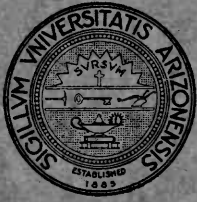


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FIRST ANNUAL REPORT OF THE ARIZONA FEED CONTROL OFFICE

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FIRST ANNUAL REPORT OF THE FEED CONTROL OFFICE OF ARIZONA

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INTRODUCTION

The Arizona Feeding Stuff Law as house bill number 91, was passed by the 13th legislative session of 1937. It is a law designed to regulate the sale of commercial feeding stuffs in Arizona. Its purpose is to give the purchaser of feeds information which will enable him to buy on the basis of nutrient value rather than price per ton and to protect feed manufacturers from unfair competitive practices. This is accomplished by requiring that feed sold or offered for sale within the state be officially labeled with the manufacturer's guarantee showing the minimum percentage of protein and fat and the maximum percentage of crude fiber. It also requires a statement, on the tag or label, of all ingredients used in preparing the feed. In mixed feed to which more than 5 per cent mineral matter has been added, or for strictly mineral feeds, a statement of the minimum percentage of calcium, phosphorus, and iodine, and the maximum percentage of salt is required.

The Agricultural Chemist at the Agricultural Experiment Station, as State Chemist, is made responsible for the enforcement of this law. Copies of the law may be obtained from the Feed Control Office at the Experiment Station.

Plans for enforcement of this law were started immediately following its final enactment, and actual operation began July 1, 1937. In view of the fact that the enforcement must be self-supporting, the machinery of operation was developed as funds permitted. By October 1, 1937, these funds were sufficient to employ a deputy administrator to handle inspections, sample collections, and make chemical analyses and an office secretary to handle other business involved in the law's administration.

As a convenience to the feed manufacturers, the office of the deputy administrator is located in Phoenix where the major portion of Arizona feeds is manufactured. The business office is located at the Agricultural Experiment Station in Tucson.

All feeds must be registered but require no registration fee. A tonnage fee of 20 cents or less, the rate being established by the State Chemist, is levied to pay for the cost of enforcement. At the end of the 1938 year of enforcement, the inspection fee was reduced from 20 cents to 16 cents per ton.

The law provides for the inspection and analysis of feeds for comparison with the label, registration, and guarantee. The analyses are sent to manufacturers, dealers, and consumers.

All persons or firms purchasing feed for resale in the state are cautioned against buying feed which does not comply with the Arizona law. Feed dealers and consumers should insert the following clause in all contracts for feed: "The feed delivered on this contract must comply with the Arizona Feeding Stuffs Law."

This report covers the period from July 1, 1937, to December 31, 1938, but hereafter the reports will be published annually. In order to maintain an active file of registrations, all feeds must be registered annually. This may be accomplished either by renewing previous registrations or making new registrations. In view of the fact that most of the registrations for 1939 have been filed, these are given in this report so that a list of registered feeds may be available to retailers and feeders. However, the fact that a feed is not listed does not necessarily mean it has not been registered as its registration may have come in at a later date. When in doubt as to whether or not a feed is registered, consult the

State Chemist
Arizona Feed & Fertilizer Control Office
Agricultural Experiment Station
Tucson, Arizona

or the

Deputy Administrator
Arizona Feed & Fertilizer Control Office
1201 W. Madison
Phoenix, Arizona

The presence of Arizona Inspection Fee Paid Stamps, tags, or other insignia on feeds does not necessarily mean that a feed is properly registered, but merely indicates that the inspection fee has been paid.

EXPLANATION OF TERMS USED IN FEED ANALYSIS

The Arizona law requires that feeds be analyzed for protein, fat, and fiber. In some cases the amount of ash or mineral matter and in all cases the amount of moisture are determined. The following explanations of these terms may be of interest.

Water or moisture.—This term is used to designate the loss in weight which occurs when the feed is heated in an oven at a temperature just above the boiling point of water. This determination is made because a high moisture content is undesirable. It lowers the keeping quality of the feed and if abnormally high may indicate fraud, for obviously the higher the moisture the lower the nutrient value.

Crude protein.—This term designates a large group of complex compounds containing nitrogen. It is by far the most valuable and most expensive constituent in feeds. There are the plant proteins available in hays, grains, and meals and the animal proteins available in milk, tankage, and similar products. A wide variation is found in the chemical properties and nutritional value

of the proteins, and hence the variety of feeds needed by animals must be selected according to their needs. The consumer of feeds is aided in such a selection by the requirement that all ingredients used in feeds must be shown on the label or tag.

Fat.—This term is too well known to need any explanation. Chemically it represents the material extracted from feeds by ether in which all fats and oils are soluble. Practically all plant materials used in feeds contain some fat or oil as do also animal materials.

Crude fiber.—This term is used to represent the woody part of the feed. It is chiefly cellulose and has little or no food value. Seeds and grain contain very little fiber, while the hulls and husks as well as the stems are very high in fiber. Thus the quality of a feed may often be represented by the amount of crude fiber it contains. Since feeds of high fiber content are not desirable, the law requires that the maximum be stated on the label rather than a minimum guarantee as is required for protein and fat. Since obviously such materials as bone and milk products do not contain crude fiber, this determination on such products merely represents matter which is insoluble in the reagents used for crude fiber determination.

Ash.—This term is used to designate the amount of mineral matter in feeds and is obtained by completely removing all organic matter by ashing. While there is no requirement regarding ash in Arizona feeds except where mineral material is added, many of these determinations were made in order that such information would be available if needed.

Nitrogen-free extract.—Some feed laws require a statement of the amount of nitrogen-free extract in feeds. It is simply a more or less arbitrary figure representing the percentage of feed which remains after subtracting the sum of the moisture, protein, fat, fiber, and ash. It consists chiefly of starches, sugars, and pentosans, and the feeding value is largely as a source of energy for the body.

DEFINITION OF FEEDING STUFFS

When a manufacturer presents a list of ingredients on the label or tag the terms used should be uniform; otherwise they may not be entirely understood by the feeder. In view of this the feed manufacturers and Feed Control officials have selected terms which are now recognized as official and the use of which is strongly recommended.

A list of these terms and their definitions—as taken from the official publication of the Association of American Feed Control Officials—is given herewith for the information of feed manufacturers, dealers, and feeders in Arizona.

ALFALFA PRODUCTS

1. **Chopped alfalfa or cut alfalfa** is the entire alfalfa hay, chopped or cut and not ground finely enough to become a meal. It must not contain an admixture of alfalfa straw or other foreign material. (Adopted prior to 1928—amended 1937.)

2. **Alfalfa meal** is the product obtained from the grinding of the entire alfalfa hay without the addition of any alfalfa stems, alfalfa straw, or foreign material, or the abstraction of leaves. It must be reasonably free from other crop plants and weeds and must not contain more than 33 per cent of crude fiber. (Adopted 1928.)

3. **Alfalfa leaf meal** is the ground product consisting chiefly of leafy materials separated from alfalfa hay or meal. It must be reasonably free from other crop plants and weeds and must not contain more than 18 per cent of crude fiber. (Adopted 1928—amended 1938.)

4. **Alfalfa stem meal** is the ground product remaining after the separation of the leafy material from alfalfa hay or meal. It must be reasonably free from other crop plants and weeds. (Adopted 1928.)

ANIMAL PRODUCTS

1. **Blood meal** is ground, dried blood. (Adopted 1926.)

2. **Blood flour** is dried blood, prepared by special processes and reduced to a fine powder. (Adopted prior to 1928.)

3. **Meat** is the clean, wholesome flesh derived from slaughtered mammals and is limited to that part of the striate muscle which is skeletal or that which is found in the tongue, in the diaphragm, in the heart, or in the esophagus and does not include that found in the lips, in the snout, or in the ears; with or without the accompanying and overlying fat and the portions of skin, sinew, nerve, and blood vessels which normally accompany the flesh. If it bears a name descriptive of its kind it must correspond thereto.

The term "meat" when used in a qualified form, as for example, "horse meat," "reindeer meat," "crab meat," etc., is then, and then only, properly applied to the corresponding portions of animals other than cattle, swine, sheep, and goats. (Adopted 1938.)

4. **Meat by-products** consist of any clean, wholesome part of the carcass of slaughtered mammals other than meat, such as lungs, spleens, kidneys, brains, stomach and intestines free from their contents; it does not include skin, horns, teeth, hoofs, and bones. If it bears a name descriptive of its kind it must correspond thereto.

The term "meat by-products" when used in a qualified form, as for example, "horse meat by-products," "reindeer meat by-prod-

ucts," "crab meat by-products," etc., is then, and then only, properly applied to the corresponding portions of animals other than cattle, swine, sheep, and goats. (Adopted 1938.)

5. Meat scraps are the ground, dry-rendered residue from animal tissues exclusive of hoof, horn, manure, and stomach contents, except in such traces as might occur unavoidably in good factory practice. When this product contains more than 4.4 per cent of phosphorus (P), it shall be designated Per Cent Protein Meat and Bone Scrap. If it bears a name descriptive of its kind, composition, or origin it must correspond thereto. (Adopted 1928—amended 1936, 1938.)

6. Digester tankage, meat meal tankage, or feeding tankage is the residue from animal tissues exclusive of hoof, horn, manure, and stomach contents, except in such traces as might occur unavoidably in good factory practice, especially prepared for feeding purposes by tanking under live steam or by dry rendering or is a mixture of the products made suitable by drying and grinding. It must not contain more than 4.4 per cent of phosphorus (P). If it bears a name descriptive of its kind, composition, or origin, the material must correspond thereto. (Adopted 1928—amended 1933, 1936, 1938.)

7. Digester tankage with bone, meat and bone meal digester tankage, meat and bone meal tankage, or feeding tankage with bone is the residue from animal tissues exclusive of hoof, horn, manure, and stomach contents, except in such traces as might occur unavoidably in good factory practice, especially prepared for feeding purposes by tanking under live steam or by dry rendering or is a mixture of the products made suitable by drying and grinding, and containing more than 4.4 per cent of phosphorus (P). If it bears a name descriptive of its kind, composition, or origin, it must correspond thereto. (Adopted 1928—amended 1933, 1936, 1938.)

8. Raw bone meal is the dried, ground product suitable for animal feeding, obtained by cooking undecomposed bone in water at atmospheric pressure just enough to remove excess fat and meat. It must not contain less than 23 per cent of protein. (Adopted 1929.)

9. Steamed bone meal is the dried, ground product suitable for animal feeding, obtained by cooking bones with steam under pressure. (Adopted 1929.)

10. Special steamed bone meal is the dried, ground product suitable for animal feeding, obtained by cooking dried bone after the removal of grease and meat fiber with steam under pressure in the process of obtaining gelatine or glue. (Adopted 1929.)

11. Bone charcoal or bone black is the product obtained by charring bones in closed retorts. It shall contain not less than 14.7 per cent of phosphorus (P). (Adopted 1938.)

12. **Spent bone black** is the product resulting from the repeated charring of bone charcoal or bone black after use in clarifying sugar solutions. It shall contain not less than 11.5 per cent of phosphorus (P). (Adopted 1938.)

BARLEY PRODUCTS

1. **Barley hulls** is the product consisting of the outer coverings of the barley. (Adopted prior to 1928.)

2. **Barley feed** is the entire by-product resulting from the manufacture of pearl barley from clean barley. (Adopted prior to 1928.)

3. **Barley mixed feed** is the entire offal from the milling of barley flour from clean barley and is composed of barley hulls and barley middlings. (Adopted prior to 1928.)

4. **Ground barley** is the entire product obtained by grinding clean, sound barley, containing not less than 90 per cent of pure barley and not more than 10 per cent of other grains, weed seeds, and other foreign material and not more than 6 per cent of crude fiber; provided that no portion of this stated 10 per cent of other grains, weed seeds, or other foreign material shall be intentionally added. (Adopted prior to 1928.)

5. **Mixed feed barley** is the entire product obtained by grinding country run barley containing not less than 75 per cent of pure barley and not more than 25 per cent of other grains, weed seeds, and other foreign material; provided that no portion of this stated 25 per cent of other grains, weed seeds, or foreign material shall be intentionally added. The ingredients must be stated as barley, other grains, weed seeds, and foreign material. (Adopted prior to 1928.)

BREWERS' AND DISTILLERS' PRODUCTS

1. **Brewers' dried grains** is the dried extracted residue of barley malt alone or in mixture with other cereal grain or grain products resulting from the manufacture of wort. (Adopted 1936.)

2. **Corn distillers' dried grains** is the dried residue obtained in the manufacture of alcohol and distilled liquors from corn or a grain mixture in which corn predominates. (Adopted 1937.)

3. **Rye distillers' dried grains** is the dried residue obtained in the manufacture of alcohol and distilled liquors from rye or a grain mixture in which rye predominates. (Adopted 1937.)

4. **Distillers' corn solubles** is a by-product from the manufacture of alcohol from corn solids obtained by the evaporation of the mash liquor after the removal of the alcohol and wet grains. (Adopted prior to 1928.)

5. **Distillers' rye solubles** is a by-product from the manufacture of alcohol from rye solids obtained by the evaporation of mash liquor after the removal of the alcohol and wet grains. (Adopted prior to 1928.)

6. **Distillers' corn and rye solubles** is a by-product from the manufacture of alcohol from corn and rye solids obtained by the evaporation of mash liquor after the removal of the alcohol and wet grains. (Adopted prior to 1928.)

7. **Malt sprouts** are the sprouts of the barley grain obtained from malted barley. Sprouts derived from any other malted cereal must be designated by the name of that cereal. (Adopted prior to 1928.)

8. **Yeast dried grains or vinegar dried grains** is the properly dried residue from the mixture of cereals, malt, and malt sprouts (sometimes cottonseed meal) obtained in the manufacture of yeast or vinegar and consists of corn or corn and rye from which most of the starch has been extracted, together with malt added during the manufacturing process to change the starch to sugars, and malt sprouts (sometimes cottonseed meal) added during the manufacturing process to aid in filtering the residue from the wort and to serve as a source of food supply for the yeast. (Adopted prior to 1928.)

CORN PRODUCTS

1. **Corn meal** is finely ground, unbolting corn. (Adopted prior to 1928.)

2. **Corn bran** is the outer coating of the corn kernel, with little or none of the starchy part or germ. (Adopted 1931.)

3. **Corn feed meal** is the fine siftings obtained in the manufacture of screened corn chop, screened ground corn, or screened cracked corn, with or without its aspiration products added. (Adopted 1931.)

4. **Corn chop, ground corn, or cracked corn** is the entire product made by grinding, cutting, or chopping the grains of sound Indian corn and may be fine, medium, or coarse and must not contain more than 4 per cent of foreign material. (Adopted 1931.)

5. **Screened corn chop, screened ground corn, or screened cracked corn** is the coarse portion of corn chop, ground corn, or cracked corn from which most of the fine particles have been removed and must not contain more than 4 per cent of foreign material. (Adopted 1931.)

6. **Corn grits or hominy grits** is the product consisting of the fine or medium sized, hard, flinty portions of sound Indian corn containing little or none of the bran or germ. (Adopted 1931.)

7. **Ear corn chops** is corn and cob chopped, without the husk,

with no greater proportion of cob than occurs in the ear corn in its natural state. (Adopted prior to 1928.)

8. **Corn gluten feed** is that part of commercial shelled corn that remains after the extraction of the larger part of the starch and germ by the processes employed in the wet milling manufacture of corn starch or sirup. It may or may not contain one or both of the following: corn solubles and corn oil meal. (Adopted 1936.)

9. **Corn gluten meal** is that part of commercial shelled corn that remains after the extraction of the larger part of the starch and germ and the separation of the bran by the process employed in the wet milling manufacture of cornstarch or sirup. It may or may not contain one or both of the following: corn solubles and corn oil meal. (Adopted 1936.)

10. **Maltose process corn gluten feed** is the dried residue from degermed corn after removal of the starch in the manufacture of malt sirup. (Adopted prior to 1928.)

11. **Hominy feed** is a mixture of corn bran, corn germ, and a part of the starchy portion of either white or yellow corn kernels or mixture thereof as produced in the manufacture of pearl hominy, hominy grits, or table meal and shall contain not less than 5 per cent of crude fat. If prefixed with the words "white" or "yellow," the product must correspond thereto. (Adopted 1935.)

12. **Corn oil cake** consists of the corn germ from which part of the oil has been pressed and is the product obtained in the wet milling process of manufacture of cornstarch, corn sirup, and other corn products. (Adopted prior to 1928.)

13. **Corn oil meal** is ground corn oil cake. (Adopted prior to 1928.)

14. **Corn germ cake** consists of corn germ with other parts of the corn kernel from which part of the oil has been pressed and is the product obtained in the dry milling process of manufacture of corn meal, corn grits, hominy feed, and other corn products. (Adopted prior to 1928.)

15. **Corn germ meal** is ground corn germ cake. (Adopted prior to 1928.)

16. **Corn screenings** is the product consisting of the small, light grains of corn, parts of grains of corn or other cereals, and other materials having feeding value, separately or together, obtained by screening shelled corn, excluding sand, dirt, and other similar inert materials. (Adopted 1931.)

COTTONSEED PRODUCTS

1. **Cottonseed meal** is a product of the cottonseed only, composed principally of the kernel with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be

recognized as cottonseed meal that does not conform to the foregoing definition and that does not contain at least 36 per cent of protein. Cottonseed meal shall be graded and classed as follows: (Adopted prior to 1928.)

a) **Per cent protein cottonseed meal, prime quality.**—Cottonseed meal, prime quality, must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellowish, not brown or reddish, free from excessive lint, and shall contain not less than 36 per cent of protein. It must be designated and sold according to its protein content. Cottonseed meal with 36 per cent of protein must be termed "36 per cent protein cottonseed meal, prime quality," and higher grades similarly designated (as "43 per cent protein cottonseed meal, prime quality"), etc. (Adopted prior to 1928.)

b) **Per cent protein cottonseed meal, off quality.**—Cottonseed meal not fulfilling the above requirement as to color, odor, and texture must be graded "36 per cent protein cottonseed meal, off quality," and higher grades similarly designated. (Adopted prior to 1928.)

c) **Per cent protein cottonseed feed** is a mixture of cottonseed meal and cottonseed hulls. It must be designated and sold according to its protein content. (Adopted prior to 1928; amended 1937.)

d) **Per cent protein whole pressed cottonseed, prime quality** is the product resulting from subjecting the whole, sound, mature, clean, undecorticated cottonseed to pressure for the extraction of oil and includes the entire cottonseed less the oil extracted and the lint removed. It must be designated and sold according to its protein content. (Adopted 1932.)

e) **Per cent protein ground whole pressed cottonseed, prime quality** is whole pressed cottonseed, ground. It must be designated and sold according to its protein content. (Adopted 1932.)

2. **Cottonseed cake** is a product of the cottonseed only, composed principally of the kernel with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be recognized as cottonseed cake that does not conform to the following definitions and that does not contain at least 36 per cent of crude protein. Cottonseed cake shall be graded and classed as follows: (Adopted 1937.)

a) **Per cent protein cottonseed cake, prime quality.**—Cottonseed cake, prime quality, must be firm but not flinty in texture, of sweet odor, free of mold and when ground into meal must produce cottonseed meal, prime quality. It shall contain not less than 36 per cent of crude protein. It must be designated and sold according to its protein content. Cottonseed cake with 43 per cent of crude protein must be termed "43 per cent protein cottonseed

cake, prime quality," and lower grades similarly designated. (Adopted 1937.)

b) Per cent protein cottonseed cake, off quality.—Cottonseed cake not fulfilling the above requirement as to color, odor, and texture must be labeled "43 per cent protein cottonseed cake, off quality," and lower grades similarly designated. (Adopted 1937.)

c) Per cent protein nut-size cottonseed cake, quality.—Nut-size cottonseed cake shall be a product which will pass through 1½-inch round perforation and over ⅞-inch round perforation. It shall be free from meal, pea-size, and pebble-size cake and shall not contain in excess of 10 per cent of sheep-size cake. (Adopted 1937.)

d) Per cent protein sheep-size cottonseed cake, quality.—Sheep-size cottonseed cake shall be a product which will pass through ⅞-inch round perforation and over ⅝-inch round perforation. It shall be free from meal and pebble-size cake and shall not contain in excess of a total of 10 per cent of nut-size and pea-size cake. (Adopted 1937.)

e) Per cent protein pea-size cottonseed cake, quality.—Pea-size cottonseed cake shall be a product which will pass through ⅝-inch round perforation and over ⅜-inch round perforation. It shall be free from meal and nut-size cake and shall not contain in excess of 10 per cent sheep-size and pebble-size cake. (Adopted 1937.)

f) Per cent protein pebble-size cottonseed cake, quality.—Pebble-size cottonseed cake shall be a product consisting of fine particles and small pieces of cottonseed cake capable of passing through a ⅜-inch round perforation. (Adopted 1937.)

g) Per cent protein cottonseed cubes or pellets, prime quality.—Cottonseed cubes or pellets, prime quality, processed through a cubing or pelleting machine, must be firm but not flinty, of sweet odor, free of mold and when ground into meal must produce cottonseed meal, prime quality. It shall contain not less than 36 per cent of crude protein. It must be designated and sold according to its protein content. (Adopted 1937.)

h) Munsell color standard for cottonseed cake and meal, prime quality.—Whenever in the definitions reference is made to color of cottonseed cake or cottonseed meal, prime quality, 41 per cent or higher protein cottonseed cake or cottonseed meal shall not be darker in color than Munsell Color Standard "1½ yellow, 5/5," and 36 per cent protein cottonseed cake or cottonseed meal, prime quality, shall not be darker in color than Munsell Color Standard "10 yellow—red 5/5." (Adopted 1938.)

Note.—Mr. S. M. Harmon, 1913 Sterick Building, Memphis, Tennessee, has offered to furnish the members of this association

the Cottonseed Meal Color Standards together with directions for their use.

LESPEDEZA PRODUCTS

1. **Lespedeza meal** is the product obtained from the grinding of the entire lespedeza hay, without the addition of any lespedeza stems, lespedeza straw, or foreign material, or the abstraction of leaves. It must be reasonably free from other crop plants and weeds and must not contain more than 28 per cent of crude fiber. (Adopted 1938.)

2. **Lespedeza stem meal** is the ground product remaining after the separation of the leafy material from lespedeza hay or meal. It must be reasonably free from other crop plants and weeds. (Adopted 1938.)

3. **Lespedeza straw meal** is the ground product remaining after the separation of the seed from lespedeza. It must be reasonably free from other crop plants and weeds. (Adopted 1938.)

LINSEED AND FLAX PRODUCTS

1. **..... Per cent protein linseed cake or per cent protein linseed meal** is the product obtained in the removal of the oil from flaxseed, provided that the final product contains less than 6 per cent of weed seeds and other foreign materials and provided, further, that no portion of the stated 6 per cent of weed seeds and other foreign materials shall be deliberately added. It shall not contain more than 0.5 per cent of acid insoluble ash. (Adopted 1933.)

2. **..... Per cent protein old process oil meal or per cent protein old process linseed meal** is oil meal as defined below, produced by crushing, cooking, and hydraulic pressure. (Adopted prior to 1928.)

3. **..... Per cent protein new process oil meal or per cent protein new process linseed meal** is oil meal as defined below produced by crushing, heating, and the use of solvents. (Adopted prior to 1928.)

4. **Flax plant by-products** is that portion of the flax plant remaining after the separation of the seed, the bast fiber, and a portion of the shives and consists of flax shives, flax pods, broken and immature flax seeds, and the cortical tissues of the stem. (Adopted prior to 1928.)

5. **Ground flaxseed or flaxseed meal** is the product obtained by grinding flaxseed which has been screened and cleaned of weed seeds and other foreign materials by the most improved commercial process; the final product must contain less than 4 per cent of weed seeds and other foreign materials, and no portion of the stated 4 per cent of weed seeds and other foreign materials shall be intentionally added. (Adopted prior to 1928.)

6. **Unscreened flaxseed oil feed cake** is the product obtained by extraction of part of the oil from unscreened flaxseed by crushing, cooking, and hydraulic pressure or by crushing, heating, and the use of solvents. The ingredients must be stated as "partially extracted flaxseed and foreign seeds (wheat, wild buckwheat, pigeon grass, wild mustard, etc.)." (Adopted prior to 1928.)

7. **Ground unscreened flaxseed oil feed** is the ground unscreened flaxseed oil feed cake. (Adopted prior to 1928.)

8. **Screenings oil feed** is the ground product obtained after extraction of part of the oil by crushing, cooking, and hydraulic pressure or by crushing, heating, and the use of solvents from the smaller imperfect flaxseed, weed seeds, and other foreign materials having feeding value, separated in cleaning flaxseed. The name of the grain from which the screenings are separated must be prefixed to "screenings oil feed." (Adopted prior to 1928.)

9. **Per cent protein oil cake** is the product obtained after the extraction of part of the oil by crushing, cooking, and hydraulic pressure or by crushing, heating, and the use of solvents from flaxseed which has been screened and cleaned of weed seeds and other foreign materials by the most improved commercial process. When used alone the term "oil cake" shall be understood to designate linseed cake as defined. When used to cover any other product the name of the seed from which it is obtained must be prefixed to the words "oil cake." (Adopted prior to 1928.)

10. **Per cent protein oil meal or per cent protein ground oil cake** is oil cake ground to a meal. (Adopted prior to 1928.)

11. **Per cent protein linseed feed** is a mixture of linseed meal with screenings oil feed or other flaxseed by-products or both. (Adopted 1937.)

MARINE PRODUCTS

1. **Fish meal** is clean, dried, ground tissues of undecomposed whole fish or fish cuttings, either or both, with or without the extraction of part of the oil, containing not more than 3 per cent of salt (NaCl). If it contains more than 3 per cent of salt (NaCl), the amount of salt must constitute a part of the brand name, provided that in no case shall the salt content of this product exceed 7 per cent. (Adopted 1933.)

2. **Fish residue meal** is the clean, dried, undecomposed residue from the manufacture of glue from nonoily fish, containing not more than 3 per cent of salt (NaCl). If it contains more than 3 per cent of salt (NaCl), the amount of salt must constitute a part of the brand name, provided that in no case shall the salt content of this product exceed 7 per cent. (Adopted 1933.)

3. **Crab meal** is prepared from the undecomposed dried waste of the crab industry and contains the shell, viscera, and part or

all of the flesh. It contains not less than 25 per cent of protein and not more than 3 per cent of salt (NaCl). If it contains more than 3 per cent of salt (NaCl), the amount of salt must constitute a part of the brand name, provided that in no case shall the salt content of this product exceed 7 per cent. (Adopted 1933.)

4. **Shrimp meal** is prepared from the undecomposed dried waste of the shrimp industry and contains the head, hull, whole shrimp, or mixture, and not more than 3 per cent of salt (NaCl). If it contains more than 3 per cent of salt (NaCl), the amount of salt must constitute a part of the brand name, provided that in no case shall the salt content of this product exceed 7 per cent. (Adopted 1933.)

5. **Whale meal** is prepared from the clean, dried, undecomposed flesh of the whale after part of the oil has been extracted. It contains not more than 3 per cent of salt (NaCl). If it contains more than 3 per cent of salt (NaCl), the amount of salt must constitute a part of the brand name, provided that in no case shall the salt content of this product exceed 7 per cent. (Adopted 1933.)

