

Red Dairy Breeds BYELORUSSIAN RED (Krasnyi belorusskii skot)

In the course of their history Byelorussian Red cattle were repeatedly improved by infusion of the blood of the superior related red breeds. During the last 100 years the blood of six breeds was used, namely: Angeln and German Red at the end of the last and early in this century, Polish Red and Danish Red in the twenties and thirties, and Estonian Red and Latvian Brown in the fifties of this century. The blood of Danish Red cattle is currently being introduced again.

A study carried out in Grodno region in 1948-49 proved that it is expedient to breed the Byelorussian Red inter se. They are of a single type, adapted to the local ecological, climatic and feeding conditions, and undemanding as to feed. They respond to improved feeding and management by increased milk production and high fat percentage.

The breeding of these cattle was carried out at the Vasilishkovskaya animal husbandry experiment station. In 1967 volume 1 of the National Herdbook of the Byelorussian Red breed was published.

At present, Byelorussian Red cattle are found in all regions of the Byelorussian Republic; however, they are commonest in Grodno and Minsk regions. In 1980 they numbered 429 000. The exterior of the Byelorussian Red cows is characterized by the following features. The head is medium long, not wide, with a long face. The poll is pronounced. The horns are of medium size. The neck is thin and of moderate length. The withers are not sharp, occasionally divided. The chest is of medium depth, wide enough. The back is level, slightly narrow. The loin is long and level, of medium width. The mid-part of the body is well developed. The abdomen is capacious, not drooping. The rump is level, slightly raised. The hindquarters are of medium length and width, with protruding hips. The legs are comparatively thin, bony, not long, correctly set. Sometimes legs are splayed or bowed. The udder is medium in volume, glandular, cup-shaped or roundish. The teats are cylindrical, of medium size. The skin is thin, elastic, mobile. The skeleton is light and strong. The musculature is moderately developed. The conformation is harmonious and compact; the constitution delicate. The colour is red or rust-red of various shades. Many animals are noted for their longevity, while maintaining normal reproduction.

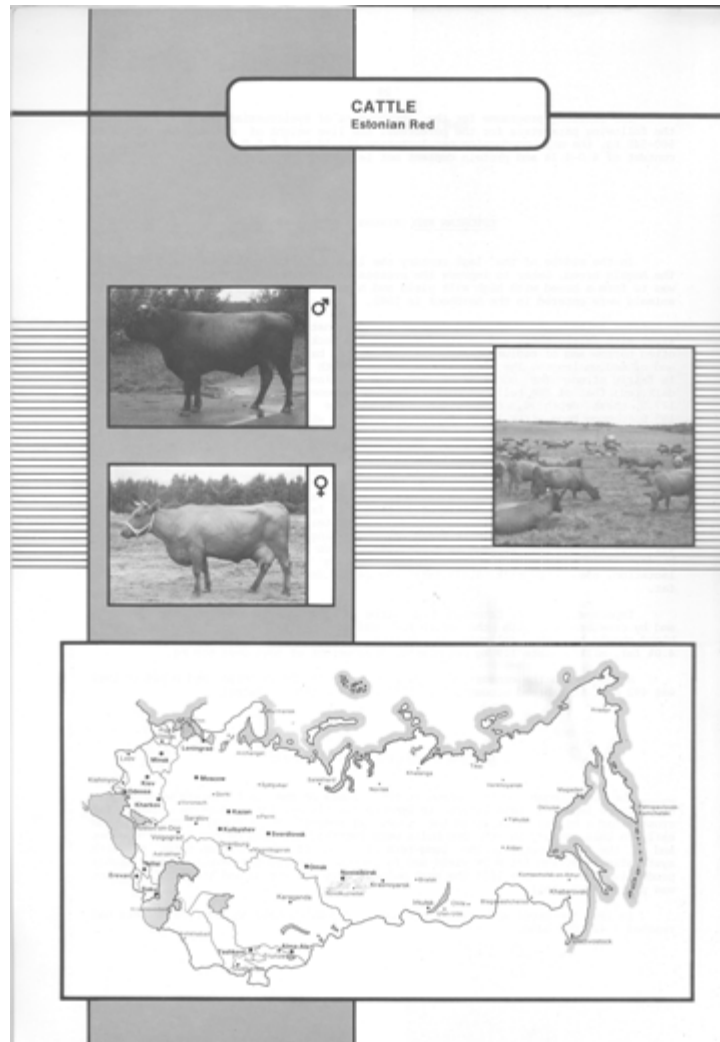
Body measurements (in cm) are as follows: withers height 128.7, chest depth 68.6, oblique body length 158.3, chest girth 189.8, cannon bone girth 19.4 (National Herdbook, vol. 1, 1967). The average live weight of mature cows is 420-500 kg (maximum 530 kg); that of the bulls is 750-850 kg (950-1000 kg maximum).

