

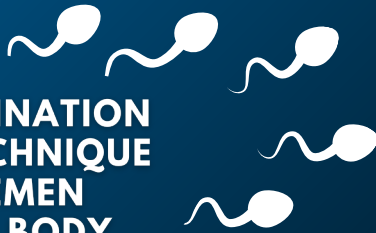
(PCAI) POST-CERVICAL ARTIFICIAL INSEMINATION



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DEFINITION:

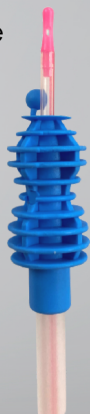
POST-CERVICAL ARTIFICIAL INSEMINATION IS A BREEDING TECHNIQUE THAT DEPOSITS SEMEN INTO THE UTERINE BODY.



PCAI deposits the semen past the female's cervix, but prior to the junction with the uterine horns, compared to conventional AI which deposits semen into the cervix.

THE PCAI PROCESS

- 1 The females to be bred are identified in standing heat using teaser heat check boars. The females are not bred until a minimum of forty minutes after boar exposure.
- 2 The vulva should be cleaned prior to insemination and a lubricating gel applied to the end of the driving catheter.
- 3 The driving catheter is introduced to the sow and locked into the cervix. After 30-60 seconds, the female will relax, allowing the inner cannula to pass through the cervix.
- 4 The application gun apparatus is then attached to the inner cannula and the semen is slowly deposited over seven seconds by squeezing the gun.
- 5 After depositing semen, take out the inner cannula approximately 25 cm and move the catheter in a revolving motion for 7-10 seconds.
- 6 When the cervical stimulation has finished, remove the catheter-cannula kit completely from the female.



Value of Post Cervical Artificial Insemination (PCAI)

Herd Size	2500 Sows	
	Traditional	PCAI
Target # sows mated	115	115
Matings per sow	2.2	2.2
Matings per week	253	253
Cost of Semen dose	\$ 4.00	\$ 3.00
Cost of Catheter	\$ 0.13	\$ 0.38
Catheter Cost/week	\$ 31.63	\$ 96.14
Total cost per mating	\$ 4.13	\$ 3.38
Mating cost/week	\$ 1,043.63	\$ 855.14
Additional Savings		
Labor Savings per mating (minutes)	0	5
Total Labor saved per week (hours)	0	21.1
Labor Savings	\$ -	\$ (284.63)
Total Cost per week	\$ 1,043.63	\$ 570.52
Total Savings per Year		\$24,602
Savings per Sow per Year		\$9.84

WHAT ARE THE BENEFITS OF PCAI?

REDUCED LABOR

- PCAI requires only two breeding technicians, although one technician can perform the task. The labor saved can be applied to other high value areas, such as Day 1 pig care. PCAI allows the best breeders to affect more sows.

TIME SAVING

- PCAI is faster than traditional artificial insemination. In large systems, it is not uncommon to save up to 5 minutes per mating.

COST EFFECTIVE

- PCAI requires fewer number of sperm cells and less volume of semen extender, resulting in a lower cost of goods for insemination.

IMPROVED SAFETY

- PCAI reduces the amount of time spent handling boars which improves safety.

HIGHER INDEX

- PCAI allows higher-indexing boars to be spread across more matings.

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FREQUENTLY ASKED QUESTIONS

IS IT NECESSARY TO CLEAN THE VULVA?

Yes, it is highly recommended to clean the vulva before breeding to reduce the risk of carrying foreign material into the cervix and uterus.

IS CERVICAL STIMULATION IMPORTANT?

Research suggests that cervical stimulation after the PCAI process improves total born and born alive numbers.

WHY IS THERE A MINIMUM 40 MINUTE WAIT FROM HEAT CHECKING UNTIL INSEMINATION?

When sows are stimulated by the boar, they exhibit standing heat. One of the results of this is contraction of the cervix, making it harder to pass the inner cannula. Waiting at least 40 minutes allows the sows to relax. Waiting makes it easier to pass the inner cannula and allows the process to go much faster.

IS THERE A TIME LIMIT TO WHEN FEMALES SHOULD BE BRED AFTER HEAT CHECKING?

After sows exhibit standing heat they become refractory and will not exhibit standing heat for a period of time. It is best to breed during the refractory period which can last up to two hours.

ADDITIONAL TIPS FOR THE PCAI PROCESS:

- Do not let the catheter touch the floor or anything unsanitary while the females are waiting to be inseminated.
- Use a new catheter for every female inseminated to prevent any infection.
- Replace the bellows on the gun apparatus every other day.
- Wait at least 40 minutes after heat checking before inseminating to ensure the cervix relaxes.



WHAT SUPPLIES ARE NEEDED TO PERFORM PCAI?

- Material to clean the female's vulva before insemination
- Lubricating gel to apply to the catheter
- Cannula and driving catheters for each female inseminated
- Semen doses at preservation temperature (15-17° Celsius)



WHO CAN I CONTACT FOR MORE PCAI INFORMATION AND TRAINING?

- Your DNA Genetics Sales Representative
- DNA Genetics Technical Services Director
 - Dr. John Sonderman
 - 402-564-0407 EXT. 396
 - jsonderman@dnaswinegenetics.com
- Visit Our Website
 - www.dnaswinegenetics.com.
- On-site visits can be scheduled by a DNA Genetics representative well-versed in PCAI.
- Reach out today for more resources, information, and to get started with PCAI in your system!