Nitrate Levels in Non-Organic and Organic Vegetables

Dew, Allison (School: Marian High School)

A large intake of nitrates can cause different health problems but, so can too little. The main source of digested nitrates come from green vegetables. One main factor that contributes to the amount of nitrates in a vegetable is, the use of nitrogen-containing fertilizers. These fertilizers increase the amount of nitrates in the vegetable it's used on. Since fertilizers are not used on organic vegetables, it is more likely that non-organic vegetables will contain a higher amount of nitrates. This experiment was performed to determine if non-organic vegetables truly have a higher amount of nitrates than organic vegetables. The hypothesis was, if more fertilizers are used on non-organic vegetables, then non-organic vegetables will contain more nitrates than organic vegetables. To test this hypothesis, broccoli, spinach, romaine lettuce, green zucchini and celery were tested, for both non-organic and organic. Each vegetable would be washed with distilled water, the control. Then it would be grounded up in a mini food processor. Distilled water would then be added to make a vegetable liquid. After it has been blended up into a solution, a filter would be used to filter out the liquid. Once only the vegetable liquid is left, the liquid would be tested with a nitrate test strip to get the results. The results supported the hypothesis. The results propose that non-organic vegetables do contain more nitrates than organic vegetables. This suggests that organic vegetables are healthier to eat than non-organic vegetables in regards to nitrate levels.

Awards Won: