Calf Production Data Recording Preferences of Cow-Calf and Feedlot Producers: Informing Recording Tool CalfDex Design

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INTRODUCTION

Animal information management presents a major challenge in the beef cattle industry. How data is gathered, recorded, utilized, and shared are constrained by time, cost, and technology. Effective information collection and administration provides a valuable tool for producers to facilitate efficient cattle management. The transfer of detailed production and health information from cow-calf to downstream producers enables tailoring production decisions, reducing redundant animal health interventions, and facilitating cattle and beef marketing. Additionally, sufficient information flow within the beef supply chain is necessary for providing beef production information desired by consumers.

Though effective animal information management can benefit the beef cattle industry, the value of various information categories may differ across production segments. The purpose of this fact sheet is to summarize research to determine the importance of information categories gathered at the cow-calf level and compare it to the value when received by feedlot producers. This fact sheet is an extension of the thesis research published in Information management in cow-calf operations: data priorities, recording, and sharing (kstate.edu).

ANIMAL INFORMATION BENEFITS

Numerous benefits may arise from collecting and managing detailed individual animal data throughout the beef cattle supply chain. For cow-calf producers, improved information management provides insight into herd performance, enabling producers to track performance changes. Such knowledge enables enhanced herd management and calf marketing decisions based on compiled data.

Although information management begins at the cow-calf production level, benefits of individual animal data follow cattle through the supply chain. For cattle feeders, information on feeder cattle age; weaning status; vaccination, medical, and implant history; and animal nutritional background is important. Such information provides indicators of how the animals will perform regarding average daily gains, carcass qualities, and disease resistance in the feedlot[2]. Because these points of information can influence how

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[2] Busby,W., D. Strohbehn, P. Beedle, and L. Corah. 2004. “Effect of Postweaning Health on Feedlot Performance and Quality Grade.” Iowa State University Animal Industry Report 650(1)

cattle feeders may value and manage incoming cattle, cow-calf producers have incentives beyond just internal management decisions to gather and record calf production data.

IMPORTANCE OF INFORMATION EXCHANGE

The willingness of producers to share animal data is key to disseminating benefits of individual animal data downstream and upstream across the beef cattle supply chain. Data sharing throughout the entire beef cattle supply chain facilitates product traceability which promotes production efficiency, improves profitability, and increases competitiveness[3]. The beneficial effects of data sharing are realized by all sectors of the beef cattle industry. However, benefits accrued by producers at different production stages are not identical.

The transfer of detailed production and health information from cow-calf to downstream producers enables tailoring of downstream production decisions. Downstream data sharing promotes the reduction of redundant animal health interventions as producers often revaccinate purchased cattle without detailed vaccination history[4]. Additionally, downstream information sharing facilitates cattle and beef marketing as producers are not able to capture the full value of their animals if certain information, such as preconditioning protocols followed, is not received by buyers[5].

SURVEY

Surveys were conducted with both cow-calf and feedlot producers as part of research effort to develop a mobile information management program for cow-calf producers. Referred to as *CalfDex*, this mobile phone application is designed to provide a tool for producers to easily gather, manage, and potentially share information about their calves. Results from the cow-calf and feedlot producer surveys were used in the design and development of *CalfDex*. The surveys gathered for this study collected information regarding animal data cow-calf producers want to record and data feedlot producers want to receive from them.

The cow-calf survey queried whether producers would or would not want the ability to record specific production information. The feedlot survey asked producers if they would want to receive each type of information for incoming cattle and if it would change how they process and manage cattle. Additionally, the feedlot producer survey separated information types into individual animal and whole load categories based on how the information would be reported to them. In total, 25 cow-calf and 7 feedlot producer surveys and interviews were completed.

[3] Peel, D.S., C.C. Craige, and B.D. Adam. “The Value of Traceability in the Beef Industry Markets.” Oklahoma Cooperative Extension Service, Oklahoma State University.
[4] Athanasios, G.C., H.S. James Jr, S. Konduru, V.L Pierce, and R.L. Larson. 2007. “Asymmetric Information in Cattle Auctions: The Problem of Revaccinations” Agricultural Economics 36(1):79-88
[5] Bulut, H., and J.D. Lawrence. 2006. “The Value of Information Provision at Iowa Feeder Cattle Auctions.” Proceedings of the NCCC-134 Conference on Applied Commodity Price Analysis, Forecasting, and Market Risk Management. St. Louis, MO. [http://www.farmdoc.uiuc.edu/nccc134].

