

Broodmare Management

Broodmares represent a large financial and time commitment, even when the mare conceives quickly and maintains the pregnancy. If a mare has a problem conceiving a foal or maintaining the pregnancy, expenses and frustration can mount rapidly. Before making the decision to breed, the owner should carefully evaluate the economics involved and the justification for breeding the mare. Although there are examples of smaller breeders (owners of one to several mares) who are unusually successful with a single breeding, the majority of horse breeders do not realize large financial returns from the sale of their offspring. In fact, it is usually more economical to buy a young horse than to breed your own. Mare owners and their veterinarians should carefully evaluate the mare for conformation, suitability to purpose and to breed registry rules, performance ability, temperament, and reproductive soundness prior to breeding. If the primary justification for breeding is that the mare is not useful for any other purpose, then the mare owner should reconsider the breeding decision. However, if the owner decides the mare has qualities worth passing on to her offspring and is willing to make the commitment in time and money, then proper broodmare management can increase the chances of producing a healthy foal. Including your veterinarian in broodmare management can greatly increase the chance of success.

Start With a Healthy Mare

Good nutrition, appropriate parasite control and vaccinations, and regular hoof and dental care contribute to the overall health of the mare. Starting with a healthy mare will go a long way toward breeding success. The intended broodmare should be in a moderate to moderately fleshy body condition. In this body condition, her ribs can be felt but not seen, she should have slight fat deposits around her tailhead and withers, and her body parts should blend together smoothly. Research has shown that thin mares have more trouble conceiving and maintaining a pregnancy than those in a moderate to fleshy condition. While many species experience delivery problems when overweight, fat mares do not have this problem. However, obese mares may have decreased conception rates.

The nutritional requirements of open mares are the same as they are for any other mature horse. Many mares that are

not exercised heavily can maintain a fleshy body condition if they have free access to good-quality hay or pasture. Open mares that cannot stay in a fleshy condition on just hay or pasture should be supplemented with a grain ration formulated for mature horses at maintenance or light work.

Lactating mares usually need more energy and protein than most Alabama summer pastures provide; therefore, they should be supplemented with a grain ration formulated specifically for lactating mares. Mares that produce large amounts of milk or are hard keepers may need additional energy in their diets to help them maintain body weight during lactation and subsequent rebreeding.

Routine health care procedures should be performed on open and lactating mares. Mares should remain current on their vaccinations, and all farms should consult with their veterinarians about an appropriate parasite management program. Parasite management is not a one-size-fits-all approach. Instead, each farm should have an individual parasite management plan that depends on the number and age of animals present, the stocking density, and the environment. Mare owners also should check with their veterinarians and with the breeding farm manager about any additional vaccinations or health care procedures that are recommended or required before a mare can enter their facility. If the mare is traveling out of state for breeding, she will need a health certificate and a current negative Coggins test.

Hoof and dental care are critical components of broodmare management. Lamé mares (those with sore legs or feet) experience stress that may make it difficult to conceive and to maintain a pregnancy. Consult your farrier for appropriate hoof care. The mare's teeth also should be checked annually for dental problems that may reduce her ability to graze and chew feeds effectively. Your veterinarian can correct most routine dental problems with regular dental care.

If the mare recently has been used in an activity that requires a high level of fitness, such as racing, endurance, or a heavy show schedule, it is advisable to give the mare some time off before immediately switching her to the broodmare role. Fall and winter should give the owner ample time to slowly adjust the mare to a forage-based diet and pasture life, giving her time to prepare for the spring breeding season.

