



**ORIGINAL ARTICLE**

## **EVALUATION OF NANO FERTILIZER AND ABSTRACT OF ORGANIC MATTER AND METHOD OF APPLICATION ON SOME QUALITY PROPERTIES AND YIELD OF FABA BEAN (*VICIA FABA L.*)**

**Raheem A.H. Jassim\*, Hanoon Nahi Al-Burky and Abdullah Kareem A-Jubory**

College of Agriculture, Al-Muthanna University, Iraq.

E-mail: rahimalwan555@gmail.com .

**Abstract:** A field experiment was conducted in Al- Najaf Governorate during winter season 2017 to study the effect of foliar and soil application of abstract of organic matter with three abstracts (water : organic matter, 2 : 1 and 3 : 1 and 4 : 1) and Nano fertilizer with three levels ( 0, 2, 4) g L<sup>-1</sup> on some quality properties and yield of Faba bean (*Vicia Faba .L*) Grano variety . according to RCBD with three replicates was designed (54 treatments). Results showed Superiority of the 4:1 organic matter abstract on chlorophyll content (4.97) spad, activity of nitrogenase enzyme (0.332) PPM ethylene plant<sup>-1</sup> hr<sup>-1</sup>, vitamin B1 and B2 (4.637 & 1.686) mg 100g<sup>-1</sup> seeds, respectively and yield (4.69) mega gm h<sup>-1</sup>. Level 4 gm.L<sup>-1</sup> nanofertilizer on chlorophyll content (38.87) spad, activity of nitrogenase enzyme (0.364) PPM ethylene plant<sup>-1</sup> hr<sup>-1</sup>, vitamin B1 and B2 (5.106 & 1.766) mg 100g<sup>-1</sup> seeds respectively and yield (4.72) mega gm h<sup>-1</sup>. Interaction of organic matter abstract 4 : 1 and nanofertilizer in 4 gm . L<sup>-1</sup> on all studied parameters. Tri interaction showed superiority of 4 :1 organic matter abstract and 4 gm.L<sup>-1</sup> nanofertilizer with foliar application on all studied parameters.

**Key words:** Nano fertilizer, Organic matter, Uptake, Faba bean.

### **Cite this article**

Raheem A.H. Jassim, Hanoon Nahi Al-Burky and Abdullah Kareem A-Jubory (2020). Evaluation of Nano fertilizer and abstract of organic matter and method of application on some quality properties and yield of Faba bean (*Vicia faba L.*). *International Journal of Agricultural and Statistical Sciences*. DocID: <https://connectjournals.com/03899.2020.16.1479>