

# The breeding association role in the development of the Bulgarian Rhodope Cattle

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## Abstract

The Bulgarian Rhodope Cattle is one of the main dairy breeds developed for the specificities of Rhodope Mountain, a region with poor soils and scarce pastures. The breed was developed by reproductive crossing between the autochthonous Rhodope shorthorn cattle with a range of breeds: the local Gray cattle; Sofia brown cattle; Oberinntal Grey; Ayrshire cattle and, at later stage, with Jersey. The development has started in the 20-ies of the XX century and continued through 5 stages in the next 70 years till the official recognition as a breed in 1989. The initial breeding goal was to develop a small breed with live weight 250-300 kg, 1500 kg milk yield, and 4.6% milk fat content. Just after the recognition of the breed, the political system in Bulgaria has changed, and as a result the state farms were closed and the livestock production collapsed. As the farmers have not realized the importance of the selection, they have not established new breeding associations. In year 2000, the state initiated the development of breeding organizations, one of the first being the organization for the Bulgarian Rhodope Cattle and Jersey. It started work with some 300 cows, where only 5 farms had more than 20 cows. The activities were facilitated using artificial insemination, a practice familiar to farmers and preserved during the years. In the beginning, the work of the breed organization was not effective, and in 2002 its activity was almost fully suspended, due to conflicts between the institutions and the attempt to restore the previous state livestock breeding. Nevertheless, there are some positive results – the number of controlled farms had increased from 23 in 2004 to 69 in 2010, the controlled animals had doubled – from 514 in 2004 to 1031 in 2010. During year 2016, the breeding organization works with 1788 animals in 103 farms, including 48 farms with more than 20 animals.

The main selection criterion in the breeding programme is the milk protein content, preserving in the same time the fat content. The secondary criteria are the lactation length and the somatic cell count. The short lactation is an issue with this breed. In the last 26 years, the lactation length has shortened by 13.4% to 8.5 months. The exterior and the functional traits are also taken into account in the selection process. The selection and partially improved feeding and keeping conditions resulted in increase of milk performance of selected cows from 3615 kg in 2008 to 4048 in 2010. Despite this progress, the breeding organization still has to solve problems induced by wrong decisions taken in the past, e.g. undeveloped main breed lines, lack of preserved genetic material from most of the bulls and selection on full lactation milk yield. For the further development of the Bulgarian Rhodope Cattle, a reasonable balance between the performance and the adaptability of the breed has to be found.

*Keywords: cattle, selection, breeding*