

Plan in Advance

The use of frozen semen should not be an emergency. Advance notice will facilitate:

- Preparation of all paperwork as required by the AKC or other registration body
- Availability of a shipping container
- Appropriate packaging and shipping of semen
- Proper ovulation timing procedures
- Unique considerations for international shipments

Use an Experienced Veterinarian

The use of frozen semen requires expertise above and beyond that of fresh or chilled semen artificial insemination. All Synbiotics Freeze Center Veterinarians and many of Synbiotics Repro Network Veterinarians have experience using frozen semen. Our Canine Reproduction Services staff will work with you to choose a qualified veterinarian in your area. Canine Semen Freezing and Reproduction veterinarians can also be found on the internet at www.synbiotics.com. It is important that:

- The bitch being bred is reproductively normal; frozen semen is not a solution for infertility problems;
- Accurate ovulation timing is performed; since frozen semen lives 24 hours or less **after** it is thawed, it must be inseminated during the short 2-3 day fertile period for conception to occur;
- Frozen semen is handled and thawed properly;
- Proper insemination techniques are used.

Ovulation Timing

Accurate ovulation timing is essential, since the stress of freezing and thawing decreases the life span of the sperm cells to 12-24 hours after being thawed and inseminated. Daily blood testing is recommended to identify the luteinizing hormone (LH) surge with WITNESS® LH, thus enabling insemination during the short fertile period of the bitch.

Insemination Techniques

Each time semen is frozen from a stud dog, one partial straw is thawed to check the viability of that particular sample, and recommendations for use are made accordingly. The method used depends on the quantity and quality of semen in storage, as well as the reproductive history of the bitch. Three different methods of frozen semen insemination are presently available for the bitch.

1. Vaginal Insemination is rarely used.

2. Surgical Insemination

The most common method of insemination with frozen semen is surgical intra-uterine implantation. Because sperm is placed closer to the site of fertilization, this technique is associated with a greater chance of conception than vaginal deposition of the semen.

3. Transcervical Insemination

Techniques are available that allow intrauterine deposition of semen without a surgical procedure. These involve passing a catheter through the cervix and into the uterus, and may be done either by palpating the cervix through the abdominal wall or by visualization of the cervix with an endoscope.

Shipping Frozen Semen

Synbiotics uses containers specifically designed to ship frozen semen safely. The following is a summary of the specific steps involved:

1. Contact the Synbiotics location where the stud dog's semen is stored. In the United States, this is Synbiotics' main office in Kansas City, MO. If the semen was collected recently contact the Synbiotics Freeze Center where the semen was collected and frozen for temporary storage.
2. Choose a veterinarian to handle the breeding. Locate a veterinarian near you on the Synbiotics website, or contact Synbiotics at 1-800-228-4305 to assist you.

3. Consult with the inseminating veterinarian regarding the recommended procedures for each individual bitch.
4. Arrange the semen shipment:
 - Semen must be released by the stud owner for each shipment.
 - Bitch's registered name and number must be indicated.
 - A minimum notice of 2 working days must be given if semen is in permanent storage, or 4 working days if semen is at a Synbiotics Freeze Center or at least 4 weeks if international shipments are desired.
5. Begin ovulation timing procedures when the bitch shows signs of estrus.
6. Arrange for the return of the shipping container to Synbiotics when the breeding is completed.

International Shipping

Frozen semen has greatly facilitated international breedings, since shipping containers keep semen viable while it is being transported and cleared through customs. Each country, however, has individual regulations regarding the importation of frozen semen, as well as the registration of litters born through artificial insemination with imported semen. These regulations should be thoroughly investigated before the semen is shipped and in fact, often before it is collected.

Shipping Charges

Contact Synbiotics for the costs involved to prepare international or domestic paperwork as well as package and ship frozen semen for a breeding. Forms are available at www.synbiotics.com.

All arrangements for the sale of frozen semen and/or stud fees are between the stud and bitch owners directly without Synbiotics' involvement.

CANINE FROZEN SEMEN

Preserve Genetic Lines and Facilitate Long Distance Breedings



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SYNBIOTICS 

Synbiotics answers your questions regarding Canine Frozen Semen...

Canine Frozen Semen What to Expect...

Synbiotics' advanced technology developed through years of research by leading scientists and veterinary specialists provides you with the best opportunity for conception available today. This system includes canine-specific freezing processes, storage and shipping methods designed to protect your dog's valuable semen, and a network of veterinarians trained to handle frozen semen inseminations.

Why Have Semen Frozen?

- **Long Term Storage**
If your stud has enduring qualities which should be preserved for the breed or your own breeding program, you should have his semen frozen. This will guarantee his breeding availability for future generations.
- **For Breeding When the Stud is Not Available**
Many times, the stud dog is not available when an individual bitch needs to be bred. The reason may be due to the stud's show or trial schedule, overbooking for the stud's services or any other scheduling conflict that could limit the stud's availability.

