Why Jerseys

More than 235,000 Jersey cows are enrolled on production testing programs in the United States. Actual yield per cow for 2012:

17,152 lbs. milk *(7,782 kg.)*
818 lbs. fat *(371 kg.)*
624 lbs. protein *(283 kg.)*
2,158 lbs. *(979 kg.)*
Cheddar cheese yield

Milk Component Comparison

Breed	Butterfat *(percentage)*	Protein
Jersey	4.77	3.64
Brown Swiss	4.11	3.41
Holstein	3.65	3.08

Source: National Dairy Herd Information Association (NDHIA) Annual Report, January 2013

On The Cover

In 2012, the American Jersey Cattle Association recorded 103,345 animals, more than at any time in its 145-year history. 75% of registration applications were submitted and processed electronically, and 52% of the calves registered were permanently identified by double-matched tamper-evident eartags such as are worn by these heifers.

The smaller, more efficient Jersey cow is the solution to the challenges of profitability and sustainability confronting dairy business owners.

A Profitable Product

"With the Jersey, we have an animal that is smaller, uses fewer natural resources and produces a smaller carbon footprint. We have a cow with a longer productive life that produces a more nutrient-rich milk that consumers are demanding and are willing to pay for."
James Ahlem, past-President, National All-Jersey Inc.

The dairy industry has entered a new age. These are times when quality matters again, when consumers are looking for a better glass of milk and more choices in quality cheeses, when dairy producers are looking for every possible efficiency, and when everyone is attending to the health of our environment and conservation of our natural resources.

Jerseys are uniquely right for these times.

Jerseys naturally produce the highest quality milk for human consumption. Compared to average milk, a glass of Jersey milk has greater nutritional value: 15% to 20% more protein, 15% to 18% more calcium, and 10% to 12% more phosphorous, and also considerably higher levels of an essential vitamin, B12.

This nutrient-dense Jersey milk tastes better. The reason is there are more solids-non-fat, protein, calcium and lactose in her milk compared to other breeds.

Compared to average milk, Jersey milk increases product yields and manufacturing plant efficiency. Cheesemakers make 25% more cheese from Jersey milk and buttermakers increase yields by over 30%—both at a lower cost per pound of product.

All this comes from a remarkably sustainable breed population. A 2010 scientific, peer-reviewed life-cycle assessment determined that for Jerseys and Holsteins to produce the same amount of protein, milkfat and other solids, the Jersey population needs 32% less water, requires 11% less land, produces less waste and uses substantially less fossil fuels with a 20% reduction in total carbon footprint. In terms of the amount of Jersey milk needed to produce 500,000 metric tons (1.1 billion pounds) of cheese, the reduction in carbon footprint is equal to taking 443,900 cars off the road annually.

A naturally concentrated milk that meets today's requirements for quality, production and manufacturing efficiency, and environmental friendliness—these are just a few reasons Jerseys are causing dairy business owners to sit up and take notice.

Sunset Canyon Hallmark Belle 1–ET, E-93%
3-3 365d* 28,290 *(12,836kg)* 4.8% 1,369 3.7% 1,037 DHIR
4-6 365d 31,104 *(14,112kg)* 4.9% 1,531 3.7% 1,142 DHIR
6-6 365d 35,832 *(16,258kg)* 5.0% 1,809 3.2% 1,298 DHIR
Premier Performance Cow, The All American Jersey Show, 2004
Lifetime production: 194,243M (88,132kg) 9,653F 7,025P

Photos this page: Frank Robinson ** 3x*

But the primary reason the Jersey is the breed to build a dairy business on is delivered to the mailbox every month. Because it contains more of milk's most valuable components—protein and fat—you get paid more money for Jersey milk.

A Profitable Producer

"The sole office of the Jersey cow, broadly speaking, is to produce the largest possible amount of rich and highly-colored cream from a given amount of food."

Jersey Herd Register, Volume 1, 1871

The Jersey breed was developed so that dairy producers would have "less cow to feed, more cow to milk." U.S. Jerseys produce, on average, more than 17 times their body weight in milk each lactation.

"Jerseys are able to capture the energy that they eat over and above their body weight, and put it into milk," explains James Tully, Ph.D., PAS, of Pine Creek Nutrition Service, Inc. in California.

