

Lunar Influence on Post-Castration Performance of Baby Piglets

Jacob R. Lange¹

Randy M. Harp^{*,1}

Joe M. Cadle¹

Rudy S. Tarpley¹

Chris L. Higgins¹

Barry D. Lambert^{1, 2}

¹Departments of Animal Sciences and Agricultural and Consumer Sciences,
Tarleton State University, Stephenville, TX 76402

²Texas AgriLife Research and Extension Center, 1229 N. U.S. Hwy. 281,
Stephenville, TX 76401

ABSTRACT

Three farrowing studies were conducted at Tarleton State University focusing on post-castration performance of piglets. In all studies, half of the boar piglets were castrated with lunar influence when the *Farmer's Almanac* recommended and the remaining half when castration was not suggested. There was no difference ($P > 0.05$) in growth in the days following castration up to weaning in all three studies ($n = 115$). The results for 30-day nursery gains were inconclusive. There was a difference in the 30 days of nursery growth ($P < 0.05$) favoring castration against the *Farmer's Almanac* recommendations in the first study, while Study 2 favored castration with lunar influence during the 30 days of nursery growth ($P < 0.05$). There was no difference in treatments in Study 3. Piglets castrated with lunar influence maintained a body temperature more close to the ideal level in the first two studies while there was no difference in Study 3. Study 1 found no difference in healing score while Studies 2 and 3 favored castration with lunar influence.

KEY WORDS: piglets, castration, lunar influence, performance, healing

INTRODUCTION

In any animal agricultural enterprise, castration of males is likely to occur. The purpose of castration is to control unwanted reproduction and to control sexual behavior of males. Intact males often become aggressive and dangerous to their handlers and other animals, and tend to damage property and facilities. Some producers believe waiting to castrate their animals can enhance a faster rate of gain and increase feed efficiency. Conversely, other producers castrate the males at an earlier age, which is less stressful on the animal and handlers. Still, some producers strategically castrate their animals based on recommendations from the *Farmer's Almanac*. This concept is based on the theory that the position of the moon affects blood flow and ultimately the stress level on the animal.

* Corresponding author: harp@tarleton.edu

In the swine industry, the ideal time for castration to occur is debatable. Producers either castrate when time permits and labor resources are available, or they strategically plan when to castrate. In this case, the size of the pig at castration and the time for the process to occur are planned. One concept that has been passed is the theory of castrating when the *Farmer's Almanac* suggests. Prior research indicates that there are no differences in growth rates of piglets castrated while still nursing on the sow until weaning (Kielly et al. 1999). Yet, some pork producers continue to plan castration for their piglets when the *Farmer's Almanac* recommends.

Prior to castrating, some swine producers will review the *Farmer's Almanac* or Zodiac signs while others will not check this information and simply castrate their pigs. Stallings and Stallings (2010) wrote that "you should only castrate when the moon signs were in the 'thighs' of Sagittarius and going down." This is believed to trigger less bleeding because the signs are away from the heart and not moving in its direction. Under this assumption, if the signs were at Leo, or in the heart, the animal would bleed more profusely. Stallings' research was conducted in horses but the signs and bleeding are hypothesized to be influenced in all animals. It is suggested that the best time for castration is when the calendar shows Sagittarius (thighs), Capricorn (knee), Aquarius (legs), and Pisces (feet) in that order, respectively. Conversely, it is not suggested to castrate while the signs are Leo (heart) and when they are in the Pisces (feet) and going up. Days the Signs of the Zodiac are Scorpio (secrets) should also be avoided as it is associated with the scrotal region. Therefore, the objective of this project is to determine the effects post-castration performance as a result of Lunar influence (*Farmer's Almanac*). This project will determine if lunar castration results in improved growth and healing. A further determination will also be made to identify if castration with the *Farmer's Almanac* results in a lower body temperature because of less inflammation.

