COMBINATION OF MS MEDIA AND GANDASIL D AGAINST GROWTH IN VITRO BANANA SHOOTS

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Introduction

Banana is one of the popular agricultural commodities. Quality banana production is currently constrained by the availability of quality seeds. Tissue culture is a method of propagation using plant parts and growing them in aseptic media. Alternative media can also be used for in vitro culture. Besides, the use of alternative media tends to be cheaper compared to Murashige and Skoog (MS) growing media.

Purpose

Determine the effect and combination of D double fertilizer in MS medium on the growth and development of bananas in vitro.

Materials and methods

May-Desember 2019

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a completely randomized design (CRD) of one factor with 5 treatment combinations that were repeated 6 times so that there were 30 experimental units. The data obtained were analyzed with an F test of 5% level and if it was significantly different it was followed by a DMRT of 5% level.

Results

Treatment	Number of leaves	Number of Shoots	Plant Height	Number of Roots	Root Length
100% MS	1,67a	0,50a	5,16a	6,83a	5,33a
75% MS + 25% Gandasil D	3,33ab	1,67ab	32,5ab	13,17ab	12,67b
50% MS + 50% Gandasil D	4,67b	1,83b	38,33ab	16,67b	14,00b
25% MS + 75% Gandasil D	5,00b	2,00b	83,67b	18,67b	14,67b
100% Gandasil D	5,17b	2,33b	96,16b	18,83b	16,17b

Conclusion

Based on the results of research and discussion it can be concluded that the addition of Gandasil D to MS media has a significant effect on the number of leaves, many shoots, plant height, root length, and some roots. MS and Gandasil D media substitution can be used as alternative media to reduce MS media dependency and save on the cost of making media.