

研究论文

野生稻和非洲栽培稻抗稗草种质资源筛选和评价

张付斗, 郭怡卿, 余柳青, 陶大云

云南省农业科学院植物保护研究所, 云南昆明650205

收稿日期 2003-6-10 修回日期 2004-2-25 网络版发布日期 接受日期

摘要 以盆栽试验对20份野生稻和5份非洲栽培稻材料的稗草出苗率、距离稻株不同范围播种的稗草株高和干重的抑制效果进行评价, 并通过聚类分析和方差分析, 将其划分为6类。再以稻叶水提液培养稗草, 依其发芽抑制率、芽长抑制率、根长抑制率和发芽指数, 再次聚类并划分为5类。盆栽和浸提液试验中效果均好的3份野生稻S37、S68、S72和1份非洲栽培稻Y11002确定为具有化感作用潜力的资源; 盆栽试验效果好, 但浸提液生物活性差的2份(S113、Y11004)确定为竞争作用强的资源; 盆栽和水提液试验均表现较差的5份野生稻材料(S43、S47、S40、S73、S111)和2份非洲栽培稻(Y11005、Y11001)为非抗性材料。

关键词 [野生稻](#) [稗草](#) [抗性](#) [评价](#)

分类号 [S511](#)

Evaluation and Screening of Resistance to Barnyardgrass in Germplasm of Wild Rice(*Oryza sativa*) and African Cultivar

ZHANG Fu-Dou, GUO Yi-Qing, YU Liu-Qing, TAO Da-Yun

Plant Protection Institute, Yunnan Academy of Agricultural Sciences, Kunming 650205, Yunan

Abstract The resistance of 20 wild rice accessions (*Oryza sativa*) and 5 African cultivars to barnyardgrass [*E. crusgalli*] was studied in pot experiment. According to the effect of germination percentage of barnyardgrasses, and its plant height and dry weight of plant at different distance with rice seedlings, there were 6 types of wild rice clustered by means of cluster analysis and variance analysis. In bioassay the allelopathic effect of wild rice extracted solution from rice leaf on barnyardgrass germination, the length of bud and root and so on were measured, based on the data, 25 accessions of germplasm were into 5 types. The results showed that 3 wild rice accessions, S37, S46, S72, and 1 African cultivar, Y11002 were defined as the allelopathic potential germplasm, they caused significantly resistant effect in pot experiment and bioassay experiment; S113 and Y11002 were defined as strong competitive germplasm showing good effect in pot experiment, but low inhibition in bioassay experiment. 5 wild rice accessions, S43, S47, S40, S73, S111, and 2 African cultivars Y11005, Y11001 showed the least effect both in pot experiment and bioassay experiment, were defined as non-resistance rice.

Key words [Wild rice](#); [Echinochloa crusgalli](#); [Resistance to weed](#); [Evaluation](#)

DOI:

通讯作者 郭怡卿

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(215KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [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](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含“野生稻”的 相关文章](#)

▶ 本文作者相关文章

· [张付斗](#)

· [郭怡卿](#)

· [余柳青](#)

· [陶大云](#)