Before the breeding season, a mare should have a breeding soundness evaluation performed by a veterinarian experienced in equine reproduction. The veterinarian can examine the internal and external reproductive conformation of the mare, identify and correct some reproductive problems, and perform diagnostic tests. Uterine culture for infectious organisms and cytology (cell examination) can detect uterine infections that will prevent pregnancy, and a biopsy (tissue sample) of the uterine wall can evaluate the mare's probability of conceiving or maintaining a pregnancy. When these procedures are performed before the breeding season, many problems can be corrected so the mare can become pregnant during the breeding season. If the mare has severe problems with her reproductive tract, the veterinarian may suggest not breeding the mare. Foaling mares also should have a veterinary exam prior to rebreeding if they had a dystocia (foaling difficulty), retained placenta (sack surrounding the foal), or abnormal vaginal discharge after foaling.

Reproductive Tract Anatomy

Understanding the mare's reproductive tract anatomy or will help you discuss certain reproductive issues with a veterinarian or breeder. Many mare reproductive problems are related to poor reproductive tract anatomy or conformation. The basic components of a mare's reproductive tract are the vulva, vagina, cervix, uterus, oviducts, and two ovaries.

The vulva, vagina, and cervix are the three physical barriers between the uterus (where the fetus is located during pregnancy) and all the contaminating microorganisms in the environment. The vulva forms the first of these three physical barriers and must form a tight seal to prevent the introduction of unwanted air, bacteria, and viruses into the remainder of the reproductive tract. The ideal vulvar conformation is vertical, which prevents fecal and air contamination of the vagina. Poor vulvar conformation and old age can cause the anus to be pulled forward to the vulva so that feces are deposited directly onto the vulva, increasing the likelihood of reproductive tract contamination. A veterinarian will assess a mare's vulvar conformation during a breeding soundness evaluation and determine the need for a Caslick's procedure, which involves suturing closed part of the vulva to prevent fecal and air contamination of the vagina.

The vagina is a tubular organ connecting the vulva and the cervix. The vagina receives the stallion's penis during copulation and serves as the birth canal during foaling. The urethra, which empties the urinary bladder, opens into the bottom of the vagina so urine can be expelled. Poor reproductive conformation, old age, and other factors will sometimes allow urine to pool in the vagina (urovagina) rather than be expelled, leading to decreased fertility. A muscular ring within the vagina forms a seal that helps minimize entry of foreign material into the reproductive tract.

The cervix is a thick-walled, muscular organ that separates the uterus from the vaginal tract. The cervix is

tightly closed when the mare is pregnant or not in heat, and the end of the cervix that protrudes into the vaginal tract is located above the vaginal floor. During estrus (heat), secretory cells in the cervix produce mucous that lubricates the tract, and the cervix is flaccid and lies on the floor of the vagina. Muscular folds in the cervix are longitudinal, rather than transverse as in the cow, making the uterus of the mare relatively accessible for artificial insemination and veterinary procedures. The cervix is the final physical barrier before reaching the uterus; therefore, any cervical problem (tear from a large foal, scar tissue, etc.) will greatly impair reproductive performance. A veterinarian can assess the status of a mare's cervix during a breeding soundness evaluation and make appropriate recommendations. Cervical problems usually are not repairable.

The mare has two ovaries that produce and release the ovum (egg). The ovum is enclosed in a blisterlike structure, the follicle. Before ovulation (release of the ovum), the follicle grows and migrates to a specific area of the ovary called the ovulation fossa. Ovulation then occurs under the influence of certain hormones. The ovaries are connected to the uterus (womb) by tubular structures called oviducts or uterine tubes. The end of the oviduct closest to the ovary is funnel shaped and encloses the ovulation fossa. The ovum is fertilized in the oviduct, and it takes approximately 6 days for the fertilized ovum to travel the length of the oviduct and enter the uterus.

The mare's uterus is a hollow, muscular Y-shaped organ, consisting of two horns and a body, in which the embryo and fetus develop during pregnancy. After the embryo reaches the uterus, it will move around the uterine horns and body (trans-uterine migration) until approximately day 16 after ovulation. The embryo's movement is passive, depending on mild uterine contractions, but is critical for maternal recognition of pregnancy. In other words, embryonic movement throughout the uterus is how the embryo "signals" to the mare that pregnancy has occurred. After day 16, the embryo becomes stationary (fixed), and if pregnancy is maintained, the embryo will begin to attach to the wall of the uterus. Full attachment does not occur until approximately day 150 of gestation (pregnancy).

