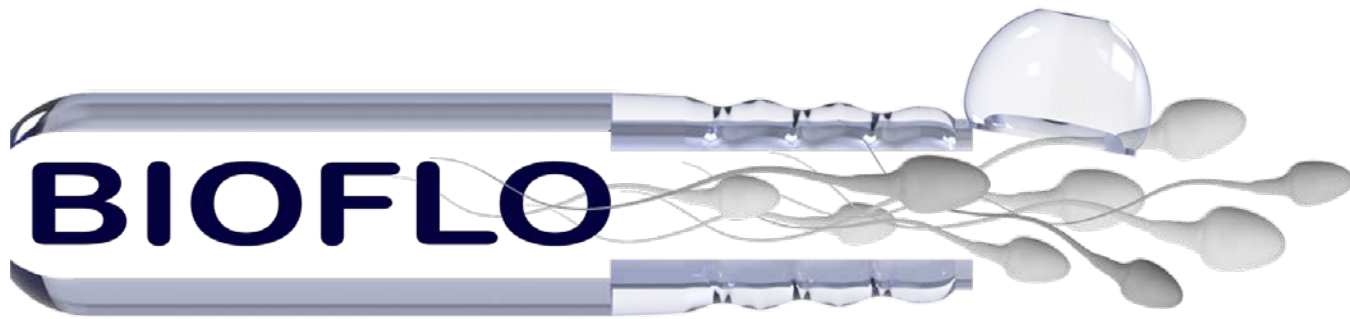


Welcome to CSIPCO's heat-detection and breeding protocols presentation. This is a no-nonsense, no frills presentation, specifically designed to suggest the best methods for using our PCAI catheters we've developed after years of research and confirmation.

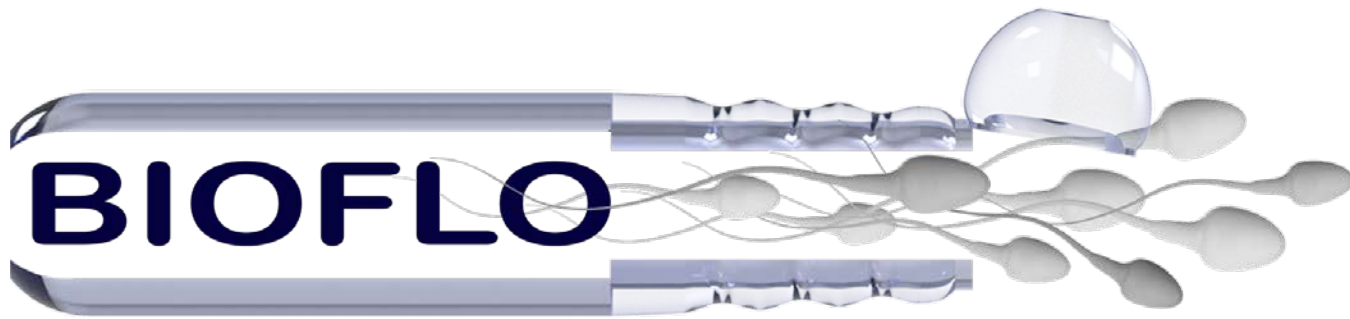
There are basically two approaches used around the world; the USA and parts of the EU heat detect and breed once per day, while the east (Pacific Rim) services and heat detects twice per day.

We will cover both models in this presentation.



First, let's all begin on the same page. We use dry-days post weaning to determine when to breed; so be sure to look at your wean day as "0", and not 1 as some people around the world do... If you consider your wean day as 1, your inseminations will be off by 24 hours and your results will be disappointing.

