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Growth performance of *Basella alba* (Spinach) exposed to liquid fertilizer prepared using invasive alien species; *Clidemia hirta* and *Chromolaena odorata*

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Inorganic fertilizers are popular in supplying plant nutrients, but their excessive use adversely affect human health and ecosystems. The present study was aimed to study the effect of organic liquid fertilizer prepared from the foliage of *Clidemia hirta* and *Chromolaena odorata* with the combination of leaves of *Pongamia pinnata* and fruits of *Phyllanthus emblica* and *Carica papaya*. Different concentrations (25, 50, 75 and 100 gL⁻¹) of both extracts separately tested on the growth and yield of *Basella alba* with tap water as the control and commercially available liquid organic fertilizer (Maxicrop) as a standard under field conditions. Two weeks old *B. alba* seedlings were treated (300 mL of each treatment with seven replicates) thrice a week for 50 days. Collected data of the growth parameters of *B. alba* were analyzed by using one-way ANOVA. According to the results, mean values of number of leaves (19), leaf area (128.16 cm²), shoot height (93.1 cm), fresh weight of shoot (100.9 g/plant) and root (9.29 g/plant) of *C. hirta* 100 gL⁻¹ in (CHM 100) treatment was significantly higher ($P= 0.05$) than those of the standard (leaves- 8, leaf area- 48.78 cm², shoot height-28.57 cm, fresh weight of shoot- 19.71 g/plant and root weight- 2.91 g/plant); and the control (leaves 7, leaf area-52.04 cm², shoot height-23.86 cm, shoot weight-13.71 g/plant and root weight- 2.91 g/plant). In *C. odorata* 75 gL⁻¹ (COM 75) treatment was having the highest mean values of the number of leaves (20), shoot height (86.4 cm), stem girth (5.17 cm) and fresh weight of shoot biomass (113.7 g/plant) and significantly higher than that of the standard (leaves 8, shoot height- 23.57 cm, stem girth- 3.66 cm and shoot biomass- 19.57 g/plant) and for those of the control. As CHM 100 and COM 75 were shown the highest growth performance of *B. alba*, both organic liquid fertilizer mixtures can be recommended for *B. alba* cultivation in Kurunegala district.

Keywords: *Clidemia hirta*, *Chromolaena odorata*, *Basella alba*, Organic liquid fertilizer, Growth performance