**Title:**

*Does cattle dung determine differences in germination responses of grazing *increasers* vs *decreasers*?*

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**Body of Abstract:**

Grassland species are conventionally classified as *increasers* or *decreasers*, depending on their response to grazing in terms of presence or relative abundance. However, the response mechanisms to herbivore action in the two groups of species have yet to be clarified. One of these actions is dung input to the soil. In a phytotron experiment, seven pairs of species in the same family, all typical of Mediterranean grasslands but with different responses to grazing, were germinated and grown in different concentrations of a cattle dung leachate. We monitored germination percentage, T50 and radicle length after 3 and 5 days. The hypothesis was that the species in the *increasers* group performed more efficiently than the *decreasers* during the germination and/or establishment phases (longer radicles) in nutrient-rich environments that produce leachates. Results show that despite the variation between families in the germination indicators, the differences in these parameters between the two species types maximize in favour of *increasers* in intermediate leachate concentrations. Similarly, radicle length in the *decreasers* after five days was lower than in the control due to the treatment, while *increasers* were not affected. This shows that livestock dung input can have a substantial effect on the species composition of grasslands, increasing the colonizing capacity of *increasers* over *decreasers*. There are indications that the competitive ability and drought resistance capacity of *decreasers* are diminished by dung input.

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