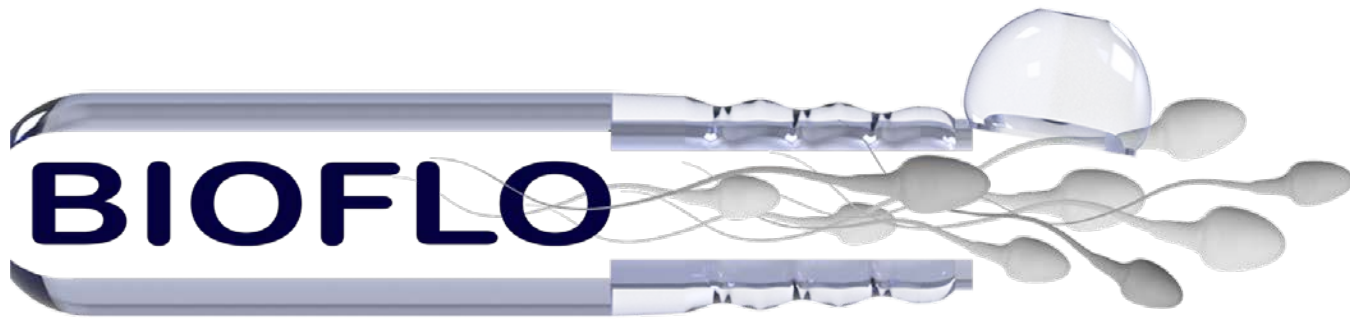
Any effective breeding schedule should be set up on an animal-by-animal basis, individualized in such a way that an adequate amount of semen is delivered to the UTJ before ovulation occurs. This allows the semen to be released, capacitate, and fertilize the oocytes properly. Not all animals ovulate at the same time!



Breeding too early causes the majority of semen to die before the egg cells are released; resulting in very low conception.

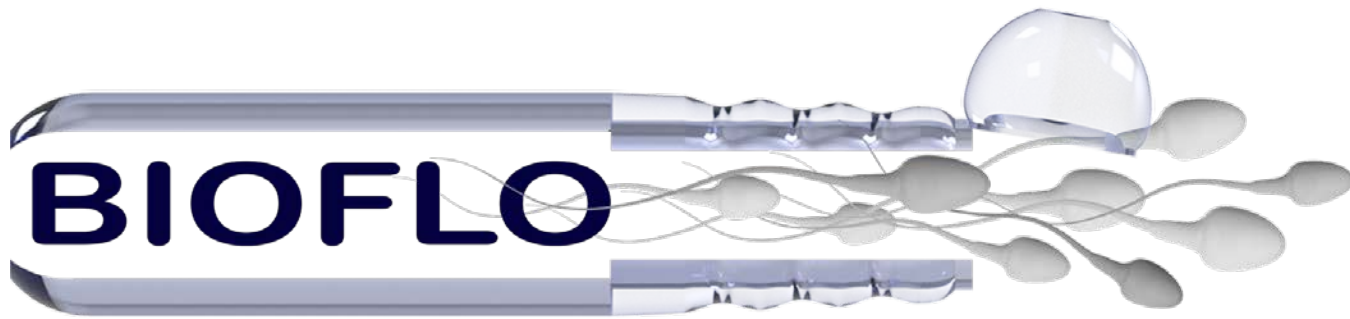
Breeding too late may cause you to miss the ovulation cycle completely, or only fertilize a few egg cells, thereby producing small litters.

Breeding after ovulation has passed, can also lead to discharges and infections; please do not overbreed your animals.



Heat detection is the most important part of any breeding program. If your technicians are not well-trained, or if your teaser boars are not interested and do not produce adequate pheromones when detecting heat, *your breeding program(s) will suffer!*

