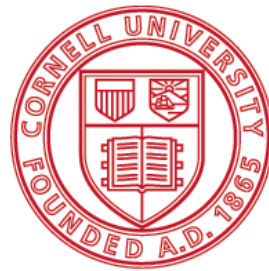


The Future

The future of the dairy industry is efficiency from the bottom up. The crops must be more efficient, having higher yields in a lower amount of acres. The calves must grow faster in order to have a calf quicker. The cows milking must produce more milk while eating less feed. The facilities and workers must run efficiently in order to maximize all of this. In the future there will be a shift towards larger dairy farms because they run the most efficient and can utilize newer technologies better than a smaller farm. As the environment becomes more of a factor there must also be less manure produced therefore the cows must utilize more of their feed. Like what was said earlier if we had the same cows genetically as we did in 1970 the environmental impact would be devastating because of the added 6 million cows. Genetic progress is what will allow farmers to match the demand of the growing population for milk.



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ANSC 3310 Applied Dairy
Cattle Genetics

Genetic Progress and the Future of the Dairy Industry

Why is genetic progress and more efficient cows a necessity to feed the world?



What does the future cow look like?



With less feed cows will have to be able to produce more milk while having lower intakes in order to compensate for the lower amount of land and lower amount of cows. If there was no genetic progress and management changes in the dairy the amount of cows that would be milked to meet demands would be dramatically higher. One cow in 2020 will be making the same amount of milk as 1.58 cows in 1970. Therefore if the demand was the same in 1970 as it will be in 2020 we would have had to milk 18,960,000 instead of 12,000,000.

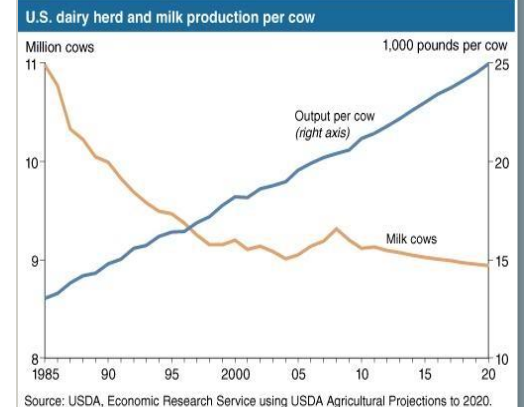
Some Companies such as Genex Have begun to put programs in place in order to emphasize the smaller more efficient cows. The United States population is also a factor in what pushes the farmer to breed for a more efficient and higher producing cow. In 1970 the population was 205.1 million and rose to 282.2 million in 2000. The projected population in 2020 is 332.2 million.

The bottom line is that famers are expected to produce more milk, with less cows, to meet the demand of a larger nation population.

How much arable land is there in the U.S?

In 1970 the United States had 466.4 million acres. That number was reduced to 433.3 million acres in 2000 and 2050 that number will be decreased to 350 million. With this decrease in land there must be fields that are larger and yields that are higher than what they were in the past. Furthermore, the cows that consume these feeds must be more efficient in order to maximize production.

In 1970 the US herd size was roughly 12 million cows. In 2000 the herd shrunk to 9.2 million cows and in 2020 the projected herd is to be 7.9 million cows.



The chart above shows the decrease in milk cows in the US while still having an increase in milk production. This is largely due to genetic progress in herds and farmers selecting bulls that are high in milk production. This trend will have to continue as we continue to reduce cows and our tillable land.