Effectiveness of Lavandula Scents in Deterring Odocoileus virginianus and Cervus canadensis from Harming Agricultural Crops

Puckett, Cecily (School: Kamiah High School)

Each year deer and elk cause millions of dollars of damage to crops across Idaho. To reduce this impact, farmers are looking for non-lethal ways to keep them away. The purpose of this study is to determine the effectiveness of lavender essential oil as a deer and elk deterrent. Home gardeners use lavender plants as a deer and elk deterrent because the strong smell negatively affects their ability to sense predators, assess the environment, and smell food. If the lavender scent proves effective, farmers could plant a perimeter of lavender around their fields to deter deer and elk. I set up two experimental sites and two control sites. Each had a salt block attractant and a game camera to track deer and elk visits. Each experimental site had a diluted mixture of lavender essential oil poured in a three meter circle around the salt block to create a scent barrier. I compared the number of visits per day to the sites with the deterrent compared to the control. My data from both experimental sites show a lower average deer visitation than at the control sites; however, only one experimental site was shown to be significantly different than the control with a p-value of 0.01. In conclusion, I found that the data supported my hypothesis that lavender scent is an effective deterrent. In future work, I will look at the effectiveness of a lavender plant perimeter around a crop field as well as the possible impacts of lavender on cattle digestive systems.

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