

DEERSELECT DEER PROGENY TEST DEERLINK

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WHAT IS DEERSELECT?

DEERSelect is a tool for all deer farmers to make informed decisions on sire stag use and purchase to maximise genetic gain for growth and other production traits.

It is a national database and analytical tool that takes breeder inputted data on deer pedigree and performance, and calculates genetic worth of stags and hinds.

Key outputs of relevance to farmers are sire rankings for breeding values (BVs) and indexes, with emphasis on valid between-herd comparisons through 'sire-linkage'.

BVs and indexes are updated quarterly using the latest inputted data.



WHAT IS THE DEER PROGENY TEST?

DPT is a 3- breeding cycle research project (800 hinds and 11 stags/annum).

It is a central progeny test operated on commercial farms

Primary aims

1. **Encourage and improve sire linkage between herds**
2. Platform to evaluate BVs across breeds (reds/wapiti)
3. **Evaluate new traits for optimisation of selection goals**
4. Starting point for evaluation of maternal traits
5. Establish a well-phenotyped population for future genomic tools

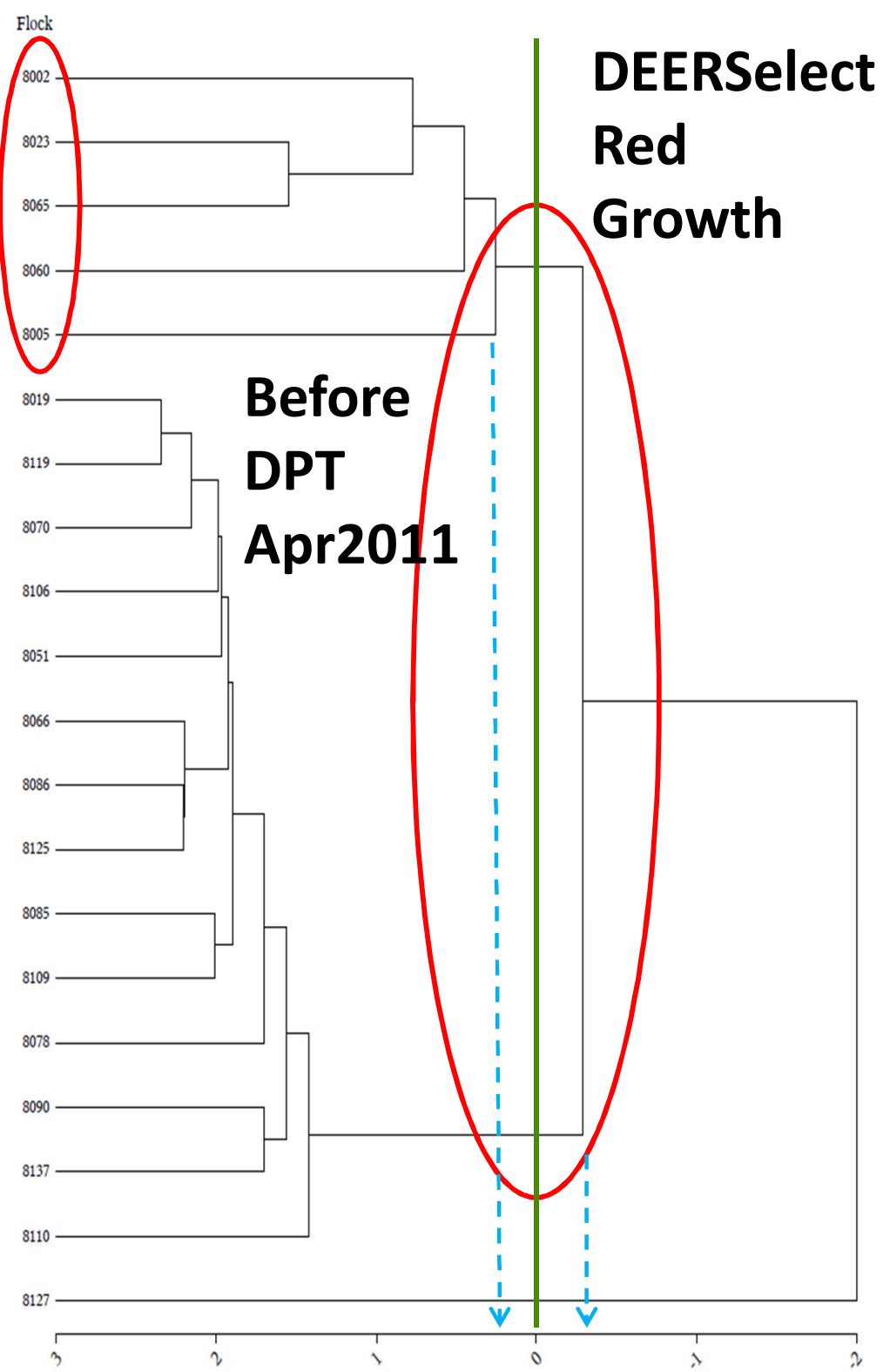
HOW HAS DPT IMPROVED LINKAGE?

