

Indian Lakes Facility  
Fallon NV 3-6-10

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Horse condition:

- After arriving at the Indian Lakes facility we walked through all the corrals with Dr. Sanford, Dean Bolstad, and John Neill. We discussed the progress of the horses, most of which had been in the facility for a month or more. There had been several foals born since our last visit. These young foals and their dams had been separated from the rest of the population, into their own pen, to protect the foals and to allow more individualized care. The foals seemed to be doing very well.
- A mare had just given birth at 8 AM when we arrived. She had been in labor for about 20 minutes, according to Dr. Sanford, who had been through the pens earlier in the morning. The birth was allowed to continue in the sand lot because separating the birthing mare from the rest of the herd would be difficult and dangerous for the mare and foal. A short time later, when we were at the chute, one of the hands came to tell Dr. Sanford that this mare had died suddenly. Though a necropsy was not completed at the time, such an acute death during foaling was most likely due to a ruptured uterine artery. This is a recognized complication with foaling and is nearly always fatal. The foal was dead at birth.
- The horses were in pens according to their sex, age, and the length of time in the facility. Other than the obvious necessity for separating males and females to prevent unwanted pregnancies, this is done to allow tailoring of the feed regimens to the horse's specific needs. For instance, the adult stallions tend to have the highest body condition score. So their feed eventually needs to be adjusted to provide fewer calories with the same bulk. On the other hand, pregnant mares have by far the greatest energy needs, tend to have the lowest body condition scores, and are the most prone to metabolic problems as their feed improves from the range. Their diet must be slowly brought on to level where their energy needs are met and where they can gain weight. Dr. Sanford explained the feeding plan and preventative medicine program for each group.

All the horses, from nursing mares, to weanlings, to adult stallions were in good shape and seem to have gained weight since our last visit. Only two horses had body condition scores of 3 or lower in the general population pens that we walked through. These were young males who had come to the facility in poor condition. They were to be separated into a hospital pen so that they would not have to compete at all for feed. To do this without having to stress the entire pen, they were to be slowly coaxed out a gate into the alleyway where they could be moved into another area. This had been attempted unsuccessfully, but was to be done again. It was pointed out that sometimes such projects took repeated attempts for safety reasons. The facility veterinarian also stated that there was a recovery pen of approximately 15-20 poor condition mares with a body condition score of 2-2.5 that had been segregated from population and are recovering.
- The horses were generally in very good condition. Feed and water were available, and they seemed relaxed and comfortable. It was striking how little attention the horses paid to us as we walked through the pens. Younger horses would

- voluntarily come right up to us to investigate, and even the adult males did not bolt when we came quite close.
- The mares and younger horses were being treated and identified first, as they had come to the facility in the poorest condition. Besides vaccinations (for rabies, tetanus, Eastern and Western equine encephalitis, West Nile Virus, and Strep equi) the horses are all deparasitized with Ivermectin, orally.
  - In the pens holding horses that had recently been treated, the majority of fecal piles held significant number of dead adult worms. A rough speciation of the parasites indicated both large stongyles (presumably Strongylus vulgaris) and small strongyles (cyathostomes), as well as ascarids (Parascaris equorum) were present. Apparently, this group of horses was considerably more heavily parasitized than the usual gathers. The significance of this for range conditions, body condition scores on arrival at the facility, and the potential for morbidity and mortality will be discussed further at the end of this report. It should be pointed out that to see this number of dead parasites this easily in fecal piles indicates a very serious level of infestation, since the majority of dead stongyles are digested and do not appear in the feces.
  - The horses were also infested with ticks. According to Dr. Sanford some of the horses, especially the younger ones, exhibited some degree of lethargy for one or two days after treatment for parasites. They also tended to scratch roll as the ticks died from the ivermectin. We did observe some of the post treatment animals that appeared to be a little dull, but it was not possible to determine if this was a result of the parasite treatment or the vaccinations. (Strep equi vaccines especially can cause local inflammation and a transient fever.) Apparently, this is typical of horses post processing and symptoms are mild, transient, and without longer-term health effects.

