

Lameness advantage



Figure 1. A hoof being trimmed

Genetic index to reduce lameness

Lameness Advantage enables dairy farmers to reduce the incidence of lameness in their herd through direct genetic selection, rather than indirect selection, through, for example, selecting for improved locomotion or Feet & Legs composites. Published by AHDB Dairy from April 2018, Lameness Advantage helps to address one of the most costly challenges faced by British dairy farmers today, as well as a major welfare concern of the industry.

Lameness Advantage Predicted Transmitting Abilities (PTAs) combine existing type data for locomotion and Feet & Legs, together with bone quality scores and digital dermatitis records from the National Bovine Data Centre (NBDC) type classification system and, most importantly, includes direct lameness recording supplied by the milk recording companies, National Milk Records (NMR) and Cattle Information Service (CIS). This PTA is available for all breeds of bull evaluated in the UK and genomically evaluated Holsteins.

Research by our partners at EGENES-SRUC* found the heritability of lameness to be 4 per cent, which provides the potential to make a real change to the prevalence of lameness on dairy farms when used alongside current management protocols.

Lameness Advantage is published as a stand-alone trait but will be incorporated into the UK national breeding indexes, the profitable lifetime index (£PLI) and spring calving index (£SCI), in the future.

*EGENES-SRUC currently provides genetic evaluations for UK dairy cattle on behalf of AHDB Dairy as part of its Breeding services.

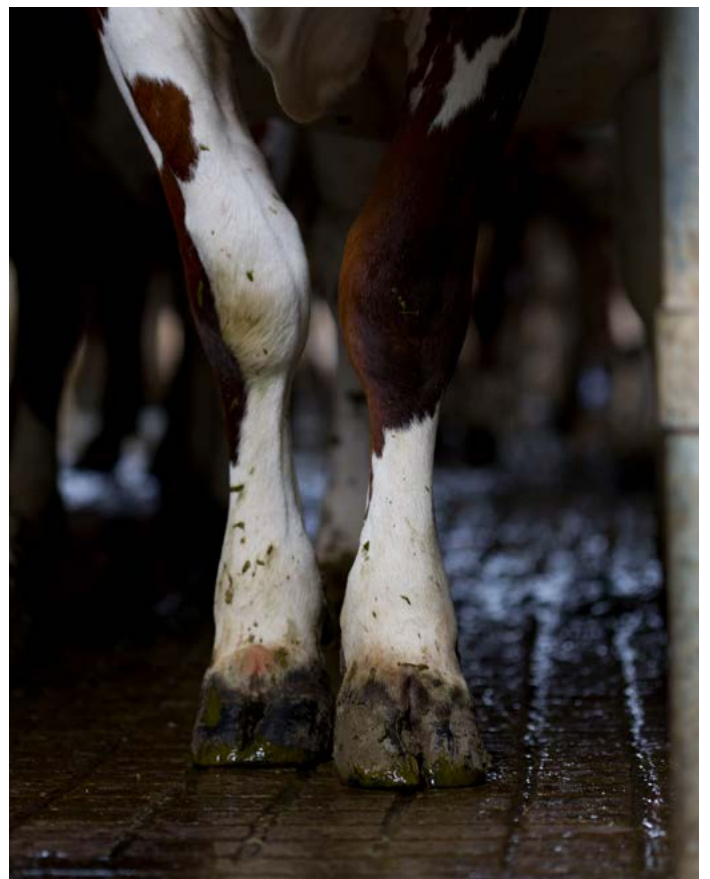


Figure 2. Cows feet

How to use Lameness Advantage PTAs

Lameness Advantage PTAs can be used to reduce cases of lameness in the herd. These PTAs are expressed as a percentage and range from -5% (bad) to +5% (excellent). For every 1 per cent change in a bull's Lameness Advantage PTA, a change of 1 per cent of daughters becoming lame per lactation is predicted, shown in graph below. For example, a bull with a +5% Lameness Advantage is expected to have 5 per cent less cases of lameness in his daughters per lactation compared to a 0 per cent PTA bull.