6. **Cod liver oil** is the oil obtained from the livers of *Gadus morrhuae* or other species of the family Gadidae, either or both. It must contain not less than 600 U.S.P. units of vitamin A and not less than 85 Association of Official Agricultural Chemists' chick units of vitamin D per gram. (Adopted 1937.)

7. **Sardine oil or pilchard oil** is the product obtained by extraction of part of the oil from the whole Pacific sardine or pilchard or from cannery refuse of this species of fish. (Adopted 1932.)

8. **Salmon oil** is the product obtained by extraction of part of the oil from the cannery refuse of salmon. (Adopted 1932.)

9. **Tuna oil** is the product obtained by extraction of part of the oil from the cannery refuse of tuna. (Adopted 1932.)

10. **Menhaden oil** is the product obtained by extraction of part of the oil from whole menhaden. (Adopted 1932.)

11. **Herring oil** is the product obtained by extraction of part of the oil from the whole herring or part of the herring. (Adopted 1933.)

12. **Salmon liver oil** is the product obtained by extraction of part of the oil from salmon livers. (Adopted 1933.)

13. **Stearine** is the solid material obtained by filtration from an animal or vegetable oil after chilling or freezing in the process of refining. When this product is sold as a feed, the term shall be prefixed by the name of the oil from which it is obtained. (Adopted 1934.)

MILK PRODUCTS

1. **Dried buttermilk** is the product resulting from the removal of water from clean, sound buttermilk derived from natural cream to which no foreign substances have been added, excepting such as are necessary and permitted in the manufacture of butter. It contains not more than 8 per cent of moisture, not more than 13 per cent of mineral matter (ash), and not less than 5 per cent of butterfat, as determined by the Roesse-Gottlieb method. (Adopted 1932.)

2. **Evaporated buttermilk, concentrated buttermilk, or condensed buttermilk** is the product resulting from the removal of a considerable portion of water from clean, sound buttermilk derived from natural cream to which no foreign substances have been added excepting such as are permitted and necessary in the manufacture of butter. It contains not less than 27 per cent of total solids, not less than 2 per cent of butterfat, and not more than 0.14 per cent of ash for each per cent of solids. This definition does not prohibit the use of a distinctive trade name, provided it is followed by one of the names given. (Adopted prior to 1928.)

3. **Dried skimmed milk** is the product resulting from the removal of water from clean, sound skimmed milk. It contains not more than 8 per cent of moisture. (Adopted 1930.)

4. **Dried soured skimmed milk** is the product resulting from the removal of water from clean, sound skimmed milk which has been soured by a suitable culture of lactic bacteria. It contains not more than 8 per cent of moisture. (Adopted 1932.)

5. **Evaporated soured skimmed milk, concentrated soured skimmed milk, or condensed soured skimmed milk** is the product resulting from the removal of a considerable portion of water from clean, sound skimmed milk which has been soured by a suitable culture of lactic bacteria. It contains not less than 27 per cent of total solids. (Adopted 1932.)

6. **Condensed skimmed milk** is the product resulting from the removal of a considerable portion of water from clean, sound skimmed milk. It contains not less than 27 per cent of total solids. (Adopted 1930.)

7. **Dried whey** is the by-product from the manufacture of cheese or casein, either or both. This product shall contain at least 65 per cent of lactose (milk sugar). (Adopted 1934.)

8. **Cheese rind** is cooked, partially defatted cheese rind. (Adopted 1935.)

MINERAL FEEDS

1. Mixed feeds containing both feed and more than 5 per cent mineral ingredients require, in addition to the usual declaration of the chemical feed analysis, a declaration of each ingredient

contained therein and the minimum percentages of calcium (Ca), phosphorus (P), iodine (I), and the maximum percentage of salt (NaCl) if same is present. If minerals predominate in the mixture, the usual declaration of the chemical feed analysis, with the exception of protein, may be omitted.

In mineral feeds for which no nutritional properties other than those of a mineral nature are claimed, the usual chemical guarantees need not be declared. A declaration should be made of each ingredient contained therein and the minimum percentage of calcium (Ca), phosphorus (P), iodine (I), and the maximum percentage of salt (NaCl) if same is present.

The mineral ingredients should be stated in the common English terms, if any such terms exist.

It being impossible to classify separately the drug ingredients and the mineral ingredients, be it resolved:

a) That all mixtures containing mineral ingredients generally regarded as dietary factors essential for the normal nutrition of animals and which are sold or represented for the primary purpose of supplying these minerals as additions to rations in which these same mineral factors may be deficient be classified as mineral feeds.

b) That all other preparations which are sold or represented primarily for the cure, mitigation, or prevention of disease be classified by this Association as drugs, medicines, or specifics. (Adopted 1935.)

2. **Iodized salt** is common salt (NaCl) containing not less than 0.015 per cent of iodine, uniformly distributed. (Adopted 1937.)

OAT PRODUCTS

1. **Oat hulls** is the product consisting of the outer covering of the oat. (Adopted prior to 1928.)

2. **Oat middlings** is the product consisting of the floury portions of the oat groat obtained in the milling of rolled oats. (Adopted prior to 1928.)

3. **Oat shorts** is the product consisting of the covering of the oat grain lying immediately inside the hull, being a fuzzy material carrying with it considerable portions of the fine, floury part of the groat obtained in the milling of rolled oats. (Adopted prior to 1928.)

4. **Oat chop, ground oats, pulverized oats, crushed oats, or crimped oats** consist of the entire product made by chopping, cutting, grinding, crushing, or crimping whole oats. (Adopted 1931.)

5. **Oat groats** are the kernels produced from cleaned and dried oats in the process of manufacturing oatmeal. (Adopted 1931.)

6. **Hulled oats, or undried oat groats** are the kernels produced

from the undried grain in the process of hulling oats. (Adopted 1931.)

7. **Feeding oat meal** is a product obtained in the manufacture of rolled oat groats or rolled oats and consists of broken rolled oat groats, oat groat chips, and floury portions of the oat groats, with only such quantity of finely ground oat hulls as is unavoidable in the usual process of commercial milling. It must not contain more than 4 per cent of crude fiber. (Adopted 1938.)

8. **Cut oat groats, cracked oat groats, or ground oat groats** is the product produced by cutting, cracking, or grinding oat groats. (Adopted 1938.)

9. **Clipped oat by-products** is the by-product obtained in the manufacture of clipped oats. It may contain the light chaffy material broken from the end of the hulls, empty hulls, light immature oats, and dust. It must not contain an excessive amount of oat hulls. (Adopted prior to 1928.)

10. **Oat mill feed** (oat hulls, oat shorts, and oat middlings) is the entire by-product produced in the manufacture of oat groats and consists of oat hulls, oat shorts, and oat middlings. If used in a mixed feed, it shall be called oat mill feed (oat hulls, oat shorts, and oat middlings). (Adopted 1932.)

PEANUT PRODUCTS

1. **Per cent protein peanut oil cake** is the residue after the extraction of part of the oil by pressure or solvents from peanut kernels. (Adopted prior to 1928.)

2. **Per cent protein peanut oil meal** is ground peanut oil cake. (Adopted prior to 1928.)

3. **Unhulled peanut oil feed** is the ground residue obtained after extraction of part of the oil from whole peanuts, and the ingredients must be designated as **peanut meal and hulls**. (Adopted prior to 1928.)

RICE PRODUCTS

1. **Rice bran** is the pericarp or bran layer of the rice, with only such quantity of hull fragments as is unavoidable in the regular milling of rice. (Adopted prior to 1928.)

2. **Rice hulls** is the product consisting of the outer coverings of the rice. (Adopted prior to 1928.)

3. **Rice polishings** is a by-product of rice obtained in the milling operation of brushing the grain to furbish the kernel. (Adopted 1938.)

4. **Rice meal** is ground brown rice or ground rice after the hull has been removed. (Adopted prior to 1928.)

5. **Ground rough rice** is ground rice from which the hull has not been removed or ground paddy rice. (Adopted prior to 1928.)

6. **Rice stone bran** is the siftings from the materials secured in removing hulls from rice and contains rice germs, broken rice, and some rice hulls. (Adopted prior to 1928.)

7. **Rice huller bran** is a product secured by the huller and cones from brown rice and consists mostly of the bran and germs. (Adopted prior to 1928.)

RYE PRODUCTS

1. **Rye bran** is the coarse outer covering of the rye kernel as separated from the cleaned and scoured rye. (Adopted prior to 1928.)

2. **Rye feed** is a by-product obtained in the usual process of the milling of rye flour from cleaned and scoured rye grain, consisting principally of the mill run of the outer covering of the rye grain and the germs with small quantities of flour and aleurone. (Adopted prior to 1928.)

3. **Rye red dog** is a by-product obtained in the usual process of the milling of rye flour, consisting principally of aleurone with small quantities of flour and fine bran particles and must not contain more than 3.5 per cent of crude fiber. (Adopted prior to 1928.)

4. **Rye low-grade feed flour** consists principally of dark rye flour and small quantities of aleurone and fine bran particles and must not contain more than 1.5 per cent of crude fiber. (Adopted prior to 1928.)

5. **Rye middlings** consists of rye feed and rye red dog combined in the proportions obtained in the usual process of milling rye flour. (Adopted prior to 1928.)

6. **Rye flour middlings** consist of rye feed, rye red dog, and pure, dark rye flour combined in the proportions obtained in the milling of rye flour and must not contain more than 5 per cent of crude fiber. (Adopted prior to 1928.)

SCREENINGS

1. **Screenings** consist of a mixture of mill or elevator run materials or a combination of varying amounts of materials obtained in the process of cleaning grain or seed, either or both, such as inferior, light or broken grain or seed, weed seeds, hulls, chaff, joints, straw, elevator dust, floor sweepings. They must be relatively free of unpalatable or injurious weed seeds, sand and dirt. They must not contain more than 14 per cent of fiber or more than 6.50 per cent of ash. If they bear a name descriptive of their kind or origin, they must correspond thereto. (Adopted 1935.)

2. **Screenings—grain** consist of inferior, light or broken grain or seed obtained in the process of cleaning grain or seed or recleaning screenings, either or both. They must be relatively free of weed seeds, chaff, straw, hulls, joints, sand and dirt, and other foreign materials. If they bear a name descriptive of their kind or origin, they must correspond thereto. (Adopted 1935.)

3. **Screenings waste or screenings refuse** is a mixture of materials or a combination of varying amounts of materials obtained in the process of cleaning grain or seed, either or both, or recleaning screenings, such as weed seeds, which may be unpalatable or injurious, chaff, hulls, straw, sticks, joints, elevator dust, floor sweepings, sand, and dirt. (Adopted 1935.)

4. **Scourings** consist of such portions of the cuticle, brush, white caps, dust, smut, and other materials as are separated from the grain in the usual commercial process of scouring. (Adopted prior to 1928.)

Note.—If to any of the wheat or rye by-product feeds there should be added screenings or scourings, as above defined, either ground or unground, bolted or unbolted, such brand shall be so registered, labeled, and sold as clearly to indicate this fact. The word "screenings" or "scourings," as the case may be, shall appear as part of the name or brand and shall be printed in the same size and face of type as the remainder of the brand name. When the word "screenings" appears, it is not necessary to show also on the labeling the word "scourings." (Adopted prior to 1928.)

The crude fiber standards as shown in the definitions for wheat and rye products apply also if screenings are added. (Adopted 1937.)

SOYBEAN PRODUCTS

1. **Ground soybeans** is the product obtained by grinding whole soybeans without cooking or removing any of the oil. (Adopted 1933.)

2. **..... Per cent protein soybean oil cake or per cent protein soybean oil chips** is the product after the extraction of part of the oil by pressure or solvents from soybeans. If a name descriptive of the process of manufacture such as expeller, hydraulic, or solvent extracted be used, the product must correspond thereto. (Adopted 1937.)

3. **..... Per cent protein soybean oil meal** is ground soybean oil cake or ground soybean oil chips. (Adopted 1933.)

WHEAT PRODUCTS

1. **Wheat bran** is the coarse outer covering of the wheat kernel as separated from cleaned and scoured wheat in the usual process of commercial milling. (Adopted prior to 1928.)

2. **Wheat standard middlings** consists mostly of fine particles

of wheat bran, wheat germ, and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial process of milling and must not contain more than 9.5 per cent of crude fiber. (Adopted prior to 1928.)

3. Wheat flour middlings shall consist of wheat standard middlings and wheat red dog combined in the proportions obtained in the usual process of milling and must not contain more than 6.0 per cent of crude fiber. (Adopted prior to 1928.)

4. Wheat red dog is a by-product obtained in the usual commercial process of flour milling, consisting principally of aleurone with small quantities of wheat flour and fine wheat bran particles and must not contain more than 4.0 per cent of crude fiber. (Adopted prior to 1928.)

5. Wheat low-grade feed flour is a by-product obtained in the usual commercial process of flour milling, consisting principally of wheat flour with small quantities of aleurone and fine wheat bran particles and must not contain more than 1.5 per cent of crude fiber. (Adopted prior to 1928.)

6. Wheat bran and wheat standard middlings consist of the two commodities as defined above, mixed in the proportions obtained in the usual process of commercial milling. (Adopted prior to 1928.)

7. Hard wheat mixed feed (mill-run wheat feed) consists of wheat bran and wheat flour middlings combined in the proportions obtained in the usual process of commercial milling. This product must not contain more than 9.5 per cent of crude fiber. (Adopted prior to 1928.)

8. Wheat brown shorts (wheat red shorts) consists mostly of the fine particles of wheat bran, wheat germ, and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial process of milling and must not contain more than 7.5 per cent of crude fiber. (Adopted prior to 1928.)

9. Wheat gray shorts (wheat gray middlings or wheat total shorts) consists of the fine particles of the outer bran, the inner bran or bee-wing bran, the germ, and the offal or fibrous materials obtained from the "tail of the mill." This product must be obtained in the usual process of commercial milling and must not contain more than 6.0 per cent of crude fiber. (Adopted prior to 1928.)

10. Wheat white shorts or wheat white middlings consist of a small portion of the fine wheat bran particles and the wheat germ and a large portion of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual process of flour milling and must not contain more than 3.5 per cent of crude fiber. (Adopted prior to 1928.)

11. **Wheat mixed feed** (mill-run wheat feed) consists of wheat bran and the gray or total shorts combined in the proportions obtained in the usual process of commercial milling. This product must not contain more than 8.5 per cent of crude fiber. (Adopted prior to 1928.)

YEAST

1. **Yeast** is a product composed of living or dead cells of *Saccharomyces cerevisiae* with impurities not exceeding commercial grade; it shall contain at least 45 per cent of protein on the moisture-free basis. (Adopted 1938.)

2. **Irradiated yeast** is yeast which has been subjected to ultraviolet rays in order to increase its antirachitic potency; it shall contain at least 45 per cent of protein on the moisture-free basis. (Adopted 1938.)

Note.—If yeast or irradiated yeast consists of bakers' type yeast, the term "bakers' type" shall precede the word yeast; if it consists of brewers' type yeast, the term "brewers' type" shall precede the word yeast.

MISCELLANEOUS PRODUCTS

1. **Dried apple pomace** is the sound, dried residue obtained by the removal of cider from apples. (Adopted 1929.)

2. **Dried apple pectin pulp** is the sound, dried residue obtained by the removal of pectin from apple products. (Adopted 1929.)

3. **Dried beet pulp** is the dried residue from sugar beets which have been cleaned and freed from crowns, leaves, and sand and from which sugar has been extracted. (Adopted prior to 1928.)

4. **Buckwheat shorts or buckwheat middlings** are the portions of the buckwheat grain immediately inside the hull secured after separation from the flour. (Adopted prior to 1928.)

5. **Chop** is a ground or chopped feed composed of one or more different cereals or by-products thereof. If it bears a name descriptive of the kind of cereals, it must be made exclusively of the entire grains of those cereals. (Adopted prior to 1928.)

6. **Per cent protein cocoanut oil meal or per cent protein copra oil meal** is the ground residue from the extraction of part of the oil from the dried meat of the cocoanut. (Adopted prior to 1928.)

7. **Processed garbage** is composed of dried animal and vegetable waste from garbage collected sufficiently often that harmful decomposition has not set in and separated from material such as crockery and glass. Its odor must not be suggestive of the presence of decomposition, and it must contain less than 1 per cent of glass. None of it shall contain knifelike or needlelike particles,

and the maximum percentage of glass should be stated on the label when present in excess of one fifth of 1 per cent. (Adopted prior to 1928.)

8. **Ivory nut meal** is the ground waste material resulting from the manufacture of buttons and similar articles from the vegetable ivory nut. (Adopted prior to 1928.)

9. **Palm kernel oil meal** is the ground residue from the extraction of part of the oil by pressure or solvents from the kernel of the fruit of *Elaeis guineensis* or *Elaeis melanococca*. (Adopted prior to 1928.)

10. **Head chops** is the product consisting of the entire heads of the grain sorghums chopped and should bear the name of the sorghum from which it is made. This includes, among others, kaffir head chops, milo head chops, feterita head chops, and sorghum head chops. (Adopted prior to 1928.)

11. **Head stems** is the product consisting of the stems from the heads of the grain sorghums after the grain has been removed and should bear the name of the sorghum from which it is made. (Adopted prior to 1928.)

12. **Dried tomato pomace** is a mixture of tomato skins, pulp, and crushed seeds resulting from the process of extracting the juice from tomatoes, and dried. (Adopted 1937.)

13. **Velvet bean meal** is ground velvet beans containing only an unavoidable trace of hulls or pods. (Adopted prior to 1928.)

14. **Ground velvet bean and pod** is the product derived by grinding velvet beans with the pod. It contains no additional pods or other materials. (Adopted prior to 1928.)

Recognized English Name and English Synonym, If Any	Article or Substance Indicated By the Name and Synonym
Capsicum; red pepper	The dried, ripe fruit of any species of <i>Capsicum</i> .
Cupric sulphate; copper sulphate	Crystallized copper sulphate with impurities not exceeding commercial grade.
Ferric oxide; red oxide of iron	Ferric oxide with impurities not exceeding commercial grade.
Ferrous sulphate	Crystallized ferrous sulphate with impurities not exceeding commercial grade.
Dextrose	A refined, crystallized sugar obtained chiefly by the hydrolysis of starch or of a starch-containing substance.
Glucose	A sirup obtained by the incomplete hydrolysis of starch or of a starch-containing substance.
Lactose; milk sugar	A sugar obtained from cow's milk.
Magnesium sulphate; Epsom salt	Magnesium sulphate with impurities not exceeding commercial grade.
Potassium bitartrate; cream of tartar	Potassium bitartrate with impurities not exceeding commercial grade.

Recognized English Name and English Synonym, If Any	Article or Substance Indicated By the Name and Synonym
Potassium nitrate; saltpeter	Potassium nitrate with impurities not exceeding commercial grade.
Sodium nitrate; Chile saltpeter	Sodium nitrate with impurities not exceeding commercial grade.
Sodium bicarbonate	Sodium bicarbonate with impurities not exceeding commercial grade.
Sodium chloride; common salt	Sodium chloride with impurities not exceeding commercial grade.
Sodium sulphate; Glauber's salt	Sodium sulphate with impurities not exceeding commercial grade.
Sulphur	Sulphur with impurities not exceeding commercial grade.
Calcium phosphate	Tricalcium salt of phosphoric acid with impurities not exceeding commercial grade.
Dicalcium phosphate	Dicalcium salt of phosphoric acid with impurities not exceeding commercial grade.
Bone ash	The ash obtained by burning bones with free access of air and containing 15.3 to 16.6 per cent P.
Precipitated calcium carbonate; precipitated chalk	Precipitated calcium carbonate with impurities not exceeding commercial grade.
Rock phosphate	Ground phosphate rock of commercial grade.
Phosphatic limestone	Ground phosphate-containing limestone of commercial grade.
Limestone; calcite	Ground calcium limestone of commercial grade.
Dolomitic limestone; dolomite	Ground calcium-magnesium limestone of commercial grade.
Shell	Ground shells of oysters or of other mollusks.
Oyster shell	Ground shells of oysters.

(Adopted 1935.)

TENTATIVE DEFINITIONS

These definitions have received favorable consideration, but are not official. They are subject to revision before final adoption.

1. **Alfalfa products.**—The word “dehydrated” may precede either of the four official definitions for alfalfa products providing the product has been artificially dried. (Proposed 1938.)

2. **Dried citrus pulp** is the peel, pulp, rag, some seed, and occasional cull fruit of citrus fruit which has been ground, filter pressed, and dried. It may or may not be partially neutralized with lime, the finished product to contain not more than 0.5 per cent of calcium (Ca). If it bears a name descriptive of the source it must conform thereto. (Proposed 1938.)

3. **Dried sugar cane pith** is the dry, pithy portion of sugar cane after the removal of most of the juice and coarse outer fiber. It must not contain more than 42 per cent of crude fiber.

This product is recognized only as an absorbent and carrier of molasses. (Proposed 1938.)

4. Feeding beet molasses is a by-product of the manufacture of beet sugar from sugar beet and should contain 48 per cent or more of total sugars, expressed as invert sugar, and not more than 27 per cent of moisture. (Proposed 1935; amended 1936, 1937.)

5. Feeding cane molasses is a by-product of the manufacture of cane sugar from cane and should contain 48 per cent or more of total sugars, expressed as invert sugar and not more than 27 per cent of moisture. (Proposed 1935; amended 1936, 1937.)

6. Feeding corn sugar molasses is the final molasses obtained from the manufacture of corn sugar and separated either by hydraulic pressure or centrifugal action. It should contain at least 51 per cent of sugar as dextrose and total carbohydrates of at least 72 per cent. (Proposed 1935; amended 1936, 1937.)

7. Sweet potato pulp is the dried residue remaining as a by-product in the process of separation of the starch in its manufacture from sweet potatoes. (Proposed 1938.)

8. Fortified cod liver oil is a product consisting chiefly of cod liver oil mixed with other suitable fish oils or fish oil concentrates or vitamin D, so as to contain not less than 400 A.O.A.C. chick units of vitamin D per gram and shall be labeled with the minimum guarantee in U.S.P. units of vitamin A per gram. If any other oil is so fortified it shall bear a name descriptive of its origin (as fortified sardine oil or fortified pilchard oil, etc.). (Amended 1938.)

9. Oat flour is the product produced by bolting ground oat groats. (Proposed 1938.)

10. Per cent protein soybean oil meal is ground soybean oil cake or ground soybean oil chips. If a name descriptive of the process of manufacture such as expeller, hydraulic, or solvent extracted, be used, the product must correspond thereto. (Proposed 1938.)

11. Meat meal is the ground, dry-rendered residue from animal tissues exclusive of hoof, horn, manure, and stomach contents, except in such traces as might occur unavoidably in good factory practice. It must contain not less than 65 per cent of protein and not more than 3 per cent of phosphorus (P). If it bears a name descriptive of its kind, composition, or origin, it must correspond thereto. (Proposed 1938.)

THE FOLLOWING DEFINITIONS HAVE BEEN SUGGESTED FOR
FUTURE DISCUSSION

1. The fluorine content of any minerals or mineral mixtures which are to be used directly for the feeding of domestic animals shall not contain fluorine in excess of 0.30 per cent for cattle, 0.35

per cent for sheep, 0.45 per cent for swine, and 0.6 per cent for poultry.

Rock phosphate or other fluorine-bearing ingredients may be used only in such limited amounts in feeding stuffs so that they will not raise the fluorine of the total concentration of the (grain) ration above the following amounts: for cattle 0.009 per cent of fluorine, for sheep 0.010 per cent of fluorine, for swine 0.014 per cent of fluorine, and for poultry 0.035 per cent of fluorine. (Suggested 1938.)

2. **Per cent protein palm nut oil cake meal** is the ground residue from the extraction of part of the oil from one or more species of palm nut. If a species name is used, the product must correspond thereto. (Suggested 1938.)

3. **Condensed whey** is the product resulting from the removal of a considerable portion of water from clean, sound cheese or casein whey, either or both. It contains not less than 62 per cent of total solids. (Suggested 1938.)

4. **Yeast cultures** are feeding mixtures containing live yeast. They shall be capable of generating 20 cc. of carbon dioxide (CO₂) per 2 grams in 6 hours at 25 degrees C. (Suggested 1938.)

5. **Distillers' slop or distillers' spent mash** is the product which remains after the alcohol has been distilled in the manufacture of whisky or alcohol from grains. The kind of grain predominating in the mash should be stated in the name as:

Distillers' corn slop or spent mash. From corn mainly.

Distillers' rye slop or spent mash. From rye mainly.

Distillers' corn and rye slop or spent mash. From both grains. (Suggested 1938.)

6. **Distillers' thin slop or distillers' thin spent mash** is the product which is strained and pressed out in the process of removing as much of the suspended solids as practicable from distillers' slop or spent mash. It contains the grain solubles. Approximately 25 per cent of the total solids are in solution. The kind of grain predominating in the mash should be stated in the name as:

Distillers' corn thin slop or thin spent mash. From corn mainly.

Distillers' rye thin slop or thin spent mash. From rye mainly.

Distillers' corn and rye thin slop or thin spent mash. From both grains. (Suggested 1938.)

7. **Distillers' grain solubles** is the nutrients in solution in distillers' slop or spent mash. The predominating grain from which it is derived should be stated in the name. (Suggested 1938.)

8. **Distillers' semisolid or condensed spent mash** is the product obtained by condensing slop or spent mash to a sirupy consistency. The predominating grain should be stated in the name. (Suggested 1938.)

9. **Distillers' semisolid or condensed thin spent mash** is the

product obtained by condensing thin spent mash. The predominating grain should be stated in the name. (Suggested 1938.)

10. Distillers' semisolid or condensed thin and pressed spent mash is the product obtained by condensing thin slop and pressed spent mash. The predominating grain should be stated in the name. (Suggested 1938.)

11. Distillers' dried spent mash or grain is the dried solids obtained from distillers' slop or spent mash. The predominating grain and condensed thin spent mash, if present, should be stated in the name. (Suggested 1938.)

12. Malt sprouts is a product of the barley grain obtained in the process of malting barley and must be relatively free of malt hulls. They must contain not less than 30 per cent of protein or more than 14 per cent of fiber. Sprouts derived from any other grain must be designated by the name of the grain. (Suggested 1938.)

13. Barley malt hulls is the hull covering of the barley obtained in the process of malting barley. (Suggested 1938.)

14. Malt sprouts and hulls is a product of malt sprouts with a considerable proportion of hulls. The percentage of protein must be part of the name. The percentages of protein and fiber must be within the limits prescribed as follows:

Twenty-five per cent protein malt sprouts and hulls. Protein not less than 25 per cent; fiber not more than 16 per cent.

Twenty per cent protein malt sprouts and hulls. Protein not less than 20 per cent; fiber not more than 17 per cent.

Fifteen per cent protein malt sprouts and hulls. Protein not less than 15 per cent; fiber not more than 18 per cent. (Suggested 1938.)

15. Brewers' dried grains are the dried solids of extracted barley malt or mixture with other extracted cereal grains and grain products, resulting from the manufacture of wort. (Suggested 1938.)

AVERAGE COMPOSITION OF SOME COMMON FEEDING STUFFS

For the information of feeders who do not have access to such data, Table 1 presents the analyses of many feeding materials used in Arizona. These analyses are taken mainly from Morrison's *Feeds and Feeding* and are expressed in per cent.

TABLE 1.