The potential of the modern Byelorussian Red cattle has not been completely realized. The average milk yield of the stock evaluated at the breeding farms in 1981 was 2557 kg with 3.69% fat; at the best farms it was 3053 kg with 3.62% fat. In the herd of Vasilishkovski breeding centre in Grodno region the average milk yield in 1982 was 2507 kg with 3.73% fat. In recent years several groups of cows of this herd and of Shchuchin experimental station averaged 4514 kg of milk with 4.08% fat. In her 4th lactation cow Vyetv 2016 produced 5986 kg of milk with 3.91% fat and 3.70% protein; Malta produced, in her 3rd lactation, 6056 kg of milk with 4.55% fat; Volna produced, in her 4th lactation, 5906 kg with 4.85% fat. Beef and fattening qualities of Byelorussian Red cattle are satisfactory: under favourable conditions of feeding and management the young stock display a high growth rate and early maturity.

The breed comprises 6 basic lines and 23 families.

To preserve these cattle conservation herds have been set up and a bank of frozen semen of the best sires of all basic lines has been established.

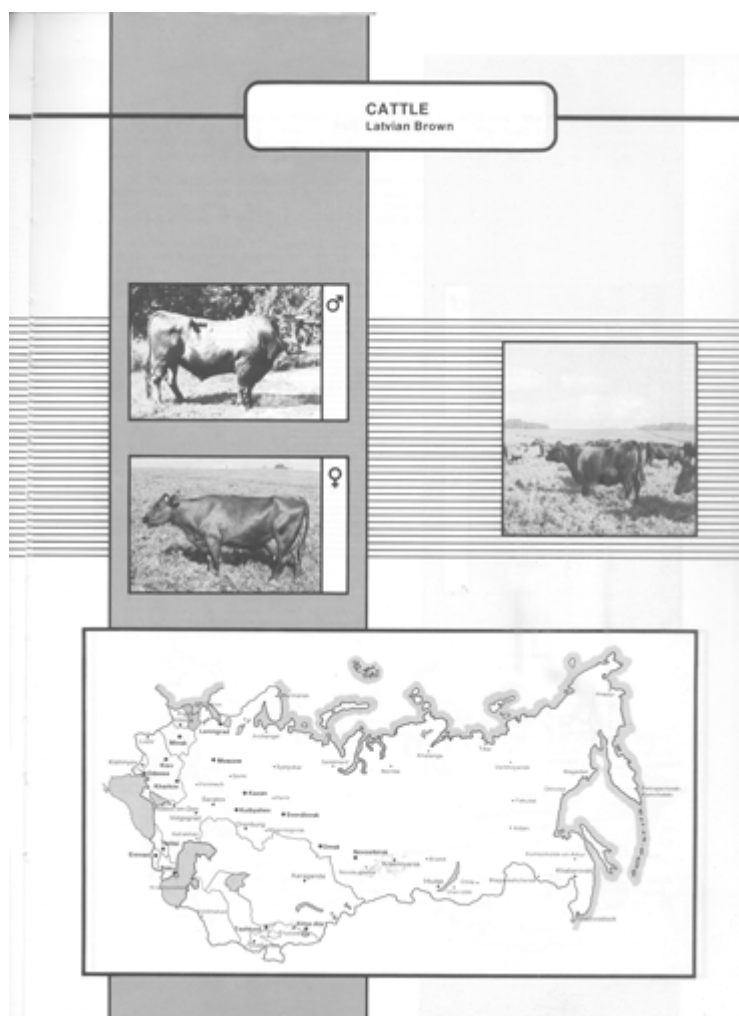
The breeding programme for the improvement of Byelorussian Red cattle aims at the following parameters for the purebreds: the live weight of mature cows should be 500-540 kg, the milk production per lactation should be 4.5-5.0 thousand kg with fat content of 4.0-4.2% and protein content not less than 3.6%.



