

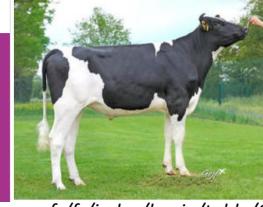


Animal genomics can improve control of bovine paratuberculosis

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ULTRAFOUX

FR4428406457 A2201
29/03/2023
GAEC DU MOULIN DE TREFOUX
GUEMENE PENFAO (44)

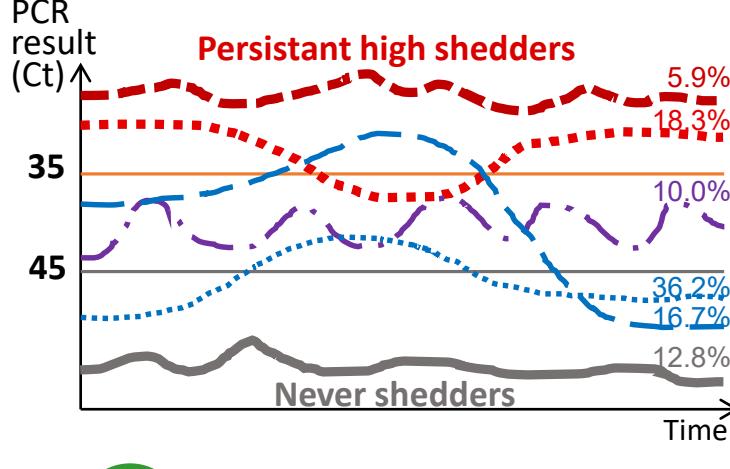


Thanks to genotyping, farmers can now select paratuberculosis-resistant cattle (Holstein and Normande breeds)



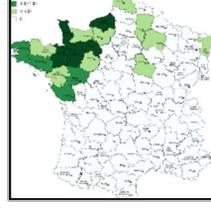
1

Distribution of shedding patterns in infected herds



2

Recruitment of cases and controls in infected herds

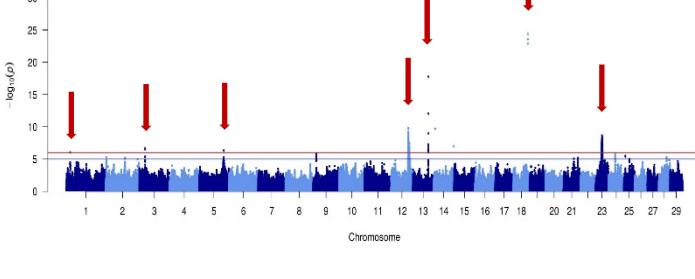


1644 Holstein cows selected
806 confirmed cases:
persistent high shedder
838 confirmed controls:
exposed and non shedders
out of >4000 sampled cows

3

Genotyping and identification of QTL

9 QTL on 6 chromosomes



4

Extension and single-step genomic evaluation



SNPs added to BeadChip for bovine genotyping

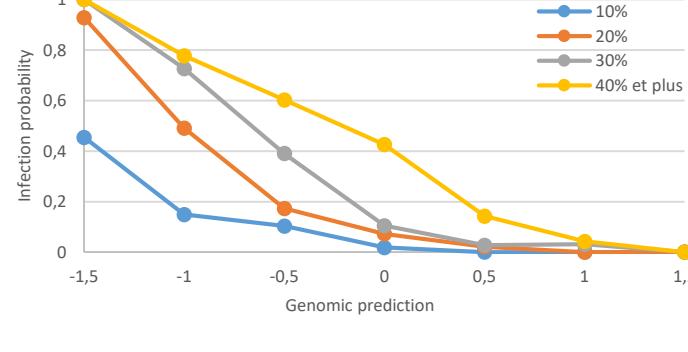
Single-step genomic evaluation in 161'253 cattle (12'431 genotyped)

→ **Genomic index**
estimated breeding value

5

Estimation of the risk of infection

Probability of infection of a cow according to genomic prediction and within-herd prevalence



6

Distribution of genomic index values in bulls

Number of bulls / breeding value