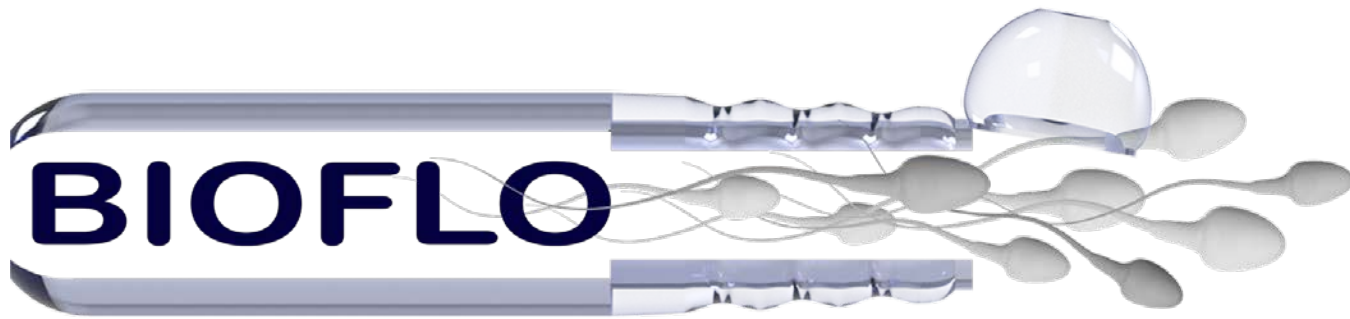
Our breeding protocols are very simple, but we prefer twice per day heat detection to be as accurate as possible. If you breed only once per day (which is OK), you can detect heat only once per day too; but then you run the risk of missing gilts at their most opportune time. The first table below represents twice per day heat detection, the next table presents once per day...



Always check your animals with a boar prior to every service; never automatically breed your animals just because they stood the first time! This not only confirms the need to inseminate, it will stimulate your animals into standing heat and ensure they return to refractory heat just prior to breeding.

**If you do NOT heat check with boar exposure before each service, you might stimulate the animals into standing heat simply by loading the catheters (which lasts approximately 15 minutes), *and that would make traversing the cervix very difficult; sometimes impossible.* You want the animals to be relaxed when using PCAI; so, after putting the boar away, wait 15 minutes before you start breeding.**

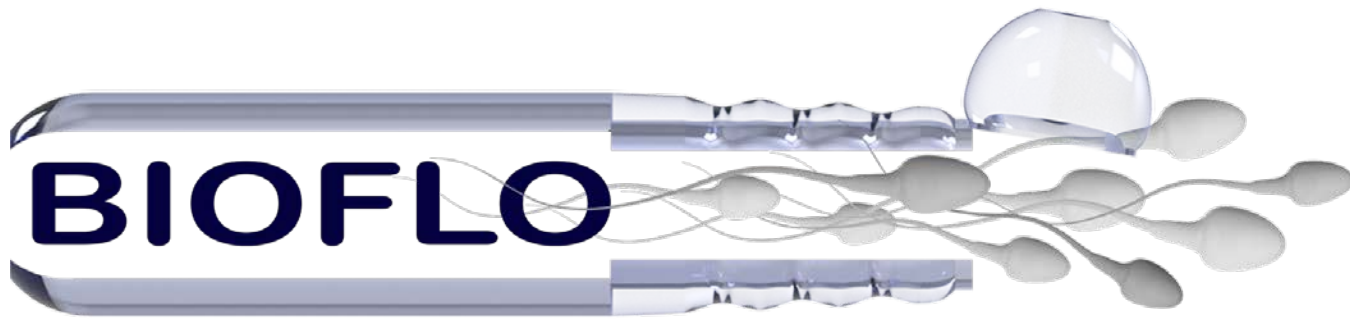
This provides a safe window to breed of approximately 1-2 hours, and since PCAI is so fast, you will finish your animals long before they recycle in to standing heat again...



Do not over breed your animals. Breed your gilts and repeats like day “0” animals; no delay.

