

The success of your farm lies in your hands: best practices for healthy flocks

There is no doubt that food safety must begin at the farm. The way flocks are cared for influences their overall health and can also impact the health of those who consume animal products. Plus, high instances of poultry illness and death impact the profitability of a farm.

by **Scott Campbell**,
Global Product Manager,
Hydro Systems.
www.hydrosystemsco.com

Today, farms can utilise various innovations and best practices to monitor and promote poultry health. Understanding and implementing recommendations, like installing the right equipment, treating water and delivering probiotics to animals, will be vital for running a successful farm.

Supporting flock health

There are numerous causes of gut conditions in poultry, including salmonellosis, fowl typhoid, Newcastle disease, worms and more. Warning signs include diarrhoea, watery and smelly droppings, dirty, ruffled feathers around the vent area, depression, loss of appetite and poor growth.

Declining health is cause for concern, as certain outbreaks can put the nation's egg and poultry supply in jeopardy. For example, Newcastle disease is an especially virulent and untreatable disease that can kill birds within days of infection. In 1971, a major outbreak in Southern California resulted in the death and slaughter of 12 million birds.

Thirty years later, a multi-state outbreak cost \$161 million to eradicate. Since May 2018, Southern California has once again been battling an outbreak and 1.2 million birds have been euthanised. Prioritising flock health not only reduces illness and deaths, it helps protect the bottom line at a time when many farms are struggling to maintain profitability, and preserves the positive reputation of the farm. According to the American Farm

Bureau Federation, for the 12 month period ending September 2019, the number of farms that filed for Chapter 12 bankruptcies rose by 24% compared to the previous year.

While poultry companies have seen record profits in recent years, the National Chicken Council found that the average farmer's pay fell 6% between 1988 and 2015.

Finding ways to more easily and affordably care for poultry and reduce unnecessary deaths is key when profit margins are thin.

Smart solutions for the farm

Breakthrough technologies can help support gut health, including:

- Reliable inventory monitoring of feed bins with the help of the Internet of Things (IoT).
- Ceiling-suspended robots to monitor ambient conditions, health and welfare and equipment function for poultry.
- Antimicrobial probiotics that eliminate harmful pathogens.
- Water-driven or electronic pumps that provide greater assurance around water quality.

While animals require clean, hygienic drinking water to maintain gut health, not all farms have access to ideal water conditions. Many rely on water from ponds and wells that can contain bacteria and viruses. Water-driven pumps (WDPs) treat water and de-scale water lines by diluting concentrated chemicals required for these purposes.

For example, the right equipment can kill algae by diluting chemicals to lean proportions necessary to care for the water lines and reduce the amount of cleaning needed. These pumps also help administer medications, vitamins, electrolytes, probiotics, organic acids and vaccines to animals through drinking systems.

WDPs also deliver other benefits through reliable and accurate dosing. Dosing at the proper dilution reduces chemical and water waste, thereby improving sustainability on the farm. These pumps enhance productivity and create labour savings. Plus, healthy animals lead to fewer treatments, reducing the need



to cull or quarantine animals that can impact profitability.

Selecting the right pump for your farm

There are features and benefits to keep in mind when selecting a water-driven pump:

- **Water pressure and flow rate:** Water pressure can fluctuate throughout the day on the farm. Thus, it is best to find a WDP that uses pressure-regulation technology to help eliminate instances of 'leaning out' or over-dilution. The equipment should also operate safely in high water pressure conditions.
- **Desired injection ratio and percentage:** Medications, chemicals and vitamins require different dilution ratios. Look for pumps that can manage ratio changes to eliminate the chance of over-medicating and under-medicating.
- **Compatibility and scalability:** Make sure the pump is compatible with water treatment chemicals used on the farm, such as descalers and pH reducers. One pump installed in a central location should be able to eliminate the need for several dosing systems for each barn, and scalability should allow the pump to meet the farm's needs if expansion or downsizing occurs.
- **Simple installation and maintenance:** The simpler the installation process is, the quicker a pump will be ready

for use. A WDP should also require minimal maintenance to reduce downtime and improve productivity.

Farms may also want to consider electronic pump solutions for whole farm water treatment. Electronic solutions are ideal for scenarios when precise dispensing is required, highly aggressive chemicals like hydrogen peroxide, chlorine dioxide and sodium hypochlorite are being used and the dilution percentages of these chemicals are extremely lean.

Boosting animal health and profits

As hen health dictates egg quality, and farms are responsible for supplying meat for human consumption, these businesses have a responsibility to operate using best practices.

From monitoring feed bins and ambient conditions to achieving high water quality standards, there are numerous ways farms can set their businesses up for success. Many farms have realised benefits with water-driven pumps that treat water, de-scale water lines and deliver essential nutrients and medications to flocks.

Upholding good gut health in flocks not only improves productivity, it helps farms maintain profitability in an increasingly competitive world. ■

References are available from the author on request