The secret of Jersey productivity is that while Jerseys tip the scales at roughly 75% of Holsteins' body weight, they eat 80% of the intake of Holsteins.

"It means we're able to get more pounds of energy-corrected milk (ECM) per pound of dry matter than the Holsteins would give. From what we've seen, the numbers approach 1.6 lbs. ECM *(0.73 kg.)* per pound of intake for a Jersey versus numbers like 1.45 to 1.5 *(0.65–0.68 kg.)* for Holstein cows."

"When I was in school, my father told me that we'd milk the cow that makes the most money," recalls Jim Huffard, a consulting nutritionist who also operates Huffard Dairy Farms in southwestern Virginia. "It didn't matter if she was purple, green or whatever—that's what he wanted to milk. My father said, 'Let's take this pile of feed and run it through both cows and see who can make us the most money.'"

Taking a fixed quantity of feed—2,000 pounds—and national DHI production data and product prices, Huffard pencils out the gross income from a Holstein milking 73 lbs. (33 kg.) at 3.6% fat and 3.1% protein and a Jersey at 56 lbs. (25 kg.), with component levels of 4.7% fat and 3.6% protein.

"With 2,000 pounds of feed (908 kg.), you can produce 294 lbs. (133 kg.) of cheese from Holsteins, or 350 lbs. (159 kg.) from Jerseys. At current farm prices, the revenue produced from that amount of feed is $529 for Holsteins, or $630 for Jerseys. So if you put that feed through a Jersey, you have an advantage of $101, or 19% more income.

"That 2,000 pounds of feed costs the same regardless of whether it's in a Holstein or

Jerseys return greater profits. Compared to other breeds, it costs less for Jersey farmers to produce a pound of fat or protein. Milk processors also spend less to produce a pound of cheese, butter, or nonfat milk solids from Jersey milk.

Product Yield Comparison

Breed	Cheddar Cheese *(pounds/cwt.)*
Jersey	12.59
Brown Swiss	11.28
Holstein	10.09

Source: National Dairy Herd Information Association (NDHIA) Annual Report, 2013. Calculations by National All-Jersey Inc.

Products are manufactured from Jersey milk more efficiently, and also are of higher quality because more protein is recovered in the cheese and the curd is firmer.

Heartland Nathan Texas–ET, E-95%

1-8	305d*	20,350	*(9,233kg)*	4.4%	882	3.7%	750	91DCR
2-10	305d*	21,850	*(9,913kg)*	4.6%	1,008	3.9%	843	93DCR
3-11	305d*	26,340	*(11,950kg)*	4.3%	1,130	3.8%	991	92DCR
5-1	305d*	25,940	*(11,769kg)*	4.6%	1,185	3.7%	963	94DCR

Dam of seven sons placed in A.I. programs

** 3x*

Photo: Lea McCullough

All-Time U.S. Production Leaders

Milk and Protein
Mainstream Barkly Jubilee, VG-87%
4-8 365d 2x 55,590 4.6% 2,550 3.2% 1,796
25,222 kg. milk 1,157F 815P

Fat
Norse Star Hallmark Bootie, E-90%
3-0 365d 3x 39,239 7.2% 2,827 3.8% 1,500
17,804 kg. milk 1,283F 681P

Lifetime Production
Duncan Hibrite of Family Hill, E-93%
343,620M, 16,070F, 12,601P 5,706 days
155,907 kg. milk 7,291F 5,717P

A proven strategy for success in the Jersey business is to select the best bulls ranked by Jersey Peformance Index™ and use AJCA cow performance information to guide progressive matings. A prime example is Pearlmont Impuls Daffy (right). Sold as a third-generation Excellent, A.I. contracted cow in The All American Jersey Sale (2008), "Daffy" has produced 90 registered progeny by embryo transfer to 16 different matings. Of 20 daughters freshened to date, five are scored Excellent and the rest Very Good. The actual 305-day records of 17 daughters with completed lactations is 17,109 lbs. milk (7,762 kg). Three sons have genomic PTAs over $500 for Cheese Merit and a maternal grandson is currently #5 among G-code bulls. Photo: Frank Robinson.

