ABSTRACT

Drought is one of the major constraints in rainfed paddyfield production. Drought stress condition caused by long drought that often happens lately andit was major problem causing decreased paddy productivity. The research aimed to determine the chlorophyll concentration of paddy plants treated with endophytic fungi and drought. The research was conducted on farmer's paddy field in Galesong Sub-district of Gowa Regency from August to November 2017. The research consisted of two treatment that puddle height and fungi application. The puddle height treatment consists of two levels i.e. puddle5 cm height (normal) and 1 cm (drought). Endophytic fungi treatment was applied to paddy seeds before planting. Leaf chlorophyll content was measured on 52 days after planting by using SPAD-502 Plus chlorophyll meter. Chlorophyll-a content, chlorophyll-b content and total of chlorophyll contentwas measured by using extraction method in laboratory. The result showed that leaf chlorophyll concentration of paddy drought was low than the waterlogged conditions. Endophytic fungi application increasedchlorophyll-a, chlorophyll-bconcentration, total chlorophyll of paddy leaf on drought condition.

Keywords: chlorophyll a, chlorophyll b, total chlorophyll, SPAD-502 Plus