MATERIALS AND METHODS

One-hundred-and-fourteen male piglets were observed to determine if there was an effect on growth and healing based on the time of castration according to the lunar system. Crossbred swine were utilized in which the representation was of Hampshire, Yorkshire, Duroc, and Spotted Poland China influence. All research was conducted in a climate controlled farrowing house at the Swine Center at Tarleton State University in Stephenville, Texas. Farrowing crates within the house were 61 cm (2 ft.) by 213.4 cm (7 ft.) with an additional 61 cm on both sides for the piglets to escape the sow. Temperature was regulated to remain at a range of 16-27 °C for the sows. In addition, there was a heat lamp provided in each pen for the piglets to stay warm at approximately 32 °C. These practices were suggested by the National Pork Producers Council (1996). The heat lamp was elevated as the piglets grew. It was model e125012s120v 250w from Threede Lighting Technologies Inc. The heat lamp was hung so that the bottom of the heat radiation would meet at the top of the piglets' spines to maintain a temperature of 32 °C. The experiment was performed from September 2011 to September 2012 and included three separate farrowings and castrations. The first farrowing study occurred from September 2011 to October 2011 with an average temperature of 20 °C. The second farrowing study occurred from December 2011 to January 2012 when the average ambient temperature was 4.5 °C. The third farrowing study was observed in July-September 2012 with an average temperature of 30 °C (Geiger and Duncan 2012) even though sows and piglets were confined to the controlled temperature housing.

Immediately after parturition, each piglet within the litter was weighed for birth weight and identified. Piglets were then given 0.7 mL of Iron (200 mg/mL), 0.35 mL of Penicillin (300,000 IU/mL), and 0.4 mL of Draxxin (200 mg/mL) along with .25 mL of Exceed (Pfizer NY, NY). Litters were standardized with gilt piglets being moved from sow to sow so that each litter possessed similar numbers of piglets. At one week of age, piglets were given a 1 mL vaccination to protect against *Bordetella*, *Pasteurella*, and *Erysipelas* (BPE) as well as 2 mL of RespiSure (Pfizer NY, NY) to combat *Mycoplasma Pneumonia*. At 10 days of age, each piglet was given another vaccination of Iron, Penicillin, Draxxin, and Exceed. At 14 days of age, creep feeding was initiated (Table 1). Creep feed was monitored daily and fed ad libitum. After 21 days of age, 1 mL of BPE was given as a booster and 2 mL of the first Circovirus vaccine was administered.

Table 1. ACCO Showmaster Starter (Bannec) medicated with carbadox and pyrantel tartrate.

Item	Guaranteed Analysis
Crude Protein	23.00%
Lysine	1.61%
Crude Fat	5.00%
Crude Fiber	3.50%
Calcium	1.29%
Phosphorus	0.70%
Salt	1.00%
Sodium	0.60%
Selenium	0.3 ppm
Zinc	3,000 ppm
Chromium	200 ppb

Weight was obtained by utilizing a Fairbanks 1,100 scale. Rectal temperature was obtained with a ReliOn 9 Second Flex thermometer. Healing scores (one to six) were assigned independently by a three-person panel with the average of the panel being documented. In each farrowing study, the piglets were weighed the day prior to the first castration and randomly grouped into two categories. Each piglet's category was represented by a coin toss with heads being Treatment 1 and tails representing Treatment 2. Previously, the coin was flipped 20 times to insure randomization with heads occurring 11 times. The two categories represented those castrated when the Lunar signs suggested castration (Treatment 1) and those piglets castrated when the signs did not suggest castration (Treatment 2). Each litter was divided equally based on weight the day prior to the first castration in each farrowing study. Piglets were then randomly divided into each treatment group equally. There was no difference in weight ($P > 0.05$) between the two groups at castration.

In each farrowing study, the piglets were placed in a cart with solid flooring, and then moved to the scale area. Once the scale was tared to zero, a piglet was placed in the clean plastic container. Once the weight was recorded, the thermometer was inserted rectally. After approximately nine seconds for the thermometer reading, the temperature

was obtained and recorded. Furthermore, the incision was examined by the three-person trained panel for the purpose of assessing a healing score. The healing score was documented and the piglet was returned to the cart. The scale and plastic container was cleaned and tared for the next piglet to be weighed. Once the data for all of the male piglets in each litter were documented, all piglets were then returned to their respective sow.

