

Distribution of species in a field



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The results of our research showed that the most daisies (common *Bellis Perennis*) grew in the middle-trampled area (48 daisy average), as opposed to our (my group's) original predictions that they would grow in the least trampled area (36.8 daisy average).

We were however correct when we predicted that there would be least daisies in the most trampled area (0.4 daisy average). I have concluded that there were most daisies in the area in which there had been a medium level of trampling because of three main reasons. Firstly, due to the relatively constant trampling on the ground, the daisies have been forced to adapt to their environment to survive.

Therefore they have grown more resistant to trampling and less liable to die or wither from the damage caused by it. They have likely done this in several ways including producing deeper and stronger roots, growing their leaves nearer to the ground and developing faster-growing and thicker stems. They are also shorter (61.4mm average) than the daisies in the least trampled area (65mm average); this is because they are less likely to be caught on shoes and they are stronger as they are less flexible. Secondly, the trampling of the ground churns it up and this causes it to be more aerated.

This means that there are more air pockets inside the soil, making it easier for the plant to grow. Lastly, the trampling spreads the pollen from the daisies throughout the area so that it pollinates surrounding plants and subsequently the seeds are dispersed from the flowers. These are trampled into the ground and, providing that they are not destroyed, will grow. In the less trampled area, there were fewer daisies because they were weaker and

did not need to reproduce as fast as the medium trampled area to survive. This meant they were more vulnerable to heavy rain or strong wind and had not adapted as well as those in the medium trampled area.

The ground was not churned up as much, and the seeds were prone to simply staying on the surface of the ground rather than being buried underneath. In the most trampled area, the daisies simply did not have enough time to grow and were destroyed by the large amount of trampling before they had a chance to become large enough to withstand the threat of the trampling. Even so, the large amount of trampling would likely overcome the defences of the daisies even if they had time to adapt. In conclusion, because the test was random it was perhaps more accurate and less biased than if we had chosen the exact places to place the quadrats, however there was still a certain amount of chance involved. The only way to overcome this would be to do this test many more times until the results in each individual area were reliable, although this could almost never be fully accurate.