

## Sweets make young horses harder to train in Montana State study

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Young horses may be easier to train if they temporarily lay off the sweets, says a Montana State University study where two-year-olds wore pedometers, wrist watches and Ace bandages.

A commercial mixture of corn, oats, barley and molasses -- sometimes called "sweet grain" or "sweet feed" -- gives horses the glossy coat and lively spirit that makes them attractive to prospective buyers, said Jan Bowman, an animal nutritionist at MSU.

But the extra energy provided by sweet grain during the early stages of training made the horses in MSU's study more disobedient and fearful than horses that only ate hay, Bowman said. The grain-eaters spent more time resisting the saddle. They startled easier. They bucked and ran more during training.

Early training, which usually lasts about 30 days, gives young horses the foundation they need for more advanced training, Bowman said. They learn to move sideways on command, for example. They learn how to move their front or hind feet in any direction.

"Results suggest that trainers under time constraints could increase their training effectiveness during the early stages of training by not feeding excess dietary energy," Wade Black wrote in a paper that will be submitted later this year to the "Journal of Animal Science."

Black -- a horse trainer, instructor for the MSU Colt Starting class and

one of Bowman's graduate students -- came up with the idea for the study when he was an undergraduate in her equine nutrition class, Bowman said. She and Black then conducted experiments during the summer of 2007. Black presented their findings to the American Society of Animal Science in June this year. He is still analyzing some of the data to see how the grain affected the horses' adrenaline during training.

The study involved 12 closely-related quarter horses that came from one Idaho ranch, Bowman said. Black trained the horses for three weeks, five days a week at MSU's Miller Livestock Pavilion. Half the horses ate only hay. The hay was a mixture of grass and alfalfa. The other horses ate five pounds of sweet grain a day in addition to the hay. Both groups ate as much hay and drank as much water as they wanted.

Each horse wore a pedometer adjusted to its stride and attached with an Ace bandage to its left front leg above the knee, Bowman said. Each horse also had a combination wristwatch-heart monitor hanging from its saddle. The watch displayed minimum, maximum and mean heart rates detected by an electrode belt.

Black trained the animals for 30 or 40 minutes a day without knowing which animal had eaten grain and which one hadn't, Bowman said. She and Black then recorded heart rates and the number of steps the horses took during training. They scored behaviors like obedience, get-up-and-go and separation anxiety.

Horses that ate both grain and hay became more upset when they were separated from the herd, Bowman said. They whinnied more and were livelier and less submissive than the horses that ate only hay.

The study doesn't mean that trainers should keep grain away from horses forever, Bowman said. They might consider withholding it just during the early weeks of training.

"We don't want to give the impression that you should starve them in order to enhance their good behavior," Bowman said. "That's not the point of it."

Wade wrote in his paper that, "Horses, being ridden by less experienced riders, need to be calm and easy to handle, characteristics that may be enhanced by more effective early training."

Bowman noted that all of the horses in MSU's study gained weight during the study. It didn't matter if they ate hay alone or hay with grain.

Source: Montana State University

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