

植物生产层

30份老芒麦种质材料抗寒性研究

德 英, 赵来喜, 穆怀彬

摘要:

对30份老芒麦 (*Elymus sibiricus*) 种质材料进行抗寒性比较, 并筛选出老芒麦种内抗寒性强的种质材料。采用育苗盘育苗, 在对照 (28 ℃) 及低温处理 (5 ℃处理12 h) 下测定叶片的相对电导率。试验结果表明, 老芒麦抗寒性分为3级, 包括抗寒性强、较强、中等。筛选出抗寒性强的种质材料25份, 包括ES002、ES004、ES006、ES009、ES010、ES012、ES014、ES015、ES016、ES017、ES018、ES019、ES025、ES026、ES028、ES029、ES030、ES031、ES032、ES034、ES036、ES037、ES038、ES039和ES040, 占供试种质材料总数的83.33%; 抗寒性较强的种质材料3份, 包括老芒麦ES001、ES005和ES007, 占供试种质材料总数的10.00%; 抗寒性中等的种质材料2份, 包括老芒麦ES013和ES033, 占供试种质材料总数的6.67%。在 $P<0.05$ 时, 可分为17组显著差异性的组合; $P<0.001$ 时, 可分为17组极显著差异性的组合。可见, 老芒麦具有广泛的生态可塑性, 长期适应原生境, 抗寒性表现出差异。

关键词: 老芒麦; 抗寒性; 低温胁迫; 伤害率

Winter hardiness of 30 germplasm materials of *Elymus sibiricus*

DE Ying, ZHAO Lai xi, MU Huai bin

Abstract:

An experiment was conducted to screen the germplasm materials with high winter hardiness by measuring the leaf electronic conductivity of 30 germplasm materials of *Elymus sibiricus* seedlings growing at 28 ℃ and 5 ℃ for 12 h in the nursery plate. The results of this study showed 30 germplasm materials of *E. sibiricus* were divided into very high, high, medium winter hardiness. 25 Germplasm materials of *E. sibiricus* were very high winter hardiness and took up 83.33% of the all materials, including ES002, ES004, ES006, ES009, ES010, ES012, ES014, ES015, ES016, ES017, ES018, ES019, ES025, ES026, ES028, ES029, ES030, ES031, ES032, ES034, ES036, ES037, ES038, ES039, ES040. Germplasm materials of *E. sibiricus* with high winter hardiness were ES001, ES005, ES007, and occupying up 10.00%. ES013 and ES033 showed the medium winter hardiness and were 6.67% of the all germplasms. The winter hardiness of 30 germplasm materials of *E. sibiricus* was significantly different ($P<0.001$) and classified into 17 various combination, and these suggested that *E. sibiricus* showed the widely ecological plasticity, and developed different winter hardiness due to long time adaptation for the original habitat.

Keywords: *Elymus sibiricus* winter hardiness low temperature stress damage rate

收稿日期 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(425KB)
- ▶ [HTML全文]
- ▶ 参考文献PDF
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 老芒麦; 抗寒性; 低温胁迫; 伤害率

本文作者相关文章

PubMed

作者Email:

参考文献:

本刊中的类似文章

Copyright by 草业科学