TO ASSESS THE VIGOR OF YOUNG BULLS

During the late 1800s and early 1900s, the AJCC had the luxury of promoting Jersey bulls as invariably superior to the "nondescripts and scrubs." There was little evidence to counter such a claim. Then production testing, the introduction of A.I. and the procedures for USDA genetic evaluations raised the standards for both selecting and proving bulls that aspired to superiority.

L. Henry Twaddell of West Philadelphia, having returned from his journey to the Islands of Jersey and Guernsey in 1865, reported to the Philadelphia Society for Promoting Agriculture that the prevailing practice of Jersey farmers was to slaughter their herd sires at three years of age, "the opinion being that young bulls have the most vigor and stamina."

Using young bulls was most likely a matter of practicality during the 19th century. The only way to assess a bull's fertility in those days would have been by his rate of successful services and, with just a few cows in any given herd, a less-than-vigorous bull could not be tolerated. Then too, the older a bull got, the greater the chance that he would pick up (and transmit) disease, equally detrimental to the herd's productivity.

But moving bulls in and out of service about every three years also aided breed improvement. At the time of Twaddell's visit, the Royal Jersey Agricultural and Horticultural Society was providing incentives for farmers to be more selective of their cattle and mating them in order "to combine beauty of form with butter-producing habits."

The rules for registration in the Island of Jersey Herd Book required that each calf's sire be both registered and qualified, the latter being a process involving a public inspection made after he was one year of age. "A bull, when submitted for examination, must be accompanied by his dam, so that the merits of the dam can be taken into consideration," noted R. M. Gow in *The Jersey*. "Should the first calf of a heifer be a bull which the owner wishes to raise.

... this bull must be examined and qualified before he can be allowed to serve cows, and this qualification examination cannot take place before he is a year old, and his dam . . . must be examined with him, as it is fully realized that the dam is 75% of the bull."

Twaddell's audience must have been impressed by his report, for everything that the Jersey farmers were doing stood in stark contrast to the methods of dairying then prevalent in America. There were 6.25 million cows used for milk production, "varying but little either in type or ability to produce," Gow wrote.

The Better Dairy Sire Special took to the rails for two weeks in September of 1923, traversing 11 counties in southern Indiana with carloads of purebred Jersey bull calves, each of which had been "passed on by The American Jersey Cattle Club as one which they are willing to have go out as a representative of that famous breed," and this lone scrub bull. Cooperating with the AJCC were Purdue University, the National Dairy Council, the Indiana Jersey Cattle Club and the Baltimore & Ohio Railroad. Farmers could purchase the Jersey bulls on board, turn in their grade bull and receive credit for his beef price. "The grade or scrub bulls thus collected, will not only be taken out of service in Southern Indiana, but will be promptly shipped to the butcher's block," reported the Jersey Bulletin.

It is hard to imagine that any of the bulls among this "nondescript collection of scrubs" would have inspired the admiration Twaddell heaped upon the Jersey stock.

Over the next 30 years, Jerseys were imported in considerable numbers, their owners convinced that they could only contribute to the improvement of dairy cattle in the United States. The early leaders of The American Jersey Cattle Club set about bringing their merits to the notice of the public. At the 1877 Annual Meeting, President J. Milton Mackie would report that "Jerseys were the leading breed on the exhibition grounds, equal in number to all other breeds combined, highly respectable in quality, so that the impression . . . was highly favorable to the breed."

The huge success of the Jersey production test herd at the World's Columbian Fair in 1893 was widely publicized, with 85,000 copies of pamphlets being distributed within three years. The Louisiana Purchase Exposition (1903), at which the Jersey was of-

ficially pronounced "the most economical producers of milk for all purposes of dairying," was all it required to stoke the interest of many farmers in buying a Jersey sire—any Jersey sire being good enough.

By the time the AJCC seriously began organizing "bull clubs" to encourage widespread use of Jersey genetics, there was enough production information on pedigreed Jersey cows that it was possible to be more selective about which should be mated for sons. Between 1917 and 1935, the "Better Bull Campaign" replaced thousands of scrub bulls across the nation. A 400lb. fat record by the dam was the key criterion if a bull was to "make the train."

HISTORICAL REVIEW

That these bulls would improve production in their offspring was demonstrated at the National Dairy Exposition in 1921, where the grade herd of John Geraghty and Sons of Iowa was displayed. It began with a grade shorthorn (220 lbs. butter), then included her daughter by a Jersey bull (420 lbs. butter), a second cross to a Jersey bull (544 lbs.), then yet another cross (first lactation, 400 lbs. butter).

