

by Mark McCully
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The problems big data may solve

It is estimated at least 2.5 quintillion bytes of data are produced every day (that's 2.5 followed by 18 zeros).

I've read that Google processes 3.5 billion requests daily, and companies like Amazon, Microsoft and Facebook are generating and storing billions upon billions of data points every hour. This rate of data accumulation is staggering. Ninety percent of all data produced by humans has been made in the last two years.

All of this leads us to the term "big data." Essentially the term refers to very large, structured or unstructured, hard-to-manage volumes of data generated in our world today — from satellite images to credit card transactions to Facebook likes. When we apply powerful mathematics, algorithms and software to these massive databases, the data turns to information and new insights appear.

The insights from big data give marketers more knowledge around consumer preferences and buying behaviors. Manufacturing companies use the data to improve efficiency and streamline operations. The data builds artificial intelligence models used for risk management, medical diagnosis, crime prevention and gives me the fastest route through rush hour traffic. All good stuff.

But what does all this have to do with the beef industry? Today, the *Certified Angus Beef*® (CAB) brand is more effectively promoted using digital media, and messaging can be served to consumers specifically speaking to their preferences or

concerns. We can monitor digital discussions about beef or the brand (think Twitter or Facebook) and step in and correct misinformation before it goes viral. By working with our retailers and their shopper loyalty data, we can target heavy beef purchasers or direct promotions to those who haven't bought in a while. Harnessing data has made marketing our end product far more effective.

Using big data, the team in Angus Media is helping Angus breeders use the same powerful marketing tactics as global mega brands. By capturing the data of those viewing sale books, you can advertise directly to those in the market for Angus genetics.


The goal is to make every dollar spent on advertising have a bigger influence on building your brand and growing your business. I encourage you to visit with your regional manager and the team at Angus Media about how you can put these tools to work for you.

Advancing genetics

Maybe the area I get most excited about is the prospect of how big data could advance genetic improvement. To some degree we are harnessing big data today through genomics and millions of phenotypic records collected and submitted by Angus breeders. Still, I see the potential for some big advancements on the horizon, and we've been discussing this future in the boardroom.

Some applications are easier to grasp than others. Every day, thousands of camera images are captured during carcass grading. If that data was connected to an animal ID, sire and red meat yield, I think we could improve carcass merit even more. Or, what if a consumer could give us feedback on the juiciness, flavor and tenderness of the steak they are eating?

What about important traits we aren't characterizing today, like disease resistance? We know there is a genetic component to animal health, and harnessing big data might be our best path to building selection tools to tackle an industry problem. Measures of respiration rate, feed efficiency, methane emission or water consumption might be in the cards when technology is applied and big data sets are built. How much more efficient could we make cattle with this knowledge in hand?

The opportunities with big data are limitless. While there are still more questions than answers in this new and emerging field, I am confident Angus will be a leader in figuring it out. When we do, registered Angus seedstock become more valuable and our commercial customer makes more money. 

A handwritten signature in black ink that reads "Mark A. McCully".

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