

BACKGROUND AND PURPOSE

Reference:1601423

Potato cyst nematode (PCN) is a harmful soil-borne potato pest that is the subject of various studies aimed at developing control methods. Typically, these studies are conducted using field soils contaminated with PCN. However, as a rule, the transport of PCN-contaminated soil is restricted by law, and even when PCN is handled in the greenhouse with a permit, there are concerns about leakage to the outside. In addition, many cysts of field origin are parasitized by bacteria and fungi, which may affect research results. Therefore, we investigated a laboratory propagation system for PCN to contain PCN within the permitted area and reduce parasitic eggs. ※Acknowledgements

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MATERIALS AND METHODS

Investigation of fungicides that inhibit fungus and do not affect PCN larvae

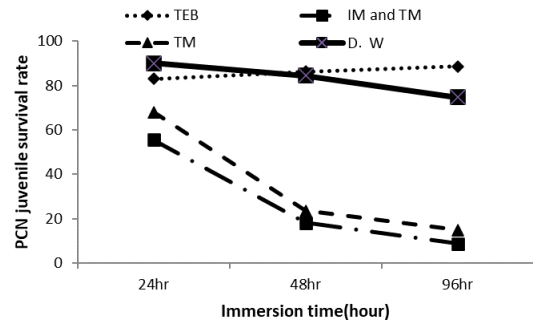
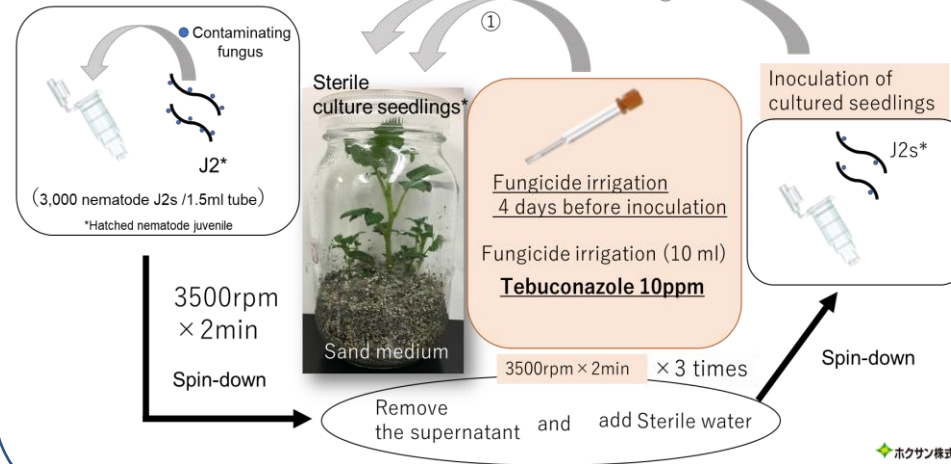


Figure. Effect of each fungicide on PCN juvenile. TEB; Tebuconazole
IM and TM; iminoctadine acetate and thiophanate-methyl(mixture),
TM; thiophanate-methyl

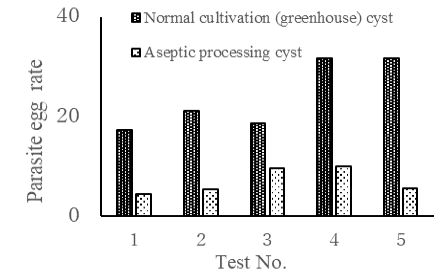
● Tebuconazole irrigation into sand medium* (autoclaved twice).
*Foot, M.A. (1977).



Tebuconazole (10 ppm) irrigation treatment on sand media

Tebuconazole concentration	10ppm	None
Fungus mycelium growth	-	+
Cyst formation	+	-

Cysts formed in sand medium!



CONCLUSION

Tebuconazole did not affect the larvae until 96 hours after immersion with PCN larvae. Tebuconazole irrigated sand medium also inhibited mold and cyst formation. The cysts (eggs) formed by this method were generally much less contaminated by filamentous fungi than those formed in the field or in an open system (greenhouse). Therefore, the cysts (eggs) formed in this test system are considered suitable for in vitro incubation tests.