After the war, the AJCC promoted as "breed improvers" those Jersey bulls meeting the standards of its awards program (Tested Sire, Superior Sire, and so forth). They became the sires of sons, the dams being distinguished by such awards as the Ton of Gold (2,000 lbs. fat in no more than four consecutive lactations). But it was becoming increasingly obvious that differences in herd management, sometimes preferential treatment of dams and also of the daughters of certain bulls, were making evaluations based upon raw averages too unreliable.

Once the USDA Predicted Difference system had been adopted by the AJCC in 1968, the sire awards were history.

For just a short time, it was not clear how to proceed inselecting the sires and dams of a new generation of breed improvers. The new tools were introduced in a *Jersey Journal* article published May 5, 1968 and written by R. H. Miller of USDA: *And Now—A Cow Index In Selecting The Dams of Bulls*.

Indexing, Miller explained, was the result of establishing objective, quantitative procedures for utilizing the production testing information" to estimate

REGIONAL SIRE SAMPLING GROUPS



"I believe it's a necessity and duty of all Jersey breeders to use as many young bulls as we economically can in our herds... if we want to continue to improve as fast as we can."

About 20 years ago, the Board of Directors stepped up efforts to encourage Jersey herd owners to increase their use of young sires in sampling programs designed to produce early, multiherd USDA proofs. It revolved around the Young Sire Incentive Program, which was more successful at enrolling bulls from the established A.I. sampling programs than it was at encouraging sampling of more bulls. The program revealed that, while there may have been the will, breeders were not organized in a way to properly sample the bulls.

All that changed in March of 1985. A group of breeders from the Carolinas met and constructed a plan. "No one else is going to do it for us," one of its charter members said. Dixieland Jersey Sires (its first Board pictured above) was incorporated in August, the first bulls were selected in September, and semen was distributed the following March.

Dixieland is one of five active regional sire sampling groups. The groups, with 286 active members, have completed sampling on 180 bulls, with 17 more in progress. Bulls have been handled by studs in turn for having the first option on leasing the bull after his proof. The American Jersey Cattle Association provides administrative services for the groups, and receives a percentage of the profits from bulls which are returned to A.I.

And who are those bulls? On the August, 1999 Active A.I. list, they are Rock Maple Brook Mannix, Molly Brook Berretta Flyer-ET, MS/DP Long Range Ainge, Sunny Day Lester Brahms-ET, MVF Berretta Dapper Dan, AU Lester Topside-ET, AU Lester Topkick-ET, HL Lester Pointer, Greenwood Skyline Kent-ET, Rock Maple Sooner Marcus-ET, Prospector of Star Jersey, Dutch Hollow Bonus-ET, Treasure Chest Sooner B, and Schultz Lester Shane.

an animal's "breeding value."

The Predicted Difference for bulls was an index, and a parallel index had been calculated for cows. Like the Predicted Difference, the Cow Index could be used to rank females from high to low. Given that "breeders have always looked to the best cows in the best herds as a source of future herd sires," the Cow Index was a way breeders could "insist that only the very best" be mated for future sons.

Indexing also provided a more objective basis for comparing the relative transmitting ability of unproven sires,

and thus was born the concept of the Pedigree Index: an average of the sum of the sire's PD and the dam's CI.

Thus the process of proving young sires began to assume its modern form. And as the Predicted Difference became more widely accepted—because the daughters of high PD bulls were living up to expectations-the pressure increased for higher Repeatability proofs earlier in a bull's life, so that a bull might have a longer life through A.I. service.

Having abandoned years earlier an active role in setting standards for the selection and distribution of bulls, the Board of Directors asserted itself again, in ways befitting the new era. The first was to syndicate a parade of well-bred but unproven bulls in the All American Sale. By 1980, sire analyst Morris Ewing would credit the All American with helping the breed make "great progress in using young bulls."

The second was the Young Sire Incentive Program, reflecting the philosophy of the Pre-

dicted Difference. Bulls were worthy of sampling only if their estimated genetic merit exceeded the average of the current A.I. sires. An early proof was essential. And, it would be far more accurate for a bull's first proof to be based upon 10 daughters in 10 or more herds, than 30 daughters in three herds.

And the incentive for stringent selection, early sampling, and wide daughter distribution? A discount on registration fees, the prospect of accelerated genetic improvement—and the possibility that one might just get one of the first daughter of the next "hot" bull.