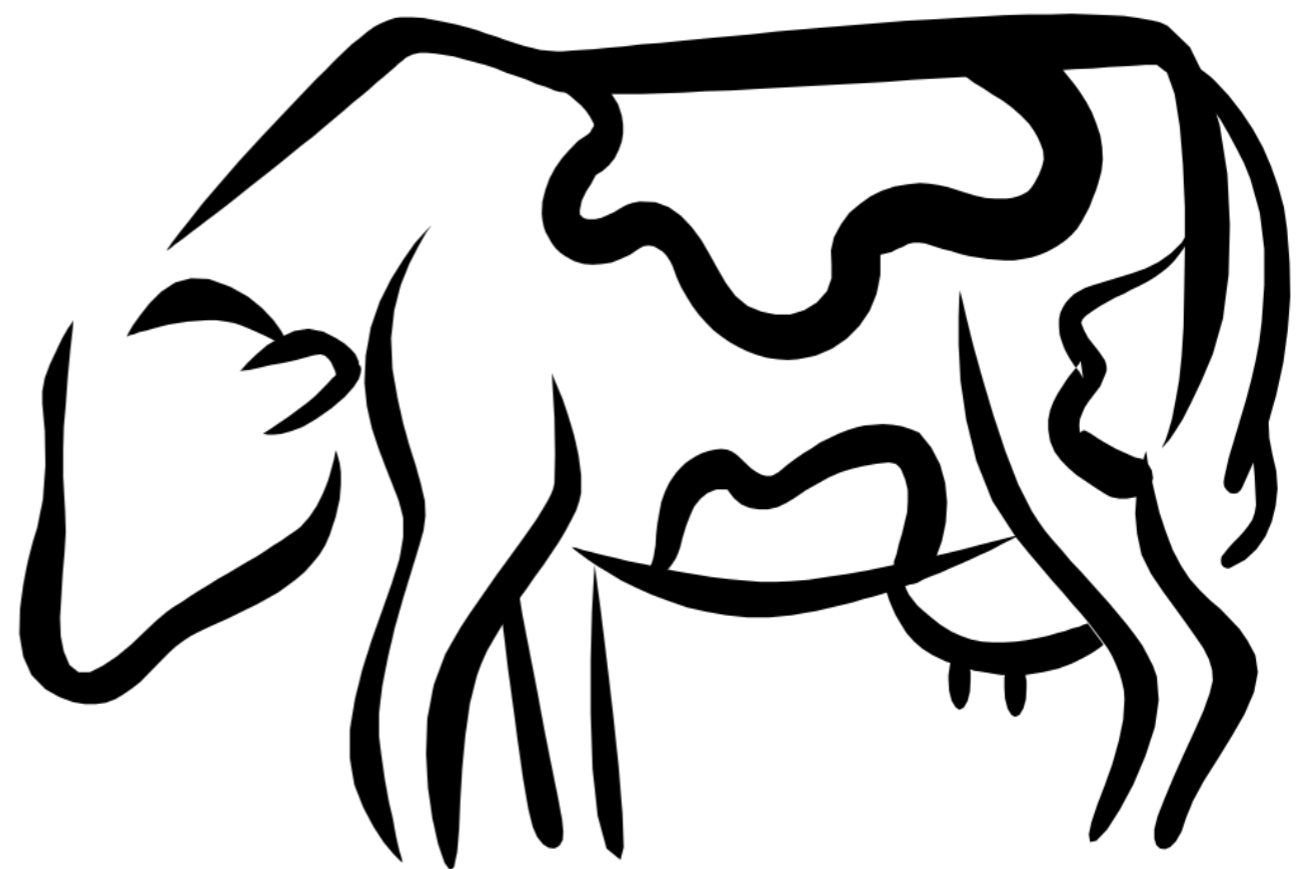


Got Milk?

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5 Main Issues

- Pollution
- Land Degradation
- Water Use
- Energy Use
- Health and Labor Concerns

Air Pollution

- Approx. 50-85% total U.S. ammonia emissions from livestock
- Manure storage contributes to 17 million tons of methane annually
- 17% of this is specifically from the dairy industry

Water Pollution

- In 2001 there were 238,000 AFOs generating 317 million Mgs of manure
- 20% of agricultural disruption to water sources is the result of livestock raising
- Manure is rich in nutrients as well as pathogens, antibiotics, and other substances

Land Degradation

- Successful and sustainable agriculture relies on healthy soils to store water, provide nutrients, and facilitate healthy plant growth
- Excessive tilling and overgrazing of livestock compromises soil. Over-plowed soil is prone to erosion and manure-rich soils can lead to run-off

