03-2-10

Regeneration of Zucchini Inbred lines

Sung Jegal*, Hyun Wook Kang, Yoon Sup Shin, Seung Gyun Yang and Chee Hark Harn

Biotechnology Center, Nong Woo Bio Co., Ltd., Jeongdan, Ganam, Yeoju, Kyonggi, Korea

Objectives

This study is to investigate regeneration efficiency of Zucchini genotypes which are presently used for developing commercial varieties. The line that shows the highest regeneration rate will be used for transformation.

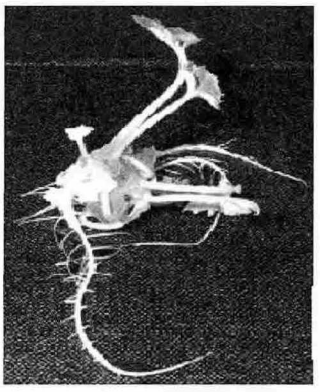
Material and Methods

1. Material:
   Nine Zucchini inbred lines (*Cucurbita pepo* L.); Cotyledon explants of 3-4day old seedling.
2. Methods:
   Regeneration medium: MS (B5) medium + 0, 1, 2, 3, 5, 10mg/l BA; cotyledons were cut by half and the lower part of the cotyledons containing petiole (upper 5mm) were used for explants.

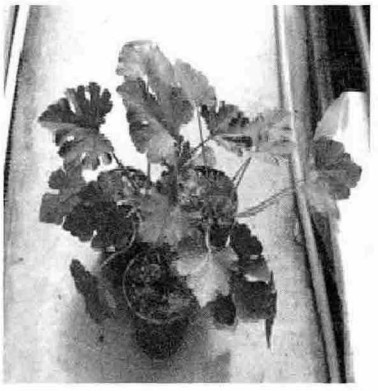
Results and Discusstion

Approximately 3-4 weeks after culturing the explants on the regeneration medium, shoot and bud were emerged from the edge between cotyledon and petiole. The optimal condition for regeneration was MS (B5) medium supplemented with 1mg/l BA, although a little bit variation was present among the lines. Out of 9 Zucchini lines, 5003-1 was chosen for regeneration because it showed the best shoot formation and elongation phenotypically. Interestingly, addition of IAA and BA in elongation and rooting medium did not affect the root development.

4~5 weeks old



rooting



1 month after acclimation

* Corresponding author: Chee Hark Harn; 031-883-7055; chharn@nongwoobio.co.kr