

## **Effect of deoxynivalenol (DON) content of the concentrate on milk yield and milk quality**

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Thirty-two early to mid-lactation multiparous Holstein cows were used in a randomized block design for a 10 week trial at INIA La Estanzuela, Uruguay to determine the effects of deoxynivalenol (DON) and Mycosorb (modified glucomannan, Alltech Inc.) on milk yield, milk composition, somatic cell count (SCC), body weight gain (BWG), body condition scores (BCS) and hepatic enzyme activities.

Four concentrates were prepared to contain 0 (T1); 2.5 (T2); 5.0 (T3) or 5.0 ppm of DON plus 1% of Mycosorb® (T4). Cows grazed on a grass/clover pasture (estimated 10 kg dry matter intake daily) and offered 25 kg of corn silage and 6 kg of experimental concentrates per head per day. This provided 0 ppm DON, 15 ppm DON, 30 ppm DON or 30 ppm DON + 6 g Mycosorb® per cow daily. Milk yield was recorded and milk samples were taken from Monday through Friday each week throughout the trial.

Prior to imposing the experimental diets, milk yield was recorded and milk samples were collected and analyzed to determine milk composition. Blood samples were obtained to establish baseline levels of aspartate amino transferase (AST) and  $\gamma$ -glutamyl transpeptidase (GGT), and subsequently obtained at weeks 4 and 8. Weekly averages of milk and component yields, milk contents, BWG and BCS were used as repeated measures from week 2 through 10. Yield of milk, protein, lactose and non-fat solids, and contents of milk fat, protein, lactose, non-fat solids and total solids did not differ ( $P > 0.10$ ) among treatments.

Fat corrected milk yield was lower ( $P < 0.05$ ) for T3 (19.6 kg/d) compared to T1 (21.8 kg/d), T2 (22.2 kg/d) and T4 (21.6 kg/d). Milk fat content and fat yield were different ( $P < 0.05$ ) between T3 (3.30%, 0.746 kg/d) and T2 (3.72%, 0.841 kg/d). Total solid yield was lower ( $P < 0.05$ ) for T3 (2.605 kg/d) compared to T1 (2.851 kg/d), T2 (2.858 kg/d) and T4 (2.815 kg/d). SCC was higher ( $P < 0.05$ ) for T3 ( $333.1 \times 10^3$  cells/mL) compared to T1 ( $108.3 \times 10^3$  cells/mL), T2 ( $116.3 \times 10^3$  cells/mL) and T4 ( $79.2 \times 10^3$  SCC/mL).

No differences ( $P > 0.10$ ) were recorded among treatments for BWG as well as for BCS; neither were differences ( $P > 0.10$ ) recorded among treatments for AST or GGT blood levels. It was concluded that daily intakes of 30 mg of DON depressed milk fat content and fat corrected milk yield, and increased the SCC. Mycosorb supplementation corrected effects of daily intakes of 30 mg of DON by lactating dairy cows.