Studies on Growth Effects and Resistant Response on Some Pre-emergence Herbicides to Azolla

S.S. Huang & C.M. Hanl[1]

Abstract

In order to evaluate the growth effects and resistant responses on some pre-emergence herbicides to azolla, a series of experiments in plastic pot were carried out the summer season of Taiwan in 1985. Results showed that azolla was very sensitive on inoculated stages and applied rates to the pre-emergence herbicides. The 5% Machate was heavy toxicity to the growth of azolla, even when azolla inoculated at the 25 days after herbicide application was killed by the lower rate of 20kg per hectare. The 10% Saturn and 7% X-52 appeared moderate toxicity which were still detrimental under the same rate when azolla inoculated at 4 days after herbicides application. However, 40kg per hectare could not be survived in case of azolla inoculated at 12 days after the herbicide application.

For further examined the resistant response on some herbicides to azolla, 16 varieties has been conducted at same year. The highly resistant of A. Filiculoides and A. Caroliniana and highly susceptable of A. Pinnata were observed. In comparison the highly resistant varieties under different rates of 7% X-52 application, it was also observed that the fresh weight of azolla inoculated at 15 days after were not significant in the amount of 10, 20kg/ha to A. Filiculoides and 10kg/ha to A. Caroliniana as compared with nonherbicide plot. A. Caroliniana had the higher propagation rate than the variety of A. Filiculoides.

Keywords: Azolla, Pre-emergence herbicides.

1.Associate Agronomist and Assistant of Kaohsiung DAIS.