“expected” interval of urease activity values necessary in the simulation, which is shown in Table 4.

The objective of Table 4 is to demonstrate how the experimental work by Havsteen et al. (2003), that the trypsin inhibitor intake of 1957 broiler chicks was much lower than the trypsin inhibitor intake of 2001 broilers for the same age, which was set at 42 days in this simulation.

For this purpose, feed conversion ratio and weight gain data were used to calculate the average feed intake by males and females as well as the diet composition from which soybean meal was the only contributor of tryptophan.

The trypsin inhibitor intake calculations were made for three trypsin inhibitor concentrations in commercial soybean meal: 2, 4 and 6 mg/kg of soybean meal. Using the data set from Nutrianalisis in Table 2 as well as the data in Table 2, the expected range of urease activity values associated with those trypsin inhibitor concentrations were calculated.

The estimates in Table 4 indicate that a 1957 broiler chick receiving a feed containing soybean meal that could have been analyzed and found to have a urease activity value of 40.50 pH units (today, we know it corresponds to approximately 5.6-6.50 mg of trypsin inhibitor per gram of soybean meal) would not have even consumed the same amount of feed as a 2001 broiler would have consumed at the lower concentration of 2 mg/kg of soybean meal. Vliegas et al., (2008a).

In 1957, a chicken would have an intake of 0.35 mg of tryptophan inhibitors per bird from a feed containing soybean meal at the top of the range of the urease activity of the current urease activity range. However, in 2001, a broiler chicken had already consumed more than 2,000 mg of trypsin inhibitors per bird at the lowest level of the urease activity range.

So, from this, it can be concluded that the upper limit of the range of the current urease activity range was valid when it was established in the 1940s. It seems that somewhere prior to the 1990s, the upper limit of the urease activity range became invalid and, thus, is not suitable for use today, especially considering the type of broilers being used by the industry.

**In 60 seconds**

**Quality certified:** Newport Laboratories, a producer of livestock vaccines, feed, and consulting services, revealed that ISO 9001:2008 certification of its Quality Management System and 2001 certification provides assurance about a company’s ability to satisfy quality requirements while enhancing customer satisfaction. Randy Simonson, Newport general manager/operations officer, said, “ISO 9001:2008 certification demonstrates that our employees are committed to continually improving our quality products and services to meet the ever-changing demands of our customers. Our success is centered on research, innovation, customer service and marketing.” This certification validates analysts and reinforcement of the critical role we play within the marketplace.

**Biotech research:** Dow AgroSciences LLC and the Fraunhofer Institute of Biomedical Engineering (IBMT) announced a multiyear research agreement focused on new biotechnology approaches for improving crop production.

The research will be carried out at Dow AgroSciences in Indianapolis, Indiana, and at the Fraunhofer IME in Aachen and Gelsen, Germany. Financial terms of the agreement were not disclosed. The Fraunhofer IME is the largest applied research organization in Europe. The effect of trypsin inhibitors on the fistula soybean meal and subsequent effects on the nutritional value for younger broilers. Br. Poult. Sci. 48:703-712.


Parracho, C. (2007) Investigated the processing conditions of full-fat soybean and found that feeding broilers the lowest treatment containing 1 mg of trypsin inhibitors per gram resulted in the highest apparent ileal amino acid digestibility at 25 days of age. The lowest level of trypsin inhibitor intake values agreesably within the 1.50-2.35 range that was previously discussed.


**References**


Clarke, E., and J. Wiseman. 2007. The description of the "field test" data that have been verified by at least two independent research laboratories. McLaughlin et al. (1981) reported that broiler chicks raised in electrically heated battery brooder cages to 21 days of age performed significantly (P ≤ 0.5) better with a soy/bean meal diet containing 31.6% soybean meal that had a urease activity of 0.02 pH units and 1.77 mg of trypsin inhibitors per g gram of soybean meal than broilers fed the same diet formulated with soybean meal that tested 0.19 pH units and 12.12 mg of tryptain inhibitors.


