1. Select the Igenity product that fits your herd.
2. Pick the DNA sampling method and time of year that’s best for you. (See charts A and B.)
3. Order your sample collection supplies online at order.igenity.com or call 877-IGENITY.
4. Collect your samples and send them in with your Igenity order form. We will sign you up for Igenity Beef Dashboard and set up your report.

By Igenity profiling your heifers, you can assess the performance efficiency and carcass values they will pass on to their calves and use Igenity decision tools to make confident selections for the future.

Here’s everything you need to get started with Igenity®
You can have more confidence you are selecting the best heifers!

Dashboard Power
To preview the beef dashboard, visit igenitybeefdashboard.com
Username: Confidence@igenity.com
Password: Confidence

<table>
<thead>
<tr>
<th>What animals to test</th>
<th>Ideal times to sample DNA</th>
<th>Sample methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heifers</td>
<td>Ideal: Branding/processing: Pre-conditioning</td>
<td>Allflex TSU, Hair card, blood card, whole blood</td>
</tr>
<tr>
<td></td>
<td>Other opportunities: When taking birth weights, pre-weaning exams, weaning process</td>
<td></td>
</tr>
<tr>
<td>Bulls</td>
<td>Ideal: Breeding Soundness Exams</td>
<td>Allflex TSU, Hair card, blood card, whole blood, semen</td>
</tr>
<tr>
<td></td>
<td>Other: Semen collection</td>
<td></td>
</tr>
</tbody>
</table>

A. Sample type chart:

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Igenity profiles</th>
<th>SeekSire</th>
<th>BVD PI</th>
<th>Genetic Abnormalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allflex TSU</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Hair follicles</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Blood card</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Semen</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>EDTA blood tube</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

B. Time to sample chart:
Beef genomics empower your future
Select, manage and market cattle with more confidence. Evaluate maternal, performance and carcass traits in one step. Focus time, feed and resources on young breeding stock of verified merit.

- Invest in heifers that improve stayability and reproduction.
- Raise cows tailored to your production and grazing goals.
- Confidently select for grids, value-added marketing programs and retained ownership.

Affordable power
The new Igenity portfolio provides affordable tools to predict performance in your breeding stock and saves years in achieving your herd-improvement goals.

Leverage crossbreeding plus DNA selection
Igenity is designed for crossbred and straightbred cattle of six key breeds. This unique design helps you use heterosis plus DNA scores to make faster progress on your goals.

The U.S. Meat Animal Research Center has shown that lifetime production in weaning weights increased about 36 percent due to heterosis in British-cross cows. Longevity increased 16 percent.

Add Igenity and you can put targeted selection pressure on traits your heifers will pass on to their offspring. By combining Igenity and crossbreeding, you get the benefits of both. Big advantage.

Maximize potential, generation after generation
Igenity is about opportunity – and making more confident decisions about the future.

A study by the Red Angus Association profiled 91 Red Angus calves with Igenity and followed them through harvest. The top 25 head scored 2.4 Igenity points higher for ADG and marbling than the bottom 25 head. The top calves netted $50 per head more at harvest.

Improving a 250-head cow herd’s Igenity weaning weight scores by one point would increase calf-crop production by 1,750 pounds annually.

Fertility traits are considered lowly heritable. But even modest gains are impactful on your bottom line. A one-point increase in Igenity stayability scores would reduce your cow replacement rate by 48 heifers needed to maintain a 250-cow herd over six years.

Holding back a heifer is a risk of $2,000 per head in costs and lost opportunity. A reduction of 48 replacement heifers would save around $96,000. Plus, it may take years to see that you retained the best.

With Igenity, you can more confidently select the heifers that will protect your investment and maximize potential in each generation.

Commercial Cattle Products
Igenity Beef Profile/Crossbred and straightbred heifers
Get 16 maternal, performance and carcass traits plus parentage—ideal for maternal line improvement (and bulls without EPDs).

- Maternal: Birth Weight, Calving Ease Direct, Calving Ease Maternal, Stayability, Heifer Pregnancy, Docility, Milk
- Performance: Residual Feed Intake, Average Daily Gain, Weaning Weight, Yearling Weight
- Carcass: Tenderness, Marbling, Ribeye Area, Fat Thickness, Hot Carcass Weight
- SeekSire™ parentage

Igenity Angus Gold Profile/Heifers
Get 15 maternal, performance and carcass traits plus parentage—a powerful profile for Angus and high-percentage Angus commercial replacement heifers.

