

园艺—研究报告

非洲菊离体叶培养诱导不定芽研究

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摘要:

为探寻非洲菊离体叶片培养的不定芽再生条件,完善非洲菊离体叶片的不定芽再生体系,以不同解离方式(叶自株从基部撕脱、叶自株从基部剪切、叶柄剪半)的离体叶为外植体,进行不同激素浓度配比的试验。结果表明,除叶柄剪半的外植体无不定芽再生外,另2种离体叶在叶柄基部均有器官型再生不定芽和器官发生型再生不定芽。自株从基部撕脱的离体叶于1/2MS+KT 5 mg/L +NAA 0.1 mg/L +蔗糖30 g/L的培养基中,器官型不定芽的直接再生率最高达60%~70%。再生比例为1~2,器官发生型再生率20%~30%,再生比例1~2。器官型不定芽再生主要集中在接种后4~12天的时间段内,而器官发生型不定芽形成主要集中在接种后12~24天的时间段内。若将KT换成BA的不同浓度,则仍以自株从基部撕脱离体叶的器官型再生率最高达60%~70%,再生比例4~5,器官发生型再生率为50%~60%,再生比例为2~3。试验表明:BA和KT二者同属细胞分裂素类物质,二者浓度上的变化对不定芽再生影响不大,而二者种类不同对不定芽再生差异很大。

关键词: 诱导

In vitro Leaves Culture and Regenerate Adventitious Shoot on Gerbera jamesonii

Abstract:

In order to explore In vitro gerbera leaves culture about adventitious shoot regeneration, improve adventitious shoot regeneration system of gerbera leaves in vitro. Adventitious shoot regeneration from detached leaves: the effects of factors on adventitious shoot formation on leaf explants of gerbera were examined, including the detaching pattern of leaf explants, basal medium and plant growth regulation. The results indicated that adventitious shoot formation occurred at the base of leaf petioles (detached and cut off from stock plant), leaves with petioles shortened to one-half in length did not form adventitious shoots, only form callus. Detached leaves which grown on half-strength MS containing 5.0 mg/L KT and 0.1 mg/L NAA medium formed adventitious shoot as follows: organ type regeneration rate was up to 60%~70%, organ type regeneration ratio was 1-2, organ occurring regeneration rate was 20%-30%, organ occurring regeneration ratio was 1-2. Organ type adventitious shoot formation from detached leaves mainly occurred during 4~12 days after inoculation of leaves detached from stock plant, and adventitious organ occurring adventitious shoot formation from detached leaves mainly occurred during 12-24 days after inoculation of leaves detached from stock plant. The culture medium supplemented with BA was more effective than KT. If the different concentrations for BA and KT, organ type regeneration rate were up to 60%-70%, organ type regeneration ratio was 4-5, organ occurring regeneration rate was 50%-60%, organ occurring regeneration ratio was 2-3.

Keywords: induce

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