Experiences from the Nordic Interstallion project

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Background

Sport horse breeding is international
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Example from SWB

- % SWB stallions
- % imported stallions
- % imported semen

2017: 22%

(Thorén Hellsten et al. 2009)
Background

Sport horse breeding is international

Interstallion was formed in 1998
WBFSH, EAAP & ICAR
“Improve accessibility, understanding and comparability of foreign breeding information across countries”

2 Interstallion PhD projects
Possible to do joint genetic evaluation!
BUT - no practical implementation due to political issues
Nordic sport horses

Similar breeding objectives

Similar testing procedures of young horses

Similar recording of competition results

Uses stallions of same origin
Nordic sport horses breeding

No of offspring in Nordic countries

Winningmood van de Arenberg
Nordic sport horses breeding

Winningmood van de Arenberg

Not enough offspring in each country for national genetic evaluation!
Nordic Interstallion 2010-2012

Aim to investigate possibilities for a joint Nordic genetic evaluation

Two universities (NMBU & SLU)
  Two professors
  One PhD student
  One post doc

Four studbooks (Norway, Sweden, Denmark and Finland)
  Breeding managers
TRUST
Towards a common goal

Win-win project

Horse industry involved from start

Vision about how research can be implemented

Different expectations can be a problem?
    Research funds cannot be used for routine evaluations

Different starting points
    National BVs in Sweden and Denmark
    Unexplored data in Norway and Finland
Resources

Swedish-Norwegian Foundation for Equine Research provided financing

Competence/Knowledge/Understanding about research

Studbooks provided data and contacts
Unique horse identifications?!

Big challenge to match horses!
   Between studbooks
   Between competition data and studbook

Manual work prolonged the project

Universal Equine Life Number (UELN) will improve the situation

752004040002069
Code of birth country
Code of database registered at birth (breed)
National identification number
Structure

PhD student and Post doc – well defined tasks and good support by professors

Meetings with reference group – open discussion climate

Respect between project members

Small group is beneficial?

Remember to have fun together!
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**Transparency**

No problem to access raw data from studbooks and sport organizations

No hidden agendas
Conclusions from project

Joint Nordic genetic evaluation is feasible
  high genetic connectedness
  high genetic correlations

More stallions will get earlier and more accurate breeding values
What happened after the project?

Routine joint Nordic genetic evaluation is not implemented
  Research results showed clear benefits for all studbooks
  Decision, and financing, is up to the studbooks

Results led to more research questions
  No funding (yet)

Continued collaboration and BVs across countries are a prerequisite for genomic breeding values in the future!
What did the studbooks think?

"Very good and fruitful project"

"Want to implement routine joint gentic evaluation, but cannot find the finance for set-up"

"Include genomic selection in the future"

"Joint Nordic breeding values for linear traits would be interesting, and may be a good base for genomics in future?"
Our recommendations

Involve horse industry from the beginning
  Competence/Knowledge/Understanding
  Vision
  Expectations

Get to know each other!

Make a ”feasability study”
  Plan for implementation

Project is not completed before the results are implemented!
Acknowledgements

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