

Supplementary Figure S1. Experimental setup in 2011 and 2013. The S group and NS group were kept on separate parcels, respectively with and without access to a fenced shade area. To exclude effects of allotment on the response variables, the experimental groups and the passage to the shaded area were daily switched between allotments. The shade area consisted of a part of the pasture ( $25 \mathrm{~m}^{*} 25 \mathrm{~m}$ ) with evenly spaced ( 5 m ) young willow (Salix alba), poplar (Populus alba) and alder (Alnus glutinosa) trees and shade cloth with a shading percentage of $80 \%$ spanned up between them. The shade cloth was hung obliquely, between a height of $\pm 2.5 \mathrm{~m}$ and a height of $\pm 3.5 \mathrm{~m}$.

