

## Reducing oxidative stress is key to poultry performance

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Published: 08 April 2014 09:32 AM



Scottish academic Professor Peter Surai has indicated oxidative stress is a major cause of reduced production and reproductive performance in commercial poultry systems.

Prof Surai, who is the technical director of Ayr-based feed additive company Feed-Food, said at the Informa VETME exhibition in Dubai that oxidative stress is the main molecular mechanism of various poultry stresses.

At the same time, a bird's immune and reproductive systems are most sensitive to stresses. Prof Surai said the liver is also a target for many poultry stresses. There is a clear need for a complex feed additive product supporting chicken liver functions.

Prof Surai said the most sensitive causes of stress in broiler production are chick placement, vaccinations, thinning, heat stress, mycotoxicoses, leg problems and ascites. He believed a good start to a bird's life was likely to mean a good ending.

Prof Surai said: "There are nutritional means to decrease negative consequences of stresses in poultry production. There is a range of anti-stress compounds added to the feed such as vitamin E and ascorbic acid. However, the effects are not always proven.

"There are various anti-stress premixes added to the feed but they are difficult to implement with low flexibility. Poultry producers should decrease feed consumption in stress conditions. Feed premix is not a solution to poultry stress problems."

Prof Surai believed the best strategy for fighting stresses in poultry production was to supply anti-stress compositions with drinking water and ensure a quick and effective delivery. Any product should be easy to use and have high flexibility. Stressed animals will be eating less but they are still drinking water. This would mean minimal expense with maximum efficiency.

He concluded that efficiency of vaccination depends on vaccine quality and chicken immune-competence. Vaccination is a stress for the chicken. He recommended an anti-stress composition which is able to metabolize mycotoxins and to decrease the oxidative stress. Prof Surai was formerly head of nutritional biochemistry at the Scottish Agricultural College.

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