Stallion fertility is important because it means foals on the ground, a successful and profitable breeding season.

Afraid your stallion is a dud at stud? Well, don't be so quick to judge: Many factors influence stallion fertility, and some stallions might benefit select stallions.

Before making a judgment about a stallion's fertility, assess the whole picture. Look at the mares he's breeding, and have a veterinarian perform a complete breeding examination to identify the source of the pain. Then he or she can prescribe appropriate treatment, such as non steroidal anti inflamatory drugs (NSAIDs) or other medications.

Testicular function and fertility often decline as a stallion ages. The exact causes of age related fertility issues are not yet known, says Turner. However, the problems are associated with a progressive decrease in testicular size and a decline in semen quality. While this decline progresses, the stallion's semen quality can drop to the point where its fertility is significantly compromised. Some stallions might benefit from omega 3 fatty acid supplementation. Omega 3 fatty acid supplementation might be able to correct the problem, fertility usually rebounds, says Turner.

Sexually transmitted diseases can affect testicular function. For example, equine herpesvirus type 1 (EHV-1) and EHV-4 can cause testicular inflammation, which can result in reduced semen production.

Equine viral arteritis causes inflammation in the external male reproductive organs and sperm blocks. Although a large number of sperm are often lost in the gradient, the resulting high concentration of sperm can improve the longevity of sperm motility as well as pregnancy rates, says Turner. Improving semen quality by increasing sperm concentration can result in increased pregnancy rates.

Reducing a stallion's "book" also can help, she says. If a stallion is booked to 80 mares for one breeding season, he might be overburdened. Reducing the number of mares he services could improve his fertility, she suggests. She also recommends decreasing a stallion's "book" size in the fall, which allows a stallion to recover and maintain fertility into the breeding season.

If a stallion has problems with fertility and is not in breeding condition, a veterinarian might use a procedure called deep vagal insemination. Here the veterinarian injects a single sperm directly into an egg as it is being released from the ovary. The sperm is usually collected from the stallion's penis. Equine viral arteritis causes inflammation in the external male reproductive organs and sperm blockages. The sperm are aspirated from the mare's ovarian follicle to produce an embryo, which can then be transferred to a recipient mare. Advantages of this technique are that it requires very few sperm, and they don't have to be motile to fertilize the egg.

In some cases when stallion sperm numbers are low and the mare is not being bred using live cover (as is often the case in horse breeding), additional treatments can be used to improve the stallion's fertility. The Problem Sperm五一Sperm is one of these treatments. Here the stallion's semen is collected and centrifuged. During this process the sperm are packed into a soft pellet at the bottom of the centrifuge tube. Most of the seminal plasma can then be aspirated off the top of the pellet, and the sperm can be resuspended in semen extender. This process can vastly improve the longevity of sperm motility as well as pregnancy rates, says Turner.

Reducing book size can mean more sperm per insemination and might increase pregnancy rates. However, the procedure is expensive and offered by few clinics in the United States.

Genetics can also play a role in a stallion's fertility. If a stallion has a genetic defect, it might have fertility problems. She suggests that this is probably why some horse breeds or family lines tend to be more fertile than others. Turner says that poor genetics, then he might have improved fertility compared to other stallions, says Turner. However, if the stallion is not able to fertilize released the egg, says Turner, resulting in good pregnancy rates.

But keep in mind these rates aren't entirely up to the stallion. To determine his fertility, look at fertile mares he has bred under good management conditions, says Terry Blanchard, DVM, Dipl. ACT, professor at Texas A&M University College of Veterinary Medicine and Biomedical Sciences in College Station, Texas.

"Stallion fertility is one of the most important factors in the economic success of a breeding operation. To determine a stallion's fertility, you have to look at the fertility of the mares he has bred under good management conditions. If he has bred under good management conditions, his stallion fertility is good," Blanchard says. However, in these cases it might be possible to manage the stallion or process the semen to improve pregnancy rates. For example, if the stallion has a genetic defect, you might try managing the condition or trying to improve the stallion's fertility with other treatments.

Even if a stallion is genetically infertile, there are still things that can be done to help. Turner says that there is a tremendous amount of research being done to improve stallion fertility, including work on improving in vitro fertilization techniques. However, the technology is not yet available for practical use in the field. In the meantime, Turner suggests that owners of subfertile or infertile stallions try to improve the stallion's fertility by improving the management of his mare.

"The goal is to minimize the risk of infertility, whether it's genetic or environmental," says Turner. "The best way to do this is to control the environment where the mare and stallion are kept, and have a veterinarian perform a complete breeding examination. Before making a judgment about a stallion's fertility, assess the whole picture. Look at the mares he's breeding, and have a veterinarian perform a complete breeding examination to identify the source of the pain. Then he or she can prescribe appropriate treatment, such as non steroidal anti inflamatory drugs (NSAIDs) or other medications."