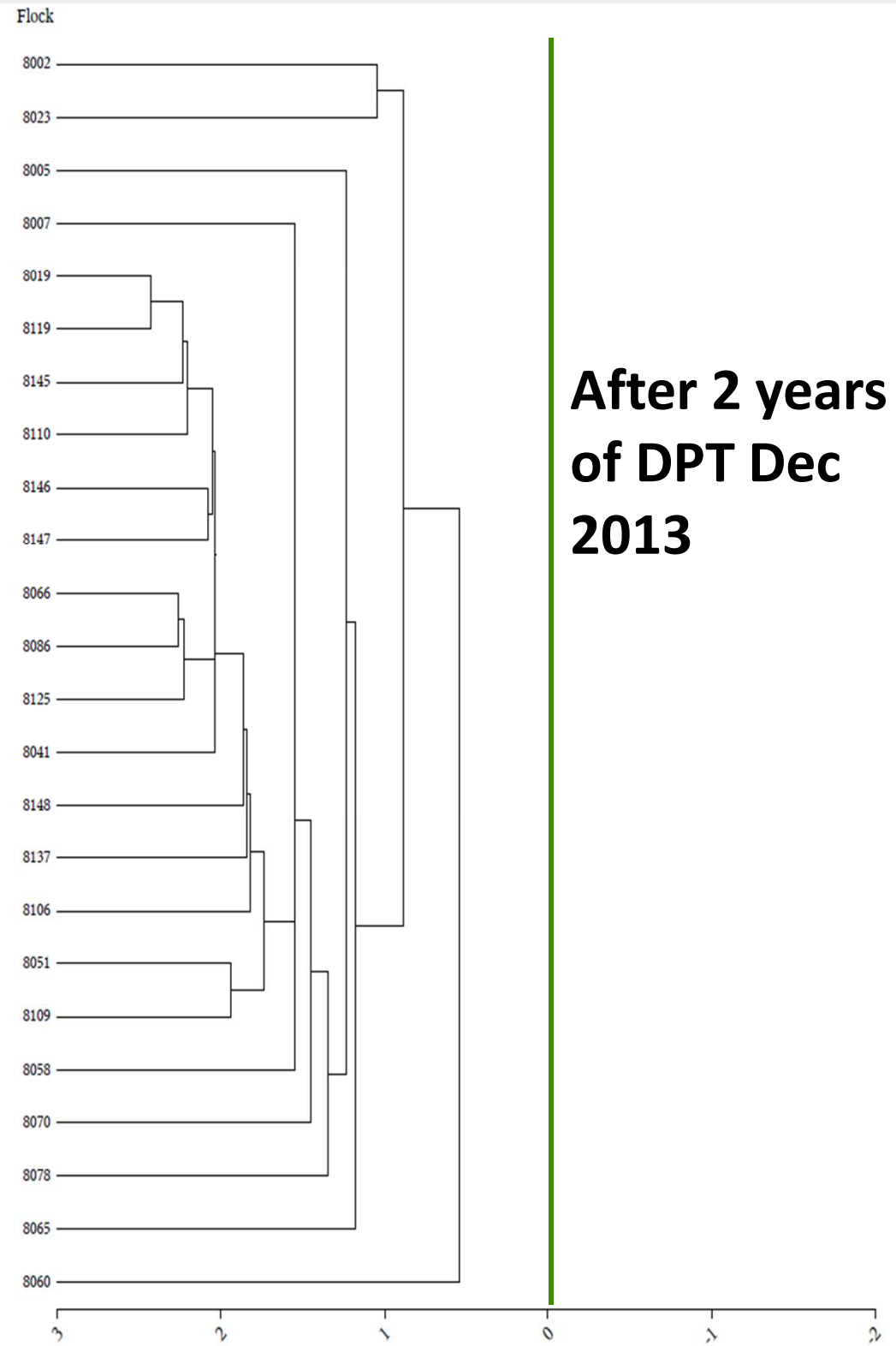
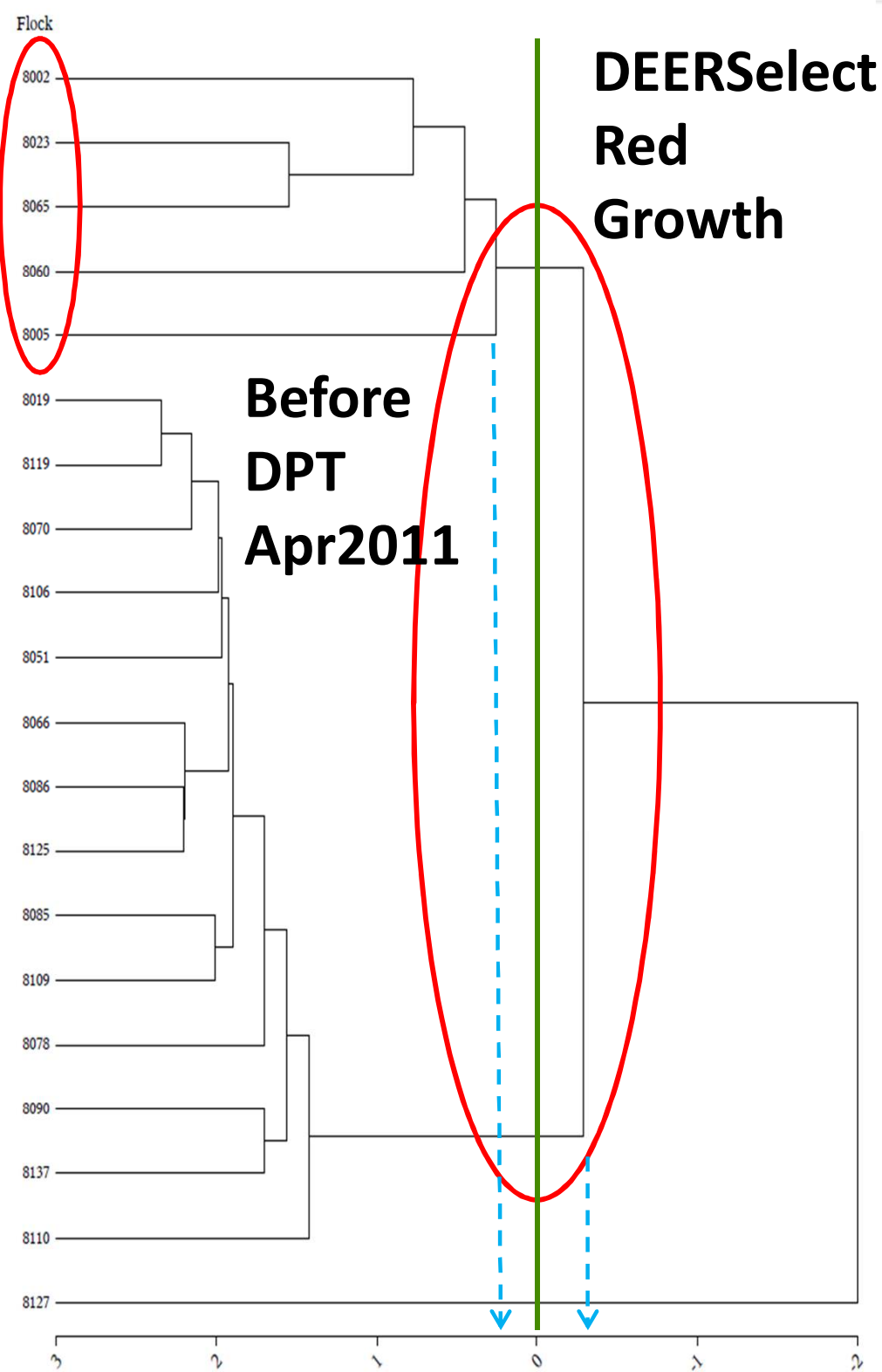
Immediate benefit from Year 1 and 2 DPT progeny has been an increase for growth, reproduction and meat yield traits of:

