

The A.I. Option

By Dawn Rector



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Though a new concept for Icelandic Horses, due to high fertility rates of natural breeding, A.I. has been widely accepted in Tennessee Walking Horses since about 1992. Be aware, though, the rules and regulations vary from breed to breed according to specific guidelines of the individual breed associations.

A.I. 101

A.I. IS THE DEPOSITION of spermatozoa into the female's reproductive tract by artificial instruments rather than by natural breeding by the stallion. A.I. using cooled or frozen transported semen broadens the options of the mare owner for breeding. It is an option and tool, which, when used correctly, can maximize reproductive efficiency and enhance the genetic progress of any breed.

There are many benefits to A.I. It reduces the possibility of injury to the mare and (or) stallion, aiding in identification of reproductive problems. It permits mares to be bred that, for whatever reason, cannot be bred by

using natural breeding. It allows more mares to be bred to the same stallion; enables mares to be bred at the most opportune time for maximum chance of conception; permits more effective use of older, more valuable stallions; prevents the overuse of a stallion at anytime during the breeding season; allows for evaluation of semen at each collection and immediate to diagnosis of minor changes in seminal quality; and aids stallions that have developed poor breeding habits or have been injured. The use of A.I. also prevents the transmission of infection and lessens the risk of injury to both the stallion and the mare. **The main advantage to A.I. is that the best stallion for your mare can be used irrespective of location.** Progressive breeders like to make full use of sires that have proven themselves able to pass on desirable characteristics to their offspring. Mares that cannot travel, mares with an injury not detrimental to foaling, and have problems with natural breeding can all benefit from A.I.

The disadvantages of A.I. can include less control over the whole breeding process; a stallions' semen not shipping well or problems with the shipper; short notice to collect stallion and ship semen; slightly higher expenses with either veterinary assistance collecting the stallion; or purchasing the equipment yourself; necessity of taking semen to ship to a far distance; training the stallion to the phantom mare; or having gentle mares available in heat for the stallion.

Stallion owners should realize that A.I. involves just as much work, if not more, than natural breeding. If both types of breedings are performed on a farm, the process becomes even more complicated. Also, as the A.I. process involves more people, including an airline or courier service, the potential for errors is greater. Realize also that financial gain due to increased bookings is a possibility, but may be offset by an increased amount of work and expenses.

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Homework First

A.I. REQUIRES MORE reproductive management of the mare, beginning with the mare's first heat cycle. A veterinarian examines the mare, usually daily, to predict ovulation for the optimal timing of insemination. The process of A.I. includes planning and management, which requires the timing of collecting and shipping of semen of the mare; artificial insemination of the mare; good communication with the stallion owner and the veterinarian; a slightly decreased conception rates compared to natural breeding, although some problem mares may have better success rates with A.I.; requires equipment/facilities for collecting the stallion and handling the semen; a mare

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(preferably in heat) available for teasing and collecting the stallion; good communication with the mare owner(s) for timing of collection and shipping of semen; and some individual stallions have semen which do not cool well and the result will be decreased fertility with transported semen or it cannot be used for transport of cooled semen.

Stallions considered for A.I. should first have a breeding soundness exam by a qualified veterinarian. This examination includes evaluation of overall health; vision; physical ability to mount a mare or dummy; external and internal reproductive organs; and semen quality. Specialized equipment is necessary to properly evaluate the semen, and it may involve having the exam completed at a veterinary school, or a veterinarian in private practice performing the exam by taking the semen to a local hospital or laboratory for detailed evaluation.

New Idea for an Old Breed

BREEDING ICELANDICS has been done the old-fashioned way since horses first came to the

island in the 800's. Stallions are turned out with a herd of mares for around a month. Some stallion owners there hand breed (bringing the stallion to the mare on a line), but this is less common. Artificial insemination is a new idea to the breed and works as well as it would in any other breed. But, natural breeding has been proven to work effectively due to high fertility rates and easy

births. There has not been much study in this field until recently, but this could possibly bring the option of widening the gene pool in different countries.

In Iceland horses are raised in herds of various sizes until around four years of age, then brought in for training. Stallions are sometimes used for breeding before they are trained, as two-year olds and three-year olds. Mares are sometimes bred before training. Foals are born out in the field without any human contact or interference. Occasionally is a breeder able to watch a birth, but birth complications are very rare.

Breeders try to keep their horses as nature intended. A breeding herd up to thirty mares, their foals and a stallion usually stay together for six weeks. The reward for this natural way of breeding is a fertility rate of around 85 percent, which is consistent with other breeds in the U.S. The International Federation of Icelandic Horse Associations (FEIF) regulates the breeding and registration of Icelandic Horses throughout the world outside of Iceland. One association from each country is allowed to represent the breed. The U.S. delegate is The

United States Icelandic Horse Congress (USIHC). The Icelandic Horse is the only breed with one breeding standard, one set of competition rules and one set of registry rules in all countries of residency.

