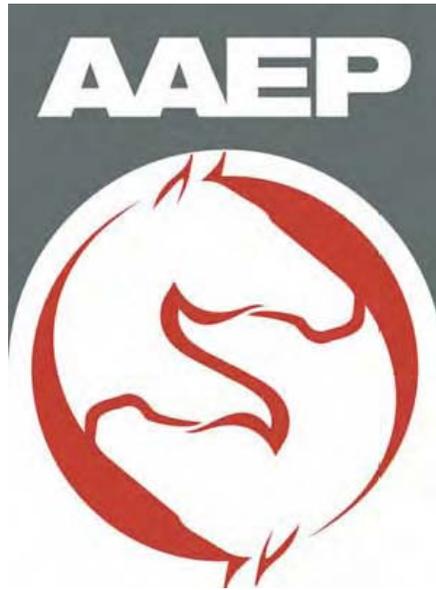


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# How to Train a Stallion to Use a Dummy Mount

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## 1. Introduction

Training a stallion to use a dummy mount for semen collection can range from a quick and easy project accomplished in a few brief sessions within a couple days to a more challenging effort over many sessions or even over weeks to achieve organized and reliable one-mount ejaculation. With a good team and adequate facilities, many stallions are successful for their first semen collection within the first session and only need a few repetitions of that experience to be judged well-organized for reliable one-mount semen collection. With experience, our team at our veterinary school referral practice has come to enjoy working with even the most challenging beginners. Every stallion teaches us something new or reminds us of various tips to speed things along. We have come to appreciate that how a stallion is introduced and how the challenges are handled can significantly affect the success or failure of initial training and sometimes the stallion's career-long efficiency for the semen collection. The purpose of this presentation is to discuss our basic training procedures and to provide practical tips for efficiently starting stallions on a dummy mount, including some of the more common challenges.

## 2. Training Schedule

Ideally, we prefer to have the stallion as an inpatient for a minimum of 3 to 5 days. As a work-

able alternative for local owners who prefer to maintain the stallion as an outpatient, the horse can be presented daily for 3 to 5 days during a week so that we have the option of two to three training sessions daily over a period of 1 week.

At our facility, we very much promote the importance of the process of training itself as a procedure that should be done and charged outside the context of actual need for semen for evaluation or breeding. This usually enables a much more organized, systematic approach than if done under the pressure of the first semen order or within the context of a breeding soundness examination. Steps that are useful in training may be deleterious to semen quality. If the semen obtained during training must be used for breeding or evaluation, we may be reluctant to take those steps. In the end, efficiency and long-term benefits of a well-started stallion are to everyone's advantage. For owners who ask that we do a semen evaluation or freezing during the training process, we inform them that we will keep that in mind and try to accommodate, but that our training decisions will favor training over semen quality, which may not yield semen ideal for evaluation, freezing, or insemination.

## 3. Getting Organized

Our approach to facilities and personnel for breeding and semen collection certainly falls on the min-

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imalist end of the scale. For us, where we are training stallions within the context of teaching veterinary student handlers and assistants, “simpler” seems better in most instances. We have only a few basic recommendations for facilities, personnel, equipment, and supplies for starting a stallion on a dummy mount for semen collection.

#### 4. Facilities

Semen collection can be done efficiently and safely in a variety of spaces. In general, we prefer a large clutter-free space, especially for training. We recommend that the shortest dimension of the breeding area is at least 25 feet. An area of roughly 40 feet by 40 feet is workable for even the most enthusiastic stallions. We recommend that the area be enclosed to reduce complications, should an animal get loose from the handler. A purpose-designed and dedicated breeding shed may be ideal for larger operations, but a grass paddock, a wide barn aisle, or an arena can be satisfactory alternatives. If the area is indoors, ample headroom, with at least 14- to 16-foot clearance to the lowest fixture, is recommended. This will accommodate the largest stallions should they rear and extend their forelimbs.

If the area is indoors, we like wide doorways (at least 10 feet) on at least two sides of the room for easy exit if necessary. Good footing is a high priority, especially when starting new stallions. It is best to have a surface that is not slippery, even when wet. We prefer a footing of solid rather than loose material. Loose material invariably gets kicked up onto the penis and can be abrasive and off-putting during thrusting and may contaminate the semen as well. We also recommend that the breeding area be out of the busy traffic area and as free as possible from distractions for the stallion and the handling team. A teasing stocks, wall, or rail in the breeding area is also useful but not necessary.

Some of the common facility pitfalls to avoid include any number of things that can be distracting or off-putting to an anxious novice. Examples include windows that cast light or reflect the animal images or movement, floor patterns or irregularities such as drains or wet spots, and sources of noises such as fans and other motors that cycle on and off.

