

ANNUAL  
**MEAT** 2019  
CONFERENCE



March 3-5, 2019 | Hilton Anatole | Dallas, TX



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# Consumer Demands and Consumer Perceptions



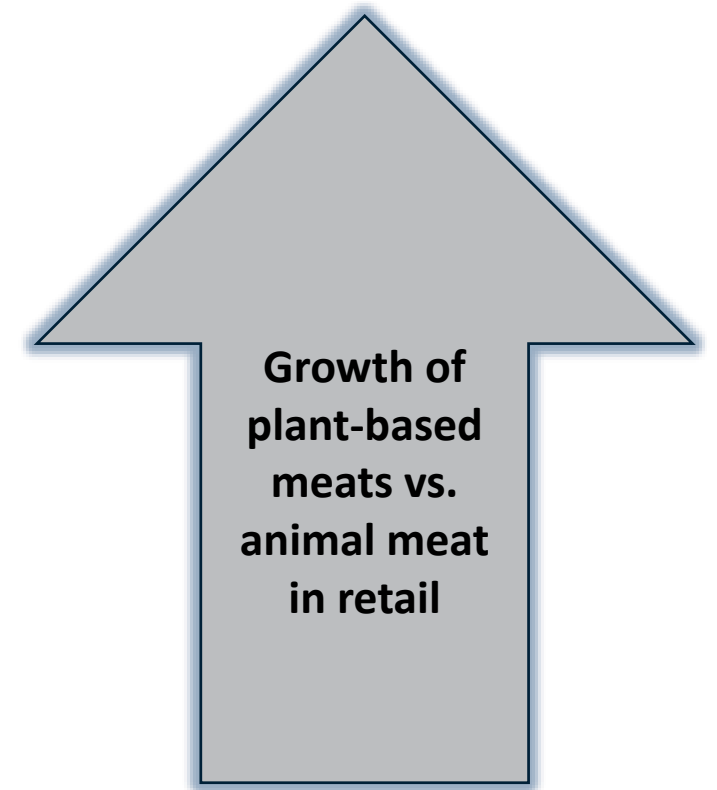
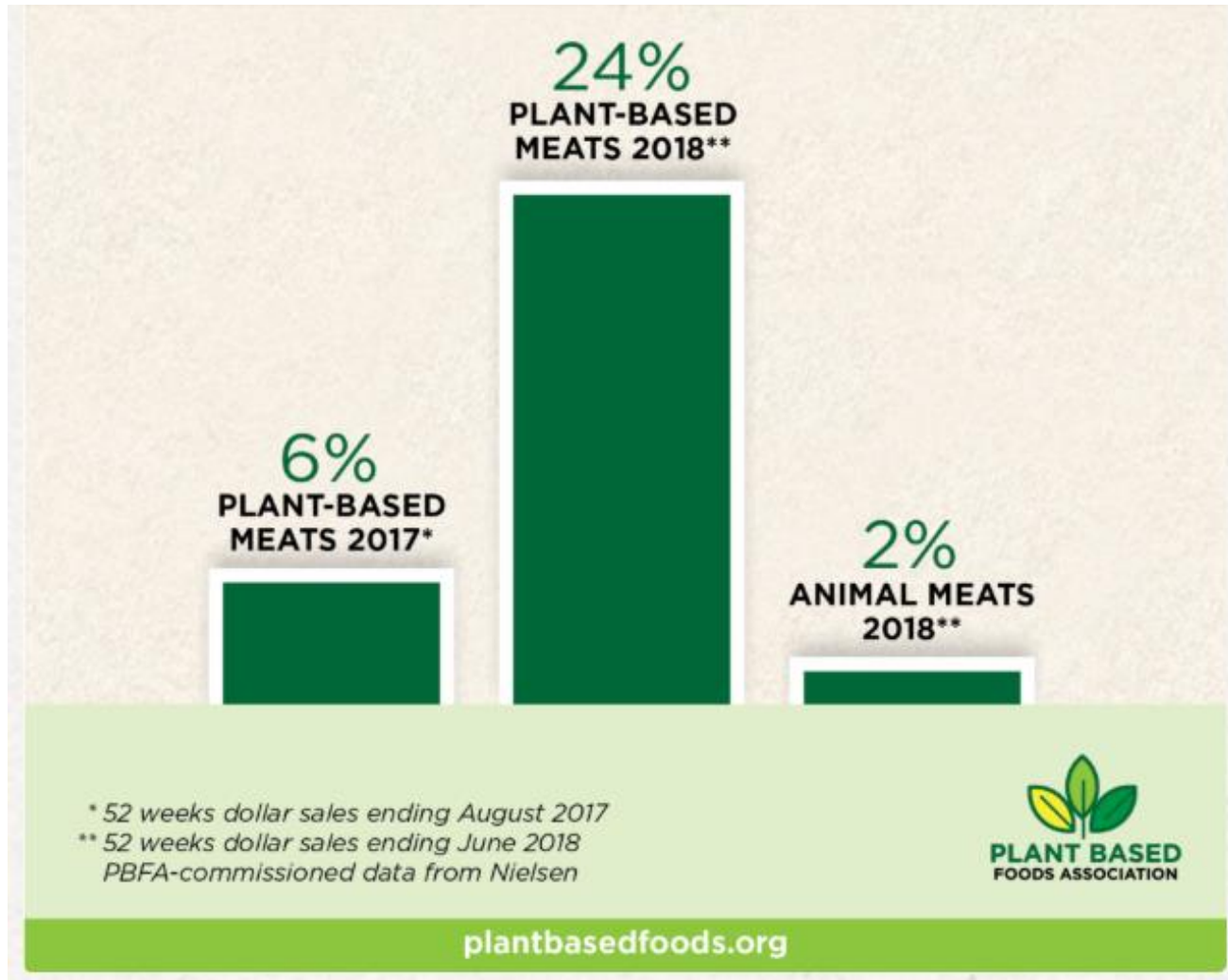
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# Nielsen: 2018 Retail Sales Data





