



California Commercial Feed Tonnage Report 2023



The California Department of Food and Agriculture (CDFA) Commercial Feed Regulatory Program (CFRP) is funded by the feed industry with an annual license fee and tonnage tax. The 2023 tax rate was 12 cents (\$0.12) per ton of feed distributed to the end-user in the State. Certain human food by-products were eligible for a lower tax of six cents (\$0.06) per ton to incentivize diversion of by-products to commercial feed.

Since 2022, the tonnage reporting section in the ExtraView database allows the licensee to provide the type of feed and intended species. This information is increasingly valuable to the CFRP, researchers, and other stakeholders to understand the California feed industry in a changing market. CDFA Safe Animal Feed Education (SAFE) Program has evaluated 2023 tonnage data to provide the annual Commercial Feed Tonnage Report. Categorization of feed type in this report is an estimation rather than exactly as provided by the licensee. Evaluation of the data revealed some inaccurate use of the feed categories, and some tonnage was re-categorized based on the written descriptions of the product/commodity. However, clarifications were made in the tonnage reporting section in 2022, which has improved the accuracy of reporting.

Over 23 million tons were reported to the CFRP in 2023, with one-third as mixed/formula feeds (**Figure 1, Table 1**). “Formula feed” is defined as any two or more feed ingredients, proportioned, mixed, and processed according to specifications. About 42% of tonnage reported was categorized as by-products, including human food by-products eligible for the reduced inspection tonnage tax rate. About 16% of tonnage was categorized as grains and seeds, and all other feed types equaled 3% or less of the total tonnage. (**Figure 1, Table 1**). The majority (55%) of tonnage reported was identified as intended for dairy cattle/calves (**Figure 2**).

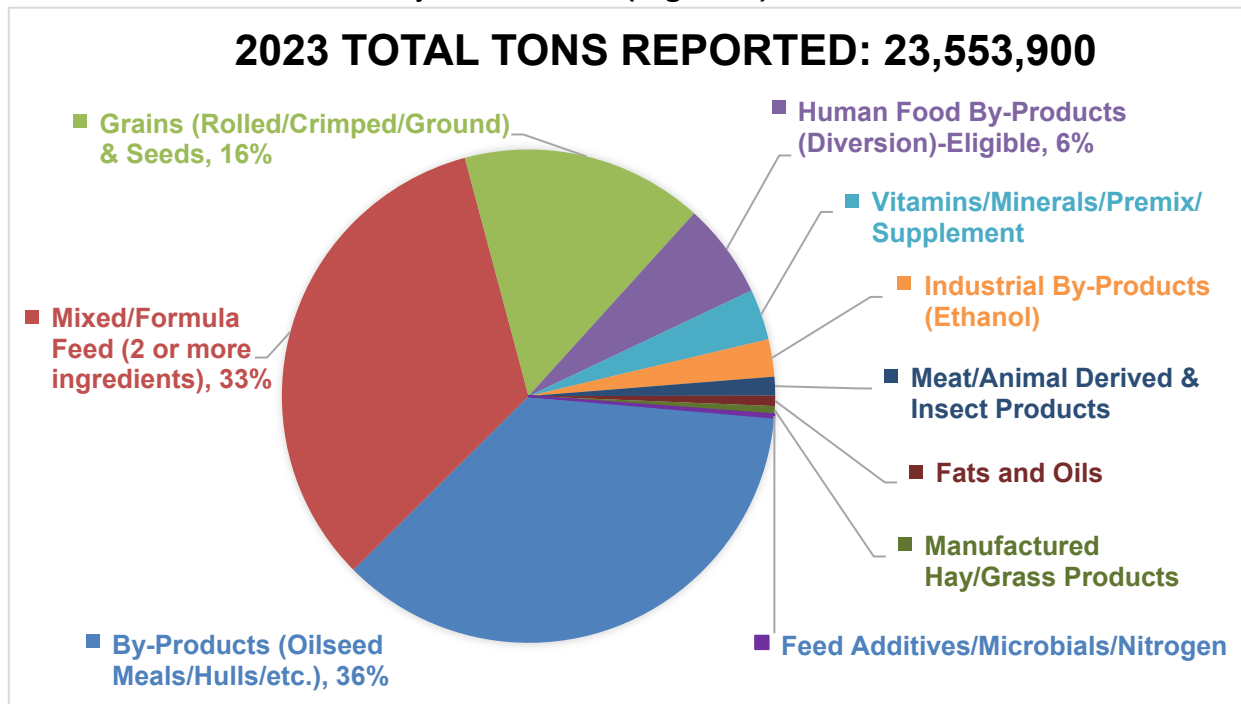


Figure 1. Percentage of total 2023 tonnage in each feed type. Categories without a percentage label were 3% or less.