Jersey, so we're comparing dollars to dollars," Huffard explains. "I've decided now which is the breed I want to run that feed through."

"The advantages of Jerseys are financial," agrees Dan Bansen, owner-operator of the 1,600-cow Forest Glen dairies located in Oregon's Willamette Valley.

"We haven't always been all Jersey. When we bought (Forest Glen Oaks), we bought it with 200 Holsteins and we were milking about 200 Jerseys on the home farm. We sat down and we pencilled everything out. We figured out how this farm was going to work with 200 Holsteins and it wasn't near what we had figured, because we didn't figure how much less we were going to get for the milk and how much more feed they were going to eat. The feed was the thing that surprised us the most.

"The amount you get out financially is much different and is much more beneficial with Jersey cows," he continues. "You can say we have our downfalls. We don't get as much for bull calves, but we don't have calving problems. We don't have reproductive problems. There are way more advantages than disadvantages with Jerseys.

"Although we like Jerseys," Bansen says, "if they weren't the most productive breed, I'm sorry, but we probably wouldn't be with them."

Advantages That Go To The Bottom Line

"Our Jersey cow can withstand the rigors of commercial dairy production. She calves early and on her own. She produces at a high level and breeds back to do it all over again."
David Chamberlain, past-President, American Jersey Cattle Association

Everything you need for a successful dairy business can be found in a Jersey cow.

Jerseys adapt to every management system that has been designed for dairying. They thrive in confinement barns and dry lot operations, in large herds and small ones. Jerseys also adapt to different feeding systems, from complete feed–TMR programs to management-intensive grazing. There are no climatic or geographic barriers for Jerseys. They are favored in the subtropic region of the Deep South, and across the arid climes of the United States. Jersey owners consistently remark that even when the temperature rises above 100° Fahrenheit, the Jerseys will be at the feed bunks or grazing.

Jerseys mature more quickly. When a dairy heifer matures earlier, she can be bred at a younger age (and smaller size). She'll then enter the milking herd sooner. The bottom line: Jerseys are quicker to generate income for a dairy producer.

In studies at Virginia Tech, purebred Jersey heifers were observed to reach puberty at an average of 39.9 weeks (10 months) of age, eight weeks sooner than Holstein heifers.

Dutch Hollow Valentino Cheryl–ET, E-90%
Averaging 90 lbs. *(41kg)* per day in first 124 days, current record
First-crop daughter of top-ranked genomic young sire (G-code bull) graduating to #7 Active A.I. after progeny test

Photo: Beth Herges ** 3x*

Body weight at puberty averaged 425 lbs. (193 kg.) for the Jersey heifers, compared to 665 lbs. (301 kg.) for the Holsteins. There's also no question as to when Jerseys are ready to breed. The Jersey heifers had longer estrus periods than Holstein heifers (12.7 hours versus 10.7 h.) and more standing heat events (27.5 versus 17). Not surprisingly, researchers at the USDA-ARS Animal Improvement Programs Laboratory (AIPL) report that historically and currently, Jerseys have the lowest average age at first calving among all breeds.

Jerseys are renown for their ease of calving. Fewer calving problems reduces worry, labor and veterinary costs. Fewer than 1% of Jersey heifers experience problems with their first calf, while nearly 8% of Holstein had difficult calvings requiring assistance according to studies by AIPL scientists. Studies in Florida dairy operations determined that Jersey heifers have fewer stillbirths than Holstein heifers (9.11% versus 15.65%) and subsequently less metritis (4.22% versus 14.17%). Says David Endres, who started his Wisconsin dairy with Holsteins, but switched to Jerseys: "Calving ease is still one of our biggest things. We just love it."

After calving, Jerseys return to their heat cycle sooner and, just as they did as heifers, show estrus more vigorously and remain in heat longer. At Virginia Tech, Jersey cows exhibited estrus for an average of 8.9 hours, compared to 7.4 hours for Holstein cows. The Jersey cows were mounted 9.5 times during any estrus, compared to an average of 6.9 times among Holstein cows.

Jerseys breed back earlier, with fewer services per conception. These facts are even more important during the times dairy cows are subjected to heat stress. A longitudinal study by University of Florida researchers determined that Jersey cows had fewer days to first service, from first service to conception, and a shorter calving interval than Holsteins.

Comparison of Herd Life Statistics

	Jersey	Holstein	Brown Swiss
Age at first calf *(months)*	25.8	26.8	28.1
Lactations completed at 5 years of age	2.3	2.1	2.0
Months in milking herd at 5 years of age	24.4	22.7	21.5
Days in milk through 5 years of age	41%	39%	37%
Cows alive at 5 years of age	45%	38%	42%

Source: Garcia-Peniche, Cassell & Miztal, Journal of Dairy Science, 89 (9): 3672. (2006)

Generation after generation, Jersey mothers transmit their outstanding traits. The All American Four-Year-Old Cow of 2012, Marys Asteroid (Excellent-93%, 17,780 lbs. milk, 8,067 kg., above) is a direct maternal descendant of the world-renown Greenridge FW Chief Althea-ET, Excellent-92%. In 2000, she was voted second in the Jersey Journal *Great Cow Contest and ranked first among living cows in the U.S. for lifetime protein production (8,800 lbs. protein, 3,992 kg.).*

The cow at the bottom of this page is a daughter of the one pictured below: Sunny Day Bold Belinda-ET (Excellent-94%, National Class Leader, three lactations over 30,000 lbs. milk and 1,500 lbs. fat), who in turn was a granddaughter of Sunny Day Yankee Becky, E-90%, the world's first Jersey cow to complete four consecutive lactations in excess of 30,000 lbs. milk (13,612 kg).

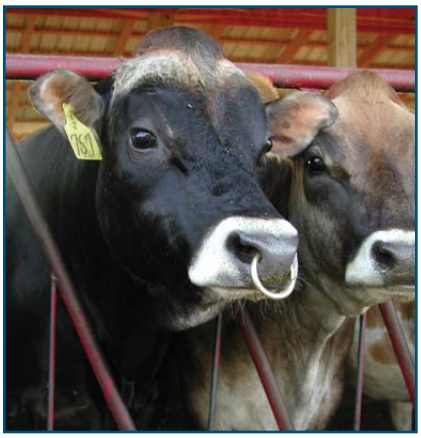
Photos this column: Lea McCullough (top); Craig Johnson (below)

JVB Red Hot Mor Belinda–ET, E-94%

3-3 305d 26,050 *(11,819kg)* 4.4% 1,148 3.7% 962 100DCR
6-0 297d 25,120 *(11,397kg)* 4.9% 1,236 3.5% 887 102DCR
7-0 305d 29,840 *(13,539kg)* 5.4% 1,609 3.5% 1,030 100DCR

Daughter was high seller of the 49th National Heifer Sale

Photo: Frank Robinson



"There is an incredible breed trend taking place which is clearly beyond a fad or niche," observes Doug Wilson, CEO of Cooperative Resources International. "The appreciation level for what the Jersey cow provides has grown."

Demand for Jersey genetics drove semen sales to an all-time record of 3,800,552 units in 2012. This included domestic sales of 2,532,855 units, an increase of 14% over the previous year. International sales also reached a new record, with 1,267,697 doses exported by members of the National Association of Animal Breeders (NAAB). For the decade, combined semen sales have increased by 152% and today, Jersey's domestic market share stands at 10.7%.

Below, two Jersey-sired females pictured in 2005 during their third lactation, identified and performance evaluated by the American Jersey Cattle Association.

Left: J1 Kilgus Lucky Chocolate, VG-88%, lifetime production after seven calvings over 136,000 lbs. milk (61,705 kgs.), averaging 4.1% fat and 3.2% protein.
Right: J1 Kilgus Lucky Rita, E-91%, lifetime production after eight calvings exceeding 168,000 lbs. milk (76,225 kgs.) averaging 4.6% fat and 3.5% protein.

AIPL studies reveal that across the lifespan, Jerseys have the shortest average calving interval (390 days, versus an average of 404 for Holsteins). And across their lifetimes, Jerseys average 3.2 calvings, compared to 2.8 calvings for Holsteins.

