

# Noah Halupa's Science Fair Project

Noah Halupa, age 10, won first place in the Jefferson Independent School District 4th grade Science Fair on March 13, 2008 in the Biological category. Noah showcased his family's Colonial Spanish Mustangs in this project.

In the introduction to "Down Let Your Grain Go Down the Drain", Noah discussed the history and different nutritional needs of these horses. In his experiment, he fed two Type O Colonial Mustang stallions three different types of grain with various protein contents for one week each along with free-choice hay. He collected manure samples from the horses on the 5th and 7th day of each week. He then tested the manure to see how much protein was excreted when the stallions were fed the three different types of grain.



*Noah and Willow Dance*

Noah found that All Stock 12% protein grain was the cheapest and most effective grain protein source for these horses. When fed All Stock, the horses excreted only 30 mg/dl of protein or less in their manure. When fed 14% protein Sweet Feed, the horses excreted 30-100 mg/dl of protein in their manure. When fed an oats/All Stock mixture, the horses excreted between 30-500 mg/dl of protein in their manure.

## PROTEIN EXCRETED IN MANURE

Horse Name	Week 1 Day 5	Week 1 Day 7	Week 2 Day 5	Week 2 Day 7	Week 3 Day 5	Week 3 Day 7
	All-purpose Pellets	All-purpose Pellets	Sweet Feed (horse)	Sweet Feed (horse)	Pellet/Oat Mixture	Pellet/Oat Mixture
Johnny	Trace	1+ (30 mg/dl)	1+ (30 mg/dl)	2+ (100 mg/dl)	2+ (100 mg/dl)	1+ (30 mg/dl)
Spirit	1+ (30 mg/dl)	Trace	2+ (100 mg/dl)	2+ (100 mg/dl)	4+ (>500 mg/dl)	2+ (100 mg/dl)

## COST COMPARISON

All Purpose Pellets	\$ 6.10 per 50 lb bag
Sweet Feed	\$10.25 per 50 lb bag
Oats	\$13.00 per 50 lb bag
Oat/Pellet Mixture	\$19.10 100 lbs \$9.05 per 50 lbs

Noah will be progressing on to the area competition in Mount Pleasant, TX. Noah is a member of the Tejas Horse Club and in 2007 he took first place at the AIHR/HOA National Show in the Frontier Costume and Pleasure classes.



*Noah and Willow Dance in the Youth Frontier Class  
AIHR 2007 National*