#### 5. Personnel

As with facilities, the type and expertise of handling teams vary widely throughout the equine breeding industry. We prefer a small team over a larger crew, especially when starting a novice breeder and when training to a dummy mount. For semen collection, this includes a stallion handler, a mare handler for the stimulus and/or mount mare should we use one as a training step, and a semen collection technician. For some stallions, a common challenge is to keep the stallion squared up at the rear rather than progressing up the side toward the head or over the barrel of the mare or dummy mount. In such cases, we find it useful to have an assistant

available to “spot” at the hip of the stallion. Most stallions travel up the near side. In rare instances, a disorganized beginner will tend to scramble up on either the near or off sides. In that case, an assistant on each side of the stallion ready to “spot” if necessary can be helpful in getting the stallion squared up for insertion and organized thrusting. In our experience, for all but the most aggressive and strong stallions, these spotters are needed for only a couple to a few sessions before the horse settles down or learns to square up without assistance or with just the nudge of the semen collection technician.

At our teaching facility, the make-up and experience of the team vary from day to day. For that reason, we find it especially important before we start a session for each member of the team of the day to understand the general goals and plan for the particular horse, the particular goals for that session, as well as the specific role for each of the team members participating on that occasion. We record session-by-session goals for both the horse and the team on a prepared form that can be reviewed at the start and end of each session. Before a session begins, we also review the anticipated challenges and the contingency plan for safe resolution, for example, should a crisis arise, where the handler will take the stallion, where the handler will take the mare, and who will make the “call” and direct the team for the session.

Personal safety gear used for breeding horses varies considerably among facilities. Experienced handlers, if not accustomed to wearing safety gear with horses, may judge that the gear encumbers their agility and perception in the breeding situation. In our experience at a teaching facility, teams that routinely use personal safety attire quickly acclimate. At our facility we have safety vests and helmets available. For staff, this gear is used on a case-by-case basis and is the personal decision of each staff team member. Veterinary students are now required by our school to wear helmets when assisting. Safety shoes that are specifically rated for steel industry or equine activities are used routinely by some individuals. Others prefer lighter athletic shoes and take the strategy of avoiding being stepped on.

To reduce distractions, both for people and animals, we encourage team members to turn off or silence mobile communication devices for stallion training and handling sessions.

#### 6. Artificial Vagina

We use the Missouri-style artificial vagina (AV). We prefer this model over the larger rigidly encased models, particularly for training, because we believe we can more easily handle the lighter AV and better achieve adequate base pressure and more physiologic positioning of the AV, which seem to improve our efficiency for stallions, particularly for those new to semen collection.



Fig. 1. Example of a stallion breeding halter.

For training, we tend to use a fairly warm (47° to 50° C lumen) and full AV with ample lubrication to provide the most inviting stimulation for the particular stallion. We also have hot compresses, as shown in Figure 6, ready to apply to the base of the penis for added encouragement to thrust. Once trained, a more average AV temperature and pressure are likely to suffice for most stallions. Many stallions that have difficulty responding adequately with a disposable plastic AV liner will have much less difficulty with the unlined latex liner. We do not routinely use a disposable liner system when training stallions.

Skilled technicians can use manual stimulation collection rather than an AV for semen collection from horses, which can be very helpful for some stallions because the pressure to the base and the glans penis can be adjusted “to effect.”

## 7. Stallion Restraint

There are many types and configurations of halters and leads that can be used effectively for handling stallions for breeding. Essential to effective use of any of the configurations is that the handler understands the particular features and limitations. At our facility, by custom, as well as with experience teaching primarily novices or unskilled handlers, we generally use a very simple halter and chain shank configuration. The lead is an 8-foot cotton lead shank with a 40-inch English brass chain. Ideally, we use a purpose-designed leather breeding halter that is well fitted to the horse. A stout nylon halter with good-quality brass fittings is an acceptable alternative. As shown in Figure 1, the leather hal-

ters designed specifically for breeding stallions have 1.25-inch, double-thickness, supple, triple-stitched nose band, cheek, and crown pieces. The throat latch is half-inch rolled leather shaped to the contour of the jaw. One-inch quarter-circle leather stays connecting the nose band to cheek pieces prevent rolling and rotation. For balanced directional control of the stallion's head, the nose band should sit approximately mid-way down the bridge of the nose, well above the crease of the lip and with approximately three fingers of slack. Another important feature of a breeding halter, especially when using a chain shank configuration, is high-quality brass fittings that are rounded in all dimensions.

The purpose-designed leather breeding stallion halters usually have 4-gauge, 2-inch brass rings. When putting the chain on and off, the snap end will pass easily through the 2-inch diameter ring and the snap is easily attached and removed from the 4-gauge, rounded stock. When handling the stallion, a similar high-quality, soft brass, oval-link chain glides smoothly through the cheek rings. Fine increments of tension can be smoothly applied and released to respectfully guide the stallion. Especially important is the instantaneous and smooth release of pressure to return to light contact as a reward for the desired response. In contrast, rings of poor-quality metal, flat stock or square-cornered, or poor-quality chain, can easily result in unavoidable prolonged and/or heavy injudicious pressure that only serves to confuse the stallion as to the contingencies. Even in skilled hands, this makes use of a chain shank inefficient for basic respectful control and behavior modification. With a good fit, these stout breeding halters appear to impart a positive level of “psychological” control—not too loose or too confined.

