

Opinion Letter

I have been working with swine reproduction since I was graduated, in 1992, and Artificial insemination, especially the right moment (related to estrus) and number of inseminations, was the major subject of my Master Science and PhD. courses.

My experience with Absolute Insemination catheters started last year, when first met Sr. Mark Anderson in a fair in my country. The major proposal of this technique is to deposit semen in the uterus, what is well known to give better results compared to traditional inseminations. **The difference to the other intrauterine methods is that it's made in such easy way.**

I always believed, according to my experiments, that a single insemination would be enough if performed at the right time (till 24 hours before ovulation). The problem when we took it to the field conditions was that not always the insemination was successful because these single inseminations could be influenced by back flow, which is very usual in traditional cervical insemination, making a single insemination really vulnerable. So, when we inseminate in the uterus this problem is avoided and I can say we inseminate at the write place.

Based on these information, we decided to perform experiments with single insemination AI catheters. We first determined when would be the write time by using ultrasound to check when sows ovulate according to the onset of estrus. In both herds all scanned sows ovulated between 24 and 48 hours after onset of estrus. So we decided that, in the treated group, insemination should take place 24 hours after onset of estrus. Well, we chose herds that we knew the heat checking was very well performed. We compared the single insemination with the traditional cervical insemination, as shown in the 2 trials below.

First Trial: A single absolute insemination 24h after onset of estrus compared to 3 traditional AI, 12, 24 and 36h after onset of estrus.

Treatment	Sows	Pregnance Rate	Litter size
Single Absolute	23	95%	12,86957
Three AI	20	86%	12,14286

Second trial: A single absolute insemination 24h after onset of estrus compared to 2 traditional AI, 12 and 36h after onset of estrus.

Treatment	Sows	Pregnance Rate	Litter size
Single Absolute	31	80%	13,23
Three AI	31	84%	12,77

Summary of the 1st and 2nd trials:

	Treatment/Absolute	Control/Traditional
Ave. Farrowing rate	87.5%	82.5%
Ave. Litter size	13.06	12.60
Total no. of animals	54	51
Insemination/s per sow	1	2.5
Total semen doses	54	157.5

As one can notice, despite the number of sows is not enough to make definitive conclusions, **it seems that there is no difference according to farrowing rate and litter size. And if we look at the savings related to reduction (60% less) in labor with insemination and semen collection, in material (not only catheters but all related equipment) and semen (even the number of boars in the herd) it makes a big difference.**

My personal opinion is that we could associate the concepts of inseminating at the right time and in the write place, what explain the results.

Depending on the final results and the semen quality, we can still try to reduce the number of sperms and the volume of the doses of semen. So, insemination will be more and more important to decrease the costs and improve the quality of pork meat.