

Madison Olver

*Hay! How's Your Dust, Mold and Nutritional Value?*

The purpose of this experiment was to collect data and determine if the length of soaking time decreases dust and mold from hay without decreasing too much nutritional value. Dust and mold are aggravations of reactive airway obstruction in horses, and soaking hay is the only known way to help a horse be prevented from that disease. I took 12 core samples from 4 bales. I then soaked 3 core samples of grass alfalfa mixed hay for 10 minutes, then 3 core samples for 20 minutes, and then 3 for 30 minutes. I strained the water through a coffee filter and centrifuged the "liquid hay" to measure the amount of dust coming off the hay. I then took the solid hay samples and put them in to mold agar plates to grow mold. Finally, I sent the solid hay samples to Weld Laboratories to be tested for nutrition. Results showed that 20 minutes decreased the most mold and dust, though also the most nutrition. I believe that proves my hypothesis is correct because while nutrition was decreased the most, it was still hardly decreased more than the other soaked samples. It is also a decent amount of time to wait while the hay is being soaked.