

Project proposal example

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Background

Legume species are an important component of pasture systems. Legumes are good sources of protein and improve the nutritional quality of a pasture mix (Provenza et al., 2003). Legumes can establish symbiotic relationships with nitrogen-fixating bacteria and thus represent a sustainable source of Nitrogen for cattle nutrition. Legume species, however, often present growth requirements that may restrict their growth under stressful environments. For example, waterlogging (i.e., periods of flooding that result in anaerobic soil conditions) is a common challenge in many cattle operations. Waterlogging may hinder plant growth and ultimately cattle nutrition. However, there is previous evidence about genotypic difference in the tolerance to waterlogging (Malik et al., 2015). The objective of this experiment is to determine the effect of waterlogging on plant growth among three legume species.

References

- Al Imran Malik, Tadhamin Iskander Ailewe, William Erskine, Tolerance of three grain legume species to transient waterlogging, *AoB PLANTS*, Volume 7, 2015, <https://doi.org/10.1093/aobpla/plv040>.
- F.D Provenza, J.J Villalba, L.E Dziba, S.B Atwood, R.E Banner, Linking herbivore experience, varied diets, and plant biochemical diversity, *Small Ruminant Research*, Volume 49, Issue 3, 2003. [https://doi.org/10.1016/S0921-4488\(03\)00143-3](https://doi.org/10.1016/S0921-4488(03)00143-3).