

Toxicity of ethyl acetate extract and ricinine from *Jatropha gossypifolia* senescent leaves against *Spodoptera exigua* Hubner (Lepidoptera: Noctuidae)

Author(s):

Bullangpoti, V (Bullangpoti, Vasakorn)¹; Khumrungsee, N (Khumrungsee, Nutchaya)¹; Pluempanupat, W (Pluempanupat, Wanchai)^{2,3}; Kainoh, Y (Kainoh, Yooichi)⁴; Saguanpong, U (Saguanpong, Unchalee)^{5,6}

Source:

JOURNAL OF PESTICIDE SCIENCE **Volume:** 36 **Issue:** 2 **Pages:** 260-263 **DOI:** 10.1584/jpestics.G10-93 **Published:** 2011

Abstract:

The beet armyworm (*Spodoptera exigua* (Hubner)) is one of the most important vegetable pests in Thailand. After 24 hr of both dipping and sprayer bioassay, estimation of LC(50) of the ethyl acetate extract of *Jatropha gossypifolia* senescent leaves demonstrated toxicity to secondary instar *S. exigua* larvae because in this stage most armyworm start to move to other plants and it is also the first susceptible stage for toxicity tests. Ricinine, the main alkaloid separated from ethyl acetate crude extract, showed toxicity on secondary instar larvae by the sprayer method with an LC(50) of 3,215 ppm whereas the LC(50) value for ethyl acetate crude extract is 8,644 ppm. Thus, the ethyl acetate crude extract of *Jatropha gossypifolia* senescent leaves may have ricinine as the active ingredient and may be used as an alternative choice for the minimal application of chemical insecticides for *Spodoptera exigua*. (C) Pesticide Science Society of Japan

Addresses:

1. Kasetsart Univ, Fac Sci, Dept Zool, Bangkok 10900, Thailand
2. Kasetsart Univ, Fac Sci, Dept Chem, Bangkok 10900, Thailand
3. Kasetsart Univ, Fac Sci, Ctr Excellence Innovat Chem, Bangkok 10900, Thailand
4. Univ Tsukuba, Grad Sch Life & Environm Sci, Tsukuba, Ibaraki 3058572, Japan
5. Rajamangala Univ Technol, Inst Res, Thanyaburi 12110, Patumtani, Thailand
6. Rajamangala Univ Technol, Inst Dev, Thanyaburi 12110, Patumtani, Thailand

แหล่งอ้างอิง [Web of Science](#)