



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

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| Name(s) Mariah G. Cox | Project Number J1807 |
| Project Title How Low Can You Sow? | |
| Objectives/Goals My objective was to see if vegetable seeds would sprout if planted at depths other than the depth recommended on the package. I also wanted to see if seeds planted on the surface, as in nature, would sprout and be successful. | |
| Abstract I divided a 10 gallon aquarium into quadrants. I divided each quadrant into 12 sections. I planted a different vegetable(radish, cabbage, lettuce, peas) in each quadrant at 4 different depths. I planted three rows thus the 12 sections. I planted 5 seeds of each vegetable except peas(only 3) in the bottom of each measured hole of the section. I used a flashlight to look and make sure that the seeds were at the bottom of the hole. I planted on the surface, at the recommended package depth, 2.5cm below the package depth, and 5cm below the package depth. I watered and observed daily and recorded data. | |
| Methods/Materials I divided a 10 gallon aquarium into quadrants. I divided each quadrant into 12 sections. I planted a different vegetable(radish, cabbage, lettuce, peas) in each quadrant at 4 different depths. I planted three rows thus the 12 sections. I planted 5 seeds of each vegetable except peas(only 3) in the bottom of each measured hole of the section. I used a flashlight to look and make sure that the seeds were at the bottom of the hole. I planted on the surface, at the recommended package depth, 2.5cm below the package depth, and 5cm below the package depth. I watered and observed daily and recorded data. | |
| Results The radishes and peas did not seem to mind the extra depth, they sprouted just fine. The lettuce and cabbage did mind the extra depth. They did not sprout well at the 5cm depth. The seeds all sprouted at the surface depth, but as they grew taller they tipped over and did not do well. | |
| Conclusions/Discussion The smaller the seed the more attention we should pay to the recommended depth on the package. The seeds only hold so much energy to get to the surface. The recommended depth is just that, it is recommended but not exact. No need to go to the garden with your ruler, just be reasonable. One reason we do not find vegetables sprouting everywhere on the ground would be that they are not successful in establishing a strong enough root system. | |
| Summary Statement Will vegetable seeds sprout at depths other than what is recommended on the package, including on the surface of the ground? | |
| Help Received | |