

# Genomic selection for growth, reproductive and conformation traits in Zebu Brahman in Colombia



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## Aim

- Estimate the increase of breeding value accuracies in traditional breeding scheme compared to genomic selection

## Conclusions

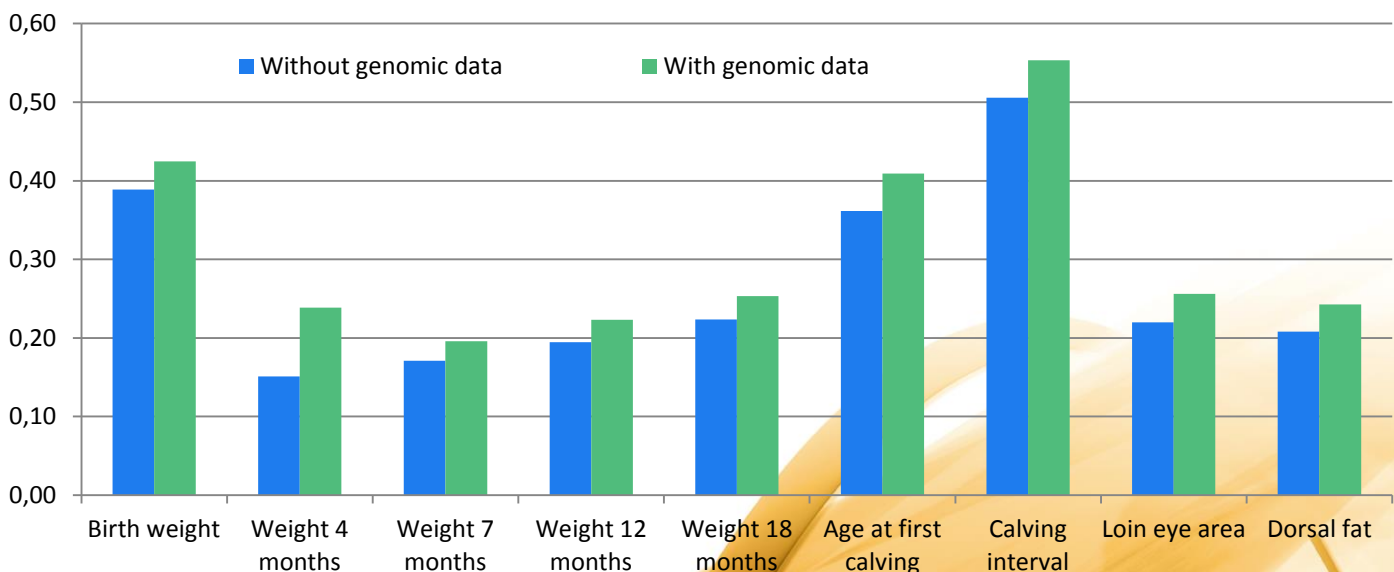
- Substantial increase in accuracies when genomic data was used to estimate breeding values
- Increase higher in growth traits
- Increased accuracies expected to increase genetic gain

## Background

- Colombia – a country with beef production focus
- Main beef breed – Zebu Brahman cattle breeds and their crosses
- Current selection – pedigree based only
- Improvement under way – Openness of farmers and breeding organizations towards genomic technologies



## Results



- Results based on data from 120,000 animals from 35 farms in Colombia

- Genotypes available from 4,250 animals

- Single step genomic BLUP to estimate breeding values, using the via the BlupF90 program (Misztal and Aguilar 2010)

- Focus on increasing the accuracies of breeding value estimates for weight, conformation and reproduction traits

- Considerable responses in all studied traits

- Weight related traits +9 to +55% increase

- Reproduction related traits +8 to +16% increase

- Conformation related traits +16% increase

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