fiber.

Blue Grass 16% Protein All-Mash Starter, 1; excess fiber; no dried whey found; screenings present the not guaranteed.

K-Y 20% Protein Egg Mash, 1; excess fiber; ingredients not as guaranteed; misbranded.

Blue Grass 16% Protein Dairy Feed, 1; ingredients not as guaranteed; misbranded.

K-Y 16½% Protein Dairy Feed, 1; no wheat bran or middlings found; oatmeal present tho not guaranteed.

K-Y Special 24% Protein Dairy Feed, 1; unground weed seeds present.

Green Bros., Falls of Rough, Ky. Inspection samples of Scratch Feed analyzed, 2; deficient in fat; 1 no milo maize found.

Green River Feed Co., S. Carrollton, Ky. Inspection sample of Green River 16% Protein Dairy Feed analyzed, 1; deficient in protein and fat; no alfalfa meal found.

Green River Hatchery, Owensboro, Ky. Inspection sample of Golden Egg 18% Protein Laying Mash analyzed, 1; equaled guaranty.

Gwinn Bros. & Co., Huntington, W. Va. Inspection samples analyzed, 10. Gwinn's Wheat Brown Middlings and Screenings, 1; deficient in protein; corn meal present; misbranded.

Mixed Feed, 1; equaled guaranty.

Merit Brand 18% Protein Laying Mash, 2; excess fiber, no corn gluten meal found; 1 no dried buttermilk found; 1 peanut oil meal present tho not guaranteed.

Merit Brand 16% Protein Dairy Feed, 3; 2 much deficient in protein and fat; 1 adulterated with rice hulls, misbranded; 1 screenings refuse substituted for oat hull feed, adulterated with approximately 632,000 unground weed seeds to 100 pounds of feed, misbranded.

Merit Brand 24% Protein Dairy Feed, 2; 1 brewers dried grains present the not guaranteed; 1 much deficient in protein, adulterated with approximately 316,800 unground weed seeds to 100 pounds of feed, misbranded.

Gwinn's Grade A Brand 24% Protein Dairy Feed, 1; ingredients not

as guaranteed; misbranded.

The Gwinn Milling Co., Columbus, O. Inspection sample of Gwinn's Wheat Feed and Screenings analyzed, 1; equaled guaranty.

Hales & Hunter Co., Chicago, Ill. Inspection samples analyzed, 16.

Morning Glory Scratch Feed, 1; equaled guaranty. Red Comb Winter Pigeon Feed, 1; equaled guaranty.

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

Morning Glory 17% Protein Chick Starter, 1; no charcoal found.

Morning Glory 17% Protein Growing Mash, 1; no dried buttermilk or charcoal found.

Red Comb 13% Protein Crate Fattener, 2; equaled guaranty.

Morning Glory 15% Protein Egg All-Mash, 1; equaled guaranty.

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

Red Comb 18% Protein Egg Mash, 1; equaled guaranty. Red Comb 21% Protein Turkey Grower, 1; equaled guaranty.

Kingfalfa Brand Horse Feed, 1; no crimped barley found.

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

Pioneer 35% Protein Hog Supplement, 1; equaled guaranty.

Victoria 12% Protein Rabbit Feed, 1; equaled guaranty. Gold Flake 16½% Protein Dairy Feed, 1; equaled guaranty.

The Hanley Milling Co., Mansfield, O. Inspection sample of Hanley's Wheat Flour Middlings and Screenings analyzed, 1; sample is not flour middlings; misbranded.

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

R. L. Harrison & Son, Bagdad, Ky. Inspection samples analyzed, 6.

Corn Feed Meal, 1; equaled guaranty.

Corn By-product Feed, 1; equaled guaranty.

Harrison's Farm Feed, 1; much deficient in protein; excess wheat flour present.

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

Harrison's Nat-Ur-Way Brand 24% Protein Sweet Dairy Feed, 2; equaled guaranty.

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

Wheat Bran and Screenings, 1; equaled guaranty.

Harsha's Wheat Gray Middlings and Screenings, 1; much deficient in protein and fat; misbranded.

Magnolia 20% Protein Egg Mash, 1; much deficient in protein; no corn gluten meal found; soybean oil meal substituted for linseed oil meal; misbranded.

Harsha's Special Brand 16% Protein Dairy Feed, 2; 1 ground soybeans present the not guaranteed, no cottonseed meal, calcium carbonate or salt found.

Edwin C. Hawkins, Paducah, Ky. Inspection samples of Topsy 18½% Protein Laying Mash analyzed, 2; much deficient in protein.

G. M. Haycraft & Son, Leitchfield, Ky. Inspection samples analyzed, 3. Haycraft's 16% Protein All-Mash Starter and Grower, 1; equaled guaranty.

Haycraft's 20% Protein Summer Laying Mash, 1; equaled guaranty. Haycraft's 16% Protein Dairy Feed, 1; equaled guaranty.

Haydon Mill & Grain Co., Springfield, Ky. Inspection samples analyzed, 4.

Economy Brand Mixed Feed, 1; deficient in protein; excess wheat flour present.

Economy Brand 18% Protein Starting Mash, 1; equaled guaranty. Grow Quick 17% Protein Growing Mash, 1; equaled guaranty.

Lay Quick Economy Brand 18½% Protein Laying Mash, 1; soybean oil meal, ground oats, and alfalfa product present the not guaranteed; misbranded.

H. C. Milling Co., Morristown, Tenn. Inspection sample of Ham-Co Feed analyzed, 1; equaled guaranty.

Henderson Elevator Co., Inc., Henderson, Ky. Inspection samples analyzed. 8.

Bullitt's 17% Protein All-Purpose Poultry Mash, 2; equaled guaranty. Bullitt's Economy Sweet Feed, 1; deficient in fat and excess fiber; soybean oil meal present tho not guaranteed.

Bullitt's Best Brand Horse and Mule Feed, 2; equaled guaranty.