- the number herds linked on DEERSelect
- and the quality of that linkage between herds

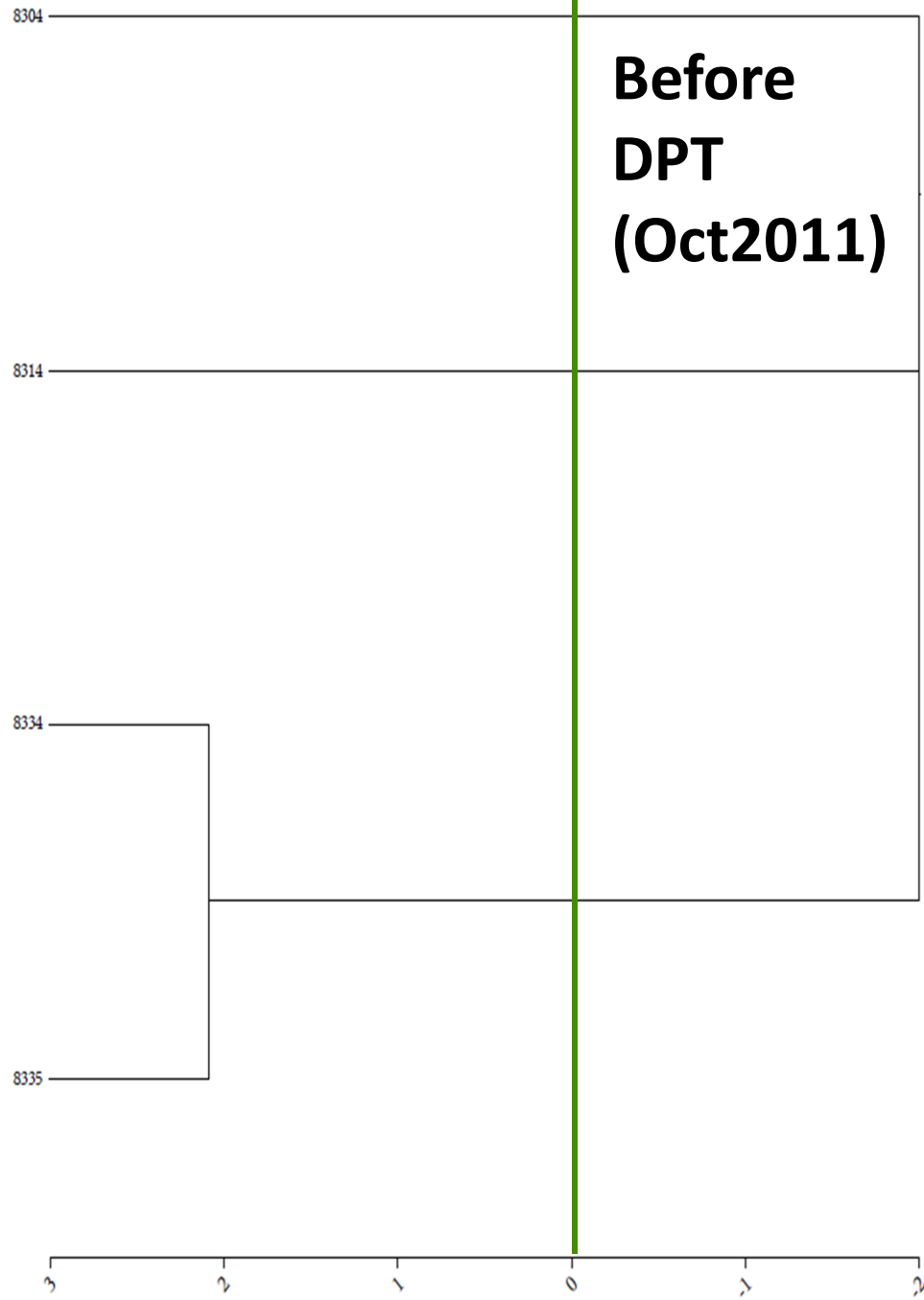
Comparing runs of three years of progeny data prior to DPT data being added – for Red and Wapiti



