LRIC LIVESTOCK RESEARCH INNOVATION CORPORATION

What can the livestock industry learn from the world of pets?

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What does the pet sector have to do with Livestock?

We have moved the farm dog from the yard to in the family. Pet owners are taking care of their companion animals, also known as pets, like never before. Considerable time, money, training, diets, sensory toys, and nanny technology have now become the standard when you are a pet owner. The pet sector in Canada is a large industry. Globally the market size in 2022 is roughly $261 billion (USD) with a +6.1% compounded annual growth rate (CAGR) (Roberts, 2022). Canadians love their pets, 38.5% of households in Canada have a cat in the home, and 35% of households have a dog in the home (CAHI, 2019). In Canada's largest city, Toronto, the population is roughly 2.8 million people and the city inhabits 230,000 dogs according to the city of Toronto (City of Toronto, 2021). In a city where space is a luxury, many Canadians are choosing to share it with a companion animal. What does this major and rapidly growing industry have to do with the Livestock sector?

Many new technologies are first adopted in the human sphere, followed next by pet owners and then by the livestock sector. By looking to the world of pets, the livestock sector can, in essence, look to their own future and be better prepared to seize opportunities. Arguably the most relevant connection between the two animal industries, is Feed.

Examples of human > pet > livestock:

The world of pets has often followed human trends before the livestock industry catches up. One example is microchip indentification. 1 in 3 pets will get lost in their lifetime, that is enough for most pet owners to get their pet microchipped (Animal Health Center,2019). This process has moved forward to livestock and is being used as a professional animal management system. Asset management for farmers is becoming more accessible, technology and microchipping is just the start. In cases of storms, disasters, theft and recovery, microchipping livestock allows you to keep a steel eye on your animals. In an infographic to promote microchipping in pets, it quotes, "Microchipping is one of the best ways to keep your family together" (Animal Health Center, 2019). As humans identify pets to be closer to the 'family', do consumers disassociate more with the livestock industry due to the proximity with animals in the home?

Ingredient use in pet food often caters to the buyers desires for their animal rather than what is beneficial for the pet (Livestock & Poultry Middle East & Asia, 2020). Whether the trend is gluten-free or alternative proteins there is a lot of diversity in the ingredients used in pet food. When it comes to livestock feed ingredients, there are often very few. Livestock feed is much simpler with rations mostly including just corn or soy and some byproducts. Lots of research now focuses on feed additives for animal agriculture. The goal for this research is to make the final livestock products more sustainable and/or efficient. For example some additives are designed to reduce cow burps

which contain methane, a greenhouse gas (GHG). For example, an article on pets eating insect-based food to be more sustainable in regards to climate change highlights the sustainable food consumer trend in the pet food industry by using insect protein to make the end product more sustainable (Hornyak, 2021). The insect protein production process produces less GHG's and uses less land and water (Hornyak, 2021 & Swanson et al., 2013). Incorporating insects into pet and livestock feed could alleviate a huge percentage of GHG emissions associated with these industries (Okin, 2017). Insects can be used for animal or aquaculture feed, and are eaten in human diets around the world. HOPE Pet Foods is a University of Toronto spinoff launched in 2020. This summer, it plans to release treats and food based on alternative proteins such as algae and black soldier fly larvae (Hornyak, 2021).

Geofencing is another adoption of technology used in the pet world that now has transformed for application within the Livestock sector. Geofencing is a technology that is commonly used to keep your dog within your lawn's boundary without having to have a physical fence. GPS fencing for pets generally use collars that shock or make a large noise to make sure your dog does not travel across the boundary. Geofencing for livestock is a component of GPS tracking technology that has many possible applications in agriculture.

Potential geofencing use in agriculture would be to have active GPS sensors on collars or tags where herds are on unfenced pasture. A designated GPS boundary would be set and when the boundary is crossed or reached the farmer can be notified (Gredig, 2022). Geofencing reduces the cost of fencing and can open the possibility of having a livestock producer improve the land of their cash crop neighbour. Biosecurity is another use for this technology and animal agriculture. As biosecurity and One Health become more important GPS geofencing would be a prevention management tool for animal health.

What are the current trends with pets?

According to Forbes the biggest trends in the pet food industry include food, direct-to-consumer (DTC) and availability, technology, and increased services (Kestenbaum, 2018). Pet food has become so diverse and personalized to the pets 'needs' and consumer 'wants'.
With demand for specialized pet products increasing, online private brands have found their place in the pet industry. By eliminating the middleman, smaller more niche players are taking advantage of the accessibility and availability advantages of DTC retail and online shopping. In many grocery stores in Ontario you can see a whole pet aisle in between your food and household cleaning items. **More products = More money.**

Technology has evolved in this industry, applications (apps) and technology are assisting pet services in a convenient new way. Pet 'nanny-cams' that give your pet a treat at home via your smart phone, dog walking apps that are like uber for your dog are some examples.
With demand for pet care so high, there is a large increase in services available with dog salons, pet grooming and care, kennel services and more. There is a large jump from the status quo of end of life care for your pet 50 years ago compared to today. Pets are now seen as part of the family and thus there are more products and services to assist with your pets exit that are now common such as pet cemeteries, cremation and grief consulting.

So What?

The pet food industry is by-product-based and tightly interlinked with livestock production and the human food system. Many commercial pet foods are formulated to provide nutrients in excess of current minimum recommendations, use ingredients that compete directly with the human food system, or are overconsumed by pets, resulting in food wastage and obesity (Swanson et al., 2013).

Consumer opinions rule the market, and we are seeing that in the livestock industry too. Whether the issue is environmental concerns, animal welfare or nutrition, misinformation and trends largely impact the narrative of livestock in the media. Reliable information is limited and a livestock report card is needed to break things down in real terms.

Innovation Gaps:

- Stable and affordable identification systems
- Inexpensive containment (e.g. geofencing)

For more information

Please contact LRIC at info@livestockresearch.ca or 519-766-5464.

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