

## Author's Accepted Manuscript

Corn (*Zea mays* L.) yield and yield components as affected by light properties in response to plant parameters and N fertilization

A. Soleymani, M. Miransari



[www.elsevier.com/locate/bab](http://www.elsevier.com/locate/bab)

PII: S1878-8181(17)30439-5  
DOI: <https://doi.org/10.1016/j.bcab.2018.06.011>  
Reference: BCAB784

To appear in: *Biocatalysis and Agricultural Biotechnology*

Received date: 22 August 2017

Revised date: 13 October 2017

Accepted date: 18 June 2018

Cite this article as: A. Soleymani and M. Miransari, Corn (*Zea mays* L.) yield and yield components as affected by light properties in response to plant parameters and N fertilization, *Biocatalysis and Agricultural Biotechnology*, <https://doi.org/10.1016/j.bcab.2018.06.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Corn (*Zea mays* L.) yield and yield components as affected by light properties in response to plant parameters and N fertilization**

A. Soleymani<sup>1\*</sup>, M. Miransari<sup>2\*</sup>

<sup>1</sup>Department of Agronomy and Plant Breeding, Khorasgan Branch, Islamic Azad University, Esfahan, P.O.BOX: 81595-158, Iran

<sup>2</sup>Department of Book&Article, Abtinberkeh Scientific Ltd. Company, Isfahan, Iran

A\_soleymani444@yahoo.com  
miransari1@gmail.com

\*Corresponding authors.

**Abstract**

Light absorption and light extinction can importantly affect crop growth and yield production. Accordingly, two field (split plot) experiments were conducted to investigate: 1) the most optimum plant spacing (S) and density (D), which result in the highest rate of corn yield and yield components as affected by light absorption (L) and extinction (K), 2) the most efficient corn genotype (G) and the most optimum N fertilization rate (N), which effectively increase corn yield and yield components by affecting corn light properties. D and N were devoted to the main plots and S and G were used as the sub treatments. Light absorption was measured using a light meter and the coefficients of light extinction (K) were calculated. D, N and G as well as their interactions were the most effective factors on corn light properties, growth and yield. The crop density of 10-12 significantly affected corn growth and yield production. D12 resulted in the highest LAI (4.40), L (16.00%), and biological yields (20623.8 kg/ha). However, the highest K (0.79), grain yield (2398.8 kg/ha), and harvest index (14.36) were related to D6.

Download English Version:

<https://daneshyari.com/en/article/8405619>

Download Persian Version:

<https://daneshyari.com/article/8405619>

[Daneshyari.com](https://daneshyari.com)