

**NGHIÊN CỨU TÍNH KHÁNG THUỐC Pymetrozine TRÊN RÀY NÂU  
(*Nilaparvata lugens* Stål) TẠI TIỀN GIANG**

**Study of the Pymetrozine Resistance on Brown Plant Hopper (BPH)  
(*Nilaparvata lugens* Stål) in Tien Giang Province**

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**Abstract**

Most of farmers has been used pesticides to control BPH with using frequency from 1 to 4 times per crop, average is 1.7 times. 20.6 % farmers used higher doses than the recommended dose (1.6 times in average) to control BPH. 52.5 % farmers from 3 investigated districts used pymetrozine for killing BPH in three consecutive crops, 15.2 % used fenobucarb, 13.6 % used buprofezine, the rest of 18.7 % farmers using other pesticides. Only on winter spring crop 2016, 90.9 % farmers used pymetrozine to control BPH.

BPH collected from Cai Lay, Chau Thanh and Cai Be districts, Tien Giang province had very high resistance to pymetrozine, in which, BPH from Cai Be showed higher resistance than that of Chau Thanh and Cai Lay. Pymetrozine resistance of BPH increased over 7 generations continuously selected. LD<sub>50</sub> of BPH from Cai Lay increased 1.31 times after 7 selected generations with pymetrozine and Ri reached from 964,06 to 1242,98; LD<sub>50</sub> of BPH from Chau Thanh increased 1.25 times, Ri reached from 1003,03 to 1256,59; LD<sub>50</sub> of BPH from Cai Be increased 1.26 times and Ri reached from 032,82 to 1299,52. Resistant of populations did not show cross-resistance between pymetrozine and nitenpyram.

The results showed that pymetrozine reduced egg laying ability of BPH collected. Effect Dose to 50 % (ED<sub>50</sub>) of BPH from Cai Be reached 0.2495 µg/g. It was higher than ED<sub>50</sub> of BPH from Cai Lay (reached 0.0996 µg/g) and ED<sub>50</sub> of BPH from Chau Thanh (reached 0.1856 µg/g), it means BPH population from Cai Be were higher than resistance of Chau Thanh and Cai Lay.

**Keywords:** Pesticides, brown planthopper (BPH), pesticide resistance, LD<sub>50</sub>, ED<sub>50</sub>, pymetrozine

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