ACTIVITY REPORT

American Jersey Cattle Association

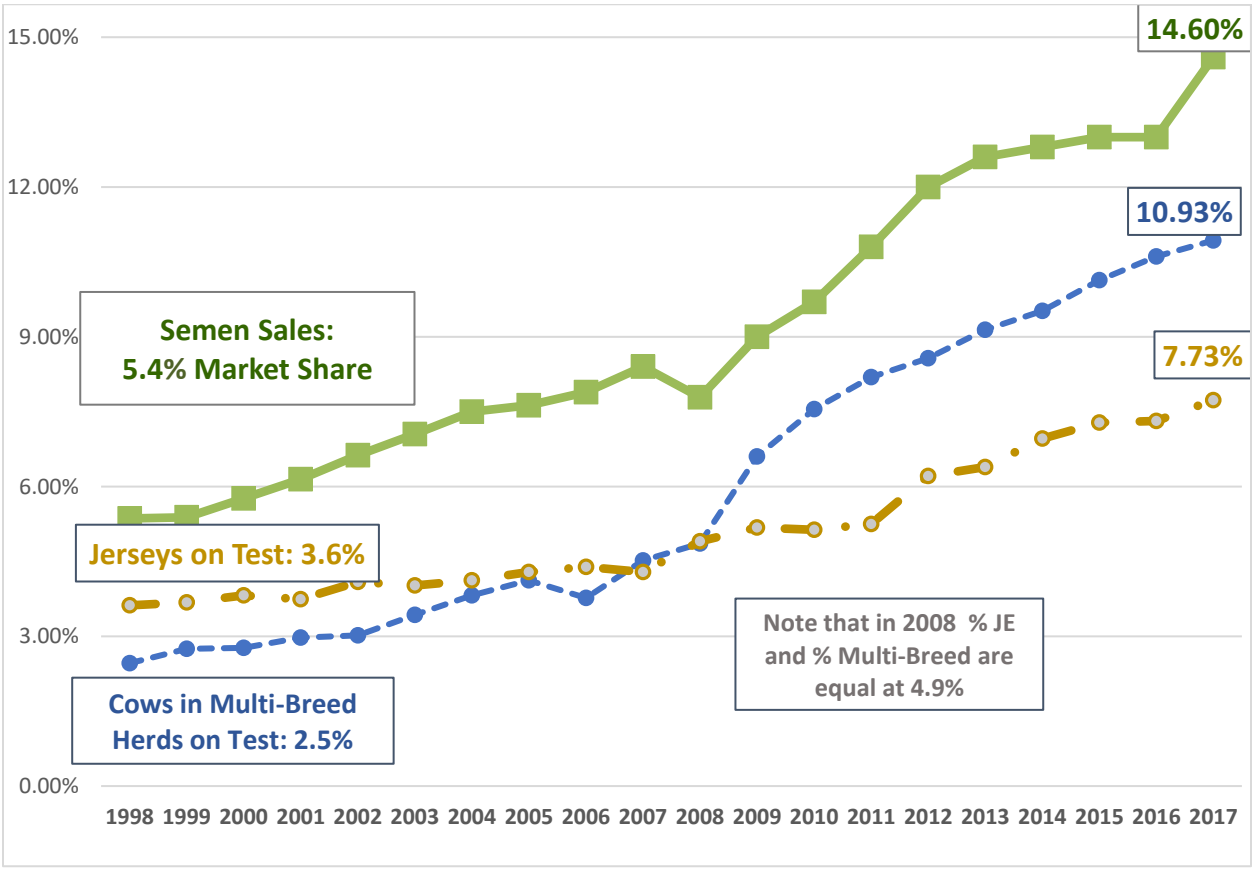
Official Production, for lactations processed by the Association

- New records in all categories, standardized 305-2x-m.e. basis: 20,150M (9142 kg), 985F (447 kg), 743P (337 kg) and 2,529 lbs. (1147 kg) on Cheddar cheese yield basis
- Average of actual 305-day production records processed by AJCA was 21,977 lbs. (9971 kg) on energy-corrected (3.5% fat, 3.2% protein) basis

Growth and Expansion in the U.S.A.

- Jersey semen sales set new record at 5,106,414 doses.
  - 3,436,296 domestic units is 14.6% of U.S. breed market share, highest in NAAB history.
  - 1,401,820 units sold for export was increase of 400,000 units over previous year.
- Jerseys are from 12% to 15% or more of U.S. cow population, growth accelerating in multi-breed herds *(herds where no one breed accounts for at least 75% of cows)*

U.S. JERSEY SEMEN SALES AND COW POPULATION, 1998 - 2017



Genomic Impact

- Rate of genetic improvement in the U.S. Jersey population has doubled since official genomic evaluations released in January of 2009.
    - The average annual gain in Net Merit from 2011 through the first quarter of 2017 is twice that of the previous six years (2005-2010).
    - Year-over-year increase from 2015 to 2016 was $69, and from 2016 to 2017, $72.
- Number of new genotyped females sets record: AJCA processed 25,599; CDCB genotype count table added 51,048 females during 2017, 45.2% YOY gain)

AJCA Services

- All-time record for registrations (184,962) and strong back-to-back years for transfer activity.
- 115,595 cows scored in Linear Type Traits Appraisal program, third-high total in history.
- 162,224 cows, fourth-best in history, in 1,062 herds enrolled on December 31.

