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(Article begins on next page)



Abstract N.0028

Dear Professor **Luisa Antonella Volpelli**,

here are the details of your abstract as they were saved on Mar 14, 2013.

Nutrition and feeding

NATURAL COMPLEMENTARY FEEDS IN GESTATING AND LACTATING SOWS: EFFECTS ON PERFORMANCE AND METABOLIC PROFILE

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Pregnancy and lactation cause high metabolic effort and high cellular metabolism in sows; the contemporary presence of stressors may lead to ROS (Reactive Oxygen Species) production, which may overcome the action of the physiological anti-oxidants. The consequences may be DNA, protein and PUFA oxidation, peroxides production, ROS release in blood, and finally oxidative stress. Liver function, sow immune defense and fertility, immunity transfer to piglets and their vitality may be unbalanced.

In this work, two natural complementary feeds (GOLD and GOLD EPS), aiming to reduce oxidative stress, were used at 0.3% in the diet of lactating (trial L, 83 sows in total, 3 groups: control, GOLD, GOLD EPS) and gestating-lactating (trial GL, 105 sows, 2 groups; control, GOLD) sows. GOLD contains: brewer's yeast and organic selenium from *Saccharomyces cerevisiae*; betaine, phosphatidylcholine, RRR- α -tocopherol. GOLD EPS also contains *Silybum marianum* extract. Collected data were: sows' feed intake and post-weaning performance; number of newborn and weaned piglets, mortality, individual growing; liver metabolic profile, oxidative stress indicators; blood, colostrum and milk IgG.

In trial L, higher weights were recorded for GOLD and GOLD EPS piglets (7352 and 7329 g at weaning) in comparison with control (7077 g); a trend to post-weaning fertility improvement for GOLD EPS sows were also observed (new successful farrowing: 62, 68 and 77 % for control, GOLD and GOLD EPS).

In trial GL, GOLD piglets were slightly heavier at birth and less affected by diarrhea. A positive increase of serum anti-oxidant power (OXY) was observed at half pregnancy in GOLD sows, followed by a decrease at farrowing. GOLD sows also showed a constant decrease of bilirubin. Serum IgG, after an increase at farrowing (control 14.4; GOLD 16.4 g/l), showed a decrease in GOLD sows at the end of lactation, when IgG level increased in piglets (control 4.6; GOLD 7.8 g/l): this might indicate a



higher transfer from mother to piglets.

Notwithstanding the difficulty of on-field conditions, these trials provide partially good results about the performance of sows fed the tested products.

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