- Maternal: Birth Weight, Calving Ease Direct, Calving Ease Maternal, Heifer Pregnancy, Docility, Milk, Mature Weight
- Performance: Average Daily Gain, Residual Average Daily Gain, Weaning Weight
- Carcass: Tenderness, Marbling, Ribeye Area, Fat Thickness, Carcass Weight
- SeekSire parentage

Get sampling supplies at order.igenity.com.
Allflex Tissue Sampling Units (TSU) are a rapidly growing sample type for DNA testing in livestock. This technology, while highly advanced, makes it easy to take DNA samples during routine cattle-handling processes while providing high-quality samples for genomic testing. Neogen® has worked closely with Allflex to enhance the convenience and reliability of DNA testing in the field.

**Why TSUs?**
- Faster, easier, cleaner
- Less hassle, more weather proof
- Sample at any age, even a day-old calf
- Neogen can use same TSU for BVD PI screening and genotyping
- Uniquely barcoded, preserves high-quality DNA

**One simple step opens a whole world of insightful predictions**
- **Fast** – Loading the applicator, taking the sample and recording the animal ID can take as little as 10 seconds per head.
- **Easy** – With one squeeze, a DNA ear notch sample is taken, sealed and preserved in a uniquely bar-coded vial.
- **Clean** – Unlike blood or hair, TSUs have little chance for cross contamination. The vial protects the sample from weather and grime.
- **Flexible** – Take DNA while handling young calves or during animal-health protocols.

**More benefits with TSUs:**

**More data from one sample**
- Tissue in the vial can be used for multiple tests.
- Screen samples for BVD PI and run genomic tests.
- Store at the lab or breed association for future testing.

**Integration with animal ID**
- Match with visual tags and/or EID tags using the same identifier.
- Integrate with other record keeping or data collection.
- RFID readers and downloadable CSV files are available from Allflex.
- As export markets look to U.S. beef producers, ID needs change. Your ID and TSU system can meet your needs both in marketing and DNA testing.
- A new handheld device from Allflex combines a barcode scanner and EID reader for chute-use. (See more at AllflexUSA.com.)

Get sampling supplies at order.igenity.com.
Putting TSUs To Work

Collecting DNA while working heifer calves

1. Rancher separates cows from heifer calves.

2. TSU loaded into applicator.

3. Heifer calves in chute are weighed, vaccinated, wormed and DNA sampled.

4. Heifer calf ID noted on TSU vial packaging. Weight data collected.

When is a good time to collect cattle DNA?
Any time cattle are handled. Samples can be taken at birth, branding or calf processing, vaccination, weaning and breeding soundness exams. Earlier DNA collection helps producers take greater advantage of DNA test findings.

Can TSUs be stored?
When processing DNA, Neogen reseals and stores the vial for future use. Producers can store vials out of direct sunlight at room temperature for one year and after that store them in a non-defrost freezer.

What is the bottom line?
Seedstock producers using GeneSeek® Genomic Profiler™ or Angus GS™ and and commercial cattle producers using Igenity Profiles can take full advantage of the benefits of TSUs to collect DNA.

Where can producers purchase Allflex TSUs?
Purchase Allflex TSUs from Neogen at order.igenity.com. They also can be purchased from animal health suppliers or breed associations.

Get sampling supplies at order.igenity.com.
Hair Sample Instructions

1. Pull (do not cut) hair from the tail switch, not tail head. Pull hair in the opposite direction from which the hair is laying. This results in less breakage than pulling straight out from the tail.

2. Make sure hair is free of fecal material and dirt. Save the hair roots (follicles), which contain the DNA.

3. Roots must be clearly visible. Approximately 30 hair roots are needed. For animals with finer hair, a minimum of 50 to 60 hairs is desired. For animals younger than three months, TSUs are recommended since hair roots will likely not be visible.

4. Open the collector and peel back the plastic cover. Insert the root end of hairs in the middle of the collector. Seal the plastic cover over the hair roots and then close the collector cover tab.

5. Trim excess hair extending from the collector. Write animal ID and other information in the spaces provided (do not cut off follicles, which contain the DNA).

6. Properly record animal IDs on the collector cards and correctly enter that information on your order form to match the DNA to the animal.

Get sampling supplies at order.igenity.com.
1. Appropriately restrain the animal. Locate a blood vessel, visually or by feel. Clean the area so the sample is not contaminated with dirt or manure. Use a clean needle or lancet for every animal.

2. Blood can also be sampled with a syringe or blood tube from the vein on the underside of the tail. This may be easier than sampling blood from an ear vein that is covered with long, thick hair.

3. Collect two to three drops of blood on the collector portion of the collection card by allowing the blood to drip or squirt onto the card. Do not wipe the needle, ear or tail on the collection card. Discard the needle in an appropriate disposal container.

4. Before placing blood drops on blood cards, write an accurate name and animal ID in the spaces provided. Let the cards sit open and air dry before closing cover flap. If blood is sticky and gets on the top of the card, the sample is not useful.