Allosperse™ Makes Products Better

- Precise delivery of chemistry
- Water-based formulations
- “Really new” off-patent products
- More flexible for growers
- Easy, convenient application
- Built directly into the product

Creating new possibilities in crop protection
Fertilizer compatible products with AlloFC™

• AlloFC™ is optimized to protect active ingredients from the high salt environment of liquid fertilizer

• Commercially available liquid fertilizer compatible products for at-plant and foliar uses
Soil-targeted products with AlloReach™

- AlloReach™ is optimized to avoid “strong” interaction with soil particles
- Particles are small enough to move through soil pores
- Mobility also depends on non-formulations properties such as soil type, rainfall, etc.
Tunable Insecticide Mobility

- Mobility of formulations containing different Allosperse particles compared with commercial product in silt loam soil
Abamectin

- Isolated from a soil bacterium (*Streptomyces avermitilis*)
- Insecticide, miticide, nematicide
- High affinity for binding to organic matter (e.g. thatch, soil)

![Abamectin Molecular Structure]

- Avermectin B$_{1a}$
  - $R = \text{CH}_2\text{CH}_3$
- Avermectin B$_{1b}$
  - $R = \text{CH}_3$
Averland Reach™

Soil-mobile abamectin formulation for control of nematodes on turfgrass

12% Abamectin (1.02 lbs gal)
EPA reg. 89118-7
Labelled for turf applications:

• 2.35-8.47 fl oz product/acre
• 14-21 day interval
• Irrigate with 0.1-0.5” water after application
Averland Reach™ in Turf

- Averland Reach was applied at 4.5, 6.5 and 8.5 fl. oz/acre
- Trial conducted in Louisiana
- Control of spiral, lance, sting and root knot nematodes

![Graph showing nematodes per 500 mL for Averland Reach at 4.5, 6.5, and 8.5 fl. oz/acre, and Avid and UTC.](image)
Improved Turf Appearance

- Very heavy nematode pressure
- Abamectin Reach mid rate

After third application, 6 weeks after first treatment
Averland Reach™ in Corn

- Georgia
- Irrigated
- High nematode pressure
- High production acreage

Yield (bu/ac)

Plot 1
- UTC: 266.31
- Half rate (1.2 fl oz): 266.21
- Full rate (2.4 fl oz): 269.04

Plot 2
- UTC: 264.47
- Half rate (1.2 fl oz): 265.66
- Full rate (2.4 fl oz): 276.02
Summary

- Vive Crop Protection optimizes products to target key problems for growers
- AlloReach™ is a formulation technology that improves the soil mobility of immobile active ingredients
- Averland Reach is an abamectin product with enhanced soil mobility to improve efficacy for target nematodes
- Opportunities for minor crop applications; irrigation, issues penetrating crop residues and/or soil
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