Reproductive Physiology

The successful broodmare owner should have a basic understanding of a mare's reproductive physiology and estrous cycle. Such an understanding will help you evaluate breeding options with your veterinarian and breeder. Mares are seasonally polyestrous, meaning that if not pregnant, they have regular estrous cycles during the breeding season. A mare's seasonality is regulated by daylight or photoperiod. Mares are long-day breeders, meaning their breeding season centers around the longest day of the year (June 21, summer solstice). Therefore, a mare's reproductive year is composed of an ovulatory/breeding season (April to October) and an anovulatory/nonbreeding season (October to April). The anovulatory season contains

a spring transition, a fall transition, and an anestrus period. Typically, most mares in Alabama begin having regular estrous cycles as the daylight hours increase in the spring (mid-March to mid-April). The first few heats in the spring during the transition period are often erratic and may not result in ovulation. Most mares will enter anestrus (stop having heat cycles) during the late fall and winter months. A mare's reproductive year generally follows the same timeline from year to year with some slight variations:

- (1) January – April: Spring (vernal) transition
- (2) April – October: Breeding season
- (3) October – December: Fall (autumnal) transition
- (4) December – January: Anestrus

Two commonly confused terms are estrous (an adjective) and estrus (a noun). The estrous cycle is the period of time from one ovulation to the next. Estrus refers to the period of time when the mare is sexually receptive to the stallion, also commonly referred to as being "in heat." The estrous cycle repeats approximately every 21 days throughout the spring, summer, and early fall if the mare does not become pregnant. During the estrous cycle, the mare is in estrus (heat) for 3 to 7 days and then in diestrus (out of heat) for 15 to 19 days. The mare is not receptive to the stallion during diestrus, and she ovulates (releases the egg from the ovary) approximately 24 to 48 hours prior to the end of the 3- to 7-day estrus.

A hormone is a chemical messenger that is produced by a ductless gland and that influences the function of a distant organ. Various hormones control the events in the mare's estrous cycle, which can be separated into two general phases, the follicular phase and the luteal phase. The follicular phase includes estrus (heat), and the luteal phase includes diestrus (nonheat). In the follicular phase, hormones prepare the reproductive tract for copulation, sperm transport, and ovulation of the follicle. In the luteal phase, hormones prepare the reproductive tract to accept and maintain the pregnancy. The luteal and follicular phases are controlled by hormones secreted from the anterior pituitary gland, which, in turn, are influenced through a feedback mechanism by the very hormones they control. For example, in the follicular phase, growth of the follicle is stimulated by a hormone from the anterior pituitary appropriately named follicle stimulating hormone (FSH). As the follicle matures, it produces estrogens. Increased estrogen concentrations in the blood cause FSH production to decrease (negative feedback).

In the follicular phase, FSH stimulates growth of the follicle. Estrogen produced from the developing follicle is the main female sexual hormone during the follicular phase and induces estrus behavior (heat). After a period of stimulation by FSH, the follicle ovulates (releases the egg) in response to another hormone from the anterior pituitary, luteinizing hormone (LH). The luteal phase begins soon after ovulation. Luteinizing hormone also causes the ovulated follicle to fill with specialized cells, the corpus luteum (CL); these cells begin producing another hormone,

progesterone, which prepares the uterus for pregnancy and helps maintain the pregnancy. If the pregnancy does not occur or is not recognized by the reproductive tract, the uterus will secrete a hormone, prostaglandin (PGF_{2α}), which destroys the corpus luteum, allowing the follicular phase to begin again.

