**Could a specific new material based on curcumin be used to improve broiler performance under heat stress.**

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High level performance in modern animal farm induces also a high level of oxidative stress and inflammatory status specially in a heat stress situation. This is the main cause of drop of performance in intensive system of modern animal production.

Phode has developed a new material based on curcumin (Force 6) that can be integrated in poultry diets to provide active support to all oxidative stress and inflammation of the body and internal organs that is detrimental to growth and performance.

300 Ross chicken were divided into 2 groups of 6 pens of 25 animals. One is a negative Control the other contain the Force 6 at 50 ppm. The heat stress was simulated by a 12 hours at “high temperature” (from 3 to 6°C over the normal recommended temperature) and then 12 hours at Ross recommended temperature.

The use of the vectorized curcumin permit a significant improvement in growth performance at 35 days +2.9 % at 35 d 2.582 *vs* 2.509. The variability was also reduced and had a better homogeneity: 7.99 vs 10.27%.

Force 6 significantly improved the production of liver glutathione peroxidase 94.14 *vs* 74.73 U/mg of proteins.

Vectorized curcumin is very efficient to reduce oxidative stress and improve broilers performances