Anne Elwell, USIHC Board Member and Breeding Committee Chairman, regulates breeding for U.S. Icelandic Horse owners. Elwell, who has bred four of her own mares using A.I., explains the advantages of using natural breeding as opposed to A.I. for the gaited horse owner. "A.I. has been used so rarely with Icelandic's. I cannot believe there are any statistics. I am not aware of a low conception rate." Elwell said. "In 1994, when I bred mares with frozen semen, I was told by the vets at New Bolton (of the University of Pennsylvania School of Veterinary Medicine) that it was "suspected" that mares developed an auto-immune



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response to the semen extenders. One of my mares was blood-tested before insemination several hours apart and indeed showed changes indicative of such a response."

"I consider A.I. for geographical considerations only," Elwell said. "This would include shipping the container of semen rather than the horse. (It) is simply a reproduction technique. If an extender is used, it is an alien substance in the mare's body."

"My mares, naturally bred, usually conceive on the first breeding," Elwell said. "They are very



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healthy using natural breeding. There are no inherited birth defects or intervention.” Elwell said. “Natural breeding is survival of the fittest for the Icelandic.” For questions related to breeding, contact Elwell at (914) 496-5561 or e-mail at icecong@aol.com.

Home Bred

CLOSER TO HOME, A.I. has had good results for years in the Tennessee Walking Horse. These horses evolved from the Narragansett Pacer, Canadian, Morgan, Standard bred, Thoroughbred and American Saddlebred through careful selective breeding. Famous for their signature smooth gaits, the flat walk and running walk Tennessee Walking Horse has developed into one of the smoothest riding horses in the world. But these days, they have a technological advantage.

Absaroka Tennessee Walking Horses nestles in the East Rosebud Valley just north of the Absaroka/Beartooth Wilderness Area. Over the mountains is Yellowstone National Park. The 1200-acre ranch, settled in the 1890's, straddles the East Rosebud River and boasts an artificial insemination laboratory.

The facility boards and artificially inseminates mares of any breed to far-away stallions. Their own training in artificial insemination and equine reproduction at

Colorado State University is supplemented by the services of an outstanding local veterinarian who helps with ovulation determination. The vet brings a portable ultrasound machine to the facility for verification of pregnancy at 14 days after breeding. The facility uses artificial insemination to reduce the breeding load of an older stallion and occasionally ships semen from the stallion.

Absaroka breeds mares of other breeds for clients using shipped semen and A.I. Dr. Dan Aadland, Ph.D., a rancher and freelance writer, operates Absaroka Tennessee Walking Horses, a breeding and training facility. Aadland has completed courses at Colorado State University on A.I., semen evaluation and shipping. He has written articles for various equine publications. “There's no difference that I know of between A.I. for gaited horses and for any other breed,” Aadland said. “The only things that vary are rules of the various breed associations.”

Aadland explains the advantages of using A.I. for the mare or stallion owner. “An occasional mare can be gotten in foal more easily with A.I.,” Aadland said. “Lack of direct contact between stallion and mare can make A.I. a safer way to go, and if done properly, little if any loss in fertility occurs.”

“From the mare owner’s point of view, consider A.I. if there’s some physiological reason the mare should not be naturally bred; the stallion is far away and it’s impractical to transport your mare to him,” Aadland said. “From the stallion owner’s point of view, A.I. can make the breeding load considerably easier if several mares are in heat at once, and getting set up to properly collect semen opens up a possible market in shipping cooled semen. Also, a mare that may tend to kick the stallion can

be handled with less risk using A.I.”

For more information on signing up for courses at Colorado State University in A.I., semen collection, and transport, contact the Equine Science Department, Colorado State University, Fort Collins, CO 80523 or web site at www.colostate.edu.

Get it in Writing

THE EXPENSES AND STIPULATIONS (contractual) agreement to a potential breeder depends on whether the potential breeder is the stallion or mare owner. Contracts should contain a live foal guarantee, just as they should for live cover, (stallion physically mount the mare), but it’s reasonable that this has some limits. Agreeing to re-breed



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the next season, if the mare does not take, seems reasonable. All expenses should be outlined. Provisions should be made for return of the shipping container. In order to maximize the success rate of A.I. it requires an understanding of the costs and commitment of the mare or stallion owner.

Contact your breed association or registry, stallion owner or veterinarian for more information to see if A.I. is a breeding option for your mare or stallion.

