Development of a microflora chip to determine microbiota changes in chickens

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A microflora chip was developed to relate microflora composition to performance of chickens. Relationships were found between microflora and performance, both in research trials and in comparisons in the field between good and less good performing flocks. Trials were performed to determine effects of raw materials and a number of feed additives on microbiota, and differences were found between raw materials and feed additives. Also, intervention studies were performed to see if a change in feed composition resulted in changes in microbiota; it appeared that changes in microbiota composition were dependent on the raw materials and additives that were changed; a difference from corn to wheat resulted in other changes in microbiota than a change from wheat to corn. The information about how microbiota can be changed by raw materials and feed additives can help to reduce the use of antibiotics in chickens.

Key Words: performance, raw materials, additives, microbiota, antibiotics