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P 16 Effects of soil moisture and nutrient availability on biomass partitioning patterns of *Colocasia esculenta* (wild taro) grown in agricultural wetlands, Sri Lanka.

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Colocasia esculenta L. Schott (wild taro) is an emergent, perennial, aquatic and semi-aquatic herbaceous species, belongs to the family Araceae. Though some varieties of this species are edible, it has been notified as an invasive weed in different parts of the world including southeast USA, Australia and some parts of Europe. In Sri Lanka, dense mono specific colonization of *C. esculenta* can be observed in agricultural wetlands, specifically when they are abandoned for some period. Once colonized in such an area *C. esculenta* spreads over the area with time, out-competing other species abundant in the area. Hence, we investigated the role of soil moisture content and nutrient availability biomass partitioning patterns of *C. esculenta* grown in agricultural wetlands in Sri Lanka. Aboveground and belowground biomass was positively correlated with soil total phosphorous content (TP) and soil moisture content. Correlation between soil nitrogen content and plant biomass was weak. However, positive correlations between plant biomass and soil TP and moisture content indicated that elevation in TP and/or moisture content result an increase in biomass accumulation and increased plant sizes (taller plants and larger leaves). Water regime in these wetlands is controlled by the availability Of" rainfall; hence soil moisture content in these wetlands may vary accordingly. Since these are low-lying lands, these areas receive storm water runoff with excessive nutrient loading in rainy season. It can lead to an elevation of TP and moisture content in the same time, which may subsequently increase biomass accumulation of *C. esculenta* in agricultural wetlands, Sri Lanka. Further, it has been observed that favorable growth conditions and biomass accumulation will indirectly influence on reproductive traits positively, which may result in an increase spreading of *C. esculenta* in Sri Lankan agricultural wetlands.

Keywords: *Colocasia esculenta*, soil nutrient, soil moisture, agricultural wetlands