Bullitt's Jersey Cream Brand 16% Protein Dairy Feed, 3; 2 adulterated with approximately 195,200 unground weed seeds to 100 pounds of feed, misbranded.

V. E. Herter & Co., Dayton, O. Inspection samples analyzed, 7.

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

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

Yankee 20% Protein Laying Mash, 2; 1 no ground barley found, peanut byproduct present tho not guaranteed.

Economy Brand 16% Protein Dairy Feed, 2; no cottonseed meal found; 1 deficient in protein, no distillers dried grains found.

Eagle 24% Protein Dairy Feed, 1; no cottonseed meal or distillers dried grains found.

Hodgenville Roller Mills, Hodgenville, Ky. Inspection samples of Lincoln Wheat Mixed Feed analyzed, 2; equaled guaranty.

Home Milling Co., Greenville, Ky. Inspection samples analyzed, 3.
Happy Home Mixed Feed, 2; 1 deficient in protein.
Happy Home Wheat Feed and Screenings, 1; deficient in protein.

Hopkinsville Milling Co., Hopkinsville, Ky. Inspection samples analyzed, 2.

Sunflower Wheat Gray Shorts and Screenings, 1; excess fiber. Life Cycle 18% Protein Poultry Mash, 1; equaled guaranty.

Horse Cave Mills, Horse Cave, Ky. Inspection samples analyzed, 2.

Superior Brand Mixed Feed, 1; deficient in protein; excess wheat flour present.

Dandy Mixed Feed, 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, 1; equaled guaranty. Wheat Mixed Feed and Screenings, 1; equaled guaranty. Champion Stock Feed, 1; deficient in protein.

Illinois Cereal Mills, Paris Ill. Inspection sample of Hominy Feed analyzed, 1; much deficient in fat; misbranded.

J. F. Imbs Milling Co., Belleville, Ill. Inspection sample of Charm Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

Jackson Cotton Oil Mill, Jackson, Tenn. Inspection sample of Bell Cow Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.

J. E. M. Milling Co. (Lexington Roller Mills), Frankfort, Ky. Inspection samples analyzed, 5.

Capitol Stock Feed, 1; excess fiber; no corn oil meal found; adulterated with rice hull product; misbranded.

Capitol 16% Protein Dairy Feed, 3; 1 corn gluten feed and linseed oil meal present tho not guaranteed.

Capitol 24% Protein Dairy Feed, 1; equaled guaranty.

Joy Milling Co., Elkton, Ky. Inspection samples of Mixed Feed analyzed, 2; deficient in protein, ground wheat present; 1 deficient in fat.

The E. Kahn's Sons Co., Cincinnati, O. Inspection sample of Diamond K 60% Protein Digester Tankage analyzed, 1; equaled guaranty.

Kasco Mills, Toledo, O. Inspection samples analyzed, 10.

Apex 17% Protein Starter and Grower Ration, 2; equaled guaranty.

Apex 15% Protein All-Mash Starter and Grower, 1; equaled guaranty.

Apex 18% Protein Egg Mash, 1; deficient in protein; no bone meal or dried whey found; screenings present the not guaranteed; misbranded.

Apex 16% Protein Hog Feed, 2; 1 deficient in protein; 1 no fish meal found, unground weed seeds present.

Kasco Sweet 16% Protein Dairy Feed, 1; equaled guaranty. Beatsall Brand 22% Protein Dairy Feed, 1; equaled guaranty.

Apex 24% Protein Dairy Feed, 2; 1 adulterated with approximately 180,800 unground weed seeds to 100 pounds of feed, misbranded.

Keco Flour & Feed Co., McKenzie, Tenn. Inspection samples analyzed, 11. Corn Feed Meal, 1; equaled guaranty.

41% Protein Cottonseed Meal, 3; 1 excess fiber.

Thrifty Brand 18% Protein Laying Mash, 1; equaled guaranty.

Keco 20% Protein Laying Mash, 1; no dried buttermilk found; linseed oil meal present tho not guaranteed.

Thrifty Brand 14% Protein Farm Feed, 2; equaled guaranty.

Keco 18% Protein Pig and Hog Feed, 1; equaled guaranty.

Keco Sweet Feed, 1; 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.

Kentucky Chemical Industries, Inc., Cincinnati, O. 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 Cotton & Grain Co., Hickman, Ky. Inspection sample of Corn Hearts analyzed, 1; much deficient in protein; sample is corn byproduct feed; misbranded.

The Kentucky Rendering Co., Taylorsville, Ky. Inspection samples analyzed, 4.

Blue Grass 50% Protein Meat Scraps, 1; much excess fiber; misbranded.

Blue Grass 60% Protein Tankage, 3; 2 much deficient in protein, misbranded.

Kittrell Grain & Feed Co., Nashville, Tenn. Inspection sample of O. K. Brand 16% Protein Dairy Feed analyzed, 1; deficient in fat and excess fiber.

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, 13.

Kroger's Wesco Scratch Feed, 1; equaled guaranty.

Kroger's Wesco 17% Protein Starting and Growing Mash, 2; equaled guaranty

Kroger's Wesco 20% Protein Egg Mash, 3; equaled guaranty.

Kroger's Wesco 16% Protein Dairy Feed, 3; equaled guaranty.

Kroger's Wesco 20% Protein Dairy Feed, 3; equaled guaranty. Kroger's Wesco 24% Protein Dairy Feed, 1; equaled guaranty.

Labrot & Graham, Frankfort, Ky. Inspection samples of 28% Protein Distillers Corn Dried Grains analyzed, 2; equaled guaranty.

Lafayette Milling Co., Lafayette, Ky. Inspection sample of Pride 16% Protein Dairy Feed analyzed, 1; much deficient in protein; misbranded.

Lake County Oil Mill, Tiptonville, Tenn. Inspection samples of 41% Protein Cottonseed Meal analyzed, 2; equaled guaranty.

Lancaster Milling Co., Lancaster, Ky. Inspection samples of Lamico Mixed Feed analyzed, 2; 1 deficient in protein and excess fiber; 1 wheat middlings present the not guaranteed.

