

Poster Presentation

[PS02] ポスター発表(学生 B:コアタイム1)

Sat. Mar 30, 2024 11:30 AM - 12:30 PM Sakura (Student) (Sakura)

[PS02-49] Microbial control of Asian corn borer (*Ostrinia furnacalis*)
by endophytic entomopathogenic fungi on maize

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Pests cause 40% of crop losses globally, including maize, and pesticides cause pest resistance. Entomopathogenic fungi (EPF) are one of alternative of pesticide. EPF can endophytically colonise in field crops, including maize, and protect plant from pests. It is known that EPF infect insects by cuticles, respiration, and ingestion routes, but oral infection effectiveness in Asian corn borer (ACB) by EPF is still under research. We show in this study that *Beauveria bassiana*spp. and *Akanthomyces* spp. can colonise in maize by leaf spray, and that infected plants may infect to ACB orally. All plant parts were infected by EPF (leaf 22%, stem 8.1%, and root 18%). The mortality of second instar larvae fed on EPF colonised leaf was significantly higher than that in control. On the feeding experiment of EPF colonised leaf, 2nd and 4th instar larvae consumed similar amount of leaf compared with control, but significant reduction of consumption was detected in 6th instar larvae. It was shown that EPFs applied in this study can colonise in maize, and they have control potential of ACB via oral infection.