



NMPF Update

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Senior Vice President, Environmental and Regulatory Affairs July 11, 2023

FDA Plant-Based Labeling Guidance

- FDA issued long awaited draft guidance on February 22nd
- Comment period ends July 31st
- Recommends disclosure of nutritional deficiencies if the term "milk" is used on plant-based milk alternatives
- Guidance is non-enforceable, rules are!
- Guidance needs to be withdrawn
 - PBMA's are not milk
 - Violates Administrative Procedures Act
 - Unconstitutional on several grounds
 - Unlikely to clear up confusion

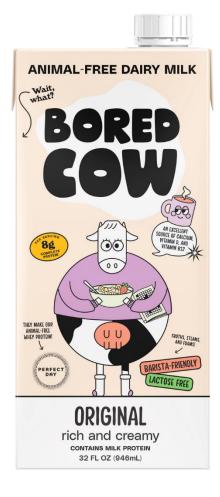


FDA Labeling of Synthetic Foods



- FDA needs to enforce existing labeling rules with respect to synthetic foods
- Bored Cow is not Animal-Free Dairy Milk
- Bored Cow likely contains one whey protein
- Real milk is complex
 - 13 Essential Nutrients
 - 2 complex families of proteins
 - 400 Fatty Acids
 - Numerous micronutrients
- FOIA request on labeling synthetic foods pending
- Complaint filed with FDA Commissioner

FDA Labeling of Synthetic Foods



Bored Cow (plain)

INGREDIENTS: Water, animal-free whey protein (from fermentation), sunflower oil, sugar, less than 1% of: vitamin A, vitamin B12 (cyanocobalamin), vitamin D2, riboflavin, citrus fiber, salt, dipotassium phosphate, acacia, gellan gum, mixed tocopherols (antioxidant), calcium potassium phosphate citrate, natural flavor.

This is not milk!

What are Milk Proteins?

- Two main protein families that provide different functional properties
 - Casein (~80%)
 - Whey protein (~20%)

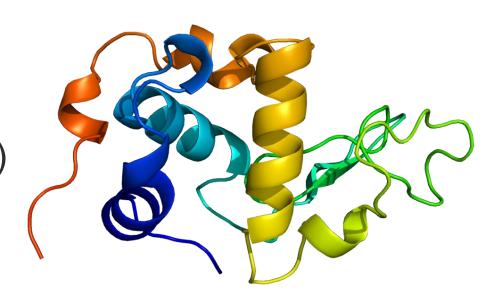
Water	87%
Lactose	4.6%
Protein	3.4%
Fat	4.2%
Minerals	.8%
Vitamins	.1%

^{*}Composition of cow's milk can change daily based on factors impacting the cow such as feeding strategies, lactation stage, season, etc.

The Complex Family of Whey Proteins

As Many as Eight Types:

- 1. α-lactalbumins
- 2. β-lactoglobulins
- 3. Bovine serum albumin
- 4. Immunoglobulins (IgG, IgM, IgA)
- 5. Proteose-peptones
- 6. Lactoperoxidase
- 7. Lactoferrin
- 8. Caseinomacropeptide



The Complex Family of Casein Proteins

Four Main Types but with Known Variants:

- 1. α_{s1} -casein Variants (A,B,C,D,E,F,G,H,I,J)
- 2. α_{s2} -casein Variants (A,B,C,D,E)
- 3. β -casein Variants (A¹, A², A³, B,C,D,E,F,G,H¹,H²,J,K,L)
- 4. κ-casein Variants (A,B,C,E,F¹,F², G¹,G²,H,I,J)

The amino acid sequence is different between the types and the ratios may vary.

Variations may matter, for example, A1 has a histidine amino acid at position 67, while A2 has a proline amino acid. Both have 206 amino acids. The A2 Milk Company asserts this change makes A2 milk easier to digest.

New rBST Test Available

- Eurofins has developed new test for rBST targeted to be used by processors
 - Developed to test samples from individual farms, not co-mingled
- Method detects a peptide of the recombinant protein and can detect rBST concentrations lower than 0.001%
- Eurofins is potentially developing label to go along with test
- Webinar recording available for those interested







2025-2030 Dietary Guidelines for Americans (DGAS)

- Advisory Committee has been appointed to write Scientific Report
 - Comment period currently open for input to Committee
- HHS and USDA will then use Scientific Report to draft DGA
 - Another comment period will open for input on the DGA
- NMPF advocating for:
 - 3 servings of dairy continuing to be recommended
 - New science on full-fat dairy included in Committee's review process



FSMA §204 - Traceability

- FDA's High Risk Cheeses:
 - Cheese (made from pasteurized milk), fresh soft or soft unripened (cottage, chevre, cream cheese, mascarpone, ricotta, queso blanco, queso fresco, queso de crema, and queso de puna)
 - Cheese (made from pasteurized milk), soft ripened or semi-soft (brie, camembert, feta, mozzarella, taleggio, blue, brick, fontina, monterey jack, and muenster)
 - Cheese (made from unpasteurized milk), other than hard cheese
- CDC (2/12/2021): Generally, make sure the Hispanic-style fresh and soft cheeses (like queso fresco) you eat have labels that state, "Made with pasteurized milk."

