

# Test Your Reproductive Knowledge

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How often do you walk into the barn to inseminate a cow and your mind is anywhere but on the task at hand? More often than not, I am guessing you are thinking about the next job that needs to be done, not on what you are doing right at that moment.

If you are like most people, you probably take a few short cuts in your semen handling and daydream while you are depositing semen. We are all guilty of it, but the truth is if you get back to the basics there is a good chance the reproductive performance of your herd could get a boost. Take a couple of minutes to test your reproductive knowledge and ensure you are doing everything possible to get cows on your farm pregnant.

1. Cold shock is a term used when semen is thawed, warmed and then cooled back down. It is detrimental to semen fertility; therefore preventing cold shock is important. Name three things you can do to prevent cold shock.

**Answer:** Some things you can do to prevent cold shock are: warm your insemination gun prior to loading it, always use tweezers when removing the semen straw from the tank, when removing semen from the cane do not hold the cane up in the neck tube of the tank for more than 10 seconds, after removing the semen from the water bath wrap it in a paper towel to dry it off and quickly load your gun, and place your loaded gun in a clean plastic glove and then inside your clothing to transport it to the cow.

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2. True or False: It is not necessary to double-check the reading on the thermometer in your thaw unit, it is always accurate.

**Answer:** *False.* You should check the thermometer in your thaw unit on a regular basis to make sure you are getting an accurate reading. If the temperature the thermometer is reading is not correct you should adjust it so it is reading correctly. A simple way to check the accuracy of your thermometer is to check it against the reading of a standard "fever thermometer." It is important to make sure your thermometer is giving you an accurate temperature reading as lower than expected temperatures will not provide a satisfactory thawing rate and exposure of semen to higher temperatures may cause a dramatic decrease in fertility.

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3. When removing semen from the tank you should not raise the canister or cane into the neck tube for more than:

1. 10 Seconds
2. 15 Seconds

3. 30 Seconds
4. 1 Minute

**Answer:** To maintain semen quality, do not allow the canister or cane to be raised into the neck tube of the tank for more than 10 seconds. If it takes you longer than *10 seconds* to locate and remove the straw of semen that you would like to use, lower the canister back into the tank for at least 10 seconds before raising it back up. An accurate semen inventory will make it much easier to follow the 10 second rule.

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4. Semen should be deposited in:

1. The left uterine horn
2. The right uterine horn
3. The uterine body
4. The oviduct

**Answer:** It is important to deposit the semen *in the uterine body* for two reasons. The first is the cow could ovulate on either side. If the semen is deposited in the left horn and the cow ovulates from the right ovary, the chances of conception are not as high as they would have been if the semen had been deposited in the uterine body. Depositing semen in the uterine body assures there is equal chance for the sperm cells to travel up both uterine horns.

The second reason is that depositing in the uterine horns can cause trauma to the uterus. The lining of the uterine horns is very sensitive and scraping it with the gun can cause bleeding, lead to the cow not getting pregnant and possibly cause an infection. A good habit to get into is to check the tip of your gun for blood when removing it from the cow. If you are consistently seeing blood on the tip, you are going too deep into the uterine horns when depositing and probably aren't settling cows as well as you could be.

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5. True or False: A proper semen deposit should last about five seconds. During the deposit you should hold the shoulder of the gun between your fingers and place your right fingers against your left arm.

**Answer:** *True.* It is important to make a slow semen deposit into the uterine body. Making a very fast semen deposit is the equivalent of several people trying to squeeze through a small doorway at the same time. If this happened, people would get squished and ran over. You don't want this to happen to the sperm cells! It is also important to lock your right hand against your left arm. This ensures that the gun is not pulled back into the cervix, during the deposit.

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6. True or False: A cow in heat should be inseminated 12 hours after the first sign of standing heat to achieve the best conception rates.

**Answer:** *Both true and false!* In the early 1940s a study was done to evaluate conception rates when insemination occurred at different intervals following estrus. The optimum time for A.I. was determined to be six to 12 hours after the onset of detected mounting activity. The industry standard of the "a.m./p.m. rule" was developed from the findings of this study. However, several more recent studies have proven that conception rates are nearly equal when insemination is performed at the first standing event of estrus up to 24 hours after the first standing event. Based on this research, we can safely conclude there is a 24-hour window after the onset of estrus to breed a cow and get similar conception rates.

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7. True or False: When a cow is enrolled into a synchronization protocol it isn't a big deal if she doesn't get the right shot on the right day all the time.

**Answer:** *False.* Noncompliance to a synchronization program is probably the number one reason why they fail. The investment of extra time and money in a synchronization program is significant, so make sure everyone involved understands the importance of the right cow, getting the right shot, on the right day. Consider a farm using the OvSynch protocol which involves three injections and each injection is given at 95 percent accuracy. At this accuracy you would actually only be correctly synchronizing 86 percent ( $.95 \times .95 \times .95 = 86$  percent) of the females enrolled into the program.

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8. Name three things that are required for a successful synchronization program.

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**Answer:** Some of the things that are required in order for a synchronization program to be successful are: females exhibiting regular estrous cycles, healthy animals that are free from disease and on a good nutritional program, a willingness to learn how to use the product(s) and program, facilities to handle cattle effectively, providing and preparing for extra labor needs, accurate and thorough detection of estrus, individual identification of females and accurate record keeping.

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When it comes to A.I. technique, semen handling and synchronization, many people think they don't need to review the steps because they have done it hundreds of times. You may find yourself daydreaming or thinking about the next job that needs to be done instead of focusing on the cow you are inseminating. I challenge you.

The next time you inseminate a cow, focus on the job at hand and each task individually. When you get back to the basics you may realize that paying attention to the details can help increase the reproductive performance of your herd. If you have any questions about semen handling, A.I. technique or synchronization programs, please don't hesitate to contact your local Genex representative. They will be able to provide you with powerful advice and tools to take your reproductive program to the next level.

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