ESTONIAN RED (Krasnaya estonskaya)

In the middle of the last century the local Estonian cattle were crossed with the Angeln breed. Later to improve the crosses Danish Red animals were used. The aim was to form a breed with high milk yield and high fat content. The first Estonian Red animals were entered in the herdbook in 1885. The animals of this breed have a strong constitution. The head is medium in size, with fairly short and narrow forehead. The neck is of medium size. The chest is often narrow and of medium depth. The withers and back are level; the rump is wide and of medium length. The legs are of medium length and correctly set. The skeleton is fairly strong. The udder is of medium size, glandular. Coat colour is light or dark red; that of the bulls is darker. Body measurements (in cm) are: withers height 127.5, chest depth 70, chest width 45.5, oblique body length 157.9, heart girth 195.5, cannon bone girth 18.3. Better cows have a wide barrel with a solid skeleton and muscles. The live weight of calves at birth is 31-33 kg; cows weigh 450-550 kg (maximum 780 kg); mature bulls weight 800-900 kg (maximum 1000 kg).

The milk yield of 164 900 evaluated cows was 3456 kg with 3.92% fat. The production of Estonian Red cattle at 77 breeding farms is as follows: average milk yield per cow 3784 kg, fat content 3.98%, protein content 3.30%. In 12 high producing herds the average milk yield per cow during a 305-day lactation amounts to 4127-5029 kg, and fat content is 3.90-4.18%. There are 25 record holders in these herds: including cow 5338 - 5th lactation, 9610 kg milk, 4.14% fat; cow 4519 - 7th lactation, 8554 kg of milk, 4.47% fat; cow 2431 - 2nd lactation, 7806 kg milk, 4.65% fat. Improvement of the Estonian Red cattle is being carried out by pure breeding and by crossbreeding with the Danish Red and the Angeln. The new type with Angeln blood should have the following performance: milk yield not less than 7000 kg with 4.0% fat, milking rate 1.9 kg per minute, live weight of cows over 600 kg. According to the census the total population of the Estonian Red breed in 1980 was 492 000. This breed accounts for 63.3% of all cattle in Estonia.



LATVIAN BROWN (Buraya latviiskaya)

The breed began to be formed in the middle of the last century when Angeln cattle were imported into Latvia to improve the local, low-productive cattle. The crosses had a higher milk yield but lower fat content. At the end of the last and early in this century Danish Red bulls were imported and used on the Angeln crosses and on the local cattle. The long-term breeding of the crosses inter se with systematic selection for milk yield and fat content ensured the development of highly productive cattle. Since 1885 the best animals were registered and the first herdbook was published in 1911. In 1947 the breed was given a new name - Red-Brown Latvian. By 1980 numbers had reached 1 417 000 head.

These cattle vary in colour from light-red to dark-red. The head, neck and legs are often darker. They have a strong constitution. The head is small, light and moderately long. The skeleton is light, chest deep, body long, rump slightly raised, udder usually well developed. The best herds have marked dairy features.

The basic measurements of mature cows (in cm) are: withers height 129.6, chest depth 71.1, chest girth 193.3, oblique body length 163.7, cannon bone

girth 18.0 (National Herdbook, vol. 29, 1983). The live weight of mature pedigree cows is 520-560 kg and that of bulls is 750-850 kg, going up to 1000 kg.

The milk yield of purebred Latvian Brown cows is high. The average milk yield of the mature cows recorded in Volume 29 of the Herdbook (1983) in their best lactation was 4537 kg and the fat content 4.28%. The average yields of the nearest female ancestors of the bulls recorded in Volume 29 of the National Herdbook were 5970-6036 kg of milk and the fat content was in the range 4.38-4.73%.

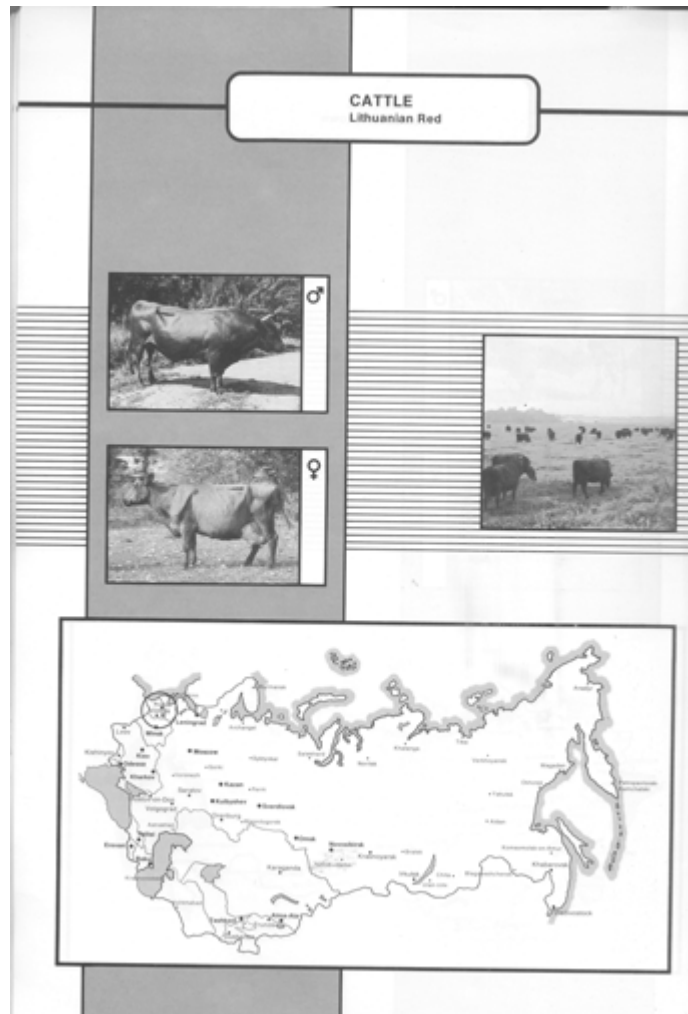
The champion milk producers are: Nadze 8977 - 8457 kg milk with 3.93% fat; Yetse 6320 - 8170 kg, 4.21%; Grieta 4915 - 8113 kg, 4.26%; Roya 5212 - 8021 kg, 4.10%.