At 24 to 28 days of age, the piglets were weaned from the sow and moved into the nursery in an “all in, all out” management system. Litters were kept together in nursery pens measuring 213 cm by 155 cm that were elevated 29 cm off the ground. All piglets were fed a commercial starter ration ad libitum. The nursery room was also climate controlled to remain at 30 °C. After 21 days in the nursery, the second Circovirus vaccine was administered (2 mL intramuscularly). After 30 days in the nursery, the piglets were weighed and then moved to the finishing floor. The data were obtained and compared for statistical analysis were as follows: body weight: one, two, three, six, eight, nine, and 10 days following the first group castration, adjusted 21-day weaning weight and 30-day end of nursery weight. Weights were obtained on the first three days post-castration to show differences in gains between treatments. Day six weight was obtained to show no difference in treatments prior to the second group’s castration on day seven. Weights on day eight, nine, and 10 were collected to compare gains between treatments following the second castration using day six weight as a starter to determine gains. Also, the body temperature was obtained the first two days post-castration and healing scores: one, two, three, and six days post-castration were recorded. Carroll et al. (2006) reported the effects of castration were most evident in the first 48 hours post-castration so body temperatures were obtained during those hours. Healing scores were obtained the first three days post-castration to examine the effect of lunar influence. Most piglets were not completely healed in the first three days so an examination on the sixth day was utilized to draw a healing score over a longer time period (Gleason 2012).

Castration Protocol (Farrowing Study I). Following birth, piglets were given six days to establish their natural order on the mammary system and then weighed on day six. The first farrowing study consisted of 27 piglets in Treatment 1 and 28 piglets in Treatment 2. Castration was performed on day seven for Treatment 2 and day 14 for the Treatment 1 in accordance with the *Farmer’s Almanac* 2011 (Geiger and Duncan 2010). Prior to castration of each piglet, they were sprayed with a commercial anti-septic (70% isopropyl alcohol) directly on the site of incision. Each piglet was castrated with a Swann-Morton size 12 scalpel utilizing a handheld cradle method of restraint (Quiverfull 2008). This is a widely accepted method within the swine industry. A new sterile scalpel was used on each piglet. The technician and handler wore and discarded sterile plastic gloves so that new gloves were used on every piglet. The incision was made 3 to 5 cm ventral to the anus in the lower scrotal region. The castration occurred using the National Pork Producers Council’s (1996) approved method of pulling the testicle free from the spermatic cord with the technician utilizing a sterile tissue to grasp the testicle. The wound was left open for proper drainage and any spermatic cord that did not separate freely was trimmed. This is a normal practice in the swine industry. The same castration techniques were utilized on Treatment 1 group of the boar piglets on the fourteenth day of life when the *Farmer’s Almanac* suggested castration.

Castration Protocol (Farrowing Study II). In the second farrowing study, each treatment group was represented by 15 piglets. Treatment 2 piglets were castrated at 14 days of life and the subsequent castration for Treatment 1 piglets occurred at 21 days of life, when the lunar signs changed and suggested castration for the Treatment 1 group. The same techniques that were utilized in the first farrowing study were also used in the second farrowing study.

Castration Protocol (Farrowing Study III). In the third farrowing study, the Treatment 1 group consisted of 14 piglets and was castrated at 12 days of life when the lunar signs were favorable for castration (Geiger and Duncan 2011). The Treatment 2 group which was comprised of 15 piglets was castrated at 19 days of life when the lunar signs changed and did not suggest castration. The castration techniques that were utilized in the previous farrowing studies were used in this farrowing study.

Weighing Protocol. Again, all piglets were weighed the day prior to the first castration. On the first day post-castration, all barrows and intact boar piglets representing both treatment groups were weighed with subsequent weights being obtained on the second, third, and sixth day. Following the subsequent castration on day seven for the remaining treatment group, both of the treatment groups were weighed on day eight, nine, and 10 based on the first treatment group castration day. Also after weaning, all piglets were weighed at day one in the nursery and after 30 days in the nursery to obtain the effects on nursery performance. In addition, an adjusted 21-day weaning weight was calculated from a weaning weight based on the day weaned.

Temperature Protocol. Prior to the piglets being carted from the farrowing crate, the thermometer was calibrated each day. This was achieved by filling a 250 mL beaker with water and ice. The mixture was then stirred for two minutes and covered with a piece of cardboard. After three minutes, the thermometer was inserted through the cardboard with the majority of the stem immersed in the ice bath without touching any part of the beaker. If the thermometer did not read 0 °C, it was not used. These methods for calibrating a thermometer are standard procedures suggested by the USDA FSIS (1995).

Once the weight was documented, while the piglet was still in the plastic container, the thermometer was inserted rectally by holding the piglet by the tail with one hand and inserting the thermometer with the other. The thermometer was left in the rectum until the “beep” signal from the thermometer sounded (approximately nine seconds). Rectal temperatures were obtained on the first and second day post-castration.

