## B-104: Effect of N levels and polythene mulch on cabbage cultivation in the upcountry

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Cabbage is a popular commercial vegetable crop grown in the upcountry of Sri Lanka. Being a leafy vegetable cabbage requires a good supply of N to produce high yields. However, high dressings raise the nitrate content in the soil while it increases the risk of leaching into drinking water supplies. Hence, there is a need to determine a more reliable N fertilizer level which eliminates or reduces the nitrate content of drinking water while maintaining high cabbage yields. In addition, the use of polythene mulch increase N use eficiency and thus also the vegetable yields. This aspect too was studied.

A field experiment was therefore, conducted at Bandarawela to determine the effect of different levels of N and polythene mulch (brown colour) on the yield

of cabbage (var. Hercules). Five levels of N (0, 50, 100, 150, 200 kg/ha) were factorially combined with and without polythene mulch sad tested in a randormzed complete block design experiment with three replicates. Phosphorus and potassium were added at rates of 125 kg $P_2O_5$ and 90 kg $K_2O$/ha, respectively.

The application of N at 100 kg/ha significantly increased the yield of cabbage over the control. In addition, polythene mulch application also increased the yield of cabbage significantly. The experiment suggests the application of 100 kg N/ha is sufficient for cabbage cultivation in this region. This will be an economical approach to the farmers who generally apply almost 3-4 times as much as this quantity. However, the use of polythene mulch (additional cost Rs. 4.70/kg cabbage) is not considered economical for cabbage cultivation under Sri Lankan conditions due to the high cost polythene.

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