Feeding stuff	Protein	Fat	Fiber	Total digestible nutrients
Alfalfa hay (before bloom).....	19.0	2.7	22.3	53.2
Alfalfa hay (past bloom).....	12.8	2.1	31.9	44.9

TABLE 1—Continued.

Feeding stuff	Protein	Fat	Fiber	Total digestible nutrients
Alfalfa leaf meal.....	21.1	2.8	16.1	57.4
Alfalfa meal.....	15.2	1.9	28.4	53.9
Alfalfa stem meal.....	11.5	1.3	36.2	43.0
Barley hay.....	7.5	2.0	26.6	54.1
Barley grain.....	8.7	1.9	5.7	78.8
Bermuda grass hay.....	7.3	1.8	25.6	43.0
Beet tops.....	2.6	0.3	1.2	7.4
Beet pulp.....	9.0	0.8	18.8	71.8
Beans, pinto.....	22.7	1.2	4.5	64.8
Beans, tepary.....	22.2	1.4	3.4	65.2
Blood meal.....	82.2	1.2	1.3	75.9
Bone meal, raw.....	25.8	2.9	0.8	.....
Bone meal, steamed.....	7.1	3.3	0.8	.....
Buttermilk.....	3.5	0.6	.....	9.1
Buttermilk powder.....	33.8	5.6	0.4	85.5
Corn, cracked.....	9.0	3.0	3.5	79.0
Cottonseed meal 43 per cent.....	43.0	7.2	10.6	75.5
Cottonseed hulls.....	3.9	0.9	46.6	43.7
Cowpea hay.....	18.6	2.6	23.3	49.4
Fish meal.....	58.7	7.9	0.9	67.6
Grapefruit refuse, dried.....	4.9	1.1	11.9	75.8
Grain sorghum, chopped.....	10.0	2.5	3.0	74.3
Grain sorghum head, chopped.....	8.5	2.5	8.0	.....
Hegari grain.....	9.7	2.5	2.3	81.2
Kaffir grain.....	11.2	3.0	2.3	80.1
Kaffir head chop.....	10.0	2.7	6.9	76.9
Kaffir fodder.....	8.9	2.8	26.8	54.1
Johnson grass hay.....	6.5	2.1	30.4	50.3
Linseed meal.....	35.2	6.3	8.0	78.2
Mesquite beans and pods.....	13.0	2.8	26.3	71.6
Molasses, beet.....	7.7	.....	.....	58.8
Molasses, cane.....	2.8	.....	.....	56.6
Meat scraps.....	55.0	10.7	2.2	73.8
Meat and bone scraps.....	50.8	11.1	2.1	71.2
Milk, dry skim.....	34.8	0.9	.....	84.1
Milo grain.....	11.2	2.9	2.2	79.9
Milo head chop.....	10.3	2.5	6.7	77.4
Oat grain.....	9.0	5.4	11.0	72.2
Oat groats.....	16.2	6.4	1.9	93.9
Oat hulls.....	3.8	1.2	30.6	38.3
Orange peel, dried.....	5.8	0.7	10.6	38.1
Orange pulp, dried.....	7.7	1.5	8.0	78.4
Rye grain.....	12.3	1.7	2.3	80.1
Sorghum chop.....	9.0	2.5	3.0	74.3
Sorghum head chop.....	8.0	2.5	8.0	.....
Soybean hay.....	14.8	3.3	28.4	50.6
Soybean oil meal.....	44.3	5.7	5.6	82.2
Sudan grass hay.....	8.8	1.6	27.9	48.5
Sunflower seed.....	15.9	25.1	28.1	87.8
Tankage, digester.....	61.3	8.8	1.4	78.0
Wheat grain.....	9.9	2.0	2.7	83.6
Wheat bran.....	15.8	5.0	9.5	70.2
Wheat gray shorts.....	17.9	4.5	5.6	78.9

REGISTRATIONS AND ANALYSES

The following tables comprise a complete list of feeds registered in Arizona since July 1, 1937. When a feed registration has been canceled or changed, this fact is noted directly below the brand name. All registrations listed are now in force with the exception of those bearing the notations: "Canceled" or "Not Renewed for 1939." All the listed cancellations were initiated by the manufacturers and not by the Feed Control Office, which, however, has authority to cancel when major violations are found.

In the tables the names of the manufacturers are arranged alphabetically, and the brand names are in turn listed alphabetically.

It will be apparent that all feeds have not been analyzed. This is due to the fact that many feeds are registered which are not being manufactured or shipped in but which are available on order. Since these feeds were not on sale no samples were taken. In other cases feeds were on the market in small quantities but were not available for sampling when inspection was made.

The analyses are reported immediately below the guarantee in force at the time the sample was taken. In some cases manufacturers have changed their guarantee or adjusted their ingredients to make their feed conform more nearly to the analyses as found by the Feed Control Office.

Cottonseed meal feeding in Arizona is practiced on a very large scale. In view of this the analyses of this product are presented in a separate table. A study of Table 2 will show a progressive improvement in quality of meal since inauguration of the Feed Control Law.

TABLE 2.—COTTONSEED MEAL ANALYSES (PER CENT).

Reg. date	Name and address of manufacturer and product	Lab no.	Protein	Fat	Fiber	Ash
3-24-38	Agricultural Products Company, Phoenix, Arizona APCO Cottonseed Cake or Meal.....	293	G.* 43.00	6.00	12.00	.....
		568	F.* 43.21 F. 44.81	7.91	9.02	6.62
6-28-37	Arizona Cotton Oil Company, Glendale, Arizona Arco Cottonseed Flake Cake or Meal.....	.....	G. 43.00	6.00	12.00	.....
		4	F. 41.50	6.84	10.10	.....
		27	F. 42.25	7.70	11.12	6.43
		28	F. 42.13	7.77	11.05	6.33
		32	F. 45.63	7.37	8.60	.....
		402	F. 45.31	7.20	8.99	.....
		429	F. 44.00	6.93	11.69	6.55
		566	F. 41.25	6.51	12.79	6.15
567	F. 41.44 F. 44.31	6.44	12.32	6.10		
6-25-37	J. G. Boswell Company, Phoenix, Arizona Bosco Brand Cottonseed Cake or Meal.....	.....	G. 43.00	5.20	12.00	.....
		24	F. 43.56	7.30	7.95	6.30
		25	F. 41.19	8.50	11.49	5.98
		393	F. 43.31	9.27	9.64	6.45
		439	F. 46.44	7.12	9.77	6.44
1- 5-38 1- 5-38	California Cotton Oil Corporation, Los Angeles, California Calico Brand 43% Protein Cottonseed Cake..... Calico Brand 40% Protein Cottonseed Meal.....	.....	G. 43.00	5.20	10.00	.....
		.....	G. 40.00	5.20	12.00	.....
	

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

9- 2-38	P. E. Cook Seed Store, Calexico, California 40% Protein Cottonseed Cake-Meal.....	411	G. 40.00 F. 38.00	6.00 7.06	12.00 12.72	..... 6.36
2-16-38	Farmers Cooperative Oil Mill, El Paso, Texas 43% Protein Cottonseed Cake, Prime Quality..... 43% Protein Cottonseed Pellets, Prime Quality..... 43% Protein Cottonseed Meal, Prime Quality.....	.....	G. 43.00	5.20	12.00	.....
2-16-38		495	G. 43.00 F. 43.69	5.20 8.15	12.00 9.66	..... 6.01
2-16-38		5	G. 43.00 F. 41.69	5.20 7.32	12.00 9.69	.....
3-23-39		Interstate Cotton Oil Company, Los Angeles, California Paymaster Brand 40% Protein Cottonseed Cake-Meal, Prime Quality.....	G. 40.00	5.00	12.00
11- 8-38	Producers Gin Company, Safford, Arizona Cream of Safford Valley 43% Cottonseed Cake or Meal.....	.....	G. 43.00	5.00	12.00	.....
4-27-38	Tidwell Fuel & Feed Company, El Paso, Texas 25% Protein Ground Whole-Pressed Cottonseed..... 25% Protein Whole-Pressed Cottonseed..... 25% Protein Whole-Pressed Cottonseed Cubes..... 41.12% Protein Cottonseed Flakes..... 43% Protein Cottonseed Cake, Prime Quality..... 43% Protein Cottonseed Flake Cake..... 43% Protein Cottonseed Meal, Prime Quality..... 43% Protein Cottonseed Pellets.....	.....	G. 25.00	6.00	23.00	.....
8-19-37		.....	G. 25.00	6.00	23.00	.....
4-27-38		.....	G. 25.00	6.00	23.00	.....
8-19-37		.....	G. 41.12	6.00	12.00	.....
8-19-37		.....	G. 43.00	6.00	12.00	.....
8-19-37		.....	G. 43.00	6.00	12.00	.....
8-19-37		.....	G. 43.00	6.00	12.00	.....
3-17-38		.....	G. 43.00	6.00	12.00	.....
3-17-38		.....	G. 43.00	6.00	12.00	.....
6- 7-37	Western Cotton Products Company, Phoenix, Arizona Paymaster Brand, Cottonseed Meal & Cake.....	..... 1 2 6 7 22 23	G. 43.00 F. 41.56 F. 42.31 F. 41.31 F. 40.69 F. 41.75 F. 41.94	6.00 7.34 6.77 6.98 6.36 7.38 6.81	12.00 12.68 9.20 12.77 11.62 10.48 9.74	..... ..... ..... ..... ..... 6.14 6.21

TABLE 2.—COTTONSEED MEAL ANALYSES (PER CENT)—Continued.

Reg. date	Name and address of manufacture and product.	Lab. no.	Protein	Fat	Fiber	Ash
		26	F. 44.50	8.67	8.12	6.67
		254	F. 41.63	8.44	11.77	6.13
		255	F. 40.44	8.21	11.79	6.17
		256	F. 41.38	7.26	12.03	6.30
		257	F. 43.75	9.05	11.03	5.87
		258	F. 43.38	7.94	10.87	6.38
		454	F. 42.88	7.49	11.60	6.37
		473	F. 42.50	6.78	11.18	6.48
		565	F. 42.94	6.88	10.95	.....
1- 1-39	New Registration.....	.....	G. 43.00	5.20	12.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

Samples of these products are presented in a separate table because they are supplementary feeds used for the purpose of supplying mineral deficiencies. Since most of them are definite chemical compounds they should not vary greatly from their guarantee.

TABLE 3.—MINERAL AND BONE FEEDS.

Reg. date	Name and address of manufacturer and product	Guaranteed (per cent)	Lab. no.	Found (per cent)
2-17-39	Albers Bros. Milling Company, Los Angeles, California Sterilized Steamed Bone Protein	5.00	.....	.....
	Fat	0.00	.....	.....
	Fiber	2.00	.....	.....
6- 4-37	American Salt Corporation, Kansas City, Missouri American Calcium-Phosphorus Salt Calcium (Ca)	3.58	.....	.....
	Phosphorus (P)	3.50	.....	.....
	Iodine (I)	0.02	.....	.....
	Salt (NaCl)	84.00	.....	.....
1-18-39	American Iodized Stock Salt Iron oxide (Fe ₂ O ₃)	Tr.	.....	.....
	Iodine (I)	0.015	.....	.....
	Salt (NaCl)	99.98	.....	.....
6-18-37	Bay Chemical Company, New Orleans, Louisiana Dicapho-Salt Blocks (30/70) Calcium (Ca)	6.75	.....	.....
	Phosphorus (P)	5.25	.....	.....
	Salt (NaCl)	70.00	.....	.....
	(Not Renewed for 1939)			
7-24-37	California Milling Corporation, Los Angeles, California Ace-Hi Pigeon Grit No. 10 or No. 6	.....	564	.....

*Boldface figures indicate deficiency or excess.

TABLE 3.—MINERAL AND BONE FEEDS—Continued.

Reg. date	Name and address of manufacturer and product	Guaranteed (per cent)	Lab. no.	Found (per cent)
1-17-38	Calcium oxide (CaO)..... Salt (NaCl)..... Sterilized Steamed Bone Protein..... Fat..... Fiber.....	48.00 (Ca 34.00) 1.50 5.00 0.00 2.00	..... ..... ..... ..... .....	54.57 (CaO) 0.66
7- 2-37	Carey's Salt Company, Hutchinson, Kansas Carey's Monocalcium Phosphate Salt Calcium (Ca)..... Phosphorus (P)..... Salt (NaCl)..... New registration	2.70 4.30 84.00	...............	...............
1-16-39	Calcium (Ca)..... Phosphorus (P)..... Salt (NaCl).....	2.50 2.90 87.50	...............	...............
12-21-37	Colloidal Products of America, Inc., Orlando, Florida Animal Mineral Colloids Calcium (Ca)..... Phosphorus (P)..... Iodine (I)..... Salt (NaCl).....	25.00 7.00 0.02 0.00	....................	....................
12-21-37	Poultry Mineral Colloids Calcium (Ca)..... Phosphorus (P)..... Iodine (I)..... Salt (NaCl).....	26.00 5.00 0.02 0.00	....................	....................
6- 4-37	Consolidated Chemical Industries, San Francisco, California Digesta-Bone Protein..... Fat.....	..... 5.00 0.00	56 ..... .....	..... 7.22 0.66

*Boldface figures indicate deficiency or excess.

	Fiber				2.76
1-13-38	Economy Hog & Cattle Powder Company, San Francisco, Calif. Economy Mineral Compound Lime (CaO) Phosphoric acid (P ₂ O ₅) Iodine (I) Salt (NaCl) Economy Super Mineral for Dairy Cows and Calves Lime (CaO) Phosphoric acid (P ₂ O ₅) Iodine (I) Salt (NaCl) Economy Super Mineral for Poultry Lime (CaO) Phosphoric acid (P ₂ O ₅) Iodine (I) Salt (NaCl) Economy Super Mineral for Sheep Lime (CaO) Phosphoric acid (P ₂ O ₅) Iodine (I) Salt (NaCl)	2.00	35.00 (Ca 25.00) 3.50 (P 1.53) 0.0125 0.00 25.00 (Ca 17.90) 3.50 (P 1.53) 0.025 0.00 12.50 (Ca 8.90) 2.00 (P 0.87) 0.0125 0.00 17.00 (Ca 12.10) 2.00 (P 0.87) 0.0125 0.00	.....	.....
3-26-38	Dr. Hess and Clark, Inc., Ashland, Ohio Dr. Hess Hog Supplement Calcium (Ca) Phosphorus (P) Iodine (I) Salt (NaCl) Dr. Hess Poultry Pan-A-Min Calcium (Ca) Phosphorus (P) Salt (NaCl) Dr. Hess Stock Tonic Calcium (Ca) Phosphorus (P) Iodine (I)	533	15.00 3.00 0.04 23.00 21.00 3.80 10.00 15.00 2.50 0.04	.....	17.00 4.29 0.14 27.93* 23.50 5.59 9.84 18.75 4.57 0.18
3-26-38		436		.....

TABLE 3.—MINERAL AND BONE FEEDS—Continued.

Reg. date	Name and address of manufacturer and product	Guaranteed (per cent)	Lab. no.	Found (per cent)
	Salt (NaCl).....	23.00	.....	23.98
10- 4-38	Julius Meyer, Casa Grande, Arizona Fatemup Protein..... Fat..... Fiber..... Calcium (Ca) Phosphorus (P) Iodine (I) Salt (NaCl).....	4.50 1.10 2.00 23.00 8.00 Tr. 24.00	...................................	...................................
6-28-37	Morton Salt Company, Chicago, Illinois Morton Calcium Phosphate Salt Calcium oxide (CaO) Phosphorus (P) Salt (NaCl) Morton Iodized Salt	3.53 6.75 69.72	...............	...............
1- 1-39	Potassium iodide (KI) Iron oxide (Fe ₂ O ₃) Sodium carbonate (Na ₂ CO ₃) Salt (NaCl).....	0.023 0.10 0.20 99.677	....................	....................
8-12-37	Paul Lime Plant, Paul Spur, Arizona Cal-Pho-Sal Calcium carbonate (CaCO ₃) Phosphoric acid (P ₂ O ₅) Iron oxide (Fe ₂ O ₃) Potassium iodide (KI) Salt (NaCl).....	35.30 9.98 0.30 0.01 51.00	435	43.87 8.22 0.34 55.65
11-12-38	Swift & Company, Los Angeles, California Swift's 5% Protein Special Steamed Bone Meal	.....	456	.....

*Boldface figures indicate deficiency or excess.

	Protein	5.00	.....	8.63
	Fat	0.00	.....	3.46
	Fiber	3.00	.....	4.54
6- 8-37	Taylor Milling Corporation, Los Angeles, California Raw Bone Meal			
	Protein	23.00	361	.....
	Fat	0.50	.....	25.62
	Fiber	1.50	.....	2.62
12- 5-38	Steam Bone Meal			
	Protein	6.00	503	.....
	Fat	0.00	.....	1.52
	Fiber	1.00	.....	.....
8-19-38	Tidwell Fuel and Feed Co., El Paso, Texas Pulverized Limestone Calcium carbonate (CaCO ₃)..... Magnesium carbonate (MgCO ₃).....	70.00 (Ca 28.00) 0.20	.....	.....
3-18-38	V-O Milling Company, Los Angeles, California White Sea Flakes Magnesium carbonate (MgCO ₃).....	99.00 (Ca 39.60)	.....	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT).

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
3-24-38	Agricultural Products Company, Phoenix, Arizona APCO Cottonseed Cake or Meal. (See Table 2)	.....	.....	.....	.....	.....
7- 1-37	Albers Bros. Milling Company, Los Angeles, California	444	G* 25.00 F. 28.06	4.00 5.73	5.00 2.85	..... 8.10
7- 1-37	Albers Calf Manna	.....	.....	.....	.....	.....
7- 1-37	Albers Cockerel Ration Mash and Paks. (Not renewed for 1939)	528	F. 19.81	4.24	6.00	6.87
1-12-39	Albers Commercial Crate Fatner	.....	G. 15.00	5.00	5.00	.....
1-31-39	Albers Egg King	.....	G. 17.00	3.50	10.00	.....
1- 5-38	Albers Egg-King Laying Mash (Not renewed for 1939)	88	G. 17.00 F. 20.75	3.50 3.75	8.00 7.94	..... 15.91
1-31-39	(See Albers Egg King)	.....	.....	.....	.....	.....
1-31-39	Albers Mil-King Dairy Ration	.....	G. 16.00	4.50	12.00	.....
12-19-38	Albers Molasses & Oat Mill Feed	527	G. 4.00 F. 4.16	1.00 1.58	24.00 26.16	..... 9.93
7- 1-37	Albers Progressive Egg Ration	536	G. 19.00 F. 21.44	4.00 4.27	7.00 6.76	..... 11.15
1-31-39	New registration	.....	G. 20.00	3.50	8.00	.....
7- 1-37	Albers Progressive Scratch (Not renewed for 1939)	.....	G. 10.00	2.50	3.00	.....
1-31-39	Albers Progressive Turkey Grower	.....	G. 19.00	4.00	9.00	.....
12-12-38	Albers Proven Battery Laying Ration	537	G. 18.50 F. 18.75	4.00 4.45	10.00 9.59	..... 9.48
7- 1-37	Albers Proven Breeders Ration	539	G. 20.00 F. 24.69	5.00 5.38	6.00 6.37	..... 9.72
7- 1-37	Albers Proven Chick Starter	.....	G. 17.00	4.00	5.00	.....
1-12-39	Albers Proven Dairy Concentrate	526	F. 20.00	5.20	5.39	9.26
1-12-39	Albers Proven Duck Paks	.....	G. 30.00 G. 15.00	4.00 3.50	6.00 9.00	..........

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

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7- 1-37	Albers Proven Egg Maker.....	84	G.	20.00	5.00	6.00	10.00
12-12-38	New registration.....	443	F.	21.44	5.45	5.77	12.53
7- 1-37	Albers Proven Fryer Ration.....		G.	20.00	4.50	6.50	
7- 1-37	Albers Proven Lax-ive Ration.....	540	F.	21.94	4.73	6.00	8.39
7- 1-37	Albers Proven Milk-Flo.....	91	F.	17.94	8.83	5.21	12.88
12-12-38	Albers Proven Pigeon Feed.....	541	G.	22.12	4.88	9.11	8.16
7- 1-37	Albers Proven Poul Developer Mash, Paks and Paks-N-Mash. (Not renewed for 1939)	544	F.	12.50	2.19	2.43	1.53
7- 1-37	Albers Proven Pullet Grower.....		G.	22.00	5.00	6.00	
1-12-39	New registration.....	89	F.	19.69	5.07	6.09	13.04
7- 1-37	Albers Proven Rabbit Breeders Paks.....	468	F.	17.94	3.91	5.54	6.87
7- 1-37	Albers Proven Rabbit Family Ration.....	86	G.	15.31	3.45	21.72	8.28
7- 1-37	Albers Proven Similene Ration.....	85	F.	15.19	3.92	16.74	6.83
1-12-39	Albers Proven Turkey Breeder Ration.....	90	F.	22.34	5.78	4.22	14.19
7- 1-37	Albers Proven Turkey Grower.....	83	F.	18.13	4.61	4.65	
12-12-38	New registration.....	470	F.	22.56	4.78	7.89	10.21
7- 1-37	Albers Proven Turkey Starter.....	542	F.	24.62	4.74	5.43	8.72
12-12-38	Albers Ration with 2% Tobacco.....	538	F.	23.31	4.51	7.85	11.74
1-18-39	Albers Trip-L-Duty.....		G.	17.00	4.00	6.00	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
7- 1-37	Albers Turkey Breeders Paks and Mash. (Not renewed for 1939)	543	G. 21.00 F. 23.94	5.00 4.46	7.00 5.65	..... 13.31
7- 1-37	Albers XLNT Rabbit Pellets.	87	G. 14.00 F. 14.19	3.50 3.35	11.00 12.37	..... 5.59
1-31-39	Bak-O-Mash or Pellets	.....	G. 20.00	4.50	7.50	.....
2-17-39	Sterilized Steamed Bone (see Table 3)	.....	.....	.....	.....	.....
2- 1-39	Stovers Pellets	.....	G. 14.50	4.50	6.00	.....
11-22-38	Allen Trading Company, Prescott, Arizona Allen's Scratch	.....	G. 9.00	2.00	4.00	.....
3-24-39	American Butter Company, Kansas City, Missouri Condensed Greenmilk	.....	G. 8.00	2.00	3.00	.....
3-24-39	Dried Greens-Buttermilk	.....	G. 25.00	4.00	15.00	.....
2-13-39	American Fisheries Company, San Diego, California	.....	G. 60.00	5.00	3.00	.....
12- 2-37	Oliver Brand 60% Protein Fish Meal	.....	G. 60.00	5.00	3.00	.....
	Oliver Brand Tuna Meal	406	F. 63.34	6.67	0.38	19.57
6- 4-37	American Salt Corporation, Kansas City, Missouri American Calcium-Phosphorus Salt	.....	.....	.....	.....	.....
1-18-39	(See Table 3) American Iodized Stock Salt. (See Table 3)	.....	.....	.....	.....	.....
4-25-38	Andersen-Smith Milling Company San Francisco, California	.....	G. 34.00	5.00	9.00	.....
2-27-39	Chick Concentrate	.....	G. 35.00	5.00	8.00	.....
4-25-38	New registration	.....	G. 40.00	4.00	5.00	.....
4-25-38	Egg Concentrate	.....	G. 24.00	5.00	11.00	.....
	Growing Pullet Concentrate	.....	.....	.....	.....	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

2-27-39	New registration.....	.....	G. 27.00	4.00	10.00	.....
5-13-38	An-Fo Manufacturing Company, Oakland, California An-Fo Calf Meal.....	545	G. 20.00 F. 22.37	5.50 7.70	10.00 11.92	7.35
6-24-38	Archer Daniels Midland Company, Minneapolis, Minnesota 44% Protein New Process Soybean Oil Meal.....	376	G. 44.00 F. 47.72	0.50 1.15	7.00 5.83	5.83
6-28-37	Arizona Cotton Oil Company, Glendale, Arizona Arco Cottonseed Flake Cake or Meal..... (See Table 2)	.....	.....	.....	.....	.....
4-19-38	Arizona Farmers Exchange, Mesa, Arizona Arizona Maid Chick Starter.....	299	G. 16.00 F. 17.34	4.00 2.65	5.00 3.68	6.90
1-23-39	New registration.....	.....	G. 16.00	3.00	5.00	.....
4-19-38	Arizona Maid Dairy Feed.....	294	G. 18.00 F. 18.12	3.50 3.88	8.00 7.39	5.34
4-19-38	Arizona Maid Developing Mash.....	399	G. 17.00 F. 17.06	3.50 3.41	4.50 4.38	8.29
1-23-39	New registration.....	.....	G. 17.00	3.00	5.00	.....
4-19-38	Arizona Maid Laying Mash.....	302	G. 20.00 F. 21.16	5.00 4.01	5.00 4.59	11.27
1-23-39	New registration.....	.....	G. 20.00	3.50	5.00	.....
4-19-38	Arizona Maid Pattering Mash.....	301	G. 14.00 F. 14.47	5.00 4.06	4.00 2.56	3.97
1-23-39	New registration.....	.....	G. 14.00	4.00	4.00	.....
4-19-38	Arizona Maid Hen Scratch.....	300	G. 10.50 F. 10.28	3.50 2.05	4.00 2.23	1.62
1-23-39	New registration.....	.....	G. 10.00	2.50	4.00	.....
4-18-38	Arizona Flour Mills Company, Phoenix, Arizona All-Grain Rabbit Pellets..... (Not renewed for 1939) (See Arizona Star All-Grain Rabbit Pellets)	546	G. 17.00 F. 16.56	3.50 3.90	15.50 8.21	5.86