Depending on the history and temperament of the stallion, the skill and preference of the handler, and any specific recommendations by the owner or trainer, we will begin with the chain either over the nose or through the mouth over the tongue similar to a riding or driving bit. In either configuration, the chain is put through the near and off-side rings and then up to attach to the high off-side ring. This high off-side attachment of the shank gives most handlers smoother and lighter directional control of the stallion. Use of the chain over the nose, and especially use of a chain over the tongue, requires some training and skill to be effective and humane. It takes some skill to maintain slack on the chain and to apply measured tension only as needed to cue the stallion. If tension is continuously applied, or if injudicious tension is applied or inadvertently caused by failure to move with the horse, the method becomes punitive and confusing and therefore ineffective or counterproductive. The goal is not to jerk the chain, but to apply gentle tension. Specifically, jerking of the chain should not be used as a form of “attention getting” or punishment. Although many stallions can abide and

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Fig. 2. Restraining device rigged to apply steady pressure to the gum.

become conditioned to such injudicious action, jerking the chain on the tongue or nose may insight dangerous evasive or offensive behavior, especially striking, rearing, or even boxing while rearing as if fighting the handler or the restraint. Some stallions can get used to being jerked around or to the nervous jerking on a chain shank, and some not only tolerate injudicious shanking but appear to become conditioned to it as a predictor of breeding opportunity. Alternatively, it can lead to “learned helplessness,” known to horseman as “souring” or “sulking,” which is counterproductive. Other configurations of the chain under the chin or completely around the nose or diagonally over the nose or under the chin can also be used effectively.

A more severe level of restraint is a gum chain. In skilled hands, a gum chain can effectively calm and gather the focus of some over enthusiastic stallions in the breeding situation, especially those that tend to rear. However, especially with a gum chain, just the right level tension must be maintained so as not to exacerbate those tendencies, provoke savage aggression, or injure and sour the stallion to breeding. Our experience has been that a much higher level of skill is required to effectively or humanely apply a gum chain for breeding than other chain arrangements. A handling device (Fig. 2) designed to apply steady pressure to the gum is commercially available.<sup>a</sup> It is the author’s experience that considerable skill is required to appropriately apply such a device.

Breeding bridles that include bits, although not as common in North America, are customary regionally around the world, and probably more so for natural

service than for semen collection. It has been my experience that a very high level of skill is required to effectively and judiciously use a breeding bridle without inadvertently inciting problematic behavior. With this type of restraint, there appears to be an unusually high incidence of rearing and striking that is obviously provoked by the action of the bridle. In evaluating problem situations, as well as observing handlers skilled at using a breeding bridle, it appears that certain stallions also behave as if “trapped” and excessively confined by the stout bridle and bit arrangement. Their behavior suggests a conspicuous approach-avoidance anxiety state, with some stallions appearing continually “on the edge” of exploding or savage attacking. This appears to reduce the tolerance of the stallion for inadvertent or nervous jerking on the bit by the handler. With time, some stallions show signs of a “learned helplessness,” loss of libido, or even an aggressive or passive “souring” on breeding. These behavioral changes can result from misapplication of any head restraint or pattern of repeated injudicious correction in the breeding situation but appear to be more common with use of a breeding bridle and even more severe restraints.

Very rarely, we have seen the use of a twitch on the stallion during breeding. I have no direct experience handling a stallion for breeding with a twitch and know of only a few facilities worldwide that routinely twitch stallions for breeding or semen collection. As with using a twitch for mares in the breeding situation, I expect it requires particular skills to safely manage a twitch in addition to directing the stallion. For certain, as with a mare, the stallion should not be led (pulled or pushed) around by the twitch, but rather directed by a primary halter and lead.

With timid or quiet stallions, we may simply clip a cotton lead to the lower ring on a halter, although this arrangement can predispose to sloppy directional guidance when needed.

### 8. Stimulus/Mount Mares and Restraint

For training, especially starting a novice breeder for semen collection, it is ideal to have a variety of stimulus mares available, some of which could be mounted. For stallions that are reluctant to mount a dummy, we sometimes find it useful to allow mounting of a mare near the dummy, as an intermediate training step. So it is helpful to have one or more mares available that will stand well for mounting should that step be needed. For the enthusiastic stallion, for semen collection on a dummy, a mare may not be needed at all, and progress may in fact be more efficient without a mare present. For the slower starting or lower-libido stallions, it is often useful to have two or more naturally cycling mares in good natural estrus available as potential stimulus mares. Some stallions, especially novice breeders, appear to show preferences and also tend to tire of one mare (and the mare of the stallion).

An especially tolerant and solicitous ovariectomized or anestrus mare (given estrogen if needed) can be adequately stimulating for most stallions, but some stallions are clearly more responsive to naturally cycling mares. For dummy training, we find it useful to use the mare that elicits the greatest urgency to mount for the particular stallion. We like to have the alternative mares nearby and available for use when we start working with a stallion so that options are easily at hand.

