

# BREEDING OF ESTONIAN RED CATTLE

*Tõnu Põlluäär*  
*Animal Breeders' Association of Estonia*

Estonian Red Cattle have been bred by continuous cross-breeding of native herd with Angler and Danish Red Cattle. In 1862, the academician Middendorff imported cattle of Angler breed and they laid the foundation for purebreeding of Angler Cattle, imported bulls were used for improving local breed. In 1885, the Baltic Cattle Breeders' Association was the first in Russia to start registering cattle in herdbooks.

At first, great attention was paid to milk production, other characteristics were considered less important. In the early 1890s, Stegmann promoted cattle with stronger constitution and therefore Danish Red Cattle were imported as they had already at that time big body weight and high milk productivity.

Red cattle breed started to spread in Estonian farm herds at the end of 19th century. A lot of breeding herds were destroyed during World War I. In 1916 there were 269,000 red cows, whereas in 1920 there were 225,000. Jaan Mägi was actively advocating breeding and he set up the Estonian Angler Breeders' Society in 1919. In 1928 J. Mägi renamed the Estonian Angler breed the Estonian Red breed and the society was renamed the Estonian Red Cattle Breeding Society.

**Table 1. Milk productivity of Estonian Red breed herdbook cows in 1922-1939**

Year	No. of cows	Body weight	Milk, kg	Fat, kg	Fat, %
1922/23	1510	386	2026	73.1	3.61
1930/31	4171	431	3082	115.2	3.74
1938/39	6136	453	3638	141.0	3.88

World War II and the following collectivisation brought about a major setback. It took time before milk production was restored.

The activity of the breeding society was terminated in 1947 and the State Breeding Centre of Estonian Red Cattle was founded which coordinated breeding work until 1991.

The biggest number of red cows was registered by animal recording in 1975 (168,053), since then the number has been gradually decreasing - 26,874 cows at the end of 2002. The best year before Estonia regained its independence was 1989 - 3919 kg milk, 4.07% fat and 3.39% protein.

Rebirth of the Republic of Estonia brought about serious crisis in agriculture. In 1992, the mean annual milk yield per cow was the same as in 1970s.

On 1 January 1992, Estonian Red Cattle Breeding Centre was founded, for which the state merged the assets of the breeding centre and the Tartu AI centre. Thus the basis was laid for the privatisation of state assets. The centre was managed by the board chaired by Sven Mäger. Tõnis Soonets was elected managing director. On 10 November 1992, 174 members convened and decided to found a breeding co-operative "Estonian Red Cattle". A board of 11 members was authorised to coordinate the activity of the co-operative and T. Soonets continued his work as a managing director. The co-operative was registered in the Tartu County Government on 18 January 1993. In 1996, the board was renamed a council (chairman Sven Mäger, later Toivo KENS and Aavo Mölder) and the 3-member board was given the task of day-to-day management. Tõnis Soonets was the chairman of the board until his sudden leaving in 2001. Anne Zeemann became the next chairman and Tõnu Põlluäär has been the chairman since 2001. In January 2003, the breeding co-operative joined the the Animal Breeders' Association of Estonia.

In 1993, the breeders of Danish Red, Angler, Lithuanian Red, Latvian Brown and Estonian Red cattle founded the European Red Dairy Breed Association in Denmark with the aim to get an economical and healthy breed. This has provided good opportunities to communicate with European red cattle breeders and get valuable breeding material on favourable terms. They are also members of the International Red Cow Club (IRCC). Thanks to participation in international organisations and the use of top bulls, Estonian Red breed has restored its position and is fully competitive with Estonian Holstein.



FYN Rosen - the historical legend of Estonian Red cattle

*A. Juus*

**Table 2. Number and milk productivity of Estonian Red breed cows**

Indicator	1993	1994	1996	1998	2000	2001	2002	2003
No. of cows	74,543	59,691	43,537	38,705	29,875	27,981	26,874	26,314
Milk, kg	3,064	3,153	3,474	4,242	4,441	4,939	5,066	5,119
Fat, %	4.11	4.12	4.28	4.27	4.39	4.41	4.42	4.44
Protein, %	3.17	3.21	3.27	3.26	3.36	3.39	3.36	3.39

The population of red cows has been decreasing during the last decade, whereas their productivity has risen (Table 2). The number of cows registered in the milk recording system has decreased by 67,736 in ten years, but milk production has increased by 1907 kg, fat content by 0.34% and protein content by 0.16%.

The number of cows in breeding herds has not decreased so much. In 1992, there were 67 breeding herds with 34,965 cows. In 2002 there were 189 breeding herds with 16,728 cows.

The breeding goal for Estonian Red breed is milk productivity, whereas protein yield, feet and udder traits are also considered very important. The desired wither height of an adult cow is at least 140 cm and body weight 600 kg. To achieve these goals, 10 young bulls are tested every year.



