SURVEY OF MORPHOLOGICAL CHARACTERISTICS, YIELD AND ABILITY RESISTANCE TO BACTERIAL WILT (*Ralstonia solacearum*) OF 12 PEPPERS (*Capsicum spp.)*

Vo Thi Bich Thuy, Tran Thi Ba and Le Thi Bich Tram

Summary

This study was conducted to describe, assess the morphological characteristics diversity, find the pepper cultivars had high seed yield and have ability resistance to bacterial wilt caused by *Ralstonia solacearum* for use as peppers rootstock at college of Agriculture and Applied Biology, Can Tho University, from 11-2013 to 10-2014. Includes two experiments: 1/ Survey morphological characteristics and yield of 12 pepper cultivars, arranged randomized completely block design with 12 treatments, which were 12 pepper cultivars: 1. Hiem trang, 2. Hiem xanh, 3. Da Lat, 4. TN589, 5. TN591, 6. TN592, 7. TN598, 8. TN607, 9. TN557, 10. Hiem 27, 11. Hiem lai 207 and 12. Sung vang. Results showed that 12 pepper cultivars were less morphological diversity, the average Shannon index of 19 morphological traits was 0.63. The pepper cultivars had stem diameter from 14.58 to 42.08 mm. The seed yield of pepper cultivars TN557 (3.54 t/ha) was highest; next to TN592 (2.94 t/ha), Da Lat (2.33 t/ha), TN607 (2.33 t/ha), Hiem lai 27 (2.33 t/ha), Hiem xanh (1.29 t/ha) and TN598 (1.11 t/ha) was lowest. 2/ Survey ability resistance to bacterial wilt (*Ralstonia solanacearum*) of 12 pepper cultivars, arranged completely randomized design two factors, once factor included 12 varieties of peppers (similar to experiment 1) and second factor included two strains *Ralstonia solanacearum* which collected at Thanh Binh district-Dong Thap province: Rs1 (Tan Binh village), Rs2 (Tan Quoi village) and control Rs0 (no inoculated). The results showed that pepper cultivars Da Lat, TN592, TN598, TN607, TN557 and Hiem lai 207 were resisted to bacterial strains R1, had incidence of bacterial wilt 0.00-4.00% and disease score 0.00-0.20. Varieties did not resist to bacterial strain R2, had incidence of bacterial wilt 36.00-100.00% and score 1.72-5.00 at 60 days after inoculate. So, the pepper cultivars TN557, TN592, Da Lat, TN607 can be researched continuously for use as rootstocks because of ability resistance to bacterial wilt and high seed yield of these pepper cultivars.

Keywords: Pepper, morphological characteristics, Shannon index, yield, *Ralstonia solanacearum*. 