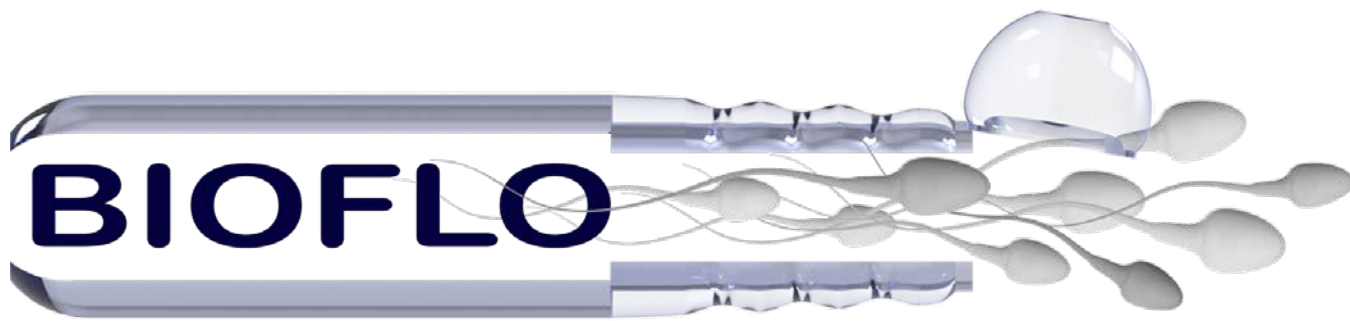
We use a dry-days post-weaning protocol, with the wean day classified as day 0. The first table below is for twice per day heat detection. When we say No Delay, it means breed right “after” the animal has relaxed and is no longer in standing heat.

**DO NOT TRY TO BREED WHEN THE ANIMALS ARE STIMULATED;** wait for them to cycle into refractory heat first. Also note, loading the catheters and checking the lock will stimulate the cervix. For sows, wait 2-3 minutes before pushing the cannula through (*or squeezing if you are using AMG*), and wait approximately 5 minutes for your gilts.



Do not force the procedure! If the cannula encounters resistance (or if the membrane does not deploy entirely), stop, go to the next animal and push on their cannula, then come back to the one with resistance. Sometimes they go through on the first try, other times they do not; be careful, and be patient with the process! Do not force anything when performing PCAI.

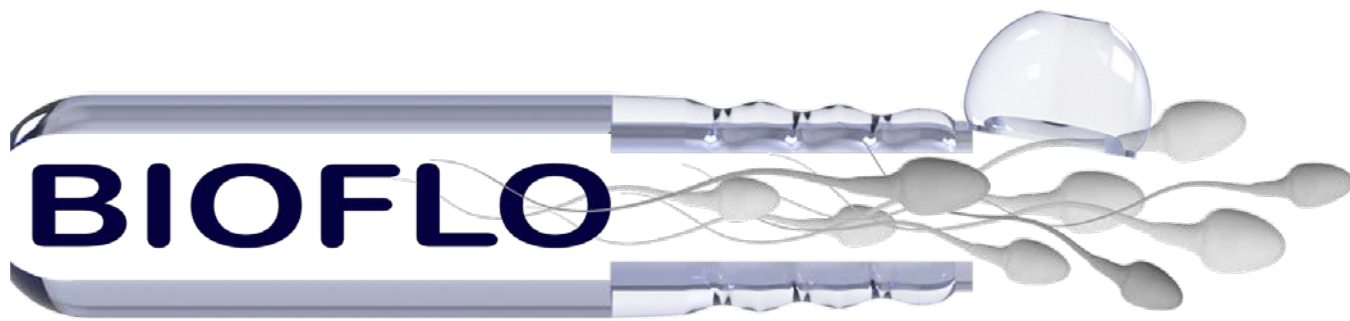
The next slide presents our timing protocols when breeding twice per day. In a perfect world, the timing between inseminations would be 12 hours; that said, we understand that is not practical in many farms so just breed them as far apart as you can during your crews working hours.



