

STUDIES ON NUTLET DISTRIBUTION AND GROWTH PATTERN OF *Cyperus rotundus*

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ABSTRACT

Studies on growth pattern of Cyperus rotundus and its nutlet distribution in different soil profile were carried out at the faculty of Agriculture, University of Jaffna. An average of 1803 nutlets per square meter of soil was found up to 30 cm depth and none was found below 30 cm. Majority of nutlets (86.8%) were found within the layer of 0-15 cm. Most of the newly formed nutlets (93.4%) were found in the top layer of 0-15 cm.

Newly planted nutlets produced shoots in a week time and the shoot production continued thereafter. Rate of shoot production increased up to 6th week and thereafter decreased. Single nutlet produced 6.5 shoots at 4th week and increased to 17.4 at 8th week and 24.2 at 12th week. Newly planted nutlet produced fresh nutlets after 2 weeks. It produced 3.6 nutlets at 4th week, 17.4 nutlets at 8th week and 29.2 nutlets at 12th week. It was found that after 5 weeks they produced more nutlets than shoots. The shoot: root ratio after 1st week was 3.65 and reduced to 0.58 at the end of 12th week. This shows that once the adequate source for photosynthesis is developed most of the photo assimilates thereafter, is used to produce nutlets, which is the primary vegetative propagule.

Key words: *Cyperus rotundus*, growth pattern, nutlets, soil profile.