FOLIAGE QUALITY OF CROTON (Codiaeum variegatum L. var. Sunny star) IS INFLUENCED BY DIFFERENT COLOURD SPECTRAL FILTERS

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C. variegatum is an ornamental plant, widely used for interior and garden decorations. Intensity and quality of light usually affects foliage colour and mosaic pattern of C. variegatum. High light intensity bleaches the foliage colour resulting in more yellow colour than green on leaves, which reduces the export quality of C. variegatum var. Sunny star foliage. The information on the effect of different colours or bandwidths of spectrum on foliage quality of C. variegatum var. Sunny star is not available. Therefore, five different coloured spectral filters; red, silver, white, black (60%) and black (80%) and a control receiving full sunlight were imposed on C. variegatum var. Sunny star in a Randomized Complete Block Design with four replicates during January to May, 2014 in Rambukkana (WM3), Sri Lanka. White colour spectral filter grown plants achieved required export standard, followed by silver colour filter. Leaf number was 1.2 times higher under silver colour spectral filter compared to control (p < 0.05). Leaves were significantly more yellow under red colour filter, followed by control. However, the control showed a lower leaf and shoot growth. The highest shoot length was observed under black colour (60%), while black colour (80%) spectral filter resulted in the maximum leaf area, fresh and dry leaf weights and concentration of chlorophyll (p < 0.05). In conclusion, management of light quality by using white and silver colour spectral filters improved the commercial characteristics (export quality) of C. variegatum var. Sunny star foliage.

Keywords: Codiaeum variegatum, Colour development, Light intensity, Spectral filters