We carefully select the restraint for the stimulus mare to be the “minimum safe level.” In fact, for dummy training, a slow novice or an experienced breeder with a lower level of arousal, it is often best to limit the restraint of the stimulus mare so that she is at liberty to express all of the normal solicitous elements of natural estrus. We find most novice breeders respond best to a mare with unwrapped tail and unwashed perineum.

### 9. Penis Preparation Supplies

We use clean warm water (115° F) in a bucket lined with a disposable trash can liner. We use a 12- to 16-ounce disposable plastic cup for applying the water. We use lint-free disposable cotton towels for blotting dry and assessing any remaining surface debris. Depending on the stallion’s level of sexual arousal and comfort with genital manipulation, we may not introduce preparation of the penis until after successful ejaculation.

### 10. Dummy Mount

The dummy mount position within the breeding area, the height, and other design features can greatly facilitate or hinder training efficiency. For detailed discussion, see *How to Select and Fit a Dummy Mount for Stallions, 47<sup>th</sup> Annual AAEP Convention, San Diego, CA, November 28, 2001*. In our experience, the most important features for training a stallion, particularly a hesitant breeder, is that the dummy height can be easily adjusted and that the dummy is without off-putting movement, rattles, or other sounds when the stallion first mounts.

For starting a novice breeder for use of a dummy mount, we typically try the stallion on the dummy from the start but also have no hesitation to start with a mount mare for one or more initial sessions and then advance to the dummy mount. For dummy training, we usually try first without the mare near the dummy, since many stallions will respond to a dummy mount with minimal stimulation. If the stallion does not mount the dummy in this manner, we then typically position the stimulus mare closer to or even alongside the dummy.

### 11. Other Items

When preparing to work with a novice, we also have a few additional items handy, should we wish to try them. These include:



Fig. 3. Full-cup blinder and half-cup blinder hoods.

- Full-cup blinders (Fig. 3, left) or half-cup blinkers (Fig. 3, right) are sometimes helpful for novice stallions that are easily distracted in the breeding shed. Full-cup blinkers can also be useful to quiet a rowdy stallion or for diverting a stallion from the live mare to a dummy mount. Half-cup blinkers are useful for stallions that appear to resent the approach of the AV technician. We apply the blinkers or blinders and then walk the stallion around to acclimate the stallion and the handler to their use before returning to the training. We fit full-cup blinders such that the stallion can see light through the bottom, and with a quick release, to enable one-handed removal should the stallion begin to panic.
- Estrous mare urine (kept frozen in 10- to 20-mL aliquots) can be useful for improving interest in a dummy mount or a stimulus or mount mare (Fig. 4).
- Knee wraps, topical anesthetic, and emollient ointment can be helpful for protection or for soothing rub sores that are a common problem in beginner breeding stallions, especially with dummy mounts. Tremendous pressure is exerted by the legs as they grope and grasp. Wraps can protect from rubs but need to be wrinkle- and roll-free. Any such irregularities of the wrap can add to the rub sores. The stretch wraps (Fig. 5) work very well, but note the hair and tissue that was rubbed from a clumsy yet vigorous novice learning to mount a dummy. In this case, the dummy was well padded with sheepskin as well.

### 12. General Protocol

Although we customize the training protocol and schedule for each novice stallion, the following 10 steps summarize how we proceed with training. We record session-by-session goals and progress for each of a list of steps for the horse and the team on a printed form, beginning with the stallion’s response in the stall for fitting the halter and approaching the breeding area.

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Fig. 4. Estrous mare urine, from a variety of mares, stored frozen for application as needed to improve response to the dummy mount.

#### Step 1: Establish or Refresh General Handling Rapport With the Stallion

Before entering the breeding situation, whether for breeding or for semen collection, we find it useful for the stallion handler to do some ground work with the stallion, using the restraint that will be used in the breeding situation. Ideally, this is done for a few days before the start of dummy training. Realistically, in most cases it is done on the day the stallion arrives for training or for the first breeding or semen collection session. Before beginning the training session, a few minutes of walking the stallion in a nonsexual situation using the restraint that will be used for breeding can be helpful in establishing good communication with the stallion. Specifically, we recommend establishment of calm gesture, tactile, and verbal commands for the following basics—walk, stop, stand, and back. For most previously schooled horses, even only three or four replicates of these commands will give the new horse and handler team confidence that will be invaluable in the breeding situation. Regardless of the history or temperament of the horse, we believe that this step is very important. A further good step is to similarly handle the stallion in the breeding area before a mare is introduced. This will familiarize the stallion with the area and reinforce your basic commands in that area.

#### Step 2: Establish Rapport With the Stallion in a Teasing Situation

Before first entering the breeding area, we also like to assess the behavior of the stallion in the presence of mares and to again reinforce positive handling

communication for the basics—forward at a walk, stop, stand, and back—again using the halter and lead that will be used in the breeding or semen collection situation. The same basic ground commands can be used to convey to the horse that with the direction of the handler, he can approach and interact with the mare in an organized manner.