RESULTS

Results of survey questions regarding information cow-calf producers wanted the ability to record are shown in Figure 1. Most respondents indicated they wanted to record all information types presented. However, specific information was essential to the cow-calf producers surveyed. Notably, producers prioritized recording data related to basic cow-calf herd management. All respondents wanted the ability to record cow and calf identification, calf sex, and calf birth date. Additionally, nearly all (96%) respondents indicated they wanted to record weaning date. Calf medical information of vaccination type, vaccination date, and illness/treatment data recording were desired by most cow-calf producers (87%, 83%, and 78% respectively).

Results from the questions regarding the value of individual animal information to feedlot producers are shown in Figure 2. These results show feedlot managers surveyed desire a medical history of each animal with all responding that they want illness and treatment data and that it would alter how they manage arriving cattle. Calf sex and identification information were wanted by all respondents, but the majority (60%) indicated that they would not impact management. Dam identification and age along with calf birth weight were the only two types of data that less than half of feedlot respondents wanted. Conversations with feedlot producers revealed many did not believe this information would affect calf performance while at the feedyard.

Results from the whole load information questions of the feedlot producer survey, presented in Figure 3, show that some information types were considered essential for the feedlot managers surveyed. All whole load information types were wanted by a majority of respondents. Type, origin of calves, indication of a co-mingled load, transportation details, and weaning date were wanted by all respondents, and all indicated that these information types would affect management and procurement practices. 80% of respondents indicated implant type and date, diet history, dewormer type and date, and breed information would impact animal management decisions. Vaccination types and dates given were both wanted by all respondents, but only the date of vaccinations received a majority (60%) of responses indicating that it would alter management practices. Although 60% of respondents indicated they want weaning weight data, it was the least desired information of those presented.

Figure 1. Cow-calf producer information recording preference question results

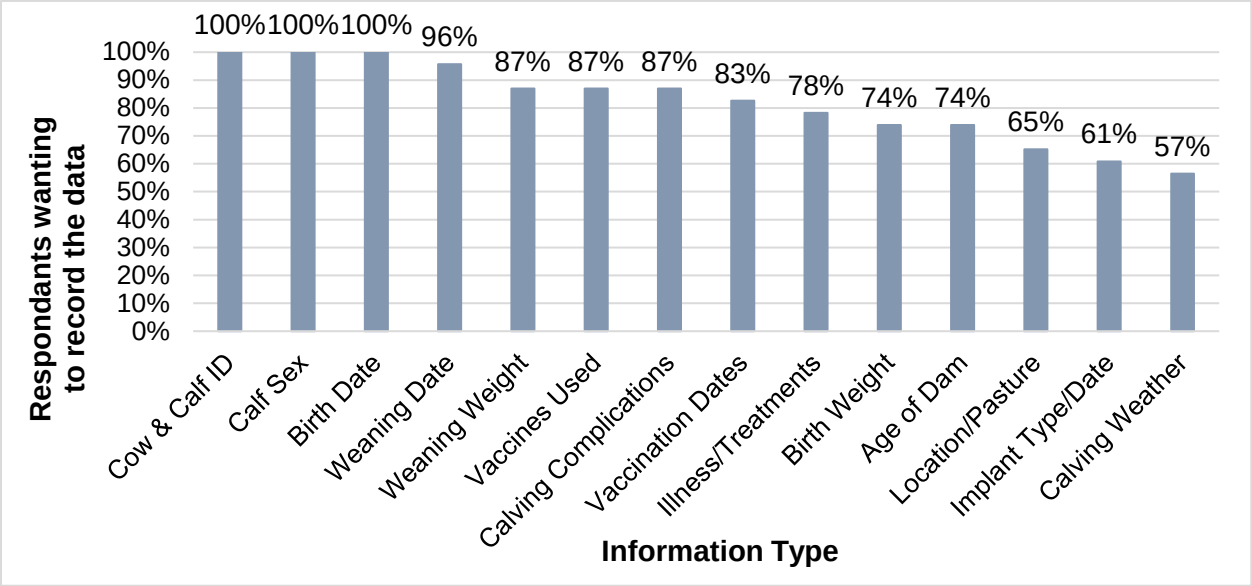


Figure 2. Feedlot producer individual animal information preference question results

