

Prep Work

By Jon P. Wiesman

I cannot believe that it is already time to begin strategizing for the upcoming 2010 breeding season. It is extremely important to plan your breeding season long before it takes place to allow your mares and stallions to be prepared, so that everyone can maximize the fertility of your herd.



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Here are some areas in which to focus:

Nutrition: The basis of your overall management program. If you were planning a feed change, now is the time! There is no stress on your herd as your weanlings are, by now, accustomed to their non-milk diet, as they should have been weaned by the middle of October.

Pregnant Mares: Should already be dried off and grouped according to their reproductive status. Your pregnant mares should be grouped by their foaling dates, because building a herd accordingly helps to alert your staff if a mare would begin to develop a bag prematurely. I draw blood to have total estrogens taken, so that I know the health of the fetus.

I have always had very good results with this protocol potentially warding off an abortion and/or compromised foal at birth.

Barren and Maiden Mares: Should be ready to be placed under lights. I normally do not have fall cultures or biopsies performed, because if a mare is not cycling, you will not get accurate results.

The fall is when I do my endocrinology as far as testing for Cushing screening and/or thyroid issues, so that they can be on medication during their time under lights allowing the medication time to have a positive effect. I normally have cultures taken when a mare is in heat/estrus, which will then provide me the accurate information to define a direction.

Stallions: Should be prepped by having a full reproductive examination performed so that you know his overall fertility. This includes total motility, progressive motility, sperm morphology and most important, sperm viability.

Sperm viability is an interesting new technology. For years we would see semen moving rapidly across the slide thinking, "Wow! His semen looks great." However, the true test in fertility is having a sperm viability test performed at the beginning and throughout the entire breeding season.

Based upon an accurate sperm count, it is important to test semen extenders and

concentrations; for years the theory was one part semen to three parts extender, and that is so archaic that living on those standards alone will get you in trouble.

It has become apparent that gourmet semen extenders are the rage and, only a few years ago, thousands of stallions

produced millions of foals using milk-based extenders. Most mares were bred on-farm, as semen transport was not widely used until after 1995. If you utilize a broad extension protocol based from an accurate sperm count, i.e. 25 to 30 million sperm per extended milliliter, milk-based extenders work equal to or better than the gourmet extenders, saving you a tremendous amount of money.



Looking after and concentrating on the above, however, is usually great for job security, because if you fail to plan, then you can usually plan to fail!

During the breeding season, I spend most of my day troubleshooting other people's problems, mainly because they did not prepare. Then their problems become mine. With the start of the breeding season just days away, I thought that a pre-breeding season checklist for stallions might be helpful to ward off some potential conflicts that may rear their ugly head during the breeding season.

No one can afford downtime with their breeding program, especially when your stallion is under maximum stress and in his biggest demand; shipping a bad dose of semen is unacceptable in this day and age.

Stallions:

1. The most important thing is a fertility analysis, so that you know the exact fertility of your stallion. Just because an extender worked well last year, does not mean it will perform the same this year. The following items are key elements to maximizing the fertility of your stallion.

2. Pre-season reproductive examination that includes the following:

- a. A minimum of three clean-out collections on three consecutive days
- b. Urethral and semen cultures, to make sure no organisms are present
- c. Sperm count
- d. Total concentration, total motility and progressive motility
- e. Sperm morphology and sperm viability

3. Semen Extender Evaluation

a. Test as many extenders and antibiotic combinations as possible. It is your cheapest insurance against your stallion getting a bad reputation for sub-fertility. About 70 percent of the time sub-fertility is extender-related.

b. Just because one extender works well on a particular stallion does not mean that it will work the same on every stallion.

c. An extender evaluation is simple. You can use your disposable shipping containers,

swapping out the ice packs daily for the longevity portion of the trial.

4. Semen Extension Evaluation

- a. The biggest mistake a breeder makes in transporting semen is not utilizing broad extension protocols. The days of 3:1 (three parts extender to one part semen) are generally considered archaic.
- b. Current theory for extension protocols is knowing the exact number of sperm per milliliter. I recommend 25 to 35 million sperm/mL, with my target being 25 million/mL and a total sperm concentration of 750 million sperm.

Based upon an accurate sperm count you can easily achieve this calculation:

1. Multiply the "Progressive Motile Sperm Percentage" by the "Total Sperm Concentration/mL." That number becomes your "Usable Sperm/mL."
2. Your total sperm per dose should be 750 million "Progressively Motile Sperm."
3. Divide 750 into your "Usable Sperm/mL" and that number will be the total sperm volume in milliliters (mL) necessary for your shipping dose.
4. Add that volume of semen to 28 mL of semen extender and you will hit the targeted goal of 25 to 35 million sperm/mL.

If you ship using this simple protocol as mentioned above, you will maximize the reproductive efficiency of your stallion.



Jon P. Wiesman has been in the Standardbred industry for the past 35 years. In 1998 he developed the Equine Express® II and his company Exodus Breeders Corporation was born. Since then, he has developed many new and innovative products used everyday throughout the world including the Next Generation® line of semen extenders and various reproductive supplies.

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