

WHAT IS BIOWAKE PRIME™ TECHNOLOGY?

BioWake Prime™ is an **EPA registered bioinsecticide**.

BioWake Prime is paired with biostimulant BioWake™ for Corn to ensure positive ROI regardless of corn rootworm pressure.

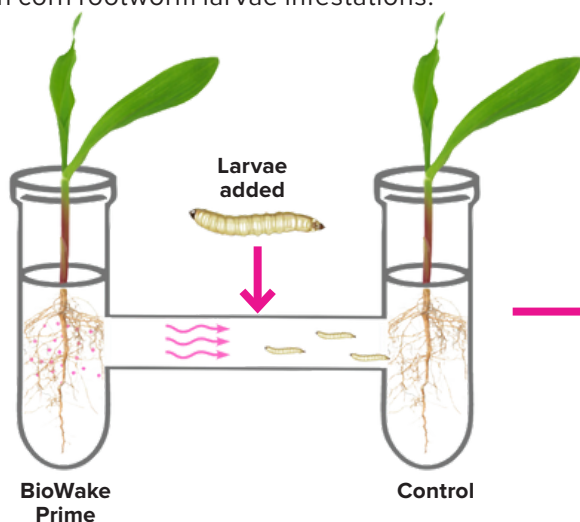
BioWake Prime can be used as part of an integrated pest management (IPM) program including traited corn and/or soil insecticides. AMVAC® does not recommend using BioWake Prime as the only tool for corn rootworm management.

BioWake Prime has multiple modes of action to mitigate corn rootworm damage:

- It interacts with the plant to prime the plant's immune system (ISR defenses).
- The plant produces chemicals which confuse or repel CRW larvae, making it harder for the larvae to find the corn roots.
- The second mode of action is root regrowth and recovery stimulation for when larvae reach the root and feed.

In the laboratory, corn rootworm larvae were given a choice between roots treated with BioWake Prime and roots with no treatment, 70% of them choose the roots with no treatment (shown here). When corn rootworm larvae were presented with only roots treated with BioWake Prime, 80% of them were unable to find roots to feed on.

In the corn field, AMVAC does not recommend using BioWake Prime as the only management tool in moderate to high corn rootworm larvae infestations.

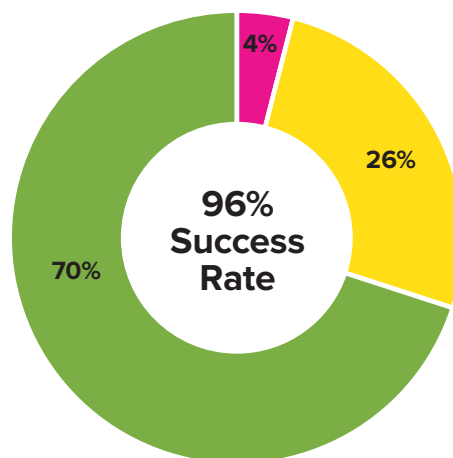
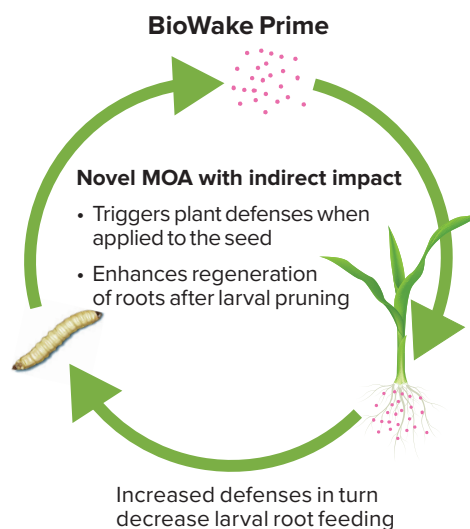


Assay conducted at the University of Missouri 2023: Neonate larvae of Western Corn Rootworm were introduced in the center of the assay system and given time to move to one of the roots, n = 120 larvae over 3 separate runs with 4 replicates each.

+ 8.0 bu/A WIN ADVANTAGE*

56 DATA POINTS

68% WIN RATE



4% of larvae chose the BioWake Prime treated roots.

26% of larvae remained undecided and stayed in the center.

70% of larvae chose the untreated roots.



RESULTS USING BIOWAKE PRIME™: ROOT RE-GROWTH AFTER LARVAL PRUNING

BioWake Prime + BioWake™ for Corn treated roots under CRW pressure exhibit an **increase in fine roots by 9%** compared to grower standard practice (GSP). In addition, there is a **16% increase in root surface area** and **10% increase in root depth**.



Grower Standard Practice



BioWake Prime +
BioWake for Corn

Individual roots from the 5th node showing re-growth after larval pruning.

The combination of the interactions of BioWake Prime with the corn plant leads to reduced lodging, better harvestability and increased corn yields.



Source: South Dakota State University

BioWake Pro Box Treatment

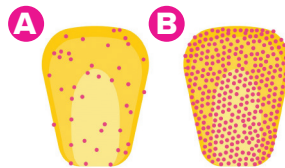


BioWake Surface Treatment



BioWake Treated

High Level of Coverage on Seed



A Traditional Product Application
Recovered Live Cells per Seed: 1,000

B Pro Box Application
Recovered Live Cells per Seed: 10,000

Source: 2021 Ag Ingenuity Partners trials

Product spec:

- Minimum of 1,000 live cells per seed (1E3 or 1×10^3 CFU/ seed)

Pro box application:

- Avoids pre-slurry wetting process that can lead to cell die off
- Achieves 10X live cells per seed 10,000 live cells per seed ($1E4$ or 1×10^4 CFU/ seed)
- Consistent across planter types