

PROBLEM MARES

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The breeding season is winding down for all of us and is already completely over on some breeding farms. Hopefully, a majority of mares are now safely in foal. Everyone involved in the equine breeding industry would prefer to have every mare become pregnant and stay pregnant, but that is not realistic. It has been estimated that end-of-season pregnancy rates on well managed farms should approach and may exceed 90%. The rate of pregnancy loss is usually between 5 and 10%.

The most accurate measurement of fertility is pregnancy rate per cycle. General factors that may decrease pregnancy rate per cycle include abnormalities of the reproductive tract, age-related reproductive changes, obstetrical injuries, poor quality semen and managerial problems. Overall, pregnancy rate per cycle typically averages approximately 50%. Consequently, a farm breeding 100 mares would get approximately 50 mares in foal on the first cycle. Of the remaining 50 mares, half would theoretically become pregnant during the second breeding cycle. If the remaining 25 mares were bred a third cycle, again roughly 50% would conceive, yielding a total pregnancy rate after 3 cycles of 87.5%. Many factors, some of which are out of the control of the mare owner and even the stallion owner, contribute to the ultimate success of getting an individual mare pregnant.

Problem mares are those that fail to become pregnant or that lose their pregnancy once confirmed. Opinions vary, but this author does not necessarily presume that a mare may potentially have a reproductive problem if she does not become pregnant after the first cycle, unless there is specific evidence to the contrary. However, if a mare does not become pregnant after two or certainly three cycles, the breeding program for that mare should be evaluated. Sometimes the answer may be to switch stallions or the type of semen being used. The initial stallion may be able to settle a majority of mares bred, but not the specific mare in question. However, in many instances the problem, and therefore the answer, may not be clear. What is clear is that problem mares need to be managed as individuals.

All problem or barren mares (i.e. mares not pregnant at the end of the breeding season) should have a reproductive evaluation performed by a veterinarian. The goals of the examination are to 1) determine if a reproductive abnormality is present; 2) formulate a treatment plan, if needed, based on any reproductive abnormalities detected; 3) provide a prognosis for future fertility; and 4) develop a breeding management program for the future tailored to the specific needs of the individual mare.

A complete breeding soundness examination usually consists of a thorough breeding and medical history, evaluation of the general health of the mare, examination of the perineum (i.e. vulva area), speculum examination of the vaginal vault and cervix, palpation and ultrasound examination of the reproductive tract, collection of sterile swabs from the uterus for culture and cytology, and possibly an endometrial biopsy. Additional tests, such as hormone analysis, may be indicated on some mares.

In general, a management plan that is successful for many problem mares is as follows:

1. Make sure the mare is not infected. Culture the uterus and treat appropriately, if needed. Re-culture following therapy, if indicated.
2. Monitor the mare by ultrasonography as she comes into heat. Evaluate follicular growth and uterine edema patterns, and note the presence or absence of uterine fluid.

3. Mate, or preferably inseminate, as close to ovulation as possible. If given a choice, breed with fresh semen; the second choice would be cooled semen, and the third choice would be frozen semen.
4. Plan on only breeding once during the estrous period to limit the inflammatory response to insemination. Administer an ovulation-inducing agent such as human chorionic gonadotropin (hCG) or deslorelin to help time the ovulation.
5. Repeat the ultrasound examination for 1-2 days after breeding to confirm that the mare actually ovulated and to determine if significant fluid is present in the uterine lumen.
6. Treat uterine fluid aggressively with lavage and/or administration of oxytocin.

An accurate diagnosis, development of a rational treatment plan and careful breeding management will increase the success of breeding a 'problem mare'.