

## Growth, Yield and Pest Infestation Response of Maize (*Zea mays* Linn.) to Biopesticide

**Authors :** Udomporn Pangnakorn, Settawut Prasatporn, Sombat Chuenchooklin

**Abstract :** The effect of biopesticide on growth, yield and pest infestation of maize (*Zea mays* Linn.) (variety DK 6818) was evaluated during the drought season. The experimental plots were located at research station of Faculty of Agriculture, Natural Resources and Environment, Naresuan University, Phitsanulok, Thailand. The extracted substance from plants was evaluated in the plots in 4 treatments: 1) water as control; 2) bitter bush (*Chromolaena odorata* L.); 3) neem (*Azadirachta indica* A. Juss), 4) golden shower (*Cassia fistula* Linn.). The experiment was followed a Randomized Complete Block Design (RCBD) with 4 treatments and 4 replications per treatment. The results showed that golden shower gave the highest growth of maize in term of height (203.29 cm), followed by neem and bitter bush with average height of 202.66 cm and 191.66 cm respectively with significance different. But neem treatment given significantly higher average of yield component in term of length, width, and weight of pod corn with 18.89 cm 13.91 cm and 166.46 g respectively. Also, treatment of neem showed the highest harvested yield at 284.06 kg/ha followed by the golden shower and bitter bush with harvested yield at 245.86 kg/ha and 235.52 kg/ha respectively. Additionally, treatment of neem and golden shower were the highest effectiveness for reducing insects pest infestation of maize: corn leaf aphid *Rhopalosiphum maidis* Fitch, corn borer *Ostrinia fumacalis* Guenee and corn armyworm *Mythimna separata* Walker. The treatment of neem, golden shower, and bitter bush given reduction insect infestation on maize with leaves area were infested at 5,412 mm<sup>2</sup>, 6,827 mm<sup>2</sup> and 8,910 mm<sup>2</sup> respectively with significance different when compared to control.

**Keywords :** maize, *Zea mays* Linn., biopesticide, bitter bush, *Chromolaena odorata* L.), neem, *Azadirachta indica* A. Juss, golden shower, *Cassia fistula* Linn.

**Conference Title :** ICASBFAS 2017 : International Conference on Agricultural Science, Biotechnology, Food and Animal Science

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** September 28-29, 2017