

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## **CLOROFILA CONTENT AND HEIGHT OF MAIZE (*Zea mays*) INTERCROPPED WITH PERENNIAL PEANUT (*Arachis pintoi*) UNDER DIFFERENT DOSES OF N**

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The production of ruminants in Brazil is mostly based on pasture which makes it necessary to use some alternatives for periods of forage empty. Corn silage is an excellent option, because has a high yield of dry matter and desirable characteristics for good fermentation. However, their productivity is limited by the availability of nitrogen in the soil. In this way, nitrogen fertilization is fundamental for the crop production however, mineral supply is one of the costs that most affect production. In view of this, strategies such as corn intercropping with legumes due to its biological N-fixing process, becomes one of the alternatives for the supply of this nutrient. In view of the above, the objective was to evaluate the chlorophyll content and height of the corn plant intercropped with perennial peanuts (*Arachis pintoi* cv. Belmonte) under different N doses, since these variables are strictly related to the N supply of the plant and dry matter production, respectively. The corn was implanted under a pre-established perennial peanut in plots of 26.7 m<sup>2</sup>, which were applied 0, 100, 200 kg of N ha<sup>-1</sup>, with four replications in a completely randomized design. The application of N was equally divided on two occasions, when the plant was in the stage of V 4-5 and V 8-9, total chlorophyll was measured in ten random plants when the flowering of most plants and height measured at the physiological maturation stage in 15 plants. The data were compared by the Tukey ( $p < 0.05$ ). Chlorophyll content was similar between plants receiving nitrogen fertilization of 100 and 200 kg N ha<sup>-1</sup> (43.30 and 45.85%) and higher than the control (36.47%). The height of the plants was equal between the control and fertilized treatments with 100 kg of N ha<sup>-1</sup>. (2.25 and 2.29 m, respectively), while the 200 kg of N ha<sup>-1</sup> had a plant height (2.41 m) higher than the control, but equal to the dose of 100 kg of N ha<sup>-1</sup>. This shown that the additional dose (200 kg of N ha<sup>-1</sup>) not be sufficient to increase the height of the plant, and presumably neither the dry matter yield. The dose of 100 kg of N ha<sup>-1</sup> applied was sufficient to guarantee results similar to the dose of 200 kg of N ha<sup>-1</sup> in terms of chlorophyll and plant height, this may be interesting when assessing the economic aspect.

**Keywords:** *Arachis pintoi*, nitrogen fertilization, *Zea mays*.

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