ABOVEGROUND BIOMASS PARTITIONING IN RED CLOVER CANOPY

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Abstract

The aim of this study was to perform an exploratory analysis of red clover canopy structure in late phenological stages (80, 100 and 120 Days After Sowing – DAS), when structural complexity increases. The results showed that the modification of assimilatory surface heights occurred due to the phenological development and the light competition between phytomeres (a self-shading process). Spatial and temporal repartition of foliage biomass and caulinar biomass influenced the evolution of canopy architecture as a summing junction of the individual component forms. Heterogeneity of canopy structure increased with maturity. The average length of generative shoots was 41 cm at 80 DAS, 75 cm at 100 DAS, and 81 cm at 120 DAS. Laminae areas of vegetative shoots increased from 11.18 ± 5.04 (80 DAS) to 17.31 ± 8.19 cm^2 (120 DAS). For red clover aboveground structure, heterogeneity of individual plants can be expressed considering biomass partitioning, variations of leaf and stem parameters, modulations of phytomere characteristics, and modifications of branching pattern.

Key words: specific leaf area, leaf weight ratio, leaf area index, canopy growth, dry matter allocation