Healing Score Protocol. On the first day post-castration, all piglets that were castrated on the previous day were examined and given a healing score by three members of an expert panel. The scores had a range of one to six. Piglets that received a six possessed an open wound that was inflamed and pustular. For a piglet to receive a healing score of five, it possessed an open wound with no inflammation. A score of four was given to piglets that had a wound in which a scab began to crust over with a red ring around the incision with inflammation. A healing score of three was set for individuals that had a scab that was beginning to crust over with a light pink ring around the incision. Piglets that obtained a grade of two had a small scab with a wound that was almost healed. A healing score of one was considered to have a wound that was completely healed. Panel members independently scored each piglet and subsequently an average for each piglet

was calculated. Subsequent evaluations occurred on days two, three, and six on the piglets that were castrated in the initial castration. The second group castrated was examined for healing score on days eight, nine, 10, and 13 from the initial castration. Therefore, the data represented for healing scores was one, two, three, and six days post-castration because the second castration scores that were taken on days: eight, nine, 10, and 13 were the first three days post-castration and the sixth day after that treatment's castration. Therefore, this derived data for both groups to be analyzed was on days one, two, three, and six, following their individual castrations. The panel evaluated the wound based on the previously described scoring system which was approved by a licensed veterinarian (Gleason 2012) and determined the given value. Previously utilized healing scoring systems could not be found in the literature.

Statistical Analysis. In order to obtain results that were valid, repeatable, accurate, and were true representatives of the population, statistical analysis was conducted using SPSS V 19 (SPSS, Illinois 60611, USA 2009). ANCOVA univariate analysis was conducted on weight gains for days one through 10 post-castration with weight gain being the dependent variable, treatment as a fixed factor, and day as a covariate. For 21-day weaning weight and weight gains in the nursery, a *t*-test was utilized. For temperature results, the ANCOVA univariate analysis was applied with temperature being the dependent variable, treatment as the fixed factor, and day as a covariate. Healing score was analyzed with ANCOVA univariate analysis because the panel gave an average so the data was continuous. Healing score was the dependent variable, treatment as a fixed factor and day as a covariate. Results were considered significant if $P < 0.05$.

RESULTS AND DISCUSSION

Growth. After analysis, there were no differences between treatments for piglets from castration to weaning in all studies ($P > 0.05$). This was in agreement with Hay et al. (2003) and Carroll et al. (2006) which found castration to cause no reduction in growth for the first 48 hours post-castration. There were no differences between treatment groups' 21-day adjusted weaning weight for all studies ($P > 0.05$). This was in agreement with Kielly et al. (1999) as neither treatment group possessed a statistical difference from birth until weaning.

However, there was a significance ($P < 0.05$) shown in Table 2 for 30-Day Nursery Weight. Results were inconclusive where data suggested to castrate boars when the *Farmer's Almanac* does not suggest based on lunar influence in post-weaning growth for one study while data suggested to castrate with lunar influence in another study. There was no difference between treatment groups ($P > 0.05$) in Study 3.

The Treatment 1 group posted a 30-day nursery weight gain of 8.56 kg while the Treatment 2 group was heavier at 9.79 kg. Yet, the second study shows differing results following 30 days post-weaning. Piglets that were castrated based on when the *Farmer's Almanac* suggested posted 7.71 kg of gain compared to the Treatment 2 group at 6.07 kg ($P < 0.05$). Conversely, the mean values of weight gain following 30 days in the nursery, shown in Table 2, were not similar to either previous study.

Table 2. Mean Values for 30-Day Weight Gain for Piglets Castrated Based on Lunar Influence.

	Treatment 1		Treatment 2	
	n-value	Weight Gain, kg	n-value	Weight Gain, kg
Study 1	28	8.56 ^a	27	9.79 ^b
Study 2	15	7.71 ^a	15	6.07 ^b
Study 3	14	11.90 ^a	15	11.00 ^a

Means within a row with different superscripts differ $P < 0.05$

Body Temperature. Figure 1 depicts the mean values of temperatures for the piglets in the first farrowing study. At day two post-castration, there was a significance between the treatment groups ($P < 0.05$). The Treatment 1 group maintained a body temperature more close to the normal level of 39 °C. This is the normal body temperature and is in agreement with other researchers (Lammers et al. 2007; Mount 1959). The Treatment 2 group possessed a lower body temperature on both days with the second day post-castration displaying a reduction in temperature, yet in all situations piglets did not require medical attention according to a consulting veterinarian (Stevenson 2012).

