



棉花学报 » 2011, Vol. 23 » Issue (2) : 172-177 文章编号: 1002-7807(2011)02-0172-06

[研究与进展](#)

[最新目录](#) | [下期目录](#) | [过刊浏览](#) | [高级检索](#)

[<< Previous Articles](#) | [Next Articles >>](#)

揭膜对陆地棉根际温度、各器官干物质积累和产量、品质的影响

宿俊吉, 邓福军\*, 林海, 宁新柱, 陈红, 李吉莲, 刘萍

新疆农垦科学院棉花研究所, 新疆石河子 832000

Effects of Uncovering Plastic Film on Rhizosphere Temperature, Dry Matter Accumulation of Organs, Yield and Fiber Quality of Upland Cotton

SU Jun-ji, DENG Fu-jun\*, LIN Hai, NING Xin-zhu, CHEN Hong, LI Ji-lian, LIU Ping

Cotton Research Institute, Xinjiang Academy of Agricultural and Reclamation Science, Shihezi, Xinjiang 832000, China

摘要

参考文献

相关文章

全文: [PDF \(461KB\)](#) [HTML 1KB](#) 导出: [BibTeX or EndNote \(RIS\)](#) [其它资料](#)

**摘要** 试验以2个陆地棉(*Gossypium hirsutum* L.)品种新陆早40号和新陆早45号为材料,研究了适时揭膜方式对陆地棉根际温度,蕾铃数,根、茎、叶、蕾铃干物质积累和产量品质性状的影响。结果表明:与全生育期覆膜相比,两陆地棉品种适时揭膜的根层 5, 10, 15 cm处根际温度均低于全生育期覆膜(6月下旬除外),平均低0.48℃;揭膜蕾铃数及根、茎、叶、蕾铃干重前期小于全生育期覆膜,而后期大于全生育期覆膜;揭膜的产量、单株结铃数、铃重、衣分、始节位高、麦克隆值和伸长率均高于全生育期覆膜,株高、纤维上半部平均长度、断裂比强度、均低于全生育期覆膜,其中小区产量、单株结铃数、纤维上半部平均长度、断裂比强度4个指标达到了显著水平。试验结果表明,揭膜相对于全生育期覆膜而言,前期发育较慢,而后期发育较快。因此,揭膜对延缓地膜棉早衰和增产具有重要作用。

**关键词:** 陆地棉 根际温度 揭膜 干物质积累

**Abstract:** With two upland cotton(*Gossypium hirsutum* L.)cultivars Xinluzao 40 and Xinluzao 45 as materials, the differences between the treatments of uncovering plastic film(UPF) and mulching plastic film(MPF) on several characters, such as rhizosphere temperature, dry matter accumulation(including roots, stems, leaves, buds and bolls), yield, and fiber quality were compared. The results showed that the rhizosphere temperatures of UPF were lower than that of MPF at the root depth of 5 cm, 10 cm and 15 cm separately, except the last ten-days of June, and the average temperature in the whole growth stage was lower than that of MPF by 0.48℃. Some characters of UPF were higher than that of MPF, including yield, boll numbers per plant, single boll weight, lint percentage, first fruit node, fiber micronaire and elongation rate, respectively, while other of the former's characters were lower than those of the later, such as fiber length, strength and plant height. And some of those characters' differences between the two treatments were at significant level, such as yield, boll numbers per plant, fiber length and fiber strength. The results suggested that the UPF's upgrowth was slower than the MPF's at the beginning of growth stage, but faster than the later at the last of growth stage. UPF is a very important and useful method for mulched cotton to delay premature senility and to increase yield.

**Keywords:** upland cotton rhizosphere temperature uncovering plastic film dry matter accumulation

收稿日期:2010-09-26;

基金资助:

农业部公益性行业(农业)科研专项(nyhyzx07-005);新疆农垦科学院引导计划项目(YXD2010-6);新疆农垦科学院青年基金项目(YQJ2009-06)

通讯作者: Dengf.j@sohu.com

引用本文:

宿俊吉, 邓福军, 林海, 宁新柱, 陈红, 李吉莲, 刘萍.揭膜对陆地棉根际温度、各器官干物质积累和产量、品质的影响[J]. 棉花学报, 2011,23(2): 172-177.

SU Jun-Ji, DENG Fu-Jun, LIN Hai, NING Xin-Zhu, CHEN Hong, LI Ji-Lian, LIU Ping. Effects of Uncovering Plastic Film on Rhizosphere Temperature, Dry Matter Accumulation of Organs, Yield and Fiber Quality of Upland Cotton[J]. Cotton Science, 2011,23(2): 172-177.

链接本文:

[http://journal.cricaas.com.cn:8082/mhxb/CN/1002-7807\(2011\)02-0172-06](http://journal.cricaas.com.cn:8082/mhxb/CN/1002-7807(2011)02-0172-06) 或 <http://journal.cricaas.com.cn:8082/mhxb/CN/Y2011/V23/I2/172>

### Service

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [Email Alert](#)
- ▶ [RSS](#)

### 作者相关文章

- ▶ [宿俊吉](#)
- ▶ [邓福军](#)
- ▶ [林海](#)
- ▶ [宁新柱](#)
- ▶ [陈红](#)
- ▶ [李吉莲](#)
- ▶ [刘萍](#)