

**NON-PARAMETRIC INDICES ESTIMATED BY COMBINING
THE ACCUMULATION OF BIOMASS AND OTHER CHARACTERS
TO EVALUATE SOYBEAN CULTIVARS IN ENVIRONMENTS
WITH AND WITHOUT SHADE**

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- **ABSTRACT:** *Three experiments were performed, and each experiment was conducted with a specific level of shading: no shading, 50% and 70% shading, obtained by the use of screens black polyethylene. Each experiment was conducted in a completely randomized experimental design with three replications. The treatments were compounds of 33 soybean cultivars with different habits of growing and degree of maturity. Based on the observed mean squares analysis of variance for each of the three experiments, a Joint Analysis was performed. There was variability among soybean cultivars in relation to shade tolerance. Leaf area, stem diameter and number of nodes contributed to the biological yield (RBA) in 70% shade. The selection of cultivars by Mulamba & Mock (1978) and the Distance from Genotype until Ideotype indexes can be displayed in order of higher selection gains in soybean in environments with 50% and 70% shading. This study aimed to evaluate the soybean cultivars competition in environments with and without shading, through resulting indices of the combinations between the production of biomass and different characters, determining the similarity between the methods.*
- **KEYWORDS:** *Glycine max; adaptability; solar radiation; sustainability.*

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