The Larabee Flour Mills Co., Kansas City, Mo. Inspection samples of Sunfed Brand Winter Wheat Mixed Feed and Screenings analyzed, 2; equaled guaranty.

The Larrowe Milling Co., Detroit, Mich. Inspection samples analyzed, 11. Beet Pulp and Beet Molasses Dried, 1; equaled guaranty.

Larro 19% Protein Chick Builder, 1; equaled guaranty.

Larro 20% Protein Broiler Feed, 1; equaled guaranty.

Larro 20% Protein Egg Mash, 1; equaled guaranty.

Larro 24% Protein Turkey Builder, 1; equaled guaranty.

Larro 27% Protein Turkey Finisher, 2; equaled guaranty.

Larro 171/2% Protein Pig and Hog Builder, 1; equaled guaranty.

Larro 25% Protein Calf Builder, 1; equaled guaranty

Larro, The 20% Protein Ready Ration for Dairy Cows, 1; equaled guaranty.

Larro 32% Protein Dairy Feed Supplement, 1; equaled guaranty.

Laswell Milling Co., Brodhead, Ky. Inspection samples analyzed, 4.

Laswell's Do-Mor 17% Protein Growing Mash, 1; equaled guaranty.

Laswell's Do-Mor 20% Protein Laying Mash, 1; equaled guaranty.

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

Laswell's 24% Protein Dairy Feed, 1; distillers dried grains substituted for brewers dried grains.

Lewisburg Roller Mills, Lewisburg, Ky. Inspection sample of Economy Brand 16% Protein Dairy Feed analyzed, 1; much deficient in protein; lespedeza hay substituted for alfalfa hay; misbranded.

Lewisport Mill Co., Lewisport, Ky. Inspection sample of Farmers' Choice Feed analyzed, 1; equaled guaranty.

Lexington Roller Mills, Lexington, Ky. Inspection samples analyzed, 17.
Thoroughbred Wheat Mixed Feed and Screenings, 2; 1 deficient in protein.

Kentucky Queen 16% Protein Starting and Growing All-Mash, 2; no dried skimmed milk found.

Kentucky Queen 17½% Protein Growing and Developing Mash, 1; equaled guaranty.

Kentucky Queen 19% Protein Broiler Ration, 1; equaled guaranty. Kentucky Queen 20% Protein Double X Egg Mash, 1; no dried

skimmed milk found.

Kentucky Queen 24% Protein Turkey Starting Mash, 1; no dried skimmed milk found.

Kentucky Queen 20% Protein Turkey Growing Mash, 1; no dried buttermilk found.

Thoroughbred 16% Protein Hog Ration, 1; alfalfa meal present tho not guaranteed.

Thoroughbred 14½% Protein Sheep Feed, 1; equaled guaranty.

Bossie Stock Feed, 1; no corn germ meal or cottonseed meal found; adulterated with cob meal; misbranded.

Thoroughbred 16% Protein Dairy Feed, 1; equaled guaranty. Thoroughbred 20% Protein Dairy Feed, 2; equaled guaranty.

Thoroughbred 24% Protein Dairy Feed, 2; 1 screenings product present the not guaranteed.

Lincoln Milling Co., Crab Orchard, Ky. Inspection sample of Blue Bird Feed analyzed, 1; much deficient in protein and excess fiber; misbranded.

G. W. Lofton & Son, Providence, Ky. Inspection samples analyzed, 3. Lofton's Mixed Feed, 1; equaled guaranty.

Lofton's Special 15% Protein All-Purpose Mash, 1; equaled guaranty.

Lofton's 16% Protein Special Dairy Feed, 1; deficient in fat.

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

Louisa Supply Co., Louisa, Ky. Inspection samples of Louisa Standard Feed analyzed, 2; deficient in protein.

L. B. Lovitt & Co., Memphis, Tenn. Inspection samples of Lovit Brand 41% Protein Cottonseed Meal analyzed, 3; equaled guaranty.

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

Madison Flour Mills, Madison, Ind. Inspection samples analyzed, 2. Wheat Bran, 1; equaled guaranty.

Mixed Feed, 1; much deficient in protein.

Marianna Sales Co., Memphis, Tenn. Inspection samples of White Mule Brand 41% Protein Cottonseed Meal analyzed, 7; 2 deficient in protein; 1 much deficient in protein, much excess fiber, misbranded.

Marion Milling Co., Marion, Ky. Inspection sample of Feeders' Favorite Mixed Feed analyzed, 1; deficient in fat; excess wheat flour present. Marion Milling Co., Marion, O. Inspection sample of Cloverleaf Wheat

Feed analyzed, 1; equaled guaranty.

Markin Feed Co., Ironton, O. Inspection sample of Standard Feed and Screenings analyzed, 1; equaled guaranty.

Mayfield Milling Co., Mayfield, Ky. Inspection samples analyzed, 4. Corn By-product Feed, 1; deficient in fat.

Wheat Mixed Feed and Screenings, 1; deficient in protein.

Big Chief 15% Protein Egg All-Mash, 1; no dried milk by-product found.

White Chester 19% Protein Hog Grower and Fattener, 1; no fish meal found; peanut oil meal and charcoal present tho not guaranteed. McCarley & Richardson, Russellville, Ky. Inspection samples analyzed, 4.

Wheat Feed and Screenings, 1; equaled guaranty.

Mixed Feed, 1; equaled guaranty.

Front Rank 18% Protein Laying Mash, 2; 1 no dried skimmed milk or fish meal found; corn gluten product present the not guaranteed.

Gentry McCauley Seed Co., Versailles, Ky. Inspection sample of Pleez-U Sheep Feed analyzed, 1; cottonseed meal and soybean oil meal

present tho not guaranteed.

McKenzie Milling Co., McKenzie, Tenn. Inspection samples analyzed, 2. White Frost Wheat Gray Shorts and Screenings, 1; deficient in protein.

