養液配方及試藥等級對尖葉萵苣和小白菜生育之影響

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關鍵字：養液配方、Hoagland、試藥等級、小白菜、尖葉萵苣、pH 值、EC 值

摘要：本試驗採用 Hoagland 及山崎養液配方，分別以試藥級及工業級原料配製養液，比較其對水耕養液之 pH 值及 EC 值變化之影響，及對尖葉萵苣與小白菜生育之影響。Hoagland 配方養液栽培尖葉萵苣及小白菜，其每日 pH 值變化為 0.08~0.66，其平均上升值及上升率皆顯著較山崎配方減少 65%。養液中的 pH 值變化皆隨栽培天數之增加而趨近於穩定，故其上升率隨栽培天數的增加而明顯下降。Hoagland 養液之 EC 值 1580～2080 μS/cm，明顯較山崎配方之 1015～1085 μS/cm 為高，但栽培期間之變化少。Hoagland 養液對尖葉萵苣及小白菜之葉片數、鮮重、葉面積等生育性狀顯著高於山崎氏配方。使用試藥級或工業級藥品配製養液，對養液 pH 值及植株生育性狀則沒有顯著差異。因此即便以工業級藥品配製 Hoagland 配方，仍可使養液 pH 及 EC 值較山崎配方穩定，且對尖葉萵苣及小白菜之生育有明顯促進效果，值得生產業者參考應用。

Effect of Culture Solution Formula and the Reagent Level to the Growth in Lettuce and Pak-Choi

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Key words: culture solution, Hoagland, reagent, lettuce, pak-choi, pH value, EC value

Summary

This experiment uses Hoagland and Shan Ch'i formula, respectively by the reagent level and the industry level raw material configuration, compared with it to influence pH value and the EC value change of culture solution, and influence to the growth in lettuce and the pak-choi. Used Hoagland formula to culture lettuce and pak-choi, the daily pH value change is 0.08~0.66, in its average the climbing value and the climbing rate all significantly decrease 65 % comparing the Shan Ch'i formula. The pH value of culture solution changes all to draw close increase along with the cultivation number of days to is stable. Therefore its climbing rate significantly drops along with the cultivation number of days increase. The EC value of Hoagland formula is 1580~2080 μS/cm, significantly higher than Shan Ch'i formula with 1015~1085 μS/cm, and changes few during cultivation period. In leaf numbers, fresh weight, leaf area of lettuce and pak-choi, the Hoagland formula is higher than Shan Ch'i formula. In the pH value of culture solution and the growth of lettuce and pak-choi, the use reagent level or the industry level raw material is not significantly. Therefore used Hoagland formula by the industry level raw material, the pH and the EC value compared the Shan Ch'i formula to be stable, and the growth of lettuce and pak-choi is better than Shan Ch'i formula. It is a worth reference for production.

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