



Use of reproduction technologies in the future

- **VG strategy**

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• VG strategy

- Our strategic goal is to keep three world wide competitive dairy programs / breeds in the future
 - VikingRed
 - VikingHolstein
 - VikingJersey
- Goal is 3 NTM units annual genetic progress
- Political acceptance of making the necessary investments in the smaller breeds

• How to optimize genetic progress ?

- Optimize use of:

- Males

- **Best females**

← Main topic in the presentation

• Optimize use of best females

- Reproduction methods:
 - Embryo transfer (ET)
 - OPU / IVF
 - Biopsies
- VG has a coordinator role to ensure that we optimize use of available reproduction methods
- ET is the common and most reliable method
 - We have not succeeded to have a satisfactory ET setup in Sweden based on liberal initiative.
 - We (VG and Växa) have full focus to improve

• Other reproduction methods

- OPU/ IVF

- Method well-known for years
- Projects with MTT and AU
- MTT ready to implement in practice during 2014
- AU project a little later

- OPU seen as a supply to ET
 - Not an alternative to take over from ET
- We still need final permission to use OPU in field
- OPU can help us to increase diversity by using different/several sires of sons on each donor

- Practical results will show how much VG will use the method in the future (cost / benefit)

• Use of biopsies

- Biopsies can help us to GS test embryos before implantation in the recipients
- Problem is that so far it has not been possible to freeze embryos from where a biopsy has been taken
- When the method becomes more reliable and it is possible to freeze the embryos – VG is ready to use the method
 - ...If cost efficient !!

• Use of repro technologies in the future

- All GS tested bull calves from ET / OPU ??
 - Probably not
 - Because.... NTM loyalty in all herds
 - High genetic level in almost all commercial herds in VG countries
 - But if we can create several generations in the laboratory so generational interval can decrease dramatically – the scenario can happen
 - Cloning
 - Do our members accept these techniques or are we going too far ?
 - How do we balance ethical questions compared to profit ?

- Comments appreciated

