

多效唑连用其它植物激素对水稻试管苗生长的影响*

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摘要 本实验采用继代多年的花培体细胞无性系Hu18再生绿芽(0.5mm)为起始材料, 研究多效唑(MET)与其它激素配合使用对试管苗的调控作用, 结果指出: (1)单独使用MET对绿芽生长有毒害作用, 除2, 4-D、GA₃外, MET与适宜浓度的其它激素配合使用才能发挥增苗、壮苗作用, 其中以MET与BA配合使用的培养效果最好, MET与NAA, C2H₄配合使用的效果次之; (2)MET与其他激素配合使用不但能降低植株高度, 促进根系发育, 而且可以延长试管苗的保存时间; (3)MET与乙烯利配合使用能加速绿芽成苗速度, 而其他激素配合使用则延缓绿芽成苗速度, 如与2, 4-D配合使用则延缓2, 4-D对绿芽的脱分化进程; (4)在本实验条件下, 以MET 2.5mg/L+BA2mg/L+NAA 0.2mg/L配合使用有利根芽的协调生长。本文还从植株干物质累积, 叶细胞结构, 细胞活力等方面进行了探讨。

关键词 [多效唑, 试管苗, 激素](#)

分类号

The Reguaration Role of MET Combined with Other Hormones on Regenerated Plantlet of Rice*

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Abstract

The current paper deals with the effect of MET with plant hormones on the growth of rice regenerated plantlets derived from Hu18 regenerated green shoots(0.05cm) that have been subcultured for several years. The results are as follows: (1) Application of suitable concentration of MET with plant hormones (except 2,4-D, GAs) can obviously enhance the green plantlets formation, among them 6-BA has the best effect followed by MET with NAA and Ethrel; (2) Application of MET with 6-BA, NAA, IAA and Ethrel can greatly reduce the height of regenerated plantlets and strengthen plantlets; (3) Application of MET with other plant hormones will defer the process; (4) Application of MET with NAA, IAA and Ethrel can benefit the root formation and strengthen the root; (5) MET with 2,4-D deferred the redifferentiation of green shoots resulting from 2,4-D; (6) It is recommended that MET 2.5mg/L with 6-BA 2mg/L and NAA 0.5mg/L would promote the growth of shoots and roots. This paper will also discuss MET regulation mechanism in terms of plant dry matter accumulation, cell structure and cell activity.

Key words [Multi-Effect Triazole](#) [Regenerated plantlet](#) [Hormones](#)

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