



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Sophie Colmignoli	Project Number J0504
Project Title Effects of Sugar on pH Levels of Fermented Meats	
Objectives/Goals In my project, I will drop the pH using starter culture which I will feed with sugar to create lactic acid which will drop the pH. My goal is to reach a pH of 5.2 in 1100 Degree-Hours using a chamber temperature of 22 degrees Celsius. My variable is the amount of sugar I need to add to achieve the goal in the time defined by the 1100 Degree-Hours. The degree-hour formula as defined by the AMI is, chamber temperature in Fahrenheit minus 60 equals degrees, then degrees multiplied by hours of fermentation equals degree-hours.	
Abstract	
Methods/Materials Equipment Used: 1. Scale 2. PH meter 3. Thermometer 4. Vacuum Machine 5. Mixing Bowl 6. Grinder 7. Sous-Vide 8. disposable Gloves 9. goggles	
Results I tested a total of 40 meat samples in four separate trails. I varied the amount of sucrose for each sample and documented the effect on pH.	
Conclusions/Discussion I found that I needed only between 0.25% - 0.75% added sugar to the meat to consistently produce the safe pH range and desired flavor. According to my results, a safe dried meat product can be obtained by adding less than 1% sucrose to the meat mixture.	
Summary Statement Mt project tested the pH impacts of various amounts of sugar added to make cured dried meat product.	
Help Received	