It's hard to overstate what the Jersey's reproductive advantages can mean to the bottom line. "Reproduction impacts the bottom line in significant areas, like having more calves to sell or grow with and allowing for greater voluntary culling," notes consultant Jim Tully. But above all, he says, "Milk is a by-product of reproduction. Having more fresh cows, more often, means more milk."

Survival and Productive Herd Life

"For cows to achieve PL, they may *calve early, and* may *calve often, but they* must *keep on living. To keep on living, they must meet the expectations of their owners ..."*
Bennet Cassell, Hoard's Dairyman, October 25, 2006, author's emphasis

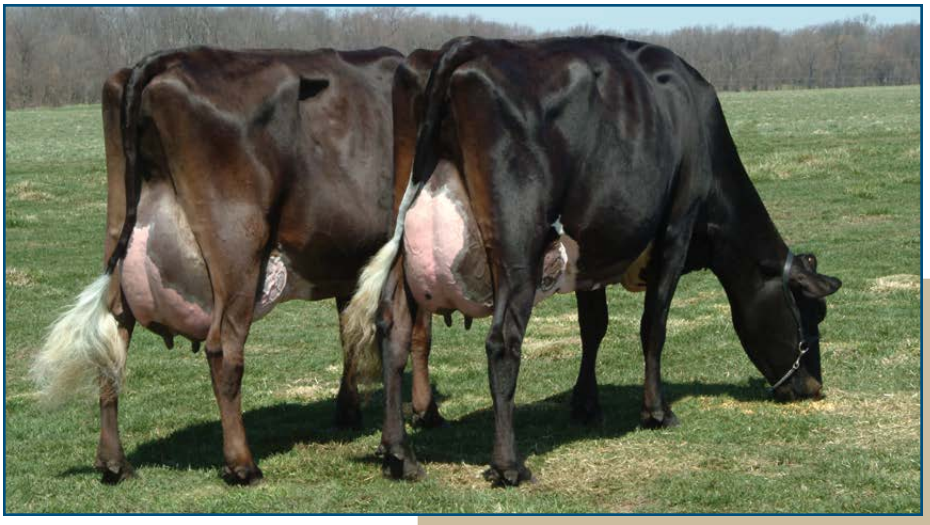
Jerseys are living up to high expectations in the milking parlor and at the same time successfully handling everyday stress and strain. National Dairy Herd Information (NDHIA) data show that Jersey cows have the highest rate of staying in production and the lowest rate of removal. Compared to other breed and crossbreed groups, Jerseys rank first, the difference ranging from 1.2% to 7.8%. There is no single reason that separates Jerseys from all other cows. Instead, differences in reproductive performance, a lower incidence of clinical mastitis, less disease and injury, and fewer feet and leg problems add up to a significantly lower rate of exiting the herd.

In the 2012 national culling study, AIPL reports that compared to Holsteins, a higher percentage of Jerseys survive to have a second calf (84.5%, versus 78.5%), a third calf

Herd Longevity and Reasons for Culling

	Jersey	All Other Breeds and Crossbreds
Cows continuing in production *(in herd and sold for dairy)*	75.1%	67.6%
Cows leaving the herd	24.9%	32.4%
For low production	6.1	6.6
For reproduction problems	3.0	5.2
For mastitis or high somatic cell count	3.1	4.1
All other reasons *(death, mobility, unspecified reasons)*	12.7	16.5

Source: Annual NDHIA Reports (2012), accessed at http://aipl.arsusda.gov/publish/dhi/cull.html



When introduced to other breeds, Jersey genetics consistently increase fat and protein yields and percentages, plus fertility and productive life. The use of top-ranked A.I. proven bulls will make this effect even greater because they are more intensely selected for than the average natural service sire.

(71.9% versus 61.0%), and a fifth calf (58.6% versus 47.4%). So, not only do Jerseys start paying back on your investment sooner, they do so longer. Jerseys produce profits longer—and they give you an opportunity for an extra calf.

Internal Herd Growth

"Comparisons of the merit of various breeds ... must consider all traits that have economic value, from birth until death or culling. Particular attention should be paid to cumulate changes in inventory resulting from small differences in stillbirth rate, pre-weaning mortality, attrition during the rearing period, losses due to calving complications, death or culling during the early postpartum period, and removal of nonpregnant animals."

