

Ratthakit Rungruang 2011: Effect of Dimethomorph and Seed Treating Method on Seed Quality, Storability and Control of Downy Mildew in Sweet Corn. Master of Science (Agronomy), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Wanchai Chanprasert, Ph.D. 86 pages.

Effect of dimethomorph on the control of downy mildew of sweet corn grown in western region of Thailand was studied. Rate of dimethomorph and seed treating method on seed quality and storability of sweet corn cv. ATS-5 were compared. The experimental design was 2 x 5 factorial in RCB with 4 replications. Factor A was seed treating method, i.e., seed dressing and seed coating, and factor B was rate of dimethomorph, i.e., 0.0, 2.5, 5.0, 7.5 and 10.0 g ai/kg seed. This study was conducted during September 2008 to October 2009. The results revealed that seed dressing and coating with dimethomorph at the rate of 2.5, 5.0, 7.5 and 10.0 g ai/kg seed effectively protected sweet corn from downy mildew and seed coating method gave a better protective effect than the seed dressing method. For the effect of dimethomorph on seed quality and storability, it was found that dimethomorph applied both by seed dressing and seed coating method had no effect on seed germination and vigor during the 0 – 6 months in storage (at 15°C, 60 %RH). However, when the treated seed was stored longer than 6 months, seed germination and vigor decreased significantly starting from 7 months after storage. Seed dressing method showed more deleterious effect than seed coating method and the higher the rates of treating were used the higher phytotoxic effect was obtained. The phytotoxic effect was more obvious when stored longer upto 12 months after storage.

---

Student's signature

---

Thesis Advisor's signature