My-T-Good Brand 16% Protein Dairy Feed, 1; no corn gluten feed, soybean oil meal or brewers dried grains found; misbranded.

The Mennel Milling Co., Toledo, O. Inspection sample of Memo Wheat Gray Middlings analyzed, 1; equaled guaranty.

Middlesboro Milling Co., Middlesboro, Ky. Inspection samples analyzed, 8

Hard-to-Beat Feed, 2; equaled guaranty.

Hi-Grade Brand Feed, 2; no salt or calcium carbonate found.

Good Value Brand 16% Protein Dairy Feed, 2; 1 no salt or calcium carbonate found.

Reliable Brand 24% Protein Dairy Feed, 2; equaled guaranty.

Mississippi Valley Grain Co., Memphis, Tenn. Inspection sample of Sweet Sixteen (16% Protein) Dairy Feed analyzed, 1; no rice bran found; corn gluten feed present the not guaranteed.

Model Mills, Georgetown, Ky. Inspection sample of Best Brand Mixed Feed analyzed, 1; deficient in protein; excess corn product present.

Mountain City Mill Co., Chattanooga, Tenn. Inspection samples of Blue Cow 16% Protein Feed, 2; 1 excess fiber; peanut oil meal substituted for soybean oil meal.

Murray Milling Co., Murray, Ky. Inspection samples analyzed, 5.
Shipstuff, 1; much deficient in protein and fat; excess wheat flour present; misbranded.

Exclusive 20% Protein Laying Mash, 1; equaled guaranty.

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

Exclusive 16% Protein Dairy Feed, 2; 1 much deficient in protein.

Nashville Cotton Oil Mill Corporation, 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 Namico Wheat Gray Middlings and Screenings analyzed, 1; equaled guaranty.

National Oats Co., E. St. Louis, Ill. Inspection samples analyzed, 15.

Corno 18% Protein Starting Mash, 1; equaled guaranty.

Corno 17% Protein Growing Mash, 2; equaled guaranty.

Corno 18% Protein Laying Mash, 1; equaled guaranty.

Nutro 18% Protein Egg Mash, 1; equaled guaranty.

Corno 20% Protein Breeder Laying Mash, 1; equaled guaranty.

Corno 35% Protein Mash Supplement, 1; excess fiber.

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

Corno Bulky Premium Brand Feed, 1; equaled guaranty.

Nutro Sweet Feed, 1; equaled guaranty.

Nutro 16% Protein Dairy Feed, 1; equaled guaranty.

Corno 24% Protein Dairy Feed, 4; equaled guaranty.

The New Era Milling Co., Arkansas City, Kan. Inspection sample of Polar Bear Wheat Gray Shorts and Screenings analyzed, 1; equaled guaranty.

Newsome Feed & Grain Co., Louisville, O. Inspection sample of Palmo Midds Feed analyzed, 1; equaled guaranty.

Nicholson Mills, Henderson, Ky. Inspection samples analyzed, 2.
Numix 40% Protein Hog Supplement, 1; equaled guaranty.
Numix 16% Protein Special Dairy Feed, 1; equaled guaranty.

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

Wheat Red Dog Flour (Soft Wheat), 1; deficient in protein. Royal Mixed Feed, 2; equaled guaranty.

North American Fertilizer Co., Inc., Louisville, Ky. Inspection samples analyzed, 6.

Nafco Red Dog (Hard Wheat), 1; deficient in fat.

Nafco Rye Middlings and Screenings, 1; equaled guaranty.

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

Nafco Horse and Mule Feed, 1; equaled guaranty.

Sunburst 16% Protein Dairy Feed, 1; deficient in fat; no linseed oil meal found.

Big Pay Brand 16% Protein Dairy Feed, 1; deficient in fat.

Chas. Nunn & Sons Milling Co., Evansville, Ind. Inspection samples analyzed, 8.

Nunn-Better Brand Wheat Gray Shorts and Screenings, 1; deficient in protein and fat; excess wheat flour present.

Nunn-Better Brand Wheat Mixed Feed and Screenings, 1; deficient in fat; excess wheat flour present.

Banner 16% Protein Poultry All-Mash, 1; equaled guaranty.

Nunn-Better Brand 17% Protein Poultry All-Mash, 1; equaled guaranty.

Nunn-Better Brand 17% Protein Poultry All-Mash (With Cod Liver Oil), 1; equaled guaranty.

Nunn-Better Brand 39% Protein Hog Supplement, 1; excess fiber. Sweet Sixteen 16% Protein Dairy Feed, 2; deficient in fat; 1 excess fiber.

Ohio Valley Mills, Lebanon Junction, Ky. Inspection samples of Mixed Feed analyzed, 2; deficient in protein; 1 excess fiber, excess corn bran present.

Old Joe Distilling Co., Lawrenceburg, Ky. Inspection sample of 30% Protein Distillers Corn Dried Grains analyzed, 1; equaled guaranty.

Owensboro Grain Co., Owensboro, Ky. Inspection samples of Greendale 41% Protein Soybean Oil Meal analyzed, 5; equaled guaranty.

Owensboro Milling Co., Owensboro, Ky. Inspection samples analyzed, 9. TruTest Brand Wheat Feed, 1; deficient in protein.

TruTest Brand 19% Protein Growing Mash, 1; equaled guaranty.

O-Mil-Co 19% Protein Laying Mash, 1; equaled guaranty.

TruTest 19½% Protein Laying Mash, 1; deficient in protein; lespedeza meal substituted for alfalfa meal.

Star Brand Horse Feed, 2; 1 deficient in protein.

D & H Stock Feed, 1; deficient in protein; excess fiber.

Star Brand 16½% Protein Dairy Feed, 2; only small amount of alfalfa meal present; 1 deficient in fat.

Pan-American Mills, Bowling Green, Ky. Inspection samples of Mixed Feed analyzed, 2; deficient in fat; 1 deficient in protein, excess wheat flour present.

