UDC 338.432:636.2.082.034(73)

JERSEY CATTLE IN MILK INDUSTRY OF THE USA

I. Goncharenko, D. Vynnychuk

Analytical review is dedicated to increasing population of Jersey cattle in the USA milk industry. History of American Jersey Cattle Association, its administration structure, and input of 2,150 active members in enhance of profitability of Jersey dairy herds are listed.

Economic benefits of making use of Jerseys comparing to similar-age Holsteins contemporaries, Jerseys population level increase in the USA and totally in the world, its progress in milk productivity and in raw materials quality are presented.

Reasons why Holsteins relinquish its leadership in productivity level are listed.

Jerseys, Holstein breed, milk productivity, USA industry, economic benefit

In the USA, main productive base of drinking milk and its products is Holstein dairy cattle. However, over the last 10 years (2003 - 2005) number of Jersey cattle in the USA has increased significantly and gross production has also increased of products obtained from this population.

American Jersey Cattle Association organized in 1868 to improve selective efficiency of the breed.

Nowdays Association unites 2150 active farmers. It is governed by 12-member Board of Directors, plus President elected at-large annually. Staff consists of 35 people working full-time, 23 at headquarters offices and 12 are distributed across the USA. Association receives 37% of total revenues by completing programs and 17% for performance evaluation programmes.

CDCB – Council on Dairy Cattle Breeding receives information from AIPL – Animal Improvement Programs Lab united by milk productivity of the cattle using DHI – Dairy Herd Improvement, DRP – Dairy Records Processing centers, NAAB – National Association of Animal Breeders, PDCA – Purebred Dairy Cattle Association

In 1957 to assure increased demand on selection material, Jersey milk and quality of produced products National All-Jersey Inc. has been established, which would have regulated market development, regulated market prices, analyzed data

of association laboratories, provided inner connections of milk industry, created development and education strategy.

By 01.01.2013 Jersey cattle takes 17% of all cattle of the USA. In 2017 it is forecasted that number of Jersey cattle would exceed 1.5 million

The economic advantage of using Jersey cows in comparison with their peers Holsteins notes in many positions. Jersey cattle cows have high productivity, but by the content of solids in the milk they come in first place among dairy cows. In addition, farmers emphasize the following Jerseys features:

- efficient feed conversion in production;
- great calving ease for cows and cow-heifers;
- high fertility;
- longer herd life;
- fast rate of internal herd growth.

Physiologists notes following biological features of Jersey cattle:

- watch cooper level (< 20 ppm);
- consume 75-80% of feed dry matter;
- mineral materials controls by Ca (0,9-1%), Mg (0,4%), K (>1,3%), Co (0,9-1%).

In 1992 Jersey productivity (standardized milk) was 6779 kg, in 2010 reached 8673 kg, for 59604 cows with 4,7 % fat content and 3,5 protein content. If productiveness figures would be adjusted by 3,5%, milk yield in 2010 would have increased by 10567 kg.

Jerseys were ranked first among other breeds for the duration of the economic use in the herd (76.2%), ahead of the Milking Shorthorn - 75.2%, Ayrshire - 72.5%, Schwyz - 71.4%, Holsteins - 68.4%.

In 2013 Jersey breed cow RJF REMAKE BECKY was admitted as the best cow on the competition in Canada. Her milk productivity for 9 lactations was 104707 - 4.34 - 4543 - 3.71 - 3884.

Jersey Performance Index™ (JPI) consists of interrelated aspects: productiveness - 57%, fitness/type - 43%, PTA fat - 15%, PTA Protein - 42%, SCS - 6%, DPR - 10%, Functional trait Index - 15%, Productive life - 12%.

Conducted analytical review on use of milk cattle breed has shown that the best by productiveness level Holstein breed is slowly loosing its positions not only in the world but also in the USA.

Therefore, in conditions of Ukraine World and European tendencies of improving breeding methods using Jersey gene pool and getting croossbred herds should be taken to the account.

Correction of breeding and selection programs for near-term perspective of Holstein milk herds breeding is inevitable, based on many stochastic development processes of cattle breeding and dairy sectors of the Ukrainian economy.

References

1. Animal Improvement Programs Laboratory, USDA; AJCA calculations / Режим доступа : http://aipl.arsusda.gov/
2. Ahlem J. RealCaliforniaMilk / Режим доступа : http://www.youtube.com/watch?v=wc3a6eSABX8
3. Animal Improvement Programs Laboratory, USDA; AJCA calculations / Режим доступа : http://aipl.arsusda.gov/
4. Capper J. L., Cady R. M., Bauman. The environmental impact of dairy production: 1944 compared with 2007 / J. of Animal Science. – 2009. – Vol. 87. – P. 2160–2167.
5. Capper J. L., Cady R. M. A comparison of the environmental impact of Jersey compared with Holstein milk for cheese production / J. of Dairy Science. – 2012. – Vol. 95 (1). – Issue 1. – P. 165–176.
6. Cow of the Year Contest / Режим доступа : http://www.jerseycanada.com/pages/cow-of-the-year-contest.html
7. Currie E., James J., Whytock J., Carty L. Wick S. Economic Analysis of Dairy Breeds. – Ontario, 2013. – 16 p.
8. Includes foreign-produced Jersey semen sold by NAAB members / National Association of Animal Breeders // http://www.usjersey.com/How-Now-JerseyCows/WhyJerseys2013.pdf. – 2012. – 8 p.
9. James Ahlem dairy of California donates Top-quality jersey calf for national heifer sale / Режим доступа : http://www.usjersey.com/researchfoundation/Pedigrees/JimAhlem.pdf
10. National DHI enrollment data, AJCA calculations / Режим доступа : http://www.usjersey.com/

11. RJF Remake Becky – cow of the year nominees / Режим доступа : http://www.jerseycanada.com/edit/files/pdfs/rjf-remake-becky-2013-nominee.pdf