Kent A. Weigel, Ph.D., 2007 Western Dairy Management Conference

Studies by Farm Credit show that the most profitable dairy businesses, year in and year out, tend to have higher rates of internal herd growth (IHG). This is because IHG gives herd owners great flexibility in optimizing their milk production, controlling costs of production, generating additional income through cattle sales, and increasing net worth.

In analyzing factors related to internal herd growth, Normand St-Pierre of The Ohio State University found that IHG is driven primarily by culling rate, calving interval and age at first calving—all significant Jersey advantages.

Using culling statistics from the dairy herds using Pine Creek's services, nutritionist Todd Stroup, PAS, points out, "If you have enough heifers to replace 40% of your herd and you look at the Holstein herds with a 35% cull rate, you can only grow at 5% per year. You're looking at 14 years to double your herd size.

"With Jerseys and 27% culling, you're able to grow at 13% a year. That's huge. Jerseys can double their herd size in six years or less."

Transitioning to Jersey Genetics In Commercial Herds

"All we ask for is a trouble-free cow that calves, cleans, comes in with four quarters, and makes a lot of milk with good components."

In increasing numbers, commercial producers are choosing Jerseys because they *do* calve easier, stay healthier, breed back earlier, and produce a higher value product. To get those results—and to protect the considerable investment they have made in raising replacement heifers—many are breeding the cows and heifers they now own to high genetic merit Registered Jersey™ bulls.

Averages of U.S. Active A.I. and Genomic Jersey Sires*

Trait	Average
PTA milk	759 lb. *(344 kg)*
PTA Fat	49 lb. *(22 kg)*
PTA Protein	31 lb. *(14 kg)*
Cheese Merit Dollars	$412
Net Merit Dollars	$374
PTA Productive Life	2.8
PTA Somatic Cell Score	2.96
PTA Final Score	1.3
Functional Udder Index	2.9

** 353 AJCA-registered bulls coded as Active A.I. and Genomic, August 2013. Source: Council on Dairy Cattle Breeding*

What Is JPI?

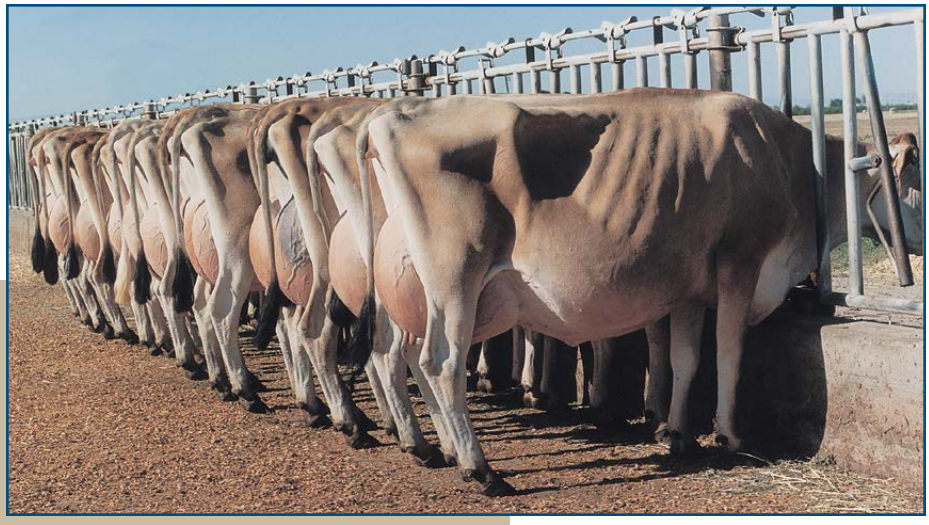
Determining which Jersey cows and bulls excel by their combined genetic merit for production and functional type is easy when you start with the Jersey Performance Index™.

JPI emphasizes commercial profitability in two ways. First, 57% of the index is weighted on PTA protein and PTA fat. The other 43% of the index puts the selection emphasis on herd life (19%), udder health (14%), and fertility (10%).

As of April, 2010, the six factors used to calculate JPI and their weights in the formula are:

- PTA protein, 42%;
- PTA fat, 15%;
- Functional Trait Index, 15%;
- PTA Productive Life, 12%;
- PTA Daughter Pregnancy Rate, 10%; and
- PTA Somatic Cell Score, 6%.

