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The relationship between fear of humans and leg health in Norwegian broiler chicken flocks

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Abbreviated Title: Fear of humans and leg health in broilers

Summary

In the Welfare Quality® assessment protocol for broilers, the touch test is included to assess the human-animal relationship in the flock. The touch test is designed to test the animals' fear of humans, where it is expected that broilers will withdraw from the observer if they are fearful. However, many broilers close to slaughter age suffer from lameness, which may impair walking ability. The results from the touch test may thus be biased by lameness and poor leg health. As the touch test is currently being used in several countries to assess human-animal relationship in broilers, there is an urgent need to examine this potential relationship for a further validation of the test. Fear of humans was assessed in 50 randomly selected Norwegian broiler flocks, using the touch test as described in the Welfare Quality protocol for broilers. Leg health was assessed by examining the gait of 150 random birds in each of the flocks, using a six point gait score scale from 0 to 5. An ordinal regression analysis showed that flocks with increased lameness had a higher touch test score, indicating that the lame flocks were less fearful ($P < 0.01$). The results may suggest that the touch test may be confounded by impaired walking ability and therefore represents a suboptimal, if not directly misleading, method of assessing fearfulness and human-animal relationship in broilers. In conclusion, the touch test must be further validated and possibly supplemented or replaced with a fear test that is not relying on walking ability in broiler chickens.

Key words: Broiler, fear, leg health, touch test, Welfare Quality.