



KNOWLEDGE CENTRE FOR AGRICULTURE

Cattle

Future collection of DNA – a Danish pilot study

NAV workshop
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Anders Fogh



Den Europæiske Landbrugsfond for Udvikling af Landdistrikterne:
Danmark og Europa investerer i landdistrikterne

Ministeriet for Fødevarer,
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Future in genomic testing

- **Prices go down on genomic test – already in 2013**
- **Prices on sexed semen go down – already in 2013**
- **Possible economic advantage in testing females on a large scale in many herds**

Future in genomic testing

In relation to new registrations in the future DNA collection has to start now, if it takes place along with ear tagging

– DNA available on females with new registrations 2-3 years ahead!



Advance in equipment for tissue sampling

- **Combined ear tag and sampling applicator**
- **Used for BVD control in Italy and Great Britain**
- **Advantage: Unique connection between ear tag number and tissue sample number**



Danish pilot study

- Experience with use of tag – **not test!**
 - Workflow of putting in tags
 - Problems with tags afterwards
- Holstein and Jersey herd
- Approx. 120 tags per herd
- November 2012 – January 2013 (later in Jersey herd)
- Frozen samples are genomic tested by Genoskan

Danish pilot study

- **How well does conserving liquid work**
 - **15 calf's with double samples per herd**
 - **Refrigerator, room temperature (dark, light)**
 - **Samples tested by Genoskan**
- **Cooperation between Knowledge Center for Agriculture, Cattle, Allflex and VikingGenetics**
- **Supported by VikingGenetics and Danish Holstein Association**

Farmer experience - so far

Holstein Herd:

- In general it works well
- Has to be careful when joining “male” part and container with conserving liquid

Conservation experience - so far

Genoskan:

- Challenge to handle samples in lab
- No results yet



Future development

- **Pilot study will be background for development of procedure for large scale collection of tissue samples**
 - **From barn to lab**
 - **Cost efficient**
 - **Good DNA quality**
- **Knowledge Center for Agriculture, Cattle will develop and test in 35 herds 2013-2014**



Future collection of DNA samples

Will be:

- An integrated part of the recording system**
- Give genetic progress**
- Give new possibilities in relation to trace ability**