#### Step 3: Enter the Breeding Shed

Our first goal when entering the breeding shed is to have the stallion enter the area and to become oriented to the stimulus mare from a distance of 20 to 30 feet initially, while abiding direction from the handler. Probably half of novice breeders will achieve and maintain an erection for preparation of



Fig. 5. Breeding leg wraps made of rubber-coated stretch fabric that enable a non-roll, snug fit to protect from carpal rubs as the stallion grasps the mount.

the penis within a minute or so when paused at this distance and therefore will not need to tease any closer to a mare before penis preparation. If not, we then proceed closer to the mare as needed. As we gradually approach the stimulus mare, the handler's goal is to convey to the stallion that he can approach the mare at the pace of the handler. If he rushes ahead, as novices often do (sometimes unexpectedly in fits and spurts of interest), we recommend avoiding inadvertent negative consequences—either punishment or catastrophe. Rather, we recommend backing the stallion as calmly as possible away from the mare or even retreating from the breeding area and regrouping for a more organized approach. The goal is to be as organized and positive as possible. Circling the stallion around the handler is specifically discouraged. This is because stallions at liberty have a natural tendency to circle away from a resistant mare, gesturing a kick threat as they circle. As with the strike threat, this is not usually a safety issue for the mare or stallion at liberty. In confined spaces, however, this kicking out while circling can be dangerous to people and animals. We try never to circle a stallion near a mare or dummy mount in a confined breeding situation; rather, we back him away using the gesture and verbal command established in the preliminary ground work described above. If necessary, we lead the stallion further away from the mare or out of the breeding area all together and again work on getting the stallion to back up as directed by the handler.

**Step 4: Tease as Close to the Stimulus Mare as Needed**  
Many novice breeders will not respond sufficiently until allowed closer contact with the stimulus mare, at least at first. Approaching head-to-head, and commencing teasing from the shoulder toward the tail is the natural sequence for horses breeding at liberty. The natural sequence also includes strike threat gestures when approaching head-to-head. While a strike threat is not a safety issue for animals breeding at liberty, in a confined breeding situation, the strike threat can be dangerous if not anticipated and carefully directed. The sequence also includes squealing and barking vocalizations that can be unsettling to the unsuspecting handler. For this reason, many handlers direct initial teasing to the rear of the mare. This works adequately for many stallions, but most respond much more enthusiastically when allowed to first approach head-to-head. Turning the head of the mare back toward the stallion can simulate the mare's natural behavior and can induce sudden arousal for most stallions. Some beginners will not respond adequately, even after long periods of exposure to a mare that is confined in stocks or behind a teasing wall. Moving the mare out into an open space and directing the mare to move a step or two at a time, or forward and back slightly, or allowing the mare to interact and posture more naturally is often needed to stimulate a novice stallion.

#### Step 5: Wash the Penis

We proceed with each stallion with the plan of introducing manipulation and preparation of the penis from then start. However, if the horse is especially shy or resentful of penis manipulation, or is not adequately aroused, the team may decide to postpone the penis preparation procedure until subsequent sessions or proceed with only an abbreviated manipulation or rinsing of the penis, trying to end on a positive note. We view this as a simple behavior modification procedure similar to picking up feet or tolerating another noninvasive procedure that all horses can learn with positive reinforcement. We do not insist that it be done from the start at the expense of having a negative experience that will delay the training.

With the stallion handler on the near side of the horse, the wash technician approaches the stallion at the shoulder, and then moves the back of the left hand along the abdomen and then firmly but gently grasps the shaft of the penis. Our goal is to maintain contact of the left side of the technician to the shoulder or abdomen of the stallion so that we can more safely "ride out" minor resentment or evasive maneuvers of the horse. Having to bail out repeatedly can put the horse in what is called in behavior terms an "avoidance cycle," which can quickly accelerate into dangerous maneuvers. At the same time that we commit to staying with the horse, we try to progress to pouring warm water on the penis as soon as possible. For most horses, the warm water appears to be immediately positive and helps them to tolerate further manipulation. Important aspects of washing include a confident, reassuring approach and gentle handling of the delicate tissues. Some tips to gain and maintain compliance of the stallion with this handling and washing the penis are below:

- For a sensitive or resentful stallion, it can be helpful to begin by stroking the belly starting at the shoulder and gradually moving toward the penis. The stallion handler can sometimes more safely do this before the washing technician approaches.
- Avoid rubbing and scrubbing; instead, massage and blot.
- Avoid splashing the hind legs with water, which for some horses appears to be off-putting.
- The wash can be abbreviated or eliminated for the first session, or until the horse has had one or more successful ejaculations, but the time spent during each session devoted to washing is increased until the horse is routinely tolerating a full examination and wash before mounting.
- For horses that are learning to tolerate the washing but have not yet succeeded, we try to end each session on a positive note. That would be at a moment of calm tolerance as opposed to amid a moment of resistance.