California Commercial Feed Tonnage Report 2023



Table 1. Total tonnage in each feed type in 2023.

Feed Type	Tons
By-Products (Oilseed Meals/Hulls/etc.)	8,520,820
Mixed/Formula Feed (2 or more ingredients)	7,837,417
Grains (Rolled/Crimped/Ground) & Seeds	3,739,553
Human Food By-Products (Diversion)-Eligible	1,469,485
Vitamins/Minerals/Premix/Supplement	785,650
Industrial By-Products (Ethanol)	576,733
Meat/Animal Derived & Insect Products	290,126
Fats and Oils	158,213
Manufactured Hay/Grass Products	125,375
Feed Additives/Microbials/Nitrogen	50,527
Grand Total	23,553,899

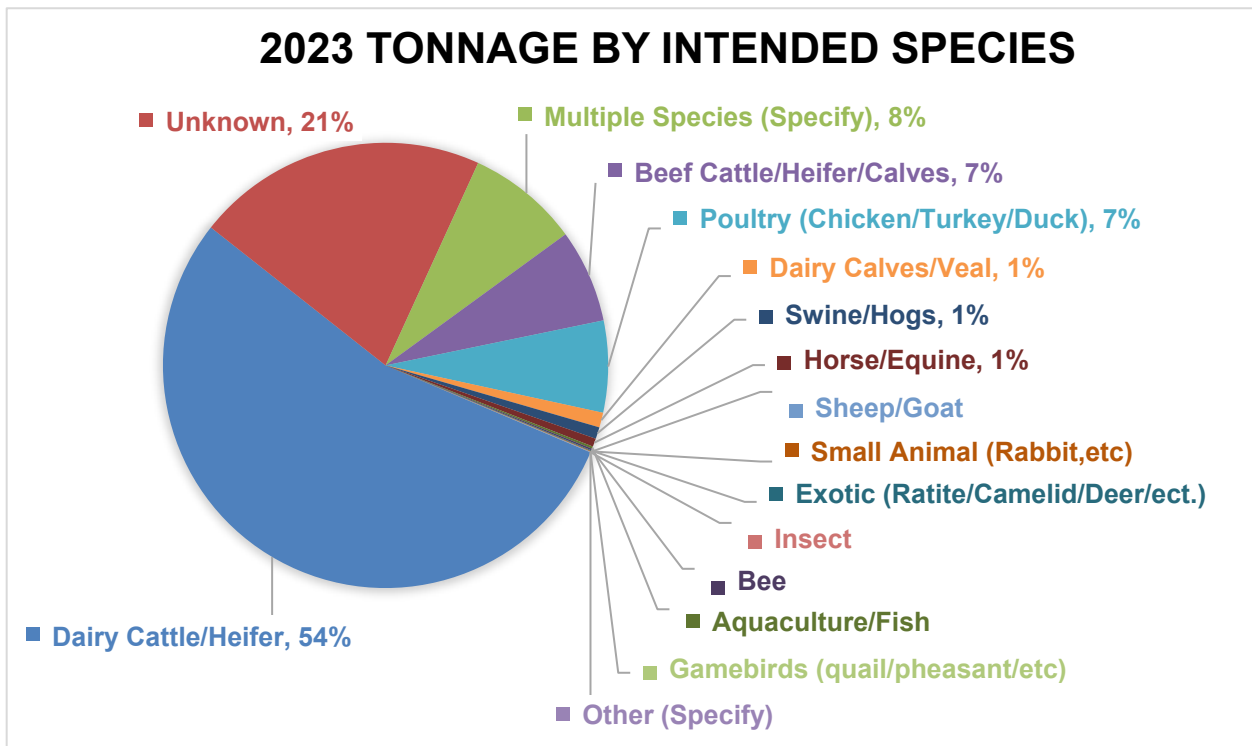


Figure 2. Total tonnage reported in 2023 by intended species of animal. Species without a percentage label were less than 1%.