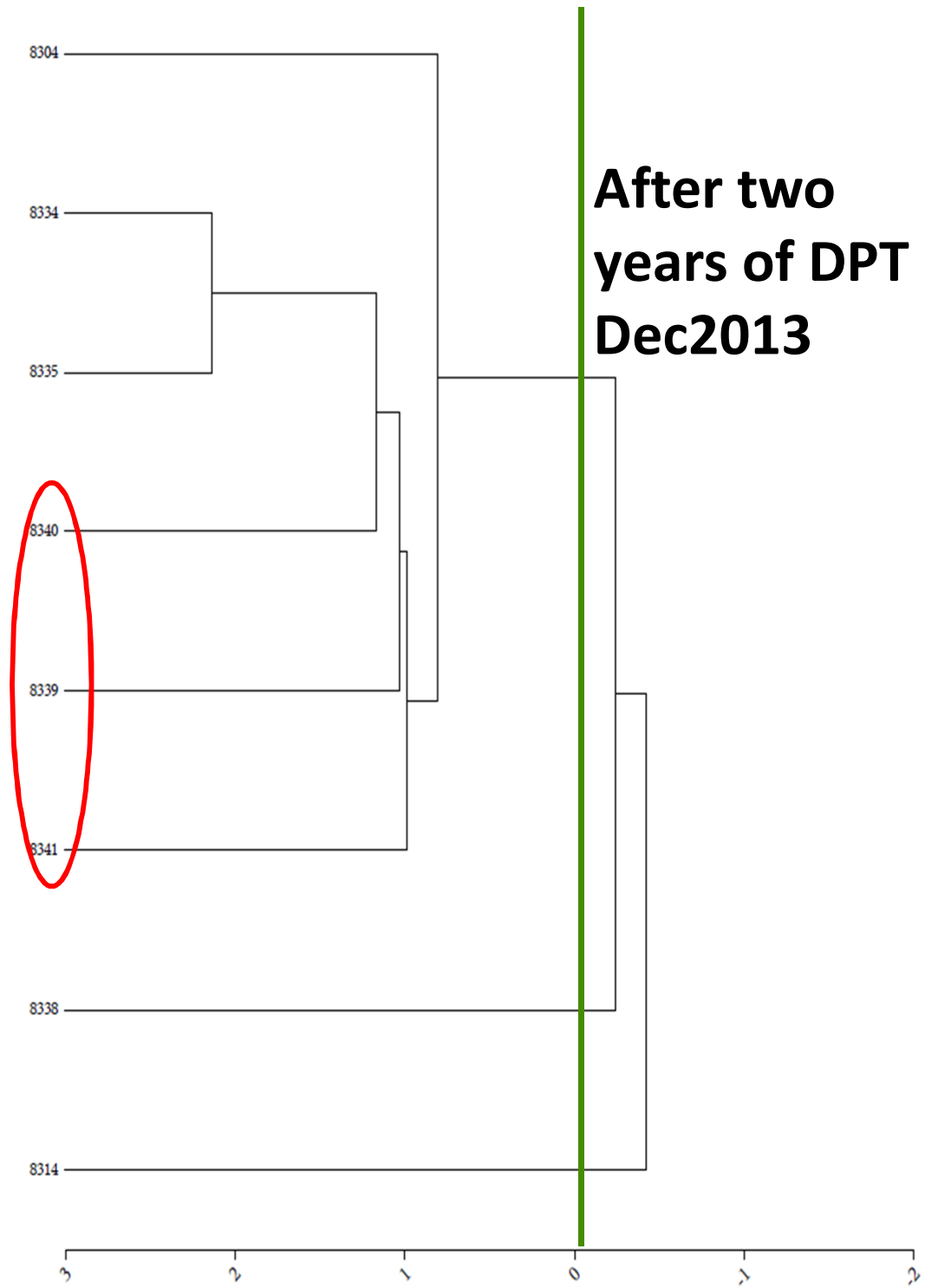