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## Step 6: Re-Tease and Mount

Once the penis has been washed, the stallion is allowed to re-tease the mare until fully erect and ready to mount at a reasonable distance from the dummy. The stallion is then led up to the dummy mount at a slight angle on the near side and encouraged to pause momentarily and then mount when directed by the handler (rather than to leap from a distance or rush ahead of the handler's direction). Some stallions, particularly novice breeders, naturally tend to mount from the side and then rotate around to the rear position. This is what is done in the natural environment. This can be safely allowed for initial training under most circumstances. Once experienced, most stallions with this tendency can learn to trust the handler to bring them safely straight on from the rear. For a novice breeder, insistence on a rear approach to the dummy or to a mount mare if used as an intermediate training step can significantly delay training and confuse some stallions. We try to safely abide lateral mounts at first and then work toward a rear mount later.

Some stallions appear to stall at the point of mounting, as if they don't know what to do next or are uncertain of mounting. Stimulation of the chest, by bumping into the dummy, can elicit mounting. Teasing to a higher level of arousal before approach, or allowing the stallion to tease close up, especially at the head of the stimulus mare aside the dummy, will typically move things along. Walking a mare a step at a time in front of a stallion, with jerky stops, can stimulate greater urgency to mount. The mare can be led up alongside the dummy as the stallion is gently diverted onto the dummy.

It is not uncommon for novice stallions to lose their erection upon approach of the dummy and then mount without an erection. This is a natural normal step in breeding under natural conditions. In natural breeding, this behavior appears to be a final testing of the mare's readiness, before risking injury of the penis. Allowing mounting without erection usually moves things along more efficiently than enforcing erection before mounting. This tendency is typically lost once the stallion becomes familiar with the dummy mount and gains the trust of the handler to "make the safety decisions," so to speak.

Also, stimulation of the penis, either with a well-lubricated, warm AV or with a very warm compress against the glans penis, can elicit thrusting and mounting. If the stallion is positioned at the dummy, such stimulation can draw the horse right up onto the dummy mount. Touching of the penis in a stallion can also incite resentment, so we recommend caution. It is likely best to gain experience with this procedure first on a trusted, well-organized stallion, so that you can learn how to position yourself for greatest safety should the stallion kick or "explode," as well as to learn how to gracefully move with the stallion so as to confidently

stay with the stallion as he lurches forward to mount in response to the stimulation.

## Step 7: Insert and Facilitate Thrusting

As the stallion mounts, care should be taken by the AV technician to be in place ready to divert the penis into the AV. Care should be taken to immediately divert the penis so that it does not thrust against the rigid dummy. This should be done whether the artificial vagina is built into the dummy or is hand-held. Most horses will thrust on their own, but some novices appear to stall or "hang" without fully coupling and thrusting. In such cases, stimulating the penis with a warm compress or artificial vagina can draw the horse up. Sometimes several mounts are needed to accomplish good rhythmic thrusts. This pattern can also occur with horses with musculoskeletal discomfort and neurologic problems, so it may be difficult to sort out at first.

## Step 8: Dismount

Whenever possible, it is usually best to allow the stallion to remain undisturbed for several seconds after ejaculation to dismount when he is ready. Occasionally, novices will appear to faint with ejaculation and need to be stimulated to stay awake for dismount. The stallion handler can assist the stallion by gently guiding him at the shoulder (as opposed to pulling on the lead) to back off the dummy mount as gracefully as possible. Most stallions are much more awkward at dismounting from a dummy than a mare, until they learn how to back off.

Especially for unsuccessful mounts, but occasionally even after successful breeding, some stallions have the tendency to turn their hind quarters toward the mount and kick out as they dismount. This turning and kicking is seen in teasing and mating under natural social conditions, where it appears to be a threat gesture similar to that seen in other thwarted goal situations. Under natural conditions, where there is plenty of space, the kick rarely makes contact. Under hand-breeding in confined spaces, this behavior can be dangerous to handlers, the mare, and unnecessarily to the stallion. The handler can usually avert the gesture by remaining alert to the possibility and directing the stallion back a few steps before turning the stallion.

## Step 9: Allow Rest and Provide Reinforcement

We try to reinforce improvement, whether or not ejaculation occurred, with a stroke of encouragement on the shoulder and positive relaxed tone of voice, and then allow the horse to stand and rest near the dummy mount for a minute or two after ejaculation before being directed to leave the breeding area.

## Step 10: Leave the Breeding Area

Some stallions are reluctant to leave the breeding area. Sometimes this appears to be because they have not yet "gathered their wits" after ejaculation. Under natural social organization, the harem stal-



Fig. 6. Soft cotton toweling attached to a Missouri style AV dipped into hot water for application of additional thermal/manual stimulation at the base of the penis to encourage thrusting.

lion “tends” the mare, remaining nearby to protect her from harassment by other stallions. So, for stallions that are reluctant to leave, we just wait a minute or two, remove the stimulus mare from the breeding shed, and then encourage the stallion to leave without a battle. Occasionally, we have a stallion that does much better if allowed to follow the stimulus mare back to his stall. We usually decide to abide that rather than to battle with the stallion. Many people establish a routine of pasture turn-out immediately after breeding, or, in hot weather, a cool bath. These can be great positive reinforcements for a good job and for leaving the breeding area. Reluctance to leave the breeding area typically wanes with experience with the routine. Occasionally, we find a stallion that retains this tendency through a long breeding career.

