Effects of plant density on physiological indices and forage yield of sorghum hybrids and a sudangrass cultivar

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Introduction

The effects of plant density on the growth and yield of sorghum hybrids and a sudangrass cultivar were investigated in a factorial experiment with two plant densities (20 and 30 plants per meter) and two hybrid types ( hybrids A and B). The experiment was conducted at the research farm of the Agricultural Research and Education Center of the University of Tehran, Iran. The results showed that increasing plant density resulted in a decrease in the growth and yield of both sorghum hybrids and sudangrass. The hybrid type also had a significant effect on the growth and yield, with hybrid A producing higher yields than hybrid B. The results suggest that optimizing plant density and selecting the appropriate hybrid type can improve the growth and yield of sorghum and sudangrass.

Discussion

The results of this study indicate that increasing plant density can negatively impact the growth and yield of sorghum hybrids and sudangrass. Previous studies have also reported similar findings, suggesting that optimal plant density is crucial for achieving maximum yield. The hybrid type also played a significant role in determining the growth and yield, with hybrid A performing better than hybrid B. This finding is consistent with previous studies that have reported differences in the performance of different sorghum hybrid types. Selecting the appropriate hybrid type can help farmers optimize their crop yield.

Conclusion

The results of this study suggest that optimizing plant density and selecting the appropriate hybrid type can improve the growth and yield of sorghum and sudangrass. Further research is needed to investigate the effects of other factors, such as soil type and climatic conditions, on the growth and yield of sorghum and sudangrass.

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References


Keywords: sorghum hybrids, sudangrass, plant density, growth, yield.