

Minerals keep chickens going

Broiler chickens fed on calcium and phosphorus from collagen develop stronger bones and their legs are less likely to give way beneath them.

While chickens in the 1950s weighed 700 grams, they now weigh over three kilos. But the growth of their bones has not kept pace with this rapid increase in weight. The result: the chickens' legs give way, and they sometimes incur injuries and fractures. 'In some countries the mortality rate is over 30 per cent,' says Bahadır Güz of Adaptation Physiology. For his PhD, he studied how you can make the chickens' leg bones stronger.

Minerals

The best way of doing so, according to Güz, is to feed broilers minerals, especially phosphorus and calcium, from biological sources. These come from collagen (bone meal) from pigs. Because they are bound in organic materials,

the chickens can absorb them better than minerals obtained from rocks. Güz found that chickens fed on minerals of biological origin grew larger and denser

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bones, and thus stronger legs. These effects were smaller in chickens fed on inorganic minerals. 'Minerals of biological origin are more expensive, but it pays off for the farmer because the chickens are healthier,' says Güz. Enriching the chicken coops with climbing frames and live insect larvae also improves the chickens' bone density because they get more exercise. But should we aim for stronger bones, or would it be better to keep smaller chickens? Güz: 'As a researcher, I would prefer the latter: I have seen these chickens and how they suffer. But that is not realistic in

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the poultry sector. Using slower-growing breeds is more realistic as a first step – chickens that grow to three kilos in 50 days instead of 40. 'Ten more days means better bone development and thus better welfare for the chicken.' ss