

Goat Producer's Newsletter



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Out of Season Breeding Study Conducted On The Jones Farm in Rowan Co. (MGA is not approved by FDA for Goats)

Terry Hutchens UK/KSU, Robert Marsh UK, Phillip Prater MSU,

One of the keys to success in the meat goat business is to hit the high markets. Traditionally, market prices trend upward in November and continue to stay high until late May. There are a number of roads leading to these markets and one of these is through out of season breeding. Boer goats are for the most part seasonal animal and usually begin to cycle in mid to late June. However, in order to market heavy kids after the first of the year, does need to be bred in April and May. Presently, the only way to accomplish this is through stimulating the reproductive system to produce follicles, that consequential produce and release of viable eggs. Otherwise most goats will not cycle until the day length triggers the beginning of estrus.

Unfortunately, to bring a doe from a non-cycling state to a cycling (reproductive) state is not a simple or an inexpensive process. One inexpensive product often used in the beef cattle industry is melengestrol acetate (MGA). In comparison to other methods, MGA is the least expensive of all the products. MGA is often used alone or in combination with other hormones or hormone stimulating products.

Carl and Sue Jones, Rowan County goat producers, cooperated with Robert Marsh, Rowan Co. Extension Agent, Terry Hutchens, Extension Associate for Goat

Production and Dr. Phillip Prather, Veterinarian, Morehead State University in a project to evaluate the effectiveness of this product used alone on non-cycling does.

Table 1

Rowan Co. Out of Season Breeding Study 2003		
Number of Does Responding	Does Marked May 1-10	Doe Ultrasound results August 14
9	Yes	
7	NO	
16		
2		Bred 60 days, Twins
2		Bred 30 days
9		Open
1		Bred possibly
2		Unknown
16		
?? <u>MGA is not approved for Sheep & Goats</u> ?? <i>Ultrasound by Dr. Phillip Prater MSU</i> ?? <i>Buck markings recorded by Carl and Sue Jones</i>		

A total of 16 mature open does were used in the study. They were isolated from the buck for a period of two weeks prior to feeding MGA. All does were fed .50 mg of MGA each day (in 2 feedings) for a period of 10 days. Feed bunk space was increased 2X the normal spacing in order to

insure adequate intake by individuals in the study.

Feeding started May 17 and concluded on May 26. At the end of the feeding period, (May 27) a fertile buck equipped with a marking harness was turned in with the does for a period of 14 days (June 11). The buck was then pulled from the does for 10 days and returned again to the herd on June 26 for clean up. Carl and Sue recorded dates of does being marked by the buck. The percent pregnancy was observed 60 days from the first doe marked by Dr. Prater through ultrasound examination. The results are shown in Table 1.

The results of this observation are well in keeping with the results seen in other studies. Here 56% of the animals showed estrus after being fed MGA while only 13% of the confirmed pregnant animals could be attributed to feeding MGA.

Out of Season Breeding Is A Difficult Barrier To Overcome

Results can be inconsistent and may vary from 0% to 90% depending for the most part on seasonal conditions such as rain, cloudy conditions, relative humidity and ambient temperature. Other reasons may include poor intake of the drug through lack of consumption or dominant animals consuming more than their share. However, there are more complex protocols costing as much as \$20/ head that may not work any better. Other products often incorporated into MGA protocols are PG600? , Lutulyse and Zeronal.

Other Uses For MGA (MGA is not approved by FDA for Goats)

The best use of MGA may be for synchronizing does that are cycling. Synchronizations sets reproductive limits for the producers. MGA can be used to control the number of does kidding within a 10-14-day period.

As an example, if a farmer has 10 kidding pens and/or only two helpers and

40 does, it is not advantageous to kid them all at one time or have them spread out over three months. If the herd is fed MGA, and 10 animals are removed from the drug at 2-week intervals, then facilities and labor resources are in the favor of the herd manager. Ten does should kid every two weeks. This allows 10 does to be in the kidding pens for two weeks prior to kidding the next set. Non-breeders can then be placed in the next breeding group in succession.

Likewise, if a producer wishes to kid 40 does within a 2-week period and then plant corn, this too can be accomplished by feeding MGA for 14 days, take them off the drug and turn the bucks into the herd.