Paramount Feed Mills (Ferncliff Feed & Grain Co.), Louisville, Ky. Inspection samples analyzed, 4.

Paramount 18% Protein Egg Mash, 1; equaled guaranty.

Paramount 16% Protein Dairy Feed, 1; much excess fiber; misbranded.

Paramount No. 1 Brand 16% Protein Dairy Feed, 1; equaled guaranty. Paramount No. 1 Brand 24% Protein Dairy Feed, 1; equaled guaranty.

S. T. Pease Jr. & Co., Memphis, Tenn. Inspection samples of Pease 41% Protein Cottonseed Meal analyzed, 2; 1 deficient in protein.

Pembroke Roller Mills, Pembroke, Ky. Inspection samples of Mixed Feed analyzed, 2; deficient in protein; excess wheat flour present.

Perkins Oil Co., Memphis, Tenn. Inspection sample of Golden Rod Brand 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.

Pinckneyville Milling Co., Pinckneyville, Ill. Inspection samples of Winter Wheat Gray Shorts and Screenings analyzed, 3; 1 deficient in fat, excess wheat flour present.

The R. C. Poage Milling Co., Ashland, Ky. Inspection samples analyzed, 12.

Pomco Wheat Gray Middlings and Screenings, 1; equaled guaranty. Pomco 17% Protein All-Mash Starter and Grower (With Cod Liver Oil), 1; soybean oil meal present the not guaranteed.

Pomco 20% Protein Laying Mash (With Cod Liver Oil), 1; no corn gluten feed found.

Vim Brand 18% Protein Laying Mash (With Cod Liver Oil), 1; no dried buttermilk found.

Pomco 15% Protein Hog and Pig Feed, 1; no charcoal found.

Ideal Brand Stock Feed, 1; deficient in protein; corn screenings present tho not guaranteed.

Vim Brand 16% Protein Dairy Feed, 1; equaled guaranty. Pomco 16% Protein Dairy Feed, 2; equaled guaranty.

Pomco 24% Protein Dairy Feed, 1; equaled guaranty.

Vim Brand 24% Protein Dairy Feed, 2; 1 deficient in protein, no cottonseed meal present.

Poole Milling Co., Poole, Ky. Inspection sample of Mixed Feed analyzed, 1; deficient in protein, excess corn meal present.

Pratt Food Co., Hammond, Ind. Inspection samples analyzed, 4.

Pratt's 17% Protein Starter and Grower, 1; equaled guaranty. Utility Brand 17% Protein Growing Mash, 1; no dried buttermilk

found; corn gluten feed substituted for corn gluten meal. Utility Brand 20% Protein Laying Mash, 1; excess fiber; no linseed

oil meal found.

Protein Dairy Feed 1: alfalfa meal present the

Pratt's Sweet 16% Protein Dairy Feed, 1; alfalfa meal present tho not guaranteed; only traces of linseed oil meal and wheat germ meal present.

Princeton Mills, Princeton, Ky. Inspection sample of Big K Mixed Feed analyzed, 1; equaled guaranty.

Proctor & Gamble, Cincinnati, O. Inspection sample of P & G Cocoanut Oil Meal analyzed, 1; deficient in protein.

Purcell Seed Co., Inc., Evansville, Ind. Inspection sample of New Idea 16% Protein All-Mash Poultry Ration analyzed, 1; equaled guaranty.

The Quaker Oats Co., Chicago, Ill. Inspection samples analyzed, 24. Ful-O-Pep 17% Protein Chick Starter, 2; equaled guaranty.

Ful-O-Pep 19% Protein Broiler Mash, 1; equaled guaranty.

Big Egg 17% Protein Growing Mash, 1; no dried buttermilk found.

Ful-O-Pep 19% Protein Growing Mash, 1; equaled guaranty.

Big Egg 20% Protein Laying Mash, 2; no dried buttermilk found; rice product present tho not guaranteed.

Ful-O-Pep 20% Protein Laying Mash, 2; equaled guaranty.

Ful-O-Pep 20% Protein Turkey Grower, 1; equaled guaranty.

Ful-O-Pep Horse Feed, 1; soybean oil meal present the not guaranteed.

Quaker 40% Protein Hog Feed Supplement, 1; equaled guaranty.

Quaker Schumacher Sweet Feed, 5; equaled guaranty.

Buckeye Feed, 1; equaled guaranty.

Quaker Oat Hull Feed and Molasses, 1; equaled guaranty.

Schumacher 20% Protein Calf Meal, 1; equaled guaranty.

Quaker 16% Protein Dairy Ration, 1; equaled guaranty.

Ful-O-Pep 20% Protein Dairy Ration, 1; equaled guaranty.

Quaker 24% Protein Dairy Ration, 1; equaled guaranty.

Quaker 32% Protein Cattle Feed Supplement, 1; equaled guaranty.

Ralston Purina Co., St. Louis, Mo. Inspection sample analyzed, 43.

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

Purina 21% Protein Chick Growing Chow, 1; equaled guaranty.

Purina 17% Protein Chick Growena All-Mash, 2; equaled guaranty.

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

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

Purina 22% Protein Lay Chow, 2; equaled guaranty.

Purina 18% Protein Family Flock Chow, 1; equaled guaranty.

Purina 24% Protein Turkey Startena, 1; equaled guaranty.

Purina 18% Protein Turkey Growena, 2; equaled guaranty.

Purina 16½% Protein Turkey Layena (Complete Ration), 1; equaled guaranty.

Purina 191/2 % Protein Calf Startena, 3; equaled guaranty.

Purina 12½% Protein Dry and Freshening Chow, 2; equaled guaranty.

Purina 16% Protein Goat Chow, 2; equaled guaranty.

Purina 13½% Protein Rabbit Chow Complete Ration, 1; equaled guaranty.

Protein 12% Protein Cattle and Sheep Feed, 3; equaled guaranty.

Purina Bulky Las Chow, 1; equaled guaranty.

Purina Work Horse Omolene, 1; equaled guaranty.

