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Qamar Uddin Ahmad

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CHAPTER 18

EFFECT OF DIFFERENT GROWTH REGULATORS ON SHOOT PROLIFERATION OF GARLIC (*ALLIUM SATIVUM* L.)

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Shoot formation of garlic (*Allium sativum* L.) tissue culture was studied in Murashige and Skoog (MS) and Gamborg's basal medium (B5) which are supplemented with a different combination of growth hormones namely 6-benzyl aminopurine (BAP) and α-Naphtaleneacetic acid (NAA) with and without cold pretreatments A stem-disc of shoot tips was used as explants for the induction of garlic shoot formation in the six weeks period.. A number of shoots, bulbs and fresh weight of bulb were observed. The shoot and bulbs formation were rapidly induced via organogenesis for the cold-pretreated bulbs at 4°C grown in a half MS media which contained 0.1 ppm of BAP in combination with 0.1 ppm NAA. Apparently, the induction of shoot and bulbs of garlic were influenced by temperature, hormones composition and nitrogen sources.

Introduction

Garlic (*Allium sativum* L.) is vegetatively propagated plant and sexually sterile and seedless. It has long been used as cooking spice and medicinal plant. Garlic has been used traditionally for the treatment of gastro intestinal problems as well as anti bacteria. Recently, it