

Study of Fall Dormancy of Different Cultivars Alfalfa

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Abstract: The objective of this research is to evaluate the fall dormancy class of 45 alfalfa cultivars from native and abroad. L.R. Teuber method was used. Result showed that most native cultivars are high fall dormant. Efforts to research the winter survival of these alfalfa cultivars are underway.

Introduction

Alfalfa (*Medicago sativa* L.) is a famous forage grass in China with the largest planting area. Fall dormancy is a vital character of alfalfa and is related to regrowth, nature plant height and yield (CZ Wang, 2008). The objective of this research is to evaluate the fall dormancy class of 45 alfalfa cultivars from native and abroad. Then we will know which kinds of alfalfa cultivars are suitable at the research area.

Materials and methods

According to L.R. Teuber (1998) method, we used 11 standard varieties of alfalfa from USA as contrast. Completely randomized block design was used with six repeats, 30 plants every repeat every variety, planting distance 30 cm and row spacing 60 cm. Individual nature plant heights were measured approximately 21-30 days after final clipping in autumn. Nature plant height was considered as the distance from the soil surface to the top of the canopy. SAS V8 was used for statistical analysis.

Results

Results showed that among the native 21 cultivars Liangmu NO.1, Yumu NO.1, Gannong NO.5 and Zhonglan NO.1 are the medium fall dormant and nondormant. The fall dormancy of Liangmu NO.1 is the weakest and its fall dormancy class (FDC) is 9. FDC of the remainder 17 native varieties range from 1 to 4. Compared with the performance of the standard varieties the FDC of imported cultivars were consistent with the given.

Discussion

Research showed that most native cultivars such as Zhungeer Alfalfa, Aohan Alfalfa and Caoyuan NO3. are high fall dormant. This is consistent with the result given by XS Lu in 2003. However Liangmu NO1. and Yumu NO.1 expression nondormant regrowth in research area.

Conclusion

The results showed that most native cultivars have low fall dormancy class. The FDC of imported cultivars were consistent with the given.

References

CZ Wang (2008). Production Performance in Alfalfa with Different Classes of Fall Dormancy. *Acta Agronomica Sibica*, 34(1): 133-141