ANGUS uLD
LOW DENSITY, LOW COST, GENOMIC TESTING FOR MATURE ANGUS FEMALES
The Angus uLD is an ultra-low density, low cost genomic product that has been developed in collaboration between Neogen Australasia and Angus Australia specifically for testing mature Australian Angus seedstock females.

Understanding the Angus uLD
The Angus uLD product uses an ultra-low density DNA test to assess the genetic makeup of mature Angus females at approximately 15,000 locations across the animal’s genome (known as SNPs or single nucleotide polymorphisms) to obtain a genomic profile for the animal.

The resultant genomic profile can be used for parentage verification of the female and her progeny, plus to add valuable information to the calculation of Estimated Breeding Values (EBVs) for not only the female, but also her relatives.

The Angus uLD is available exclusively to Angus Australia members for a limited time and has been designed for members who may now have commenced genotyping either all, or a subset of their current calves, but have not genotyped their cow herd. Angus uLD enables those members to undertake one-off genotyping of their mature breeding herd so that they can obtain maximum benefit from genomic technology, both now and into the future.

Benefits of Angus uLD
Genotyping mature Angus females with Angus uLD has several benefits, including:

- More reliable EBVs: Angus uLD adds valuable information to the Angus BREEDPLAN EBVs that are calculated for the female, and her relatives

- Parentage verification of the female: Subject to the availability of a SNP profile for the female’s sire and/or dam, DNA verification can be conducted to confirm the parentage of the female, improving the integrity of not only the female’s pedigree, but also the integrity of any genetic condition and Angus BREEDPLAN EBV information that is displayed.

- Parentage verification of progeny: DNA parentage verification can be conducted to confirm the parentage for any of the female’s progeny that are genotyped, improving the integrity of not only their pedigree, but also the integrity of any genetic condition and Angus BREEDPLAN EBV information that is displayed for them.

- Eligibility for Angus Parentage Assured program: The ability to conduct full parentage verification for the female’s progeny makes any future sale catalogues eligible for the Angus Parentage Assurance program.

How Angus uLD Compares to other Genomic Products
Angus uLD is a low cost, ultra-low density product that is suitable for testing mature Angus seedstock females only.

By comparison to the higher density Angus GS and HD50K for Angus products that evaluate an animal’s genome for 49,000 and 37,000 SNPs respectively, Angus uLD evaluates 15,000 SNPs. Reliable results will still be produced from the Angus uLD, but it should not be viewed as a replacement for the Angus GS or HD50K for Angus products.

The Angus uLD has been developed for use by those members who wish to undertake one-off genotyping of their mature breeding herd so that they can obtain maximum benefit from genomic technology, both now and into the future.

Angus uLD is not suitable for genotyping sires or calves, which should be genotyped with either of the higher density Angus GS or HD50K for Angus products.

Ordering Angus uLD
Angus uLD can be ordered exclusively from Angus Australia for a cost of $40.45 (inc GST) by completing a DNA Services Order form.

Order forms are available for download from the Angus Australia website, or by contacting staff at Angus Australia.

Angus uLD is available for a limited time only, with testing available until April 30th, 2020.

Collecting DNA Samples for Angus uLD
Angus uLD can only be conducted from tissue sampling units (TSUs), as marketed by Allflex.

TSUs involve the use of specialised equipment that takes an ear notch, places it in a collection tube that contains preservative, and seals the collection tube.

TSUs are available for purchase from Neogen Australasia on (07) 3736 2134, or from local rural merchandise stores.

Further Information
Further information about the Angus uLD product is available from staff at Angus Australia on (02) 6773 4600, or Neogen Australasia’s Beef Genomic Territory Manager, Hannah Bourke on 0447 299 096.
Commonly Asked Questions

1. Can any mature Angus female be tested with Angus uLD?
Angus uLD testing can only be requested for mature Angus females that are active on the female inventory of the Angus Australia member who is requesting the testing.

