

TAKING THE MEASURE OF THE BREED

Where the Jersey has been concerned, *what* has been measured and *how* it has been measured have been functions of *who* was doing the measuring and *for what purpose* the measurements were being made.

Before the Jersey Herd Book was created in 1866 and the AJCC's Herd Register in 1868, there was talk that the cattle of Jersey—despite superior productivity—were ripe for improvement. The Jersey in the early 1800s was “an animal with no pretensions to type.”

And at every turn in the history of Jersey type evaluation, the leading parties have claimed that their efforts have left the breed better than when they first encountered it—beginning with an aide-de-camp of Queen Victoria and an Englishman who would become one of the most active exporters of cattle from the Island of Jersey.

Col. John Le Couteur, the Queen's Aide-de-Camp, issued a sharp critique of the cattle on his native Jersey in his essay, “The Jersey, Misnamed Alderney, Cow.”

“Most Jersey farmers never thought of crossing with a view to improvement, conscious of possessing a breed excellent for the production of rich milk . . . The Jersey farmer sought no further. He was content to possess an ugly, ill-formed animal, with flat sides, wide between the ribs and hips, cat-hammed, narrow and high hips, and a hollow back.”

Le Couteur's comments are most properly understood as retrospective in nature. They were written in 1844, some 10 years after formation of the Royal Jersey Agricultural and Horticultural Society and its adoption of a Scale of Points to be used for judging an extensive schedule of Island and parish shows. LeCouteur is drawing attention to the remarkable effects the adoption of a Scale of Points had upon type improvement in the cattle of Jersey Island.

Le Couteur's dissatisfaction with the conformation of Jersey cows appears to have been piqued by a cattle dealer, Michael Fowler. As “traveling partner” for the Great West London Dairy, Fowler selected and purchased animals for the dairy. Though he greatly admired their desirable qualities, he opined that the “ill-shaped beasts” of Jersey could hardly be considered a breed. His basis of comparison was the “established valuable breeds” in England which had been developed through selection of “the best animals, of the best blood and form . . . possessing the most valuable qualities and fewest defects.”

Fowler is credited with suggesting to Le Couteur that the Jersey farmers needed “to improve the conformation of the Jersey, without injuring her desirable qualities.” Fowler and Le Couteur set about to create in those farmers an appreciation for type.

Fowler and Le Couteur drafted a scale of points along with an outline of an agricultural society on Jersey Island. Backed by an association of Jersey farmers endorsing standards for type, they thought, the show ring would become a tool for breed improvement.

On August 26, 1833, 25 Jersey farmers convened at St. Helier's, then left, having formed the Royal Jersey Agricultural and Horticultural Society. “Within a few days,” Gow reports, “rules and regulations were adopted for the improvement of the breeding of cattle, and for the offering of premiums.

“From 1834 began that development in beauty, conformation and yield which in our day, in addition to her innate characteristic of yielding rich milk, has made the Jersey famous and sought after the world around. Before then the Jersey cow was a diamond, but a diamond in the rough. An association of breeder directing and unifying effort, a scale of points, judges to apply it in the competitive show-ring, and selective breeding, conserving both production and conformation—all these helped the Jersey in achieving the world-wide fame that is hers to-day” (R. M. Gow, *The Jersey*, p. 51).

SCALE OF POINTS FOR COWS.	
Adopted by the American Jersey Cattle Club, April 21, 1875.	
Points.	Counts.
1. Head small, lean, and rather long.	2
2. Face dished, broad between the eyes and narrow between the horns.	1
3. Muzzle dark, and encircled by a light color.	1
4. Eyes full and placid.	1
5. Horns small, crumpled, and amber color.	3
6. Ears small and thin.	1
7. Neck straight, thin, rather long, with clean throat, and not heavy at the shoulders.	4
8. Shoulders sloping and lean; withers thin; breast neither deficient nor beefy.	3
9. Back level to the setting on of tail, and broad across the loin.	4
10. Barrel, hooped, broad and deep at the flank.	8
11. Hips wide apart, and fine in the bone; rump long and broad.	4
12. Thighs long, thin, and wide apart, with legs standing square, and not to cross in walking.	4
13. Legs short, small below the knees, with small hoofs.	3
14. Tail fine, reaching the hocks, with good switch.	3
15. Hide thin and mellow, with fine, soft hair.	4
16. Color of hide where the hair is white, on udder and inside of ears, yellow.	5
17. Fore udder full in form, and running well forward.	8
18. Hind udder full in form, and well up behind.	8
19. Udder free from long hair, and not fleshy.	5
20. Teats rather large, wide apart, and squarely placed.	6
21. Milk veins prominent.	5
22. Escutcheon high and broad, and full on thighs.	8
23. Disposition quiet and good-natured.	3
24. General appearance, rather bony than fleshy.	5
Perfection.	100
In judging heifers, omit Nos. 17, 18, and 21.	
The same scale of points shall be used in judging bulls, omitting Nos. 17, 18, 19, and 21, and making moderate allowance for masculinity.	
NOTE. It is recommended that Judges at Fairs do not award prizes to animals falling below the following <i>minimum</i> standard, viz.: cows, 70 counts; heifers, 55 counts; bulls, 70 counts.	