Twice per day

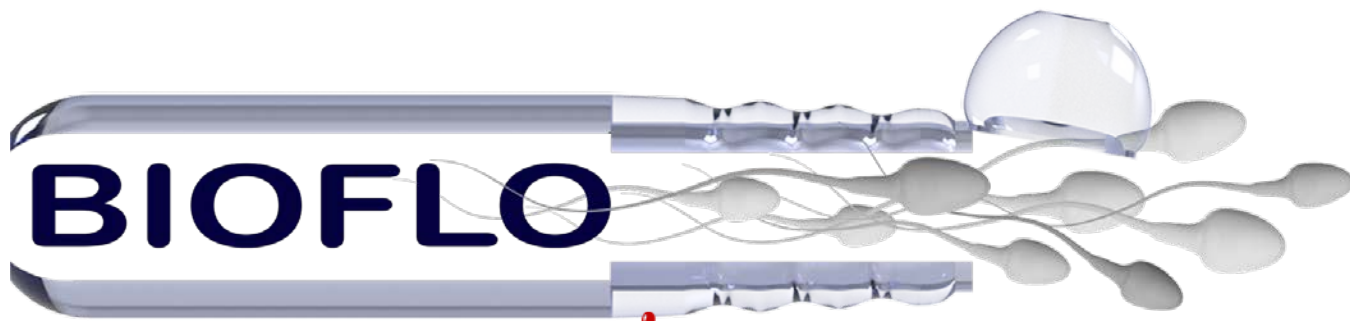
Days Post Weaning	First Service	Second Service	Third Service
0	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
1	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
2	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
3	Delay 24 hours <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
4	Delay 24 hours <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
5	Delay 12 hours <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
6	Delay 12 hours <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
7	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
8	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!
9	No delay <b>if standing</b>	6-12 hours later <b>if standing</b>	Only if they stand for the boar!





