

Pass the cigar, THE BOYS ARE BACK IN TOWN

Science and good management can go hand in hand in restoring and sustaining the commercial stud career of the modern stallion.

WORDS BY JESSICA OWERS

It was March 1997, and Allen Paulson had a problem. The world's most famous racehorse, his racehorse, had retired to stud but couldn't get a single mare in foal. Thirty-five females had trod a path to Paulson's horse, each retreating as empty as when she had arrived, and Paulson was resigned to the obvious. "I'm quite certain he is infertile," he told a contingent of shocked journalists on March 7. "His sperm have no life."

Paulson's famous horse was Cigar, who retired the leading stakes earner and two-time American Horse of the Year. He was the Breeders' Cup Classic winner in 1996, and the inaugural victor of the Dubai World Cup. Cigar had tallied 15 Group 1 victories in the US, had a Timeform rating of 138, and he had amassed a staggering US\$9.99 million in prizemoney.

Paulson sold a 75 per cent share of his horse to Coolmore America for the reported sum of US\$18.75 million, and the new arrangement insured their investment against infertility for US\$25 million. Cigar was floated through the opulent gates of Ashford Stud in Versailles, Kentucky, and his book was full within days. He was the son of leading North American sire Palace Music, out of the Seattle Slew mare Solar Slew. Cigar possessed, therefore, the two most critical attributes of a new sire: proven performance and proven pedigree.

When Cigar's first 12 mares returned negative pregnancy tests, Paulson became very uneasy. It was an alarming situation for his horse, for while fertility problems in stallions just retired from racing were not uncommon, no pregnancies in 12 attempts was highly unusual. When that figure ballooned to 35, and extensive testing found Cigar's sperm to lack any mobility, Paulson and Coolmore admitted the likelihood that Cigar, the world's most famous thoroughbred, was completely infertile.

"Cigar was a good case of complete infertility," says Dr. Angus McKinnon, Australia's premier equine-reproduction specialist. "With some stallions, you can improve their fertility dramatically by managing them, and with some it doesn't make any difference at all. It's very individualistic. With Cigar, he had no mobility to his semen. That's not to say it was dead, but it was all non-moving." Dr. McKinnon, who consulted with

Cigar's specialists in 1997, admits that if artificial insemination was permitted throughout the racing industry, Cigar could have produced offspring.

The case of Cigar's sterility became the highest profiled infertility incident in recent memory, but it was not unique. Throughout history, the breeding industry has been disappointed by dozens of racetrack stars, including George Washington in 2007, and Triple Crown winner Assault in 1946. Throughout the 1980s, Nureyev proved himself a stallion manager's nightmare with constant subfertility. Dr. McKinnon believes that 11 per cent of stallions in the breeding industry are expected to have subfertility issues. "Around one in every 10, that's about right," he says. "But subfertility is relative because it has much to do with management. A subfertile horse can have almost normal fertility if mares are presented at the right time, and if his season is well managed."

Within the industry, there are two recognised fertility issues. Congenital infertility occurs when a horse is never fertile, as was the case with Cigar. Stallions in this category often present with smaller than normal testicles and, when analysed, semen often shows increased morphological (structural) abnormalities and decreased numbers of sperm. Dr. McKinnon states that congenital infertility is not common, though it is common enough that experts are needed across the industry to diagnose it and treat it.

The second fertility issue is testicular degeneration, which occurs in a normally fertile horse because of insult or trauma to the testicles. A kick, fever, drug usage and even transportation temperatures can lead to this category of problem, resulting in the stallion becoming subfertile. Fertility declines, and Dr. McKinnon states that insults and traumas can snatch away at least two sperm cycles in a stallion, or at least 130-odd days.

The theories behind fertility problems are complex and many. Some believe that over-racing invites issues, and this was tossed about when Cigar's case unfolded in 1997. For four years straight, Cigar rarely went for a month without a race, but Dr. McKinnon decries the suggestion that racing affects fertility. "Veterinarians who deal with breeding stallions don't believe that over-racing makes any difference," he says.

What does make a difference, however, is size. "Ninety-nine per cent of the time, the bigger the testicle the more fertile the horse," McKinnon says.

When it came to Cigar's first season in 1997, his infertility insurance policy decreed that to be announced fertile, he had to cover 20 mares twice and impregnate at least 60 per cent of them. Nowadays, expectations of fertility are higher. Fashionable, expensive stallions on well-managed farms are often expected to impregnate at least 80 per cent of the mares they cover, while the less fashionable, cheaper stallions who are forced to accept poorer quality mares may show lower percentages. "We have to be careful how we define this though. Per cent figures are per cycle," cautions Dr. McKinnon. "You can influence fertility by how you quote things, but the only accurate test of fertility in a stallion is the pregnancy rate per cycle."

Cigar remains the most publicised problem stallion in horse racing, but he has not been an exception. Here in Victoria, three very different stallions have recently reminded the industry that fertility issues are a real and present problem, but a problem that can be negotiated, successfully.