California Commercial Feed Tonnage Report 2023



Formula Feeds, Supplements, Premixes

Under “mixed/formula feed” and “vitamins/minerals” the available categories were “medicated” or “non-medicated”. “Medicated” includes both feeds medicated with Veterinary Feed Directive (VFD) drugs and all other animal drugs such as monensin and decoquinate. Over 90% of the tonnage reported for mixed/formula feeds was non-medicated formula feed (**Figure 3, Table 2**), and 46% of tonnage for vitamins/minerals/premix/supplements was non-medicated (**Figure 4, Table 3**).

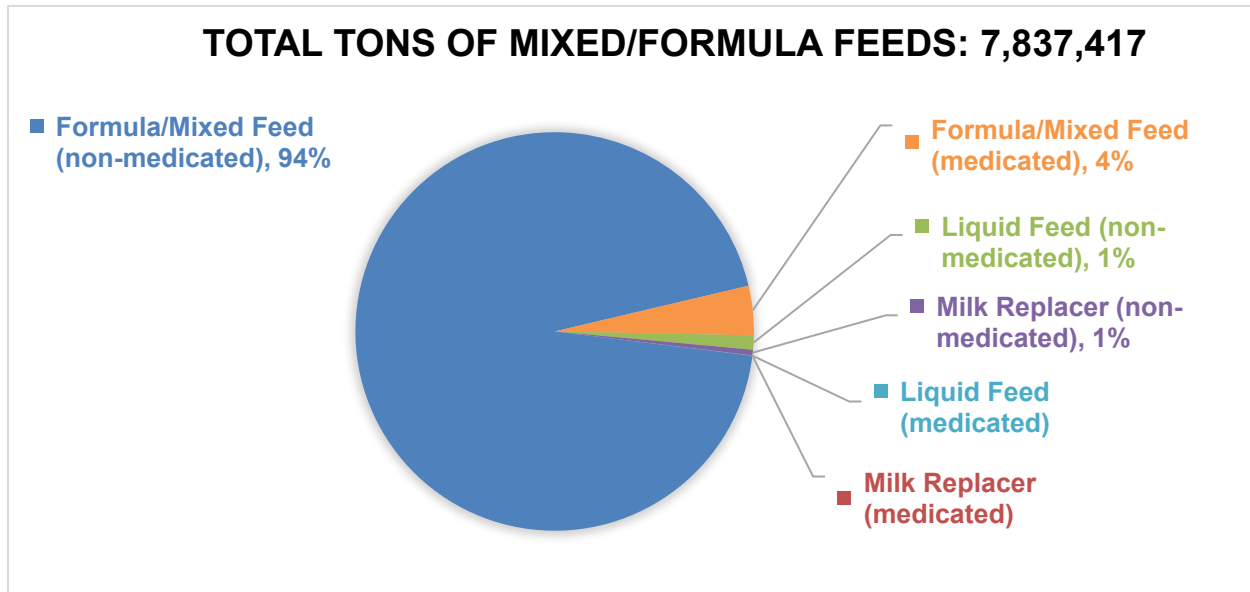


Figure 3. Percentage of tonnage for mixed/formula feeds. Labels without a percentage were less than 1%.

Table 2. Tonnage by feed category for mixed/formula feeds.

Feed Category	Tons
Formula/Mixed Feed (non-medicated)	7,396,042
Formula/Mixed Feed (medicated)	313,407
Liquid Feed (non-medicated)	90,518
Milk Replacer (non-medicated)	36,056
Liquid Feed (medicated)	1,358
Milk Replacer (medicated)	36
Grand Total	7,837,417



