

THE ARTIFICIAL VAGINA

from *Equine-Reproduction.com*

The "A.V." is the tool most commonly used for semen collection from stallions for use in artificial insemination programs, for the semen to be frozen, or for analysis.

There are several types of artificial vagina available commercially. Although there are differences, they all follow the same general design format of having a tubular inner liner, usually of latex, which is surrounded by a fillable water jacket encased in a harder outer shell. Attachable at the distal end is some form of collection apparatus to capture the ejaculated semen, this apparatus will often include a filter of some sort to remove the gel fraction of the ejaculate and any detritus such as smegma.

Probably the two most common models seen in use in North America are the Colorado and Missouri models. The Colorado model has been modified by other companies but retains a similar basic design. Each AV model has different advantages over another, and many technicians, and indeed stallions, develop a preference for one or another model. These are some of the commonest advantages to each model that we and others have noted:

COLORADO STYLE



- Retains water temperature longer in cold weather
- Is more durable under extreme use
- Liner is cheaper to replace when worn or damaged
- If not too long, allows the stallion to ejaculate well clear of the heated liner, thereby avoiding danger of sperm damage by heat shock

MISSOURI

this model by:
NASCO



- Is cheaper to purchase initially
- Is lighter and therefore easier to handle when filled with water
- Will allow for the addition of air to make the liner tighter
- Allows a less direct manual stimulation of the penis, which can be preferable with some stallions

FRENCH (INRA MODEL)

Manufactured by:
IMV International Corporation



- Extremely light weight - can be held with one hand
- Has 2 handles (second handle not visible) making it extremely easy to handle
- Holds marginally more water than

ROANOKE

Manufactured by:
Roanoke AI Labs.



- Extremely light weight - can be held with one hand
- Allows for great bell pressure on penis glans, which is preferred by some stallions
- Shortness permits manual stimulation of the upper shaft of the penis at the sensitive

the Missouri or Roanoke models, but not as much as the Colorado, making it lighter to handle, but maintaining good heat retention properties

- The removable/adjustable latex hood (seen at the right end of image) enables the use of a single AV for many different size stallions
- The latex hood also allows for the less direct manual stimulation of the glans of the penis during collection if required
- Liner is cheaper to replace when worn or damaged

pressure point located close to the preputial ring

- "Spit-off" pressure relief valve automatically adjusts water pressure to required level

At *Equine-Reproduction.com* we have used all of the above models, but generally prefer the French Model, as we find it is convenient in size and weight to handle, while providing rigidity and good heat retention properties. We also particularly appreciate the double handles, and the ability to move the latex hood to adjust the length of the AV to enable its use on a variety of different sized stallions.

Many farms and semen collection centers use a sterile liner in the artificial vagina. This liner is usually made of a thin plastic of some sort, and is especially useful if one is collecting semen from different stallions, as it pretty well eliminates any chance of cross-contamination of any kind, either bacterial or seminal. Even if not collecting multiple stallions, it is still extremely convenient, as it eliminates the need for removing and cleaning the latex AV liner after each use, and aside from the time savings, this will also assist in extending the length of time before the latex liner becomes worn out. Often stallion owners will advise us that some stallions do not tolerate a disposable liner, but we have found that changing the internal temperature or pressure of the AV, or switching to another brand or style of liner that may be of a different thickness or "softness" will solve this situation. Some of the sterile liners available commercially, notably those designed for use in the Missouri model AV, come with a built-in filter for gel and detritus, which can be very convenient. If one is going to be using the AV a lot however, it may be preferable to buy your liner in a straight continuous roll, and cut off the desired length at the time of use, as this will prove a lot cheaper.

© 1999 and 2002 Jos Mottershead and Equine-Reproduction.com

Use of article permitted only upon receipt of required permission and with necessary accreditation.

Please contact us for further details of article use requirements. Other conditions may apply.