As a genetic resource for Latvia, Latvian Brown cattle are of primary importance: they account for 99% of all cattle in this Republic. The breed includes 4 major lines.

In the improvement of Latvian Brown cattle much importance has been attached to line breeding. In 1979 a new breeding line was tested and approved; it was named BL-1 (Brown Latvian No. 1). The number of the BL-1 line is over 50 000 head. This line is being developed in four branches by the assortative mating of sires to cows from the best families and by periodical moderate inbreeding. The major selection herds belong to the breeding centres Vetsautse, Sigulda and Sarkanais Octobris.

The BL-1 cows are noted for their harmonious conformation. The udder is large, glandular, usually cup-shaped or spherical with equally developed quarters (average index is 45%). The milk yield of the cows in the selection group is 5287 kg; fat content averages 4.16%, and protein content 3.45%. There are many champions in this line; they combine high yield with increased fat content: Undra 6088 - 4th lactation, 9298 kg milk, 4.75% fat, 3.84% protein; Baka 3469 - 4th, 8544, 4.82%, 4.05%; Dalasa 4044 - 8th, 10 106, 3.76%.

The Latvian Brown breed of cattle is being improved with the aim of increasing milk yields to 5000 kg with the same fat and protein content and to meet the requirements of the industrial methods of cattle management.



LITHUANIAN RED (Krasnaya litovskaya)

The breed was formed early in this century by improved feeding and management of the local Lithuanian cattle, assortative mating and mass selection and crossing with the improved breeds: Ayrshire, Angeln, Dutch, Danish Red, Swiss Brown and Shorthorn. The crosses were selected for milk production.

Most animals are of clearly defined dairy type. Basic measurements of the pedigree cows (in cm) are as follows: withers height 126, oblique body length 157, chest width 43, chest depth 69, chest girth 188, cannon bone girth 19. Coat colour is red. The average live weight of cows is 470 kg; those in the herdbook weigh 520 kg and bulls 750 kg.

The young stock of the Lithuanian Red breed are noted for their rapid growth rate, good food conversion and high carcass quality. When intensively fattened, steers weigh 413 kg as yearlings and 503 kg when 15 months old. Up to the age of 15 months one kg of gain requires 5.32 feed units. The dressing percentage is 58.6 and proportion of meat 81.6%. The average daily gain of steers from 6 to 15 months of age is 1032 g.

The milk yield of 83 500 mature cows was 3362 kg with 3.69% fat; 2700 cows at pedigree farms produced 4337 kg with 3.87% fat. The record holders of the Red Lithuanian breed are as follows: Sloga 35 - 7th lactation, 10 754 kg milk, 4.20% fat; Zhabine 1355 - 4th, 10 242 kg, 4.33%; Gerve 1246 - 6th, 10 196 kg, 4.09%.

The breed consists of 18 lines and related groups.