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
8-19-38	Arizona Star All-Grain Rabbit Pellets	.....	G. 17.00	3.50	15.50	.....
6-24-37	Arizona Star All-In-One Life Cycle Mash (Canceled 8-19-38)	286	G. 16.00 F. 16.18	2.50 4.04	6.50 6.85	9.37
8-19-38	Arizona Star All-In-One Rabbit Pellets	.....	G. 17.00	3.50	15.50	.....
6-24-37	Arizona Star Baby Chick Grain	292	G. 12.00 F. 11.78	2.50 1.10	2.00 1.84	3.09
6-24-37	Arizona Star Baby Chick Mash (Canceled 8-19-38)	283	G. 18.00 F. 19.50	4.00 4.16	4.00 5.76	6.68
6-24-37	Arizona Star Broiler Mash	289	G. 18.00 F. 20.43	4.00 4.13	6.00 5.92	8.07
8-19-38	New registration	.....	G. 18.00	3.00	7.00	.....
6-24-37	Arizona Star Calf Meal	287	G. 24.00 F. 24.72	5.00 5.23	6.00 5.52	7.65
6-24-37	Arizona Star Cattle Mix (Not renewed for 1939)	.....	G. 16.00	2.25	18.50	.....
6-24-37	Arizona Star Coccidiosis Control Mash	285	G. 17.50 F. 18.31	3.00 4.03	6.50 6.02	7.46
6-24-37	Arizona Star Dairy Feed	291	G. 18.00 F. 19.87	3.50 3.82	7.00 6.65	7.59
6-24-37	Arizona Star Developing Mash	290	G. 18.50 F. 17.75	3.50 3.66	6.00 5.84	9.62
8-19-38	New registration	.....	G. 18.00	3.00	7.00	.....
12-15-37	Arizona Star Fattening Mash	.....	G. 18.00	4.00	4.00	.....
8-19-38	New registration	.....	G. 14.00	3.00	5.00	.....
6-24-37	Arizona Star Growing Grain	310	G. 12.00 F. 12.81	3.00 3.16	3.00 2.17	1.81
6-24-37	Arizona Star Growing Mash (Canceled 8-19-38)	307	G. 18.00 F. 18.37	4.00 5.31	4.50 5.27	8.37
6-24-37	Arizona Star Laying Mash (Canceled 8-19-38)	124	G. 20.00 F. 20.31	3.00 3.86	6.00 6.12	10.15
8-19-38	Arizona Star Manamam All-In-One Life Cycle Mash (Not renewed for 1939)	.....	G. 16.00	3.00	7.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-24-37	(See Manamar All-In-One Life Cycle Mash) Arizona Star Manamar Dairy Concentrate.....	305	G. 28.00 F. 29.96	4.00 7.08	8.50 7.05	10.19
6-24-37	Arizona Star Manamar Dairy Feed.....	313	F. 20.00 F. 20.72	3.50 4.61	8.00 7.75	6.96
8-19-38	Arizona Star Manamar Growing Mash..... (Not renewed for 1939)	571	G. 16.00 F. 17.06	3.00 4.12	7.00 6.51	
8-19-38	(See Manamar Growing Mash) Arizona Star Manamar Laying Mash..... (Not renewed for 1939)		G. 20.00	3.00	7.00	
8-19-38	(See Manamar Laying Mash) Arizona Star Manamar Starting Mash..... (Not renewed for 1939)		G. 17.00	3.00	7.00	
8-19-38	(See Manamar Starting Mash) Arizona Star Molasses Cattle Mix.....		G. 14.00	2.25	20.00	
6-24-37	Arizona Star Pigeon Scratch Feed.....	314	F. 12.06	3.40	2.99	1.86
7-16-38	Arizona Star Protein & Vitamin Concentrate.....	547	G. 32.00 F. 34.00	4.00 5.60	9.00 7.31	16.50
6-24-37	Arizona Star Rabbit Pellets..... (Not renewed for 1939)	309	G. 17.00 F. 17.28	3.50 5.08	15.50 15.38	7.23
6-24-37	(See Arizona Star All-In-One Rabbit Pellets) Arizona Star Scratch Feed.....		G. 9.00	2.00	4.00	
6-24-37	Arizona Star Turkey Breeder Mash.....	125	F. 11.28	1.95	1.71	1.60
8-19-38	New registration.	303	F. 11.87	2.02	1.75	1.53
6-24-37	Arizona Star Turkey Growing Mash.....	312	G. 22.00 F. 19.81	4.50 4.18	7.00 6.49	9.44
8-19-38	New registration.		G. 22.00	3.00	7.00	
6-24-37	Arizona Star Turkey Maturing Mash.....	308	F. 20.41	5.53	8.22	7.81
8-19-38	New registration.		G. 22.00	4.00	7.00	
6-24-37	Arizona Star Turkey Starting Mash.....	315	F. 18.31	4.71	7.51	11.08
8-19-38	New registration.		G. 22.00	3.00	7.00	
6-24-37	Arizona Star Turkey Starting Mash.....	311	F. 22.19	4.17	5.34	9.55
8-19-38	New registration.		G. 23.00	4.00	6.00	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
6-24-37	Arizona Star Worm Control Mash.....	.....	G. 20.00	3.00	6.00	.....
8-19-38	New registration.....	304	F. 19.03	5.40	8.53	9.99
6-24-37	Arizona Pride Laying Mash.....	.....	G. 20.00	3.00	7.00	.....
6-24-37	Arizona Pride Scratch Feed.....	282	F. 22.31	4.69	8.26	10.76
4-18-38	Calf Growing Pellets.....	284	G. 9.00	2.00	4.00	.....
1-31-39	Hominy Feed.....	.....	F. 11.50	1.73	1.68	1.65
1-31-39	Manamar All-In-One Life Cycle Mash.....	306	G. 20.00	3.00	13.00	.....
1-31-39	Manamar Breeder Mash.....	.....	F. 20.25	4.43	14.39	8.69
1-31-39	Manamar Growing Mash.....	.....	G. 13.00	5.50	6.00	.....
1-31-39	Manamar Laying Mash.....	.....	G. 16.00	3.00	7.00	.....
1-31-39	Manamar Starting Mash.....	.....	G. 20.00	4.00	7.00	.....
12-15-37	Millrun Wheat Bran.....	.....	G. 17.00	3.00	7.00	.....
12-15-37	Molasses Cattle Mix.....	52	G. 14.00	3.00	10.00	.....
7-16-38	(Not renewed for 1939)	.....	F. 18.53	3.69	8.03	6.26
7-16-38	(See Arizona Star Molasses Cattle Mix)	288	G. 14.00	2.25	20.00	.....
7-16-38	Processed Beet Seed.....	.....	F. 18.53	2.32	18.56	12.01
7-16-38	Processed Beet Seed and Molasses.....	.....	G. 7.50	1.00	35.00	.....
12-15-37	Wheat White Shorts.....	65	G. 9.00	1.00	25.00	.....
1-31-39	Arizona Flour Mills Company, Tucson, Arizona	.....	F. 9.50	1.23	24.92	16.94
8-19-38	All-In-One Life Cycle Mash.....	519	G. 10.19	1.35	25.63	16.37
6-25-37	Dehydrated Carrot Meal.....	548	F. 15.00	2.50	3.50	.....
11- 1-38	Double Check Chick Mash.....	46	F. 17.75	3.17	3.39	.....
11- 1-38	New registration.....	.....	G. 16.00	3.00	7.00	.....
	All-In-One Life Cycle Mash.....	.....	G. 8.00	1.50	8.00	.....
	Dehydrated Carrot Meal.....	.....	G. 18.00	3.00	6.00	.....
	Double Check Chick Mash.....	.....	F. 19.19	4.24	3.56	9.10
	New registration.....	.....	G. 18.00	3.00	7.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-25-37	Double Check Egg Mash.....	44	G.	20.00	3.00	7.00	9.92
6-25-37	Double Check Growing Pullet Mash.....	45	F.	20.62	3.10	7.71	8.61
4-19-38	Eagle All-In-One Life Cycle Mash (Not renewed for 1939) (See All-In-One Life Cycle Mash)	498	F.	17.37	3.08	7.93	8.26
6-25-37	Eagle Baby Chick Scratch Feed.....	48	G.	16.00	3.00	7.00	1.74
6-25-37	Eagle Fattening Mash.....	41	F.	17.94	4.37	3.62	6.64
8-19-38	New registration.....	499	G.	14.00	3.00	5.00	6.32
1-31-39	New registration.....		G.	14.00	3.00	6.00	
1-11-39	Eagle Horse Feed.....		G.	11.00	3.00	6.00	
6-25-37	Eagle Manamar Growing Mash.....	42	F.	17.94	3.39	8.48	9.91
8-19-38	New registration..... (Not renewed for 1939) (See Manamar Growing Mash)	500	G.	16.00	3.00	7.00	8.60
6-25-37	Eagle Manamar Laying Mash.....	40	F.	21.87	3.77	7.49	14.02
8-19-38	New registration..... (Not renewed for 1939) (See Manamar Laying Mash)	501	F.	20.94	4.21	7.19	12.50
6-25-37	Eagle Manamar Starting Mash.....	43	G.	17.00	3.00	7.00	8.21
6-25-37	Eagle Scratch Feed..... (Not renewed for 1939) (See Manamar Starting Mash)	502	F.	18.00	3.79	6.74	7.94
6-25-37	Eagle United Mash..... (Canceled 8-19-38)	47	F.	13.87	2.52	3.50	2.03
6-25-37	Growing Scratch Feed.....	39	F.	16.00	3.50	6.00	7.86
6-12-37	Manamar Dairy Feed.....	49	F.	18.75	3.70	7.39	1.56
1-31-39	Manamar Growing Mash.....	55	G.	12.63	3.63	8.00	6.78
1-31-39	Manamar Laying Mash.....		F.	17.00	3.47	13.47	
			G.	16.00	3.00	7.00	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
1-31-39	Manamar Starting Mash.....	.....	G. 17.00	3.00	7.00	.....
4-19-38	Pomerene Mash.....	389	G. 20.00 F. 21.53	2.50 3.76	7.00 6.23	10.62
12-13-37	Rolled Mixed Feed.....	.....	G. 9.00	1.50	6.00	.....
7- 6-37	Vit-A-Plus Alfalfa Leaf Meal (Canceled 1-31-39).....	.....	G. 20.00	2.00	18.00	.....
7- 6-37	Vit-A-Plus Alfalfa Meal.....	51	F. 23.25 G. 17.00	2.42 2.00	16.99 25.00	12.85
1-31-39	New registration.....	50	F. 19.50	3.01	25.22	11.25
7- 6-37	Vit-A-Plus Stem Meal.....	.....	G. 18.00 G. 9.00	2.00 1.00	24.00 40.00	.....
		53	F. 8.41	1.41	44.71	6.20
	Armour & Company (Hauser Plant), Los Angeles, California					
1- 7-38	Armour's 50% Protein Meat and Bone Meal Digester Tankage.....	.....	G. 50.00	6.00	2.00	.....
9-13-38	Armour's Blood Meal.....	391 556	G. 30.00 F. 84.00 F. 87.06	0.00 1.43 1.23	2.00 0.83 0.79	..... 4.20 3.74
	Associated Dairy Products, Phoenix, Arizona					
1-26-38	Webster's Powdered Buttermilk.....	.....	G. 35.00	4.00	0.00	.....
		251	F. 41.62	5.80	0.07	7.44
		414	F. 36.63	4.38	0.10	.....
1-30-39	New registration.....	.....	G. 35.00	4.00	1.00	.....
5- 2-38	Webster's Powdered Skim Milk.....	378	G. 35.00	0.00	0.00	.....
		413	F. 34.75 F. 33.63	0.20 0.23	0.00 0.07	7.77
1-30-39	New registration.....	.....	G. 34.00	0.00	0.00	.....
	Babbitt Bros. Trading Company, Flagstaff, Arizona					
4-13-38	Superior Brand Meat Meal.....	.....	G. 48.06	13.40	1.00	.....

*G. guarantee as shown in registration; F. found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7-16-38	New registration.....	525	F. 47.37 G. 50.00	10.00 8.00	1.69 1.50	36.54				
7-12-37	Baber Mercantile Company, Tempe, Arizona Baber Brand All-In-One Baby Chick Mash..... (Not renewed for 1939)	176	G. 17.00 F. 17.31	3.10 5.12	4.00 5.14	7.07				
7-12-37	(See Baber Brand Baby Chick Mash) Baber Brand All-In-One Turkey Starting Mash.....	401	G. 17.00	3.10	4.00	7.48				
1-24-39	Baber Brand Baby Chick Mash.....		F. 18.00	4.62	5.50					
7-12-37	Baber Brand Baby Chick Scratch Grain.....	174	G. 17.00 F. 13.00	5.00 2.80	3.00 1.36					
1-24-39	New registration.....		G. 11.00	2.00	2.00					
3-21-38	Baber Brand Dairy Feed.....	177	G. 18.60	3.60	8.50					
1-24-39	New registration.....	177	F. 20.12	4.01	7.61	5.24				
7-12-37	Baber Brand Developing Mash.....	400	F. 19.56	3.76	8.13	5.39				
3-21-38	Baber Brand Developing Scratch Grain.....	175	G. 20.00 F. 16.80	3.75 1.90	8.00 7.00					
1-24-39	New registration.....		G. 10.60	4.04	5.00	5.86				
7-12-37	Baber Brand Laying Mash (with buttermilk).....	172	F. 12.69	1.72	2.30					
1-24-39	New registration.....		G. 11.00	2.00	2.00					
7-12-37	Baber Brand Laying Mash.....	171	G. 19.50 F. 22.72	3.10 5.25	7.00 4.58	9.11				
1-24-39	Baber Brand Scratch Grain..... (Not renewed for 1939) (See Scratch Grain) Scratch Grain.....	173	G. 8.13 F. 12.56	2.45 2.86	2.06 1.86	1.81				
6- 8-37	Ray Chemical Company, Inc., New Orleans, Louisiana Dicalpho-Salt Blocks (30/70)..... (See Table 3)									
11- 8-37	Blalack Feed & Seed Company, Yuma, Arizona Sunset Brand Laying Mash..... (Not renewed for 1939)	164	G. 18.90 F. 19.31	3.35 3.94	5.00 5.44	8.80				

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
1-5-38	Border Feed & Seed Company, Nogales, Arizona Mexican Wheat Bran.....	189	G. 15.50 F. 14.69	3.00 4.78	8.90 7.67	4.90
1-5-38	Border Scratch Feed.....	474	G. 16.18 F. 9.50	4.65 2.50	8.08 3.00	5.16
1-5-38	Border Dairy Feed.....	190	G. 11.88 F. 18.50	2.76 2.50	2.19 12.50	1.75
		38	G. 18.81 F. 18.81	4.04 4.10	12.70 13.70	7.91 7.60
6-25-37	J. G. Boswell Company, Phoenix, Arizona Bosco Brand Cottonseed Cake or Meal..... (See Table 2)	.....	.....	.....	.....	.....
2-28-38	Brophy Carriage Company, Lowell, Arizona Brophy's Scratch Feed.....	462	G. 10.80 F. 12.94	2.25 2.20	2.63 2.42	1.51
7-12-37	Buckeye Seed & Feed Company, Inc., Buckeye, Arizona Golden West Brand Chick Grain.....	.....	G. 12.75 F. 17.50	3.00 3.50	3.00 5.50	.....
7-12-37	Golden West Brand Chick Mash.....	152	F. 16.20	3.83	5.25	8.16
7-12-37	Golden West Brand Dairy Feed.....	154	G. 16.00 F. 16.91	3.00 3.32	8.00 6.33	4.65
7-16-38	Golden West Brand Dairy Feed with Dr. Hess Stock Tonic.....	.....	G. 16.00	3.00	8.00	.....
7-12-37	Golden West Brand Developing Grain.....	155	G. 11.30 F. 13.00	4.75 4.26	3.50 2.50	1.71
7-12-37	Golden West Brand Developing Mash.....	151	G. 15.10 F. 16.87	3.00 3.55	6.50 5.28	10.22
7-12-37	Golden West Brand Laying Mash.....	150	G. 18.00 F. 18.06	3.00 4.27	5.35 5.64	13.25

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7-16-38	Golden West Brand Pan-A-Min Laying Mash.....	.....	G. 18.00	3.00	5.35	.....
7-12-37	Golden West Brand Scratch Feed.....	153	G. 12.50 F. 13.09	3.00 2.25	3.50 1.93	..... 1.66
1- 5-38	California Cotton Oil Corporation, Los Angeles, California Calico Brand 43% Protein Cottonseed Cake (see Table 2).....	.....	.....	.....	.....	.....
1- 5-38	Calico Brand 40% Protein Cottonseed Meal (see Table 2).....	.....	.....	.....	.....	.....
4-23-38	Calico Brand 30% Linseed Meal..... (Not renewed for 1939)	360	G. 30.00 F. 35.37	5.00 6.98	10.00 8.34	..... 5.33
12-16-37	California Milling Corporation, Los Angeles, California Ace-Hi All-Age Feed.....	76	G. 16.00 F. 18.50	3.00 3.21	5.00 4.36	..........
12-16-37	Ace-Hi Angora Rabbit Feed.....	.....	G. 9.00	3.50	8.00	.....
12-16-37	Ace-Hi Baby Chick Feed.....	488	G. 10.00 F. 11.31	2.50 2.01	3.00 1.85	..... 1.98
7- 6-37	Ace-Hi Broiler & Fryer Mash.....	262	G. 17.00 F. 19.63	3.50 5.13	7.00 5.58	..........
7- 6-37	Ace-Hi Brooding Mash.....	68	G. 19.00 F. 21.38	5.00 4.55	7.00 6.74	..... 8.10
7- 6-37	Ace-Hi Calf Meal.....	497	G. 24.00 F. 25.50	3.50 3.50	7.00 4.70	..... 9.15
7- 6-37	Ace-Hi Chick Starter.....	489	G. 16.00 F. 20.06	4.00 4.73	6.00 5.64	..... 7.60
7- 6-37	Ace-Hi Coccidiosis Control Mash.....	.....	G. 13.50	2.50	4.00	.....
12-16-37	Ace-Hi Consolidated All-Grain Rabbit Pellets.....	.....	G. 11.50	2.00	9.00	.....
7- 6-37	Ace-Hi Consolidated Chick Mash.....	263	G. 17.00 F. 19.13	4.00 4.47	7.00 5.46	..........
7- 6-37	Ace-Hi Consolidated Growing Mash or Pellets.....	261 260	G. 15.00 F. 17.31	4.00 4.82	7.00 6.78	..........
7- 6-38	Ace-Hi Consolidated Growing Mash with Conditioner.....	64	F. 18.00 F. 16.69	4.07 3.60	6.60 6.32	..........
		.....	G. 15.00	4.00	7.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
7- 6-37	Ace-Hi Consolidated Laying Mash or Pellets.....	36	G. 17.00	3.00	7.00	9.91
7- 6 37	Ace-Hi Consolidated Laying Mash with Conditioner (Not renewed for 1939)	33	F. 18.50	4.48	6.99	10.33
7- 6-37	Ace-Hi Dairy Feed.....	75	G. 17.00	3.00	7.00	10.33
		490	F. 19.75	4.81	6.80	
		70	G. 16.00	4.50	10.00	
		490	F. 18.13	3.13	9.12	
12-28-37	Ace-Hi Duck Mash.....	70	F. 14.00	3.54	9.44	6.98
			G. 15.00	3.50	10.00	
12-16-37	Ace-Hi Fattening Mash.....		F. 17.13	3.62	8.91	8.02
12-16-37	Ace-Hi Goat Feed.....		G. 13.00	5.00	6.00	
11-29-37	Ace-Hi Growing Chick Scratch.....		G. 10.00	3.00	10.00	
7- 6-37	Ace-Hi Horse Feed.....		G. 10.00	2.50	3.00	
		61	C. 10.00	3.00	11.00	
7- 6-37	Ace-Hi Laying Mash or Pellets.....	264	F. 13.06	3.35	5.70	
		34	G. 19.00	4.00	7.00	
		492	F. 19.75	3.65	7.58	
			F. 19.56	5.38	7.60	9.35
			F. 20.69	4.77	8.64	11.87
12-28-37	Ace-Hi Laying Mash or Pellets with Conditioner (Not renewed for 1939)		G. 20.00	4.00	7.00	
7- 6-37	Ace-Hi Moulting Mash.....	35	G. 19.00	4.00	7.50	
7- 6-37	Ace-Hi Moulting Pellets (Not renewed for 1939)		F. 20.62	5.08	5.63	9.39
5- 2-38	Ace-Hi Pig Feed.....		G. 19.00	4.00	7.50	
7- 6-37	Ace-Hi Pigeon Feed.....	491	G. 11.00	2.00	12.00	
7-24-37	Ace-Hi Pigeon Grit No. 10 or No. 6 (See Table 3)		G. 11.00	4.50	4.00	
12-16-37	Ace-Hi Poultry Breeders Mash.....		F. 12.06	2.28	1.79	1.41
12-16-37	Ace-Hi Rabbit Pellets.....		G. 17.00	4.00	8.00	
			G. 16.00	3.00	16.00	

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7- 6-37	Ace-Hi Scratch Feed.....	71	F.	17.13	3.89	16.49	8.31
9-10-38	Ace-Hi 66% Protein Liver Meal.....	.....	G.	10.00	2.50	3.00	.....
.....	.....	.....	G.	66.00	10.00	1.00	.....
12-16-37	Ace-Hi Special Rabbit Pellets.....	370	F.	64.06	15.72	1.64	5.63
7- 6-37	Ace-Hi Turkey Breeders Mash.....	.....	G.	16.00	3.00	16.00	.....
7- 6-37	Ace-Hi Turkey Finishing Mash.....	.....	G.	20.00	5.00	7.00	.....
.....	.....	.....	G.	21.00	4.00	7.00	.....
7- 6-37	Ace-Hi Turkey Growing Mash.....	73	F.	22.13	4.73	6.45	.....
.....	.....	.....	G.	24.00	5.00	7.00	.....
3- 2-39	Ace-Hi Turkey & Poultry Concentrate.....	496	F.	26.50	4.80	5.95	10.28
7- 6-37	Ace-Hi Turkey Starting Mash.....	.....	G.	40.00	5.00	6.00	.....
.....	.....	.....	G.	24.00	4.50	6.00	.....
7- 6-37	Ace-Hi Yeast Foam Laying Mash.....	63	F.	26.50	4.57	5.99	.....
.....	.....	.....	G.	18.00	4.00	7.00	.....
12-28-37	Blended Mill Run.....	77	F.	18.81	3.70	6.32	.....
.....	.....	.....	G.	14.00	3.00	10.00	.....
12-16-37	Daisy Duck Mash Pellets.....	82	F.	17.44	3.70	9.00	.....
.....	.....	.....	G.	15.00	3.50	11.00	.....
7- 6-37	Daisy Laying Mash.....	72	F.	16.38	3.74	9.31	8.81
12-16-37	Eagle Chick Mash.....	.....	G.	16.00	3.25	11.00	.....
.....	(Not renewed for 1939)	.....	G.	16.00	3.75	7.00	.....
12-16-37	Eagle Growing Mash.....	.....	G.	16.00	4.00	8.00	.....
12-16-37	Eagle Laying Mash.....	.....	G.	18.00	3.75	8.00	.....
12-16-37	Eagle Rabbit Pellets.....	.....	G.	15.00	3.00	17.00	.....
7- 6-37	50-50 Scratch Feed.....	.....	G.	10.00	2.50	3.00	.....
.....	.....	.....	G.	80.00	0.00	0.00	.....
6-10-38	Ground Blood.....	.....	G.	19.00	6.00	11.00	.....
7- 6-38	Jao Cui Pien Copra Meal.....	.....	G.	33.00	1.00	0.00	.....
.....	Knudsen Dried Skim Milk.....	.....	F.	33.06	0.07	0.00	8.07
6-10-38	Luzon Copra Meal.....	494	G.	19.00	6.00	11.00	.....
.....	.....	.....	F.	20.00	9.95	12.85	7.31
12-16-37	Our Special Mash.....	374	G.	15.00	3.25	11.00	.....
.....	.....	.....	F.	17.00	3.67	10.76	8.94
12-16-37	Our Special Rabbit Pellets.....	37	G.	14.00	2.50	18.00	.....
12-16-37	Our Special Scratch Feed.....	.....	G.	10.00	2.50	3.00	.....
7- 6-37	Special Pigeon Feed.....	.....	G.	12.00	4.00	4.00	.....
7- 6-37	Standard Brand Laying Mash.....	69	G.	18.00	3.75	9.00	.....
.....	.....	.....	F.	20.81	4.98	8.89	9.55

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
7- 6-37	Standard Dairy Feed.....	.....	G. 15.00	3.00	11.50	.....
7- 6-37	Standard Scratch Feed.....	.....	G. 10.00	2.50	3.00	.....
1-17-38	Sterilized Steamed Bone (see Table 3).....	.....	.....	.....	.....	.....
6-10-38	Sun Ripe Brand 30% Protein Old Process Linseed Meal.....	.....	G. 30.00	6.00	10.00	.....
1-17-38	30% Protein Old Process Linseed Oil Meal.....	.....	G. 30.00	6.00	10.00	.....
12-19-38	Torch Brand Old Processed Linseed Meal.....	.....	G. 31.00	5.00	12.00	.....
12-16-37	31% Protein.....	555	F. 29.87	5.63	10.60	5.58
	Valley Farm Dairy Feed.....	.....	G. 14.00	2.50	13.00	.....
12-16-37	Valley Farm Rabbit Pellets.....	62	F. 15.88	3.37	10.03	.....
	Valley Farm Dairy Feed.....	.....	G. 13.50	2.75	19.00	.....
3-24-39	Van Camp 62% Protein Sardine Fish Meal.....	74	F. 16.50	2.90	17.01	.....
7- 6-38	Vita-Greens Dehydrated Alfalfa Meal.....	.....	G. 62.00	5.00	1.00	.....
	Valley Farm Dairy Feed.....	.....	G. 18.00	1.50	24.00	.....
	Valley Farm Dairy Feed.....	495	F. 18.50	2.75	20.28	11.58
12-10-37	California Rendering Company, Ltd., Los Angeles, California Premier Brand Meat and Bone Scraps..... (Not renewed for 1939)	493	G. 45.00 F. 50.69 G. 50.00	6.00 10.58 6.00	2.00 1.95 2.00	..... 32.14
1-16-39	Premier Brand 50% Protein Meat & Bone Scraps.....	.....	.....	.....	.....	.....
5- 2-38	Capital Fuel, Feed and Seed Company, Phoenix, Arizona Alfalfa Screenings with 10% Molasses.....	.....	G. 27.00 F. 22.00 G. 20.00 G. 18.00 F. 19.37	4.00 5.09 4.00 3.00 4.28	15.00 12.63 15.00 3.50 3.98	..... 7.25 5.39
4- 1-39	New registration.....	518	.....	.....	.....	.....
7- 2-37	Capitol Brand All-In-One Chick Starter (Canceled 8-19-38) (See Capital Brand All-In-One Starter)	221	.....	.....	.....	.....
7- 2-37	Capitol Brand All-In-One Developer.....	229	G. 15.00 F. 16.25 G. 16.00	3.00 3.45 3.00	4.00 5.28 6.00	..... 6.11
8-19-38	New registration.....	.....	.....	.....	.....	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7- 2-37	Capitol Brand All-In-One Egg Maker.....	511	F. 17.56	3.00	4.95	6.78
8-19-38	New registration.....	222	G. 17.00	3.40	5.00	6.24
8-19-38	Capitol Brand All-In-One Starter.....	508	F. 17.37	3.11	4.97	6.96
9-24-38	Capitol Brand Battery Mash.....	509	F. 18.56	3.25	5.00	5.29
8-19-38	Capitol Brand Breeder Mash or Pellets.....	506	G. 18.50	4.00	6.50	5.84
7- 2-37	Capitol Brand Broiler Mash or Pellets.....	510	F. 17.00	3.12	4.09	9.38
5- 9-38	New registration.....	223	F. 20.06	3.25	7.00	6.55
8-19-38	New registration.....	512	F. 18.00	3.00	5.80	6.96
7- 2-37	Capitol Brand Chick Grain.....	224	G. 19.44	3.50	5.00	1.57
7- 2-37	Capitol Brand Chick Mash (Canceled 8-19-38).....	225	G. 16.00	3.50	5.00	5.67
7- 2-37	Capitol Brand Dairy Feed.....	226	G. 18.50	3.25	6.00	5.70
7- 2-37	Capitol Brand Developing Grain (Canceled 2-16-39).....	227	F. 18.87	2.50	5.00	1.13
7- 2-37	Capitol Brand Developing Mash or Pellets.....	228	G. 10.00	2.71	1.95	6.22
7- 2-37	Capitol Brand Fattening Mash (Canceled 2-16-39).....	230	F. 12.56	4.00	4.50	1.91
2-16-39	Capitol Brand Growing Grain.....	507	F. 18.69	3.70	5.25	5.95
8-19-38	Capitol Brand Growing Mash or Pellets.....	231	F. 10.00	3.75	3.00	8.56
7- 2-37	Capitol Brand Laying Mash or Pellets.....	232	F. 13.75	3.03	2.36	9.31
8-19-38	New registration.....	514	G. 17.50	2.50	3.00	9.04
7- 2-37	Capitol Brand Molasses Dairy Feed.....	233	F. 16.37	3.25	6.00	5.02
			G. 20.00	3.50	5.50	7.00
			F. 21.25	4.16	5.62	7.00
			F. 20.94	3.94	6.45	7.00
			G. 20.00	3.00	7.00	5.02
			F. 21.06	3.55	5.02	7.00
			G. 18.00	3.50	7.00	5.92
			F. 18.12	3.19	7.43	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
8-19-38	Capitol Brand Pan-A-Min Growing Mash or Pellets	515	G. 17.50 F. 17.25	3.25 3.28	6.00 5.97	8.01
8-19-38	Capitol Brand Pan-A-Min Laying Mash or Pellets.	516	G. 20.00 F. 20.56	3.00 3.65	7.00	10.00
7- 2-37	Capitol Brand Pigeon Feed	234	G. 10.00 F. 11.37	2.00 2.39	5.00 3.30	2.14
7- 2-37	Capitol Brand Scratch Grain	235	G. 10.00 F. 12.56	2.50 2.48	4.00 1.86	1.58
7- 2-37	Capitol Brand Special Dairy Sweet Feed	236	G. 15.00 F. 16.88	2.50 2.90	9.00 12.28	11.08
8-19-38	Capitol Brand Starting Mash or Pellets	517	G. 18.50 F. 19.87	3.25 3.55	5.00 4.05	6.67
2-16-39	Capitol Brand Thorobred Horse Feed	.....	G. 12.00	3.00	8.00	.....
2-16-39	Capitol Brand Turkey Breeder Mash	.....	G. 22.00	4.75	6.50	.....
2-16-39	Capitol Brand Turkey Growing Mash	.....	G. 23.50	4.75	6.50	.....
2-16-39	Capitol Brand Turkey Maturing & Finishing Mash	.....	G. 21.50	4.50	6.50	.....
2-16-39	Capitol Brand Turkey Poulst Starter Mash	.....	G. 24.50	5.00	6.00	.....
7- 2-37	Capitol Brand Turkey Starting Mash (Canceled 8-19-38)	237	G. 20.00 F. 21.37	4.00 3.70	4.00 4.88	8.11
7- 2-37	Economy Brand Egg Mash	238	G. 20.00 F. 18.41	3.50 3.64	5.50 5.79	11.04
11-19-38	Economy Brand 14% Sweet Dairy Ration (Canceled 2-16-39)	513	G. 14.00 F. 12.32	2.25 2.35	20.00 12.69	11.48
7- 2-37	Economy Brand Hen Scratch	239	G. 10.00 F. 11.63	2.50 2.71	4.00 1.75	1.52
5- 2-38	Ground Grain Screenings with 18% Molasses	377	G. 9.00 F. 9.59	1.30 2.97	15.00 15.28	9.58
12- 9-37	Molasses Beet Feed	240	G. 7.50 F. 10.47	1.00 2.35	28.00 17.04	11.34
7- 2-37	Carey Salt Company, Hutchinson, Kansas Carey's Monocalcium Phosphate Salt (See Table 3)	.....	.....	.....	.....	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

