

DATCP Feed Updates

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Hemp, hemp byproducts in feed, and GMO claims on feed labels

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- We will not cover:
 - pricing
 - nutritional value
 - opinion
- We will discuss:
 - current regulatory status of each issue
 - allowable and unallowable paths to follow

High Points

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- Definitions of hemp
- Allowable uses of hemp or hemp byproducts
- Definition of GMO
- Federal guidances used to determine allowable GMO claims on labels of commercial feeds

What is industrial hemp?



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- 2014 Farm Bill and Wis. Stat. § 94.55
 - Industrial hemp - plant with the Latin species name *Cannabis sativa* L., with a delta-9-THC concentration of 0.3 percent or less in all parts of the plant when it has been dried.
- 2018 Farm Bill
 - federal law removed the word “industrial”
 - Hemp - plant *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 1.3 % on a dry weight basis.

Name the elephant in the room

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Cannabidiol - CBD

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- Cannabis is a plant of the Cannabaceae family and contains more than eighty biologically active chemical compounds. The most commonly known compounds are delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD).
- Epidiolex - human drug containing active ingredient - Cannabidiol.
- Set precedent: Cannabidiol (CBD) is regulated by the Food & Drug Administration as drug.



The mammoth in the room? All the CBD-containing products out there.
Bottom line: Cannabidiol is a drug. FDA regulates drugs.

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Hemp byproducts

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- Hemp seed
- Dehulled hemp seed
- Hemp seed protein powder
- Hemp seed oil
- Etc.



Hemp byproducts for humans

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- In December 2018, FDA completed its evaluation of 3 generally recognized as safe (GRAS) notices for:
 - hulled hemp seed,
 - hemp seed protein powder, and
 - hemp seed oil.
- No question to company conclusion of safe use.
- As long as otherwise compliant, those 3 products can be legally marketed in human foods for the uses described in the notices.

Hemp byproducts for animals

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- Safety and utility information not available.
- No approved ingredients or uses for any hemp or hemp byproduct.
- Human food GRAS \neq Animal food GRAS

Hemp in feed summary

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- Hemp and hemp byproducts not currently approved for use in animal feed



Genetically Modified Organisms (GMOs)

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January is National Biotechnology Month!



GMO or non-GMO?

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Bull mastiff dog



GMO or non-GMO?

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Holstein



GMO or non-GMO?

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Polled Hereford

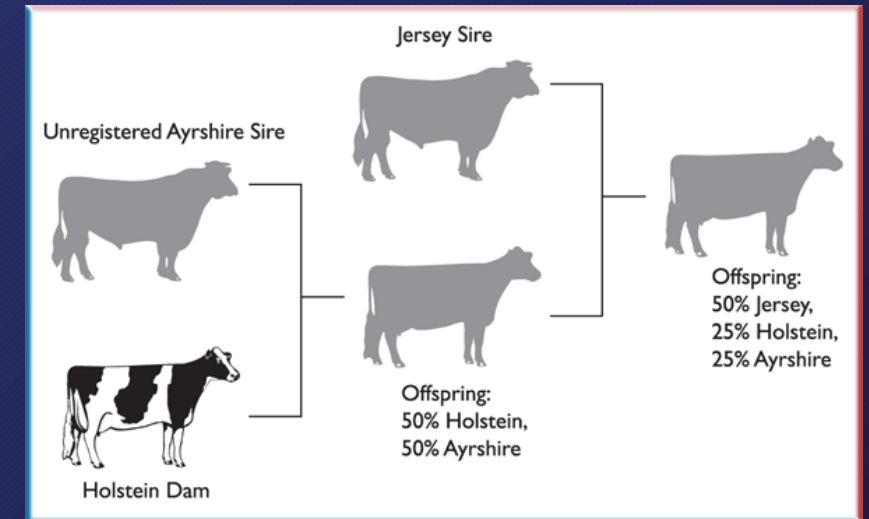
According to the Federal definitions, most domestic animals would be considered GMO through genetic selection.



Genetically modified organism

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- FDA considers the term “genetic modification” to be a broad term
- Genetic modification encompasses selective breeding, and lab-based in vitro methods, as well as bioengineering
- Genetic engineering is thus a subset of genetic modification



GMO Label claims

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- Must be truthful and not misleading
- Encouraged:
 - Not genetically engineered
 - Not genetically modified through the use of modern biotechnology
 - Not bioengineered
- Discouraged: not GMO or non-GMO

Blended feeds example

- Misleading: “None of the ingredients in this food are genetically engineered”
- Why? Minerals cannot be bioengineered.

HEIFER YOUNGSTOCK MINERAL

For dairy replacement heifers, youngstock and young cattle on lowgrain diets.