#### Facilities:

- The facilities seem to be working very well. There was no evidence of injuries from feeders or fencing. The hay feeding system was working very well, with hay being placed on a concrete slab to avoid excessive sand ingestion. It is clear that the contractor who manages the facility is constantly working on ways to improve the physical plant. To this end they are experimenting with some barriers on the outside of the hay feeding slabs to prevent any sand from being pushed into the feed.
- The lots were dry and free of mud, despite recent rains. The corrals are well graded to avoid puddle formation and swampy conditions. The sandy soil characteristic of the area helps a lot.
- I discussed the potential necessity for shade construction for the summer with staff. Based on the climatic conditions in high desert northern Nevada, it is not entirely clear that these would be necessary. The town of Fallon has numerous private horse farms and horses seem to do well in this environment with or without shade. At the same time it was agreed that access to shade in the summer might be a quality of life issue and, as such, should be investigated. We agreed that looking at current literature in animal science and veterinary medicine on the affect of shade on the well being of livestock would be investigated. I said that I

would do this research. Further, it should be noted that providing shade structures would not be without risk. Poles set up in the corrals to support the structures have the potential for causing problems when horses are herded in and out of the corrals, especially right after arrival. In addition, slatted structures can act as a roost for birds that could be a reservoir of salmonella. We will continue to research this issue. My own experience in the area is that even in the hot part of the summer, afternoon winds are common and really high temperatures do not last for a long time. The actual seasonal highs and lows should be investigated from weather service data.

- Following a tour of the corrals, I we were able to observe the processing of a group of young horses (weanlings to two year olds). This gave us an opportunity to see how the handing corrals, chute, and personnel worked with the horses. The working corrals, alley way, and chute worked very efficiently and were operated with a minimum of noise. The young horses were not prodded in any way to move through the alley into the chute. Modifications made to the squeeze chute's controls allowed the operator to have a complete view of each horses' position and behavior as it moved into the squeeze, without the horse being startled by the presence of personnel around the working area. Despite the fact that a number of the horses were quite wild, none received any injuries, nor were they ever in unsafe positions as they were being worked.

#### Horse handling:

- While we were observing the working process about 10 AM and 2 PM approximately 75 horses went through the chute area. They received vaccinations, deworming, and their freeze brands. They were also aged, had blood taken for EIA testing, and had a numbered collar placed for easy identification. Data on age, gender, color, and treatments were entered into a computer.
- A team of 5, including Dr. Sanford, did the herding, chute operation, and all the treatments. It was striking how quietly and efficiently the crew worked, and how calmly these unsocialized horses reacted to the whole process. It only took one man to move the horses from the back corral into the alley and chute system. This was the result of a very well designed series of gates and the evident skill of the operator. In discussions with the wrangler who was filling the alley behind the chute, it was clear that he had a great deal of experience, cared for the welfare of the horses, and had put a lot of thought into their handling. The horses were never crowded, none went down in the alley, and, in the rare instance one became agitated, he "backed off" allowing the horse to quiet down, rather than pushing it forward. In fact there was little or no coercion used by any of the staff at this facility to make the horses move through. There was not only no yelling or loud voices, but relatively little talking at all. The team was extremely relaxed, efficient, and professional.
- In the occasional instance when a young horse would rear in the chute or try to get out one of the side gates used to administer treatments, the experienced handlers would get the horse back into a safe position, without agitating it further. All

personnel made every effort to ensure the horse's safety and none of the animals was ever in a dangerous position.

- Electric prods were never used on any of the horses. In fact, I did not see an electric prod anywhere around the chute area or anywhere else on the premises.
- All vaccines were given with a separate needle and syringe. The dewormer was given orally in appropriate dosage. Few of the horses seemed to object to any of the treatments.
- It must be emphasized that this crew consisted of horsemen who were clearly skilled and experienced. They gave every consideration to minimizing stress in the horses and working them quietly and safely. The operation was adequately staffed and well organized, allowing things to move along rapidly, and minimizing the amount time that the horses had to be restrained. The instruments and working area were clean and uncluttered.

Other notes:

- *Streptococcus equi* infections can be a real problem in wild horse holding facilities. The Indian Lakes facility has a reasonable vaccination program in place to minimize the potential for the outbreak of this disease, though no equine respiratory vaccines are 100% effective, even in the best of circumstances. I doubt that it is possible to completely prevent Strep and influenza infections in this number of horses, no matter what. The preventative health measures in place are standard practice. One horse had an abscess when we visited three weeks ago. This individual was quarantined and treated. The abscess was cultured. It turned out to not be Strep equi and the horse is recovering. This is a very appropriate way to handle such a case.
- The degree of parasitism was surprising to me, given the dry range conditions from which these horses came. Parasite load can, of course, affect body condition scores on arrival at the facility. Further, a serious parasite burden could contribute to the problems experienced by the very weak mares noted on the previous report.
- A program of gentling (halter training, foot handling, etc) the young horses at the facility would be a great asset and improve their adoptability.
- Overall Impressions from this trip:
  - The facilities are working well, especially the processing area.
  - The staff at the facility is skilled and dedicated to the welfare of the horses.
  - The condition of the horses is improving.
  - The preventative medical program is adequate.
  - Generally, if horses are to be held in a feed yard like situation, the Indian Lakes facility and its staff does about as good a job as one could expect.