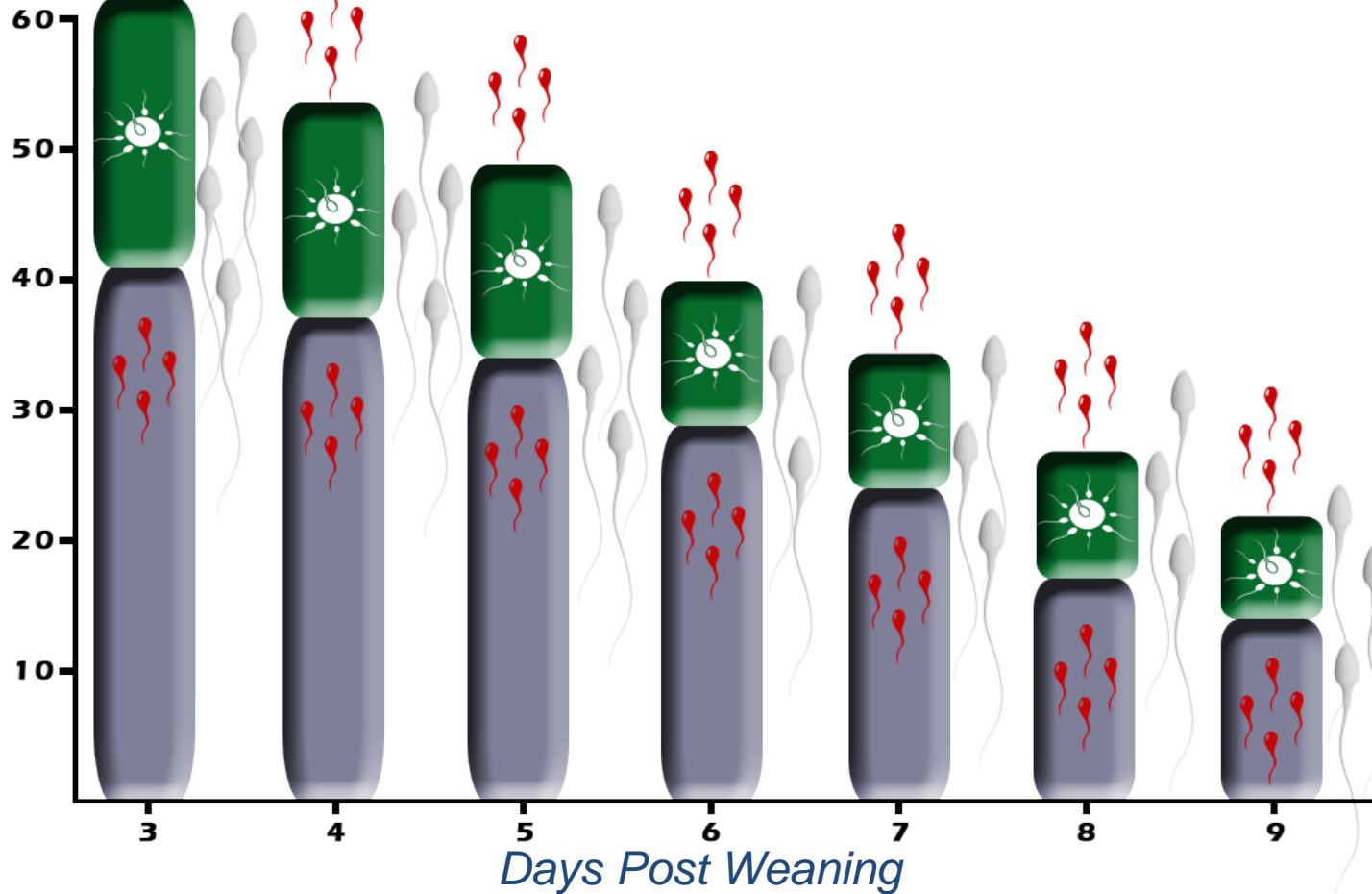
Once per day

Days Post Weaning	First Service	Second Service	Third Service
0	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
1	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
2	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
3	Delay 24 hours <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
4	Delay 24 hours (older sows) <b>if standing</b> No delay on parity 1	24 hours later <b>if standing</b>	Only if they stand for the boar!
5	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
6	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
7	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
8	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!
9	No delay <b>if standing</b>	24 hours later <b>if standing</b>	Only if they stand for the boar!

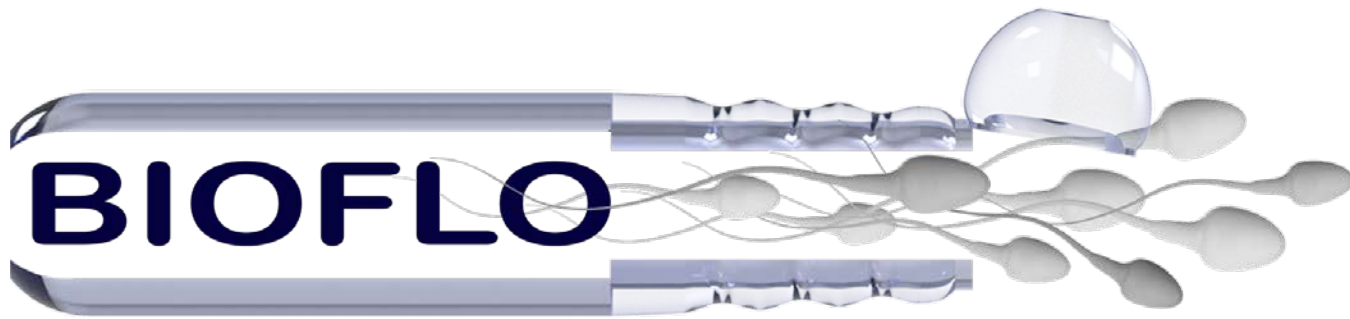


The duration of estrus is longer in animals that cycle closer to the wean day, and it continuously gets shorter as days go by... Semen you place into your animals should overlap the ovulation period which takes place during the final 1/3 of the estrus cycle (green) area; not long before, and certainly not after!