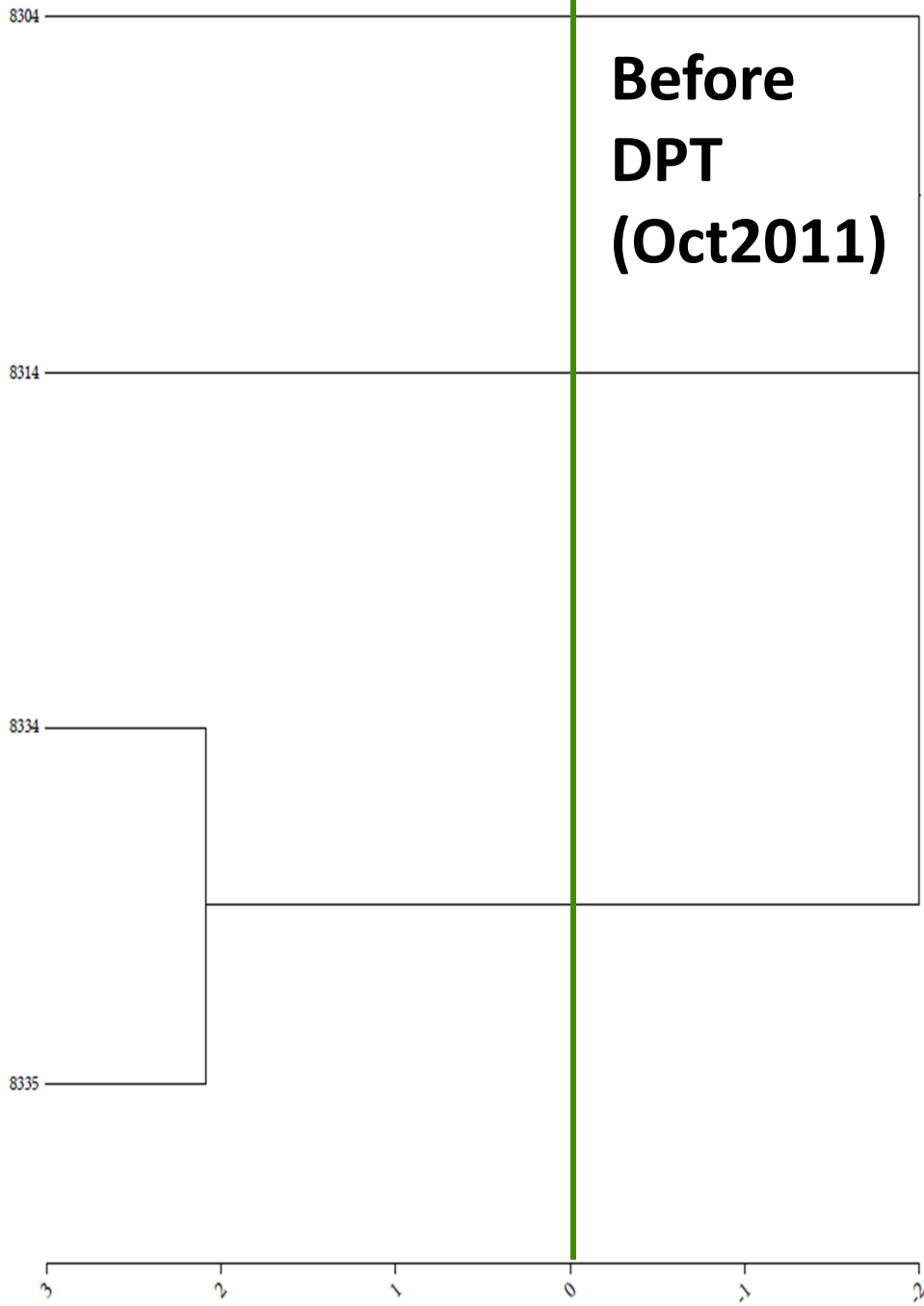




