

Holstein Cattle in Michigan and the U.S.

The Holstein Cow

The Holstein cow originated in Europe. The major historical development of this breed occurred in what is now the Netherlands and more specifically in the two northern provinces of North Holland and West Friesland which lay on either side of the Zuider Zee. The original stock were the black animals and white animals of the Batavians and Friesians, migrant European tribes who settled in the Rhine Delta region about 2,000 years ago

After the New World was settled, and markets began to develop for milk in America, dairy breeders turned to Holland for their seed stock. Winthrop Chenery, a Massachusetts breeder, purchased a Holland cow from a Dutch sailing master who landed cargo at Boston in 1852. She proved to be such a satisfactory producer that Chenery imported more Holsteins in 1857, 1859 and 1861. In the late 1800's there was enough interest among Holstein breeders to form associations for the recording of pedigrees and maintenance of herdbooks. These associations merged in 1885 to found the Holstein-Friesian Association of America.

Holsteins are large, stylish animals with color patterns of black and white or red and white. A healthy Holstein calf weighs 90 pounds or more at birth. A mature Holstein cow weighs about 1500 pounds and stand 58 inches tall at the shoulder. Holstein heifers can be bred at 15 months of age, when they weigh about 800 pounds. It is desirable to have Holstein females calve for the first time between 22 and 25 months of age. Holstein gestation is approximately nine months. While some cows may live considerably longer, the normal productive life of a Holstein is six years.

Production

Michigan dairy farmers produce 5.5 billion pounds (647 million gallons) of milk each year. That's enough to fill about 93,000 milk truck tankers, or enough for each person to drink 67 gallons of milk (which was the national average annual consumption for 1997). In the year 2000 individual holstein cows on MI herds involved in the Dairy Herd Improvement association averaged 21,442 pounds of milk or 2493 gallons for the year.

Livingston dairy farmers produce 76 million pounds (8.59 million gallons) of milk each year. That's enough to fill about 1,217 milk truck tankers, or enough for each person to drink 64 gallons of milk.

Profit and Loss (1997 numbers)

When you go to the grocery store, you pay about \$2.15 for a gallon of milk. How much of that does the farmer get?

$$\begin{array}{rclcl} \text{Farmer's Share} & + & \text{other income} & = & \text{income per gallon.} \\ (\$1.19) & + & (20\text{¢}) & = & \$1.38 \end{array}$$

In addition to milk income, the farmer sells cows and crops for an additional 20¢ per gallon. That means that for every gallon of milk sold, the farmer earns \$1.38. However, from this amount, the farmer must subtract the expenses. These include crop cost, livestock cost, and the cost of running a business, among other various expenses. This means that the average Michigan dairy farm gets about a 2¢ profit per gallon of milk sold.

$$\begin{array}{rclcl} \text{Farmer's Income per gallon} & - & \text{Expenses per gallon} & = & \text{Profit per gallon} \\ (\$1.38) & - & (\$1.36) & = & \$0.02 \end{array}$$

What Cows Eat

What the cow eats effects how much milk she produces, how much weight she gains, and how healthy she is. The amounts and types of feed that a cow is fed depends on how much she weighs, how much milk she gives, how old she is, and where she is in her gestation cycle. Dairy farmers work with nutritional consultants to put rations together to meet the nutritional needs for the different groups of cows on their farms

So what do cows eat? They eat a variety of grain and forages.

Haylage – Haylage is moist alfalfa that has been ensiled (fermented) so that it will not spoil. Haylage is an important source of protein and fiber to the cow.

Corn silage – Corn silage is made by chopping the whole corn plant and then ensiling it so that it will not spoil. Corn silage is a source of fiber and energy.

Cottonseeds – Cottonseeds are a byproduct from the clothing industry. Cotton is used to make your clothes and then cows can use the cottonseeds for energy and fiber. This use of byproducts makes cows an important part of reducing waste.

Corn grain – Corn grain is dry kernels of corn that are usually cracked or ground before feeding to cows. Corn grain provides energy to the cow.

High moisture corn – High moisture corn is put in storage when it is wetter than corn grain. It ferments much like haylage and corn silage. This allows it to be stored in silos.

Distillers grains – Distillers grains are a byproduct of ethanol production. Ethanol is used in many ways including running your car. Cows use this byproduct for energy and keep it from going to waste.

Soybean meal – Soybean meal is made from soybeans. Soybeans are processed and much of the oil is removed for use by humans like you. Cows use the soybean meal that is left as a source of protein.

Minerals/vitamins – Cows need minerals and vitamins to stay healthy just like you do.

Water – Water is the most important nutrient in the cow's diet. Without adequate water cows will not produce very much milk and will not be healthy.

A typical Michigan Dairy cow might eat a ration that looks like this. That is in just one day!!