(See next page.)

HISTORICAL REVIEW

The Scales of Points

“Points,” in the language of the mid-1800s, are equivalent to what we now refer to as “traits.”

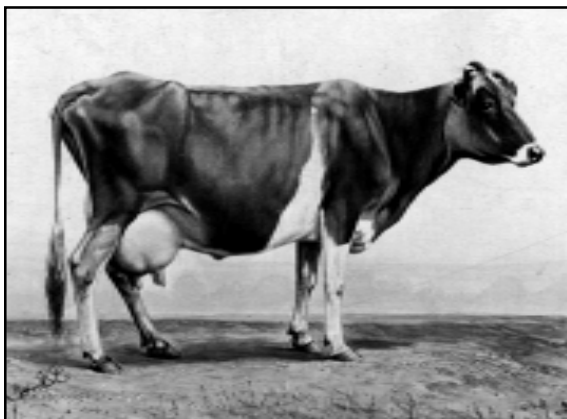
Five months after the creation of the Royal Jersey Agricultural Society, a committee of five cattle dealers constructed the first Island Scale of Points in the “presence of the President and Agricultural Committee of the Society for 1834.” It was based upon these dealers studying two live models. Gow reports that “one of them was considered to be perfect as to barrel and fore-quarters, the other as to hind-quarters.”

The scale had seven primary “articles” for cows: first, the head, eye, horns, ears, giving preference to refinement and proper color (30%); second, topline and chest (15%); third, hide and hair (7%); fourth, barrel and tail (11%); fifth, legs and feet (7%), and sixth, udder (15%). The remaining 15% of the scale was allocated to *points de race*, the degree to which a Jersey farmer was able to demonstrate to the judges the “purity of breed on male and female sides, reputed for having produced rich and yellow butter.”

Revisions to the scales in 1849, 1851 and 1858 more fully defined the sought-after standard for the original points. Points were both added to, and deleted from, the scale, the most notable deletion being the *points de race*.

The American Perspective

It is apparent from the historical record that the Americans influenced the



This undated illustration of the cow Countess depicts the conformation of a desirable Jersey in the early history of the breed in the United States.

Island’s scale of points, in several ways.

The first appears to have been in the reaction of The American Jersey Cattle Club to the Island scale of 1834. A committee was appointed in 1872 to formulate a new scale. In its preliminary work on this scale, the committee critiqued the Island scale:

“Every point in the scale is given only one count, as if all were equally important, so that the count for the nostrils, the tail and the hoofs combined may carry over the udder. The committee took the ground that ‘udder means dairy cow.’”

In short, the committee argued, all points were not of equal importance, an opinion which was clarified in an 1875 report to the AJCC membership:

“(The Island scale) for cows gives twenty-four out of the one hundred counts to the head, and only fourteen to udder, teats and milk-veins—to udder alone only five. The proportion, udder five counts to head twenty-four counts, is a ratio which cannot, we think, be justified by sound argument . . .”

While the Scale of Points adopted in 1875 by the AJCC does give greater emphasis to dairy temperament and mammary development, it does so partly through a dubious feature, the escutcheon.

This term refers to the shield-like patch of hair growing upwards above the udder when the cow is viewed from the rear. It was hypothesized by François Guénon that this patch of hair was a “milk mirror,” showing “as in a glass, the milk-giving capacity of the cow. It does not signify a fraction of this capacity, but the whole of it.”

Within a few years, it became apparent that the escutcheon was a “point of fancy.” That is, it was a fea-



Generators Topsy was the first Jersey cow to be appraised Excellent-97% in 1980. Pictured here as the 1973 National Grand Champion, she was nearly 16 years of age when scored under the Uniform Type Traits Appraisal program.

ture of the cow that had no usefulness in predicting production or longevity. R. A. Sibley, President of the AJCC, was reported to have said in 1885 that if the escutcheon had any value, only Guénon knew what it was.

