Estimate of sweet potato productivity based on vegetation indices of drone imagery

Luis Felipe Pigatto Miranda SILVA¹, Taya Cristo PARREIRAS², Wellington de LIMA³, Lucas Emanuel SERVIDONI⁴, Filipe Castro FELIX⁵, Jeferson Carlos de Oliveira SILVA⁶, Marcos Coelho BISSOLI⁷, Valter Carvalho de Andrade JUNIOR⁸, Marx Leandro Naves SILVA⁹ and Ronaldo Luiz MINCATO¹⁰

¹Universidade Federal de Alfenas: lfpmgeo@gmail.com; ²Universidade Federal de Alfenas: tayacristo1@gmail.com; ³Universidade Federal de Lavras: tomdelima@yahoo.com.br; ⁴Universidade Federal de Alfenas: les.servidoni@gmail.com; ⁵Instituto Agronômico de Campinas and Universidade Federal de Alfenas: filipefelix@gmail.com; ⁶Universidade Federal de Lavras: jefersonteng@gmail.com; ⁷Universidade Federal de Alfenas: mbissoli@gmail.com; ⁸Universidade Federal de Lavras: valter.andrade@dag.ufla.br; ⁹Universidade Federal de Lavras: marx@des.ufla.br; ¹⁰Universidade Federal de Alfenas: ronaldo.mincato@unifal-mg.edu.br

Technological innovations is constantly growing in the agricultural field, the use of Drones has been showing significant results in the monitoring of different cultures, making it possible to diagnose tensions before physiological, environmental or economic damage and, consequently, the ability to estimate productivity with vegetation indices (VI). Thus, the objective was to evaluate using a multirotor drone in the cultivation of sweet potatoes in an area of around 2,000 m².

MATERIAL AND METHODS

INTRODUCTION

Flights were performed at 20, 50 and 75 m height, and the Green Leaf Index (GLI) vegetation index was applied; to determine the best altitude for the research

Figure 1: Study area location at Lavras Municipality, Minas Gerais State.

RESULTS AND DISCUSSION

Figure 2. Maps comparing the 3 flight heights. * GLI = Green Leaf Index.

The results showed that the 50 m flight is significantly better associated with the productivity of sweet potato.

CONCLUSIONS

Although it has been applied in a small area, it has the potential to be extrapolated to larger areas, however, it aims to support family farmers with conventional agricultural practices.

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