# Meat vs. Plant-Based Alternatives in Dollar Sales 2018



Meat sales



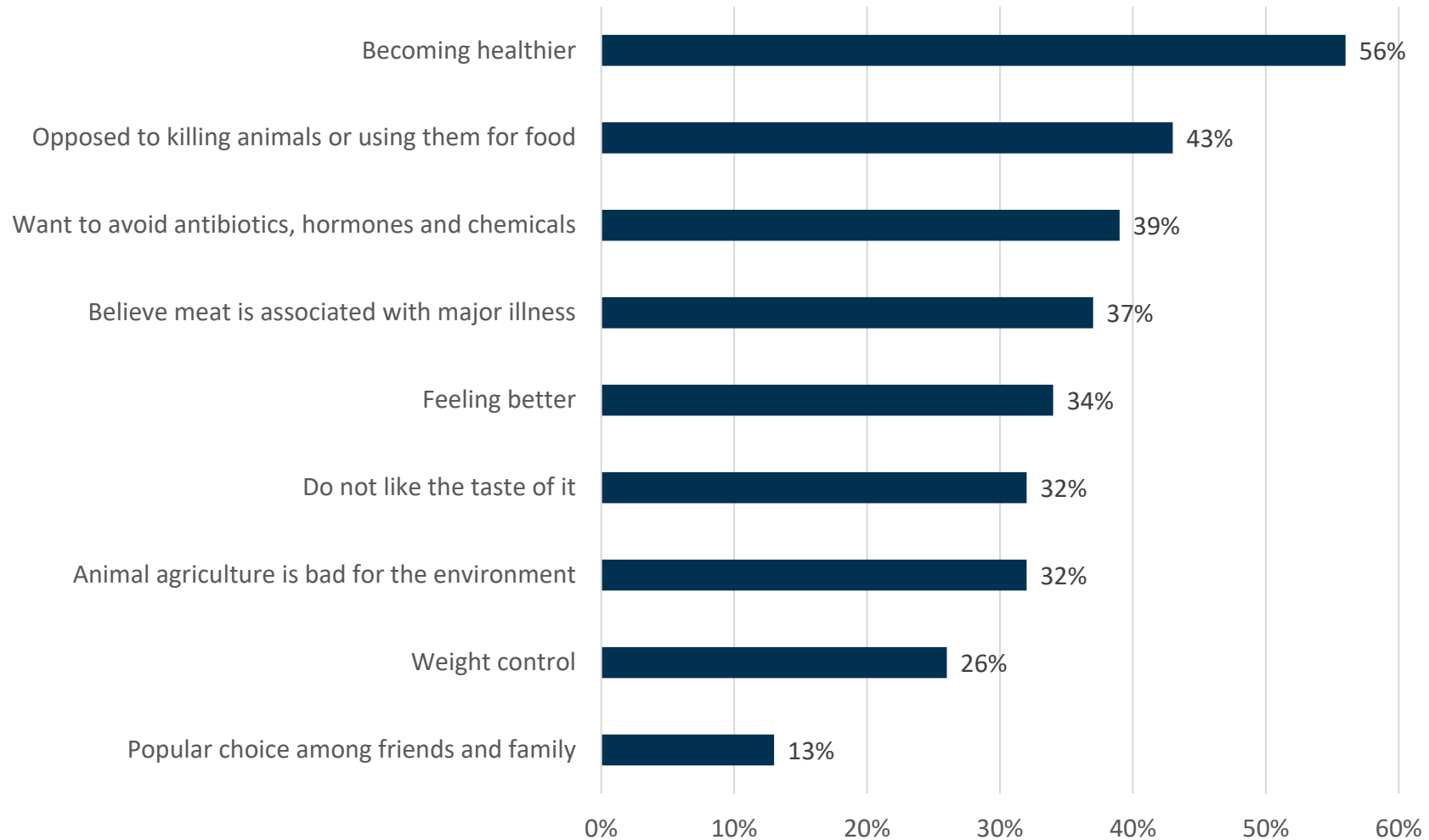
Plant-based alternatives sales







# Top Reasons People Eat a Vegetarian/Vegan Diet





# Will Consumers Buy Meat Alternatives or Blended Products?

| Would you purchase...?   | Already do | Definitely would | Maybe would | Absolutely not |
|--|------------|------------------|-------------|----------------|
| Blended meat/plant-based items, such as a blend of ground beef with mushroom burgers               | 13%        | 23%              | 40%         | 24%            |
| Plant-based/vegetarian protein, such as veggie burgers, meatless tenders, meatless meatballs, etc. | 15%        | 19%              | 31%         | 36%            |
| Cell-based meat and poultry (developed in a lab from animal cell culture)                          | N/A        | 18%              | 27%         | 55%            |



# Which Consumer Demographic is Most Likely to Buy Plant-Based Meat Alternatives?

| Would you purchase...?                | Already do | Definitely would | Maybe would | Absolutely not |
|---------------------------------------|------------|------------------|-------------|----------------|
| <b>Plant-based/vegetarian protein</b> |            |                  |             |                |
| All                                   | 15%        | 19%              | 31%         | 36%            |
| Gen Z                                 | 22%        | 24%              | 32%         | 23%            |
| Younger Millennials                   | 21%        | 25%              | 33%         | 20%            |
| Older Millennials                     | 17%        | 21%              | 34%         | 28%            |
| Gen X                                 | 13%        | 19%              | 30%         | 38%            |
| Boomers                               | 9%         | 10%              | 28%         | 54%            |
| Describe diet as "meat eater"         | 13%        | 18%              | 31%         | 38%            |
| Describe diet as "flexitarian"        | 28%        | 24%              | 31%         | 17%            |



# Innovation/Investment/Partnerships



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# Nurture Ranch



## Nurture Ranch claim: Better In 12 Ways®

1) Nurture Tracker

2) 1Steer

3) Humane

4) No Antibiotics

5) No Hormones

6) Low Fat & Cal

7) CLA

8) Omega 3

9) More Vitamins A, B1 & 2 And E

10) Mineral Rich

11) Environment

12) Indy Ranchers

Certificate by the American Grassfed Association includes the following standards:

- **100% Grass Fed** from weaning until harvest with no grain ever.
- **Free Range** pasture raised without confinement to feedlots.
- **Antibiotic & Hormone Free.**
- **Traceable Origin** born and raised in the USA.



