

Dr. Jodi Sterle
Assistant Professor and State Extension Swine Specialist
Texas A&M University

On December 22, 1999, the Food and Drug Administration (FDA) approved ractopamine for finishing swine. Elanco Animal Health, a division of Eli Lilly and Company, has come out with a ractopamine product called Paylean™. There is much “barn talk” about its effects, uses and misuses, and this article will address this issue.

It has been known for years that ractopamine enhances growth in meat animals by repartitioning nutrients. This means that the nutrients that the animal consumes in its feed are shifted away from being stored as fat and are instead used in lean tissue production. This shift occurs as the animal reaches the top of its growth curve and lean tissue production drops off and fat deposition increases. Fat levels also appear to decrease, due to an increase in lypolysis (fat breakdown).

Effects

If you have raised pigs or steers or lambs for very long, you have already figured out that there is no magic pill that will make an average animal into an ideal animal. However, you also know that proper management, nutrition and housing can greatly affect your animals' performance. Paylean™ should only be viewed as a management tool to enhance the genetic potential of your animal. It is not a magic pill and cannot substitute for genetics or proper management.

According to Elanco Animal Health literature, Paylean™ fed at 18 grams per ton improved feed efficiency by 13%, increased average daily gain by 10%, reduced average daily feed intake by 6% and increased lean gain by 25-37% in research trials. However, increased protein, specifically lysine and other amino acids are needed in the diet to enhance lean tissue growth. A diet of at least 16% CP is recommended. Nutritional requirements are greater with the use of ractopamine, but since many show pig diets are excessive in protein and specifically lysine, this is often not a problem. There does not seem to be any effect on muscle quality at the given time. Since show pigs are already extreme in muscling and leanness (therefore possibly closer to reaching their genetic potential), I would not necessarily expect to see such large increases in these production traits, although some improvement is certainly expected.

One of the most important things to consider when using Paylean™ is that *the response is not constant over time*. The largest response will be seen in the first four weeks of feeding, during the repartitioning phase. Therefore, *you do not need to feed it long to get a response*. Feeding it longer than recommended (during the last 7 weeks of the finishing phase) is illegal and will *not* yield an additive response. It is important to remember that Paylean™ increases growth (both in average daily gain and feed efficiency) and therefore your pigs will grow differently than they would normally. Closely monitoring each individual pig's growth and keeping track of the days to the show will prevent your animal from being over its optimal weight. Carefully plan the use of Paylean™ so that you are within the law, keep the cost to a minimum and maximize results. Abuse of this product could have serious food safety concerns. It is only labeled for swine at this time, *not* steers or lambs.

Label Directions

Paylean™ is approved at 18 grams per ton from 150 to 240 pounds (pen average). This is considered the last seven weeks of the finishing period. There is no withdrawal time when using Paylean™. Upon cessation of using Paylean™, a decrease in performance (back to the performance level prior to using Paylean™) occurs over a period of time (approximately 5-6 weeks). As with any drug, care should be taken to follow the label instructions completely. Increasing the dosage (feeding more than 18 g/T, which is equal to 20 ppm) has shown absolutely no improvement over 18 g/T in either on-farm performance or carcass parameters. Therefore, it appears that a point of diminishing returns is reached when exceeding the dosage level. *Increasing the dosage (above 18 g/T) or feeding longer is not recommended and is, in fact, illegal.*

Questions? Contact Dr. Jodi Sterle at (979) 845-2714 or j-sterle@tamu.edu. A fact sheet is also available from Elanco Animal Health. Their phone number for questions on Paylean™ is 1-800-428-4441.