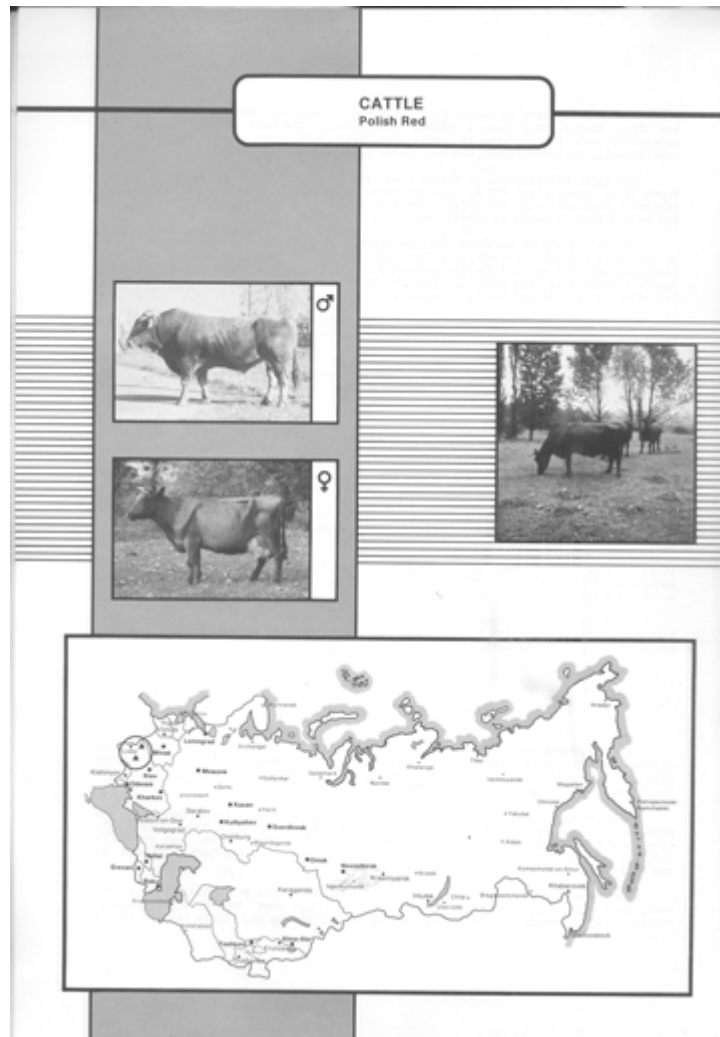
The best bulls are kept at Pasval, Shaulyai and Vilnius breeding centres.

The average milk yield of the nearest female ancestors of these bulls ranges from 6346 to 7210 kg and the fat content is 4.39-4.72%.

The Lithuanian Red breed is found in 18 districts in the north and northeast of the Lithuanian SSR. In 1980 the total population was 567 000. Up to 10 000 head of young pedigree stock are exported annually to the Kazakh, Uzbek and other Soviet republics.

The programme for the improvement of Lithuanian Red cattle, along with pure breeding, envisages the use of Danish Red and Angeln bulls to form high butterfat lines.

Blood group analysis has shown that the homozygosity rate is fairly low (6.8%). It points to a high heterogeneity of Lithuanian Red cattle and to a great potential for improvement by accumulating the useful genes.



POLISH RED (Krasnaya polskaya)

The breed derived from the local cattle of Poland and western Ukraine. In the early 20th century they were improved by crossing with the Angeln and Danish Red and, since 1956, in the USSR with the Latvian Brown, Estonian Red and Byelorussian Red. The greatest impact in terms of the increase of production was of Angeln and Danish Red cattle.

The total population of the breed in 1980 was 183 000. It is found chiefly in the western Ukraine, namely in Volyn region and, to a lesser extent, in Ternopol region and is being improved at Olykski breeding centre in Volyn region.

Polish Red animals have a delicate constitution and a compact conformation. The colour varies from light yellow to brown; most typical is light to dark red, or cherry-red with lighter markings. The horns are light in colour; the bulls have short and thick horns of medium size. The head is medium in size, not wide enough. The back and loin are straight, usually narrow. Some animals have a sway and wedge-shaped back. The rump is narrow, frequently wedge-shaped and sloping. The udder is medium in size, glandular, cup-shaped. The fore-legs are strong, properly set; sometimes

they are knock-kneed or bow-legged. The skeleton is thin. The skin is thin and hard. The hair cover is thick and short. The hooves are dark in colour. The basic measurements of cows are (in cm): withers height 124.4, chest depth 64.2, oblique body length 145.4, chest girth 174.6, bone girth 16.9. The live weight of pedigree cows is 450-480 kg.

The milk production of mature cows recorded in Volume 1 of the herdbook is 3782 kg with 3.96% fat.

The characteristic features of the Polish Red breed are the compact conformation, undemanding feed requirements, resistance to disease, high fertility and high milk fat percentage.

The breed consists of 25 lines and related groups.

The breeding programme includes the improvement of reproduction in the purebred local-line animals, setting up of conservation herds at the better breeding farms, and forming a bank of frozen semen of the major line sires. On commercial farms cows are mated to bulls of related improved breeds - Danish Red and Angeln.