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干旱胁迫下化控种衣剂对大豆幼苗生长发育及保护酶活性的影响

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摘要: 以化控种衣剂(HK)和常规种衣剂(ND)对大豆种子进行包衣处理,分析了干旱胁迫下,大豆幼苗株高、植株干重、根干重、根体积及超氧化物歧化酶(SOD)、过氧化物酶(POD)活性的变化规律。结果表明:干旱胁迫后,化控种衣剂能促进幼苗植株干重、根干重和根体积的增加,抑制株高的增长和根冠比的增加,提高大豆叶片SOD、POD的活性。化控种衣剂处理能促进植株的生长速度,增加叶片的保护酶活性,提高大豆幼苗的抗旱性。

Abstract: In this paper, the effect of chemical control seed coating on the growth and the activity of protective enzymes of soybean seedlings were discussed under drought stress. Soybean seeds Suinong 10 were treated with chemical control seed coating(HK) and conventional seed coating(ND), the growth traits of plant height, plant dry weight, root dry weight, root cubage and the activity of superoxide dismutase(SOD) and peroxidase(POD) of soybean seedlings were determined. Compared with ND, Chemical control seed coating could increase plant dry weight, root dry weight and root cubage, inhibit the plant height and root shoot ratio, enhance the activity of SOD and POD under the drought stress. On the whole, Chemical control seed coating could promote plant growth rate, increase the protective enzyme activities of leaves and improve drought resistance of soybean seedlings.

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