



FACT SHEET

Department of Animal Science, University of Connecticut

Effective Horse Management - Horse Management Series

Researchers Try to Answer the Question To Blanket or Not to Blanket

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To blanket or not to blanket? That is often the question! Some scientists from Norway decided to give horses the chance to answer that question.

In a paper entitled “Horses can learn to use symbols to communicate their preferences”, scientists taught 23 horses 3 different symbols that either meant “take blanket off”, “put blanket on” or “no change”. During the first 4 steps in the study, the horse was trained to approach and touch the display board with its muzzle and a short, sharp “Ya!” sound was given as a clicker (the researchers found it too hard to use an actual clicker wearing winter gloves). The horse was then rewarded with thin slices of carrot presented in a bucket with a raised bottom. Once the horse identified, approached and touched the board firmly without hesitation in 8 consecutive trials the researchers moved on to step 5. In step 5, only one display board was used at a time, like “blanket off” if and only if the horse had a blanket on. When the horse touched the display board, it got a food reward in the bucket and the meaning of the symbol was carried out straight away (such as blanket taken off). All horses were trained both with and without a blanket with consecutive repetitions to learn to associate each of the two symbols with a definite outcome, blanket off or on. At step 6 both “blanket off” and “blanket on” symbols were presented at the same time. The horse was rewarded with a treat only when touching the

board with the relevant symbol (e.g. “blanket on” if not wearing a blanket). The first two times the change symbols were presented at the same time with the relevant symbol placed closer to and in front of the horse to increase the chance of a “correct” touch. Later, board position was varied.

In Step 7, horses were given a heat test and then a cold test. The heat test was performed by the researchers putting a thick blanket on the horse so the horse became hot and checking that it would touch the display board with the “blanket off” symbol. The cold test was done on a separate day, keeping the horse outdoors in rain or chilly weather, without a blanket, until it began to show signs of thermal discomfort (tense body posture, tail tucked) and then checked that the horse chose the “blanket on” symbol. In Step 8, the horse had to touch the board with the relevant symbol without any error in the last 12 trials. At step 9, the third “no change” symbol was introduced. All horses showed interest for and touched the white board after it was introduced and the touch was rewarded with carrot slices but no change in blanketing. When a horse was judged to have understood the meaning of all 3 symbols, it was then presented with two display boards with relevant symbols, “no change” and either “blanket on” or “blanket off” and then retested with heat/cold tests with one session/day or two sessions with a ½ - 1 hour in between for the horse to feel the consequence of wearing or not wearing the blanket.

After training was completed the horse was tested under varying weather conditions from Feb to May and late August to December outdoors with or without a blanket on. The blanket was individual for each horse and varied with hair coat status and weather conditions. The horses were turned out for 2 hours then the horse to be tested was haltered and led to the separate testing area and given two display boards with the relevant symbols, “no change” and “blanket on” or “blanket off”. Any choice was rewarded with a treat in a bucket and after changing blanket status or performing a sham blanketing procedure, the horse was returned to its paddock.

All 23 of the horses (100%) successfully learned the task within 14 training days and could differentiate between each symbol. Horses of warmblood type needed slightly but significantly fewer training days than horses of cold-blood type probably because the warmblood horses had previous experience with positive reinforcement training. Horses chose to stay without a blanket in nice weather, and they chose to have a blanket on when the weather was wet, windy and cold. This study shows that horses had an understanding of the consequence of their blanket choice on their own thermal comfort, and they successfully learned to tell the researchers their preferences by using symbols.

Every day, new discoveries are made that are of benefit to the equine industry. Your equine extension specialists, professors and researchers are constantly working to improve horse health and well-being. I hope that you will reflect on this article and perhaps make a donation to an area of equine research, teaching, or outreach. Thanks, and have fun with your horses!

Source:

Mejdell CM, Buvik T, Jorgensen GHM, Boe KE. 2016. Horses can learn to use symbols to communicate their preferences. *Applied Animal Behaviour Science*. 184:66-73.

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