

**Title** Effect of tea polyphenol on inhibition of *Diplodia natalensis* infections  
**Author** Liu HM, Deng BX, Guo JH, Wang BQ, Li FF and Zu YX  
**Citation** Program and Abstracts, 11<sup>th</sup> International Citrus Congress (ISC Congress), 26-20 October 2008, Wuhan, China. 333 pages.  
**Keyword** stem end rot; tea polyphenol

#### **Abstract**

This study was conducted to determine the effects of tea polyphenol at different concentrations alone, and the interaction with a yeast antagonist *Candida ernobii* reducing the stem-end rot caused by *Diplodia natalensis*. The results indicated that tea polyphenol alone was effective in inhibiting the stem-end rot *in vitro*, especially with the high concentrations, and its efficacy was stable within the incubation time, so tea polyphenol alone could provide enduring protection of *citrus* from *Diplodia natalensis* infections. Tea polyphenol inhibited stem-end rot by reducing conidial germination rates, delaying conidial germination initiation, restricting elongation of germ tube and mycelium, as well as inducing abnormal alternation of morphology of germ tubes and hyphae. When applied at the concentration range from 0.1% to 10% (V/V), tea polyphenol did not influence the population growth of *Candida ernobii in vitro*. Moreover, combination of tea polyphenol and *Candida ernobii* resulted in a synergistic inhibition of the stem-end rot. It showed that the same control ability of the disease between the combination of Yeasts at  $10^6$  CFU ml<sup>-1</sup> with 0.1% (V/V) tea polyphenol and the antagonists alone at  $10^8$  CFU cm<sup>-1</sup>. These findings suggest that tea polyphenol could be used as an innovative tool to control postharvest diseases.