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RFID readable ink a more palatable solution for horses

The ink can be read through a mane and is invisible on the skin, but is not ready yet for commercial use

BY SUZANNE ATKINSON
Ontario Farmer



Lantz McLaren started looking for an alternative identification system for horses when the government started talking about ear tags

What started as a search for an alternative to ear-tagging his beloved Appaloosa horses has led a Norwood man to partner in the creation of an internationally fluent data base concept which could save agriculture millions of dollars in re-tooling, and provide international traceability for all manner of farm animal.

And once it's market-ready, Animal ID Solutions's Lantz McLaren says an RFID readable ink will be available for "signaturing" not only live animals, but animal products. He'll be promoting his concept as an "in-the-box" solution at an international animal identification symposium and trade show in the U.S. later this month.

"The pilot is not market ready," McLaren says of the RFID ink being developed by a St. Louis company. But with a system designed to read all current forms of animal identification, from RFID tags, to brands, DNA to pheno-typing, and marrying that with the extensive potential of his data base, McLaren says that an international language of animal identification, including traceability of birthdates and herd movement, is possible.

McLaren said he is partnering with National Cash Register Corporation to develop the asset tracking program, by applying existing technology to an "agricultural template."

"Our power is our data base," says McLaren explaining that the data collection tool has "multiple front ends." Not only will animals' whereabouts be trackable, but depending on security clearances, searches of its breeding and performance history will be instantly retrievable.

The St. Louis-based Somark Innovations said it's RFID-readable tattoo system is awaiting one technological development before it is market ready.

"It's an entire system. There are multiple sub-components and there is a significant amount of simple engineering to get it to the point of being user-friendly," co-founder Mark Pydynowski told *Ontario Farmer*, admitting he is

"waiting on a development milestone."

Pydynowski said the bio-compatible, invisible RFID ink is applied through the hair onto skin instantaneously by a device resembling "a bed of small needles." Applied adjacent to a bovine's tail head, the invisible tattoo will be readable by a wand mounted several feet above the animal.

He would not confirm that he is talking with Animal ID Solutions, but asked "Should we be? We're looking at partnership agreements in different countries."

"We're willing to work with anybody out there to provide the product as a solution," Pydynowski said. "We've had inquiries from 97 different countries. There is tremendous interest out there and we wouldn't be able to fill the orders fast enough."

The RFID ink tattoos would be distributed in numbered, individual, disposable ink cartridges, Pydynowski said. In preliminary tests it can be applied to food products, and causes no ill effects.

Pydynowski will discuss technological breakthroughs and opportunities in the livestock industry at the Animal ID Expo in Kansas City hosted by the National Institute for Animal Agriculture.

Julie Stitt of CCIA will provide an overview of the Canadian traceability system while Quebec's "comprehensive traceability system," will also be the sub-

ject of a presentation. Ron Axelson, also of CCIA will discuss Canada's multi-species traceability initiative. Former federal agriculture minister Chuck Strahl had also been scheduled to speak.

McLaren said he is also working with companies in Peterborough's DNA cluster and the University of Guelph which currently has the capacity to "do instant DNA for genus. They have the process started. Now we're developing the tools to work with the data base."

While the Canadian cattle industry has been working for some time in the establishment of a foolproof traceability system, Equine Canada established a task force for horse identification in 2003 with the goals of identification for traceability, trackability and accountability.

As early as the 2008 crop year, foals could be required to be permanently marked, McLaren says, noting that it's particularly needed in the equine industry for breeding, competition and consumption purposes.

McLaren says that by partnering with the extensive data tracking capabilities of National Cash Register Co., the massive complexities of animal identification can be managed without organizations, countries, breed associations, having to convert existing systems.

"We can work with the 'jewellery' that's already there," he says, noting that

the NCR data base allows for as many as 10 images of an animal to be filed. Noting the ever-changing colouring of his appaloosa horses, McLaren says that a written description of colouring, or a photograph, does not always match the physical animal.

But the traceability system can be applied "depending on how the industry wishes to employ it."

"My company can give you an out-of-the box solution for your farm... or it can go international."

Ideally he's looking forward to the day when the RFID readable ink system is market ready. Then it will provide a non-corruptible solution to animal identification.

The passive UHV readable mark will only be removable by physically compromising the hide and is scannable even when it is covered by a mane.

McLaren, the vice-president of Appaloosa Canada, began researching options when Agriculture and Agrifood Canada noted that ear tags could be acceptable for horses.

"I felt there had to be a better solution," McLaren said. He partnered with Anne Olscher, another Appaloosa enthusiast who "revolutionized inventory control and tracking for Cott Cola."

"I had horse ideas and she had technical solutions."