

Improved Banana Production in Cambodia

Cheang Hong

Faculty of Agronomy, University of Agriculture

Abstract

Diseases are main constraints for banana production in Cambodia. The utilization of conventionally propagated seedlings of banana are causing the spread of disease/pest, resulting in the low banana productivity in the country. Plant tissue culture has been proved as an effective way to solve this problem. However, there has been no report on the in vitro response in shoot formation and multiplication of Cambodian banana cultivars so far. The present proposed research is undertaken to investigate in vitro responses of widely cultivated banana genotypes to the varied concentrations of exogenous cytokinin (Benzylaminopurine, BAP) and to improve banana productivity in Cambodia via disease-free banana seedlings from tissue culture (TC). Firstly, the sword suckers excised from the widely cultivated and market-oriented genotypes are inoculated in the Murashige & Skoog (MS) media supplemented with various concentrations of Benzylaminopurine (0 mg/L, 1 mg/L, 2 mg/L, 3 mg/L and 4 mg/L). The effects of different concentrations of cytokinin on the number of regenerated shoots, shoot length, and the days to shoot initiation after inoculation will be studied. Secondly, the present study will also investigate the performances of the TC-derived seedlings of banana against the conventionally-propagated seedlings on the farmers' field. Therefore, based on the present study results, the identified suitable concentrations of BAP on the genotypes tested will be used for the mass-production of disease-free banana seedlings for farmers in Cambodia through micropropagation technique. This will help improve banana productivity and farmers' incomes in the country.