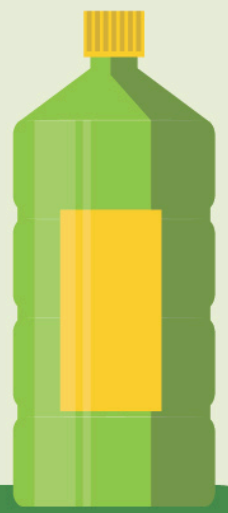


Venerate[®] XC by Marrone Bio Innovations:

A sustainable biopesticide solution



Venerate[®] XC, a microbial-based biopesticide from MBI, is effective against a wide range of chewing/sucking insects and mites. It was compared to traditional insecticides used for tackling these pests. Results showed it produced lower GHG emissions than some of the insecticides and was less toxic in water and soil.

Climate impact score: **8.6/10**



Key benefits by SDG impact

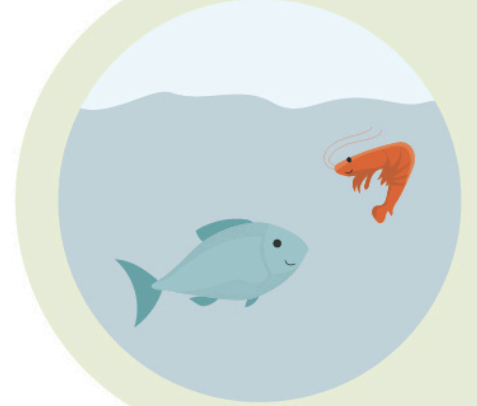
Climate impact – SDG 13

The estimated GHG Footprint of Venerate[®] XC is similar to that of spinosad, **18% lower** than Organophosphates, and **44% lower** than *Bacillus thuringiensis* (Bt).



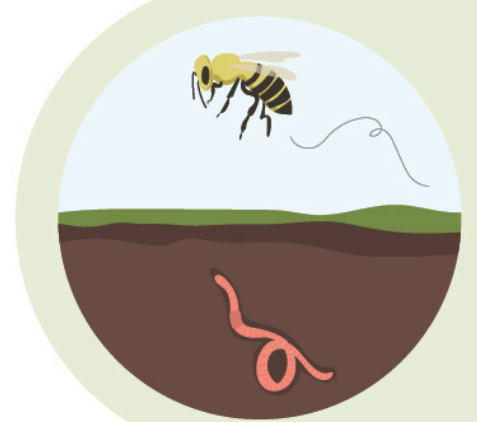
Aquatic safety – SDG 14

Very low toxicity to aquatic life, including fish and invertebrates, unlike OPs, neonicotinoids, diamides, and pyrethroids.



Biodiversity and soil health – SDG 2 & 15

- **Bee and earthworm-friendly**, unlike other assessed insecticides
- **Biodegradable**, with no long-term impact on soil fertility or nitrogen cycling



Human health – SDG 3

- **Very low toxicity** for humans
- Little to no skin or eye irritation
- Safer for farmworkers compared to traditional insecticides



Why it matters

Venerate[®] XC supports sustainable agriculture, protects ecosystems, and aligns with integrated pest management by offering a low-impact, effective alternative to traditional insecticides.