DEERSelect Wapiti Growth



DEERSelect Wapiti Growth



WHAT NEW TRAITS ARE BEING PURSUED IN THE DPT?

- Carcass traits (e.g. prime muscle distribution, venison quality sensory traits)...over 60 measured traits!
- Co-product traits (e.g. tails, pizzles, hides)
- Host resistance/resilience to parasites (e.g. CarLA)
- Measures of temperament
- Maternal traits



By December 2014, following last slaughter of Year 3 progeny, we will have a valid dataset for full genetic analysis over >1000 progeny across >30 sires.

Intended outcome...new BV options in DEERSelect for deer farmer to select for economically important traits.



WHAT IS DEERLINK?

DEERLink is a new adoption project to ensure the integrity of sire-linkage within DEERSelect is maintained after the DPT completes in 2014.

Research-driven component is a down-sized DPT on Invermay (400 hinds and 7 stags/annum) for a maximum of 3 breeding cycles (first AI in April 2014)...industry's most influential sires.

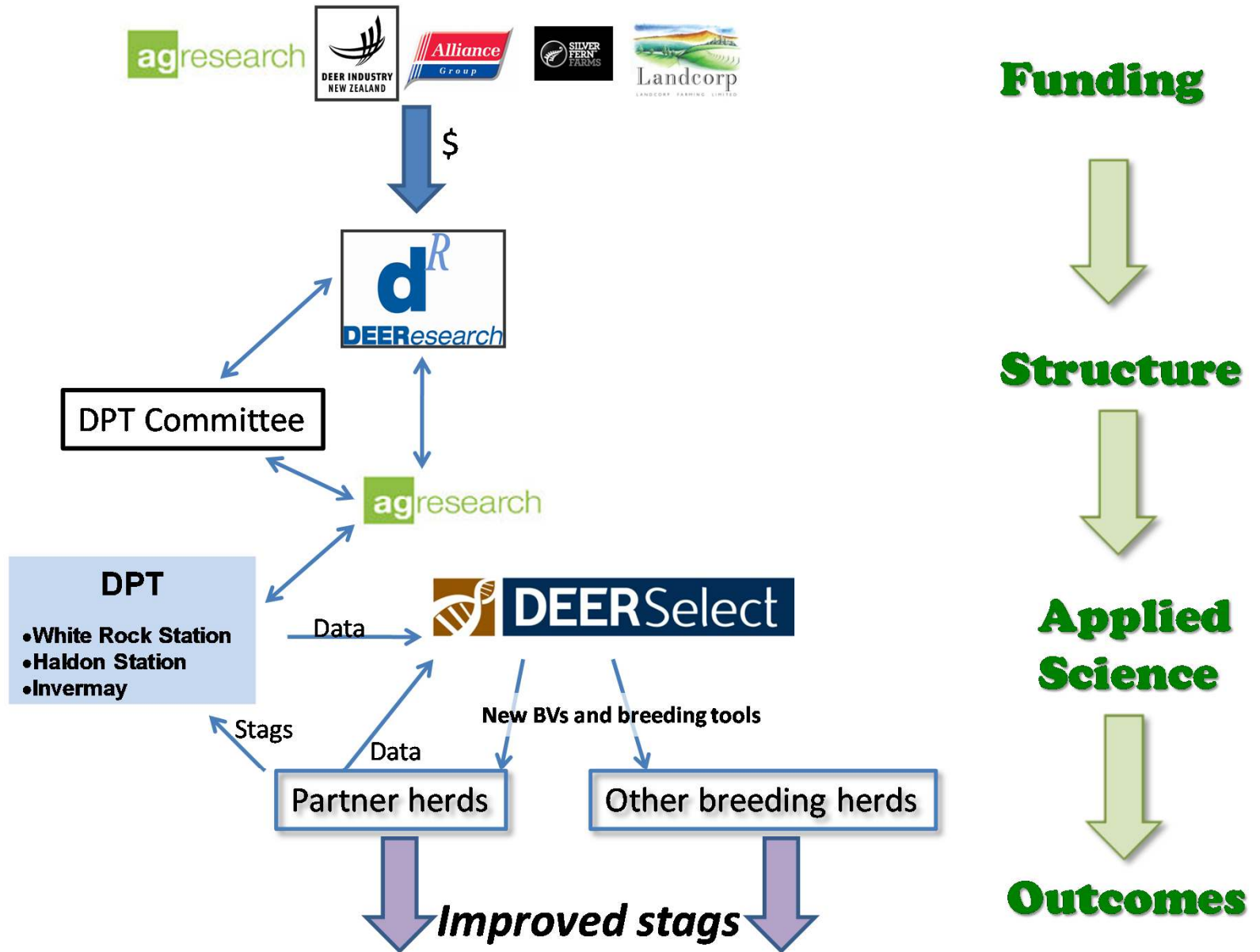
Industry-driven component is an on-going stag/semen exchange programme between studs co-ordinated by the DINZ DEERSelect manager.

The intent is that industry will phase in full responsibility for maintaining sire-linkage in DEERSelect.

Research will phase out its role and re-direct resources into discovery of new genetic opportunities for the NZ deer industry (e.g. new selection traits, genomic technologies, etc)



WHO HAS MADE IT HAPPEN?



Improved productivity – on-farm in part, in-market