

## Abstract Submission Form

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**Preferred presentation**

Oral

**Preferred session**

Session 1: WG Animal Data Exchange – Decision Support Tools of the Future – Promoting Sustainability Farm Management

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**Title of your paper**

Development of an analytical tool for animal genetic progress assessment based on gEBVs and results of its on-farm implementation

**Insert ABSTRACT text**

When dealing with animal genetic progress, it is essential to consider retrospective animal breeding values, genomic data, and historical herd performance. All this information allows to improve the quality of breeding decisions and provides insights into the impact of different herd management strategies.

We report on the development and use of an advanced herd genetic progress analytical tool for dairy cattle that have been tested on farms for three years. Our report shows how such analytical approaches improve breeding processes and overall genetic gain for the farms that used them.

We also overview how the tool utilizes genomic breeding values calculated with ss-GBLUP model, pedigrees and genotypes to build retrospective herd genetic progress reports, such as different breeding groups analysis and comparison and analytics of used bulls within a herd. As well as show an approach to calculate different herd development scenarios based on retrospective breeding data and how future herd genetic gain will change depending on different breeding strategies utilized. This allows farmers to gain insights into herd management processes such as cattle sales and purchase impact, animal culling impact, and the effect of used bulls on the specific herd or the entire population.

Results of an on-farm implementation showed that this analytics enables farmers to identify weak herd

management practices and improve decision-making processes in dairy cattle breeding to obtain better genetic gain.

**Enter keywords**

gebv, analytics, ss-GBLUP, herd management, genomics