12-31-37	Colloidal Products of America, Inc., Orlando, Florida Animal Mineral Colloids. (See Table 3) Poultry Mineral Colloids. (See Table 3)	.....	.....	.....	.....	.....	.....	.....
12-31-37		.....	.....	.....	.....	.....	.....	.....
7-14-37	Community Milling Company, El Paso, Texas Victory Laying Mash with Charcoal..... Victory Scratch Feed..... Wheat Bran Screenings..... Wheat Gray Shorts..... Wheat Mixed Feed.....	464	G. 18.00 F. 20.94	4.00 5.41	7.00 6.22	7.00 6.22	..... 7.00	..... 7.00
7-14-37		463	G. 10.50 F. 12.56	2.60 0.91	4.00 1.29	4.00 1.29	0.77	0.77
6-28-37		467	G. 14.50 F. 18.25	3.00 3.84	3.00 3.84	10.00 9.18	10.00 9.18	6.09
9- 6-38		465	G. 16.00 F. 18.31	3.50 4.11	3.50 4.11	5.00 6.02	5.00 6.02	4.25
7-14-37		466	G. 16.00 F. 19.75	3.50 3.98	3.50 3.98	8.50 7.39	8.50 7.39	4.25 5.46
4-13-38		The G. E. Conkey Company, Cleveland, Ohio Conkey's Y-O.....	482	G. 30.00 F. 35.37	10.00 10.06	6.00 5.85	6.00 5.85 5.20	..... 5.20
6- 4-37	Consolidated Chemical Industries, Inc., San Francisco, California Digesta-Bone (see Table 3)	.....	.....	.....	.....	.....	.....	.....
9- 2-38	P. E. Cook Seed Store, Calexico, California 40% Protein Cottonseed Cake-Meal (See Table 2)	.....	.....	.....	.....	.....	.....	.....
5-14-38	Cottonwood Fuel & Feed Company, Cottonwood, Arizona Yavapai Scratch Feed.....	350	G. 9.00 F. 11.78	2.00 1.98	3.00 1.87	3.00 1.87	..... 1.47	..... 1.47
1-20-38	Creeks Fuel & Feed Company, Lowell, Arizona Creeks Dairy Ration.....	.....	G. 20.00	4.50	7.10	7.10	.....	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
1-16-39	New registration.....	186	F. 22.59	4.67	8.69	5.27
1-20-38	Creeks Scratch Grain.....	471	F. 22.00 G. 20.00	4.48 4.00	8.22 9.00	5.57
			G. 9.00	2.50	3.00	.....
1-16-39	New registration.....	187	F. 10.06	1.32	1.32	1.25
		472	F. 12.31 G. 9.00	1.61 1.50	1.74 3.00	1.30
2- 5-38	Davies Fuel & Feed Company, Douglas, Arizona Davies Laying Mash.....	.....	G. 19.36	3.26	6.55	.....
		131	F. 20.34	4.48	5.25	9.28
2-16-38	Davies Special Scratch Feed.....	430	F. 22.00 G. 10.75	5.43 2.50	5.37 4.00	10.71
		132	F. 12.81	2.82	2.11	3.04
		431	F. 11.62	2.29	2.26	2.45
1-16-39	Dawe's Vitameilk Company, Chicago, Illinois Dawe's Vitameilk Base.....	.....	G. 21.00	4.50	5.00	.....
6-25-37	Duncan Milling Company, Duncan, Arizona Duncan Milling Company Chick Starter.....	.....	G. 19.00	4.00	5.00	.....
6-25-37	Duncan Milling Company Lay Mash (Canceled 2-26-38)	128	F. 16.37	3.38	4.36	6.62
6-25-37	Duncan Milling Company Scratch Feed (Canceled 2-1-39)	126	F. 18.87	3.92	4.88	9.66
6-25-37	Duncan Milling Company Wheat Bran (Canceled 2-1-39)	127	F. 11.00	3.00	4.00	1.75
5- 5-38	O. K. Chick Scratch.....	129	G. 14.00	3.00	10.00	5.26
2- 1-39	O. K. Chick Starter.....	.....	F. 17.53	3.54	7.81	.....
2-26-38	O. K. Grow Mash.....	.....	G. 11.00	3.00	4.00	.....
		G. 18.00	4.00	5.00
2-26-38	O. K. Lay Mash.....	385	F. 16.00	4.00	5.00
		F. 17.43	3.69	7.53	9.15
		G. 20.00	4.00	5.00

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2-1-39	New registration.....	384	F. 17.68	3.33	6.87	11.06
2-1-39	O. K. Scratch Feed.....	G. 18.00	4.00	5.00
2-1-39	O. K. Wheat Bran.....	.....	G. 11.00	3.00	4.00	.....
			G. 14.00	3.00	10.00	.....
10-31-38	Eagle Flour Mills, Denver, Colorado					
	Blended White Shorts.....	.....	G. 14.00	2.50	4.50	.....
6-10-38	Pure Gold Lay Mash.....	452	F. 19.31	3.13	2.55	2.36
6-10-38	Pure Gold Scratch Grains.....	.....	G. 19.00	5.00	8.00	.....
		386	G. 10.00	3.00	5.00	.....
7-30-37	Wheat Bran & Screenings.....	.....	F. 12.87	3.00	2.60	1.96
		58	G. 14.50	3.50	10.00	.....
7-30-37	Wheat Grey Shorts.....	.....	F. 19.69	4.14	7.71	.....
		31	G. 16.00	3.50	6.00	.....
7-30-37	Wheat Mixed Feed & Screenings.....	.....	F. 17.75	4.75	5.09	.....
		390	G. 15.50	4.00	8.50	.....
			F. 19.87	4.19	7.71	5.49
1-13-38	Economy Hog & Cattle Powder Company, San Francisco, California					
	Economy Super Mineral for Dairy Cows & Calves.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
1-13-38	Economy Super Mineral for Poultry.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
1-13-38	Economy Mineral Compound.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
1-13-38	Economy Super Mineral for Sheep.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
1-15-38	Falvey's Feed and Supply Company, Tucson, Arizona					
	Falvey's Scratch.....	.....	G. 9.50	2.00	3.00	.....
		198	F. 11.56	2.37	1.62	1.47
1-15-38	Falvey's Special Pigeon Feed.....	.....	G. 11.00	2.00	3.50	.....
		197	F. 13.62	2.30	2.42	2.08
2-5-38	Falvey's Special Scratch.....	.....	G. 9.50	2.00	3.50	.....
		196	F. 10.75	2.03	1.50	1.41

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
2-16-38	Farmers Cooperative Oil Mill, El Paso, Texas 43% Protein Cottonseed Cake, Prime Quality (See Table 2)	.....	.....	.....	.....	.....
2-16-38	43% Protein Cottonseed Pellets, Prime Quality (See Table 2)	.....	.....	.....	.....	.....
2-16-38	43% Protein Cottonseed Meal, Prime Quality (See Table 2)	.....	.....	.....	.....	.....
1-17-39	Farmers Seed and Feed Association, Phoenix, Arizona	.....	G, 15.00	3.50	5.00	.....
4- 5-38	Farmers Calf Meal.....	.....	G, 10.00	2.50	3.50	.....
4- 5-38	Farmers Chick Grain.....	320	F, 13.00	4.28	2.20	1.80
4- 5-38	Farmers Chick Mash.....	321	G, 18.00	4.00	4.50	6.84
1-16-39	New registration.....	.....	F, 18.69	3.69	2.52	.....
4- 5-38	Farmers Corn Scratch.....	.....	G, 18.00	3.00	4.50	.....
1-16-39	New registration.....	322	G, 10.00	2.57	2.28	1.50
5- 9-38	Farmers Developing Scratch.....	.....	G, 10.00	2.00	4.00	.....
4- 5-38	Farmers Growing Mash.....	324	F, 11.78	3.10	2.16	1.55
1-16-39	New registration.....	.....	G, 15.00	3.00	6.00	.....
4- 5-38	Farmers Laying Mash.....	318	F, 15.86	3.67	4.17	7.60
1-16-39	New registration.....	.....	G, 15.00	3.00	5.00	.....
4- 5-38	Farmers Pigeon Scratch.....	319	G, 20.00	3.00	7.00	.....
4- 5-38	Farmers Regular Dairy.....	535	F, 20.81	4.52	4.22	11.23
1-16-39	New registration.....	.....	F, 21.87	4.74	4.46	13.04
4- 5-38	Farmers Special Dairy Feed.....	.....	G, 11.00	3.50	4.00	.....
1-16-39	New registration.....	317	G, 17.00	3.50	7.00	.....
4- 5-38	Farmers Special Dairy Feed.....	.....	F, 18.34	4.74	7.59	4.97
1-16-39	New registration.....	G, 17.00	3.50	9.00
4- 5-38	Farmers Special Dairy Feed.....	316	G, 15.00	3.00	7.00
			F, 17.87	5.43	8.54	5.06

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1-16-39	New registration.....	G. 16.00	3.00	10.00
5- 9-38	Fattening Mash.....	G. 15.00	2.50	7.00
5-14-38	Laying Mash..... (Not renewed for 1939)	323	F. 14.47	2.84	3.82	7.83
7-16-38	Farmers Warehouse Company, Willcox, Arizona Scratch Feed.....	.....	G. 10.00	2.50	3.00	.....
1-15-38	Fedco Company, Rosemead, California Fedco..... (Not renewed for 1939)	.....	G. 17.00	4.00	6.00	.....
4-18-38	Fedco Dairy Feed..... (Not renewed for 1939)	.....	G. 12.00	2.50	12.00	.....
5- 9-38	General Mills, Inc., Western Division, Sperry Flour Company, San Francisco, California Baby Chick Scratch..... (Not renewed for 1939)	.....	G. 10.00	2.00	2.50	.....
3- 8-39	Chick Scratch.....	.....	G. 9.50	2.00	2.50	.....
5- 9-38	Coccol-Blackhead Flush Mash.....	.....	G. 11.50	3.50	4.00	.....
3- 8-39	New registration.....	.....	G. 11.50	3.00	4.00	.....
8- 2-37	Cracked Corn..... (Not renewed for 1939)	.....	G. 9.00	3.00	2.00	.....
8- 2-37	40% Milk Mash for Chick & Growing Stock.....	.....	G. 20.00	2.50	3.50	.....
5- 9-38	Life Cycle Mash or Pellets.....	193	G. 16.50	3.75	7.00	.....
3- 8-39	New registration.....	484	F. 19.31	4.44	7.50	7.53
3- 2-37	Olympic Chick Scratch.....	.....	F. 16.87	3.67	7.87	7.14
5- 9-38	Olympic Dairy 17½.....	.....	G. 16.50	3.50	8.00	.....
5- 9-38	Olympic Dairy 20.....	.....	G. 10.00	2.00	2.50	.....
3- 2-37	Olympic Egg Mash.....	.....	G. 17.50	4.00	10.75	.....
6- 2-38	Olympic Rabbit Pellets.....	.....	G. 20.00	3.75	10.00	.....
8- 2-37	Olympic Rabbit Pellets with Alfalfa Meal..... (Not renewed for 1939)	.....	G. 20.00	4.00	8.00	.....
8- 2-37	(See Olympic Rabbit Pellets)	95	G. 15.00	2.50	17.00	.....
			F. 16.82	3.12	17.61	7.26

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
1-21-38	Olympic Rabbit Pellets without Alfalfa Meal.....	96	G. 14.50	3.50	8.50	.....
8-2-37	Olympic Pullet Scratch.....	.....	F. 16.88	4.14	7.27	6.05
5-9-38	Pullet Scratch.....	.....	G. 10.00	2.00	2.50	.....
5-9-38	Scratch.....	.....	G. 9.50	2.00	2.50	.....
2-8-39	Sperry Horse Feed.....	.....	G. 9.50	2.00	2.50	.....
8-2-37	Sperry Special Laying Mash.....	.....	G. 18.00	4.00	9.50	.....
7-16-38	New registration.....	94	F. 21.06	4.42	8.19	10.05
5-9-38	Sperry Special Scratch.....	.....	G. 18.00	3.75	9.50	.....
5-9-38	Sperry Special Scratch.....	.....	G. 8.00	2.00	4.00	.....
5-9-38	SureBroiler.....	392	F. 10.56	1.82	1.72	1.16
1-21-38	SureBuild.....	.....	G. 19.00	4.00	7.00	.....
8-2-37	SureCalf.....	92	F. 22.06	4.87	6.75	10.11
5-9-38	SureGrow.....	.....	G. 23.00	4.00	4.00	.....
3-8-39	New registration.....	.....	G. 16.00	4.00	7.50	.....
8-2-37	SureLay.....	.....	G. 16.00	3.75	8.00	.....
9-10-38	SureLay with 2% Tobacco Dust.....	93	G. 20.00	4.00	7.00	.....
5-9-38	SureLive Baby Chick Mash.....	388	F. 22.21	5.09	7.13	9.81
3-8-39	New registration.....	.....	G. 20.00	4.00	7.50	9.27
8-2-37	SureMilk 14.....	.....	F. 21.75	5.04	7.27	.....
8-2-37	SureMilk 16.....	.....	G. 16.50	4.50	7.00	.....
1-17-39	New registration.....	.....	G. 16.50	4.25	7.00	.....
8-2-37	SureMilk 18.....	.....	G. 14.00	3.25	10.00	.....
1-17-39	New registration.....	.....	G. 16.00	3.75	10.00	.....
3-8-39	New registration.....	.....	G. 16.00	3.25	10.00	.....
8-2-37	SureMilk 24.....	.....	G. 18.00	3.75	10.00	.....
2-8-39	New registration.....	.....	G. 18.00	3.75	10.25	.....
8-2-37	SureRabbit.....	G. 18.00	3.50	10.25
8-2-37	SureRabbit.....	G. 24.00	4.50	9.00
8-2-37	SureRabbit.....	G. 14.00	3.00	9.00

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5- 9-38	SureRabbit Green Pellets.....	G.	15.00	250	17.00
2- 8-39	New registration.....	G.	15.00	250	18.00
5- 9-38	SureRabbit Pelleted.....	379	G.	14.00	3.00	9.00	.....
			F.	15.81	3.52	8.01	5.55
1-17-39	New registration.....	.....	G.	14.00	3.50	9.00	.....
8- 2-37	SureTurk Builder.....	387	G.	24.00	4.50	6.50	9.46
			F.	25.06	5.19	5.77	.....
8- 2-37	SureTurk Finisher.....	.....	G.	19.00	3.50	7.00	.....
3- 8-39	Wheat Mixed Feed with Ground Screenings.....	.....	G.	13.00	3.00	9.00	.....
9-22-37	Globe Fico Manufacturing Company, El Paso, Texas Finely Ground Corn Chops.....	438	G.	9.00	4.00	3.00	1.36
			F.	11.00	4.01	2.23	.....
11- 5-37	Globe Fico Laying Mash with Alfalfa Meal and Charcoal.....	178	G.	18.00	3.60	7.00	8.08
3-14-38	Globe Mills Bran, Shorts & Screenings.....	432	F.	18.91	5.58	6.06	.....
			G.	14.00	3.80	7.10	6.18
2- 5-38	Globe Mills Peerless Brand Hen Feed.....	179	F.	17.81	4.50	8.39	1.88
			G.	9.80	2.80	3.20	.....
9-22-37	Sifted Corn Chops.....	434	F.	11.72	3.27	1.82	.....
			G.	8.00	3.00	3.00	0.74
6-14-37	Wheat Bran & Screenings.....	130	F.	10.31	2.04	1.38	.....
			G.	14.50	3.00	10.00	5.69
11- 3-38	Wheat Gray Shorts.....	433	F.	18.37	4.09	8.14	.....
			G.	17.00	4.00	6.00	3.05
			F.	18.94	4.08	4.04	.....
6-23-37	Globe Grain and Milling Company, Los Angeles, California A-1 Special Hog Ration (Not renewed for 1939)	.....	G.	19.00	5.00	8.00	.....
6-23-37	A-1 Wonder Rabbit Pellets.....	441	G.	15.00	3.00	16.00	8.96
6-23-37	25% Daisy Dairy Concentrate.....	.....	F.	17.62	3.09	15.32	.....
6-23-37	14% Daisy Dairy Feed (Canceled 1-18-38)	.....	G.	25.00	5.00	10.00	.....
6-23-37	16% Daisy Dairy Feed (Canceled 3-23-38)	.....	G.	14.00	4.00	12.00	.....
			G.	16.00	4.00	12.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Pat	Fiber	Ash
6-23-37	20% Daisy Dairy Feed.....	.....	G. 20.00	4.00	12.00	.....
5-27-38	New registration.....	341	F. 21.19	3.63	9.61	8.00
6-23-37	Globe A-1 Baby Chick Scratch.....	.....	G. 20.00	4.00	11.00	.....
6-23-37	Globe A-1 Baby Chick Starter.....	.....	G. 10.00	2.50	3.00	.....
6-23-37	Globe A-1 Battery Mash.....	.....	G. 18.00	4.00	5.50	.....
6-23-37	Globe A-1 Complete Baby Chick Starter.....	331	G. 20.00	4.00	5.50	7.25
6-23-37	Globe A-1 Booster Ration.....	.....	F. 20.69	5.06	5.08	.....
1-21-39	New registration.....	.....	G. 23.00	6.00	9.00	.....
6-23-37	Globe A-1 Breeder's Laying Mash.....	.....	G. 23.00	5.00	9.00	.....
1-21-39	New registration.....	.....	G. 20.00	4.00	7.00	.....
6-23-37	Globe A-1 Calf Food.....	.....	G. 20.00	4.50	7.50	.....
6-23-37	Globe A-1 Complete Baby Chick Starter.....	.....	G. 22.00	4.00	5.00	.....
6-23-37	Globe A-1 Complete Growing Food.....	145	G. 16.00	4.00	6.00	.....
6-23-37	Globe A-1 Complete Growing Food.....	.....	F. 18.91	5.05	5.51	9.31
9- 2-38	New registration.....	146	G. 15.00	4.00	6.00	8.39
6-23-37	Globe A-1 Complete Laying Feed.....	.....	F. 18.97	4.72	6.24	.....
1-24-39	New registration.....	.....	G. 15.00	4.00	7.00	.....
6-23-37	Globe A-1 Crate Fattener.....	147	G. 17.00	4.00	6.50	7.42
6-23-37	Globe A-1 Dairy Feed.....	.....	G. 18.19	5.05	5.80	.....
6-23-37	Globe A-1 Finishing & Dry Fattening Mash.....	.....	G. 17.00	4.00	7.00	.....
6-23-37	Globe A-1 Complete Laying Feed.....	.....	G. 14.00	4.00	4.00	.....
6-23-37	Globe A-1 Finishing & Dry Fattening Mash.....	.....	G. 16.00	4.00	12.00	.....
6-23-37	Globe A-1 Finishing & Dry Fattening Mash.....	.....	G. 17.00	6.00	6.50	.....
1-21-39	New registration.....	332	F. 17.84	4.71	5.31	8.80
6-23-37	Globe A-1 Goat Pellets.....	.....	G. 17.00	5.00	7.50	.....
6-23-37	Globe A-1 Growing Chick Mash.....	.....	G. 17.00	4.00	9.00	.....
6-23-37	Globe A-1 Growing Chick Mash.....	.....	G. 18.00	4.00	6.50	.....
9- 2-38	New registration.....	333	F. 19.59	4.29	6.79	8.23
6-23-37	Globe A-1 Growing Chick Scratch.....	.....	G. 18.00	4.00	7.00	.....
6-23-37	Globe A-1 Hog Concentrate.....	442	F. 21.62	4.46	6.59	7.17
6-23-37	Globe A-1 Hog Concentrate.....	.....	G. 10.00	2.50	3.00	.....
6-23-37	Globe A-1 Hog Concentrate.....	.....	G. 40.00	5.00	5.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-23-37	Globe A-1 Laying Mash.....	.....	G.	20.00	4.00	7.00	.....
6-23-37	Globe A-1 Milk Control Mash.....	.....	G.	14.00	2.50	3.50	8.58
6-23-37	Globe A-1 Mineralized Yeast Mash.....	148	F.	14.48	2.72	3.00	.....
6-23-37	Globe A-1 Pigeon Feed.....	334	G.	17.50	4.00	8.50	9.36
6-23-37	Globe A-1 Poultry Concentrate with Milk.....	335	F.	19.37	3.81	8.60	.....
6-23-37	(Not renewed for 1939)	.....	G.	12.00	4.50	4.00	1.43
6-23-37	Globe A-1 Poultry Concentrate.....	.....	F.	12.41	2.50	2.32	.....
6-23-37	Globe A-1 Poultry Concentrate without Milk.....	.....	G.	40.00	6.00	5.00	.....
6-23-37	(Canceled 1-18-38)	412	G.	40.00	6.00	6.00	.....
6-23-37	Globe A-1 Pullet Developer.....	337	F.	41.50	6.83	3.74	23.01
9- 2-38	New registration.....	.....	G.	16.00	4.00	8.50	8.71
6-23-37	Globe A-1 Rabbit Grain-etics.....	338	F.	18.69	4.16	7.91	.....
6-23-37	Globe A-1 Scratch.....	78	G.	16.00	4.00	8.00	.....
8-30-38	Globe A-1 Start To Finish Mash.....	.....	G.	15.00	4.00	8.00	5.20
6-23-37	Globe A-1 Turkey Breeders Mash.....	339	F.	17.66	3.12	7.70	.....
6-23-37	Globe A-1 High Protein Turkey Growing Mash.....	.....	G.	10.00	2.50	4.00	.....
6-23-37	(Canceled 5-23-38)	.....	F.	11.00	2.42	1.75	.....
6-23-37	Globe A-1 High Protein Turkey Starter.....	.....	G.	17.00	4.00	7.00	.....
1-24-39	(Canceled 5-23-38)	.....	G.	20.00	4.50	9.00	9.44
6-23-37	Globe A-1 Turkey Developer.....	.....	F.	21.97	5.76	7.34	.....
6-23-37	Globe A-1 Turkey Growing Mash.....	.....	G.	21.00	5.00	9.00	.....
9- 2-38	New registration.....	.....	G.	22.00	5.00	8.00	.....
6-23-37	Globe A-1 Turkey Mash.....	.....	G.	20.00	4.00	8.50	.....
6-23-37	Globe A-1 Turkey Mash.....	.....	G.	19.00	4.00	8.00	.....
6-23-37	(Canceled 1-24-39)	.....	G.	19.00	4.00	9.00	.....
6-23-37	Globe A-1 Turkey Starter.....	.....	G.	20.00	4.00	8.50	.....
6-23-37	Globe A-1 Worm Control Mash.....	.....	G.	18.00	4.50	8.00	.....
6-23-37	Globe IXL Laying Mash.....	340	G.	16.00	3.00	7.00	.....
6-23-37	(Not renewed for 1939)	.....	G.	19.00	4.00	8.50	.....
9- 2-38	(See IXL Laying Mash)	.....	F.	20.44	3.46	7.31	9.88
6-23-37	Globe IXL Scratch.....	.....	G.	9.00	2.50	4.00	.....
9- 2-38	IXL Laying Mash.....	.....	G.	19.00	4.00	8.50	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
6-23-37	Utility Egg Mash.....	.....	G. 17.00	3.00	8.50	.....
6-23-37	Utility Scratch Feed.....	336	G. 9.00 F. 11.47	2.50 2.94	4.00 2.16	1.62
1-19-38	White Wheat Mixed Feed.....	79	G. 12.00 F. 16.13	3.00 3.53	10.00 6.29	.....
3-24-39	Golden State Company, Ltd., El Centro, California Powdered Skimmilk for Animal Feeding Purposes.....	.....	G. 33.00	0.60	0.10	.....
5-24-38	Gold Spot Hatchery, Phoenix, Arizona Gold Spot All-In-One Developing Pellets.....	326	G. 15.00 F. 14.25	3.00 4.42	3.50 3.06	6.25
5-24-38	Gold Spot All-In-One Laying Pellets.....	325	G. 16.00 F. 15.62	3.00 3.88	4.00 3.40	8.37
6-30-37	Gold Spot Baby Chick Mash.....	113	G. 18.00 F. 20.63	4.00 5.21	4.00 4.60	9.75
2- 5-38	New registration.....	.....	G. 18.75 G. 10.00	4.00 2.50	3.50 3.00	.....
6- 8-38	Gold Spot Baby Chick Scratch.....	329	F. 11.56 G. 19.50	1.68 4.00	1.14 5.50	1.18
5-24-38	Gold Spot Broiler Mash.....	328	G. 18.06 F. 19.81	4.00 5.27	5.13 5.00	9.26
5-24-38	Gold Spot Coxol Mash.....	558	G. 18.00 F. 18.06	8.00 10.70	5.42 9.00	7.45
7-14-37	Gold Spot Dairy Feed.....	.....	G. 17.00 G. 17.00	3.00 3.00	8.75 8.75	.....
7-23-37	New registration.....	114	F. 18.94 G. 17.00	3.49 3.00	6.90 7.00	4.69
6-30-37	Gold Spot Developing Mash.....	112	F. 18.06 G. 17.00	4.29 3.00	6.04 6.50	18.79
2- 5-38	New registration.....	.....	G. 15.00 F. 15.28	3.50 4.40	3.50 2.60	.....
5-24-38	Gold Spot Fattening Mash.....	327	F. 15.28 G. 10.00	4.40 2.50	2.60 3.00	5.55
6-30-37	Gold Spot Hen Scratch.....	.....	.....	.....	.....	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-30-37	Gold Spot Laying Mash.....	330	F. 10.50	3.18	2.00	1.60
2-5-38	New registration.....	.....	G. 21.00	4.00	5.00	.....
1-23-39	New registration.....	111	G. 21.60	4.00	4.50	20.19
			F. 22.12	4.42	4.93	.....
			G. 21.00	4.00	5.00	.....
11-29-37	Graden Mercantile Company, Durango, Colorado					
2-13-39	Graden's Best Wheat Mixed Feed & Screenings.....	13	G. 14.50	3.50	8.50	.....
2-13-39	New registration.....	.....	F. 17.25	4.80	7.31	.....
	Vitamelnk Laying Mash.....	.....	G. 14.00	3.00	8.50	.....
		.....	G. 19.00	3.50	8.00	.....
2-3-39	Haynies Feed Store, Douglas, Arizona					
2-5-38	Haynies Mexico Wheat Bran.....	437	G. 14.00	3.00	10.00	.....
12-10-38	Haynies Wheat Bran.....	181	F. 16.87	4.48	7.68	5.43
	Plain Bag Scratch Feed.....	.....	G. 14.00	3.00	10.00	.....
		.....	F. 13.62	4.32	2.29	4.40
		.....	G. 10.00	2.00	3.00	.....
3-26-38	Dr. Hess & Clark, Inc., Ashland, Ohio					
3-26-38	Dr. Hess Stock Tonic.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
3-26-38	Dr. Hess Poultry Pan-A-Min.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
	Dr. Hess Hog Special.....	.....	.....	.....	.....	.....
	(See Table 3)	.....	.....	.....	.....	.....
9-7-38	Hungarian Flour Mills, Denver, Colorado					
6-30-37	Economy Chick Grains.....	.....	G. 10.00	3.00	4.00	.....
6-30-37	Producer All Mash Chick Starter.....	.....	G. 18.00	4.00	6.00	.....
9-7-38	Producer Chick Grains.....	.....	G. 10.00	2.50	3.00	.....
	Producer Chick Starter Complete Ration.....	.....	G. 16.00	4.00	7.00	.....
	(Not renewed for 1939)	380	F. 17.44	3.52	3.93	5.62
9-7-38	Producer Chick Starter with Cod Liver Oil.....	.....	G. 18.00	4.00	6.00	.....
6-30-37	Producer Developer Grains.....	.....	G. 10.00	2.50	3.00	.....
6-30-37	Producer Grow Mash with Cod Liver Oil.....	.....	G. 16.00	4.00	7.00	.....
6-30-37	Producer Hen Scratch.....	.....	G. 11.00	2.50	3.00	.....
6-30-37	Producer Quality Lay Mash.....	11	F. 13.44	2.53	1.81	.....
		.....	G. 19.00	4.00	8.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
12-10-38	Producer Sun Life Growing Mash.....	12	F. 20.44	4.34	4.20	.....
6-30-37	Red Wheat Mixed Feed & Ground Wheat Screenings.....	530	G. 15.00 F. 16.93	3.50 3.95	7.00 4.24	..... 8.22
6-30-37	Screened Cracked Yellow Corn.....	15	G. 16.00 F. 19.38	3.50 4.26	8.50 6.97	.....
6-30-37	Standard Bran.....	485	G. 8.00 F. 10.00	3.50 3.65	3.00 1.95	..... 1.23
6-30-37	Wheat Gray Shorts.....	486	G. 16.00 F. 18.25	3.50 4.27	11.00 8.51	..... 6.12
9- 7-38	White Wheat Mixed Feed & Ground Wheat Screenings.....	14 381	G. 16.00 F. 18.31 G. 14.50 F. 16.34	3.50 4.05 3.00 3.98	6.00 3.70 8.50 7.52	..... ..... ..... 5.06
12-21-37	Hurley Wholesale Meat Company, Phoenix, Arizona Hurley's Meat Scrap Meal.....	..... 57 534	G. 50.00 F. 52.44 F. 56.62	7.00 12.03 9.92	2.50 1.97 1.95	..... 26.92 27.19
1-20-38	Independent Fuel & Feed Company, Bisbee, Arizona Independent Scratch Feed.....	..... 188	G. 9.00 F. 11.19	2.50 2.56	3.50 2.36	..... 1.78
3-23-39	Interstate Cotton Oil Company, Los Angeles, California Paymaster Brand 40% Protein Cottonseed Cake-Meal, Prime Quality (see Table 2)	.....	.....	.....	.....	.....
3-29-38	Jacobs Fuel & Feed Company, Tucson, Arizona J Brand Scratch Feed..... 487	G. 9.00 F. 10.31	2.00 3.46	4.00 2.05 1.77

