Impact of SLGAP-Certification Process on Growth, Yield and Disease Incidence of Chilli

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Assuring the nation's food quality and safety is of utmost importance. Sri Lanka Good Agricultural Practices (SLGAP) is identified as one of the important steps in achieving it. SLGAP standards address the food quality and safety, environmental sustainability, social acceptability and economic viability. However, good agronomic performance is needed to attract farmers to the SLGAP. The objective of this study was to compare chilli grown under SLGAP directives and conventional chilli cultivations established in both lowland rice fields and uplands. Hence, chilli established under 4 treatment combinations was evaluated. They included SLGAP cultivations in lowland rice fields, conventional cultivations in lowland rice fields, SLGAP cultivations in uplands and conventional cultivations in uplands. Each treatment was evaluated using ten cultivations (replicates). Cultivated chilli variety in all the cultivations was MICH HY1. Agronomic performance was measured using plant height, yield and disease incidence with special reference to Leaf Curl Complex (LCC) and Narrow Leaf Disorder (NLD). In both cultivations the SLGAP-certification and conventional, the recorded yields were high ($p<0.05$) under upland conditions when compared to lowland rice fields. The yield differences between SLGAP and conventional cultivations were non-significant ($p>0.05$) under upland conditions. SLGAP cultivations recorded significantly high ($p<0.05$) yields when compared to conventional cultivations when grown in the lowland rice fields. It was observed that LCC was high ($p<0.05$) under conventional cultivations when compared to SLGAP cultivations both under upland conditions and lowland rice fields. The NLD incidence was high ($p<0.05$) in lowland rice fields when compared to uplands in both SLGAP and conventional cultivations. Hence it is apparent that practicing SLGAP standards is beneficial to obtain high agronomic performances and low disease incidences with reference to LCC and NLD when establishing chilli cultivations in uplands in the DL1b agro-ecological region of Sri Lanka.

Keywords: Chilli, Good agricultural practices, Leaf curl complex, Narrow leaf disorder, SLGAP

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