California Commercial Feed Tonnage Report 2023

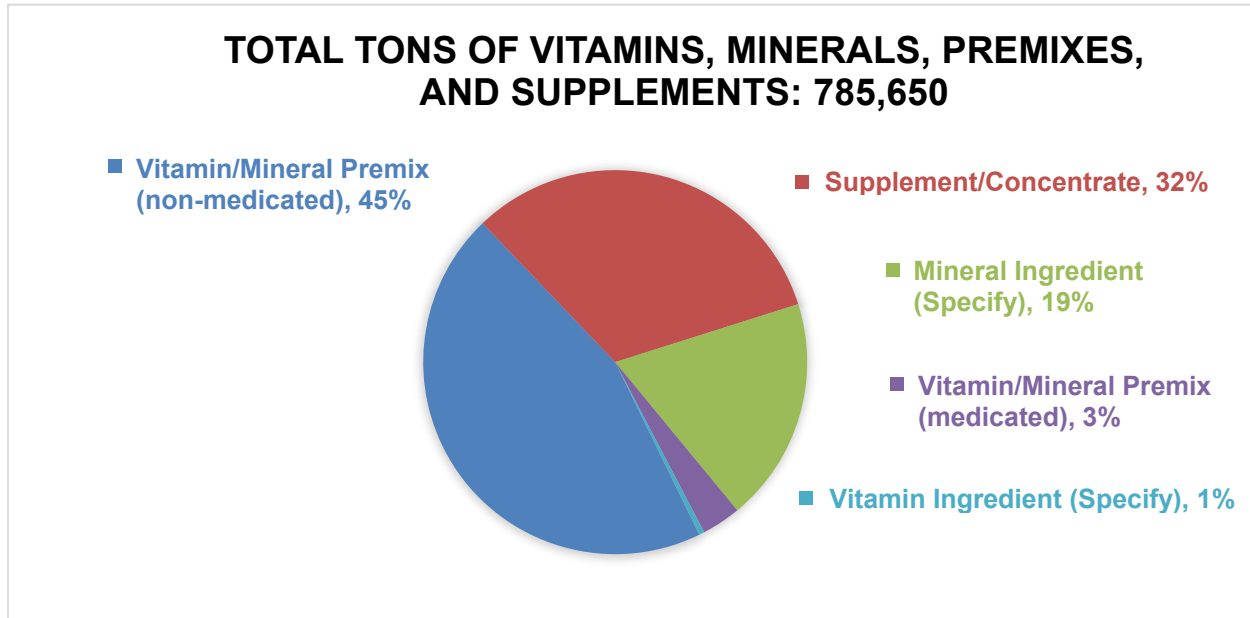


Figure 4. Percentage of tonnage for vitamins, minerals, premixes and supplements.

Table 3. Tonnage by feed category for vitamins, minerals, premix, and supplements.

Feed Category	Tons
Vitamin/Mineral Premix (non-medicated)	354,252
Supplement/Concentrate	253,362
Mineral Ingredient (Specify)	148,626
Vitamin/Mineral Premix (medicated)	25,863
Vitamin Ingredient (Specify)	3,547
Grand Total	785,650



California Commercial Feed Tonnage Report 2023



Commodities and Feed Additives

In the grain and seeds feed type (**Table 4**), the highest commodity reported was corn. The next highest was “mixed grains”, which may represent a mixture of whole grains such as a corn/barley mix or may have been used to report the tonnage of several individual grain commodities without distinguishing between them.

Table 4. Tonnage by feed category for Grains (Rolled/Crimped/Ground) & Seeds.

Feed Category	Tons
Corn	2,060,162
Mixed Grains (i.e., corn/barley mix)	1,343,659
Wheat	268,756
Other Grains/Seeds (Specify)*	53,095
Oats	6,282
Rice/Broken Rice	2,687
Barley	2,442
Millet	1,249
Sunflower Seeds	1,224
Grand Total	3,739,553

*Other grains/seeds reported included milo, rye, quinoa, flax, canola and soybeans.

Manufactured hay products, such as pellets and cubes, contributed about 125,000 tons.

Various “other” feed products were categorized as “feed additives” which consisted of technical additives, flavorings, amino acids, non-protein nitrogen, and microorganisms (**Table 5**.)

Table 5. Tonnage by feed category for Feed Additives.

Feed Category	Tons
Other Feed Additive (Specify)	23,980
Amino Acids	9,031
Non-Protein Nitrogen (Urea)	6,383
Enzymes/Fermentation Products/Yeast, etc.	4,503
Preservatives/Binders/Flavor/etc.	3,096
Direct Fed Microbials	2,630
Type A Medicated Articles	904
Grand Total	50,527

*Other feed additive reported included anti-caking agent, binders, mold inhibitor, probiotic, and flow agents.