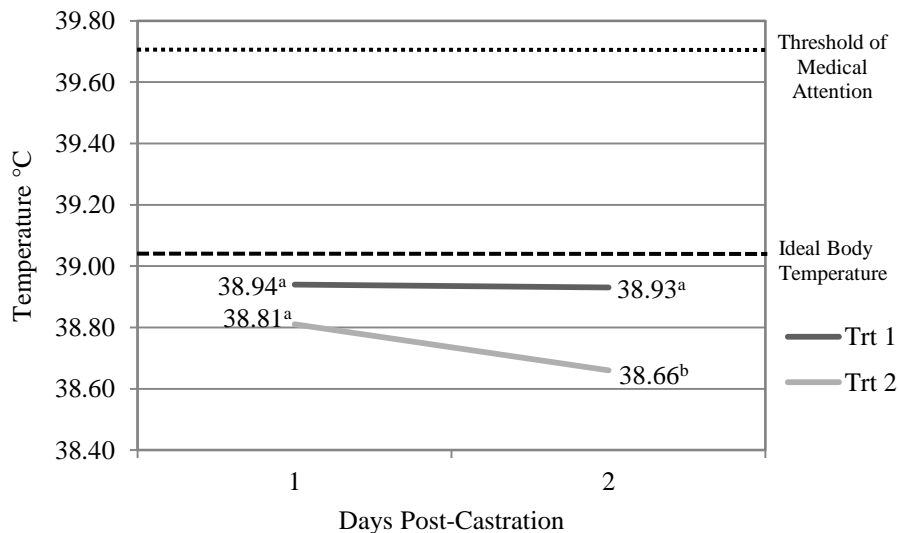


Figure 1. Mean Values for Body Temperature for Piglets Castrated Based on Lunar Influence (Study 1) Means within a day with different superscripts differ $P < 0.05$.

Figure 2 shows the mean values of body temperatures for the piglets in the second farrowing study. There was a significance between the treatment groups ($P < 0.05$) and a treatment by day significance ($P < 0.05$) at day one. Treatment 1 group possessed a body temperature slightly lower than the ideal body temperature on the first day while the Treatment 2 was slightly elevated. Furthermore, Treatment 1 was significantly lower in body temperature yet neither was at a level that required medical

attention. Yet, on the second day post-castration both groups were close to the ideal body temperature.

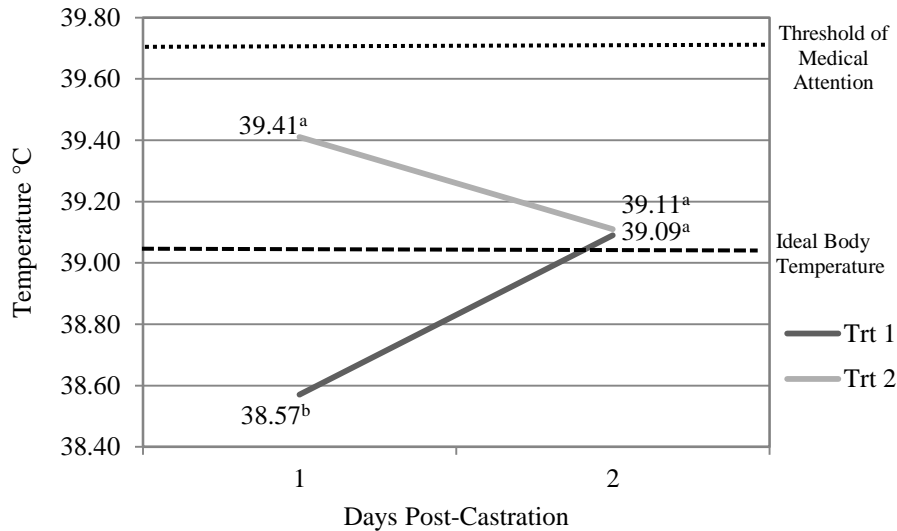


Figure 2. Mean Values for Body Temperature for Piglets Castrated Based on Lunar Influence Study 2) Means within a day with different superscripts differ ($P < 0.05$).

Figure 3 depicts the mean values of temperatures for the third farrowing study. There was no significance between the treatment groups ($P > 0.05$). On both days, the treatment groups were very close to the normal body temperature of 39° C and were not statistically different ($P > 0.05$).