Milk Marketing

- National All-Jersey Inc. is coordinating industry effort to implement multiple component pricing in two additional Federal Marketing Orders.
- First Jersey Value-Added 101 Workshop was conducted.

Cattle Marketing

- 2017 U.S. Jersey auction sales averaged US$ 2,244.96 (3,535 lots), seventh-best year since data summarized starting in 1919. High selling animal was Lyon Ajack Bay (US$ 126,000), Reserve All American Senior Two-Year-Old of 2017. Top bull was JX Dupat Fever{5}-P-ET (US$ 75,000) to syndicate and Select Sires Inc.
- Jersey Marketing Service reported sixth-high year in history for total gross (US$ 9,377,575)

Policy

- Completed implementation of integrated system for animal recording authorized by Board of Directors in 2016:
    - Generation Count in registered name indicates that animal has an unknown parent or a parent of another breed and position of that animal in the pedigree
    - All animals having one (or more) ancestor(s) of another breed within six (6) generations are designated with the JX prefix in the registration name.
    - Bulls at Generation Counts 3 through 6 are not recorded unless (a) genotyping results in a Breed Base Representation (BBR) value of 87 or greater; and (b) both the sire and the dam are genotyped.

Breeding Selection and Herd Management

- Development of CFP Milk and AJCA Body Weight Composite (developed from Jersey cow data) with implementation in Jersey Performance Index™
- Added to infoJersey Public Tools: Online Inbreeding Calculator and Animal Family Tree
- Directed research to analyze feed rations of high producing U.S. Jersey herds, summary report published in October *Jersey Journal*
- Research in the August 2017 *Journal of Dairy Science* gives definitive answer about optimum age at first calving (AFC) for U.S. Jerseys: 20 to 21 months, based on 19 years of performance

records from more than 1.2 million Jersey cows. “It appears that the Jersey herd has almost reached an AFC for the breed, 46% of all calvings at ≤21 months, that maximizes production.”

Research Projects Funded

By AJCC Research Foundation 2017

- A. H. Laarman (University of Idaho), *Effect of supplemental butyrate on colostrum quality and passive transfer of immunity,* to provide multiple targets for nutritional management to improve passive transfer of immunity in Jersey calves.
- Kimberly Miller and Trish Berger (University of California–Davis), *Reduced testicular estrogens in Jersey bull calves: Hormonal responses to a potential stimulant of Sertoli cell proliferation,* focusing on increasing sperm production capacity in prepuberal Jersey bulls.
- Francisco Peñagaricano (University of Florida), *Genomic analysis of bull fertility in Jersey dairy cattle,* to identify and characterize bovine genomic regions, individual candidate genes, and molecular pathways underlying sire fertility.

By National All-Jersey Inc. 2017-2018

- Dennis Savaiano (Purdue University), *Comparing the digestion of milk with different beta-casein protein content in lactose maldigesters,* to evaluate the lactose digestion from and tolerance to milks containing different levels of A2 β-casein.

By AJCC Research Foundation 2018

- Victor Cabrera, Peter Vadas, and Kristan Reed (University of Wisconsin-Madison), *Updating Jersey and Holstein lactation curves for use in whole farm systems model to assess efficiency of the Jersey breed for milk production.*
- Luciano S. Caixeta (University of Minnesota), *Use of a bovine non-specific immune stimulant on health and performance of Jersey calves during the pre-weaning period.*
- Rebecca Cockrum, Katharine Knowlton, and Kristy Daniels (Virginia Polytechnic Institute and State University), *Genomic improvement of colostrum quality and Jersey heifer calf survival.*
- Maurice Eastridge (The Ohio State University), *Developing calf starters for efficient growth of Jersey heifers.*
- Heather Dann, Richard Grant, and David Barbano (William H. Miner Agricultural Research Institute and Cornell University), *Development of milk fatty acid parameters for feeding and herd management on Jersey farms.*
- Paul J. Kononoff and Rick Stowell (University of Nebraska), *Updating our knowledge and understanding factors that affect heat production by lactating Jersey cows.*
- Holly Neibergs and Dale Moore (Washington State University), *Identification of loci associated with a deficiency of colostrum production in Jersey cows.*
- Stephanie Ward and David Barbano (North Carolina State University and Cornell University), *Correlation of fatty acid profile to total fat production in milk produced by Jersey cows.*

Jersey Journal

- Monthly publication delivering exclusive coverage of the Jersey breed, average issue of 79 pages
- Marks 65th anniversary on October 5, 2018

Youth Development

- Class V of Jersey Youth Academy held in July, activities tracked daily by USJersey Journal on Facebook with reports archived at http://bit.do/JYA
- 156 different individuals from 33 states have participated in five completed classes.