Purina 14% Protein Hog Fatena, 1; equaled guaranty.

Purina 26% Protein Sow and Pig Chow Supplement, 1; equaled

Purina 36% Protein Hog Chow Supplement, 5; equaled guaranty. Purina 23% Protein Steer Fatena Supplement, 1; equaled guaranty.

Protein Brand 16% Protein Dairy Feed (Southern States), 4; equaled guaranty.

Purina 18% Protein Cow Chow (Southern States), 1; equaled guaranty.

Purina 20% Protein Cow Chow (Southern States), 1; equaled guaranty.

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

Reading Grain Co., Reading, O. Inspection sample of Distillers Corn Dried Grains analyzed, 1; equaled guaranty.

Read Phosphate Division, Davison Chemical Corporation, New Albany, Ind. Inspection samples analyzed, 5.

Read Red Diamond 50% Protein Meat and Bone Scraps, 1; equaled guaranty.

Read Red Diamond 60% Protein Digester Tankage, 4; 3 excess fiber; 1 much deficient in protein, misbranded.

Red Ranger Coal & Feed Co., Nicholasville, Ky. Inspection samples analyzed, 3.

Red Ranger 18% Protein Starting and Growing Mash, 1; equaled guaranty.

Red Ranger 15% Protein Sheep Feed, 1; equaled guaranty. Red Ranger 16% Protein Dairy Feed, 1; equaled guaranty.

R. D. Riedling, Louisville, Ky. Inspection sample of Happy 16% Protein Cow Feed analyzed, 1; much deficient in fat and much excess fiber; ingredients not as guaranteed; adulterated and misbranded.

Robbins Bros., Auburn, Ky. Inspection samples analyzed, 5.

Wheat Gray Shorts, 1; equaled guaranty. Corn By-product Feed, 3; deficient in fat.

Mixed Feed, 1; deficient in protein; excess corn product present.

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

P. M. Rountree, Benton, Ky. Inspection sample of Wheat Bran, Shorts and Screenings analyzed, 1; deficient in protein; excess wheat flour present.

Royal-Stafolife Mills, Memphis, Tenn. Inspection sample of Old Maud Mule Feed analyzed, 1; excess filler present.

Rush County Mills, Rushville, Ind. Inspection samples analyzed, 13.

RCM 16% Protein All-Mash, 2; no dried buttermilk found; 1 excess fiber, ground oats and ground barley present the not guaranteed. Imperial 18% Protein Egg Mash, 3; no dried buttermilk found; 2 corn

gluten product present tho not guaranteed.

RCM 16% Protein Dairy Feed, 7; 4 much deficient in protein, misbranded; 2 deficient in fat; 2 no corn gluten feed found; 2 no malt sprouts found; 1 distillers dried grains present the not guaranteed.

RCM 24% Protein Dairy Feed, 1; no distillers dried grains found.

Salt Lick Roller Mills, Salt Lick, Ky. Inspection sample of Perfect Brand X Mixed Feed analyzed, 1; equaled guaranty.

Sandusky Bros., Harrodsburg, Ky. Inspection sample of Mixed Feed analyzed, 1; equaled guaranty.

Saxony Mills, St. Louis, Mo. Inspection sample of Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

Schultz, Baujan & Co., Beardstown, Ill. Inspection samples analyzed, 8.

Sunbeam Hard Wheat Brown Middlings and Screenings, 1; equaled guaranty.

Critic Brand 18% Protein Starting and Growing Mash, 1; no fish meal found.

Honest Brand 17% Protein Starting and Growing Mash, 1; excess fiber; no dried buttermilk found.

Sweet Clover Brand 17% Protein Growing Mash, 1; much excess fiber; no dried buttermilk found; misbranded.

Honest Brand 18% Protein Egg Mash, 2; 1 excess fiber, no dried buttermilk or fish meal found; 1 corn gluten feed and ground barley present tho not guaranteed.

Critic Brand 15% Protein Pork Maker, 1; equaled guaranty.

Critic Brand 20% Protein Calf Meal, 1; soybean oil meal present tho not guaranteed.

Scioto Farm Bureau Co-operative Association, Lucasville, O. Inspection samples analyzed, 2.

White Hominy Feed, 1; equaled guaranty.

Scioto Feed, 1; equaled guaranty.

W. N. Scoville, London, Ky. Inspection sample of Farm Feed analyzed, 1; deficient in protein and fat; excess wheat flour present.

Security Mills, Knoxville, Tenn. Inspection samples analyzed, 6. Security 19% Protein Chick Ration, 1; no sardine meal found. Security 17½% Protein Pullet Grower, 1; no sardine meal found. Big S 20% Protein Laying Mash, 1; equaled guaranty.

Security Sweet Feed, 1; equaled guaranty.

Security Milk Booster Brand 16% Protein Dairy Feed, 1; oat hull feed and brewers dried grains present tho not guaranteed; adulterated and misbranded.

Security 24% Protein Dairy Feed, 1; equaled guaranty.

Sedalia Sweet Feed Mill, Sedalia, Ky. Inspection sample of Sedalia 16% Protein Dairy Feed analyzed, 1; equaled guaranty.

Shepherdsville Roller Mills, Shepherdsville, Ky. Inspection samples analyzed, 2.

Silver Leaf 14.6% Protein Hog Feed, 1; deficient in fat; soybean oil meal present tho not guaranteed.

161/2% Protein Dairy Feed, 1; much deficient in protein and excess fiber; ingredients not as guaranteed; adulterated and misbranded.

Sherwin-Williams Co., Cleveland, O. Inspection samples of Sherwin-Williams 34% Protein Linseed Meal analyzed, 3; equaled guaranty. Shipp & Warner Feed Mills, Campbellsville, Ky. Inspection samples

analyzed, 4.

Economy Brand 17% Protein Starter and Grower, 1; only trace of corn gluten feed present.

Economy Brand 18% Protein Laying Mash, 1; no corn gluten feed

Economy Brand Stock Feed, 1; equaled guaranty.