Healing Score. Figure 4 shows the mean values of healing scores for the piglets castrated by lunar influence in the first farrowing study. There was no significance between treatment groups ($P > 0.05$) but there was a day significance ($P < 0.05$). Although there were no differences between the treatment groups on any day, both groups were significantly lower as each day passed to the next. This was reflected by the natural healing process.

Figure 5 depicts the mean values of healing scores for the piglets castrated by lunar influence in the second farrowing study. Treatment 1's mean value was considerably lower the first day post-castration ($P < 0.05$). However, treatment groups were similar in the remaining days for healing scores with inconsistency between the treatment groups for various days.

Figure 6 shows the mean values of healing scores for the piglets castrated by lunar influence in the third farrowing study. There was a treatment by day effect on healing score ($P < 0.05$) with the treatment significance being ($P < 0.05$). Treatment 1 was consistently lower than the Treatment 2 group for days one, two, and six. However at six days post-castration, Treatment 2 groups mean value remained the same (2.14) as the day three healing score and did not lower, while the Treatment 1 group healed and possessed a lower mean value (1.27).

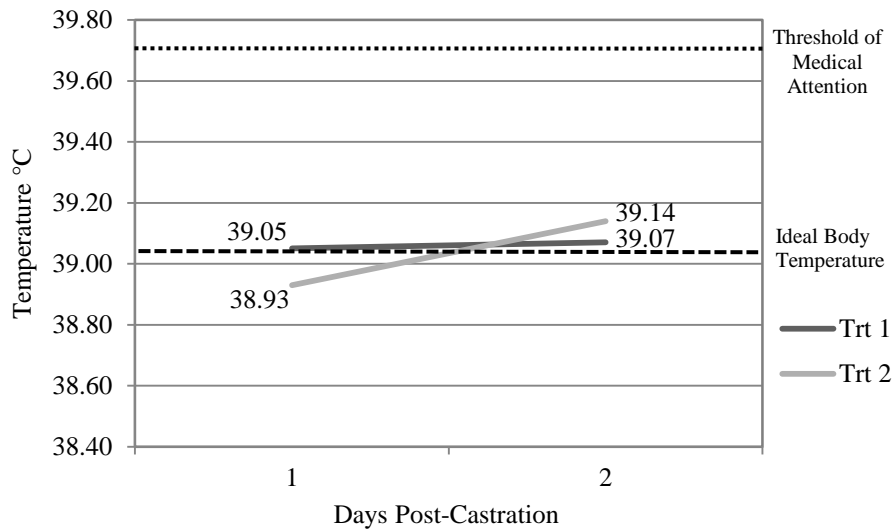


Figure 3. Mean Values for Body Temperature for Piglets Castrated Based on Lunar Influence (Study 3).

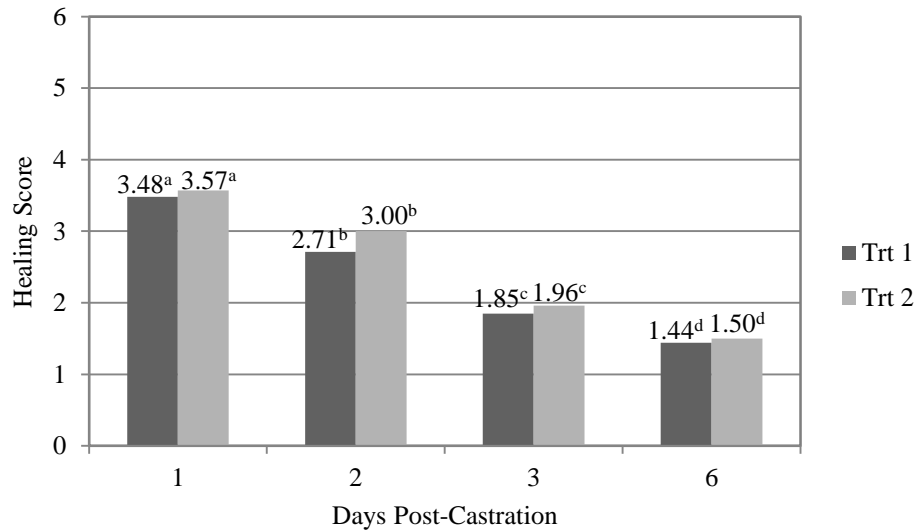


Figure 4. Mean Values of Healing Score for Piglets Castrated Based on Lunar Influence (Study 1).

