

Introduction

Diets containing high levels of fat and fiber, like those based on corn distillers dried grains and solubles (DDGS) are notoriously difficult to pellet. Poor pellet quality negatively impacts livestock performance

Feed phosphates contribute to maintain a clean die opening by dislodging residual feed adhering to the inner die thanks to their abrasive properties. This effect will decrease feed manufacture costs but its influence on pellet quality is uncertain.

The objective of the present study was to explore the effect of different inorganic feed phosphates on feed manufacture costs and pellet quality

Methods

Corn and soybean meal based diets with 6% DDGS were formulated to contain 0.36% non-phytate phosphorus and 1.6:1 Ca:P ratio. The following experimental diets were analysed:



Diets were pelleted at the West Virginia University pilot feed mill, using a 40-horsepower California pellet mill.

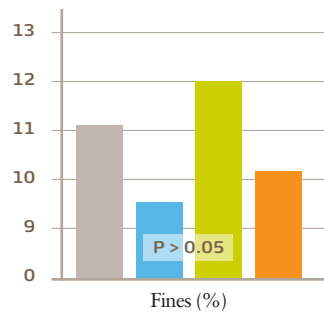
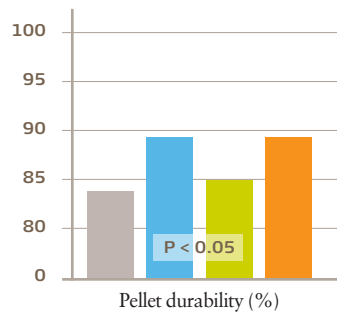
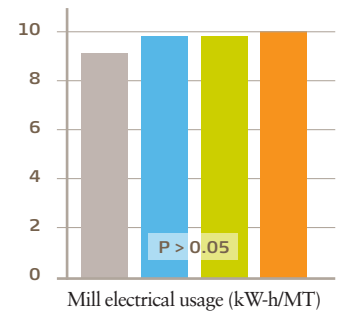
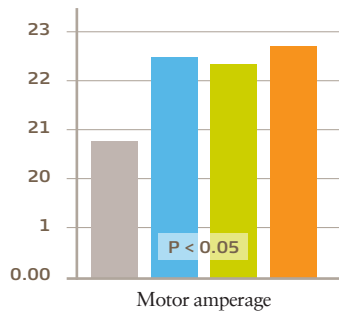
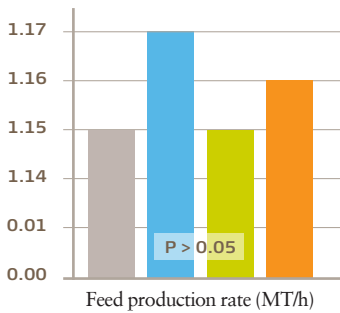
The following parameters were analyzed in each batch

- Feed production rate
- Electrical energy usage
- Motor amperage
- Pellet durability (New Holmen pellet tester, NHPT)
- Fines percentage (no. 6 Tyler Sieve)

3 Replicates

Data was analyzed by the ANOVA procedure followed by a Fisher LSD post-hoc test, using the day of feed manufacture as experimental unit.

Results



Conclusions

Bolifor® MCP usage maintains similar motor amperage to DCP and MDCP. DFP lowers motor amperage.

Feed phosphates did not significantly affect manufacturing costs (electrical usage).

Bolifor® MCP and DCP determined the best pellet quality compared to MDCP and DFP.

For any inquiries please contact us at:

www.yara.com/animal-nutrition

animal.nutrition@yara.com