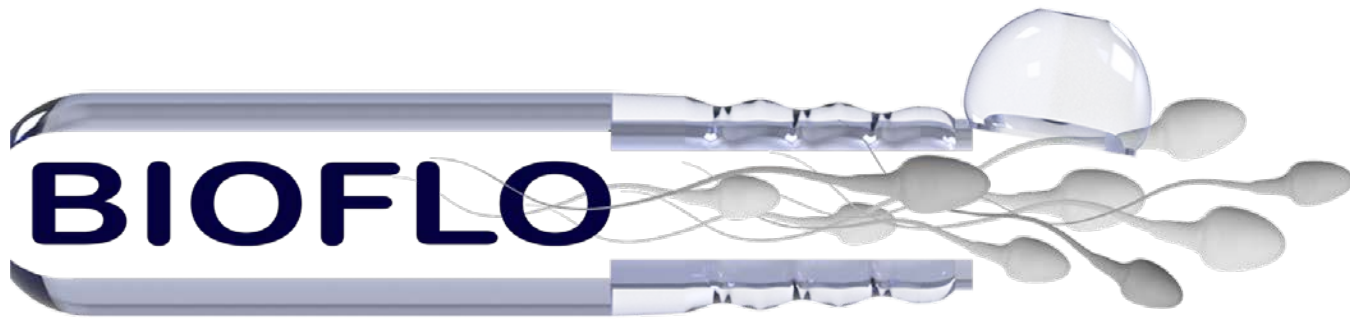
*Estimated Duration of Estrus*



The whitish sperm in the chart shows how our protocols help you properly overlap ovulation. If you breed to early, or to late, “those” services will be ineffective and a waste of time. Both overbreeding and under-breeding can cause problems and cost you money! **We strongly advise you do NOT breed after ovulation has occurred for optimal results.**



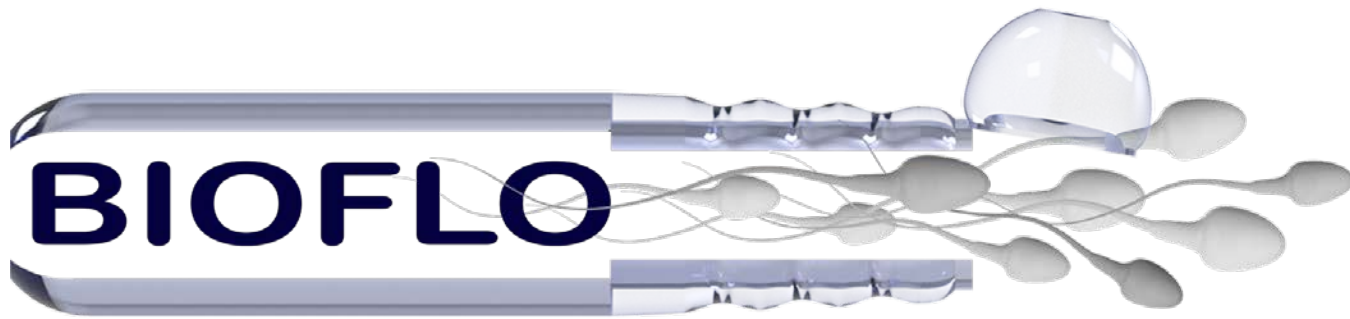
- When using PCAI catheters, load your GILTS first then load your SOWS
- LOAD 10 or more ANIMALS ALL AT ONE TIME.
- Never stimulate your animals during loading, keep them relaxed!
- Breed your Sows FIRST
- Then breed your Gilts
- Loading and breeding in this order automatically lets your GILTS relax longer without wasting valuable time.
- Production farms will soon notice this wait is actually no wait at all. IT HAPPENS AUTOMATICALLY AS PART OF THE LOADING PROCESS.



- Wait 2 minutes for Sows
- Wait 5-8 minutes for Gilts

Please be sure to wait this time before squeezing the semen container and performing the insemination. This short “waiting period” allows the cervix to relax after loading the catheter, making it easier for the cannula or membrane to move safely through the delicate cervical folds on their way to the uterus...

**When using BioFlo, do not twist and turn the cannula, just push straight forward and do not push it in and out. There is no need. Our special tip will find the safe pathway and not get stuck like other cannula based catheters.**