Instead of flirting with fancy, the Board of Directors presented and the Club adopted a revised scale. This scale allocated 39 of its 100 points to the mammary system, 49 points to the frame and feet and legs, and 12 points to features “which by anyone could be termed fancy or unessential.”

Fancy points aside, fads emerged in the evaluation of Jersey conformation. None of these was more disturbing to the Island breeders than foreigners’ infatuation with hair color. Gow noted that, “In 1872-73 English and American buyers on the Island were showing more and more a tendency to select solid-colored animals. This led the Agricultural Society of Jersey to urge the necessity of emphasizing butter and milk producing qualities rather than the mere color of the animal. The demand for fancy points was establishing a fashion which, if allowed to go unchecked, would ultimately lead the public to forget the real and true merit of the Jersey . . .”

The color of the hide, and not of the hair, was included in both the Jersey Island and American scale of points. By 1935, all reference to color had been removed from the AJCC’s scale, while

the Jersey Island scale referred only to “a yellow color on horns, escutcheon and inside of ears” as a mark of “richness.”

Herd Classification Programs

The development and use of Scales of Points encouraged dairy farmers on both the Island of Jersey and in the United States to pay greater attention to conformation. These scales set forth a description of the “ideal type” that, it was argued, could be obtained through culling undesirable types and mating cows and bulls to correct or improve less-than-perfect traits.

The logistics of showing on the small Island of Jersey, with its system of three seasonal shows and a continuing schedule of parish shows, provided ample opportunity for farmers to compare their animals side-by-side and against the very best. In the United States, however, exhibitions alone could not provide the same opportunities for the more than 78,000 owners of Registered Jerseys.

Rather than taking the cow to the judge, the AJCC developed a system which took the judge to the cow. On July 7, 1932, a program for “the inspection and classification of Jersey cattle” was initiated, having been approved by the membership at the annual meeting on June 1.

Executive Secretary R. M. Gow provides less than two pages of information on the “Herd Classification plan” in his 1936 book, *The Jersey*. The reason appears to be its slow adoption by breeders. In its first three years, a total of 1,227 animals were classified, a pale comparison to the 300 or more animals being consistently shown at the annual National Dairy Exposition, or the 495 Jerseys shown in 1931 at the Tennessee Regional Show in Nashville.

By 1953, however, type classification had caught on and Executive Secretary Jack C. Nisbet exuded unbridled enthusiasm for the program.

“In 1932 a far-sighted group of men established the foundation for what has since proved to be a most popular and successful type improvement program. The sound basis upon which this program was built gave it the ability to grow

from its meager first year total of 674 animals classified to the literally astounding figure of 12,399 animals in the past fiscal year.”

The classification program is clearly a child of the Scale of Points. It set forth 13 categories for evaluation: general appearance; stature; breed character; back, rump and tail; feet; legs; dairy character; chest and barrel; fore udder; rear udder; teats; suspensory ligament; and mammary system.

Each cow examined by the official inspectors, or “classifiers” as they came to be known, was rated in each category and then a final score was assigned. Classification labels were Excellent (90 points or more compared to the official Scale of Points), Very Good (85 to 89 points), Good Plus (80 to 84 points), Good (75 to 79 points), Fair (70 to 74 points) or Poor (less than 70 points).

Classification served several purposes, the most important to Nisbet in 1953 being education:

“One of the contributing factors to the outstanding success of this program has been the uniformly excellent work done by the official inspectors. Their work, in demonstrating and teaching correct type standards to Jersey breeders the country over, has been of inestimable value toward the improvement of our breed.”

Classification also introduced a method for removing the least desirable animals from the Herd Register. “The applicant must agree to surrender to the official inspector the registration certificates of all animals classified as ‘poor,’” Gow noted at the program’s inception. “Such certificates shall be sent to the Club for cancellation, and registration of the future progeny of such animals shall be prohibited. Further, the applicant must agree not to offer for registration any male calves from any of his cows past five years of age that may be classified as ‘fair.’”

Just like the shows before it, the classification program evaluated conformation separately from production, under the assumptions that production follows type and that the type committees and appraisers of the AJCC had sufficiently studied these connections to know what

to look for and how to measure it. Adjustments to the program were made over five decades, and subsequent research appeared to support these claims. Most generally, the cows classified Excellent and Very Good were more productive than those placed in the other categories.

Framed originally as a tool for breed improvement, classification also served the function of promotion. The breed average for classification was published in nearly every Annual Report and publicized as evidence recommending the Jersey cow to American dairymen. A classification score for an individual cow completed her official pedigree and, while not a complete substitute for a photograph in *Jersey Bulletin* (later, *Jersey Journal*) advertising, it could promote interest in the animal herself or her offspring. Classification became an integral part of many breeders’ merchandising efforts.

