

Genetics

Facilitator: James Hoban

Recorder: Andrew Rose

Participants: Sharon, Grant, Jason

Topics the group were interested in:

- 1) One member had just DNA'd hinds and fawns – keen to know how best to use the info.
- 2) One member just getting into breeding after being totally finishing
- 3) What's better – keeping as many young hinds as possible (for maximum age gain) or keeping good performing hinds longer
- 4) Velvet genetics – what's available on DeerSelect and who is using it?

Velvet genetics are tricky as first of studs have emphasis on trophy market.

Grant believes the biggest benefit in knowing parentage is being able to cull the bottom 10-20% of his animals.

Sharon: Spiker velvet is not a good predictor of adult velvet.

Grant: reasons for DNA-ing his herd:

- Increase potential buyer interest in his velvet stags for sale.
- Being able to identify poorer animals
- Even though he single sire mated, DNA testing will show which weaners were sired by back up stag.

Jason recommended he no longer “single sires calves” as there will be a bias as between different calving paddocks.

Grant – the reason he single sires calves is because he places a lot of emphasis on deer social groups. He believes he gets good conception rates as a result of not mixing different groups.

Sharon –it is hard to get cross age group linkages – need to encourage farms to mix few MA hinds with R2 and R3 mating mobs to achieve this. She uses DNA testing now for info other than just parentage eg:

- English Red vs Euro Red vs Elk.
- Genetic markers being developed
- Pedigree trees
- Dam summaries (will tell all offspring of each hind)
- Sire summary – as above but for stags.

Question – what would encourage commercial farmers to use DeerSelect?

Answer – leave it up to the stud breeder.

EBVs now available for

- Early gestation
- EMA
- Velvet
- Growth rate
- Maternal reproduction trait – through low heritability.

Grant: For someone who doesn't do AI will they be at a disadvantage due to lack of linkage/lineage?

Sharon: Will only be able to within herd EBV unless they have swapped a stag occasionally.

Q - How often do commercial farmers look at the BVs in a stud catalogue?

A – Nearly always look at them but look at animal itself as well.

Jason: Recommended using BVs to narrow down stags you're interested in and then look at the appearance of the animal – (not the other way around).

For **velvet** the heritability of velvet is high (around 80%) so selecting on the basis of stag's own characteristics is fairly safe (compared to other traits).

Jason's take home message: much more important to select the breeder than the individual stag.

Sharon's take home message: Due to longevity of deer most farmers will only get the chance to make 3 changes of genetic direction in their career therefore it is vital to ensure the stags you get are better than the ones you are replacing them with.