

Did You Know - Fertility Control - Part 3, by Marty Felix, Historian

The darting part of the Fertility Control Study was concluded in 2006, but we kept gathering data until 2011. Dr. Jason Ransom, our project manager for the study, analyzed the data and published the results in a 104 page scientific paper in 2012. Jason found that PZP was 90% effective in the three study areas. (It was 94% effective in the Little Book Cliffs.) By using PZP, he estimated that 215 foals were prevented during the study, saving taxpayers \$1,426,248. As far as PZP affecting horse behavior, social structure, and herd dynamics, the only finding that was remotely significant was that there was more mare interchange between bands. Research also confirmed that PZP is safe. The only adverse effect on mares darted with PZP was that some of them developed a nodule at the injection site. These are harmless and usually disappear over time. I am often asked if darting a pregnant mare with PZP will make her abort her unborn fetus. It doesn't. "The vaccination doesn't disrupt pregnancy, and the foals of treated mares are born healthy and fertile."

One surprise finding was that mares treated with PZP live longer (often 20 years and older). Body conditions increase, and mares have a better quality of life. Before using fertility control, most of our horses died between 16 and 18 years of age. Currently we have seven mares on our range between the ages of 21 and 26. By comparison, our oldest stallions are 17 years old, and there are only three of them.

The amount of "residual effect" was another surprise. During the study, 59% of the mares who received PZP in the three study areas experienced residual effect. In general, the more injections a mare receives, the longer it takes her to return to fertility. Example: Shadow was treated for three consecutive years, but she didn't return to fertility for another three years. She gave birth to Dash four years after her last booster shot. This is a trend that we are still seeing with most of the 98 mares that we have treated on our range since 2002. It's worth noting that we only had one "non-responder," and that was the bay mare Lady. Her immune system didn't respond to the vaccine, and no matter how many inoculations we gave her, she just kept having foal after foal.

In 2007, we were allowed to treat control group mares with PZP, and we got right to work! The darting team meets every February to select which mares we will dart that year. This is primarily based on horses' ages and genetics and how many offspring a mare has on the range. On average, we treat 20 mares a year in the LBCs. The number of "remote deliveries" is 372 as of this writing. A huge thank you goes out to all of the dedicated volunteer darters and BLM WH Specialist Jim Dollerschell who spend countless hours in the LBCs trying to find and then get close enough to dart the selected mares. It is often difficult, but it is always rewarding.

Before we began using PZP as a management tool, we were averaging 37 foals per year. Since 2004 when PZP began to take effect, we have averaged 17 foals per year. In the last 12 years, we feel we have prevented 240 foals. With an adoption rate of 70% during our last 12 roundups/adoptions, this means we prevented 72 horses from going to holding pens. The BLM now says that it costs \$50,000 to keep a horse in long term holding if it lives for another 15 years, so theoretically, we have saved taxpayers \$3,600,000 by using fertility control on our range.

Billie Hutchings and I, as volunteers, have continued to keep data on all of our horses. Between us, we have 17 lists and charts. We are learning more about the effects of PZP on our herd every year. We would like to thank those of you who share with us your horse sightings, pictures and other information. You are a tremendous help to us as we strive to gain more knowledge about our herd, in part so that the darting team can make good decisions about which mares to treat with PZP.