# CALIFORNIA STATE SCIENCE FAIR
## 2008 PROJECT SUMMARY

**Name(s)**
Erika Kern; Analiese Scrivano

**Project Number**
S0507

**Project Title**
## Is Going Green Good?

**Abstract**

**Objectives/Goals**
Ethylene gas production has been shown to affect the spoiling rate of produce (especially in high concentrations). This experiment examined the ability of differing containers to maintain the freshness of produce, possibly due to the container#s ability to diffuse ethylene gas. The hypothesis was that the Debbie Meyer Green Bags would keep the produce freshest for the longest period of time.

**Methods/Materials**
Materials used in this experiment included brown paper lunch bags, Debbie Meyer Green Bags, Zip-Loc bags, twelve apples, twelve onions, twelve bananas, and eight cups of precut lettuce. Three pieces of produce, or two cups of lettuce, were placed in each container. A control group, no container, was also done. All were observed for fourteen consecutive days and measured with a differentiated rating scale.

**Results**
The results showed that Debbie Meyer Green Bags kept the produce freshest for all of the tested produce. The brown paper lunch bags# and the Zip-loc bags# results varied depending on the type of produce, the ethylene gas production and the published sensitivity rate of the produce. Results are ongoing as further repetitions are being performed.

**Conclusions/Discussion**
Overall, the control group spoiled at the most rapid rate. The hypothesis was correct due to the Debbie Meyer Green Bags# Natural Oya# mineral form of Zeolite which absorbed and removed the ethylene gas that causes ripening and rotting. The other containers used in the project do not possess the same mineral that absorbs ethylene gas. More specialized equipment would need to be used to measure the ethylene concentration within these containers.

**Summary Statement**
The observation of ethylene gas production and sensitivity in a variety of produce when stored in various containers.

**Help Received**
Dr. Selgrath and Mrs. Wilke helped supervise the project. Our parents provided workspace in their kitchens.