None of the ingredients in this mineral are genetically engineered

Guaranteed Analysis

Calcium	max	19.2%
Calcium	min	17.5%
Phosphorus	min	6.5%
Magnesium	min	1.0%
Potassium	min	1.0%
Salt	max	26.3%
Salt	min	24.5%
Sodium	min	10.0%
Zinc	ppm	4,000
Copper	ppm	944
Selenium	ppm	27
Vitamin A	units/lb	240,000
Vitamin D	units/lb	60,000
Vitamin E	units/lb	1,200

Ingredients

Monocalcium Phosphate, Dicalcium Phosphate, Calcium Carbonate, Salt, Magnesium Oxide, Potassium Chloride, Iron Sulfate, Zinc Sulfate, ethylenediamine dihydriodide, Manganese Sulfate, Copper Sulfate, Cobalt Carbonate, Sodium Selenite, Vitamin A Acetate, Vitamin D Activated Sterol, Vitamin E Supplement, Mineral Oil.

Feeding Directions

Feed 0.25 to 0.5 pounds of this mineral per head per day.

Manufactured by:

ABC Feeds
Madison WI 55555

Net Weight 50 lbs (22.68 Kg)

Implication through graphics

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- Misleading: “Not produced through modern biotechnology”
- Why? Label also includes statements or vignettes that suggest or imply that, as a result of not being produced through modern biotechnology, such food is safer, more nutritious, or has different attributes than other foods solely because the food was not produced using modern biotechnology.



“Free” claims

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- Misleading: The word “free” (e.g. “GMO free,” “GE free,” “does not contain GMOs,” or “non-GMO”) conveys zero or total absence, and without a regulatory definition in place, substantiating a “free” claim is impossible without a validated test method (currently no method to test for the absence of bioengineered material).



Ingredient adjective

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- Not allowable: “Ingredients: non-GMO corn, non-GMO wheat, cane molasses,”
- The ingredient statement may only utilize formal ingredients in feed, no verbiage regarding the GE status of any ingredient.

INGREDIENTS: rBGH Free Cream Cheese (pasteurized cultured milk and cream, salt, stabilizers (xanthan and/or carob bean and/or guar gums)), Non-GMO Canola Oil, Filtered Water, rBGH Free Sharp Cheddar Cheese (cultured milk, salt, enzymes, annatto (color)), Roasted Garlic, Brown Rice Syrup, Garlic, Apple Cider Vinegar, Onions, Frozen, Chopped, Unprepared, Sea Salt, Liquid Smoke (water, natural hickory smoke flavor), Non GMO Soy Protein, Lemon Juice Concentrate, Mustard Flour, Guar Gum, Xanthan Gum, Chives

Allowable Claims

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- Where consumers may not distinguish different types of salmon, sellers may wish to distinguish between different types of salmon. A viable statement would be “Not genetically engineered. No Sockeye salmon is genetically engineered.”
- “Some of our growers plant soybean seeds that were developed through modern biotechnology to be drought tolerant,” is viable.

Required Disclosures

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- If a GE food or one of its constituents:
 - differs from the traditional counterpart in use (i.e. if the GE food behaves differently when fried or canned).
 - has a significantly different nutritional property compared to the non-GE counterpart (e.g. a vegetable bioengineered to contain vitamin B12 and traditionally has no B12).
 - contains an allergen consumers would not expect to be present based on the name of the food - declare the allergen.

National Bioengineered Food Disclosure Standard (NBFDS or Standard)

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- Establishes national mandatory bioengineered (BE) food disclosure standard
- Eff. February 19, 2019; Impl. January 1, 2020
- Limits definition of food to food for human consumption, and does not include food for animals
- Focus on BE claims, not absence claims
- Reference 80 FR 19860 and 80 FR 65814 - USDA/AMS

- Establishes list of BE foods¹:
 - Alfalfa
 - Apple (Arctic™ varieties)
 - Canola
 - Corn
 - Cotton
 - Eggplant (BARI Bt Bgun varieties)
 - Papaya (ringspot virus-resistant varieties)
 - Pineapple (pink flesh)
 - Potato
 - Salmon (AquAdvantage®)
 - Soybean
 - Squash (summer)
 - Sugarbeet

Unified Website for Biotechnology Regulation

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- <https://usbiotechnologyregulation.mrp.usda.gov/biotechnologygov/home/>



FDA Guidances

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- Guidance for Industry, 187, “Regulation of Genetically Engineered Animals Containing Heritable Recombinant DNA Constructs”
- Draft Guidance for Industry: Voluntary Labeling Indicating Whether Food Has or Has Not Been Derived From Genetically Engineered Atlantic Salmon (Rev.3/2019)
- Guidance for Industry: Voluntary Labeling Indicating Whether Foods Have or Have Not Been Derived from Genetically Engineered Plants (Rev. 3/2019)

GMO Claims on Feed Labels Summary

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- Must be truthful, and able to substantiated

Thank you!

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