健康畜禽 Healthy Livestock

PROBIOTICS USE IN LIVESTOCK

WP2 Resilience/ Probiotics /Poultry

HEALTHY LIVESTOCK

Using antimicrobials in animals contributes to the rise and spread of antimicrobial resistance. By doing so it reduces the availability of safe and effective medicines against infectious diseases for both humans and animals. HealthyLivestock is a research project aiming to find ways to reduce the use of antimicrobials in livestock by improving the health and welfare of the animals.

RESILIENCE

One way to protect animals against infections is by strengthening their resilience. More resilient animals have a stronger defence mechanism of their own. They are less susceptible to infections. The chances that they get sick and will need to be treated with antimicrobials will be less. Hence, stronger resilience leads to less antimicrobial use and by that to less antimicrobial resistance

PROBIOTICS USE IN LIVESTOCK

Probiotics have been evaluated in animal nutrition to generate immune stimulatory effects, improve the balance of beneficial gut microbiome and eliminate detrimental gut pathogens. These effects result in a range of advantages such as enhanced functioning of the gastrointestinal tract, improved immunity at the gut as well as systemic levels, and better health status. Consequently, these beneficial effects positively influence overall production performance and farm profitability.

HEALTHYLIVESTOCK ON PROBIOTICS

A research trial has been carried out by HealthyLivestock project, where 2 farms have used only probiotics, 2 farms used a cocktail of probiotics and antibiotics, 2 farms used only antibiotics, and finally, a control group of 2 farms used neither antibiotics nor probiotics. The objective of this study was to investigate how the health status of chickens can be improved by using probiotics.

RESULTS

- With the use of only probiotics the broilers reach a higher live weight at slaughter
- The mortality of the group of chickens finished with the use of only probiotics was lower
- Production costs of the groups of chickens raised with only probiotics are the lowest, which is in particular due to the low mortality rate
- Total weight gain over the experimental period was higher for chickens that were supplemented with symbiotic (probiotic/prebiotic)
- Control-fed chickens had lower immunity and increased incidence of infections showing clearly lower immune status.

WHY TO USE PROBIOTICS?

HealthyLivestock survey identified that from 200 farmers in 4 different EU countries, more than 50 % of the farmers found the innovation useful and more than 55% would likely adopt it.

The results indicate that the resilience of broiler chickens was improved by using symbiotic (probiotic/prebiotic) as supplementation to a normal diet.
Probiotics are proposed as an alternative to reduce the use of antimicrobials because of their ability to improve gut microbiome, to improved immunity, increase animal health, reduce the use of antimicrobials, and increase farm profitability.

- The results obtained show that supplementation of symbiotic products containing probiotic/prebiotic and vitamins can influence bird immunity and result in better production parameters in examined birds.
- The administration of pre, probiotics and vitamins, has similar benefits for the animals as the administration of antibiotics.
- The obtained preliminary results suggest that chickens from the groups supplemented with probiotic/prebiotic I (P) as well as III (P&A) show a higher vaccination protection index against pathogens commonly existing in poultry flocks. This is also closely correlated with a higher rate of weight gain.