ØJY Mabru

E.-K. Lõhmus

During the last decade, seven different breeds have been used to improve the Estonian Red cattle, whose grade of blood has to be considered when selecting parent pairs, yet the prevalent breeds are Angler and Danish Red. In addition, Swiss, Red Holstein, Norwegian Red, Ayrshire and Swedish Red-and-White are used.

The use of Angler has helped maintain the classic red colour. Muscularity and protein yield have increased. The use of Danish Red cattle breed has increased milk productivity, improved legs, udder traits and body size. The use of Swiss breed has made the red cow stronger, improved milk productivity, the build of udder and body size. The use of Red Holstein has resulted in getting very big cows with beautiful udders, milk yield has improved considerably. The use of Norwegian, Swedish and Ayrshire breeding material has

mostly improved the health of the udder and also increased milk production.

The best breeding bulls of the last decade have been imported from Denmark. FYN Rosen 42683, bought by lease in 1992, laid a new foundation for breeding. He has over 2000 daughters. He has improved the exterior and udder of the red cattle. Unfortunately, none of his male calves have turned out to be breeding bulls. OJY Mabru 42737 has more than 2500 daughters and the highest SPAV (RBV for production) was 143. In 2002 his male offspring Mabi 10232 was given high grade – SPAV=132. Right now his several male offspring are waiting for evaluation.

Swedish leased bull Brattbacka 49011 (SPAV=155) has also been popular, having over 2000 daughters. The best of Angler bulls was Meteor 40249 with 2000 daughters, the highest SPAV was 122. He has some promising male offspring waiting for evaluation. Several Red Holstein bulls are popular among farmers at the moment as they improve cow's body size and milk production, the best of them being Lorenz 65024 (SPAV 128) and Rotterdam 46151 (SPAV 122).

There has been a breakthrough in cows' milk yield recently. The best lactation yield was 11,007 kg in 2000 (37; S Kelm; Reet Lilleorg), 11,750 kg in 2001 (4330; S Norrbacka; Tartu Agro AS), and the biggest yield in history – 12,401 kg in 2002 (344394; S Norrbacka; Tartu Agro AS).

The herd with the biggest annual milk production is that of the Õunapuu farm of Lea Puuri in Viljandi County (Table 3). In 2002 this herd with the same number of Estonian Holstein breed cows had the highest milk production in Estonia – 10,200 kg.

According to the highest daily milk yield, the best cow is Lea Puur's Musi (S Šum), who has been the best in daily milk production thrice in the last decade (1994: 43.6 kg; 1996: 42.6 kg and 1997: 43.3 kg). Breed record belongs to the cow No. 656097 of Tartu Agro AS (2002: 60.4 kg; S Mabi; SS OJY Mabru).

A breeding herd is recognized for selling breeding material, mostly by raising young bulls of high value. Most of the bulls have been sold by Põlva Agro OÜ (16), Õunapuu farm (15), Sallasto OÜ (13), Tartu Agro AS (10) and OÜ Kõpu PM (8).

Animal breeders get knowledge and recognition at competitions. The most active participants throughout years have been the companies OÜ Kõpu PM, Sallasto OÜ and Tartu Agro AS. The "cows of the year" have also been in these herds (Table 4).

**Table 3. The best herds of Estonian Red breed**

Year	Owner	County	No. of cows	Milk, kg	Fat, %	Protein, %	Fat + Protein, kg
1994	Lea Puur	Viljandi	11	6636	4.50	3.36	522
1995			14	7445	4.33	3.32	569
1996	Toivo Kens	Jõgeva	17	6684	4.17	3.31	500
1997	Lea Puur	Viljandi	11	7731	4.45	3.18	590
1998			12	7658	4.09	3.25	562
1999			11	7209	4.03	3.19	520
2000	Jaak Koplikask	Viljandi	7	8146	4.20	3.33	613
2001	Põlula OÜ	Lääne-Viru	21	8728	3.88	3.61	654
2002	Lea Puur	Viljandi	15	9594	4.00	3.31	701



Champion of the Estonian Red Cattle Show 2003 Õisu (sire Ralla, owner OÜ Kõpu PM)  
*O. Saveli*



The best breeder of Estonian Red and Estonian Holstein cattle in 2003 Lea Puur from Viljandi county  
*A. Juus*

**Table 4. Top cows of the Estonian Red breed**

Year	Cow	Sire	Maternal sire	Owner	County
1994	10943	Haervey Gert	Fyns Talbru	Haage Farm	Tartu
1995	KILLI	Dancer	Ipp	Mereranna PÜ	Saare
1996	KANNI	Telik	Reid	Sallasto OÜ	Viljandi
1997	KITS	Igrek	Janos	Sulev Trahv	Valga
1998	TÄPI	Truck	Soldik	Kullar Soolo	Viljandi
1999	KIRJAK	Ralbo	Vord	Sallasto OÜ	Viljandi
2000	ROOSI	FYN Rosen	Tett	Tartu Agro AS	Tartu
2001					
2002	OOLI	SYD Jason	Vord	OÜ Kõpu PM	Viljandi
2003	ÕISU	Ralla	Vord	OÜ Kõpu PM	Viljandi