

Antimicrobial activity of essential oils from *Laureliopsis philippiana* against agricultural interest phitopatogens.

Pérez, P.¹; Reyes, M.²; Quiroz, A.³; Jofré, I.¹; Soto, I.¹; y Parada, M.¹⁻².

¹Laboratorio de Microbiología y Rhizobiología, *Universidad de La Frontera*,

² *Departamento de Ciencias Agronómicas y Recursos Naturales, Universidad de La Frontera.*

³ *Departamento de Ciencias Químicas, Universidad de La Frontera.*

¹ p.perez08@ufromail.com ; papccourbis@gmail.com.

Greenhouse and nursery garden generate losses by phytopatogens microorganism as fungi and bacteria that are controlled using synthetic pesticides. For the purpose of reducing the agrochemical pollution by indiscriminate and prolonged use over time we have working for friendly environment solutions to control phytopatogens microorganism. Preliminary studies shown that *Laureliopsis philippiana* have antimicrobial activity about fungi and bacteria damaging crop such as potatoes tomatoes and fruit tree. The present study has the aim evaluate antibacterial and antifungal activity in phytopatogens of essential oils obtained of *Laureliopsis philippiana* extracted in different seasons of the year.

Was extracted the essential oils from triturated fresh and washed leaves which they were subjected to extraction using the hydrodistillation or steam drag method, this process was realized with selection leaves and theirs extractions in the four seasons of the year. The samples were tested on *Pectobacterium caratovorum*, *Pseudomonas syringae*, *Botrytis cinerea* y *Fusarium* sp cultured and measured its antimicrobial properties by Kirby Bauer method. The results during the course of one year, shown the extract has active compounds in essential oils. This variation in the concentration in different plant structures is in concordance with seasons of the year. This variation could be responsible in bactericide and antifungal activity in some cases being twice the value of the positive control. This result are relevant because to assess to evaluate a possible new bactericide an antifungal product with biodegradable characteristic which means less impact on environment, human and animal health, the other hand, may also benefit economic sector as agricultural nursery garden and greenhouse.

Keywords: Antimicrobial activity, Essential oils, *Laureliopsis philippiana*.

Funding: Project Fondef-IDEA CA12i10134.