Economy Brand 16% Protein Dairy Feed, 1; equaled guaranty.

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

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

Butter Fat Brand Feed, 1; corn product present the not guaranteed. Somerset Hatchery Feed & Seed Co., Somerset, Ky. Inspection samples analyzed. 7.

Alfalfa Meal, 1; equaled guaranty.

Gothard's Pride 17% Protein Chick Starter, 1; equaled guaranty.

Gothard's Pride 17% Protein Growing Mash, 1; equaled guaranty.

Sun Rise 18% Protein Laying Mash, 1; ground oats present the not guaranteed.

Gothard's Pride 32% Protein Poultry Supplement, 1; equaled guaranty.

Gothard's Pride 32% Protein Hog Supplement, 1; equaled guaranty. Our Pride 16% Protein Dairy Feed, 1; oat hull feed and molasses present the not guaranteed; misbranded.

Woodford Spears & Sons, Paris, Ky. Inspection sample of Spears' Feed analyzed, 1; deficient in protein; excess low grade flour present.

A. E. Staley Manufacturing Co., Decatur, Ill. Inspection samples analyzed, 8.

Staley's 41% Protein Soybean Oil Meal, 7; equaled guaranty.

Staley's 37% Protein Feed Supplement Pellets, 1; equaled guaranty.

Staley Milling Co., Kansas City, Mo. Inspection samples of Record Brand 18% Protein Egg Mash analyzed, 2; 1 no ground barley found; 1 no dried milk by-products or fish meal found.

Standard Milling Co., Elkton, Ky. Inspection samples of Mixed Feed analyzed, 3; much deficient in protein, misbranded; 2 much deficient in fat.

Star Milling Co., Inc., Clinton, Ky. Inspection samples analyzed, 3. Wheat Gray Shorts, 1; excess fiber.

Tenn. Special Brand 16% Protein Dairy Feed, 2; 1 no corn gluten feed found; cottonseed meal present the not guaranteed.

Star Roller Mills, Cloverport, Ky. Inspection samples of Star 20% Protein Laying Mash analyzed, 2; equaled guaranty.

Sunnyside Milling Co., Evansville, Ind. Inspection sample of Winter Wheat Mixed Feed and Screenings analyzed, 1; equaled guaranty.

D. B. Sutherland & Sons, Bloomfield, Ky. Inspection samples analyzed, 5.Corn By-product Feed, 1; deficient in fat.

Sutherland's Mixed Feed, 1; deficient in protein, excess wheat flour present.

Sutherland's 19% Protein Hen Mash, 1; ingredients not as guaranteed; misbranded.

Sutherland's Farm Feed, 1; deficient in protein.

Kentucky Star Brand Stock Feed, 1; equaled guaranty.

Sweet Feeds, Inc., Hopkinsville, Ky. Inspection samples of Sweet Mix 16% Protein Dairy Feed analyzed, 2; 1 no alfalfa meal found.

Sweet Feed Mills, Bowling Green, Ky. Inspection samples analyzed, 9. Ace Brand 20% Protein Hog Ration, 1; deficient in fat; cottonseed meal present the not guaranteed.

Ace Brand 44% Protein Hog Supplement, 1; much deficient in fat; no fish meal found; cottonseed meal and molasses present tho not guaranteed; misbranded.

Ace XX 16% Protein Dairy Feed, 7; 6 deficient in fat; 1 no soybean oil meal found; 1 no ground oats found; 3 adulterated with cob meal, misbranded.

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

Swift's 50% Protein Meat and Bone Scraps, 1; equaled guaranty.

Swift's 60% Protein Digester Tankage, 1; equaled guaranty.

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

Swift & Co. (Oil Mill), Atlanta, Ga. Inspection sample of Cotton Bloom 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.

Swift & Co. (Oil Mill), Cairo, Ill. Inspection sample of Cotton Bloom 41% Protein Cottonseed Meal analyzed, 1; deficient in protein.

Swift & Co. (Oil Mill), Memphis, Tenn. Inspection samples of Cotton Bloom 41% Protein Cottonseed Meal analyzed, 8; 2 deficient in protein.

Swift & Co. (Soybean Mill), Champaign, Ill. Inspection samples of Swift's 41% Protein Soybean Oil Meal analyzed, 2; equaled guaranty.

Tell City Flouring Mills, Tell City, Ind. Inspection samples analyzed, 4. Hoosier Special Wheat Brown Shorts and Screenings, 1; much deficient in protein and fat; misbranded.

Hoosier No. 2 Special-Mix Feed, 3; 1 deficient in protein and excess fiber; 2 adulterated with cob meal, misbranded.

Thomson's Mill, Madisonville, Ky. Inspection samples analyzed, 14.

Ideal Brand 17% Protein Starter and Grower, 1; no dried buttermilk or fish meal found.

17% Protein All-Purpose Feed, 2; equaled guaranty.

Ideal Brand 16% Protein All-Purpose Poultry Mash, 1; corn gluten feed present tho not guaranteed.

Eighty-Five Horse and Mule Feed, 1; equaled guaranty.

Thomson's Ideal Brand 16% Protein Dairy Feed, 9; 5 much deficient in protein, misbranded; 3 deficient in fat; 3 no brewers dried grains found; 2 no ground wheat found; 1 no cottonseed meal found.

Tilford & Walters, Metropolis, Ill. Inspection samples analyzed, 2.

Masco Special Brand 18% Protein Egg Mash, 1; no cottonseed meal found.

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

Trenton Cotton Oil Co., Trenton, Tenn. Inspection sample of Trenton 41% Protein Cottonseed Meal analyzed, 1; equaled guaranty.

Trenton Milling Co., Trenton, Ill. Inspection sample of Wheat Gray Shorts and Screenings analyzed, 1; deficient in protein.

Triple-Bridge Mills, Franklin, Ky. Inspection samples of Wheat Gray Shorts analyzed, 2; 1 deficient in protein and fat, excess wheat flour present.

