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**Red light absorbance-transmittance, fluorescence and electron transport measures from PS II on the T4 and E1 and leaves of eight maize hybrids**

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We examined red light absorbance-transmittance (RAT) and chlorophyll fluorescence ( $F_o$ ,  $F_m$ ,  $F_m - F_o$ ), electron transport from PS II ( $F_v/F_m$ ,  $F_v/F_o$ ) of eight maize hybrids since the crop scientist's curiosity. For it, we conducted an experiment of randomized complete block design of three replications planting seeds on Dec 1, 2017 at farmers' field at Fulbari-Chitwan, Nepal. We took one hundred observations of RAT measures (using SPAD 502 plus, Spectrum, USA) from T4 leaf of each of the six randomly selected plants in 3 day period from 69th day during early vegetative stage and  $F_o$ ,  $F_m$ ,  $F_v (=F_m - F_o)$ ,  $F_v/F_m$  and  $F_v/F_o$  from the E1 leaf from the same plants in each of twenty four plots from 141 to 148th day during late grain filling (using chlorophyll fluorometer (OS30p+, Opti-Sciences, USA). After analysis of the frequency distributions of the measures and their mean comparisons, we

found no significant difference among the single reading, three and 100 readings averages of the measures. Besides, we can conclude that a single reading from sample plants from the T4 and E1 leaves of six plants in each plot is enough to examine the traits from the equipments, but we must eliminate outliers while taking observations from the equipments if we are just examining averages of maize crop genotypes in the respective T4 and E1 leaf. We could not find special peculiarities in the frequency distribution of the variety of the measures for high grain yielding hybrids although we found different types of frequency distribution pattern for different hybrids based on skewness and kurtosis. Three significantly differing highest grain yielding hybrids are Bioseed, Gangakaveri, and Shresta and their corresponding grain yields are 16, 14 and 12 t ha<sup>-1</sup>.

**Biography**

Nav Raj Adhikari is the Professor at Institute of Agriculture and Animal Science (IAAS), Tribhuvan University (TU), Nepal. He has worked on triticale genome engineering in his MS Thesis work from Tottori University, Japan in 1995. He completed his PhD in Plant Breeding from Tribhuvan University, Nepal in 2015. He worked in flowering and photosynthetic model formulation in maize in his PhD. He has been involved in teaching courses and undergraduate and graduate research students of plant breeding.

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