If the ovum is fertilized, trans-uterine migration of the embryo throughout the uterine horns and body signals to the mare that pregnancy has occurred, preventing the release of PGF_{2α}. This allows the corpus luteum to persist and secrete the hormone progesterone, maintaining the pregnancy. At approximately day 16 of gestation (pregnancy), the embryo becomes stationary in one spot of the uterus (typically at the base of one of the uterine horns) in a process called fixation. Fixation should not be confused with the process of fetal-maternal attachment.

Fetal-maternal attachment is a very gradual process. The conceptus does not begin attaching to the uterus until about day 40 of gestation, and attachment is not complete until day 150. Early in the attachment process, the mare's uterus forms endometrial cups that secrete a hormone, equine chorionic gonadotropin (eCG), which assists in the formation of supplementary corpora lutea that help maintain the early pregnancy. Once formed around days 36 to 40 of gestation, the endometrial cups and the resulting eCG can prolong the supplementary corpora lutea and prevent a mare from returning to estrus for approximately 3 months after an early embryonic death or abortion. Together, the fetus and placenta (the sack that surrounds the fetus and attaches it to the uterus) begin producing and secreting high concentrations of progestins into the mare's circulation between day 30 and day 60 of pregnancy. By approximately day 100 to 140 of pregnancy, these progestins are sufficient to maintain pregnancy in mares without the need for corpora lutea. In fact, all corpora lutea degenerate by day 150 to 200 of gestation.

Timing of Breeding

Mare owners need to have some way of detecting or inducing estrus in their mares. Delivering the mare to the breeding farm immediately prior to estrus can reduce expenses at the breeding farm. Also, if the mare is going to be bred with shipped or frozen semen, it is crucial to accurately predict estrus and ovulation times to obtain the semen and inseminate the mare at the correct time. Without access to a stallion, owners must observe their mares closely for signs of estrus each day. These signs include increased interest in other horses, frequent urination, posturing (rump lowered, one or both hind feet supported by the toe only), and "winking" (frequent eversion of the vulva to expose the clitoris). Some mares will show estrus to a gelding or even to another mare.

A veterinarian can help pinpoint estrus through rectal palpation of the reproductive tract or through ultrasound imaging of the ovaries and uterus. A veterinarian also may prescribe various hormone treatments to induce estrus or

to help schedule the time of the next estrus. After the mare is in estrus and is inseminated with semen, the veterinarian can induce ovulation with a hormone injection so that the timing of the insemination is favorable for fertilization.

After ovulation, the egg has a relatively short life span for breeding purposes (about 12 hours), but the sperm can live in the mare's reproductive tract for 48 hours or longer. Therefore, the best option for fertilization of the egg is to inseminate the mare between 36 hours before ovulation and the time of ovulation. Breeding early after ovulation can result in pregnancy but is less effective than breeding prior to ovulation. Because the heat period varies both between mares and within the same mare, predicting ovulation time can be a problem without the help of a knowledgeable veterinarian who can either palpate or ultrasound the ovaries to predict when ovulation will occur.

Because of the erratic nature of the first few heats in the spring, the mare should not be taken to the breeding farm until late March or early April, unless she has been under an artificial lighting regimen. A daily artificial lighting regimen during the winter months will cause the mare's reproductive system to begin the early spring transition from anestrus to a cycling state in approximately 60 days. By 90 days after the start of an artificial light program, most mares are cycling in their usual breeding season patterns. An artificial lighting regimen should provide 16 hours of total light (any combination of natural and artificial light) daily. Two footcandles of light provide enough illumination for an artificial lighting program. A practical rule is to provide enough illumination to easily read a newspaper in the most dimly lit area of the pen or stall.

Hormonal Control

Many hormones involved in a mare's reproductive cycle and synthetic substances that act like these hormones can aid the horse breeder. Anyone handling hormones *must* understand that they also can affect humans. Women, especially pregnant women, should be extremely careful when handling these substances because they can cause abortions or other reproductive anomalies. Asthmatics should also be careful because some of the drugs cause constriction of human airways. When used inappropriately in the mare, they also can cause unwanted reproductive effects such as abortion, erratic estrus cycles, and unusual reproductive behavior. The safest recommendation is to use these substances only under the advice of a veterinarian. When used properly, they are a tremendous aid to broodmare reproductive management. The following is a list of hormones most commonly used in the horse breeding industry but is not a complete listing of the substances available to enhance mare reproductive success.