2. Is the Angus uLD suitable for testing sires or calves?
No. Sires or calves should be tested with the higher density Angus GS or HD50K for Angus products.

3. Should mature Angus females previously tested with another genomic product be tested with Angus uLD?
The Angus uLD product is an ideal option for upgrading the genomic information that is available for females that have been previously genotyped with a base parentage panel. Angus females previously genotyped with the Angus GS or HD50K for Angus products, or their predecessors should not be tested with Angus uLD.

4. Angus uLD is only available for a limited time. How long will Angus uLD be available for?
The Angus uLD product will be available until April 30th, 2020. Angus uLD should not be viewed as a replacement for Angus GS or HD50K for Angus, but has been designed specifically to enable Angus Australia members who may not have genotyped their female breeding herd to undertake a one-off genotyping of their mature breeding herd so that they can obtain maximum benefit from genomic technology, both now and into the future.

5. Is Angus uLD compatible with other genomic products?
Angus GS is fully compatible with all other SNP based genomic products, including base parentage panels offered by both Neogen and Zoetis, and higher density genomic products such as Angus GS and HD50K for Angus, and their predecessors.

6. What type of DNA samples can be collected for testing with Angus uLD?
Angus uLD can only be conducted from tissue sampling units (TSUs), as marketed by Allflex. TSUs involve the use of specialised equipment that takes an ear notch, places it in a collection tube that contains preservative, and seals the collection tube. TSUs are available for purchase from Neogen Australasia on (07) 3736 2134, or from local rural merchandise stores.

7. How much additional accuracy will Angus uLD add to the EBVs of my females?
Angus uLD will add similar accuracy to the EBVs of females as when they are tested with either the Angus GS or HD50K for Angus products.

If a group of females are tested with Angus uLD, no change would be expected in their average EBVs, but some re-ranking will occur, with the EBVs for some females increasing, and the EBVs for others decreasing. An increase in the spread of their EBVs (i.e. standard deviation) would also be expected.

8. What happens if a female fails parentage verification? Will she be deregistered?
If testing with Angus uLD identifies an error in the pedigree of a female, Angus Australia staff will investigate the matter and try to identify the correct parentage for the female. This will normally involve conducting parentage verification against other sires joined in the herd in that year, which will enable the parentage of the female to be corrected in most cases.

In cases where the parentage of the female cannot be resolved, as per Angus Australia’s Regulations (clause 17.10 & 17.11), if the female is born before 1/1/2018, the animal’s registration status and that of her progeny will remain unchanged. A suffix of “E” will however be added to her name identifying a possible issue with her parentage information.

9. Can genetic condition testing be conducted from the same DNA sample?
Genetic condition testing can be requested in association with Angus uLD using the same DNA sample, but will incur the same cost as when the genetic condition testing is requested as a standalone test, being $22.55 per genetic condition. As a result, if genetic condition testing is also required, it is recommended that members undertake the testing as an add-on to either the Angus GS or HD50K for Angus products, which in most cases will be a cheaper option.

10. What is the cost of Angus uLD?
Angus uLD can be ordered exclusively from Angus Australia for a cost of $40.45 (inc GST).

11. What is the turn-around time for Angus uLD?
The turn-around time for testing with Angus uLD is similar to the turn-around time for Angus GS or HD50K for Angus testing. Members should allow 4 weeks from when samples are dispatched for the completion of the genotyping, and up to an additional 3-4 weeks for the inclusion of the genotypes into Angus BREEDPLAN, subject to analysis cut-off dates.

12. Who should I contact to further discuss testing with Angus uLD?
Further information about the Angus uLD product is available from staff at Angus Australia on (02) 6773 4600, or Neogen Australasia’s Beef Genomic Territory Manager, Hannah Bourke on 0447 299 096.
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www.angusaustralia.com.au
https://genomics.neogen.com/au/