### 13. Polishing the Teamwork and Reinforcing the Routine

Initially, we try to be as patient and tolerant as safely possible with stallions learning semen collection procedures, whether the stallion is a completely novice breeder or an experienced breeder that is new to semen collection. This is whether the stallion’s behavior is slow and confused, or enthusiastic and sloppy. Once ejaculation has occurred with the protocol in a positive manner, most stallions appear to have ample motivation to abide necessary improvements in direction and procedures. With each subsequent session, our goal is to provide consistent handling, so that the horse can efficiently learn our routine. We also try to plan for and appreciate increments of improvement with each session rather than to demand immediate perfection, or to accept “B+, good enough.” At the completion of each session and before the start of the next session, the team reviews specific progress and areas for improvement and the planned protocol to facilitate the improvement.

For the enthusiastic or rowdy stallion, training is most efficient when sessions are repeated over a short period of time. So, for an enthusiastic novice, we generally recommend working three or four sessions per day for a few consecutive days. After a break of a few days, it is often our impression that

the stallion’s enthusiasm is too great for organized learning sessions.

For stallions with low libido, once- or twice-daily sessions may be best at first. If libido diminishes, one session every other day can sometimes be a more efficient training schedule than daily. For slow stallions, we tend to work in half-hour sessions, or even shorter if interest diminishes or frustration of the horse or team is apparent. We try to end on a “good note.” So if there is an explosive moment, for example, should the horse rush ahead of the handler, strike, or rear, we try to continue on a minute or two to end the session at a more positive point while the horse is doing well.

We generally request that the stallion be available a few days for dummy training. We prefer that the stallion stay at our facility so that we can work at times and on a schedule that are most productive for the horse and clinical environment. In reality, however, about half of the stallions we start are brought in for brief sporadic training. For some stallions, that works satisfactorily. For others, it is our impression that organized breeding or semen collection is clearly delayed and not as time- or cost-efficient as when training is done over the course of a few days as an inpatient dedicated to that training.

Once a stallion is comfortable with our handling and routine, we recommend gradually introducing some variety, so that the stallion can experience and accept some change of routine. This avoids creating what can appear to be a ritual-bound breeder. This would include locations of breeding, handlers and assistants of varying levels of expertise, and the specific order of protocol. This step also helps us better understand and address potential challenges that may arise for the stallion with various handlers and conditions at other locations. We also recommend that if along the way the stallion has not had opportunity for mounting a mare that we allow the horse to do some natural covers or semen collection using a mount mare. This is because many of the stallions that we start with semen collection with a dummy mount probably will at some point be used also for natural cover.

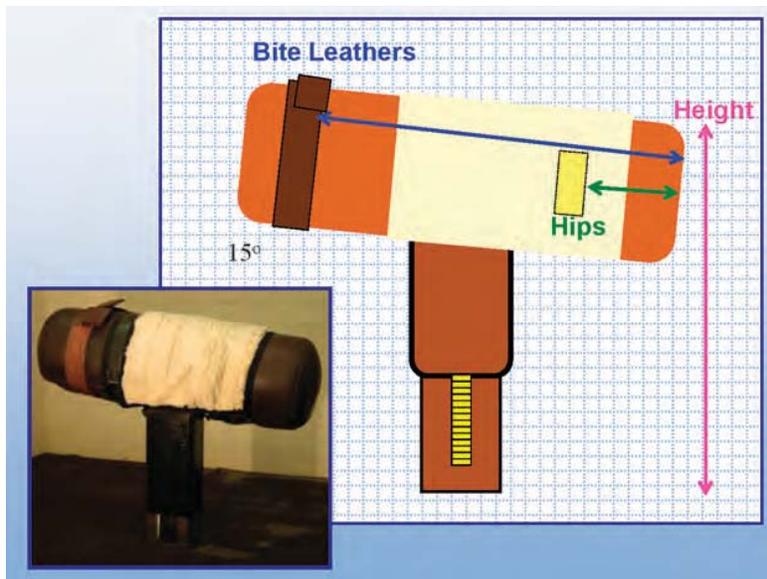


Fig. 7. Adjustment features for best individual stallion fit to dummy mount.

#### 14. Common Challenges

Probably the three most common difficulties delaying ejaculation for semen collection on a dummy mount are suboptimal arousal, poor dummy fit, and suboptimal penile stimulation.

#### 15. Optimizing Sexual Arousal

Many stallions can become aroused sufficiently to ejaculate reliably and consistently for semen collection with little primary sexual stimulation. Others require a live mare in good natural estrus (as opposed to ovariectomized) to become adequately aroused for semen collection with a dummy. This can be overcome in many with the use of estrous mare urine from “favorite” stimulus mares. Acceptance and accommodation of these differences is often the most efficient solution to difficulties.

