

# What makes the National Whole Chain Traceability system different?

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In previous whole chain traceability systems, most notably the U.S. Department of Agriculture (USDA) National Animal Identification System, producers were concerned about data privacy and confidentiality. Some did not participate in the system because they were concerned that data stored in the system would be used against them by their competitors or government agencies. Another reason some producers chose not to participate in the system was because of the additional expenses, such as RFID ear tags, software, or other electronics. Producers believed they would bear the majority of these costs and receive little, if any, of the economic benefits. Indeed, research showed that much of the implementation cost would be carried by the producer, while the stockers, processors, and distributors farther down the supply chain would reap more of the benefits. The whole chain traceability system developed at Oklahoma State University (OSU) has addressed these issues, namely, the lack of confidentiality and the cost-benefit gap. This was achieved by creating value-added opportunities for system participants, while providing participants the ability to keep their data confidential, or share their data with whomever they chose (Figure 1).

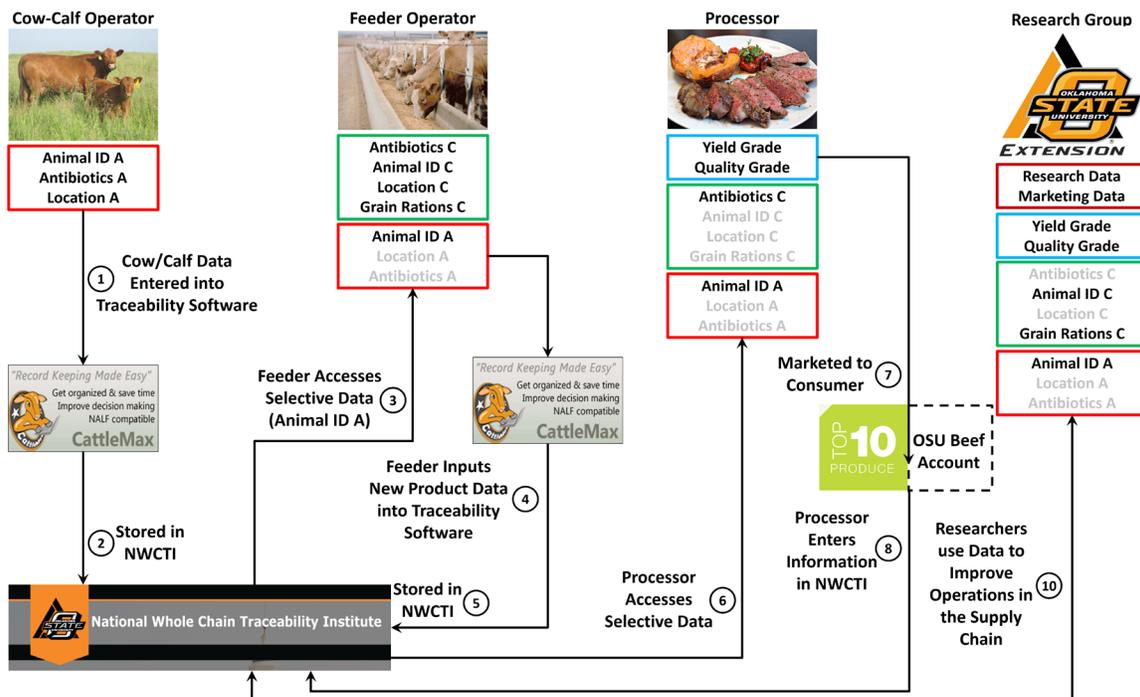


Figure 1. Within the NWCTI traceability system, users own the data they enter into the system. This means they control who sees their information, solving confidentiality concerns. Secondly, producers can request premiums for their beef because there is a record linking quality products back to their herd, which can provide greater profit opportunity.

When a cow-calf producer enters animal information into the system, such as animal ID, location, and antibiotics administered, they own that data and can choose who they want to share that information with throughout the supply chain. For example, after selling cattle to a stocker operator the producer may choose to share only the animal ID. The stocker can also add information to the system about the cattle including, the stocker location, daily gain, and additional antibiotics. At the next level, the animals have been transferred to a feeder. The feeder may be able to view the antibiotics given to the animals by the producer but not view any of the information generated by the stocker. Only information that the data owner has chosen to share can be seen by the groups selected by the data owner. As the animal travels through the supply chain more information is added; creating a detailed record of the animal's life. This information record would extend all the way to consumers, who could view information about the beef products by scanning the barcodes with a smartphone (Figure 2). Finally, data collected throughout the supply chain, including consumer opinions, can be shared with the producer.

Consumer preferences, such as a desire to know more about the food they consume, could generate revenue for producers. The NWCTI system is poised to help operators in all stages of a beef supply chain add value to their products. The goal is that value-added opportunities greatly offset the cost of implementing and maintaining the whole chain traceability system.

For more information about the NWCTI system, contact Dr. Michael Buser using the information below. YouTube videos related to the NWCTI system can be viewed at: <https://goo.gl/MwPhoS>.



Figure 2. Studies have shown that consumers are willing to pay more to learn more about the food they consume. This could help compensate producers for the upfront costs of implementing the NWCTI system.



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