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PEG胁迫对八棱海棠种子萌发及幼苗生理的影响

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摘要:

本文以八棱海棠种子为试材, 利用不同浓度PEG溶液模拟干旱条件, 研究了干旱胁迫对八棱海棠种子萌发及幼苗生理的影响。结果表明: 经PEG处理的种子, 其相对发芽率、发芽势、发芽指数以及活力指数均随着胁迫强度的增大而逐渐降低。幼苗SOD酶活性随着PEG浓度的增加而逐渐增大, POD酶活性则相反。MDA和脯氨酸含量随着胁迫强度的增大而增大, 说明PEG浓度越大对幼苗有更深伤害。

关键词: PEG胁迫 八棱海棠种子 萌发 幼苗生理

Effects of PEG stress on seed germination and seedling physiology of *Malus robusta*

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Abstract:

We investigated the influences of drought stress on the seed germination and seedling physiology of *Malus robusta*, which was simulated with different concentrations of PEG solution. Results show that the relative germination rate, germination potential, germination index and vigor index of the seeds processed with PEG decrease with the increase of stress intensity. SOD activity of the seedlings increases with the increase of PEG concentration, while POD activity demonstrates the opposite tendency. MDA and proline content increase with the increase of stress intensity. This indicates that higher PEG concentration cause worse damage to the seedlings of *Malus robusta*.

Keywords: PEG stress *Malus robusta* seed germination seedling physiology

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