California Commercial Feed Tonnage Report 2023



By-products

The tonnage reported under “human food by-products (diversion)- eligible” was subject to the reduced tonnage tax rate of six cents per ton, upon approval and audit from the program. The actual tonnage reported to the program under this feed type was 997,360.73 tons. However, estimated tonnage due to miscategorized feed is 1,318,448 tons (**Table 6**).

All by-products are further categorized as industrial by-products (**Table 7**) and by-products (oilseed meals/hulls/etc.) (**Table 8**). The greatest volume and diversity of tonnage was reported under by-products (oilseed meals/hulls/etc.). Canola meal had the most tonnage reported of any single commodity, followed by cottonseed and almond hulls which were only slightly less than the tonnage reported for mixed grains.

Table 6. Tonnage by feed category for Human Food By-products (Diversion) Eligible.

Feed Category	Tons
Whey/Dairy By-Products (Liquid)	482,780
Wet Fruit/Vegetable Pomace/Pulp	251,642
Cull Fruit & Vegetable	221,627
Dried Bakery Product/Cereal Food Fines	152,789
Brewers Wet Grain	128,634
Wet Food Processing Waste	49,204
Recovered Retail Food	31,772
Restaurant Food Waste	0
Grand Total	1,318,448

Table 7. Tonnage by feed category for Industrial By-Products (Ethanol).

Feed Category	Tons
Dried Distiller's Grains	335,247
Wet Distiller's Grains	222,097
Other Industrial (Specify)	7,875
Corn Oil	5,362
Glycerin	4,284
Distiller's Corn Solubles	1,869
Grand Total	576,733



California Commercial Feed Tonnage Report 2023



Table 8. Tonnage by feed category for By-Products (Oilseed Meals/Hulls/etc.).

Feed Category	Tons
Canola Meal	3,108,696
Cottonseed (Whole, Cracked)	1,259,782
Almond Hulls	1,068,661
Other By-Product (Specify)	1,003,605
Corn By-Product	519,948
Almond Hulls & Shell	501,754
Soybean Meal	345,337
Grain Screenings	178,270
Wheat Mill Runs	133,860
Grape Pomace	126,635
Soybean Hulls/By-Product	51,117
Beet Pulp/Beet By-Product	39,651
Sunflower Meal	36,758
Cottonseed Hulls/By-Products	28,298
Rice Bran	20,094
Bean/Pea By-Product	17,818
Safflower Meal	16,008
Dried Milk & Dairy By-Products (Whey/etc.)	15,877
Cottonseed Meal	15,705
Molasses	13,853
Nut By-product	5,348
Linseed Meal	4,502
Dried Milk/Dairy By-product	3,431
Potato By-Product	1,916
Rice By-product	1,735
Molasses By-Product (beet/cane)	1,391
Olive Meal	771
Grand Total	8,520,820

**Other by-products reported included mixed by-products, fig, prune meal, millrun, coconut meal, pomegranate, and various other ingredients.*



California Commercial Feed Tonnage Report 2023



Fat and Oils and Meat/Animal Derived

In the fat and oils and meat/animal derived feed types (**Table 9 and 10**), the highest commodity reported was dried poultry litter followed by animal fat and tallow. Animal fat and tallow can be found in both tables since this commodity could fall under either feed type, the total tonnage for this would be 86,330 tons.

Table 9. Tonnage by feed category for Fats and Oils.

Feed Category	Tons
Animal Fat and Tallow	66,622
Other Vegetable Oils (Specify)*	47,036
Yellow Grease	44,018
Canola Oil	537
Grand Total	157,197

**Other vegetable oils reported included palm oil or fat, nut oil, and soybean oil.*

Table 10. Tonnage by feed category for Meat/Animal Derived & Insect Products.

Feed Category	Tons
Dried Poultry Litter	138,666
Meat and Bone Meal (Ruminant)	39,568
Other Animal Product (Specify)*	30,073
Fish Meal/Fish	29,713
Animal Fat and Tallow	19,707
Meat	10,726
Poultry By-products	10,070
Chicken Meal	4,959
Meat and Bone Meal (Non-Ruminant)	3,055
Feather Meal	2,877
Destressed/Salvage Pet Food	587
Insect Products (Specify)	124
Lamb	0
Grand Total	290,126

**Other animal products reported included blood meal, plasma, and mixed meat and bone meal.*