- **Prostaglandin F_{2α} (PGF_{2α})** causes luteolysis (destruction) of a functional corpus luteum, which lowers progesterone concentrations and returns the

mare to estrus. Mares must have a functional corpus luteum for PGF_{2α} to be effective. Therefore, the hormone should be used between 5 and 14 days after ovulation to induce estrus. Mares will come into estrus within 2 to 5 days after administration of the hormone and will have a normal estrus and ovulation. A single injection of PGF_{2α} also can be used to abort mares between days 5 and 36 after breeding. Prostaglandin F_{2α} is used widely by horse veterinarians and breeders, but it can cause cramping and sweating in mares. It is rapidly absorbed through human skin so it must be handled carefully.

- **Human chorionic gonadotropin (hCG)** acts much like LH, causing ovulation of the follicle. However, the follicle must be large enough to ovulate (at least 35mm in diameter) in response to hCG. Mares will ovulate within 48 hours of hCG administration if the follicle has reached the appropriate size. Human chorionic gonadotropin is widely used to synchronize ovulation with the stallion's breeding schedule or with insemination using fresh or frozen semen. With the appropriate use of hCG, many mares can be inseminated using only one or two doses of semen, greatly reducing breeding expenses. Reducing the number of inseminations also reduces complications from post-breeding endometritis.

Because hCG is a foreign protein, mares develop antibodies for it when it is used repeatedly over a breeding season. Therefore, the effectiveness of hCG is often reduced in mares that have received hCG several times during a breeding season. However, these mares still ovulate during estrus in response to their own LH.

An implant that acts much like the gonadotropin-releasing hormone (trade name – Deslorelin; Fort Dodge) is also available to induce ovulation in mares and can be used instead of hCG. The implant *must* be removed on the day of ovulation to prevent extended interovulatory intervals in mares that do not become pregnant.

- **Progestogens** have a number of uses in breeding management. The mare must have some ovarian activity for progestogens to work effectively. Progestogens are progesterone-like substances that suppress estrus and ovulation in mares, which makes them appealing for effectively blocking estrus in performance mares that are excitable or uncooperative during estrus. The mare will remain out of estrus as long as she is receiving progestogens, and the subsequent fertility of the mare is not affected by short-term use.

Progestogens often are given to mares to help predict when estrus will occur. Administering a progestogen for 10 to 15 days and then withdrawing it induces estrus in most mares 2 to 5 days after the withdrawal date. Ovulation usually occurs 7 to 12 days

after withdrawal. Oral progestogens also are used in mares during the late winter transition from anestrus to regular cycles to hasten their return to regular estrus cycling. However, recent research indicates that this may not be effective.

Another use of oral progestogens is to supplement mares with insufficient natural progesterone production, helping them maintain their pregnancies. Oral progestogens are administered for the first 100 to 120 days of pregnancy until the fetoplacental unit produces and secretes enough progestins into the mare's circulation to maintain pregnancy. Although widely used for this purpose, research also suggests questionable efficacy of this use. Oral progestogens are used to maintain pregnancy in ovariectomized mares that are used as recipients in an embryo transfer program. Progestogens can be absorbed through the skin, so breeders should always follow handling precautions when administering oral progestogens to mares.

- **Oxytocin** is a hormone produced by the posterior pituitary gland that stimulates uterine contractions. Veterinarians use oxytocin in conjunction with other therapies to help the mare expel a retained placenta after foaling. Mares that have difficulty expelling fluid from the uterus after insemination can be treated with oxytocin to enhance uterine contractions, which help clear fluid and inflammation from the uterus.

