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植物生产层

模拟碱胁迫对绿豆种子萌发与幼苗生长发育的影响

韩建明，张鹏英

摘要：

试验模拟研究了碱胁迫(NaOH)对绿豆(Vigna radiata)种子萌发和幼苗生长的影响，结果表明：随着pH值升高（pH值7.0、8.0、9.0、10.0、11.0、12.0），种子萌发率受碱胁迫的影响不大，但种子的萌发指数与活力指数则随着pH值的升高而降低，幼苗的主根长、侧根数及株高等形态学指标也随pH值的升高总体呈下降趋势；幼苗叶片中的丙二醛（MDA）、可溶性糖含量则增加。

关键词： 绿豆 碱胁迫 种子萌发 幼苗生长 丙二醛 可溶性糖

Effects of simulated alkaline stress on germination and seedling growth and development of mung bean

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Abstract:

In order to provide the guidance for mung bean (Vigna radiata) cultivation in alkaline soil, the seed germination and seedling growth of mung bean under simulated alkaline stress was studied. The results showed that the alkaline tolerance of mung bean was strong. With the increasing of pH value (pH 7.0, 8.0, 9.0, 10.0, 11.0, 12.0), the seed germination rate was not significantly affected. However, with the increasing of pH value, the seed germination index and vigor index reduced. The taproot length, lateral root number, plant height and other morphological indicators of seedlings were reduced, and the concentrations of malondialdehyde (MDA) and soluble sugar in seedling leaves increased.

Keywords: mung bean alkaline stress seed germination seedling growth MDA soluble sugar

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