#### 16. Optimizing AV Stimulation

Stallions vary considerably in their apparent preferences for various combinations of AV pressure and temperature. Often the stallion will thrust in a tentative manner and fail to settle into well-organized committed thrusts, suggesting that the AV is not adequate. In other cases, the stallion appears to thrust normally but does not ejaculate. Although it may be unclear in those cases whether the AV is a contributing factor, we recommend trying to optimize the AV because it often helps.

In our experience, in general, warmer temperatures and greater pressure work best for training and for retraining a stallion having difficulties. Once the stallion responds well, we record the lumen temperature and the weight of the AV. With the Missouri-style AV, pressure can also be affected by the fit of the leather jacket, so we record that as well (buckle position on proximal, middle, and

distal buckles). Many stallions ejaculate less efficiently with a disposable plastic AV liner than with a well-lubricated latex lumen. Therefore, for re-training in particular, we recommend no plastic liner. Other tips for stallions having difficulty ejaculating in an AV include:

- Some stallions fail to ejaculate if the AV is not held parallel and right up against the belly.
- Some stallions that thrust well but fail to ejaculate appear to be interrupted just as the glans penis engorges in a manner that suggests that the AV is too tight for comfortable filling of the glans penis. In such cases, using a Missouri AV, we take care to be sure the penis is fully inserted such that the glans penis passes into beyond the water jacket portion of the AV into the rubber cone, where it is less confined. Although it takes some skill, manual stimulation can also work well for such stallions. The hand pressure can be adjusted to accommodate even an extremely large glans flare.
- Most AVs do not provide optimal pressure to the base of the penis. Adding hot compresses (Fig. 6) that are applied high at the base of the penis with firm, steady, circumferential pressure typically increases thrusting vigor. An additional light squeeze to the base of the penis with each thrust can appear to help some stallions achieve ejaculation.

#### 17. Encouraging a Stallion to Couple Up Well, “Lock In,” and Settle Into Committed Organized Thrusting

Some stallions have difficulty settling into organized, committed thrusting for semen collection. They may hang or sink back and fail to come forward into a normal breeding position. This can be the case for



Fig. 8. Standing up on a dummy mount as commonly seen with carpal rubs.

novices even for natural cover and therefore may not be due only to suboptimal conditions of the dummy mount and semen collection. In such cases, when using a dummy, in addition to attempting to maximize the stimulation of the AV, we find it useful to try to evaluate the best combination of dummy height, position of the grasping leathers, and position of “hips” built into the sheepskin cover. We record the positions (Fig. 7) and evaluate video records to “tweak” positions for the best combination. In almost all cases, raising the dummy to somewhat higher than a live mare of the same size can help stallions “lock in” and thrust in a more organized manner.

Another simple factor accounting for multiple mounts and sometimes failure to ejaculate, especially when using a dummy mount, is carpal rubs. A stallion with carpal rubs may appear to be trying to avoid grasping with the forelegs, such mounting sideways over the dummy or standing up on the dummy mount (Fig. 8).

#### 18. Keeping the Stallion Squared Up on the Mount

Another common difficulty with semen collection is the stallion advancing up the side of the dummy mount. Whether or not thrusting in an organized manner and achieving ejaculation, a stallion may paddle or scramble with the forelimbs or sometimes rotate such that both forelegs are over the dummy mount. This can be the case with a live mount mare as well and is not always attributable to dummy fit. With the dummy mount, adjustments can often be made that cannot be made with a live-mount mare. Changes we find helpful in keeping the stallion squared up at the rear of the mount include (1) guiding the stallion’s head to rest to the near side of the dummy, (2) increasing the height of



Fig. 9. Use of a “spotter” at the hip to guide the stallion to remain “squared up” at the rear of the dummy mount.

the dummy or positioning the mare on a slight grade so that the stallion is mounting upgrade, (3) adjusting the position of the “hips” on the dummy cover, (4) having an assistant at the stallion’s hips to help keep the stallion squarely at the back of the mare or dummy mount (Fig. 9), and (5) holding the AV firmly against the mare or mount at the hip.

#### 19. Natural Service Experienced Breeders

Sometimes concern is raised about expected difficulty of dummy-training an experienced natural-service breeder. Among stallions that have bred by natural cover, whether pasture or in-hand breeder, we find most are extremely easy to train to mount a dummy, whereas fewer are moderately to less easy. One tip for pasture-breeding stallions is that if the stallion should not ejaculate, upon dismount he may reflexively turn and kick out toward the dummy as he would in a threat gesture to a mare after an unsuccessful mount.

#### 20. Training Without a Live Stimulus Mare

For many stallions, training can be done without a live mare, using only estrous mare urine. Training time may not necessarily take longer but typically does proceed more slowly.

#### References and Footnote

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<sup>a</sup>Stableizer, Wheeler Enterprises, Inc., 33032 795th Ave., Ellendale MN 56026.