

农学—研究报告

芝麻栽培种与野生种种间杂交亲和性研究

刘红艳¹,赵应忠²

- 1. 中国农科院油料所
- 2. 中国农业科学院油料作物研究所

摘要:

以芝麻栽培种‘中芝14’ (2n=26) 为母本, 分别与野生种‘刚果野芝麻’ (2n=64) 和‘野芝1号’ (2n=64) 进行正反交, 结果表明: 栽培种与野生种杂交均可得种子, 其中‘中芝14’与‘刚果野芝麻’正交结籽率为2.16%, 平均每蒴粒数为0.85粒, 反交结籽率为95.14%, 平均每蒴粒数为2.16粒; ‘中芝14’与‘野芝1号’正交结籽率为8.21%, 平均每蒴粒数0.51粒, 反交结籽率为0.79%, 平均每蒴粒数5.43粒。将杂种F1植株与亲本比较发现, F1植株的形态偏向于母本。因此, 通过人工杂交的方法难以得到真正的杂交种。

关键词: 种间杂交亲和性

Studies on the Hybridization Compatibility Between Cultivated Sesame and its Wild Species

Abstract:

Two cross between sesame cultivars ‘Zhongzhi 14’ and its wild species ‘Gangguo’ and ‘Yezhi 1’ were studied. The results indicated that: we could obtain a few of seeds. The seedy ratio between ‘Zhongzhi 14’ and ‘Gangguo’ was 2.16%, the average of seeds per capsule was 0.85 seeds. The seedy ratio between ‘Gangguo’ and ‘Zhongzhi 14’ was 95.14%, the average of seeds per capsule was 2.16 seeds. In addition, the seedy ratio between ‘Zhongzhi 14’ and ‘Yezhi 1’ was 8.21%, the average of seeds per capsule was 0.51 seeds. The seedy ratio between ‘Yezhi 1’ and ‘Zhongzhi 14’ was 0.79%, the average of seeds per capsule was 5.43 seeds. Then planted F1 next year, and compared F1 with their parents, we could found that the configuration of F1 was almost the same as their mothers. So it was difficult to obtain true hybrid seed using artificial hybridization method.

Keywords: hybridization compatibility

收稿日期 2010-11-04 修回日期 2010-12-14 网络版发布日期 2011-04-25

DOI:

基金项目:

通讯作者: 刘红艳

作者简介:

作者Email: liuhuy@oilcrops.cn

参考文献:

- [1] 冯祥运, 张秀荣, 刘越英. 芝麻优良种质资源的深化鉴定与综合评价[J]. 中国油料, 1996, 18(3): 63- 66.
- [2] 石淑稳. 芝麻野生种与栽培种的交配能力[J]. 中国油料, 1993, (2): 18- 21.
- [3] 柳家荣, 屠礼传, 徐如强, 等. 芝麻的耐涝性与基因型及根系活力的关系[J]. 华北农学报, 1993, 8(3):82- 86.
- [4] Kabayashi,T. The wild and cultivated species in the genus Sesamum. Sesame: Status and Improvement. Proceedings of Expert Consultation, 1981, 29: 157-163.
- [5] Prabakaran, A.J. et al.. Observations on interspecific hybrids between Sesamum indicum and S. malabaricum.I. Qualitative characters .Sesame and Safflower Newsletter, 1995, 10: 6-10
- [6] Aiyadurai, S.G. et al.. Interspecific hybridization between S.orientale Linn.and S.laciniatum Klein, Indian Oilseeds J, 1962, 11(1): 71-72.
- [7] Amirthadevarathan, A.Studies on interspecific hybridization in Sesamum with special reference to the hybrid S.indicum×S.laciniatum Klein and its amphidiploid, Madras Agric.J. 1965(52): 362.

扩展功能

本文信息

- Supporting info
- PDF(503KB)
- [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

- 种间杂交亲和性

本文作者相关文章

- 刘红艳
- 赵应忠

PubMed

- Article by Liu,H.Y
- Article by Diao,Y.Z

- [8] Parthasarthy, N. et al.. Improvement of Sesamum crop in India, Indian J.Genet. Pl. Br, 1949, 7: 35.
- [9] 马光恕, 廉 华, 景艳丽. 蕃茄远缘杂交不亲和性的研究[J]. 吉林农业科学, 2009, 29(2): 45- 48.
- [10] 隋益虎, 陈劲枫. 辣椒属种间远缘杂交育种研究进展[J]. 热带作物学报, 2009, 30(4): 55- 563.
- [11] 雷家军, 代汉萍, 邓明琴, 等. 草莓种间杂交的研究[J]. 园艺学报, 2002, 29(6): 519- 523.
- [12] 魏治中, 闫新甫, 邓志峰, 等. 烟草与曼陀罗属间杂交育种研究[J]. 中国烟草科学, 2005(1): 1- 5.
- [13] 王爱云, 李 杓, 胡大有. 芥菜型油菜和黑芥与诸葛菜属间杂种的获得及其特性[J]. 作物学报, 2008, 34(9): 1557- 1562.
- [14] Sampson D R. Intergeric pollen-stigma incompatibility in the cruciferae[J]. Can J Genet Cytol, 1962, 4: 38- 49
- [15] 刘后利. 油菜的遗传和育种[M]. 上海: 上海科学技术出版社, 1984.
- [16] 王爱云, 李 杓, 胡大有, 等. 诸葛菜与芸薹属属间杂交亲和性研究[J]. 中国油料作物学报, 2006, 28 (1) : 7- 10.

本刊中的类似文章