

Effect of Fertilization on Yield and Quality for Amachzuruforum(*Gynostemma pentaphyllum* Thunb. Makino)

Chang, Moa-shen and Tai-chun, Chou¹

Summary

The experiment had been carried out at this station since 1991. The purpose of this study was to find out reasonable management of fertilization for the yield and saponin content of amachzuruforum. The trial layout was used SPD with four replications, organic manures 4ton / ha and without organic manures for mainplot and the amount of incomplete N.P.K. combinations as 75-180-200,150-180-200,150-90-200,150-180-100, and 150-180-300kg/ha for subplot, on schist alluvial soil Js. series, moderately shallow (>30cm), imperfect drainage, silt loam at Taitung city.

For four years experiment, the results showed that the application of organic manures 4t/ha could be increased the yields of amachazurruforum by 10% in 1992 and 25% in 1995, compared to without organic manures. The total saponin content was also increased by 0.5~0.7%. The total amount of N.P.K. fertilizer that N-P₂O₅-K₂O seemed as optimum in 150-180-300kg/ha was reasonable for amachazuruforum, compared to medium amount as 150-180-200kg/ha, the yield was increased by 1-10% and the total saponin content was also increased by 0.7~1.2%. As for the effect of N.P.K. amount on the yields and saponin content, it seems as if nitrogen and potassium were more affected to fresh yields and then phosphate and potassium were to the total saponin content.

Key words: *Gynostemma pentaphyllum*, Yield, Fertilization, Quality, Saponin.

¹Associate Soil Scientist and Assistant of Taitung DAIS.