Refer to the USJersey web site and the Jersey Genetic Summary *(http://greenbook.usjersey.com)* for more information on the Jersey Performance Index™ and the research-evaluated weights for type traits in the Functional Trait Index.



U.S. Registered Jerseys™

*High, wide rear udders, good feet and legs, **hard** black hooves, and they keep working through the heat of the day*

Photos: Kathy DeBruin (opposite); Julia DeLavergne

Jerseys are changing the color of dairying all across the United States. The demand for the Jersey cow is at the highest level the breed has ever experienced.

The reason is simple.

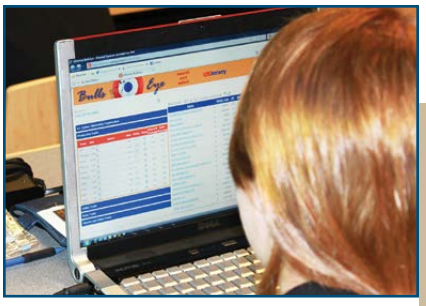
The Jersey is the most profitable cow for today's dairy business.

- *She produces a pound of milk components at a lower cost compared to the other major breeds.*
- *She has little or no calving problems, greater fertility, a shorter calving interval, and earlier maturity.*
- *Jerseys stay in the herd longer than any other dairy breed.*
- *Jersey milk has greater nutritional value, plus the highest yield and greater efficiency when processed into cheese and other value-added products.*
- *Jersey milk commands a premium price in many markets.*

The missions of the American Jersey Cattle Association and National All-Jersey Inc., as outlined in their respective constitutions, are to:

- *Improve and promote Jersey cattle;*
- *Maintain records and activities that are in the best interests of Jersey cattle breeders;*
- *Promote the increase sale of Jersey milk and milk products; and*
- *Promote the increased sale of Jersey genetics.*

We invite you to investigate the advantages of Jerseys and how they can help you reap greater profits from your dairy business.



Information on U.S. Jerseys is as close and as fast as your connection to the World Wide Web. Log on today.

According to a University of Wisconsin survey, across the board, owners of Jersey-sired cows and heifers give them high scores for calving ease, conception, longevity, and higher levels of milkfat and protein.

New research is documenting herd owners' observations. University of Minnesota researchers report that Holstein cows bred to Jersey bulls, rather than Holstein bulls, produced calves that were 20% lighter at birth, born with less dystocia, and were over 50% less likely to have retained placentas. Differences between the two groups after the first lactation were just 672 lbs. (305 kg.) in energy-corrected milk yield, favoring the purebred Holsteins. Jersey-sired crossbreds averaged 78 days to first service, versus 88 days for Holsteins, and 139 days open, compared to 155 days for Holsteins.

It's safe to say: The closer a cow is to being a Jersey, the more profitable she is to own.

U.S. Jersey Genetics

U.S. Jersey genetics are the obvious choice because U.S. Jersey genetics are the best available anywhere on the globe. Dairy producers located on every continent have used U.S. Jersey sires to develop national production-leading herds and cows recognized for production and top placings at major shows.

U.S. Jersey sires rank highly in progeny evaluations across a number of countries, and are many of the key "sires of sires" for large Jersey populations in Australia, Canada, Denmark, New Zealand and South Africa. Jersey females and embryos purchased from U.S. Jersey breeders have been equally outstanding performers in many countries.

The USJersey Organizations

The American Jersey Cattle Association promotes Jersey breed improvement through identification services, recording of production records, functional type traits evaluation, and the application of advanced research and genetic evaluations.

The right-arm of the AJCA is National All-Jersey Inc. Its mission is two-fold: to increase the value of and demand for Jersey milk and Jersey cattle, and to promote equity in milk pricing. It holds an extensive resource library on Jersey milk, multiple component pricing, and fluid milk standards.

When you are ready to take advantage of the many advantages U.S. Jerseys offer, contact us at:

USJersey

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JerseyJournal.USJersey.com
Jersey Journal, official publication of the American Jersey Cattle Association and National All-Jersey Inc., and the only monthly magazine in the world devoted to providing news and information about the Jersey breed

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