

研究论文

# 结瘤和非结瘤大豆同位基因系种子荚皮发育中POD和SOD活性的比较

许守民, 鲍晓明, 苗以农, 朱长甫, 刘学军

东北师范大学生物系, 吉林长春, 130024

收稿日期 1991-11-13 修回日期 1992-5-24 网络版发布日期 接受日期

**摘要** 1.大豆果实发育过程中种子和荚皮地过氧化物酶 (Peroxidase-POD,不同)和超氧化物歧化酶 (Superoxide Dismutase-SOD, 不同)活性均有变化。结瘤大豆的两种酶活性高于非结瘤大豆, 这种差异在POD活性上表现尤为显著。

2.SOD和POD均高于发育早期就基本合成齐全, 而POD同工酶随发育逐渐增多。

3.种子SOD和POD均高于荚皮中的活性, 但同工酶带数却以荚皮的为多,而且非结瘤种子和荚皮的两种同工酶条带均多于结瘤株的。这表明同工酶条带数与活性间不一定呈相关关系。

**关键词** [结瘤和非结瘤大豆,种子,荚皮,过氧化物酶,超氧化物歧化酶](#)

分类号

## Comparative Studies on the SOD and POD Activities and Their Isoenzymes in the Seed and Pod shell of Nodulating and Non-nodulating Soybean Isolines during the Course of Fruit Development

Xu Shou-ming, Bao Xiao-ming, Miao Yi-nong, Zu Chang-fu, Liu Xue-jun

Biology Department of Northeast Normal University, Changchun, 130024

**Abstract** 1.Changes of POD(peroxidase)and SOD (superoxide dimutase) activities were observed during the course of fruit development of 2 soybean isolines. Both enzyme activities in the nodulating soybean were higher than those in the non-nodulating lines, although the difference was more prominent with the POD activity. 2.The synthesis of the SOD isoenzymes in the seed were basically completed at the early stage of seed development, whereas the POD isoenzymes increased gradually as the seed developed. 3.The SOD and POD activities in the seed were both higher than those in the pod shell, but there were more isozymic bands in the pod than in the seed. And there were more isozymic bands of the 2 isoenzymes in the seed and pod shell of the non-nodulating soybean than in those of the nodulating soybean. This result indicated that there were no specific correlation between the isozymic bands and the isoenzyme activity.

**Key words** [Nodulating and non-nodulating soybean](#)

DOI:

通讯作者

扩展功能	
本文信息	
▶	<a href="#">Supporting info</a>
▶	<a href="#">PDF(0KB)</a>
▶	<a href="#">[HTML全文](0KB)</a>
▶	<a href="#">参考文献</a>
服务与反馈	
▶	<a href="#">把本文推荐给朋友</a>
▶	<a href="#">加入我的书架</a>
▶	<a href="#">加入引用管理器</a>
▶	<a href="#">复制索引</a>
▶	<a href="#">Email Alert</a>
▶	<a href="#">文章反馈</a>
▶	<a href="#">浏览反馈信息</a>
相关信息	
▶	<a href="#">本刊中 包含“结瘤和非结瘤大豆,种子,荚皮,过氧化物酶,超氧化物歧化酶”的 相关文章</a>
▶	本文作者相关文章
·	<a href="#">许守民</a>
·	<a href="#">鲍晓明</a>
·	<a href="#">苗以农</a>
·	<a href="#">朱长甫</a>
·	<a href="#">刘学军</a>