

What are the best practices for composting and do most Sonoma County residents follow them?



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Introduction and Background

In the past decade, composting has become more popular in today's society. Many people worldwide compost, but the real question is: what is the correct way to do it? Our research investigates the methods Sonoma County residents use to compost. Composting is the process of recycling various organic materials/waste to produce and fertilize soil. There are many environmental benefits to composting, such as reducing one's garbage, creating a natural fertilizer rather than using a chemical one, decreasing water use, and removing harmful pathogens in the soil. We began our research by analyzing the most effective methods used in composting. One of the main factors people are unaware of is, the location of your compost bin does not affect its productivity. However, stirring one's compost once a week is recommended to promote the flow of oxygen throughout the compost pile. Maintaining a good moisture level is important as well; adding leaves will help dry up the compost if it's too moist and adding water will help moisten the compost if it's too dry. There are many composting practices that most people aren't aware of, and these examples and our research demonstrate the most effective ways one could use their compost.

Research Methods

We gained information through surveying and residents of Sonoma County about their own practices for composting. Survey Questions:

- Do you separate your food waste from your trash?
- What do you put in your compost?
- Do you put bio gradable plastic utensils in your compost?
- Do you monitor the temperature of your compost bin?
- Do you use of your compost in your garden/yard?
- Do you worry about the performance of your compost?
- Would you like to learn more about composting due to the practices that we have found?

Visualizing Compost

These 2 images of compost are from Sonoma State's Environmental Technology Center. Image 1 is compost that is not yet active, and Image 2 is compost that is active. Compost from Image 2 is added to the compost in Image 1 in order to get compost to be active.

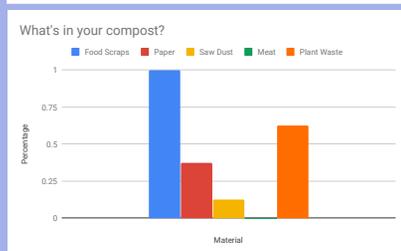
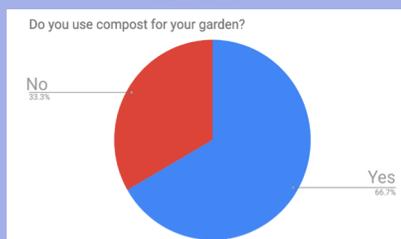


Image 1 (Before)



Image 2 (After)

Results



Additional Findings

- No one said they put compostable utensils in their bin.
- No one monitors their compost bin temperature.
- No one stressed over the performance of their compost bin.

Where do you put your compost?

- Green waste bin 37.5%
- In ground compost 25%
- Yard/Garden 37.5%

What does the ideal compost bin consist of?

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|-----------------------------------|------------------------------------|---|
| <u>Browns Mix (carbon based):</u> | <u>Greens Mix (Nitrate Based):</u> | <u>What to avoid putting in your compost:</u> |
| • Leaves | • Grass clippings | • Meat |
| • Straw | • Coffee grounds | • Bones |
| • Paper/cardboard | • Fruits/vegetables | • Dairy |
| • Sawdust | • Trimmings from plants | |

The Proper Ratio of Brown to Green Mix is 3:1

Discussion

Our research shows the typical individual is not engaged enough in their compost to have, or know, the proper ratio of brown to green mix; it is shown many engage in casual composting. It is shown that food scraps such as vegetables and fruits are tossed into the bin, as well as yard trimmings and paper. Composters often put compost back into their garden or green bin, which is enough for the average composter. It is apparent people are willing to learn more about the practice.

Conclusion

Although our survey shows many do not have all the proper materials and properties in their compost bin, they are still composting which is beneficial for soil health and reducing landfill waste. Many individuals engaging in composting are willing to learn about more effective techniques. To further our research, it would be beneficial to gather more in-depth information on people's compost such as taking nitrate and carbon levels, as well as temperature. This will help show how much green and brown waste people should have in their bins. It would also be beneficial to survey a larger area across Sonoma County in order to get more conclusive data.

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References

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