Common Issues in Broodmare Management

The following is a brief description of common issues in broodmare management. The topics are not all-inclusive, and broodmare owners are always encouraged to consult with their local veterinarians about issues in their specific locations.

Fescue Toxicosis

Tall fescue is a perennial grass found throughout much of Alabama, and a large portion of Alabama fescue is infected with the fungal endophyte *Neotyphodium coenophialum*. The endophyte is important for two main reasons: (1) it makes fescue more tolerant of harsh environmental conditions, and (2) it causes a wide variety of livestock disorders. The disorders relevant for broodmare owners are prolonged pregnancy, abortions, premature placental separation, retained placenta, agalactia (little or no milk production), and dystocia (foaling difficulties). There is even evidence that fungus-infected fescue reduces a mare's chance of conceiving. The best way to prevent such problems is to avoid endophyte-infected fescue pasture and hay. Mares scheduled for breeding should not be allowed to graze endophyte-infected fescue at least 30 days before breeding and at least 30 days after breeding. Also, mares should be removed from endophyte-infected fescue at least 30 days before the anticipated foaling date.

Persistent Mating-induced Endometritis

Insemination causes inflammatory reactions and fluid buildup in the uteruses of all mares. This inflammation and fluid must be cleared from the uterus before the fertilized egg reaches the uterus at approximately 5 to 6 days after ovulation. Most mares have no problem clearing the uterus naturally. However, some mares, especially older ones, may have trouble expelling fluid from the uterus. Veterinary techniques, such as post-breeding uterine flushes and oxytocin injections, can help promote pregnancy in these mares.

Twin Management

Twinning is one of the most common noninfectious causes of abortion in mares and, therefore, should be avoided. Equine twins result from a double ovulation (two eggs ovulated). Thoroughbreds, warmbloods, and draft horses tend to have a higher incidence of twin pregnancies, but all breeds are capable of twinning and should be evaluated for twins at the appropriate time. A veterinarian can rectally palpate and ultrasound your mare from day 14 to day 16 after breeding to diagnose a pregnancy and check for twins. If twins are present, there is a 90 percent success rate of carrying the remaining foal to term after manually destroying one of the embryos. If twins are not detected by day 14 to day 16 after breeding, or if the broodmare owner decides to wait, there are other options for a veterinarian to remove one of the twins. However, the success rate for the remaining twin decreases dramatically after day 22, so a veterinarian should examine a mare for pregnancy between days 14 and 16 after breeding.

Caslick's Procedure

Depending on a mare's vulvar conformation and foaling history, she may need a Caslick's procedure. The vulvar opening should be symmetrical, vertical, and have at least 50% of the vulvar opening below the pelvic floor. Poor vulvar conformation is frequently found in older mares that are thin and have previously foaled. Mares with poor vulvar conformation are more prone to pneumovagina (air in the vagina) and fecal contamination of the reproductive tract; both conditions hinder reproductive performance. Caslick's procedure prevents the recurrence of these problems by suturing closed part of the vulva. When performed properly on the right mare, Caslick's procedure can effectively enhance reproductive performance. Consult your veterinarian for more information about Caslick's procedure. However, remember that the vulva will require surgical opening by a veterinarian 2 to 4 weeks before the mare's anticipated foaling date.

Signs of Impending Parturition

The average gestation length is 335 to 342 days, but this can vary considerably depending on the breed, time of year, and many other factors. While it is imperative to keep breeding records with accurate dates, broodmare owners also need to know physical changes that will indicate a mare is near parturition (foaling). Also, most mares will foal between 8:00 p.m. and 8:00 a.m. Signs of impending parturition include the following:

- udder development with colostrum and udder “waxing”
- relaxation of vulva and pelvic ligaments resulting in an elongated vulva and sinking of muscles around the tail
- increased calcium in mammary secretions (detected with a water hardness or foal watch kit)
- separation from the rest of the herd

Dystocia

Dystocia is a difficult parturition (foaling) that requires human intervention. Equine dystocias are *emergencies* that endanger the mare’s and foal’s lives. Consult your veterinarian at the first sign of dystocia.

