



# CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

<b>Name(s)</b> <b>Ryann O. Flach</b>	<b>Project Number</b> <b>J1306</b>
<b>Project Title</b> <b>Do Meat Goats See and Prefer Color? The Effect of Various Feed Color Containers on Meat Goat Consumption</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this study is to determine if meat goats are able to see color or if they are color blind. If they do see color I wanted to know whether there is a specific color or colors they prefer.</p> <p><b>Methods/Materials</b> I used 2 similar age and size meat (Boer) goats separated in barn stalls and over a 2 week period fed them daily the same amount of feed in 4 colored containers and 1 non colored container. 1 hour after each feeding period, I weighed remaining goat feed in each container using a gram scale to measure consumption data. In the third week of the study I used only two non colored containers for the control portion of the experiment.</p> <p><b>Results</b> Initial experiment results indicate that meat goats DO see color and MAY prefer to eat from specific colored containers. Goat 1 preferred to eat food from the colored containers in both the first and second weeks and preferred the red colored bucket. Goat 2 preferred the colored buckets in the first week and had a slight preference for the black, by just 1%, non colored bucket in the second week. My results conclude that this experiment would require further study in order to truly verify these results but the data concludes that there is an indication that goats do see and prefer color.</p> <p><b>Conclusions/Discussion</b> I am very involved in raising and breeding meat goats on our family farm. Good nutrition is essential to the health and future of our livestock and I think this research will benefit goat farmers like us to ensure proper food consumption without any added and unnecessary stress on the animals. When we take our goats away from their daily farm environment to offsite locations, such as fairs for show purposes, their feeding patterns often change and sometimes they stop eating and drinking water in this new environment. If keeping their preferred feed container color used at home the same as when the animals are offsite ensures that feeding patterns are not changed I think this naturally ensures proper feed consumption which results in good overall health for meat goats. It is also a big expense to make sure the right type of goat feed is fed to our herd and because of this investment it is important to make sure feed is consumed and not wasted. If proper nutrition and consumption can easily be supported by making sure the right feed container is used every time I think this experiment will be helpful for our family farm as well as others.</p>	
<b>Summary Statement</b> By testing the effect of various feed color containers on meat goat consumption I found that meat goats are not color blind and not only do they see color but there may be specific colors they prefer over others.	
<b>Help Received</b> I worked with the two meat (Boer) goats on my own during the experiment that are part of the herd raised on our family farm. I initially consulted our large animal veterinarian who approved my project idea.	