“Our strategic alliance with Memphis Meats is an exciting way for Cargill to explore the potential in growing the cultured meats segment of the protein market. As a leading and trusted source for wholesome, sustainable and responsibly produced protein, this investment fits nicely with our customer-first approach to grow our portfolio.”

- Brian Sikes, Protein group leader, Cargill



“We want to work with them to scale. Cost is the main focus for us. ... For the first time, we’re replacing meat with meat - not a meat alternative. That gets Tyson and Cargill enormously excited because they’re in the meat business. There’s the potential to transform feeding the world as we know it.”

- Uma Valeti, CEO and cofounder, Memphis Meats



**MEMPHIS**  
M E A T S

**FAEGRE BAKER  
DANIELS**





Future Meat Technologies has announced a \$2.2 million seed investment round co-led by Tyson Ventures, the venture capital arm of Tyson Foods.





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“We need to be thinking about alternate ways to produce healthy protein in a more efficient way – to produce protein without all the other things [the parts of crops and animals we don’t use].”  
 -Jonathan McIntyre, CEO, Motif Ingredients







# Regulatory Oversight



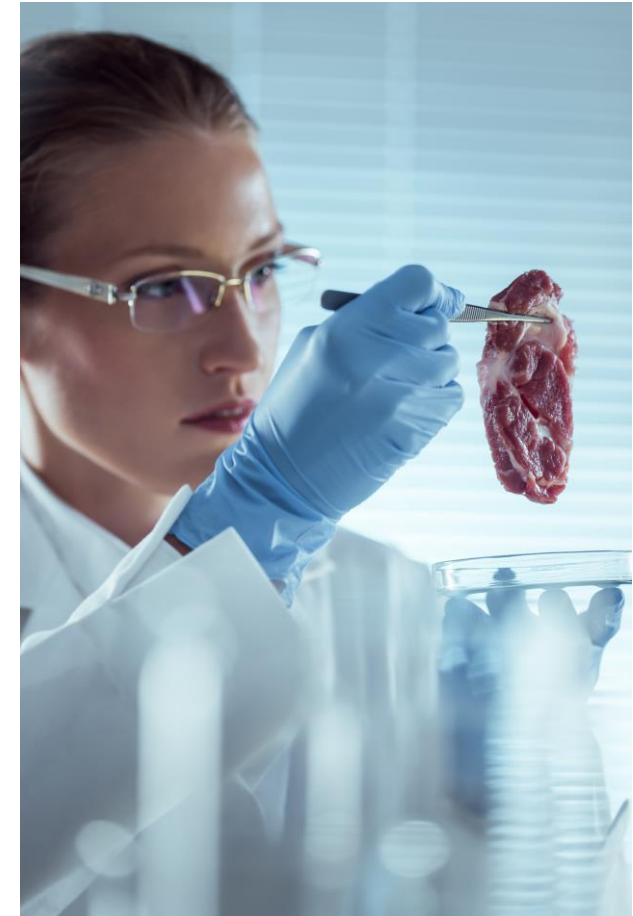
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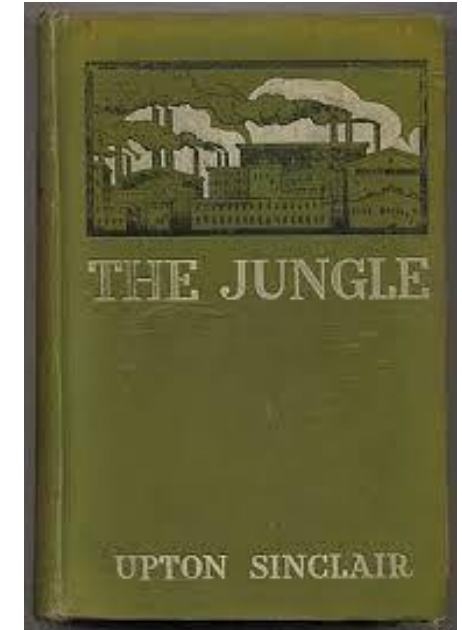
# What is meat?