Retained Fetal Membranes

The mare should expel her fetal membranes (placenta) within 3 hours after she gives birth to her foal. Failure to do so is an *emergency* and can result in life-threatening consequences for the mare. *Never* attempt to manually remove the placenta. Manual removal can result in severe uterine damage or death. Call your veterinarian if your mare has not expelled her placenta within 3 hours.

Some Final Breeding Tips

Understanding the normal estrus cycle of the mare, working within the seasonal constraints of the mare’s cycle, and utilizing technological advances in equine reproduction will increase the horse breeder’s success. Below are helpful breeding tips.

- Start with a healthy mare in good body condition with good teeth and feet.
- Do not try to breed during the transitional period between anestrus and the breeding season. The practice of declaring the universal birthday for a horse born during a specific year as January 1 of that year often tempts horse breeders to breed mares as early in the year as possible. Most mares in Alabama do not start normal cycling until about mid-March. They may show transitional estrus before this time, but attempting to breed them before mid-March is usually unsuccessful. If you must breed early in the year, begin an artificial lighting program in the fall so that the mare cycles early the following year.

- Frequently tease by exposing the mare to the stallion to check for behavioral signs of estrus. Some mares will tease to a gelding or another mare, and some will show obvious behavioral changes associated with heat. If the mare does not seem to be cycling or you cannot detect estrus during the normal physiologic breeding season, consult your veterinarian.
- Breeding during foal heat (a fertile heat that occurs approximately 5 to 12 days after foaling) is more successful when there is a break between foaling and ovulation. This gives the uterus greater time for involution and repair before another pregnancy. Mares that are “early” on foal heat or that have dystocia or a retained placenta at foaling may not be good candidates for foal heat breeding.
- Avoid pasturing mares on endophyte-infected fescue or feeding them hay from such fescue. Endophyte-infected fescue causes a variety of serious reproductive problems in mares. There are safe varieties of fescue available, including endophyte-free fescue and fescue infected with a harmless variety of endophyte. If you do not know if your fescue pasture is safe, have it tested for toxicity. If it is toxic, you should remove the mares from the pasture.
- Inseminate the mare a minimal number of times. Certainly the mare will not become pregnant unless she is inseminated, but inseminating the mare every other day while she is in estrus may not allow older or more susceptible mares time to expel inflammatory products from the uterus before the embryo reaches the uterus. Use technologies available to accurately inseminate and to help mares clear inflammation from the uterus. A veterinarian experienced in equine reproduction can help identify the best time to inseminate your mare.
- Visit your veterinarian for an initial pregnancy exam 14 to 16 days after breeding. Have your mare’s pregnancy rechecked between day 30 and day 35 and at day 180.

Before breeding the mare, you should determine the overall goals of your breeding program. The desired type, quality, and marketability of the resulting foal should be evaluated before breeding the mare. Mares that cannot produce desirable traits in their foals should not be bred. Performance and production records of the mare and her close relatives, the predicted reproductive abilities of the mare, conformation, pedigree, disposition, and, sometimes, color should be considered before breeding the mare. You should remember that buying a young replacement animal is usually more economical than trying to breed and raise one. However, if you decide to breed the mare, keeping her healthy throughout the year will increase her chances of conceiving and producing a healthy foal.

After the mare is successfully bred, you must still properly care for the mare. As during the prebreeding period, proper nutrition, health care, and management of the mare are important to the health of the developing fetus. You should carefully evaluate your facility and ensure that it is a safe place to raise a foal and that it will attract potential foal buyers. Successful horse breeders continue to learn about new breeding technologies, bloodlines, and care and management of horses. Mare owners who enter the breeding business with a clear understanding of the economics involved in breeding and stallion selection and who carefully manage their horses should have a successful and fulfilling experience. The horse breeding business is a gamble, but conscientious owners can stack the odds in their favor.

Further Reading

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