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1-26-39	Circle J Scratch Feed (new brand name).....	G.	9.00	2.00	4.00
	Johnson Pearce Commercial Co., Inc., Mesa, Arizona						
7- 6-37	Conference All-In-One Growing Mash.....	.....	G.	14.00	6.00	8.00	7.15
		134	F.	15.04	3.18	3.30	
7- 6-37	Conference All-In-One Laying Mash.....	.....	G.	16.00	3.00	3.00	8.48
		136	F.	17.64	3.27	3.46	
7- 6-37	Conference All-In-One Starting Mash.....	.....	G.	16.00	3.00	3.00	10.75
		139	F.	19.84	4.46	2.88	
7- 6-37	Haws All-In-One Chick Mash.....	.....	G.	16.00	4.00	3.00	7.38
		138	F.	18.34	4.33	3.07	
2-25-38	Pan-A-Min Laying Mash.....	.....	G.	19.00	4.00	7.00	6.09
	(Not renewed for 1939)	395	F.	16.59	3.84	4.94	
2-25-38	Pan-A-Min Laying Mash.....	.....	G.	18.00	4.00	5.50	6.13
	(See Perfecto Pan-A-Min Laying Mash)	394	F.	17.75	3.47	3.86	
7- 6-37	Pan-A-Min Starting & Growing Mash.....	.....	G.	10.00	3.00	3.00	2.54
	(Not renewed for 1939)	141	F.	12.31	3.67	2.33	
7- 6-37	Perfecto Brand Chick Scratch Feed.....	.....	G.	13.00	4.00	5.00	4.77
	(See Perfecto Pan-A-Min Starting & Growing Mash)	137	F.	13.47	3.00	2.78	
2-25-38	Perfecto Brand Fattening Mash.....	.....	G.	10.00	3.00	3.00	1.68
7- 6-37	Perfecto Brand Hen Scratch Feed.....	.....	F.	11.31	2.54	1.43	5.53
		122	G.	14.00	3.00	6.00	
7- 6-37	Perfecto Dairy Feed with Molasses.....	.....	F.	15.78	3.01	6.23	9.57
		140	G.	18.00	4.00	6.00	
7- 6-37	Perfecto Egg Mash.....	.....	F.	19.22	4.37	5.01	7.00
		135	G.	19.00	4.00	7.00	5.50
1-23-39	Perfecto Pan-A-Min Laying Mash.....	.....	G.	18.00	4.00	4.00	8.50
1-23-39	Perfecto Pan-A-Min Starting & Growing Mash.....	.....	G.	16.00	4.00	4.00	8.50
1-23-39	Perfecto Special 16% Dairy Feed.....	.....	G.	16.00	4.00	4.00	8.50
2-25-38	Special 16% Dairy Feed.....	.....	F.	15.94	3.88	5.21	6.64
	(Not renewed for 1939)	396					
4-27-38	Special 40% Hog Supplement.....	G.	40.00	4.50	9.00	6.00
7- 6-37	U. of A. Contest Laying Mash.....	F.	20.75	4.42	4.82	12.52
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TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
1-25-38	Kelco Company, Rosemead, California Kelco-Meal	359	G. 3.00 F. 6.44	0.10 0.38	10.00 7.32	34.34
1-10-38	Spencer Kellogg & Sons, Inc., Buffalo, New York Kellogg's 32% Protein Old Process Linseed Meal	405	G. 32.00 F. 33.41	4.50 6.92	9.00 8.11	5.82
1-10-38	Kellogg's 34% Protein Old Process Linseed Meal		G. 34.00	4.50	9.00	
	(Canceled 2-1-39)					
1-10-38	Kellogg's 41% Protein Old Process Soybean Oil Meal		G. 41.00	4.50	7.00	
3- 4-38	Kellogg's Pure Old Process Copra Meal		G. 19.00	5.00	11.00	
		170	F. 19.50	7.39	11.07	8.17
1-17-38	Kuder Meal Company, Los Angeles, California Kuder Orange Meal		G. 7.00	1.50	12.00	
	(Not renewed for 1939)	66	F. 8.00	1.50	10.60	
1-17-38	Kuder Orange Pulp		G. 7.00	1.50	12.00	
	(Not renewed for 1939)					
11-20-37	Lamar Flour Mills, Lamar, Colorado Diamond M. Chick Feed		G. 10.00	2.50	5.00	
11-20-37	Economy Egg Mash		G. 16.50	4.50	8.50	
		362	F. 18.18	4.29	7.00	9.85
11-20-37	Scratch Grains		G. 10.00	2.50	5.00	
11-20-37	Wheat Bran and Screenings		G. 14.50	3.50	12.00	
		445	F. 18.19	4.18	8.93	6.49
11-20-37	Wheat Gray Shorts		G. 16.00	3.25	6.00	
11-20-37	Wheat Mixed Feed and Screenings		G. 14.50	4.00	8.50	
		522	F. 18.17	4.42	7.55	6.07
11-29-37	Larowe Milling Company, Los Angeles, California Molasses Dried Beet Pulp	60	G. 7.00	0.30	20.00	
			F. 7.75	0.55	13.46	

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3-28-38	Lowell Fuel & Feed Company, Lowell, Arizona Balanced Cow Ration..... 184 457 460	G. 18.00 F. 21.07 F. 21.06 F. 22.00	3.00 4.47 4.49 4.55	9.50 7.98 6.96 6.08	5.51 5.87 6.14
3-28-38	No. 1 Laying Mash.....	..... 185 459	G. 17.00 F. 18.87 F. 19.81	3.00 4.25 4.42	8.00 4.92 5.54	6.93 5.25
3-28-38	No. 1 Scratch.....	..... 183 458	G. 9.00 F. 12.81 F. 11.81	2.50 3.04 1.62	3.00 2.52 1.82	1.53 1.25
6-21-37	Maricopa Creamery Co., Inc., Phoenix, Arizona Mar-I-Lac (Not renewed for 1939)	.....	G. 32.00	0.75	0.20	.....
4-23-38	Mesa Grain, Seed & Feed Company, Mesa, Arizona Mesa Pride All-In-One Laying Mash..... (Not renewed for 1939)	..... 298	G. 17.00 F. 18.32	3.00 2.64	5.00 3.84	8.81
4-23-38	Mesa Pride All-In-One Starting Mash..... (Not renewed for 1939)	..... 297	G. 15.00 F. 16.25	4.00 2.39	4.00 2.98	5.56
4-23-38	Mesa Pride Developing Mash..... (Not renewed for 1939)	..... 296	G. 17.00 F. 17.58	4.00 2.53	4.50 3.81	8.47
4-23-38	Mesa Pride Laying Mash..... (Not renewed for 1939)	..... 295	G. 17.00 F. 16.78	4.00 2.44	5.50 3.62	7.37
10- 4-38	Julius Meyer, Casa Grande, Arizona Pat'Em Up (see Table 3).....	.....	.....	.....	.....	.....
3-20-39	Miller Cereal Mills, Omaha, Nebraska Bar-B-Kubes .....	.....	G. 25.00	4.50	5.00	.....
4- 4-38	Middleton Feed & Seed Company, Tucson, Arizona Developing Grain.....	.....	G. 9.00	2.00	5.00	.....
4- 4-38	Harvest Brand Pigeon Feed.....	..... 480	G. 11.00 F. 12.19	2.00 2.36	4.00 2.70	..... 1.76

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
10-21-37	Harvest Chick & Broiler Mash.....	195	G. 15.00 F. 17.62	3.00 3.91	6.00 5.68	6.60
1-18-38	Harvest Chick Foundation Mash.....	194	G. 18.00 F. 23.19	3.00 5.15	7.00 4.13	9.08
7- 6-38	Harvest Dairy Ration.....	481	G. 16.00 F. 18.37	2.50 3.47	12.50 10.91	10.73
9-27-37	Harvest Laying Mash.....	30	G. 20.50 F. 23.44	4.00 4.73	7.00 5.13	.....
9-19-38	Harvest Laying Mash Complete.....	.....	G. 16.00	3.00	6.00	.....
10-24-38	Harvest Laying Mash with Pan-A-Min.....	483	G. 20.50 F. 20.87	4.00 4.34	7.00 6.24	12.55
7- 8-37	Purina Dairy Ration (Canceled 1-26-39)	29	G. 16.00 F. 21.81	2.50 4.36	12.50 11.42	.....
7- 8-37	Scratch Feed.....	21	G. 9.50 F. 12.31	2.00 2.38	4.00 1.94	.....
7-14-37	Winner Growing Mash (Canceled 1-26-39)	.....	G. 17.00	3.50	9.50	.....
7- 8-37	Winner Laying Mash (Canceled 1-26-39)	.....	G. 21.00	3.50	9.00	.....
10-10-38	Monte Vista Flour Mills, Monte Vista, Colorado Wheat Bran and Screenings.....	561	G. 14.50 F. 14.81	3.00 5.05	11.00 9.17	5.33
6-28-37	Morton Salt Company, Chicago, Illinois Morton Calcium Phosphate Salt..... (See Table 3)	.....	.....	.....	.....	.....
1- 1-39	Morton Iodized Salt..... (See Table 3)	.....	.....	.....	.....	.....
12- 9-37	J. M. Munguia, Nogales, Arizona Sonora Wheat Bran & Shorts.....	.....	G. 15.00	3.00	9.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

8- 2-37	Newsom's Feed Store, Tucson, Arizona Newsom's Scratch Feed.....	20 479	F. 15.94 F. 16.06	3.85 4.62	8.21 7.77	..... 4.90
1-17-38	Nogales Feed & Seed Company, Nogales, Arizona N. F. & S. Scratch Feed.....	..... 191	G. 9.00 F. 12.31	2.00 2.32	4.00 1.90	..........
2-26-38	Nutrena Mills, Inc., Kansas City, Kansas Nutrena All-Mash Egg Pellets.....	.....	G. 15.00	4.00	6.00	.....
2- 3-39	New registration.....	.....	G. 15.00	4.00	7.00	.....
2-26-38	Nutrena Calf Meal.....	.....	G. 24.00	3.50	4.50	.....
2- 3-39	Nutrena Calf Pellets.....	.....	G. 20.00	3.00	8.00	.....
12- 4-37	Nutrena Chick Mash and/or Pellets.....	.....	G. 18.00	3.50	5.00	.....
2- 3-39	New registration.....	.....	G. 18.00	4.00	7.00	.....
2-26-38	Nutrena Egg Mash and/or Pellets.....	.....	G. 18.00	4.50	6.00	.....
2- 3-39	New registration.....	.....	G. 18.00	4.50	7.00	.....
2-26-38	Nutrena 32% Grain Balancer.....	.....	G. 32.00	5.00	7.00	.....
12- 4-37	Nutrena Growing Mash and/or Pellets.....	.....	G. 17.00	5.00	6.00	.....
2- 2-39	New registration.....	383	F. 19.81	4.54	6.78	7.09
2-26-38	Nutrena Turkey Growing Pellets (Not renewed for 1939).....	.....	G. 17.00	5.00	7.00	.....
2- 3-39	Nutrena Turkey Growing Mash and/or Pellets.....	.....	G. 18.00	3.50	7.00	.....
2-26-38	Nutrena Turkey Starting Pellets (Not renewed for 1939).....	.....	G. 24.00	5.00	6.00	.....
2- 3-39	Nutrena Turkey Starting Mash and/or Pellets.....	.....	G. 24.00	5.00	7.00	.....
1-21-38	The Pacific Molasses Company, Ltd., San Francisco, California Hawaiian Cane Molasses (sugar content 48%).....	.....	G. 3.00	.....	.....	.....
11-28-38	Pacific Nut Oil Company, Los Angeles, California Hempseed Meal..... (Not renewed for 1939)	.....	G. 30.00	5.00	25.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	
12-13-37	Old Process Linseed Meal..... (Not renewed for 1939)	..... 3	G. 30.00 F. 30.69	6.00 6.09	10.00 10.10
11-28-38	Palm Kernel Oil Meal..... (Not renewed for 1939)	.....	G. 18.75	7.75	13.00
11-28-38	Sesame Meal..... (Not renewed for 1939)	.....	G. 40.00	8.50	6.00
1- 5-38	Philip R. Park, Inc., San Pedro, California Cattle Manamar.....	..... 550	G. 35.00 F. 36.37	3.00 2.79	4.00 3.37
1- 5-38	Manamar	549	G. 40.00 F. 40.00	3.00 3.50	4.00 2.54
1- 5-38	Mixing Manamar.....	551	G. 20.00 F. 24.81	2.00 3.21	6.00 3.89
8-12-37	Paul Lime Plant, Paul Spur, Arizona Cal-Pho-Sal (see Table 3).....	.....	.....	.....	.....
10-28-38	H. L. Paxton, Durango, Colorado Wheat Bran.....	.....	G. 13.00	3.00	12.00
10-25-38	Wheat Shorts.....	.....	G. 11.00	2.00	14.00
6-10-37	Pecos Valley Alfalfa Mill Company, Hagerman, New Mexico Alfalfa Meal.....	..... 143	G. 13.00 F. 12.81	1.50 1.71	33.00 34.85
2-18-38	Alfalfa Stem Meal.....	144	G. 10.00 F. 10.41	0.80 1.21	39.00 37.50
6-10-37	Peevee Alfalfa Leaf Meal.....	..... 142	G. 20.00 F. 20.94	2.50 2.97	18.00 17.32
6-10-37	Velvet Brand Alfalfa Meal.....	.....	G. 17.00	1.50	23.00
7-23-38	New registration.....	.....	G. 17.00	1.50	27.00

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

4-13-38	Pikes Peak Grain Company, Denver, Colorado Hen Scratch.....	.....	G. 10.00	2.00	5.00	.....
3- 1-39	Plant Food Corporation, Los Angeles, California 62% Protein Sardine Fish Meal.....	.....	G. 62.00	5.00	1.00	.....
7- 2-37	Pratt Feed & Supply Company, Phoenix, Arizona Pratt All-In-One Lay Mash.....	.....	G. 15.00	3.50	8.00	.....
7- 2-37	Pratt Chick Starter.....	.....	G. 18.00	4.00	7.00	.....
7- 2-37	Pratt Grow Mash.....	.....	G. 15.00	3.50	8.00	.....
7- 2-37	Pratt Hen Scratch.....	101	G. 10.00	2.50	5.00	.....
7- 2-37	Pratt Milking Dairy Ration.....	.....	F. 12.94	2.64	1.83	1.56
7- 2-37	Pratt Special Lay Mash.....	99	G. 16.00	2.50	12.00	.....
		100	F. 22.22	3.63	5.36	9.80
			G. 18.00	3.50	8.00	.....
			F. 25.66	5.68	4.40	10.78
9- 8-37	Prescott Seed & Feed Company, Prescott, Arizona Dunbar's Special Scratch Feed.....	.....	G. 9.00	2.00	4.00	.....
2-27-39	Dunbar's Special Scratch Feed—Chick.....	80	F. 11.13	2.32	2.11	.....
2-27-39	Dunbar's Special Scratch Feed—Intermediate.....	.....	G. 9.00	2.00	4.00	.....
9- 8-37	Dunbar's Wheat & Maize..... (Not renewed for 1939)	.....	G. 9.00	2.00	4.00	.....
		81	G. 9.00	2.00	4.00	.....
			F. 10.50	1.88	2.08	.....
11- 8-38	Producers Gin Company, Safford, Arizona Cream of Safford Valley 43% Cottonseed Cake or Meal (see Table 2).....	.....	.....	.....	.....	.....
1-23-39	Pueblo Flour Mills, Pueblo, Colorado Baby Chick Scratch Grains.....	.....	G. 10.00	2.50	5.00	.....
1-23-39	Hen Scratch Grains.....	.....	G. 10.00	2.50	5.00	.....
11-29-37	Wheat Bran.....	.....	G. 14.00	3.00	11.00	.....
11-29-37	Wheat Gray Shorts.....	.....	G. 15.00	3.50	6.50	.....
11-29-37	Wheat Mixed Feed.....	523	F. 19.25	4.07	4.15	3.88
		59	G. 14.00	3.00	11.00	.....
			F. 19.56	4.40	7.24	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
3-21-39	The Quaker Oats Company, Chicago, Illinois					
1- 5-38	Big Egg All Mash Starter-Grower.....		G. 16.00	4.50	8.00	.....
	Big Egg Laying Mash.....	346	G. 20.00	4.00	8.00	.....
			F. 21.06	4.46	6.98	4.86
3- 7-38	Big Egg Scratch Grains.....	347	G. 9.50	2.00	3.50	.....
			F. 11.19	2.43	2.77	1.55
1- 5-38	Early Bird Scratch Grains.....		G. 9.50	2.00	3.50	.....
1- 5-38	Ful-O-Pep Broiler Mash.....	348	G. 19.00	4.50	7.00	.....
			F. 24.31	4.89	5.70	6.06
1- 5-38	Ful-O-Pep Chick Starter.....		G. 17.00	4.50	7.00	.....
		10	G. 17.63	5.37	6.07	.....
1- 5-38	Ful-O-Pep Coarse Chick Feed.....	343	F. 17.84	5.23	6.97	4.96
			G. 10.00	2.00	2.50	.....
		342	F. 10.50	2.11	1.86	1.24
3- 7-38	Ful-O-Pep Crate Fattener.....		G. 13.00	4.00	7.50	.....
1- 5-38	Ful-O-Pep Egg-Breeder Mash.....		G. 20.00	4.50	8.00	.....
		349	F. 20.75	5.76	6.71	7.75
1- 5-38	Ful-O-Pep Fine Chick Feed.....	344	G. 11.00	2.50	2.00	.....
			F. 11.16	1.79	1.61	1.16
1- 5-38	Ful-O-Pep Growing Mash.....	345	G. 19.00	5.00	7.00	.....
			F. 20.06	5.68	5.67	6.79
1- 5-38	Ful-O-Pep Scratch Grains.....	8	G. 9.00	2.00	3.00	.....
			F. 11.00	2.75	2.69	.....
3- 8-39	North Star Oat Meal.....		G. 16.00	6.00	3.50	.....
3- 8-39	Oat Groats.....		G. 16.00	6.00	2.00	.....
1- 5-38	Quaker 24% Protein Dairy Ration.....		G. 24.00	3.50	12.00	.....
		9	F. 27.56	4.28	11.25	.....
1-12-39	New registration.....		G. 24.00	3.75	12.00	.....
1- 5-38	Schumacher Calif Meal.....		G. 18.00	5.00	5.00	.....
1-17-39	New registration.....		G. 20.00	5.00	5.00	.....
8-30-38	Screened Cracked Corn.....		G. 8.00	3.50	2.59	.....
3-21-39	White Hominy Feed.....		G. 10.00	5.00	7.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

11-30-37	Quick Seed and Feed Company, Phoenix, Arizona	351	G.	16.50	3.00	5.50	10.22
	Quick Brand All-In-One Chick Mash.....		F.	17.81	3.61	4.80	
11-30-37	Quick Brand All-In-One Fattening Mash.....	352	F.	15.06	3.51	5.52	8.46
11-30-37	Quick Brand All-In-One Growing Mash.....	120	F.	15.03	2.75	5.00	5.79
11-30-37	Quick Brand All-In-One Laying Mash.....	116	G.	16.50	2.50	6.00	9.32
11-30-37	Quick Brand Arizona Conference Chick Mash.....	121	F.	18.44	3.79	5.30	7.63
11-30-37	Quick Brand Arizona Conference Growing Mash.....	353	G.	16.50	3.00	3.50	3.12
11-30-37	Quick Brand Arizona Conference Laying Mash.....	115	F.	17.78	4.94	3.12	7.63
11-30-37	Quick Brand Calf Meal.....	354	G.	14.50	2.50	3.50	10.59
11-30-37	Quick Brand Chick Grain.....	355	F.	19.50	3.00	5.00	12.24
11-30-37	Quick Brand Dairy Feed.....	356	F.	17.62	4.46	7.09	3.95
11-30-37	Quick Brand Developing Grain.....	357	G.	11.50	1.50	3.00	1.61
1-10-38	Quick Brand Molasses Dairy Feed.....	117	F.	12.97	1.77	1.99	1.61
12-22-38	New registration.....		G.	19.50	3.00	10.00	5.84
11-30-37	Quick Brand Pigeon Grain.....	358	F.	21.69	3.76	7.75	5.84
11-30-37	Quick Brand Scratch Grain.....	119	G.	12.00	2.50	3.00	1.67
11-30-37	Quick Brand Special Dairy Feed.....	118	F.	12.87	1.74	1.76	1.67
			G.	13.00	2.00	8.00	5.54
			F.	15.66	3.97	6.93	
			G.	13.50	2.00	8.00	
			G.	13.00	4.25	3.50	
			F.	13.18	2.28	1.95	1.90
			G.	10.50	2.00	2.00	
			F.	11.69	2.46	2.16	1.91
			G.	14.50	2.00	10.00	10.00
			F.	18.31	4.17	8.69	6.23
9-24-38	Ralston Purina Company, St. Louis, Missouri		G.	17.00	3.00	8.50	
2-17-39	Chowmix Chick Growing Mash.....		G.	17.00	3.00	8.50	
9-24-38	Chowmix Chick Starting Feed.....		G.	18.00	3.50	7.00	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
10- 4-38	Chowmix 16% Dairy Feed	.....	G. 16.00	3.00	8.00	.....
2-17-39	Chowmix 16% Dairy Feed B	.....	G. 16.00	3.00	8.00	.....
2-17-39	Chowmix Hog Feed	.....	G. 14.00	2.50	9.00	.....
2-17-39	Chowmix Hog Feed B	.....	G. 14.00	2.50	9.00	.....
9-24-38	Chowmix Laying Mash	.....	G. 20.00	3.50	8.50	.....
2-17-39	Chowmix Laying Mash B	.....	G. 20.00	3.50	8.50	.....
9-24-38	Chowmix Turkey Growing & Fattening Mash (Not renewed for 1939)	.....	G. 20.00	3.50	8.50	.....
9-24-38	Chowmix Turkey Starting Feed (Not renewed for 1939)	.....	G. 23.00	4.00	7.00	.....
7- 1-37	Protena Cattle & Sheep Feed	.....	G. 10.00	1.20	23.00	.....
7- 1-37	Protena Sweet Feed B (Canceled 10-4-38)	524	F. 13.87 G. 8.00	2.73 2.00	21.27 12.00	6.97
7- 1-37	Purina Blue Checker Cattle Checkers (western states) New registration	446	G. 12.00 F. 15.75 G. 12.00	2.00 2.53 2.00	19.00 17.17 8.50	.....
9-22-38	Purina Blue Checker Lamb Fatena (western states) New registration	.....	G. 14.00 G. 14.00	2.00 2.00	19.00 8.50	.....
7- 1-37	Purina Blue Checker Sheep Checkers (western states) New registration	.....	G. 12.00 G. 12.00	2.00 2.00	19.00 8.50	.....
9-22-38	Purina Blue Checker Steer Fatena (western states) New registration	.....	G. 12.00 G. 12.00	2.00 2.00	19.00 8.50	.....
7- 1-37	Purina Broler Chow	109	G. 18.00 F. 22.25 G. 18.00 G. 9.00	4.00 4.67 3.50 2.00	7.00 5.29 7.00 15.00	16.33
1-31-39	New registration	.....	.....	.....	.....	.....
7- 1-37	Purina Bulky Las Chow (western states)	.....	.....	.....	.....	.....