Tyner Milling Co. (Hermitage Feed Mills), Nashville, Tenn. Inspection sample of Hi-Grade Brand 20% Protein Egg Mash analyzed, 1; equaled guaranty.

The Ubiko Milling Co., Cincinnati, O. Inspection samples analyzed, 29. Glendale Scratch Feed, 1; equaled guaranty.

Ubiko 18% Protein All-Mash Starter, 2; equaled guaranty.

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

Sunbeam 17% Protein Starter and Grower, 1; equaled guaranty.

Ubiko 18% Protein Growing Mash, 1; equaled guaranty.

Ubiko 18% Protein Broiler Ration, 1; corn gluten meal present tho not guaranteed.

Ubiko 14% Protein Fattening Mash, 1; excess fiber.

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

Sunbeam 20% Protein Laying Mash, 3; equaled guaranty.

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

Ubiko 25% Protein Turkey Starter and Grower, 2; equaled guaranty.

Ubiko 25% Protein Turkey Grower, 1; equaled guaranty.

Ubiko 32% Protein Poultry Mash Supplement, 1; equaled guaranty.

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

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

Ubiko 16% Protein Pig and Sow Ration, 1; equaled guaranty.

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

Ubiko 28% Protein Calf Meal, 1; equaled guaranty.

Clover Brand Sweet 16% Protein Dairy Feed, 2; 1 adulterated with approximately 408,000 unground weed seeds to 100 pounds of feed; misbranded

Union Grains 20% Protein Sweet Dairy Ration, 1; equaled guaranty. Union Grains 24% Protein Dry Dairy Ration, 2; equaled guaranty. Sunbeam 24% Protein Dairy Ration, 2; equaled guaranty.

Ultra-Life Laboratories, Inc., E. St. Louis, Ill. Inspection sample of Ultra-Life Concentrate analyzed, 1; equaled guaranty.

Union National Mill, Springfield, O. Inspection samples of William Tell Wheat Feed and Screenings analyzed, 3; equaled guaranty.

Union Starch & Refining Co., Columbus, Ind. Inspection samples analyzed, 4.

Union 20% Protein Corn Oil Meal, 2; equaled guaranty. Union 25% Protein Corn Gluten Feed, 2; equaled guaranty.

Valier & Spies Milling Corporation, St. Louis, Mo. Inspection sample of Valier's Wheat Mixed 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 Scraps analyzed, 1; equaled guaranty.

John Wachtel Co., Indianapolis, Ind. Inspection sample of 60% Protein Tankage analyzed, 1; equaled guaranty.

Weisenberger Sanitary Flour Mills, Midway, Ky. Inspection sample of Repeater Feed analyzed, 1; deficient in protein.

Wetzel Milling Co., Nicholasville, Ky. Inspection sample of Premium Brand Wheat Mixed Feed and Screenings analyzed, 1; deficient in protein; excess wheat flour present.

Wiedlocher & Son, Springfield, Ill. Inspection samples analyzed, 7.

Faultless Brand 17% Protein Starting and Growing Mash, 1; excess

Faultless Brand 20% Protein Egg Mash, 2; equaled guaranty. Faultless Brand 19% Protein Hog Feed, 1; equaled guaranty.

Congress 16% Protein Dairy Feed, 2; 1 adulterated with approximately 476,200 unground weed seeds to 100 pounds of feed; misbranded.

Faultless Brand 24% Protein Dairy Ration, 1; equaled guaranty.

Williamstown Roller Mills, Williamstown, Ky. Inspection samples of Mixed Feed analyzed, 3; 1 deficient in protein.

Winchester Milling Co., Winchester, Ky. Inspection samples analyzed, 5.

Corn Feed Meal, 1; equaled guaranty.

Perfection Brand Wheat Brown Shorts, 1; deficient in protein.

Perfection Brand Feed, 3; 2 deficient in protein, excess corn product present.

Wingo Milling Co., Wingo, Ky. Inspection sample of Champion 16% Protein Dairy Feed analyzed, 1; deficient in fat; alfalfa meal present tho not guaranteed.

Winn Milling Co., Greensburg, Ky. Inspection samples analyzed, 6. Daisy 20% Protein Starter and Grower, 1; equaled guaranty.

Daisy 18% Protein Laying Mash, 3; equaled guaranty.

Daisy Stock Feed, 2; 1 much deficient in protein, ingredients not as guaranteed, adulterated and misbranded; 1 no linseed oil meal or malt sprouts found.

Woolcott Flour Mills, Lexington, Ky. Inspection samples analyzed, 4. Woolcott's Best Brand Mixed Feed, 1; deficient in protein; excess wheat flour present.

Moseley's Big 12 Hog Minerals, 1; much deficient in calcium and phosphorus and excess salt; adulterated with oat hulls; misbranded.

Moseley's Big 12 Stock Minerals, 1; much deficient in calcium and phosphorus and excess salt; adulterated with oat hulls; misbranded.

Big 5 Mineral Mixture, 1; much deficient in calcium and phosphorus and excess salt; adulterated with oat hulls; misbranded.

Woolcott Milling Co., Harrisburg, Ill. Inspection samples of Mixed Feed analyzed, 3; 1 deficient in protein, excess corn product present.

The Wren Milling Co., Wren, O. Inspection sample of Wren 24% Protein Dairy Ration analyzed, 1; deficient in fat; no linseed oil meal found. Yopp Seed Co., Paducah, Ky. Inspection sample of Crushed Corn, Cob and Shucks analyzed, 1; excess fiber.

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

J. W. Zaring Grain & Mill Co., Richmond, Ky. Inspection sample of Bonanza Feed analyzed, 1; much deficient in protein; excess corn product present; misbranded. Ziliak & Schafer Milling Co., Evansville, Ind. Inspection samples ana-

Target 161/2 % Protein All-Mash Poultry Ration, 2; no dried buttermilk or fish meal found; 1 excess fiber.

Imperial 24% Protein Dairy Feed, 1; no molasses found.