# Federal Meat Inspection Act





**Meat.** (1) The part of the muscle of any cattle, sheep, swine, or goats which is skeletal or which is found in the tongue, diaphragm, heart, or esophagus, with or without the accompanying and overlying fat, and the portions of bone (in bone-in product such as T-bone or porterhouse steak), skin, sinew, nerve, and blood vessels which normally accompany the muscle tissue and that are not separated from it in the process of dressing. As applied to products of equines, this term has a comparable meaning.

(i) Meat does not include the muscle found in the lips, snout, or ears.

(ii) Meat may not include significant portions of bone, including hard bone and related components, such as bone marrow, or any amount of brain, trigeminal ganglia, spinal cord, or dorsal root ganglia (DRG). 9 C.F.R. § 301.2





**Meat food product.** Any article capable of use as human food which is made wholly or in part from any meat or other portion of the carcass of any cattle, sheep, swine, or goats, except those exempted from definition as a meat food product by the Administrator in specific cases or by the regulations in part 317 of this subchapter, upon a determination that they contain meat or other portions of such carcasses only in a relatively small proportion or historically have not been considered by consumers as products of the meat food industry, and provided that they comply with any requirements that are imposed in such cases or regulations as conditions of such exemptions to assure that the meat or other portions of such carcasses contained in such articles are not adulterated and that such articles are not represented as meat food products. This term, as applied to food products of equines, shall have a meaning comparable to that provided in this paragraph with respect to cattle, sheep, swine, and goats. 9 C.F.R. § 301.2



# If it doesn't fit within existing statutory definitions, what do you call it?

It depends on who you ask:

*"Cell-based meat"* -Eric Schulze, Memphis Meats

*"Clean meat"* -Good Food Institute

*"Lab grown fake meat"* -Kevin Kester, National Cattlemen's Beef Association





# Missouri Meat Advertising Law

Missouri forbids “misrepresenting a product as meat that is not derived from harvested production livestock or poultry.” Mo. Rev. Stat. § 265.494(7)

Can't market it as meat unless it walked on two (or four) feet.





# Missouri Department of Agriculture Guidance

Products must include a prominent statement on the front of the package, immediately before or immediately after the product name, that the product is “plant-based,” “veggie,” “lab-grown,” “lab-created” or a comparable qualifier; and

Products must include a prominent statement on the package that the product is “made from plants,” “grown in a lab” or a comparable disclosure.





# What happens if a company doesn't comply with Missouri's law?

Class A misdemeanor

Penalty of up to one year in jail,  
fine up to \$1,000





“Missouri Department of Agriculture (MDA) recognizes that plant-based products already are available for sale in the Missouri marketplace. MDA will work with any company in order to avoid a product recall or enforcement referral for products containing labels created prior to this guidance. If, prior to January 1, 2019, a company makes any necessary changes to a product label that MDA confirms as consistent with this guidance, MDA will not make referrals after January 1, 2019 for any remaining product in the marketplace that bears the earlier, pre-guidance label.”









IN THE UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF MISSOURI  
CENTRAL DIVISION

Turtle Island Foods, SPC, doing business as )  
The Tofurky Company; and )  
The Good Food Institute, Inc., )

Plaintiffs, )

v. )

No. 18-cv-4173 )

Mark Richardson, in his official capacity as )  
Cole County Prosecuting Attorney and )  
on behalf of all Missouri Prosecuting Attorneys, )

Defendants. )

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. This is a civil-rights action challenging the constitutionality of Mo. Rev. Stat. § 265.494(7), as amended by 2018 Senate Bills 627 & 925 (the Statute). The Statute criminalizes truthful speech by prohibiting “misrepresenting” a product as “meat” if that product is “not derived from harvested production livestock or poultry.” A violation of the Statute carries a penalty of incarceration up to one year as well as a fine of as much as \$1,000. The Statute is effective August 28, 2018.

2. Plaintiffs—a plant-based meat corporation and a nonprofit corporation that helps create and support companies that produce plant-based and clean meats, including through advocacy—seek injunctive and declaratory relief pursuant to 42 U.S.C. § 1983 that the Statute is unconstitutional on its face and as applied to them.

