

# improve pig growth

In experiment 4, 96 pigs weaned at an average age of 22.1 days, were allotted into six bodyweight groups of 16 pigs per group. Within each group, the pigs were allotted to two treatments — control and 0.5% HS1 — with eight pigs per pen.

Pigs were fed the phase 1, 2 and 3 diets for 7, 14 and 31 days, respectively. On day 8, eight pigs in each pen group were moved into a ventilated environmental chamber for 48 hours (24 hours acclimation followed by 24 hours of data collection) for measurement of aerial ammonia and hydrogen sulfide.

The results showed:

- The average ammonia concentration from the HS1 group was 11.65 parts per million and tended to be lower than that of the control group (14.22 ppm).
- Hydrogen sulfide was not detectable during the collection period.
- The aerial ammonia concentration followed a diurnal cycle corresponding with pig activity.

Experiment 5 used 96 pigs that were weaned at an average age of 20.9 days and allotted into four bodyweight groups of 24 pigs per group. Within each group, pigs were allotted to three treatments: control, 0.5% HS3 and 0.5% HS4.

Each treatment had four pens with eight pigs per pen. All other procedures were the same as in experiment 4.

The results showed:

- The average ammonia concentration from the HS4 group was 13.93 ppm and tended to be lower than that from the control group (16.70 ppm). There were no significant differences between the control group (16.70 ppm) and the HS3 group (16.17 ppm).
- Hydrogen sulfide was not detectable during the collection period.
- The rate of ammonia production from the HS3 group was less than that from the control group. The rates of ammonia production from the control and HS4 groups were similar.

The authors suggested that the

different levels of fulvic acid and humic acid in the humic substances caused the different pig responses. The humic substances used in this study reduced ammonia emissions from pig manure 3-18%.

## The Bottom Line

This study showed that supplementing swine diets with certain humic substances may have possibilities to improve growth performance and reduce ammonia emission. However, more research is needed to deter-

mine the mechanism of action and to further characterize the various humic substances.

## Reference

J. Anim. Sci. Vol. 84, No. 9.

## 5. Growth performance from experiment 3

Item	-----Control-----		-----0.5% HS1-----		-----0.5% HS2-----	
	Barrow	Gilt	Barrow	Gilt	Barrow	Gilt
Initial bodyweight, kg	7.25	7.25	7.24	7.25	7.25	7.26
ADG, kg per day	0.731	0.685	0.750	0.718	0.634	0.613
ADFI, kg per day	1.776	1.637	1.832	1.835	1.679	1.657
Gain:feed	0.411	0.418	0.409	0.391	0.378	0.370
Mortality, %	6.25	12.5	9.38	9.38	0.00	9.38
Pigs more than 110 kg at slaughter, %	76		91		64	

ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS  
ILEITIS

## Make it disappear in as little as 10 days.

Now you can give your whole herd the kind of ileitis protection you truly want, with Denagard® (tiamulin) 10. But you'll cut your input costs even more, because Denagard 10 requires smaller dosage and less medication time than other ileitis treatments.

- New lower price
- Smaller dosage and less medication time means lower input cost
- The only feed medication for ileitis not used in human medicine
- Can be fed in combination with CTC

No other feed medication works faster against ileitis. And now no other feed medication is as cost-effective. Get the #1 solution to your #1 enteric disease concern. Get Denagard 10.



© 2006 Novartis Animal Health US, Inc. Denagard is a registered trademark of Novartis AG. [www.livestock.novartis.com](http://www.livestock.novartis.com) (800) 843-3386 45193288, JAN06

NOVARTIS

## In 60 seconds

**Broiler enzyme:** Broiler producers in the European Union can now benefit from Danisco Animal Nutrition's novel phytase feed enzyme Phyzyme XP following the European Commission's decision to grant permanent authorization for the use of Phyzyme XP 5000 L in broiler feeds.

**Management resource:** Monsanto Dairy has launched [www.Make10.net](http://www.Make10.net) to help dairy producers increase productivity. Monsanto noted that by adding Posilac to a dairy management program, dairy producers can increase milk production by an average of 10 lb. per supplemented cow per day. The web site also has information on subjects ranging from cow comfort to reproductive efficiency.

**Mycotoxin book:** Wageningen Academic Publishers has released *Mycotoxins & Phycotoxins: Advances in Determination, Toxicology & Exposure Management*, edited by Henry Njapau, Socrates Trujillo, Hans van Egmond and Douglas Park. The 356-page hardbound book contains selected peer-reviewed papers of the International Union of Pure & Applied Chemistry symposium on mycotoxins and phycotoxins. Additional information is available at [www.wageningenacademic.com/phyco toxins](http://www.wageningenacademic.com/phyco toxins).