

United States



- Facts:
- 915 million ha total
 - 350 million ha agricultural land
 - 160 million ha grassland
 - 345 million citizens
 - 9,5 million dairy cows: 106 billion Liters of milk
 - 24.000 dairy farms

Interviewed people:
Mike McCloskey (Fair Oaks)
Frank Mars (MARS)
Paul Windemuller (Dream Winds Dairy)
Jesse Meerman (Green pastures)
Alen Reed (Chicago Foodland)
Jacqi Coleman (DMI), Reza Afshar, Jill Manata (DMI), Fabian Bernal (DMI), Nick Gardner (US Dairy Export Council)
Martin Vanderstappen (Dutch Made Holsteins)
Dave Daniels (Mighty Grand Dairy)

Key topics around sustainable farming: Revenue model, Farm scale, low cost

Overall summary of the sector:

The United States dairy industry is one of the largest and most technologically advanced in the world. It supplies a domestic population of more than 340 million people while also exporting close to a fifth of its production, up from under 5% three decades ago. Production takes place in all fifty states, but is heavily concentrated: California, Wisconsin, Idaho, New York and Texas together account for the majority of national milk output. Around 24,000 dairy farms currently keep roughly 9.5 million dairy cows, producing over 100 billion liters of milk per year.

The sector has consolidated steadily for decades: herd sizes keep growing while the total number of farms declines, with some operations now exceeding 15,000 cows. Farms differ widely in scale, climate and management style, ranging from small family operations built around direct sales to highly industrialized dairies focused on cost efficiency. This diversity shapes how sustainability is approached: large-scale farms tend to have more capital to invest in soil health, manure management and monitoring technology, while smaller farms often lean on direct to consumer sales and niche markets to stay competitive. A national checkoff system, funded through a levy on milk sales, supports coordinated research and promotion across the sector, including a growing focus on environmental stewardship and greenhouse gas neutrality. Biodiversity itself is not yet a mainstream metric in US dairy; the current focus rests primarily on climate and soil health, with measurement tools and shared data systems still being developed. Economic viability remains the deciding factor in adoption, as practices are far more likely to scale when they demonstrably lower costs or raise yields, rather than being rewarded through subsidies or market premiums alone.

Findings:

What is Biodiversity?

"Mix of different species in the soil, emphasizing its role in maintaining a healthy ecosystem"

"The living creatures from bacteria till big animals"

"A combination of different topics on a farm"

Is Biodiversity important?

"Soil quality is the most important biodiversity on a farm"

"With No Till, it takes 2 weeks for the soil to recover. With ploughing it takes a year"

"Not on this moment, the focus is primary on climate"

How should Biodiversity must be rewarded?

"Subsidies is not a long term reward model for biodiversity"

"Start with rewarding No Till and cover crops"

"The consumer should pay through the supermarket, but will never pay enough"

"The only reward is to lower the costs or higher the crop production by biodiversity"

"Rewarding must be better crops, better profit"

"Big farms have the opportunity to invest in soil, smaller farms have the opportunity to invest in direct selling to consumers"

What are the biggest challenges?

"The agriculture universities are too involved with the big agriculture industry who are making money with fertilisers and crop protection"

"Most farms will scale up to 15.000+ cows "

"I lost all my clover this year because it was very dry after cutting grass"

"The need for better soil testing and monitoring to track progress and optimize farming strategies"

"The goal is to balance environmental sustainability with economic viability"

"Science proves that while farmers improve soil health, they often fail to demonstrate significant economic benefits"

"Set up data-driven approaches, mentioning systems and certification is hard"

"Farmers are afraid to share data"

"You can bring every soil in a better state but every soil type asks for its own approach"

"The potential to change soil structure through management practices is huge."

"The importance of understanding the true economics of different crops and rotations is crucial"

"Successful rotations are important to get good income crops in sustainable farming"

"The cost-effectiveness of certain tests and the need for economic justification for spending"

"Yield is currently the only reliable economic indicator"

"The challenges of managing manure and the potential economic benefits of selling dry solids"

"The diversity of the dairy sector"

"We just started a couple years ago with measuring tools, we are still building"

Take aways/Advise:

- It starts with data, works on a common data system owned by farmers (organisations), so farmers only have to fill in 1 data system for different purposes.
- Share good examples about sharing data and sustainable farming.
- The market will never pay enough for real investments in Biodiversity, keep telling the story that also consumers and industry are having responsibilities.
- Big scale farms have most of the time a lot of land in use. This makes them the perfect system to start experimenting with improving biodiversity and soil quality on a couple of fields.
- We need a better understanding and application of existing soil tests.
- Make models and instruments to help farmers continuous monitoring and comparison to baseline data for effective management.
- Cover crops are not only for improving soil health but are also crucial for capturing nitrogen for the next crop and improving water quality.
- Think of new ways to teach future farmers more around healthy soils.
- Challenge Universities to conduct research that demonstrates the economic benefits of sustainable practices.
- Make simple steps. Example: start counting earthworms during time. Create a standard method for counting.