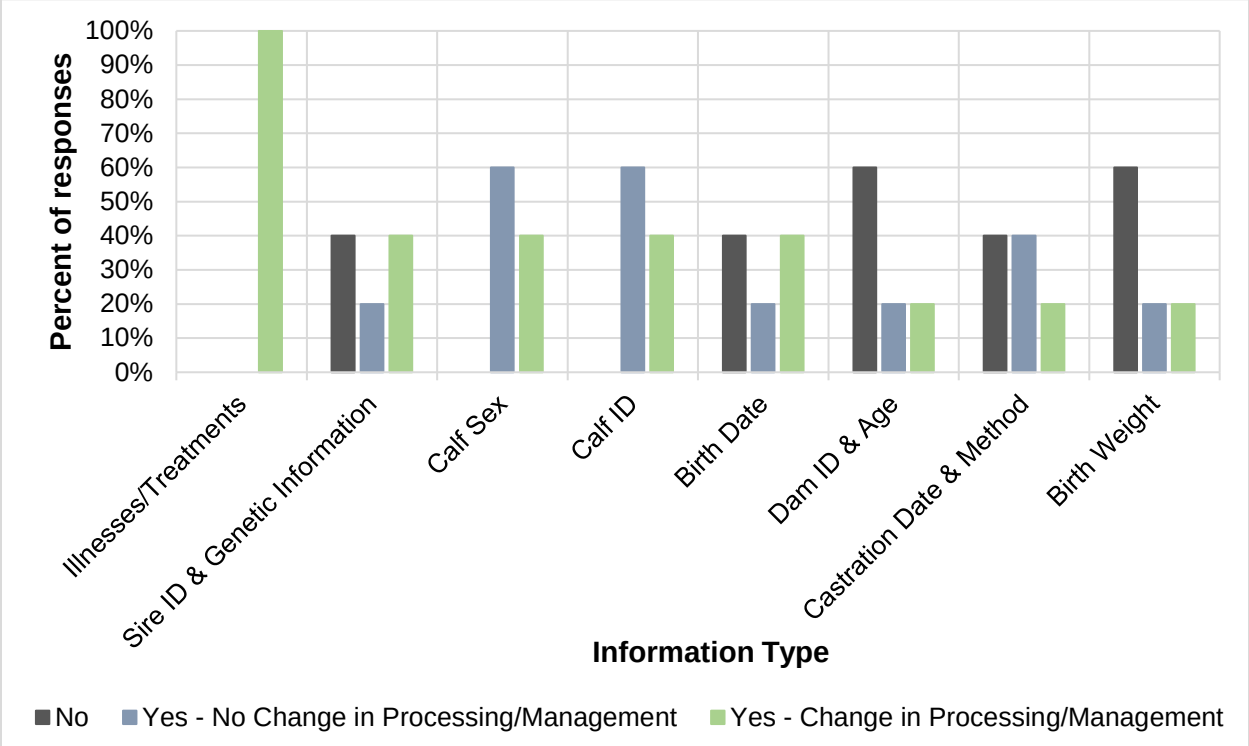
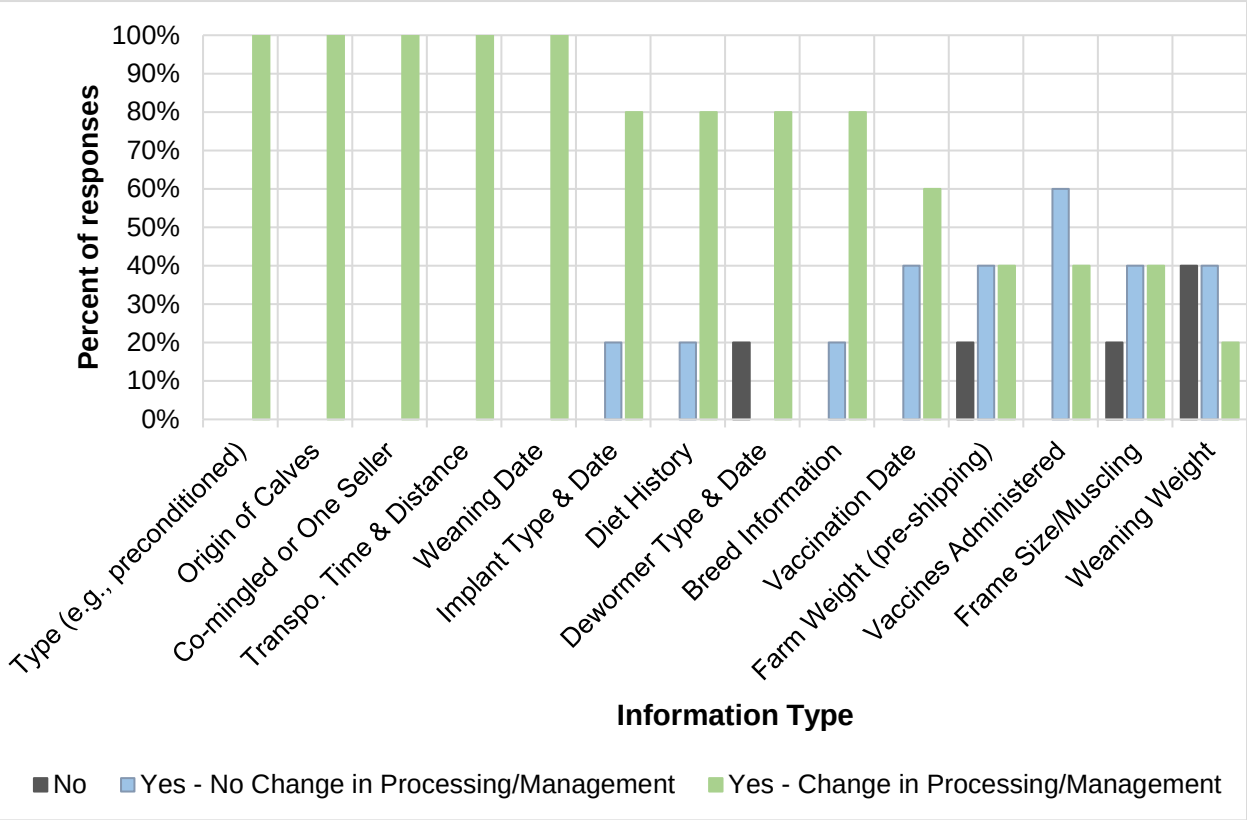