Other Thoughts On Out of Season Breeding

Some animal scientists classify the Boer goat as seasonal in the northern hemisphere while others classify the goat as a partially seasonal breeder with no complete anestrus or period without an estrus cycle. But for all practical purposes the Boer goat should be considered seasonal and managed as a seasonal animal.

In Kentucky, estrus activity begins in mid-June and increases in intensity through the summer months and peaks during August and September. As would be expected, estrus activity declines slowly through the fall and early winter followed by extremely low levels of estrus activity occurring in January through April. (D. B. Barry & R. A. Godke, Dept. of Animal Science, LSU: Potential for cross breeding)

Therefore, the first best means of having breeding does out of season is to select individuals from the herd that cycle early or cycle closer to year round. Always in a discussion such as this, someone has a doe that will breed anytime of the year. With good record keeping and observation, these individuals should be marked as *out of season cyclers* and female offspring from

these individuals can be incorporated into the herd genetic pool.

Secondly, if the breeding cycle of the Boer goat is taken into account, breeding and fertilization can be accomplished within a given number of days following kidding. This is true if the doe is in good body condition and health.

Table 2 readily shows the major differences in the number of days occurring before the doe's first estrus cycle and where the kidding date falls within the breeding season. If does kid in late fall, the first estrus cycle will occur in about 40 days. This gives time for rebreeding in little more than a month following birth. On the contrary, when kids come in a time of low estrus, primarily in the spring, a minimum of 60 days is needed before does can be bred.

Table 2

After Kidding Anestrous Periods for Boer Goat	
Fall kidding season (Oct. – Nov.)	37.3 days
Spring kidding season (March – April)	59.9 days
<i>(D. B. Barry & R. A. Godke, Dept. of Animal Science, LSU: Potential for cross breeding)</i>	

Dairy Goat Equipment Opportunities

Dr. Herbert Strobel, UK Animal Scientist

Although much of the focus on goats in Kentucky has been for meat production, there is interest in dairy animals as well. However, fluid milk and cheese processors do not want to deal with the relatively small volumes of milk generated by the typical goat dairy, and this inability to access processing facilities has limited the opportunities available to dairy goat farmers. But there is growing interest in on-farm processing and the equipment offered by a company in New Hampshire may offer promise to Kentucky dairy goat farmers.

2nd2Nun was founded by farmer Courtney Haase

(www.nunsuch.org/2nd2nun.htm) and she sells pasteurizers, bottle fillers and cappers, bottle washers, and cheese vats. The equipment is scaled to handle from 10 to 50 gallons and is ideal for the small goat or cow dairy interested in on farm processing. The units have been approved for use by inspectors in a number of states and costs are much less than larger scale units. Ms. Haase also founded the Small Dairy Project, which supports the development of small commercial dairies. Part of this initiative is an innovative pasteurizer-lending program that provides New Hampshire producers access to processing equipment for a one-year period. A similar program could benefit individual or small cooperative groups of dairy producers in Kentucky. Anyone interested in exploring the possibilities is encouraged to contact Terry Hutchens at the University of Kentucky (859 257-2465; thutchen@uky.edu).

?? **Begin September Breeding***

- ☞☞ Bring buck into adjacent pen at onset of breeding for 1-2 days.
- ☞☞ Give mature buck access to 35 females.
- ☞☞ Feed bucks 2-4 lb grain/day and high quality hay or pasture (feed 30 days before and during breeding).
- ☞☞ Feed doe ½ -1 lb of grain daily and high quality hay or pasture (feed 30 days before, and during breeding).
- ☞☞ Equip buck with breeding harness using different color marker 21 days after the first mark.
- ☞☞ Expect decreased libido and lower fertility during hot weather breeding. Keep buck in a cool shaded area away from does during the day and turn into the herd during the night.

?? **Breeding Targets**

- ☞☞ Cycling index: % does mating in first 14 days= 65-70 or more
- ☞☞ Mating index: % does mating in entire breeding season= 95 or more
- ☞☞ Kidding rate: % of does mated that kid= 95 or more

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