- **Long-Distance and International Breeding**
Long-distance breedings may be accomplished without shipping either the bitch or stud dog by using either chilled-extended or frozen semen.

How is Semen Collected?

Semen is collected from the stud dog by manual stimulation. The different parts or fractions of the ejaculate are collected separately, so that good quality sperm-rich semen is frozen and stored. In general, semen of higher quality with a greater sperm count is collected when the dog's libido is high. Therefore, try to closely mimic a typical breeding situation for each stud; owners are encouraged to provide a bitch in season to use as a "teaser". In addition, if the dog associates a particular item with breeding, such as a rug, table, breeding rack, etc., that item should be brought to the collection.

What Happens After Semen is Collected?

Immediately after the collection, the semen is evaluated. If the quality is acceptable for freezing, the sample is then extended with a buffer solution that protects the sperm during freezing and thawing. A sperm count is performed and the sample is further diluted to a uniform concentration of approximately 50 million sperm per straw, which has been found to be the most advantageous for both the freeze and the insemination. The semen is frozen in individually labeled straws. After freezing, a small aliquot of sperm is thawed to judge percent progressive motility and quality; average motility post-thaw is 40%-60%.

How Long Does the Process Take?

The entire freezing process takes 4-5 hours from the time of the collection. However, clients are present for the first 15-45 minutes only. The first visit may require additional time to take care of necessary paperwork.

How and Where Is the Semen Stored?

Frozen semen is stored in liquid nitrogen at a temperature of -196° C, which keeps semen viable for an indefinite period of time. Since electricity is not required, there is no fear of accidental thawing due to a power failure. Semen is stored short term at the Synbiotics Freeze Center, and is then transported to Synbiotics' main office in Kansas City, MO for permanent storage. Synbiotics full-time staff is then available to assure proper monitoring of storage facilities and handling of semen when requested for breeding. Semen frozen at Synbiotics freezing centers outside the United States remains at the freezing center for permanent storage or can be shipped to other locations for breedings worldwide.

How Much Semen Will Be Stored from Each Collection?

The quantity of straws obtained is directly dependent on the dog's sperm count. The quantity and quality of semen produced in one ejaculation can vary, sometimes considerably, from dog to dog and collection to collection.

Factors that affect the ejaculate include:

- **AGE**
In general, a young, mature dog (2-5 years of age) will have a higher sperm count and better quality semen than older dogs or young, immature dogs.
- **GENERAL HEALTH STATUS**
An ill or stressed dog will rarely produce good quality semen. It can take as long as 3-6 months for the ejaculate to return to normal following recovery from illness. Certain drugs also affect sperm production.
- **SIZE**
In general, large dogs produce more sperm than small dogs. Toy breeds may have semen collected several times to store enough to breed one bitch, whereas a giant breed stud might produce enough semen in one ejaculate to inseminate 3-5 bitches or more. Remember that it is the number of sperm cells, not the volume of ejaculate collected, that is important.
- **DISPOSITION/TEMPERAMENT**
In general, an experienced stud dog produces better quality semen than one who doesn't fully understand what is expected of him. In addition, a dog that is accustomed to having people around and/or being handled while breeding will perform better when having semen collected.

What Is The Cost?

Contact the individual Synbiotics Freeze Center for current costs. Charges at individual freezing centers may vary, and are subject to change without prior written notice.

What Are the Storage Fees?

In the United States, permanent or long-term storage should be at Synbiotics corporate headquarters in Kansas City, MO. Upon receipt of the semen by Synbiotics you will be billed directly for the first year's storage and annually for the duration of storage.

What Kind of Paperwork and Record Keeping are Necessary?

A copy of the stud's individual registration paper plus positive identification such as a tattoo, microchip, or full color front and side view photographs must be brought to the appointment. The AKC requires each dog collected for semen freezing to have a DNA Profile on file with the AKC. If you already have a Profile for your dog, bring a copy to the first appointment. If you do not, the collecting veterinarian will submit cheek swab samples to the AKC so that a profile can be generated. The stud owner's signature must be obtained on both the Synbiotics contract and the Record of Semen Collection and Freezing that the collecting veterinarian will file with the appropriate registration organization. After the semen is frozen you will receive a copy of this record as well as a written evaluation of the stored semen. In some cases, a Record of Collection Ownership is also required.

What is the Success Rate with Frozen Semen?

Individual success will vary depending on the semen quality, bitch fertility and the procedures employed. Many Synbiotics Freeze Centers report conception rates similar to the success achieved with natural service breedings.

Planning a Frozen Semen Breeding?

Consult with a Synbiotics Freeze Center Veterinarian to decide if the use of frozen semen is appropriate for your bitch.