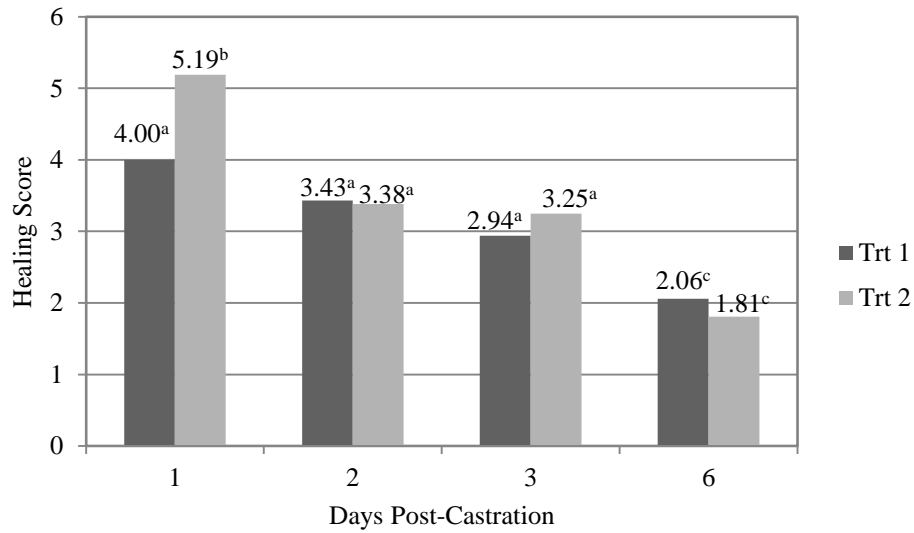


Figure 5. Mean Values of Healing Score for Piglets Castrated Based on Lunar Influence (Study 2). Means within a day with different superscripts differ ($P < 0.05$).

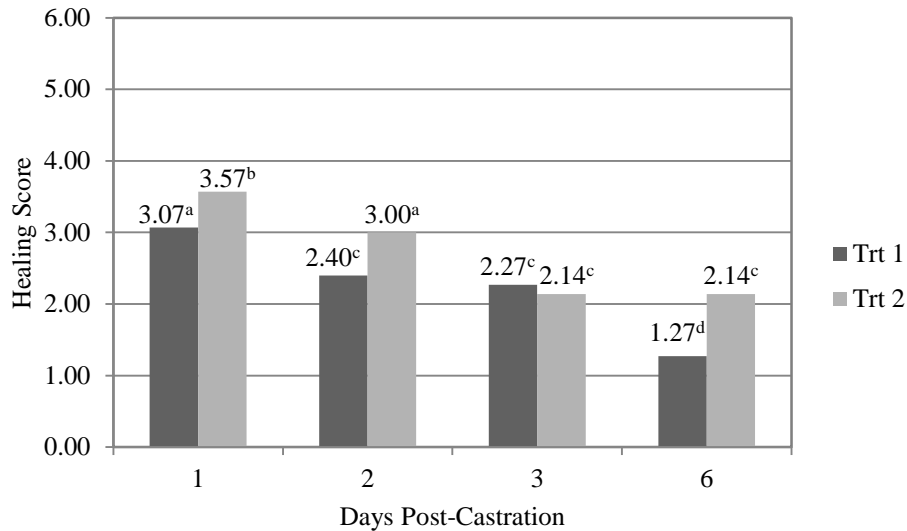


Figure 6. Mean Values of Healing Score for Piglets Castrated Based on Lunar Influence (Study 3). Means within a day with different superscripts differ ($P < 0.05$).

CONCLUSION

The hypothesis stated there will be no difference in growth of piglets castrated when the *Farmer's Almanac* suggests compared to those that were castrated against the *Farmer's Almanac* recommendations. This hypothesis failed to be rejected. There was no

statistical evidence in any replication of the piglets' growth rate for differences compared on the first 10 days post-castration and at weaning. However, after 30 days in the nursery, all three studies generated conflicting results. Therefore, more research should be conducted to determine if a relationship may exist during the nursery growth period.

The hypothesis that stated there will be no difference in body temperature of those piglets castrated when the *Farmer's Almanac* suggests castration compared to those castrated when the *Farmer's Almanac* does not advocate castration. Also, this hypothesis failed to be rejected. Although there was noted a significance in the first two replications, the temperatures were still close to the normal body temperature. Therefore, none of the temperatures required medical attention. In the third farrowing study, there were no differences ($P > 0.05$).