*G. guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7- 1-37	Purina Bulky Omolene (western states)	199	G.	10.00	3.20	11.00	3.44
7- 1-37	Purina Calf Startena	106	F.	13.28	4.27	6.71	14.05
7- 1-37	Purina Calf Starting Chow	477	G.	19.50	3.00	9.50	5.17
1-13-38	Purina Cattle Checkers		F.	21.05	3.16	9.08	
7- 1-37	Purina Cattle Checkers (western states) (Canceled 4-12-38)		G.	27.00	3.20	5.00	
10- 4-38	Purina Cattle and Sheep Feed		F.	31.50	3.93	4.10	
7- 9-37	Purina Checkerboard Rolled Oats		G.	23.00	3.20	8.50	
7- 1-37	Purina Chick Chow (coarse) (Denver)		G.	12.00	2.00	10.00	
1-31-39	New registration		G.	10.00	1.20	23.00	
7- 1-37	Purina Chick Chow (fine)	447	G.	15.00	2.50	2.00	1.57
7- 1-37	Purina Chick Growena	415	F.	13.25	2.32	1.71	1.58
7- 1-37	Purina Chick Growing Chow	416	F.	18.81	5.21	5.95	5.61
7- 1-37	Purina Chick Startena	107	G.	21.00	3.50	7.00	17.25
7-19-37	Purina Chicken Fatena	104	F.	22.82	4.91	5.75	11.72
1-31-39	New registration		G.	14.00	4.00	7.50	
7- 9-37	Purina Chicken Fatena Checkers (Not renewed for 1939)	417	F.	19.50	4.12	6.34	4.94
1-31-39	Purina Chicken Fatena Checkers (blue bag)		G.	14.00	3.50	7.50	
1-31-39	Purina Chicken Fatena Checkers (red bag)		G.	17.75	4.33	4.58	
7- 1-37	Purina 32% Chowder (Not renewed for 1939)	423	G.	14.00	3.50	7.00	15.05
9-22-38	Purina 32% Chowder (western states)	450	F.	34.37	6.22	7.14	12.47
1-31-39	Purina Complete Sow & Pig Chow Ration		G.	32.00	4.00	8.00	
2-18-38	Purina Cow Chow 24%		F.	39.00	5.23	4.09	
2-18-38	Purina Cow Chow 34% (western states)		G.	15.00	3.00	6.00	
7-19-37	Purina Dry and Freshening Chow	418	G.	24.00	4.00	11.00	8.46
			F.	34.00	5.50	6.86	
			G.	36.00	2.50	14.00	

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
9- 7-37	Purina Family Flock Chow.....	103	F. 16.53	2.91	12.58	14.16
7- 1-37	Purina Family Flock Ration (Canceled 1-18-38).....	105	G. 18.00	3.50	8.00	15.22
7- 1-37	Purina Growing Chow (Not renewed for 1939).....		G. 21.87	4.91	6.99	
7- 1-37	Purina Hen Chow (Denver mill).....		G. 15.00	3.50	8.00	
1-31-39	New registration.....		G. 17.00	3.50	7.00	
1-31-39	Purina Hog Chow Supplement (Denver mill).....	419	G. 10.00	2.50	4.00	
7- 1-37	Purina Hog Fatena.....		F. 11.31	2.35	1.92	1.37
7- 1-37	Purina Lamb Fatena with Grain (Canceled 4-12-38).....		G. 9.00	2.00	4.00	
7- 1-37	Purina Lay Chow.....		G. 36.00	3.50	7.00	
9-17-37	New registration.....	110	G. 14.00	3.00	7.00	
7- 1-37	Purina Layena (complete ration).....		G. 10.00	2.00	7.00	
2-18-38	Purina Milk Chow (for dairy cows) (western states).....	108	G. 18.00	4.00	10.00	17.90
7- 1-37	Purina Milking Cow Chow (24%) (western states) (Not renewed for 1939).....	440	F. 21.94	5.21	6.70	6.95
7- 1-37	Purina Milking Cow Chow (34%) (Denver mill) (Not renewed for 1939).....	448	F. 20.00	4.66	6.52	6.45
7- 1-37	Purina Omolene (western states).....	476	G. 24.00	3.50	12.00	7.41
7- 1-37	Purina Pig and Hog Chow (Not renewed for 1939).....	102	F. 28.94	3.99	9.19	6.23
7- 1-37	Purina Pigeon Chow.....	200	G. 34.00	3.50	10.00	3.78
7- 1-37	Purina Pig and Hog Chow (Not renewed for 1939).....	422	F. 38.50	5.01	5.85	10.80
7- 9-37	Purina Pigeon Chow.....	420	G. 10.00	3.20	11.00	2.01
			F. 13.53	4.36	6.85	
			G. 36.00	3.50	7.00	
			F. 40.25	6.03	4.68	
			G. 13.50	2.00	4.00	
			F. 16.06	2.11	2.58	

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

7- 1-37	Purina Rabbit Chow (complete ration) (Denver mill).....	.....	G. 13.50	2.50	16.00	.....
1-13-38	Purina Sheep Checkers.....	421	F. 15.37	3.56	12.43	6.08
7- 1-37	Purina Sheep Checkers (western states) (Canceled 4-12-38).....	.....	G. 23.00	3.20	8.50	.....
10-23-37	Purina Sow and Pig Checkers.....	.....	G. 12.00	2.00	10.00	.....
1-31-39	(Not renewed for 1939)	.....	G. 26.00	3.50	7.00	.....
1-13-38	Purina Sow & Pig Chow Supplement.....	.....	G. 26.00	3.50	7.00	.....
7- 1-37	Purina Steer Fatena.....	.....	G. 23.00	3.20	8.50	.....
7- 1-37	Purina Steer Fatena (western states) (Canceled 4-12-38).....	.....	G. 12.00	2.00	10.00	.....
7- 1-37	Purina Turkey Breeder Chow.....	.....	G. 23.00	5.00	8.00	.....
1-31-39	New registration.....	.....	G. 23.00	4.00	8.00	.....
7- 9-37	Purina Turkey Chow Concentrate (35%).....	.....	G. 35.00	5.00	7.00	.....
1-31-39	New registration.....	.....	G. 35.00	4.00	7.00	.....
7- 1-37	Purina Turkey Growena.....	.....	G. 18.00	4.00	7.00	.....
7- 1-37	Purina Turkey Growing Chow.....	531	F. 19.81	4.67	5.88	6.90
1-13-38	Purina Turkey Layena (complete ration).....	449	G. 21.00	3.50	8.00	7.11
7- 1-37	Purina Turkey Startena.....	.....	F. 22.06	5.17	6.07	.....
1-31-39	New registration.....	.....	G. 16.50	3.50	8.00	.....
7- 1-37	Purina Western States Cow Chow.....	.....	G. 24.00	4.50	6.00	.....
12- 6-37	New registration.....	.....	G. 24.00	4.50	7.00	.....
7- 1-37	(Not renewed for 1939)	478	G. 15.00	3.00	12.00	9.69
7- 1-37	Purina Western Egg Chowder.....	.....	F. 21.94	3.78	6.20	.....
7- 9-37	Winner All Mash Growing Feed.....	.....	G. 18.00	3.00	12.00	.....
7- 9-37	(Not renewed for 1939)	.....	G. 21.00	3.00	6.50	.....
7- 9-37	Winner Growing Mash.....	.....	G. 15.00	3.50	9.00	.....
7- 9-37	(Not renewed for 1939)	.....	G. 17.00	3.50	9.50	.....
7- 9-37	Winner Laying Mash.....	.....	G. 21.00	3.50	9.00	.....
3-28-38	Royal Milling Company (General Mills, Inc.), Great Falls, Montana Dependable Rex Hard Wheat Standard	.....	.....	.....	.....	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
3-28-38	Middlings & Ground Screenings..... (Not renewed for 1939) Dependable Rex Hard Wheat Bran & Ground Screenings.....	..... ..... 169	G. 16.50 G. 15.00 F. 17.12	4.00 3.00 4.57	7.50 10.00 10.25	..... 6.42
3-28-38	Dependable Rex Hard Wheat Bran, Middlings & Ground Screenings..... (Not renewed for 1939)	.....	G. 16.00	4.00	10.00	.....
2-21-38 11-18-38	St. David Farm Bureau, St. David, Arizona Dairy Ration..... St. David Lay Mash.....	..... .....	G. 14.50 G. 20.00	3.00 4.00	7.00 6.00	..........
5-10-38	J. A. Sainz, Nogales, Arizona Dairy Feed.....	.....	G. 21.00	3.25	11.00	.....
1-21-39	New registration.....	192	F. 23.26	4.83	12.10	10.28
5-10-38	Scratch Feed.....	.....	G. 21.00	3.50	9.50	.....
1-21-39	New registration.....	.....	G. 10.50	3.00	2.80	.....
1-21-39	Sonora Wheat Bran.....	.....	G. 11.00	2.50	2.80	.....
9-27-37	Wheat Bran..... (Not renewed for 1939) (See Sonora Wheat Bran)	..... 18 453	G. 15.50 G. 15.50 F. 16.06 F. 17.25	2.50 2.50 3.79 3.63	8.00 8.00 5.63 5.20	..... ..... ..... 4.49
3-21-38	R. Salem, Douglas, Arizona Salem's Mexican Wheat Bran.....	..... 180 461	G. 15.50 F. 14.22 F. 15.88	3.00 4.35 4.44	8.90 6.92 8.94	..... 4.38 5.64
3-23-39	New registration.....	.....	G. 14.00	3.00	8.90	.....
7-19-38	James H. Seley & Company, Los Angeles, California Franco Brand Fancy Tuna Meal.....	.....	G. 60.00	5.00	1.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

2-13-39	55% Protein Fish Meal.....	397	F. 57.94	6.85	0.26	22.98
2-13-39	60% Protein Fish Meal.....	.....	G. 55.00	5.00	1.00	.....
7-19-38	62% Protein Fish Meal.....	.....	G. 60.00	5.00	1.00	.....
2-13-39	65% Protein Fish Meal.....	.....	G. 62.00	5.00	1.00	.....
9- 7-38	62.5% Sardine Fish Meal.....	.....	G. 65.00	5.00	1.00	.....
7-19-38	65% Sardine Fish Meal.....	372	F. 62.50	5.00	1.00	15.49
		.....	G. 60.62	3.41	0.47	.....
		.....	G. 65.00	5.00	1.00	.....
11-16-38	Silver Creek Mill, Shumway, Arizona Silver Creek Lay Mash.....	.....	G. 18.00	3.50	8.00	.....
4-25-38	Snow Brokerage Company, Los Angeles, California Philreco Brand Copra Meal..... (Not renewed for 1939)	407	G. 19.00	6.00	11.00	7.73
		.....	F. 19.90	6.53	12.88	.....
3-24-38	Southwest Flour & Feed Company, Phoenix, Arizona Alfalfa Meal.....	.....	G. 14.70	1.40	28.90	.....
3-24-38	(Canceled 12-14-38)	280	F. 14.90	1.52	31.19	7.72
5-26-38	Dairy Producers Ration No. 6.....	277	G. 12.10	1.00	23.30	9.53
12-14-38	Corrected registration.....	.....	F. 16.25	1.42	22.03	.....
6-30-37	(Not renewed for 1939)	.....	G. 12.50	1.50	28.50	.....
	Fancy No. 1 Grade Ground Alfalfa Hay.....	.....	G. 12.00	1.00	24.00	.....
	Full Value Chick Grain.....	.....	G. 10.00	2.25	3.00	.....
5-26-38	Corrected registration.....	259	F. 12.94	2.25	3.00	1.87
12-14-38	New registration.....	.....	G. 12.00	2.00	3.00	.....
6-30-37	Full Value Chick Mash.....	.....	G. 10.00	2.25	3.00	.....
	(Canceled 12-14-38)	.....	G. 18.50	4.75	4.50	.....
6-30-37	Full Value Dairy Feed No. 15.....	265	F. 18.75	4.68	3.66	6.54
6-30-37	Full Value Dairy Feed No. 18.....	.....	G. 15.50	3.50	8.50	.....
6-30-37	Full Value Dairy Feed No. 24.....	.....	G. 18.50	4.00	9.50	.....
6-30-37	Full Value Developer Grain.....	.....	G. 24.00	5.00	10.00	.....
5-26-38	Corrected registration.....	266	G. 10.00	2.25	3.00	1.68
12-14-38	New registration.....	.....	F. 13.13	1.94	2.08	.....
		.....	G. 12.00	2.00	3.00	.....
		.....	G. 10.00	2.25	3.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
6-30-37	Full Value Developer Mash.....	.....	G. 17.00	4.50	5.00	.....
12-14-38	New registration.....	267	F. 18.27	4.35	5.28	6.38
6-30-37	Full Value Egg Mash.....	.....	G. 17.50	4.20	5.40	.....
12-14-38	New registration.....	241	G. 18.50	5.00	6.00	.....
6-30-37	Full Value Hen Scratch.....	.....	F. 19.97	4.26	5.84	8.99
12-14-38	New registration.....	.....	G. 19.00	4.20	5.90	.....
12-14-38	Full Value Starter-Grower Chick Mash.....	242	G. 10.81	2.25	2.63	1.73
12-14-38	Govt. No. 9 Starter Mash.....	.....	F. 12.56	2.33	2.46	.....
3-24-38	(Canceled 5-26-38)	.....	G. 9.50	2.00	4.00	.....
3-24-38	Govt. No. 10 Laying Mash.....	.....	G. 18.00	4.50	5.50	.....
12-14-38	(Canceled 5-26-38)	.....	G. 19.30	3.70	4.60	.....
6-30-37	Molasses Bran.....	.....	G. 21.30	3.80	4.90	.....
11-29-37	"999" Dairy Feed.....	279	F. 21.97	4.28	5.19	13.36
7-25-38	New registration (not renewed for 1939) (See Special "999" Dairy Feed)	.....	G. 12.50	1.50	28.50	.....
3-24-38	Rabbit Ration.....	268	G. 11.50	3.25	7.00	.....
6-30-37	Molasses Bran.....	.....	F. 15.72	2.95	7.03	5.17
11-29-37	"999" Dairy Feed.....	269	G. 15.00	3.50	8.00	.....
7-25-38	New registration (not renewed for 1939) (See Special "999" Dairy Feed)	.....	F. 17.31	2.90	6.76	5.81
3-24-38	Rabbit Ration.....	149	G. 13.00	6.50	28.50	.....
6-30-37	New registration (not renewed for 1939) (Not renewed for 1939)	.....	F. 15.55	3.18	24.00	12.61
12-14-38	Red Star "All In One" Chick Mash.....	.....	G. 13.00	2.50	28.50	.....
6-30-37	Red Star "All In One" Developer Mash.....	.....	G. 13.00	2.50	28.50	.....
12-14-38	Red Star "All In One" Egg Mash.....	.....	G. 10.30	1.40	16.50	.....
5-20-38	New registration.....	.....	G. 18.00	5.00	4.00	.....
5-20-38	Red Star "All In One" Starter-Grower Mash..... (Canceled 12-14-38)	.....	G. 18.00	4.00	5.40	.....
		.....	G. 17.50	4.50	4.00	.....
		.....	G. 17.00	4.00	5.80	.....
		.....	G. 18.00	5.00	4.00	.....

*G. guarantee as shown in registration; F. found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-30-37	Red Star Calf Meal.....	270	G.	19.00	4.50	3.00	3.19
12-14-38	New registration.....	.....	F.	21.97	4.20	4.42	.....
6-30-37	Red Star Chick Grain.....	.....	G.	20.00	4.00	4.50	.....
6-30-37	Red Star Chick Mash.....	243	C.	10.00	2.50	3.00	1.41
6-30-37	(Canceled 5-13-38) Red Star Dairy Ration.....	244	F.	13.25	2.72	4.50	8.94
5-10-38	New registration.....	245	F.	19.91	4.65	5.60	5.57
12-14-38	New registration.....	.....	G.	15.50	3.50	8.00	.....
5-28-38	Red Star Dairy Ration with Dr. Hess Stock Tonic.....	.....	F.	16.56	3.58	7.49	.....
6-30-37	Red Star Dairy Ration HP.....	.....	G.	16.00	3.90	8.00	.....
12-14-38	New registration.....	.....	G.	16.00	3.50	8.00	.....
6-30-37	Red Star Dairy Ration with Kelco Meal.....	.....	G.	24.00	5.00	10.00	.....
6-30-37	(Canceled 10-27-38) Red Star Developer Grain.....	.....	G.	24.00	3.50	8.00	.....
6-30-37	Red Star Developing Mash.....	246	C.	15.50	3.50	8.00	.....
12-14-38	New registration.....	.....	G.	10.00	2.50	3.00	1.75
6-30-37	Red Star Fattener.....	247	F.	13.53	2.83	1.94	9.37
12-14-38	(Not renewed for 1939) Red Star Fattener Broiler & Fryer Mash.....	248	F.	20.00	4.38	4.67	6.67
6-30-37	Red Star "Pull Pail" New registration.....	253	G.	18.00	4.30	4.80	5.44
12-14-38	Red Star Hen Scratch.....	249	G.	15.50	5.00	5.50	.....
6-30-37	New registration.....	.....	F.	16.69	4.65	5.34	.....
12-14-38	Red Star Laying Mash.....	250	G.	19.00	4.50	5.30	.....
6-30-37	New registration.....	.....	G.	16.00	3.50	8.00	.....
12-14-38	Red Star Milk Feed.....	271	F.	18.69	3.32	7.68	8.09
6-30-37	New registration.....	.....	G.	18.00	3.00	8.00	.....
12-14-38	Red Star Milk Goat Feed.....	.....	G.	9.50	2.50	3.50	1.87
6-30-37	New registration.....	.....	F.	12.19	2.61	2.63	.....
12-14-38	Red Star Dairy Ration with Kelco Meal.....	.....	G.	10.50	2.50	3.00	.....
6-30-37	New registration.....	.....	G.	19.00	4.50	5.00	.....
12-14-38	Red Star Dairy Ration with Kelco Meal.....	.....	F.	18.91	3.58	6.24	8.09
6-30-37	New registration.....	.....	G.	16.50	4.50	7.00	.....
12-14-38	Red Star Dairy Ration with Kelco Meal.....	.....	F.	16.31	3.70	7.06	5.61
12-14-38	New registration.....	.....	G.	16.00	3.50	8.00	.....
12-14-38	Red Star Dairy Ration with Kelco Meal.....	.....	C.	13.50	3.00	7.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
11-29-37	Red Star Molasses Dairy Feed..... (Canceled 12-14-38)	272	G. 14.00	4.00	12.00	.....
5-28-38	Red Star Pan-A-Min Chick Mash.....	428	F. 15.31	2.68	10.99	7.13
12-14-38	New registration.....	.....	G. 18.00	5.00	4.50	.....
5-28-38	Red Star Pan-A-Min Developing Mash.....	427	F. 20.00	4.63	5.47	11.54
12-14-38	New registration.....	.....	G. 18.00	4.50	5.70	.....
5-28-38	Red Star Pan-A-Min Laying Mash.....	426	G. 19.00	5.00	4.50	9.60
12-14-38	New registration.....	.....	F. 19.44	4.16	4.38	.....
6-30-37	Red Star Pigeon Scratch.....	252	G. 18.00	4.30	4.80	.....
6-30-37	Red Star Poultry Starter..... (Not renewed for 1939)	273	G. 19.00	4.50	5.00	.....
12-14-38	Red Star Poultry Breeders Mash.....	.....	F. 18.94	4.05	5.74	9.82
12-14-38	Red Star Rabbit Feed (a complete ration).....	.....	G. 19.50	4.50	5.80	.....
12-14-38	Red Star Rabbit Feed (all grain ration).....	.....	G. 12.00	2.50	4.00	.....
6-30-37	Red Star Rabbit Mash..... (Canceled 5-13-38)	274	F. 13.53	3.11	2.42	1.89
3-24-38	Red Star Rabbit Pellets..... (Canceled 12-14-38)	278	G. 20.00	5.00	3.00	10.05
12-14-38	Red Star Rabbit Ration.....	.....	F. 20.87	4.64	2.70	.....
5-20-38	Red Star Starter-Grower Mash..... (Not renewed for 1939)	281	G. 25.00	4.90	6.00	.....
12-14-38	Red Star Starter-Grower Chick Mash with Buttermilk & Cod Liver Oil.....	.....	G. 20.00	4.50	5.80	.....
6-30-37	Red Star Starter-Grower Mash.....	.....	G. 16.00	3.00	17.00	.....
3-24-38	Red Star Starter-Grower Mash.....	.....	G. 16.00	4.00	8.50	.....
12-14-38	Red Star Starter-Grower Mash.....	.....	G. 10.50	2.75	5.75	.....
6-30-37	Red Star Starter-Grower Mash.....	.....	F. 13.53	3.47	4.99	4.64
3-24-38	Red Star Starter-Grower Mash.....	.....	G. 11.00	2.30	7.90	.....
12-14-38	Red Star Starter-Grower Mash.....	.....	F. 14.02	3.66	7.56	4.69
5-20-38	Red Star Starter-Grower Mash.....	.....	G. 10.30	1.40	16.50	.....
12-14-38	Red Star Starter-Grower Mash.....	.....	G. 18.50	5.00	4.50	.....
6-30-37	Red Star Starter-Grower Mash.....	.....	G. 18.00	4.50	5.70	.....
3-24-38	Red Star Trace Buster.....	278	G. 14.75	4.50	5.00	.....
6-30-37	Red Star Trace Buster.....	.....	G. 9.40	4.40	10.50	.....
3-24-38	Red Star Trace Buster.....	.....	F. 12.78	4.87	10.03	4.10

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
11-12-38	Swift's Meat and Bone Scraps.....	451	G. 50.00 F. 52.50	6.00 11.17	3.00 2.83	..... 26.00
6- 8-38	Taylor Milling Corporation, Los Angeles, California					
3-14-38	Certified Mash.....		G. 20.00	3.50	9.00	.....
8- 8-37	Domestic Sardine Meal.....		G. 65.00	6.00	1.00	.....
3-14-38	Dried Blood Meal.....		G. 80.00	0.50	0.50	.....
3-14-38	Imported Sardine Meal.....		G. 58.00	6.00	1.00	.....
3-14-38	Imported 28% Old Process Hempseed Cake Meal.....	424	G. 28.00 F. 29.31 G. 28.00	6.00 7.89 5.00	29.00 28.71 9.00	..... 7.81
3-14-38	Kellogg's 28% Protein Old Process Linseed Meal..... (Not renewed for 1939)					
6-21-37	Purity Mash.....		G. 15.00	2.00	10.00	.....
6-21-37	Purity Fattening Mash.....		G. 14.00	3.00	6.00	.....
6-21-37	Purity Scratch Feed.....		G. 10.00	2.00	4.00	.....
6- 8-37	Raw Bone Meal (see Table 3).....					
12- 5-38	Steam Bone Meal (see Table 3).....					
6-21-37	Taylor Made Calf Food.....		G. 15.00	3.00	7.00	.....
1-17-39	New registration.....	365	F. 17.37	4.99	6.61	4.08
6-21-37	Taylor Made Chick Mash or Pellets.....		G. 15.00	3.00	8.00	.....
6-21-37	Taylor Made Chick Scratch Feed.....		G. 14.00	3.00	10.00	.....
6-21-37	Taylor Made Dairy Feed.....		G. 10.00	2.00	4.00	.....
6-21-37	Taylor Made Goat Feed.....		G. 17.00	4.00	12.00	.....
6-21-37	Taylor Made Growing Chick Scratch.....		G. 12.00	3.00	9.00	.....
6-21-37	Taylor Made Growing Mash or Pellets.....		G. 10.00	2.00	4.00	.....
6-21-37	Taylor Made Growing Mash or Pellets.....	366	G. 14.00 F. 16.16	3.00 3.02	10.00 5.08	..... 5.53
6-21-37	Taylor Made Pigeon Feed.....		G. 12.00	3.00	5.00	.....
6-21-37	Taylor's All In One Battery Fattening Food.....		G. 15.00	4.00	7.00
6-21-37	Taylor's All In One Bird Pellets..... (Not renewed for 1939)		G. 15.00	4.00	8.00