3. The Statute is a content-based, overbroad, and vague criminal law that prevents the sharing of truthful information and impedes competition by plant-based and clean-meat







## Where does it go from here?

“Because lab-created products have not yet reached the marketplace, MDA may need to refine or expand this guidance once the products are fully developed. Because they are expected to have more similarity to products derived from harvested production livestock or poultry than plant-based products, the risk of misrepresentation likely will be greater in lab-created products. Manufacturers of lab-created products are encouraged to work with MDA on appropriate labels before attempting to sell lab-created products in Missouri.”





“From the US Cattlemen's perspective, the qualifier would not be an acceptable substitute. That's only because we see exactly what happened with the dairy industry when folks used that qualifying term to describe something that's not milk or dairy.”  
-Lia Biondo Policy and Outreach Director, U.S. Cattlemen’s Association

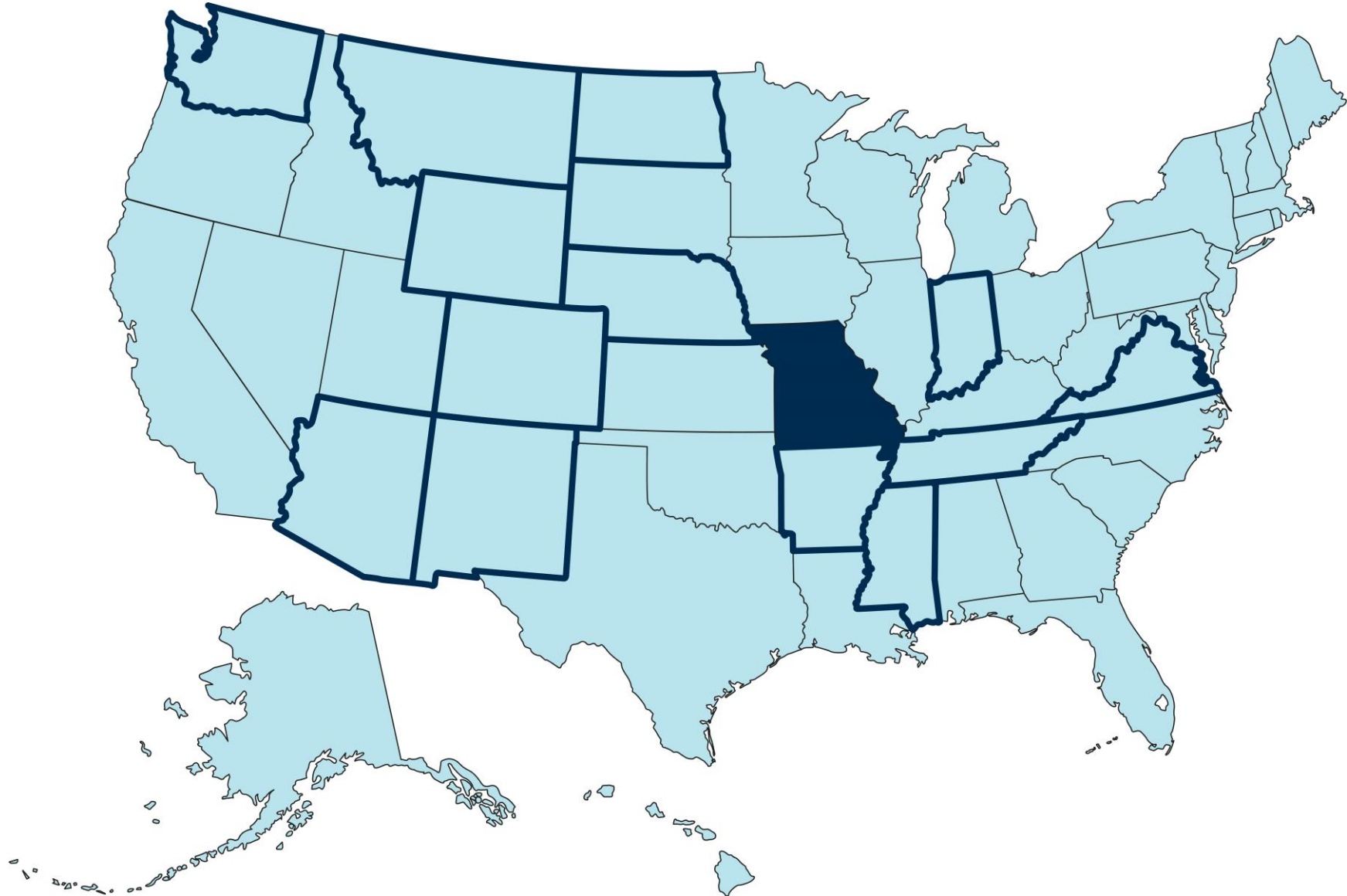




“While at this time alternative protein sources are not a direct threat to the beef industry, we do see improper labeling of these products as misleading. Our goal is to head off the problem before it becomes a larger issue.”