Figure 3. Feedlot producer whole load information preference question results



SUMMARY

Cow-calf survey results suggested cow-calf producers find general calf management information (calf identification, sex, birth date, and weaning data) and health information (illness, treatment, and vaccination data) most important to record of those given. From the feedlot producer survey results, producers valued shipping information (origin, transportation time and distance, and whether the load was co-mingled), management information (illnesses, treatments, implants given, and vaccination history), and general calf information (sex, ID, type, breed).

Though both types of producers valued medical information, feedlot producers placed greater weight on this category. Notably, implant information was one of the lowest valued types of information in the cow-calf survey, but it was wanted by all feedlot producers. Though both producers highly valued weaning date information, feedlot producers did not put similar weight on weaning weight as cow-calf producers did. Lastly, discrepancies were found in the value of calving information (birth date and weight) as a large percentage of cow-calf producers indicated a desire to record this information compared to percent of feedlot producers that desired to receive this information. Similarities are found in that both cow-calf and feedlot producers both value general management information such as calf sex and identification.

However, the ranking of information types in both surveys focused solely on preference and not economic values of each information type. Therefore, rankings may not be based on economic value to the producers. Additionally, results are based on a small number of respondents and not necessarily representative of producers in general. The samples were selected based on recommendations of producer associations of selected members who were willing to take time to complete the surveys and interviews and potentially interested in testing *CalfDex* as a data recording tool.