

## 有机肥对铅胁迫下小麦生长的影响

乔莎莎<sup>1</sup>, 张永清<sup>1\*</sup>, 杨丽雯<sup>1</sup>, 裴红宾<sup>2</sup>, 孙红帅<sup>1</sup>

<sup>1</sup>山西师范大学城市与环境科学学院 | 山西临汾 041004; <sup>2</sup>山西师范大学生命科学学院 | 山西临汾 041004

Effects of organic manure on wheat growth under lead stress.

QIAO Sha-sha<sup>1</sup>, ZHANG Yong-qing<sup>1</sup>, YANG Li-wen<sup>1</sup>, PEI Hong-bin<sup>2</sup>, SUN Hong-shuai<sup>1</sup>

<sup>1</sup>College of Urban and Environmental Science, Shanxi Normal University, Linfen 041004, Shanxi, China | <sup>2</sup>College of Life Science, Shanxi Normal University, Linfen 041004, Shanxi, China

- [摘要](#)
- [参考文献](#)
- [相关文章](#)

全文: [PDF \(496 KB\)](#) [HTML \(1 KB\)](#) 输出: [BibTeX](#) | [EndNote \(RIS\)](#) [背景资料](#)

### 摘要

采用盆栽方法,研究了不同程度铅胁迫条件下施用有机肥对小麦生长的影响.结果表明:无论施肥与否,随着铅胁迫程度的加剧,小麦均表现出株高下降、次生根数减少、总根质量下降、总根长缩短、根系活力和吸收面积降低、根系SOD和POD活性下降、MDA含量增高的趋势,但在不同施肥处理下的下降幅度不同.施用有机肥可以不同程度地缓解铅胁迫对小麦生长的影响,延缓小麦根系衰老,促进根系发育与生长,最终使小麦产量增加,籽粒中的铅含量降低.

**关键词:** 小麦 有机肥 铅胁迫 根系

### Abstract:

A pot experiment was conducted to study the effects of organic manure on the wheat growth under different levels of lead stress. With increasing lead stress level, whether fertilization or not, the plant height, shoot dry mass, adventitious root number, root total length, root dry mass, root activity, root total and active absorbing area, and root SOD and POD activities decreased, and root MDA content presented an increasing trend. The decrement of the above-mentioned parameters differed with fertilization treatments. Applying organic manure mitigated the impact of lead stress on wheat growth to some extent, delayed the senescence of wheat roots, and promoted root development and growth, ultimately leading to the increase of wheat yield and the decrease of lead content in grain.

**Key words:** wheat organic manure lead stress root

### 引用本文:

. 有机肥对铅胁迫下小麦生长的影响[J]. 应用生态学报, 2011, 22(04): 1094-1100.

. Effects of organic manure on wheat growth under lead stress.[J]. Chinese Journal of Applied Ecology, 2011, 22(04): 1094-1100.

### 链接本文:

<http://www.cjae.net/CN/> 或 <http://www.cjae.net/CN/Y2011/V22/I04/1094>

### 没有本文参考文献

[1] 郑有飞,倪艳利,麦博儒,吴荣军,冯妍,孙健,李健,徐静馨. 太阳辐射减弱对冬小麦旗叶光合速率的影响[J]. 应用生态学报, 2011, 22(06): 1457-1464.

### 服务

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

### 作者相关文章