The hypothesis that stated there will be no difference in the length of time required for the incision to heal in those piglets that were castrated with the recommendations of the *Farmer's Almanac* versus those that were castrated when the *Farmer's Almanac* did not recommend castration. This hypothesis was rejected. The first study did not find a significance between treatments ($P > 0.05$). Yet, in studies two and three, evidence showed that piglets that were castrated with lunar influence began to heal earlier than those piglets that were not and the mean value was lower on the first day post-castration. In the first two studies, the piglets that were castrated with lunar influence were older and were castrated a week later in life but still began to heal at an earlier day than their littermate comparisons. In the second farrowing study, the first day post-castration there was a difference between treatment groups ($P < 0.05$) favoring castration with lunar influence. The third farrowing study was conducted with males that were castrated with lunar influence at 12 days of age while their counterparts were castrated without lunar influence at 19 days of age. There was a significance ($P < 0.05$) favoring castration when the *Farmer's Almanac* suggests based on lunar influence. The major difference between treatment groups occurred in healing from days three to six.

Recommendations to continue this study would be to determine if lunar influence has an effect on nursery performance. Another recommendation is to perform this study on pigs that are larger and out of the nursery to determine if lunar influence has a greater effect on growth as the pig increases in size. Along with this, the rate of healing might increase with lunar influence as the pigs increase in size because as the piglet grows the stress from castration will increase as body size increases (Miller and Ingram 1991). The final recommendation is to perform a similar study on another species.

REFERENCES

- Carroll JA, Berg EL, Strauch TA, Roberts MP, Kattesh HG. 2006. Hormonal profiles, behavioral responses, and short-term growth performance after castration of pigs at three, six, nine, or twelve days of age. *J. Anim. Sci.* 84:1271-1278.
- Geiger P, Duncan S. 2010. Best Days in 2011. Page 90-91 in *Farmers' Almanac 2011*. Almanac Pub. Co., Lewiston, Maine.
- Geiger P, Duncan S. 2011. BEST DAYS IN 2012. Page 84-85 in *FARMERS' ALMANAC 2012*. Almanac Pub. Co., Lewiston, Maine.
- Geiger P, Duncan S. Weather History for Stephenville, TX. Retrieved Sept. 14, 2012 from <http://www.almanac.com/weather/history/zipcode/76401/2012-09-14>.
- Gleason J. DVM. Personal Interview. "Swine castration techniques and healing" July 7, 2012, San Angelo, Texas.

- Hay M, Vulin A, Génin S, Sales P, Prunier A. 2003. Assessment of pain induced by castration in piglets: behavioral and physiological responses over the subsequent 5 days. *Appl. Anim. Behav.* 82:201-218.
- Kielly J, Dewey CE, Cochran M. 1999. Castration at 3 days of age temporarily slows growth of pigs. Retrieved Apr. 16, 2012 from <http://www.assp.or/shap/issues/v7n4/v7n4p151.html>.
- Lammers PJ, Stender DR, Honeyman MS. 2007. Environmental Needs of the Pig. Retrieved Sept. 20, 2011 from <http://www.ipic.iastate.edu/publications/210.EnvironmentalPigNeeds.pdf>.
- Miller RF, Ingram R. 1991. Swine Care Practices: Care and Management. Retrieved Sept. 20, 2011 from http://www.vetmed.ucdavis.edu/vetext/INF-SW_CarePrax.html.
- Mount LE. 1959. The metabolic rate of the newborn pig in relation to the environmental temperature and to age. *J. Physiol.* 147:333.
- National Pork Producers' Council. 1996. Page 7 in *Swine Care Handbook*. Des Moines, Iowa.
- Quiverfull J. 2008. How to Castrate a Piglet. Retrieved Sept. 20, 2011 from <http://www.quiverfullfamily.com/2008/04/28/how-to-castrate-a-piglet/>.
- Stallings R, Stallings M. 2010. Castration by the Moon Signs. Retrieved Sept. 20, 2011 from <http://www.stallingspainhorses.com>.
- Stevenson ZR. DVM. 2012. Personal Interview. "Sick Pigs with elevated body temperature." July 16, 2012, Cleveland, Texas.
- USDA (United States Department of Agriculture). 1995. Calibrating Thermometers. Retrieved Sept. 20, 2011 from <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRD3108920>.