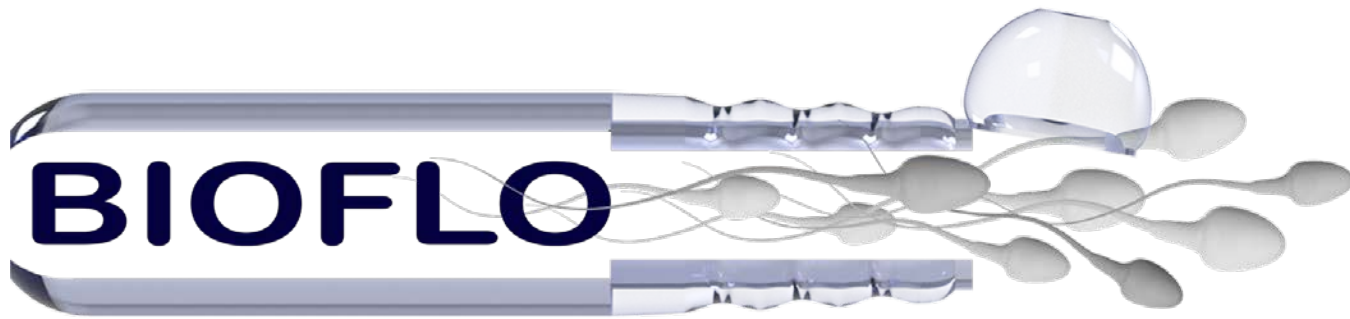


When it is time to inseminate your animals

Please do not check the lock on the catheter like you normally would; unless it was dislodged from the cervix by the animal backing into the gate. (in this case, reload the catheter and wait the appropriate 2-5 minutes.

If you check the lock like normal, the action will stimulate the animal's cervix and cause her to clamp down hard on the foam tip; this action tightens her entire tract and makes it harder for our membrane(s) to travel "through" the cervix directly into the uterus.

Please keep your animals as relaxed as possible!

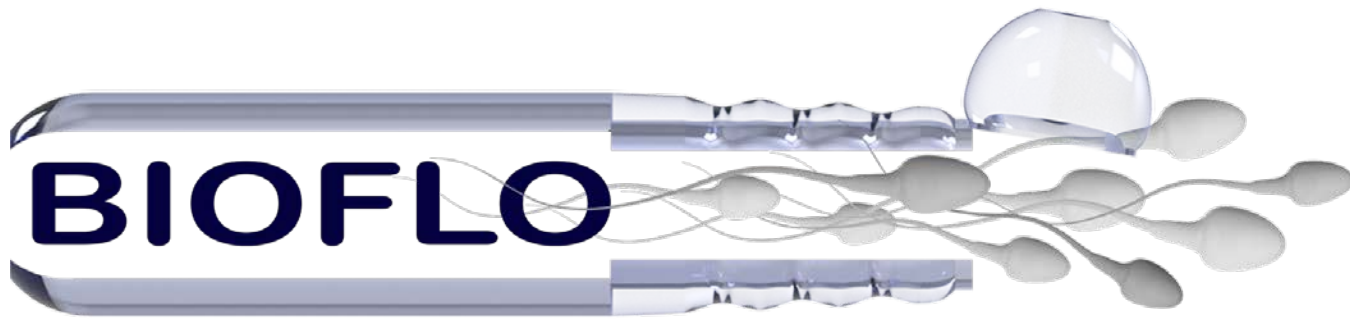


Some inseminations work perfectly, and others will take a little patience.

If you run into an animal that does not immediately accept the cannula or membrane; **DO NOT FIGHT IT.**

Either move on to the next animal and return later, or try waiting 10-15 seconds in between squeezes...

Be patient and get a feel for the process; you will master it in no time at all.



- When using BioFlo or AMG™ catheters, if you follow our instructions, your animals will be relaxed; sometimes they will even be laying down or sleeping. Because of this, when you apply pressure to the semen container and the membrane travels forward, it tries to push the catheter backwards and out of the cervix.
- **Please maintain a slight forward pressure on the catheter to prevent the lock from breaking.** If the foam tip pops out of the cervix, the membrane can turn around and you will get backflow...**THIS IS EXTREMELY IMPORTANT!**

Depending on the accuracy of your heat detection, most animals should receive two doses; approximately 75-80%. 15% or so stand for the boar a 3<sup>rd</sup> time, and 5% might only stand one time. Both over breeding and under-breeding can cause problems, so a good rule of thumb is to breed your animals only when they stand for the boar. Of course there can be exceptions, but this is a good practice to follow. If you have any questions, please contact us: [mark@csipco.com](mailto:mark@csipco.com) or [rocky.george@internationalagdistribution.com](mailto:rocky.george@internationalagdistribution.com)