

## Advancements in Identification Technology

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For those of you who have stopped by our trade booth, you've had the opportunity to take a close look at the ID+PLUS Cattle Identification System. This new entry into the visible and EID field was introduced recently in early October during World Dairy Expo in Madison, Wisconsin. My company, Jenrik Marketing, is the exclusive North American licensee for ID+PLUS. We have committed the past year to conducting market research into this area of EID and we are presently embarking on the initial new product introduction stage.

The ID+PLUS System is being developed and manufactured in Australia and I would like to introduce to you at this time my Australian colleague. Mr. Josef Pfistershammer is the inventor and patent holder for the ID+PLUS System. He is Managing Director of C.I.C. Enterprises P/L based in Perth, WA. C.I.C. Enterprises is committed to an on-going research and development of the ID+PLUS electronics and is presently establishing worldwide distribution for the ID+PLUS System.

I will most likely be deferring any technical questions to Mr. Pfistershammer during the Q&A session following. My apologies to those of you with special interests in species other than beef or dairy cattle as these are the two exclusive markets our commercial interest in EID are focused on. My perspective on this subject of EID is primarily from a marketing point of view which I regard to be more customer-driven than say product-driven or even regulatory-driven. While the list may be long for factors that have been holding back commercialization of EID, three primary reasons stand out in my mind:

1. Producer understanding suggests that EID simply costs too much, relative to what they see it doing for them.
2. Arguably, a truly commercially viable or fully practical approach to EID has yet to emerge.
3. Standardization is the most immediate obstacle but progress appears to be finally taking place in this area.

What I believe is going to interest this gathering with regard to what we have to offer in the field of EID is two fold:

1. What you presently see at our trade booth is what we refer to as a DELIVERYSYSTEM for EID. It represents a very unique and radical approach to visual ID and external chip attachment to the animal that we believe has numerous inherent advantages over existing approaches. This delivery system will carry C.I.C.'s own chip as well as that of certain competitive EID manufacturers who recognize a strategic fit with their marketing objectives.
2. What you cannot see today, due to its on going development, is an approach to electronics that we believe will deliver increased value to producers compared to other EID options presently available. By more value I mean delivering electronic technology that will do more for producers than simply identify the animal or interact with existing automated equipment. Such added

value will include enhanced computerized record keeping. Rather than staying on the ranch or farm, individual records will physically follow the animal through ownership changes from birth to slaughter. The potential advantages this will present are far reaching.

On the surface, the DELIVERY SYSTEM behind ID+PLUS may not appear as "sexy" or "high tech" as the focus has been on EID. However, we believe this delivery system represents a potentially significant advancement that could very well unlock one of the primary doors holding back EID: **permanent attachment to the animal**. This delivery system includes two options with the first one represented by a nose tag attaching into the nasal cavity of a newborn calf. This radical approach does have some people "bouncing off" of the aesthetic "look", but I am certain the practical advantages will eventually win over even the most fashion-conscious purebred "purist." The ID+PLUS Nose Tag permanently locks into the nose where it does not interfere with breathing, eating, drinking or nursing. It does not pierce tissue, therefore it is bloodless. While the nose tag can and will be attached to mature beef and dairy animals, newborn calves will also be fitted with this device which will comfortably stay in the nose to maturity, through their productive life, and on to slaughter. The locking mechanism, while not requiring any applicator, is permanent. The design will not allow catching on inanimate objects and this tag will not tear out of the nose like a conventional ear tag will tear out of the far less sensitive ear tissue. Birth-to-slaughter ID...one tag for the life of the animal. Permanency of the attachment is the key.

While the ID+PLUS nose tag puts visible ID on the "front bumper" of the animal, the ankle tag version is targeted primarily to the parlor-milking dairy market. It involves the permanent attachment on the rear leg that will place ID on the "back bumper" or the "business end" of the milking cow. In-parlor visible I.D., where ear tags are difficult to read, is now possible. This is not a "me too" ankle tag. It rides up approximately 10 inches on the cannon bone out of the muck where during most seasons and in better managed dairy operations, the visibility of the number will be maintained.

Both the nose tag and ankle tag combine visible I.D. (which will continue to be necessary) with the optional insertion of the electronic chip. Both of these positioning sites on the animal also provide what we believe to be an easier and more reliable electronic reading of the chip. The nose is quite predictable as to where it will travel, either to water or feed. The nose will also present the chip in tighter proximity to the antennae with ample time for more accurate electronic reading. In the case of the ankle tag, an antennae attached to the milking claw also provides similar important advantages. We believe that both of these electronic reading sites, the nose or ankle, will provide more reliable automated reading.

In terms of the economics behind EID, I believe beef and dairy producers are puzzled. They're asking themselves how electronic ID is going to put money into their pockets. The highly automated dairies have put electronic ID to work, but for reasons only having to do with specific management objectives. Simply put, beef and dairy producers presently see limited value in today's commercially available electronic ID. Mandating compulsory EID will be a very difficult sell without more tangible economic benefit at the producer level.

We believe the ID+PLUS System has the potential to change the economic-driven resistance to EID by driving down costs. More importantly, if producer perception suggests that EID simply costs too much,

ID+PLUS will build in far more value toward the technology, over and above simply identifying an animal. EID and our accompanying advanced electronics will, in my opinion, make it look cheap at ten times the price!

Temperature sensing in the nose with the ID+PLUS Nose Tag has the potential to build such value into EID. We're essentially talking about a biosensor...in the nose. Concept patents are in place so we feel comfortable to say a little bit about this exciting potential. Applied research will be initiated in the very near future that we expect will validate a useful benefit behind temperature sensing that will automate estrus detection. The labor-intensiveness behind estrus detection or the cost of synchronization drugs may quite possibly be eliminated.

Imagine the potential benefits of temperature sensing to identify sick cows before clinical signs are observed by either the milker in the dairy or the pen rider in feedlot operation. The labor savings alone with such temperature sensing applications could put serious money into the pockets of beef and dairy producers. Add on the increased efficiencies via less drug use, less lost gain in the feedlot and improved reproductive performance (this is only a partial summation), then perhaps the market, rather than government, will truly drive EID into widespread use among those progressive producers in the cattle raising industry.

Building real economic value into existing EID technology is what the beef and dairy industry has been waiting for. And, building such value will not be limited to the concepts I have just discussed.

Integrating all of the existing and growing technology into packaged management systems could go a long way toward building substantial value that will create more widespread use of EID. How to get the scale manufacturers, ultrasound scanning manufacturers, various milking machine equipment component manufacturers and EID chip manufacturers together poses a marketing challenge that is limiting today's use of EID.

The dairy market has a clear head start in this area. However, in the beef market, such a coming together of ideas and electronic components is much further behind. Effectively positioning and packaging all of these ideas into management systems that the average beef and dairy producer can understand will be required in order to gain broader use of EID. The market has yet to determine exactly how this task is going to sort itself out.

In conclusion, when the producer clearly finds his or her self interest being served, the objectives driving this gathering will be met. In fact, EID will likely find itself simply riding on the coattails of more valuable and tangible technology addressing more critical management objectives.

Many of the concepts I have discussed await complete validation but, the potential to the cattle raising industry is, in my mind, very interesting and very exciting.