WANTED

The 2010 VRC Newmarket Handicap winner Wanted retired to stand duties at Widden Stud early last year. The classy, handsome son of Fastnet Rock, out of the Snippets mare Fragmentation, was the hottest freshman prospect for the season, but excitement fizzled towards regret when it was found that Wanted was a rig.

The term 'rig' is slang for cryptorchidism, a medical condition whereby one or both testicles of a stallion have failed to move into the scrotum. In Wanted's case, he had one dropped testicle, and Widden Stud ran into problems when securing fertility insurance. They released the horse, and Wanted was secured by Eliza Park after advice from Dr. Angus McKinnon.

"There did not prove to be a fertility issue at all with Wanted," says Greg Tobin, marketing manager for Eliza Park. "Any fears we had for his fertility proved to be unfounded. The trick to him was management. We didn't overuse him in his first season, and limited his book to 80 mares. In fact, he covered 75 mares, and his >

Wanted has managed to get the job done for Eliza Park without any medical treatment



WELL MANAGED: Wanted, who is a rig, covered his first book of mares last spring at Eliza Park without any problems.

PHOTO SEAN GARNSWORTHY

strike rate proved better than any other stallion on the farm."

Wanted was not given any veterinary treatment for his cryptorchid condition. He remains a stallion with one testicle, but Eliza Park's careful management policies have ensured the horse has completely normal fertility. Mares are presented at the right time, and in small numbers, and in 2011 he will again cover only 80.

"He has been very popular," says Tobin, "in the top half of Eliza Park sires. If breeders thought there were any issues with his fertility, they wouldn't have invested in him. But this year he will serve a book of very, very good mares, and his being a rig hasn't hurt him at all. He doesn't know he has only one testicle."

Wanted has managed to get the job done for Eliza Park without any medical treatment, and on the faith and advice that correct management and grounded ambition will achieve results. It has, and the son of Fastnet Rock will command \$38,500 a service this season.

FOREPLAY

If there is anything in a name, then Foreplay was very unlucky. The talented son of Danehill, out of the Jade Hunter mare Procrastinate, retired to Yarraman Park in 2006, but in four seasons his fertility slumped to zero. He produced 75 foals in his first crop, followed by 58 in his second and 24 in his third. In his fourth

infertile by 2009, he was worth going on with.

The case caught the attention of Brett Langan, co-director of C4M Laboratories in Melbourne, who were specialists in stem cell treatment. Foreplay was moved to Woodside Park Stud in Tylden, Victoria, and in 2010 he began a groundbreaking stem cell program. "We got him on July 1 and found he had only 20 per cent viable sperm," says Langan. "We extracted pluripotent stem cells from peripheral blood and treated them, then reinjected them back into the horse. After treatment, the very first mare that went to Foreplay got in foal."

The results were exemplary, immediately. Foreplay's sperm count on the first test was sensational, and on the second Langan found a very nice result. They tested the horse with 10 on-farm broodmares at Woodside Park Stud, and managed to impregnate six, and by the time off-farm mares began to arrive for the 2010 breeding season, Foreplay had normal sperm counts of between 80 and 90 per cent viability. "Everyone in the industry knew Foreplay was subfertile," says Langan, "but with regular stem cell treatment, this horse will have 100 per cent normal fertility."

For the coming season, Foreplay will receive stem cell treatment weekly. Standing for \$12,500 plus GST, it will take fewer than three covers to pay off the entire season's treatment. For Dean Harvey, Woodside Park Stud's bloodstock manager, the cost is worth it

because the results speak for themselves. "I was open-minded about the treatment, and based on Foreplay's results I would have no problem with doing it again if another horse was of that ilk," he says. Harvey confirms that Foreplay's book for the coming season is already three-quarters full, and will certainly be full by the start of breeding.

NEW APPROACH

There were few freshman sires in 2009 like New Approach, the chestnut son of Galileo who won the Group 1 Epsom Derby in 2008. He was an undefeated two-year-old, a Derby winner at three and victor of both legs of the Champion Stakes. He had performance and pedigree, and brought to Australia the classic staying lines that had made High Chapparral such a success. But New Approach also is a rig.

Standing at Darley's Northwood Park, New Approach was limited to a book of 72 mares for his debut season. He returned 55 live foals, with a 92 per cent fertility rate. In 2010, he again covered 72 mares. Darley has declined to comment to *Inside Breeding* on the management of New Approach, or how it has maneuvered around cryptorchidism, stating only that "New Approach has no fertility challenges". As with Wanted and Foreplay, it appears that keeping the numbers low each season has helped leapfrog the complex nature of a rig stallion. U



COMEBACK: Foreplay, pictured at Woodside Park, has had his stud career resurrected by stem cell treatment.



SHELLSCRAPE

HIGHLIGHTS

- Genuine colonial speed horse
- Stakes winning 2YO
- G1 winning 3YO
- Son of Dane Shadow – so a grandson of the legendary Danehill, out of a Snippets mare, out of a Vain mare
- Wonderful temperament



HELENUS

HIGHLIGHTS

- Three-times G1 winner
- Winner of the Caulfield Guineas – defeating Bel Esprit and Choisir, who are now both very successful sires
- Sire of G1 winner Cedarberg
- Currently the leading Australian sire in the winners to runners ratio



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