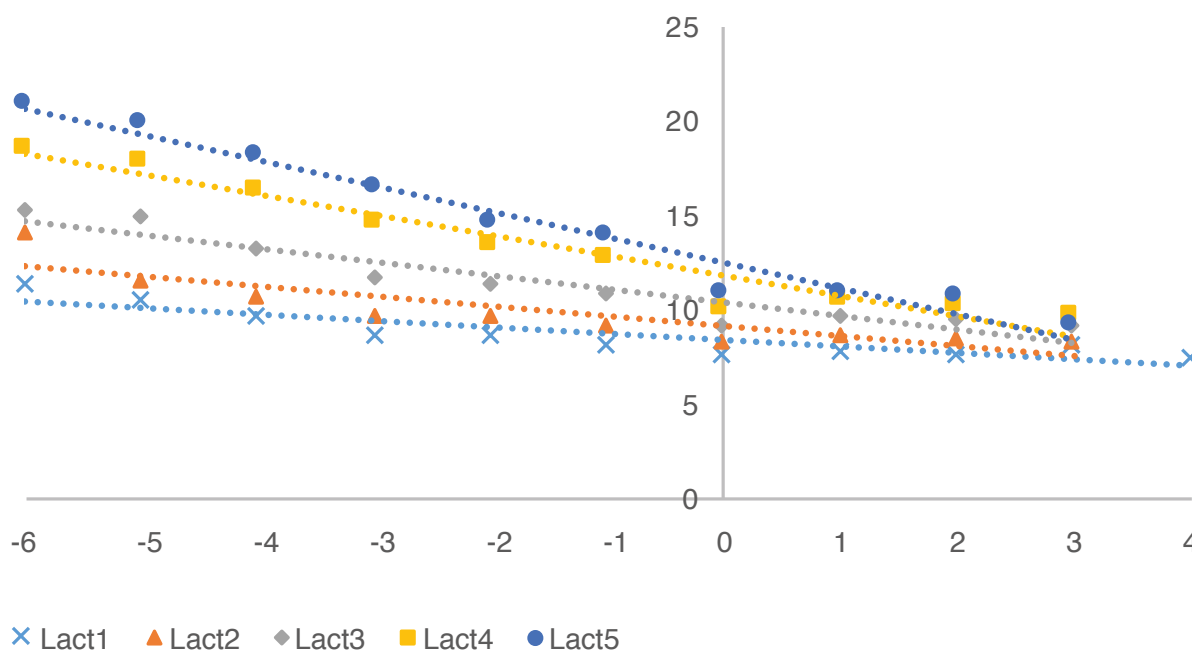


Figure 3. The relationship between sire Lameness Advantage PTA and the per cent of daughters with lameness

Author

Marco Winters, AHDB Head of Genetics

Further information

For more information on AHDB Dairy breeding and genetics, visit dairy.ahdb.org.uk/breeding or email breeding.evaluations@ahdb.org.uk

Visit the AHDB website for this trait and lots of other helpful tools to manage lameness, including the AHDB Dairy Healthy Feet Programme, which has successfully helped farmers across the UK reduce lameness incidences in their herd.

Produced for you by:

AHDB Dairy
Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

T 024 7669 2051
E comms@ahdb.org.uk
W dairy.ahdb.org.uk
Twitter @AHDB_Dairy

If you no longer wish to receive this information, please email us on comms@ahdb.org.uk

While the Agriculture and Horticulture Development Board seeks to ensure that the information contained within this document is accurate at the time of printing, no warranty is given in respect thereof and, to the maximum extent permitted by law, the Agriculture and Horticulture Development Board accepts no liability for loss, damage or injury howsoever caused (including that caused by negligence) or suffered directly or indirectly in relation to information and opinions contained in or omitted from this document.

© Agriculture and Horticulture
Development Board 2018.
All rights reserved

AHDB