عنوان مقاله:

Utility of fungicides for controlling Rhizoctonia solani on sugar beet

محل انتشار:

Journal of Crop Protection, دوره 5, شماره 1 (سال: 1394)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Yangxi Liu - *Department of Plant Pathology, North Dakota State University, ۷۶۶۰, P. O. Box: ۶۰۵۰, Fargo, ND ۵۸۱۰۸-۶۰۵۰, USA.*

Mohamed F. R. Khan - *University of Minnesota, St Paul, MN, USA*.

خلاصه مقاله:

Rhizoctonia solani is the most serious problem on sugar beet Beta vulgaris L. grown in North Dakota and Minnesota. Picoxystrobin, a quinone outside inhibitor, and penthiopyrad, a succinate dehydrogenase inhibitor, were used alone and in combinations for controlling R. solani AG ۲-۲ IIIB on sugar beet under greenhouse conditions of ۲۲ ± ۲ °C and a ۱۲-h photoperiod. Fungicides were applied in-furrow at planting, followed by inoculation with R. solani grown on barley seeds. The experimental design was a randomized complete block with four replicates and the experiment was repeated three times. Stand counts were taken and roots were evaluated for symptoms using a ۰ to ۷ scale ۲۱ days after inoculation. Analysis of variance was conducted by the SAS general linear model, and Fisher's protected least significant difference at α = ۰.۰۵ was used to compare treatment means. Fungicides used alone and in mixtures provided effective control of R. solani, which had significantly greater percent survivors than the inoculated check. This research demonstrated that picoxystrobin and penthiopyrad have the potential to be used for providing control of R. solani on sugar beet.

کلمات کلیدی:

Rhizoctonia root rot, Sugar beet, picoxystrobin, penthiopyrad, Rhizoctonia solani