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9-19-38	Taylor's All In One Breeders Laying Food.....	G.	20.00	3.00	7.00
6- 2-38	Taylor's All In One Broiler and Fryer Food.....	G.	20.00	4.00	9.00
6-21-37	Taylor's All In One Chick 40% Milk Food.....	363	G.	20.00	.....	3.00	5.00	5.14
6-21-37	Taylor's All In One Fattening Food.....	.....	F.	20.35	.....	3.60	3.33	.....
6-21-37	Taylor's All In One Growing Chick Food.....	.....	G.	15.00	.....	4.00	8.00	.....
6-21-37	Taylor's All In One Growing Pullet Food.....	165	G.	15.00	.....	4.00	8.00	5.70
6-21-37	Taylor's All In One Laying Food.....	367	F.	18.12	4.23	4.06	7.19	5.76
6-21-37	Taylor's All In One Rabbit Food.....	.....	F.	17.34	.....	4.00	8.00	.....
6-21-37	Taylor's All In One Starting Chick Food.....	167	G.	15.00	.....	4.00	8.00	5.43
6-21-37	Taylor's All In One Starting Chick Food.....	.....	F.	16.69	.....	4.10	6.30	.....
6-21-37	Taylor's All In One Starting Chick Food.....	.....	G.	14.00	.....	3.00	19.00	.....
6- 2-38	Taylor's All In One Turkey Breeders Food.....	166	G.	15.00	.....	4.00	8.00	6.65
6-21-37	Taylor's All In One Turkey Developing Feed.....	.....	F.	18.37	.....	4.35	6.43	.....
6-21-37	Taylor's All In One Turkey Fattening Food.....	.....	G.	18.00	.....	4.00	10.00	.....
6-21-37	Taylor's All In One Turkey Growing Food.....	364	F.	18.12	.....	4.23	6.68	6.90
6-21-37	Taylor's All In One Turkey Laying Food.....	.....	G.	18.00	.....	4.00	10.00	.....
6-21-37	Taylor's All In One Turkey Laying Food.....	.....	G.	18.00	.....	4.00	10.00	.....
6-21-37	Taylor's All In One Turkey Starting Food.....	.....	G.	15.00	.....	4.00	8.00	.....
6-21-37	Taylor's Certified Mash.....	.....	G.	20.00	.....	4.00	8.00	.....
6-21-37	Taylor's Cream of Grain Tonic Yeast Mash.....	168	G.	17.00	.....	4.00	9.00	9.09
6-21-37	Taylor's Cream of Grain Tonic Yeast Mash.....	.....	G.	20.00	.....	3.00	8.00	.....
6-21-37	Taylor's Imperial Laying Mash.....	.....	G.	13.00	.....	2.50	8.00	.....
6-21-37	Taylor's Mineralized Sweet Bran.....	.....	G.	14.00	.....	2.50	12.00	.....
12- 6-37	Taylor's Mineralized Sweet Wheat Bran.....	17	F.	14.00	.....	3.29	8.18	.....
1-17-39	New registration.....	.....	G.	13.00	.....	2.50	12.00	.....
6-21-37	Taylor's Purity Dog Food Pellets.....	.....	G.	28.00	.....	5.00	8.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
6-21-37	Taylor's Sweet Bran. (Not renewed for 1939)	.....	G. 10.00	3.00	7.00	.....
1-17-39	Taylor's Sweet Wheat Bran	.....	G. 10.00	3.00	7.00	.....
6-21-37	Taylor's Thrifty Duck Pellets	.....	G. 14.00	2.00	12.00	.....
6-21-37	Taylor's Thrifty Mash	.....	G. 13.00	3.00	11.00	.....
6-21-37	Taylor's Thrifty Rabbit Pellets	.....	G. 12.00	2.00	22.00	.....
6- 2-38	Taylor's West Coast Dairy Feed	.....	G. 15.00	3.00	15.00	.....
6-21-37	Taylor's West Coast Special Dairy Feed (Not renewed for 1939)	368	G. 15.00	3.00	15.00	.....
	(See Taylor's West Coast Dairy Feed)		F. 18.37	3.60	8.58	7.36
6-21-37	Thrifty Scratch Feed	.....	G. 10.00	2.00	4.00	.....
8-19-37	Tidwell Fuel & Feed Company, El Paso, Texas					
8-19-37	Corn Chop (fine)	.....	G. 9.00	3.50	3.00	.....
8-19-37	Crimped Whole Oats and Molasses	.....	G. 8.40	2.80	8.50	.....
8-19-37	Digester Tankage	.....	G. 60.00	5.00	3.00	.....
8-19-37	Dried Buttermilk	.....	G. 30.00	5.00	1.00	.....
4-27-38	Dried Skimmed Milk	.....	G. 34.00	0.20	0.00	.....
8-19-37	Finely Ground Whole Milo Maize	.....	G. 11.29	2.69	2.10	.....
8-19-37	Finely Ground Whole Oats	.....	G. 11.00	4.00	12.00	.....
8-19-37	Ground Whole Barley and Screenings	.....	G. 10.00	1.50	9.00	.....
8-19-37	Hominy Feed	.....	G. 10.10	6.00	7.00	.....
8-19-37	Meat and Bone Scraps	.....	G. 50.00	6.00	3.00	.....
8-19-37	Milo Head Chop and Cane Molasses	.....	G. 6.50	1.80	5.00	.....
8-19-37	More Milk Brand Dairy Feed with Molasses	.....	G. 17.00	5.00	8.50	.....
4-27-38	25% Protein Ground Whole-Pressed Cottonseed	.....	G. 25.00	6.00	23.00	.....
8-19-37	25% Protein Whole-Pressed Cottonseed	.....	G. 25.00	6.00	23.00	.....
4-27-38	25% Protein Whole-Pressed Cottonseed Cubes	.....	G. 25.00	6.00	23.00	.....
8-19-37	41.12% Protein Cottonseed Flakes	.....	G. 41.12	6.00	12.00	.....
8-19-37	43% Protein Cottonseed Cake Prime Quality	.....	G. 43.00	6.00	12.00	.....
9-19-37	43% Protein Cottonseed Flake Cake	G. 43.00	6.00	12.00
8-19-37	43% Protein Cottonseed Meal Prime Quality	G. 43.00	6.00	12.00

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3-17-38	43% Protein Cottonseed Pellets.....	G. 43.00	6.00	12.00
8-19-37	34% Protein Linseed Meal.....	G. 34.00	6.00	9.00
3-30-39	50% Protein Meat and Bone Meal Tankage.....	.....	G. 50.00	4.00	3.00	.....
8-19-37	Pulverized Limestone (see Table 3)	.....	.....	.....	.....	.....
8-19-37	Sifted Cracked Corn (cracked corn with portion of meal and finer particles sifted out).....	.....	G. 9.00	3.50	3.00	.....
8-19-37	Steamed Rolled Whole Barley.....	.....	G. 11.00	1.50	6.00	.....
8-19-37	Success Horse and Mule Feed.....	.....	G. 10.00	3.50	9.30	.....
8-19-37	Success Brand Growing Mash with Charcoal.....	.....	G. 16.00	3.50	6.50	.....
8-19-37	Tidwell's Big T Dairy Feed.....	.....	G. 16.00	3.50	10.00	.....
8-19-37	Tidwell's E. P. Brand Hen Scratch.....	.....	G. 10.00	2.50	4.00	.....
8-19-37	Tidwell's Egg Producer Laying Mash with Charcoal.....	.....	G. 20.20	3.90	8.00	.....
8-19-37	Tidwell's Success Brand Hen Scratch.....	.....	G. 10.40	2.60	4.00	.....
8-19-37	Tidwell's Success Brand Laying Mash with Limestone and Charcoal.....	.....	G. 20.50	3.70	8.00	.....
8-19-37	Tidwell's Success Brand Pigeon Feed.....	.....	G. 13.00	2.20	4.00	.....
8-19-37	Tidwell's Success Chick Scratch.....	.....	G. 10.50	3.00	4.00	.....
8-19-37	Tidwell's Success Chick Starter.....	.....	G. 16.50	4.00	4.50	.....
4-27-38	Tidwell's Success Growing Scratch.....	.....	G. 10.50	2.70	3.40	.....
8-19-37	Tidwell's Success Poultry Fattener.....	.....	G. 13.50	5.00	6.00	.....
8- 4-37	Wheat Bran and Wheat Screenings.....	.....	G. 14.50	3.00	10.00	.....
8- 4-37	Wheat Gray Shorts.....	.....	G. 16.70	3.70	6.00	.....
8-19-37	Wheat Mixed Feed (mill-run wheat bran).....	.....	G. 16.00	3.50	8.50	.....
6-28-37	Tovrea Packing Company, Phoenix, Arizona Big T Brand Poultry Food.....	.....	G. 48.00	7.00	2.50	.....
1-17-39	(Not renewed for 1939) Big T Brand Meat & Bone Scrap.....	375	F. 49.94	7.53	2.65	28.81
		557	F. 48.81	7.00	2.50	.....
			F. 48.81	7.53	1.82	35.85
6- 4-37	Tremaine Alfalfa Ranch & Milling Company, Mesa, Arizona Arizona Brand Alfalfa Leaf Meal.....	.....	G. 20.00	2.50	18.00	.....
6- 4-37	Arizona Brand Alfalfa Stem Meal.....	.....	G. 9.00	0.80	40.00	.....
6- 4-37	Tremaine Brand Alfalfa Meal.....	.....	G. 16.00	2.00	25.00	.....
8-24-37	United Hay & Grain Company, Phoenix, Arizona United Dairy Feed.....	.....	G. 17.00	4.00	9.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
4-25-38	United Developing Grains.....	218	F. 21.03	4.15	9.95	8.10
			G. 11.00	3.50	4.00	.....
8-24-37	United Developing Mash.....	220	F. 12.72	2.15	2.05	1.76
			G. 14.50	3.00	7.00	.....
8-24-37	United Egg Mash.....	560	F. 19.62	4.22	6.15	8.89
			G. 20.00	5.00	7.00	.....
8-24-37	United Scratch Feed.....	219	F. 21.00	4.55	5.12	12.00
			G. 10.00	3.00	4.50	.....
8-24-37	United Starting Mash.....	217	F. 11.12	2.74	2.00	1.86
			G. 14.00	4.00	7.00	.....
6-21-37	Valley Lumber, Fuel & Feed Company, Phoenix, Arizona					
	A.A.A. Dairy Feed.....	201	G. 10.00	2.50	3.00	.....
8-19-38	New registration.....		F. 15.97	3.58	9.63	7.60
			G. 12.00	2.00	12.00	.....
2-1-39	Full Ration Baby Chick Mash.....	409	F. 14.81	2.35	9.97	6.81
4-27-38	Full Ration Chick Mash.....	562	F. 14.94	2.36	10.32	8.17
	(Not renewed for 1939)		G. 18.00	4.00	5.00	.....
4-27-38	Full Ration Growing Mash.....		G. 18.00	4.00	5.00	.....
4-27-38	Full Ration Laying Mash.....		G. 17.00	3.50	7.00	.....
4-27-38	Half and Half.....		G. 17.50	3.50	5.50	.....
2-1-38	High Protein Baby Chick Mash.....		G. 20.00	2.50	3.00	.....
4-27-38	High Protein Growing Mash.....		G. 20.00	4.00	7.00	.....
1-18-39	Turkey Breeder Mash.....		G. 18.00	4.00	7.00	.....
6-21-37	Valley Brand Baby Chick Grain.....		G. 20.00	4.00	7.00	.....
	Valley Brand Dairy Feed.....	215	G. 21.00	4.00	7.00	.....
	(Canceled 4-27-38)		G. 10.00	2.50	3.00	.....
	(See Valley Dairy Feed)		F. 12.69	3.24	1.95	1.80
6-21-37	Valley Brand Dairy Feed.....		G. 20.00	4.00	11.00	.....
		214	F. 20.13	4.33	9.68	8.05

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

6-21-37	Valley Brand Developer Grain.....	..... 213	G. 10.00	2.50	3.00	..... 1.51
6-21-37	Valley Brand Fattener Mash (Not renewed for 1939) (See Valley Fattening Mash)	.....	F. 11.50	2.49	2.09	.....
6-21-37	Valley Brand Full Ration Chick Mash (Canceled 4-27-38)	.....	G. 18.00	4.00	7.00	.....
6-21-37	Valley Brand Baby Chick Mash (See Full Ration Growing Mash)	..... 211	G. 18.00	4.00	5.00	..... 7.59
6-21-37	Valley Brand Full Ration Growing Mash (Canceled 4-27-38)	.....	F. 20.13	4.87	4.67	.....
6-21-37	Valley Brand Full Ration Growing Mash (See Full Ration Growing Mash)	..... 210	G. 17.00	3.50	6.50	..... 7.36
6-21-37	Valley Brand Full Ration Laying Mash (Canceled 4-27-38)	.....	F. 19.75	4.54	6.09	.....
6-21-37	Valley Brand Laying Mash (See Full Ration Laying Mash)	..... 209	G. 17.50	3.50	5.50	..... 7.07
6-21-37	Valley Brand Half and Half (Canceled 4-27-38)	.....	F. 17.50	3.88	4.55	.....
6-21-37	(See Half and Half)	..... 208	G. 10.00	2.00	3.00	..... 1.46
6-21-37	Valley Brand High Protein Growing Mash (Canceled 4-27-38)	.....	F. 10.06	2.90	1.50	.....
6-21-37	Valley Brand High Protein Growing Mash (See High Protein Growing Mash)	..... 202	G. 18.00	4.00	7.00	..... 7.14
6-21-37	Valley Brand High Protein Laying Mash (Canceled 4-27-38)	.....	F. 19.63	4.95	4.46	.....
6-21-37	Valley Brand Laying Mash (See High Protein Laying Mash)	..... 203	G. 20.00	4.00	7.00	..... 6.28
6-21-37	Valley Brand Pigeon Feed	.....	F. 21.19	4.76	5.20	.....
6-21-37	Valley Brand Scratch Feed.....	..... 204	G. 10.00	2.50	3.00	..... 2.22
6-21-37	Valley Brand Scratch Feed.....	.....	F. 12.81	3.93	2.71	.....
6-21-37	Valley Brand Special Dairy Feed.....	..... 205	G. 10.00	2.50	3.00	..... 1.98
6-21-37	Valley Brand Special Dairy Feed.....	.....	F. 11.50	2.87	1.85	.....
6-21-37	Valley Brand Special Scratch Feed.....	..... 206	G. 17.00	3.00	12.00	..... 12.49
6-21-37	Valley Brand Special Scratch Feed.....	.....	F. 17.13	3.30	9.94	.....
6-21-37	Valley Brand Turkey Growing Mash.....	..... 207	G. 10.00	2.50	3.00	..... 1.40
6-21-37	Valley Brand Turkey Growing Mash.....	.....	F. 11.13	1.86	1.39	.....
6-21-37	Valley Brand Turkey Starting Mash.....	.....	G. 22.00	4.00	7.00	.....
4-27-38	Valley Dairy Feed.....	..... 410	G. 23.00	4.00	7.00	..... 8.16
4-22-38	Valley Fattening Mash.....	..... 563	F. 23.59	4.40	4.75	.....
			G. 20.00	4.00	11.00	.....
			F. 18.69	4.00	7.00	..... 6.00
			G. 18.69	4.02	3.33	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT).—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
4-22-38	Valley High Protein Chick Mash. (Not renewed for 1939) (See High Protein Baby Chick Mash)	216	G. 18.00 F. 20.37	4.00 5.02	7.00 4.37	..... 7.98
3-16-39	Vogel Hatchery, Tempe, Arizona	.....	G. 18.00	4.00	6.00	.....
3-16-39	Vogel Chick Mash	.....	G. 21.00	4.00	7.00	.....
	Vogel Laying Mash	.....			
	V-O Milling Company, Los Angeles, California					
3-21-38	Blood Meal	.....	G. 80.00	0.50	1.00	.....
3-18-38	Copra Meal	.....	G. 19.00	6.00	11.00	.....
3-21-38	Hempseed Meal	.....	G. 28.00	4.00	25.00	.....
	(Not renewed for 1939)					
12-15-38	Hovden's Vacuum Dried Fish Meal	.....	G. 66.00	5.00	1.00	.....
3-14-38	Marvel Dairy Food	.....	G. 14.00	3.00	14.00	.....
3-26-38	Molasses Dried Beet Pulp	.....	G. 7.00	0.30	20.00	.....
3-18-38	Old Process Linseed Meal	.....	G. 30.00	6.00	10.00	.....
3-14-38	Orange Brand Chick Food	.....	G. 18.00	4.50	7.00	.....
7- 3-37	Orange Brand Growing Food	.....	G. 16.00	4.50	7.00	.....
		161	F. 19.34	4.92	7.26	8.76
7- 3-37	Orange Brand Laying Food	.....	G. 19.00	4.00	9.00	.....
		156	F. 20.63	4.98	7.62	10.32
3-18-38	Orange Meal	.....	G. 7.00	1.50	12.00	.....
3-18-38	Peanut Oil Cake Meal (45%)	.....	G. 45.00	6.00	13.00	.....
12-15-38	Peanut Pellets	.....	G. 40.00	7.00	11.00	.....
12-15-38	James H. Seley Tuna Fish Meal	.....	G. 60.00	5.00	1.00	.....
3-21-38	Sesame Meal	.....	G. 40.00	6.00	8.00	.....
	(Not renewed for 1939)					
3-18-38	Soybean Oil Meal	.....	G. 41.00	4.00	7.00	.....
3-14-38	Val-U Brand Laying Food	.....	G. 18.00	4.00	10.00	.....
7-18-37	Val-U Chick and Growing Scratch	.....	G. 10.00	2.50	3.00	.....
		157	F. 11.94	1.86	1.22	1.37
7-27-38	New registration	.....	G. 10.00	2.00	3.00	.....

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

3-14-38	Val-U Dairy Ration.....	.....	G.	17.00	3.50	10.50	.....
3-14-38	Val-U Dairy Ration with 10% Beet Pulp.....	.....	G.	17.00	3.50	10.50	.....
3-14-38	Val-U Duck Pellets.....	.....	G.	16.00	3.00	12.00	.....
12-21-38	New registration.....	.....	G.	15.00	3.00	12.00	.....
3-14-38	Val-U Rabbit Pellets.....	.....	G.	13.00	2.50	16.00	.....
12-15-38	Velera Brand 65% Protein Fish Meal.....	.....	G.	65.00	4.00	1.00	.....
		559	F.	64.00	3.60	0.28	17.48
7- 3-37	V-O All Purpose Mash.....	.....	G.	17.00	4.00	6.00	.....
	(Not renewed for 1939)						
7-27-38	V-O All Purpose Poultry Food.....	.....	G.	17.00	4.00	6.00	.....
12-21-38	New registration.....	.....	G.	17.00	4.00	6.50	.....
3-14-38	V-O Breeders Mash.....	.....	G.	20.00	4.50	7.00	.....
3-14-38	V-O Broiler & Fryer Builder.....	.....	G.	17.00	4.00	7.00	.....
3-14-38	V-O Calf Meal.....	.....	G.	22.00	3.50	5.00	.....
		163	F.	24.19	3.71	2.95	5.82
3-14-38	V-O Chick Food.....	.....	G.	18.00	5.00	5.00	.....
		162	F.	22.43	4.89	5.26	8.30
7-27-38	V-O Chick and Growing Scratch.....	.....	G.	10.00	2.00	3.00	.....
3-14-38	V-O Cucci Control Milk Mash.....	.....	G.	16.00	3.00	6.00	.....
12-21-38	New registration.....	.....	G.	16.00	3.00	7.50	.....
3-14-38	V-O Dairy Ration (plain).....	.....	G.	17.00	3.75	10.00	.....
3-14-38	V-O Dairy Ration with Beet Pulp.....	.....	G.	17.00	3.75	10.00	.....
3-14-38	V-O Duck Pellets.....	.....	G.	20.00	4.00	8.50	.....
	(Not renewed for 1939)						
7- 3-37	V-O Full Ration Laying Food.....	.....	G.	16.00	3.50	6.00	.....
3-14-38	V-O Growing Food.....	.....	F.	19.13	4.55	5.62	8.23
7- 3-37	V-O High Protein Laying Food.....	.....	G.	16.00	4.00	6.00	.....
3-14-38	V-O Poultry Fattening Food.....	.....	F.	22.25	5.24	5.75	9.06
		158	G.	17.00	5.00	7.00	.....
3-14-38	V-O Rabbit Grain Pellets.....	.....	F.	19.37	6.27	4.95	8.55
		159	G.	13.00	4.00	9.00	.....
3-14-38	V-O Rabbit Pellets.....	.....	F.	15.09	4.29	7.53	5.76
3-14-38	V-O Turkey Breeder Mash.....	.....	G.	15.00	3.50	15.00	.....
10-14-37	V-O Turkey Developer.....	.....	G.	19.00	4.00	10.00	.....
3-14-38	V-O Turkey Starting Mash.....	.....	G.	22.00	4.00	10.00	.....
		408	G.	24.00	5.00	7.00	.....

TABLE 4.—ANALYSES AND GUARANTEES OF ALL MISCELLANEOUS AND MIXED FEEDS (PER CENT)—Continued.

Reg. date	Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
3-14-38	V-O Yeast Foam Laying Food.....	.....	G. 19.00	4.00	9.00	.....
12-21-38	New registration.....	.....	G. 19.00	3.00	9.00	.....
1-19-39	Western Livestock & Poultry Yeast Culture.....	.....	G. 11.00	3.00	4.00	.....
3-18-38	White Sea Flakes (see Table 3).....	.....	.....	.....	.....	.....
4-18-38	Wasco Creamery & Construction Company, Wasco, California Wasco Creamery Powdered Skim Milk..... (Not renewed for 1939)	.....	G. 35.39	0.63	0.00	.....
4- 7-38	Western Condensing Company, Petaluma, California Pebbles Lacto-G Dried Whey.....	..... 552	G. 12.00 F. 12.37	0.50 1.13	0.10 0.10	..... 11.15
6- 7-37	Western Cotton Products Company, Phoenix, Arizona Paymaster Brand, Cottonseed Meal & Cake..... (See Table 2)	.....	.....	.....	.....	.....
4-25-38	Western Products Company, Ontario, California Western Brand Fish Meal..... (Not renewed for 1939)	.....	G. 65.00	5.00	1.00	.....
4-25-38	Western Brand Fish Meal..... (Not renewed for 1939)	.....	G. 62.50	5.00	1.00	.....
4-25-38	Western Brand Fish Meal..... (Not renewed for 1939)	.....	G. 60.00	5.00	1.00	.....
7-18-37	Western Seed, Feed & Honey Company, Phoenix, Arizona Scratch Feed.....	..... 98	G. 9.00 F. 12.53	2.00 2.00	4.00 2.07	..... 8.07

*G, guarantee as shown in registration; F, found by analysis; boldface figures indicate deficiency in protein and fat and excess of fiber.

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7-18-37	Western Brand Dairy Ration.....	97	G. 16.00 F. 19.50	3.50 3.41	8.00 6.39 4.49
3- 9-39	Westminster Mills, Alhambra, California Supreme Brand 50% Protein Meat & Bone Scrap....	G. 50.00	6.00	3.00
9- 2-38	Whitman Seed Company, Yuma, Arizona Whitman's Mexican Bran..... (Not renewed for 1939)	.....	.....	G. 13.00	3.00	10.00	.....
2- 6-39	Wilbur-Ellis Company, Los Angeles, California 45% Peanut Oil Cake Meal.....	.....	.....	G. 45.00	6.00	13.00	.....
12- 6-37	P and G Cocoanut Oil Meal.....	.....	.....	G. 19.00	8.00	11.00	.....
2- 6-39	(Not renewed for 1939) P and G 41% Protein Soybean Oil Meal (old process).....	553	.....	F. 20.25	10.01	12.51	7.20
2- 6-39	19% Protein Cocoanut Oil Meal.....	.....	.....	G. 41.00	4.50	7.00	.....
12-15-38	60% Protein Fish Meal.....	.....	.....	G. 19.00	6.00	11.00	.....
12- 6-37	65% Protein Fish Meal..... (Lighthouse Brand)	554	.....	G. 60.00	8.00	1.00	.....
2- 6-39	28% Protein Hempseed Meal.....	.....	.....	F. 59.69	10.64	0.69	17.24
2- 6-39	65% Protein Liver Meal.....	.....	.....	G. 65.00	4.00	1.00	.....
2- 6-39	18% Protein Tomato Pulp.....	.....	.....	F. 63.50	4.67	1.37	15.59
2- 6-39	65% Sardine Fish Meal.....	.....	.....	G. 28.00	8.00	26.00	.....
12- 9-37	Wilson & Company, Inc., Los Angeles, California Red "W" Brand 50% Protein Meat and Bone Scraps	.....	.....	G. 65.00	8.00	35.00	.....
2- 5-38	Leigh S. Wright, Phoenix, Arizona Beef Krumbles..... (Not renewed for 1939)	.....	.....	G. 50.00 F. 50.62	6.00 13.56	3.00 2.42	..... 27.30
3- 4-39	UKC Beef Krumbles.....	.....	.....	G. 24.00	7.00	6.00	.....
		.....	.....	G. 24.00	5.00	4.00	.....

TABLE 5.—ANALYSES OF UNREGISTERED FEEDS COLLECTED AND ANALYZED.

Name and address of manufacturer and product	Lab. no.	Protein	Fat	Fiber	Ash
Ady & Crowe Merc. Co., Denver, Colorado A & C Mixed Grains.....	182	F.* 12.94	3.08	2.36	1.58
Balfour, Guthrie & Co., Ltd., San Francisco, California Sesame Seed Meal.....	403	F. 40.12	12.87	9.57	12.01
S. E. Barnes, Bayfield, Colorado Wheat Mixed Feed.....	16	F. 16.38	4.23	7.20	.....
California Milling Corporation, Los Angeles, California Hi Plane Growing Mash.....	67	F. 17.75	4.15	8.39	7.64
California Packing Corporation, Los Angeles, California Selected Sardine Meal.....	362	F. 65.56	2.39	0.09	15.69
Challenge Cream and Butter Association, Los Angeles, California Dried Buttermilk.....	369	F. 30.56	3.98	0.00	7.49
Danish Creamery Association, Fresno, California Dried Skim Milk.....	398	F. 32.44	0.23	0.00	7.72
Liberty Vegetable Oil Company, Buena Park, California Torch Brand 32% Protein Old Process Linseed Meal.....	404	F. 31.18	6.12	10.29	5.47
Dr. L. D. Le Gear Medicine Company, St. Louis, Missouri Dr. Le Gear's Poultry Prescription..... Dr. Le Gear's Stock Powders.....	505 504	F. 5.50 F. 7.56	2.24 1.94	36.08 33.19	25.45 28.48

*F, found by analysis.

SUMMARY

MIXED FEEDS

Total feeds registered	
By Arizona manufacturers.....	340
By out-of-state manufacturers.....	474
Total.....	814
Number of feed manufacturers registered.....	97
Arizona.....	49
Out-of-state.....	48
Total tonnage as represented by receipts for fees (approximate).....	31,000
Number of samples collected and analyzed (chemical analysis).....	519
Number of samples not up to guarantee.....	221
Summary of violations—reasons for unsatisfactory reports	
Brand name on tag did not agree with registration.....	44
Ingredients on tag did not agree with registration.....	124
Feeds not registered when sampled.....	84
Feeds deficient in protein.....	50
Feeds deficient in fat.....	119
Feeds had excess of fiber.....	106
Tags did not show list of ingredients.....	43
Tags did not show net weight of package.....	37
Tags did not show name and address of manufacturer.....	10
Guaranteed chemical analysis not shown on tag.....	24
No tag or label on package.....	24
Feed did not carry Arizona inspection fee stamps or tags.....	11
Guaranteed analysis on tag did not agree with registration.....	76
Tag did not show brand name or kind of feed.....	1
Unregistered feeds.....	10

COTTONSEED MEAL

Number of registrations.....	20
Arizona manufacturers.....	5
Out-of-state manufacturers.....	15
Number of manufacturers registered.....	10
Arizona.....	5
Out-of-state.....	5
Total tonnage as represented by receipts for fees (approximate).....	25,000
Number of samples collected and analyzed (chemical analysis).....	33
Number of samples deficient in protein.....	20

MINERAL FEEDS

Number of registrations.....	26
Arizona manufacturers.....	2
Out-of-state.....	24
Number of manufacturers registered.....	16
Arizona.....	2
Out-of-state.....	14
Number of samples collected and analyzed (chemical analysis).....	9
Number of samples below guarantee.....	4