-Lia Biondo, Policy and Outreach Director, U.S. Cattlemen’s Association

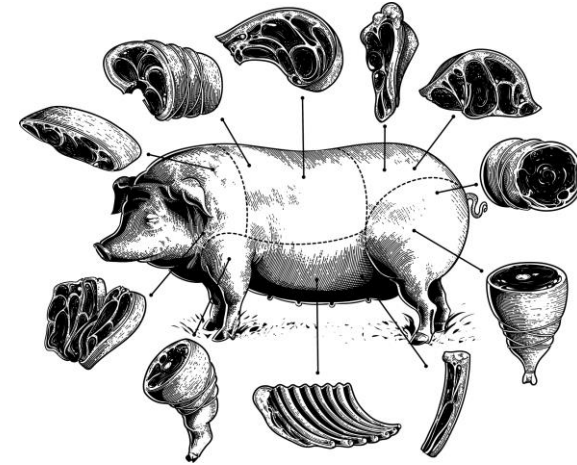






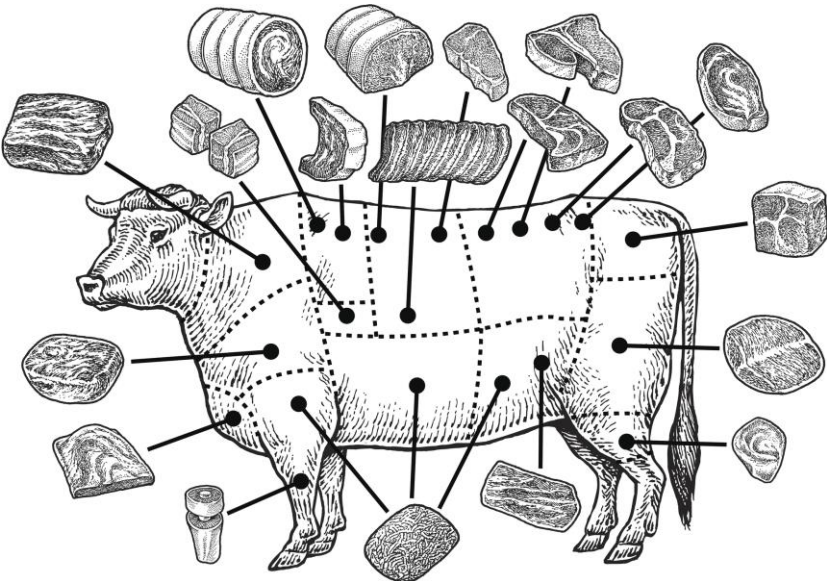


“This isn’t a Missouri issue. This is about protecting the integrity of the products that farm and ranch families throughout the country work hard to raise each and every day ...”



“... This legislation does not stifle technology, but it does ensure the integrity of our meat supply and reduces consumer confusion. We must ensure that those products do not mislead consumers into thinking those products are actually meat produced by farm and ranch families.”

-Mike Deering, Executive Vice President, Missouri Cattleman's Association





# If the product doesn't fit into existing statutory definitions, who regulates it?

FDA oversees cell collection, cell banks, and cell growth and differentiation.

USDA will then oversee the production and labeling of food products derived from the cells of livestock and poultry.



A transition from FDA to USDA oversight will occur during the cell harvest stage.









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# Plant-Based Dairy Alternatives





# What's Ahead?



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# Questions?