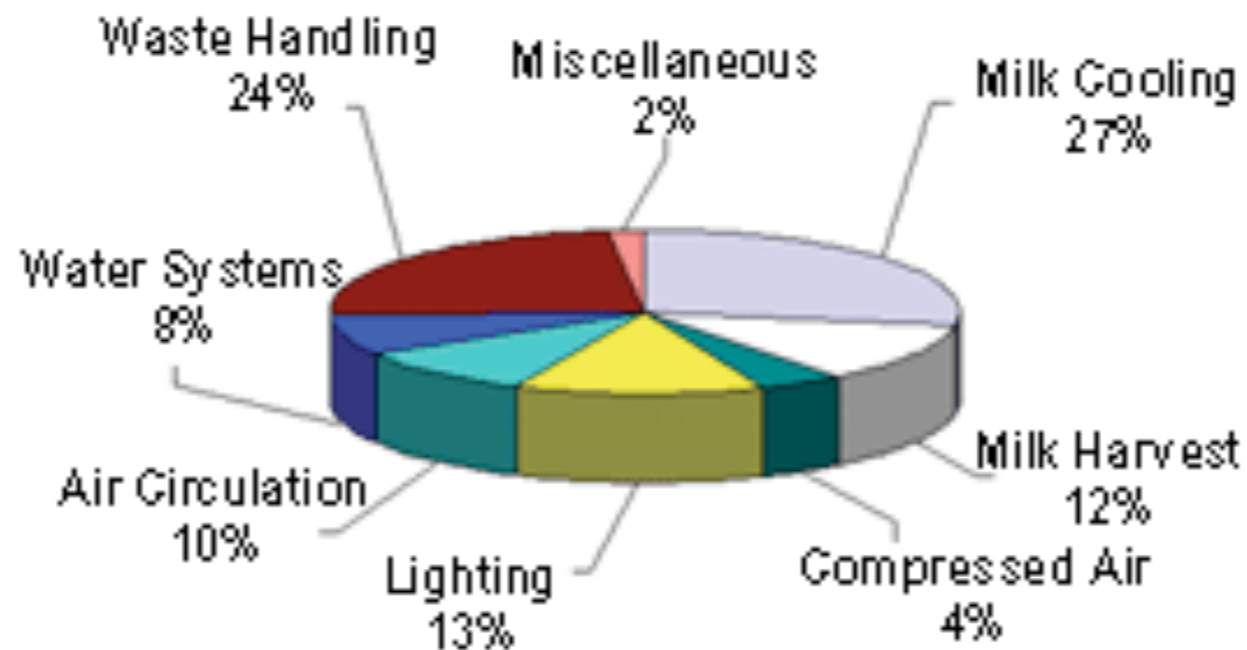
Water Use

- Agriculture accounts for 80% of U.S. water use
- It takes approx. 48.3 gallons of water to produce one glass of milk

Energy Use

- Dairies rely on electrical energy more than almost any other agricultural operation
- Because of the need for perpetual refrigeration, dairy production relies on consistent energy use from harvesting to consumption

Dairy Energy Pie



Health and Labor

- There is still not enough research to determine how exactly rBST used in livestock production affects humans
- Many dairy operations employ immigrant workers who may lack training and property safety measures resulting in many injuries in the workplace

Available Options

Shamrock Farms

Pro:

- Shamrock is reducing greenhouse gas emissions through the production of fluid milk by the U.S Dairy.
- The company uses 100 percent recyclable bottles.
- Shamrock manure is transformed into fertilizer and sent out to local farms in Arizona
- Local: which means from production to shelf is less than three days

Con:

- Shorter shelf life for organic variety (less than ten days)
- There are only selected sizes, and selected choices for massive resale

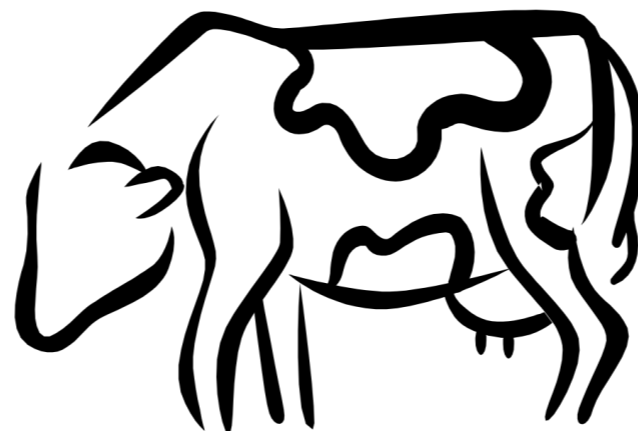
Sarah Farms

Pro:

- Local (regional)
- Proper Animal Welfare
- One primary owner
- Bottles and process sustainably

Con:

- Only one location near ASU
- The farm might not be able to support ASU's demand for dairy
- Even though the company is in Yuma, there would still be food miles and carbon emissions to transport to ASU.



Other Companies

Pro:

- Larger scale that can compete with ASU's demand
- There would be more options on the shelves with having more companies
- Prices would not be higher

Con:

- More food miles
- Higher carbon emissions
- Lack of information on animal/Worker welfare
- Many companies do not have organic options/sustainable options



Other Considerations

Local?

Pros: Less food mileage (less fossil fuels), local economic support

Cons: Limited options, may not be able to reliably meet demand

Conventional?

Pros: Meets demand, consistent, safe, convenient

Cons: Lack of transparency, unknown food mileage

Organic?

Pros: Fewer chemical inputs, fewer health risks from chemicals, doesn't disrupt pest populations, creates jobs

Cons: Land intensive, diverts productive land from use for human consumption, poor regulation does not ensure optimal benefits, costs more



Recommendations

Continue Sourcing from Shamrock Farms

Why? Comes from less than 50 miles away and already hormone free. Short distance means fewer fossil fuels in transport and less refrigeration time. Keeps jobs in the community.

Incorporate Arizona Cheese Co. Products into “Green ‘n’ Go”
Lunches and Wherever Else Applicable

Why? According to the Barrett Dining Hall, ARAMARK’s cheese is sourced all the way from Wisconsin! But AZ Cheese Co. has been approved for the supply chain and while their offerings are limited, they could supplement meal choices already marked as being more sustainable.