



CALIFORNIA STATE SCIENCE FAIR

2015 PROJECT SUMMARY

Name(s) Liam T. Smith	Project Number J1022
Project Title Crazy Composting	
<div><div>Objectives/Goals To find out the best compost preparation method (chop, blend, or freeze) that will make compost worms the healthiest.</div><div>Methods/Materials I tested 12 compost bins with 50 grams of worms and 50 grams of bananas, apples and lettuce (all foods combining to make 50 grams), 14 oz. of vermicastings, and 14 oz. of coconut fiber to absorb excess moisture. I used old coffee cans for the bins. I chopped 150 grams of food and distributed them evenly across three compost bins. I froze and chopped 150 grams of food, and distributed them among another 3 bins. I did the same except blend 150 grams of food and distribute them among the next 3 bins. I put 45 grams of rice in 4 bins, and 25 grams of citrus in 5 different bins. One bin was the control, with only 50 grams of worms and no food. The experiment itself was over the course of 3 weeks.</div><div>Results The bins that had only banana, apples, and lettuce had generally low food weights, the worm weight didn't change much, but with varying egg numbers. The bins with rice had high food and worm weight, but low egg count. The bins with citrus had low food weights surprisingly, and very high egg counts, with low worm weight. The most successful bin was the bin with blended food. there was no food that we could measure, the worms had actually lost weight though, probably because they ate all of it at the beginning, and there was not much to eat from there on. It had an extremely high egg count, only one egg behind the highest, 105.</div><div>Conclusions/Discussion My hypothesis was incorrect. I expected the frozen food with added rice would make the worms the healthiest, but it turns out the blended food made them the happiest and healthiest. What most likely happened was that frozen food had less nutrients after it froze. In the blended bin, there was literally no food to weigh, and many eggs.</div></div>	
Summary Statement An exploration about what compost preparation method makes worms the healthiest.	
Help Received My Dad helped weigh food and count eggs and he helped pick out worms, helped review and revise project.	