CDC on Listeria and Cheese

For at risk individuals (old, ugly or pregnant): Eat this, not that Choose these instead Do not eat •Unpasteurized soft cheese, such as queso Pasteurized soft cheeses heated to an internal fresco and brie temperature of 165°F or until steaming hot Unheated cheeses sliced at a deli •Deli-sliced cheeses heated to 165°F or until steaming hot •Hard cheeses, such as cheddar and parmesan •Cottage cheese, cream cheese, string cheese, and feta

Healthy Claim Parameters

- Contain a certain meaningful amount of food from at least one of the food groups or subgroups recommended by the DGAs (fruit, vegetables, grains, dairy, protein foods)
- For a dairy food to qualify, food must contain at least ¾ cup equivalent dairy and per RACC must have no more than:
 - 2 grams saturated fat
 - 230 mg sodium
 - 2.5 g added sugar
- Low-fat and fat-free milk and most plain fat-free and low-fat yogurts qualify
- NMPF has requested that all dairy be treated as a group and qualify for use of healthy

Sodium Reduction Guidance

- FDA released voluntary, short-term goals
 - Targeting sodium content in commercially processed, packaged and prepared foods
 - Goal: To reduce sodium intake while supporting role sodium plays in maintaining a safe food supply
- NMPF and IDFA have submitted comments and met with FDA emphasizing that butter and cheese need to exempt from guidance
 - Quality, food safety concerns & shelf life
- USDA using guidance as reference for sodium reduction in proposed school meal standards

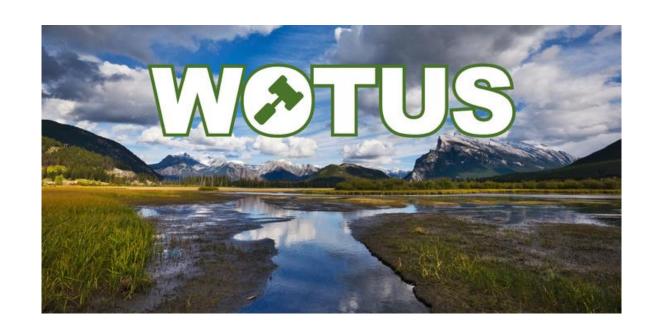


Short Term Sodium Reduction Targets

Food	Baseline (mg/100g)	Target (mg/100g)
Cottage Cheese	360	340
Cream Cheese	403	380
Brie	533	500
Soft Hispanic	749	710
Cheddar	659	620
String	820	680
Butter	670	590

Sackett v. Environmental Protection Agency

- Shocking 5/4 Supreme Court decision. All 9 justices concurred in outcome.
- Test is now "continuous surface connection"
- Adjacent largely written out of CWA, focus on adjoining
- Overturned policy of 8 administrations over 45 years
- Current WOTUS rule is DOA, EPA to issue new rule Sept. 1



BUSINESS

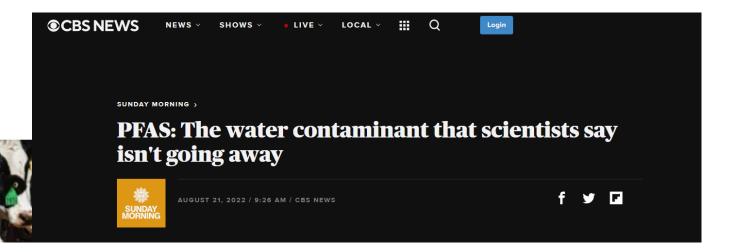
Living a PFAS Nightmare



While Schapp's fond memories of his dairy are now tainted with destruction and heartache, he never and fight for his farm.

(Farm Journal)

By TAYLOR LEACH March 1, 2023



Environment and Outdoors

More than 50 Maine farms impacted by PFAS, but state officials see 'glimmer of hope'

Maine Public | By Kevin Miller

Published February 1, 2023 at 5:52 PM EST



PFAS Mitigation

- FDA continuing dairy feed PFAS sampling assignment
- EPA proposed low MCL for water
 - Approximately 3200 water utilities impacted
 - Water bills could increase by \$100 to \$11,000
- EPA pending proposal to add PFAS to Superfund, enforcement discretion offering meaningless
- Food manufacturers need to know what is in their packaging and know state laws
- Food test results continue overall trend of non-detect except for seafood



State PFAS Packaging Laws

- Eleven states have issued PFAS bans in food packaging
 - California, Colorado, Connecticut, Hawaii, Maine, Maryland, Minnesota, New York, Rhode Island, Vermont and Washington
- Effective dates range from 12/31/22 to 12/31/24
- Seven apply only to paper food packaging
- Most require the intentional addition of PFAS but not all
- PFAS may be in some dairy packaging
 - Food companies need to check with their packaging suppliers

Recent Litigation on PFAS in Packaging and Butter

- Class Action lawsuit filed in Feb 2023 claiming butter company had violated the laws that prohibit food packaging from containing PFAS
- The plaintiff claims "the company should have warned customers about the presence of toxins in its products, specifically within the grease-resistant packaging, as it posed serious health risks."
- "Insofar as PFAS made its way into Defendant's Products on purpose, it should have been listed on the Product's labeling," the complaint continues.



Farm Air Emissions X2



- EPA recalled the EPCRA Manure Air Emission exemption for reconsideration
- New rule pending at OMB
- Rumored small farm exemption would be a joke
- NAEMS Emission Estimation Methods out anytime.
- Will cover NH4, H2S, PM, VOC
- Stakeholder review then finalization by EOY
- Regulatory impact unclear