**Various Data on GMOs in Livestock and Pet Food**

* Pesticide use in GMO crops: glyphosate:

“**Is glyphosate safe?**” Contains some brief comments on several studies of the effects of the pesticide glyphosate (Roundup). Also cites the article “**Glyphosate’s suppression of cytochrome…**”, commenting on it that “they are of the view that continuous and long-term exposure to glyphosate is responsible for some of the modern human diseases, including gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer’s disease.” This article also comments on the effects of glyphosate in animals, specifically suggesting that it disrupts the gut microbiome.

The article also mentions the regulations on the pesticide in crops and its tolerance level. I attached “**eCFR code of federal regulations**” which shows the current US tolerance amounts for this pesticide, as the data in the article was for Canada.

Additional reading: “**How GMOs cut the use of pesticides - and perhaps boosted it again**” from NPR.

* How are GE crops processed in animal bodies:

“**Detection of glyphosate in meat**” and “**Determining whether transgenic DNA...**” and “**Prevalence and impacts...**”: Comment on the use of GE (genetically engineered) crops in livestock production and find that meat from livestock fed GE crops does not differ from that of livestock fed non-GE crops.

* What portion of crops are biotech:

“**USDA ERS Recent Trends in GE Adoption**”

Percent of domestic soybean acres planted with HT seeds rose to 94 percent in 2014.

Currently, approximately 89 percent of domestic corn acres are produced with HT seeds.

Domestic Bt corn acreage grew to 81 percent in 2015.

“**B52 Infographics…**”: Infographic of data on global use of biotech (GMO, GE) crops, very useful and quickly accessible data on numbers of GMOs.

* How much GE crop goes to livestock feed?

About 36 percent of world consumption of cereals goes to feed, the bulk of it coarse grains.

Source (was not able to download a copy): FAO. 2013. World Agriculture Towards 2030/2050: The 2012 Revision. United Nations Food and Agriculture Organisation, Rome, Italy.

Corn is the primary U.S. feed grain, accounting for more than 95 percent of total feed grain production and use. Source: <https://www.ers.usda.gov/topics/crops/corn/background.aspx>

Further reading: <https://www.scientificamerican.com/article/time-to-rethink-corn/>

* Additional document

“**Go non-GMO**”: a concise presentation of data and reasons to avoid GMOs

* Non-GMO Project Standard for animal-derived ingredients:

The Non-GMO Project Standard considers animal-derived ingredients as high-risk inputs due to the prevalence of GMOs in animal feed. Most of the corn, soy, and canola grown in North America is genetically modified and ends up in animal feed 1,2,3.

Though traces of genetically modified material can be detected in animal ingredients 4, it is not the most reliable method for identifying or quantifying GMO content. Therefore, for ingredients such as meat, dairy, eggs, and honey, the standard focuses the evaluation on the animal feed. The feed does not need to be Non-GMO Project Verified, as long as it meets our requirements (though if it is verified, that certainly speeds up the verification process).

Animals must eat a non-GMO diet:

Meat animals (other than Poultry): starting at birth

Poultry: starting from second day after hatching

Dairy animals and laying hens: 30 days prior to verification and continuously thereafter

Honey and other bee products: Documentation is required showing that the 4-mile radius surrounding the beehives is free from all high-risk commercial agriculture, similar to organic requirements. Any supplemental feed must also comply with the standard.

* No regulation for labeling GMOs in pet food, not included in new labeling legislation.

 For livestock farmers in the US this remains a mystery, but if the animal feed is not organic or non-GMO verified, it almost certainly contains GMOs.

The United States of course, infamous for the pervasiveness of GMOs and the country’s lack of labeling laws, does not have to deal with the particular complexities of GMO animal feed labeling. In the United States, in order to avoid animal products that have not been influenced by GMO animal feed, consumers have to look for certified organic products (since organic standards prohibit the intentional use of GMOs) and for the recently release Non-GMO Project certification for meat, egg, and dairy products.

* How pervasive in animal feed?

Helpful data on how prevalent GMOs are in pet foods on this webpage: <http://www.gmoinside.org/gmos-in-animal-feed/> Any grains used in food are most likely GMO. Additionally, some minor ingredients such as “tocopherol”, which can be made from a number of original plants including soybeans, or “soybean or canola oil”.

* Brands producing non-GMO pet food

The following is according to http://www.dogsnaturallymagazine.com/gmo-no-gmo/

Here’s what I have learned from each so far…

Honest Kitchen Pet Food

No GMO ingredients; they require a pledge to this effect from every supplier.

Nature’s Logic Pet Food

No GMO ingredients. The only possible GM ingredient would be millet, but currently there is no GM millet. If this changes they will require certification of non-GM.

People Fud

Is actively working with ingredient suppliers to “find out the truth about the vegetables”. Potatoes and vegetables are their question (my comment – grains are the most likely to be GM, which are not found in this pet food; I was amazed at their honesty. He could have easily said no GMO; but he didn’t. This is not an endorsement on my part, just impressed with their honesty). Most supplements and protein sources are specified non-GMO.

Fresh Fetch Pet Food

Is working with the Non-GMO project to identify potential GMO in their foods; actively tries to use no GMO.

Red Moon Pet Food

No GMO ingredients; purchase all ingredients from certified GMO free suppliers.

Answers Pet Food

No GMO ingredients.

Weruva Pet Food

No GMO ingredients. Suppliers of ingredients can provide certification.

Blue Seal Pet Foods

Possible GM ingredients. Company does not seek out GMO free.

Iams Pet Food

Possible GM ingredients. Company states these possible GM ingredients must meet the same strict safety and legal requirements as other foods people eat.

Raw Health Pet Food

No GMO ingredients. Supplier of ingredients can provide certification.

Nature’s Variety Pet Food

No GMO ingredients. Company states they require non-GMO from suppliers.

* Use of GMOs in common pet food brands, according to their websites.

Purina

Does your Dog and Cat food contain GMO grains?

“It is likely that our pet food contains GMO grains because genetically modified grain and grain products constitute a significant portion of the supply of grain available throughout the U.S. for both human and pet foods. U.S. grain handling and distribution practices result in a co-mingling of supply, which results in a loss of identity preservation.

The FDA recognizes the safety and equivalence of products derived from U.S.-approved varieties of genetically modified grain, so there is no reason to exclude it from the general supply. In addition, the FDA does not require products containing GMO grains to bear additional labeling.”

Predominantly grains in first few ingredients

Eukanuba and Iams

Predominantly grains in first few ingredients. Corn meal second ingredient. No statement on sources of ingredients