Agriculture Education
Cycle Theme: Meaning & Purpose
Seminar Reading: Plant Protein

Self Evaluation

Name: _____

As you prepare for our seminar please read and annotate the following text. Include three comments and two defined vocabulary words per page. Also write two discussion questions that you would like to bring up during seminar.

Copied from: https://www.nytimes.com/2019/06/21/opinion/fake-meat-climate-change.html
Opinion: **Fake Meat Will Save Us by Timothy Egan** Contributing Opinion Writer June 21, 2019

I plopped down in the sports bar Thursday to watch World Cup soccer and eat my first fake meat burger. I don't mean to slight the surging United States women's team, but the plant-based protein slab made nearly as big an impression as the match.

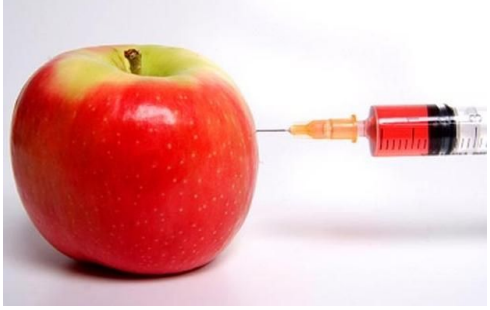
No surprise then, that a burger that bleeds like meat, tastes like meat and looks like meat is winning over millions of skeptical consumers, taking Wall Street by storm and prompting Big Ag to jump into a lucrative business that started on the vegan fringe.

But does the world really need a KFC Imposter Burger, or Tyson Foods grinding peas into patties instead of quartering chickens into nuggets? Well, yes. Very much so.

At a moment when animal-based agriculture is near the top of planet-killing culprits, ditching meat for substitutes, faux or otherwise, is the most effective thing an individual can do to fight climate change, according to a study in the journal Science. I say this as an appreciative omnivore. I love a flank steak fresh off the grill, a leg of lamb seasoned and slow-cooked, a brat at a ballpark, as do most of us. Vegans and vegetarians make only about 8 percent of the population, a static number.

Industrial agriculture to produce meat is the coal-mining of food production. Producing a single beef burger takes about 660 gallons of water — equivalent to a full week of water use by

the average household in the United States. At the same time, unhealthy diets pose a greater risk of early death than unsafe sex, alcohol, drug and tobacco use combined, as the medical journal Lancet recently reported.



The cautionary note is that we don't have enough experience yet with the "secret sauce" that makes the new line of fake burgers taste so good. Both Beyond Meat, and Impossible Foods, the two darlings of alt-meat, use about 20 different ingredients in their patties. They are highly processed Frankenfoods hatched in a lab, not carrots pulled out of the earth.

Also, food panaceas in general don't have the best track record. Remember margarine as a healthful alternative to butter? "Diet" soda makes people crave a big hit of real sugar water. Some granola is worse for you than an Oreo cookie.

But in the meantime, there is the protein we put on our plate. While weaning people off animal flesh, the new burgers hardly meet Michael Pollan's admonition that we should never eat food our great-grandmothers wouldn't recognize. But Pollan is a fan, saying fake meatballs might help save the world.

Plant-based eggs, nuggets and burgers are far less likely to hasten the inevitable last act of the Age of Man than the food sources they replace. And the free market — judging by soaring sales and a bullish roar from Wall Street to Beyond Meat, a company that was briefly worth more than Macys or Xerox by market capitalization one day this week — is lining up with the environment on this one, as carnivores take notice. If it takes disruptive capitalism to help solve a problem that a clay-headed president will not, more power to the plant dog and soy burger masquerading as meat.

Copied from:
https://www.vox.com/future-perfect/2019/10/7/20880318/meatless-meat-mainstream-backlash-impossible-burger

Meatless meat is becoming mainstream — and it's sparking a backlash
The growing pushback against Impossible and Beyond burgers in fast-food chains, explained
By Kelsey Piper Oct 7, 2019, 7:50am EDT

When the Impossible Burger launched quietly in upscale restaurants a few years ago, the coverage was mostly positive, with some reviewers even calling it the future of meat.

Now, Impossible products have hit Qdoba, Burger King, and supermarkets. Another plant-based meat company, Beyond Meat, is featured in Carl's Jr, Subway, and now McDonald's. It's a sign that the new wave of meatless meat is approaching mainstream status — an encouraging development if you care about changing our meat-centric food system.

Plant-based meat myths, debunked

There have been many critiques leveled at plant-based foods. They all boil down to four broad criticisms: 1) they are highly processed; 2) they contain GMOs; 3) they're not that healthy — or even hazardous to your health; and 4) they're aesthetically objectionable as "fake" food.

Plant-based burgers, many critics argue, are "ultra-processed junk foods." Whole Foods CEO John Mackey warned customers "they are super, highly processed foods." Chipotle CEO Brian Niccol said, "We have spoken to those folks and unfortunately it wouldn't fit in our 'food with integrity' principles because of the processing."

What does "processed" even mean? There's no perfectly agreed-upon meaning of processed foods, but the term can refer to any food that's been modified — to preserve it, to enhance its flavor, to add nutrients, or to make plant proteins taste like a hamburger.

Both the Beyond Burger and the Impossible Burger are, to be sure, produced in a factory with lots of different plant ingredients. But that word — "processed" — can obscure more than it clarifies.

"There's this really confusing nomenclature going around right now, with this idea that we can classify food as being good or bad based on its degree of processing," Ruth MacDonald, a nutrition scientist at Iowa State University told Wired. "And it makes no sense from a nutritional perspective, and it really makes no sense from a food science perspective either."

Pasteurization is a form of processing. Adding supplemental vitamins, which has been lifesaving, is a form of processing. Yogurt is a highly processed food. While processing can make food unhealthy, not all processed foods are unhealthy. You have to look at the ingredients and at which processes in particular the food went through.

When it comes to the ingredients, the dozens listed in the Beyond and Impossible burgers are frequently cited as proof the products can't be healthy. But even a salad can have lots of ingredients, and ingredient lists on products are often more a product of labelling laws than an objective measure of how many things go into the food.

Our food system isn't natural. It hasn't been natural for a very long time. Critiques that plant-based meat fails to promote the joy, gratitude, and connectedness of raising your own pig and then communally slaughtering it with your neighbors aren't wrong, exactly — but they have very little to say to the typical American.

Three of the biggest harms caused by our current food system are the harms to the environment, to public health through antibiotic resistance, and to animals through factory farming. In order to address all of those, plant-based or lab-produced alternatives to meat must be mass-produced. And if we're uncomfortable with the fact of mass-production itself then we can't fix any of the problems it's currently causing.

Discussion Questions:

1. _____

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2. _____

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