

## Density and relative time of emergence of *Raphanus raphanistrum* on bean crop

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### Workshop Information

I Workshop of Plant Biology (I Workshop de Biologia Vegetal) was held in the Bioscience Institute – UNESP, campus of Rio Claro, Brazil, during August 20 and 21, 2012. Workshop was a scientific event organized by Post-graduate students from that Institute aiming to integrate Post-graduate and Graduate students from different areas related to Plant Biology (Anatomy, Ecology, Evolution, Morphology, Physiology, and transitional areas) from different Universities. Workshop Organization offered a large number of speaking activities, scientific discussions, and extra short-courses to improve the knowledge and formation of students in Plant Biology.

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The bean plantation occupies an important position in the Brazilian economy, and as any vegetable, it is subject to a series of factors that affect plant development and production. Such factors may be abiotic (water availability, nutrition, soil pH, light, etc.) or biotic, those are due to the action of living animals. Regarding the biotic factors, is important the interference of harmful plants such as weeds, which compete for light, nutritious, water and space, in addition these plants act as hosts of plagues, diseases and they also have allelopathic effects. According to several researchers, the world losses of bean crop due to the interference of weed reach 80%. The aim of this study was to evaluate the influences of times of emergence and plant densities wild radish (*Raphanus raphanistrum*) in relation to the bean, in the vegetative stage on growth and productivity. The experimental design was randomized blocks in a factorial scheme 2x5, with three replicates: two times of emergency of *R. raphanistrum* in relation to bean crop emergence: at the same day (0 days after emergence – DAE), and when the bean plant had first leaves all opened (14 DAE) and four densities of wild radish: 1, 2, 4 and 8 plants pot<sup>-1</sup>, with a control

treatment (only one bean plant or one wild radish plant). As a result *R. raphanistrum*, interferes in the bean growth and development of bean plants. The relative emergence time only influenced the leaf area of plants beans in coexistence with four plants per pot and one plant per pot negative interference occurs in the characteristics of the bean plants.