



A Producer's Focus on Consistency and Monitoring to Overcome Changes to Antimicrobial Use

Rick Kaptein

RICK KAPTEIN AND HIS WIFE BOTH COME FROM POULTRY FARMS IN SOUTHWESTERN ONTARIO, STARTING IN THE INDUSTRY IN 1965. OVER THAT TIME, THEY HAVE SEEN THE INDUSTRY GROW AND CHANGE; FROM IMPLEMENTATION OF THE QUOTA SYSTEM, TO THE DEVELOPMENT OF ANTICOCCIDIAL MEDICATIONS, TO THE COMMERCIALIZATION OF THE TECHNOLOGY AND AUTOMATION THAT IS RELIED ON BY MOST PRODUCERS TODAY. AS THE INDUSTRY HAS EVOLVED, SO TOO HAVE THEY.

The Kapteins purchased an older facility and started their own operation, expanding to another location where they have built a brand new state-of-the-art facility run by their son. Between the two sites, they grow 60,000 kilos per quota period on one site, and 35,000 kilos on the other.

Rick and his family produce heavier birds using a slightly longer cycle than average. Their birds typically grow to 3.2 kg and have a 45-47 day growing period. Because of their success in managing disease and bird health, they were asked by their processor to be involved in a pilot project over 4 quota periods to assess the success and feasibility of raising birds without the use of Category I, II, and III antimicrobials. They began on this program approximately 3.5 years ago and have fine-tuned their management style to optimize both bird health and performance, as well as antimicrobial stewardship.

Below are some of the lessons that Rick identified that helped smooth the transition of not using Category I, II, and III antimicrobials.

Balancing Down Time and Stocking Density: Start Dry and Stay Dry

Because of his experience, Rick has learned some important lessons that have helped him to overcome the removal of preventative antimicrobials. Two lessons he shared were as follows:

You build your barn once: plan ahead and ensure it will suit your needs as well as bird growth and performance for the program you will be involved in. This will help to mitigate issues with stocking density and ensure all birds have enough room to spread out evenly

Start dry and stay dry: ensuring clean floors and dry bedding is key to preventing disease in birds early on. Adjusting temperature, ventilation, and stocking density to keep bedding as dry as possible

To overcome the potential challenges associated with having a longer growing period (particularly its impact on bedding cleanliness, moisture, and CO2 levels), Rick opted to reduce stocking density compared to that of many conventional and/or Raised Without Antibiotics (RWA) flocks. He feels his flocks are best stocked at approximately 2.2 kg/square foot. This creates less demands on ventilation (but a slight increase in costs for feed with a longer growing period), bedding management, as well as down time.

Another area Rick altered to overcome reliance on antimicrobial products was putting more emphasis on keeping floors clean and bedding dry, which he found helped to prevent outbreaks of coccidiosis and necrotic enteritis. His experience has been that maintaining a warmer barn and striving for a decreased humidity level will help to reduce moisture levels that cause damp litter and wet manure accumulation. He also monitors flock performance to assess their overall health, which helps to identify areas to focus on for cleaning during down time.

Chick Health: Employing Principles of Platinum Brooding and Working with Your Hatchery to Set Chicks Up for Success

Farmers need high quality chicks with good parental antibodies to give them the immunity they need to grow and develop into healthy, productive birds. Hatcheries do their best to provide producers with chicks from breeder flocks with excellent performance. It is difficult to provide birds best suited to every different management style and program, so producers must do their part in setting chicks up in a healthy environment with parameters in place to reduce their exposure to disease.

To overcome minor fluctuations from the hatchery and ensure chicks get off to the best possible start, Rick and his wife employed the Platinum Brooding Program principles on their farm for many years and followed the management suggestions closely. As their operation has changed, they still use many of these principles to optimize chick health starting at placement. Producers know that the first 10-14 days after chick placement is a period of careful and close monitoring to ensure chicks are healthy, and eating and drinking appropriately. Some of the key performance indicators Rick looks for are include:

- Clear eyes with no signs of conjunctivitis or ulcers
- Healthy navels
- Rectal temperature
- Check weights at arrival, after 4-5 days, and again at 7 days of age

He also places feed on paper and under lines so that it doesn't get lost in the litter. Water line pressure is also checked often prior to and after placement to ensure birds are receiving adequate water. He softens the water as soon as it leaves the well to prevent high levels of iron and calcium, which can affect flow at the nipples, causing leaking, and helps to prevent the accumulation of biofilms.

One important aspect for maintaining chick health is ensuring that his ventilation and temperature are suitable for chicks given their reduced stocking density. At chick placement, Rick ensures that the entire barn has a consistent temperature and that minimum circulation fans are turned on and aimed at the ceiling to prevent drafts. Many RWA flocks will confine chicks to help proliferate their vaccines, but Rick finds this can be a source of stress for chicks and one that is not needed to achieve success with his reduced antibiotic program. When an incredibly consistent temperature is maintained throughout the barn, birds can move freely throughout, giving them better access to resources as well as preventing bunching.



“ Farmers are open to learning and receiving feedback that can help to improve their operation. ”

The Importance of Close, In-Person Monitoring Rather than Reliance on Technology

While Rick values and sees the need for technology and automation that is employed on his farm, he still prioritizes time spent in the barn monitoring birds; no amount of technology will replace the human eyes, ears, nose, and touch. He stressed the importance of having a pail, bale, or seat set up in the barn where, after your twice daily walkthrough has been completed, you can sit quietly and watch birds act naturally. Some health indicators he makes sure to watch for include:

- Ruffled feathers
- Abnormal wing positions
- Clear eyes
- Pecking or nesting behaviours
- Playfulness or activity levels
- Closed eyes without sleeping
- Flock uniformity

During this time, it is also possible to identify changes in barn temperature and find drafts. These are fine nuances that technology will not pick up on, and that might be missed in a quick chick check.

Reducing Reliance on Antimicrobials for both Human and Animal Health

When asked whether Rick misses being able to rely on preventative antimicrobial use, he was very honest in saying that yes, he does miss the flexibility and leeway it allowed in management. However, he understands that improving management practices to allow for reduced use is the right thing to do, for both human and animal health. While removing the use of these products on an operation comes at a financial cost, it is not an unattainable goal.

He feels antimicrobial reduction is the right way for the industry to go, and taking a proactive approach can help the industry get there. It is important, however, that with the removal of some of these products, other safe alternatives are in place (for instance, pre- and probiotics, and perhaps making some approved in the U.S. more available for use in Canada) to help producers address the challenges they face, and to maintain bird health and welfare. Rick also stressed the importance of using a team approach, and having open conversations with veterinarians, processors, nutritionists, and feed companies. Farmers are open to learning and receiving feedback that can help to improve their operation, and when everyone involved has a vested interest in doing the right thing, strategic, targeted improvements can be made that optimizes the benefits for everyone.