Applying The Ruler

A number of factors contributed to the next major development in evaluation of Jersey type traits, not the least of which was seeking more and better information through scientific research. By the mid-1970s, scientists interested in dairy cattle breeding were confronting the limitations of type classification as it existed, both as they affected breeders’ abilities to make corrective matings and as they impacted evaluations of sires’ transmitting abilities for specific characteristics.

In January of 1979, the American Jersey association, in cooperation with the American Guernsey Association, introduced the uniform functional type traits appraisal program. Rather than classifying traits that were subjectively defined, the program *appraised* biological traits along a linear scale.

Type trait appraisal is based upon the premise that the cow could “tell” breeders what she needed to look like in order to be profitable. It proceeded in a three-step fashion. First, traits were selected and defined based upon their economic value. Second, traits that had been previously combined in a single category were independently measured. For

TYPE EVALUATION WORLDWIDE

More than 120,000 Jersey cows are evaluated for conformation annually, with 80% of those evaluations occurring in three countries: the United States, New Zealand, and Denmark.

How do the different national Jersey societies evaluate Jersey type, and how can the information obtained in one country, using its system, be used in another country for sire evaluations?

For the past three years, associations from across the globe have participated in a series of workshops on Jersey type classification. These conferences have, to date, been concerned with increasing understanding of how each country collects and uses type data with a broader purpose of developing a method for comparing bulls' type proofs across countries.

The first conference was hosted by the Danish association, Danmarks Jerseyforening, in 1996, with a second conference in 1997 hosted by the Jersey Cattle Breeders Society of South Africa. The American Jersey Cattle Association hosted the third conference

on November 4-5, 1998. Eleven nations—Australia, Canada, Colombia, Costa Rica, Denmark, Italy, Jersey Island, New Zealand, South Africa, the United Kingdom, and the United States—were represented.

Keynote speaker for the 1998 conference was Dr. Kent A. Weigel of the University of Wisconsin, Madison, who provided an in-depth analysis of the opportunities and challenges of MACE (multiple-trait across-country evaluation). MACE is designed to produce genetic evaluations that can be used by breeders to compare foreign bulls to those used in their country. Basic chal-

lenges to the development of MACE for type include such basic factors as the differences in how traits are defined and measured.

According to Weigel, the Danish and American evaluation programs are the most comparable, measuring 14 similarly defined traits. The only trait not evaluated by Danish evaluators is rear udder height, while the Danish program adds five more traits (top line, rear legs rear view, hock quality, bone quality, and front teat thickness). Comparing appraisal information from daughters of 23 bulls scored in both countries, Weigel reported that

correlations were moderate to high in degree for most traits. Very high correlations (.85 or greater) were obtained for teat placement, udder depth, fore udder, and rear legs side view.

At the upcoming World Jersey Bureau meetings in Australia, a working group named at the November workshop will report on developments in completing research and production of MACE summaries for Jersey classification traits.



The Third Type Classification Workshop for Jerseys was held in this past November at the AJCA headquarters offices. Participants were (from left) John Allan, New Zealand; Cari Wolfe, AJCA; Bruce Cutforth, New Zealand; Christina Villalobos, Costa Rica; Dr. Kent Weigel, University of Wisconsin—Madison; Julio Villalobos, Costa Rica; Richard Waters, Jersey Island; David Hambrook, United Kingdom; Maria Vida, Italy; Alan Carson, Australia; Colin Renouf, Jersey Island; Dr. Johan Jooste, South Africa; Steven Smith, Canada; Paul Vestergaard and Rasmus Jerver, Denmark; Lorne Ella, Canada; Jorge Martinez, Colombia; Geoff Heazlewood, Australia; Poena Van Niekerk, South Africa; and Dr. John C. Wilk, AJCA Board of Directors.

example, "rear udder" in the classification program evolved into two distinct traits in appraisal: rear udder height and rear udder width. Finally, traits were scored from one biological extreme to the other along a continuous scale. To illustrate, rear legs side view is scored from very posty to very sickled.

The program in place today has

changed little from the revised program adopted January 1 of 1980. It includes 15 traits: stature; strength; body depth; dairy form; rump angle; thurl width; rear leg set; foot angle; fore udder attachment; rear udder height; rear udder width; udder cleft; udder depth; front teat placement; and teat length.

It has proven to be a most successful

program for breed improvement, both from the standpoint of the information gained and its support from Jersey breeders. From the 39,119 cows in 689 herds scored in 1980, AJCA appraisers now score, on average, nearly 46,000 first- and second-lactation cows annually.