

# Milk From the Field Not a Lab



Natural, non-GMO dairy **VS.** precision fermented synbio dairy

Rich, healthy soil

Perennial grasses

Cows on pasture, expressing natural behaviors

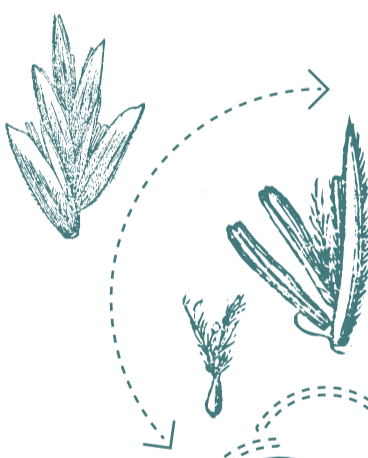


Cows produce whole milk including butterfat, milk solids, enzymes and more

Farmer milks cows

Milk is tested, bottled and sold

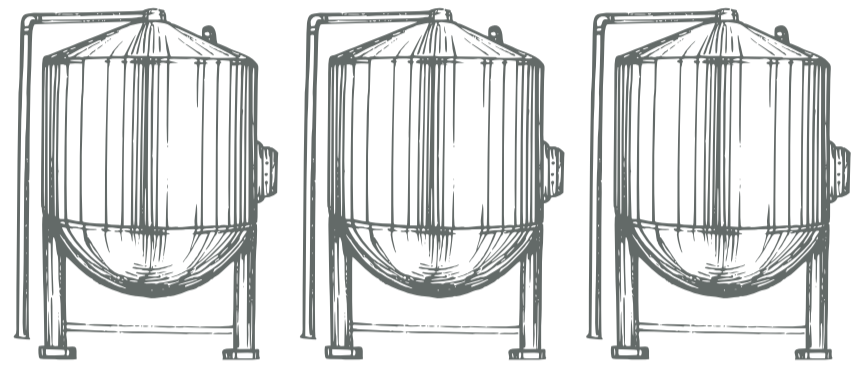
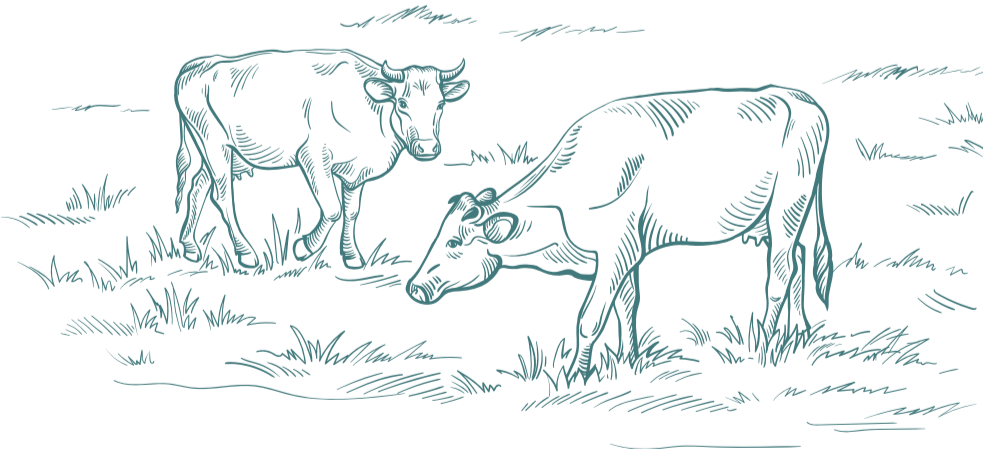
Milk is used to create natural, non-GMO products like ice cream, cheese, cream and butter



Waste: Manure is natural fertilizer

The regenerative cycle starts over

Healthy perennial grasses sink carbon



Sterile laboratory



Genetically engineered microbes such as yeast, algae or bacteria

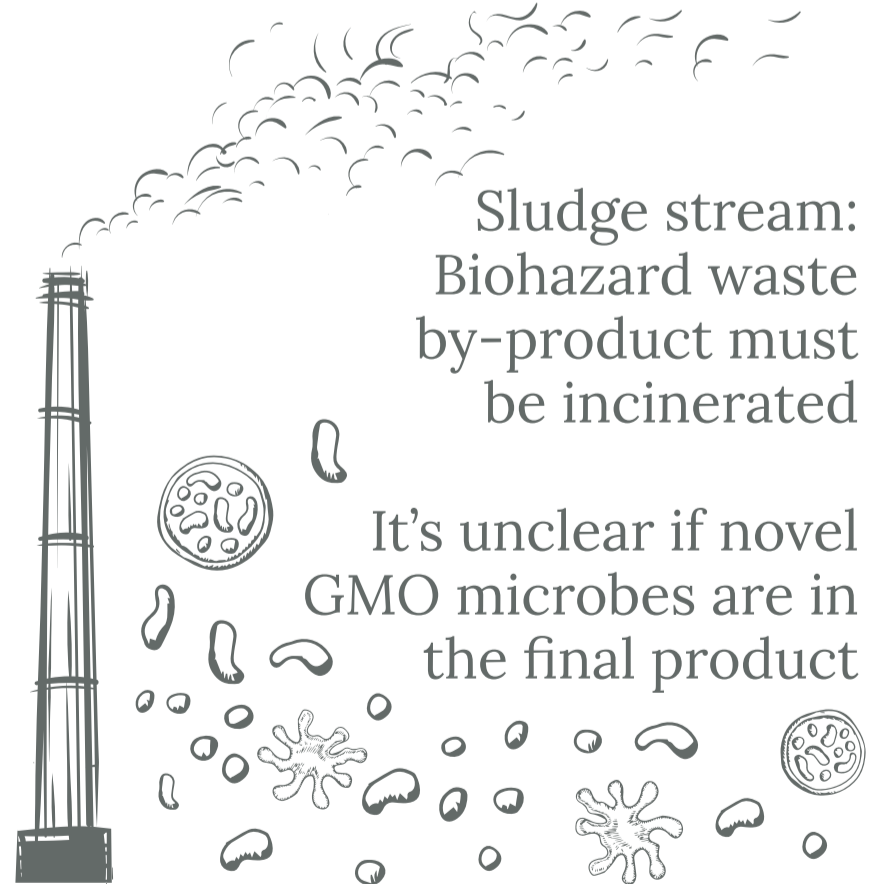
GMO corn, soy or sugar likely used as growth medium for microbes



Microbes produce "milk" protein isolates such as whey

Lab workers skim proteins from growth medium slurry

Milk protein isolate is combined with flavorings, other proteins, colorants, texturizers, processing aids, etc., into almost any processed food containing "animal-free" dairy proteins



Sludge stream: Biohazard waste by-product must be incinerated

It's unclear if novel GMO microbes are in the final product

## Questions about ingredients made with precision fermentation

HOW NUTRITIOUS ARE THESE NOVEL ENGINEERED DAIRY PROTEINS?

HOW DO THEY IMPACT OUR GUT MICROBIOME?

WHO GETS PAID FOR THESE PATENTED GMO PRODUCTS, AND WHO GOES OUT OF BUSINESS?

WHAT ARE THE BIOSECURITY RISKS IF THESE NOVEL GENETICALLY MODIFIED ORGANISMS OR MATERIALS ARE RELEASED OUTSIDE THE LAB?

HOW MUCH WASTE MATERIAL IS PRODUCED IN THE PRECISION FERMENTATION PROCESS RELATIVE TO THE SELLABLE PRODUCT?