

植物生产层

紫花苜蓿非秋眠型标准品种种子萌发期耐盐性评价

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摘要:

应用隶属函数法, 以发芽势、发芽率、根长、苗高、发芽指数、活力指数为指标, 对紫花苜蓿 (*Medicago sativa*) 非秋眠型标准品种种子萌发期耐盐性进行评价。结果表明, 50 mmol/L NaCl对紫花苜蓿种子萌发没有促进作用, 而在NaCl浓度高于50 mmol/L下, 紫花苜蓿发芽势、发芽率、根长、苗高、发芽指数、活力指数随着NaCl浓度的增加而降低。盐胁迫对种子萌发活力指数的影响大于对种子发芽率的影响。萌发期指标的隶属函数平均值综合评价表明, 非秋眠型紫花苜蓿耐盐性强弱顺序为: Dona Aan>Pierce>CUF101。非秋眠型紫花苜蓿在种子萌发期的耐盐性高于中苜一号。

关键词: 耐盐性; 紫花苜蓿; 非秋眠型标准品种; 隶属函数; 萌发期

Evaluation on the salt tolerance of fall nondormancy standard varieties of alfalfa at the germination period

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Abstract:

Membership function of fuzzy mathematic was used to evaluate the salt tolerance of fall nondormancy standard varieties of alfalfa (Dona Aan, Pierce, CUF101) at the germination period by considering germination power, germination percentage, root length, shoot length, the germination index and the vigor index as the evaluation indicators. This study indicated that low levels of salinity (0-50 mmol/L NaCl) did not increase seed germination. The increase of NaCl concentration reduced the germination power, germination percentage, root length, shoot length, the germination index and the vigor index when NaCl concentration was over 50 mmol/L. The effect of salt stress on the vigor index was stronger than that on the seed germination rate. Evaluation results of membership function of fuzzy mathematic showed that the salt tolerance of alfalfa varieties was Dona Aan>Pierc>CUF101>Zhongmu No.1.

Keywords: salt tolerance *Medicago sativa* fall nondormancy standard varieties membership function germination period

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