



# What You Can't See Is Costing You: Airborne Pathogens and the Ag Yield Gap

### What is the cost of ineffective, labor-intensive disinfection? Let's see...

### **Livestock Health and Production Losses**

- U.S. livestock industries lose over \$20 billion annually to disease-related performance reductions and treatment costs (AVMA).
- Respiratory illness is the leading cause of calf mortality in U.S. beef herds, accounting for 22.5% of pre-weaning deaths (USDA NAHMS).
- Barn air in U.S. grower-finisher pig operations shows 5,000–20,000 CFU/m³ pathogen load, posing risks to animals and workers (NIOSH).

### U.S. Crop Production Threats from Pathogens

- In the U.S., pests and plant diseases cause an estimated \$40 billion in crop losses each year (USDA).
- Corn, soybeans, and wheat are the most affected by soilborne fungi, bacterial blight, and viruses, resulting in average yield reductions of 10-25% depending on the region (USDA-ARS).

### **HVAC Systems and Indoor Air in Ag Facilities**

- A study of North American swine barns found HVAC coil biofilms accumulating up to 35,000 CFU/cm<sup>2</sup> within weeks (NIOSH).
- Contaminated barn air significantly contributes to respiratory infections in confined livestock environments, affecting productivity and veterinary costs (NIH).

### **Food Safety and Market Vulnerability**

- The recent avian influenza outbreak in the U.S. resulted in the culling of over 58 million birds and led to a 70% increase in wholesale egg prices (USDA ERS).
- Recurring Listeria and Salmonella outbreaks linked to poorly sanitized packing and storage areas have resulted in multiple national recalls (CDC).

Keep reading to see the solution >









## Reach Every Corner. Protect Every Acre.

Touch-Free, Full-Coverage Disinfection for Ag Facilities



**Introducing AgGriGuard** 

Stop chasing pathogens with wipes and sprayers. Automate your clean with precision misting.

### What It Is:

AgGriGuard Mist™ and InRoom™ Mist Systems are an integral part of the Genesis 360Mist™ Product line. self-contained, automated misting units that disperse **BotaniMax** into the air and across all exposed surfaces—no labor, no downtime, no recontamination.

### Why It Works:

- Ultra-Fine Droplet Technology Delivers fullarea coverage without soaking surfaces or damaging equipment.
- **Dual Action** Kills pathogens in the air and on surfaces in a single cycle.
- Low-Contact Angle (4–12%) Ensures even spreading and high cling to surfaces.
- Fully Programmable Set custom disinfection schedules, daily, hourly, or between shifts.
- **Mobile or Stationary** Use as a fixed unit in production zones or a mobile unit between barns, processing rooms, or greenhouses.



**By Secure Logic** 

Peace of Mind at the Push of a Button

### **Application Examples:**

- Seed treatment and handling facilities
- Indoor crop environments
- Animal birthing and nursery areas
- Veterinary and milking stations
- Vertical farms and aquaponics









# HVAC Disinfection, Reimagined!

Your HVAC system could be your biggest contamination risk. Genesis 360 contains pathogens at the source.





At the core of the Genesis 360 system is our proprietary micronozzle technology, engineered to produce one of the smallest, most uniform droplet sizes in the industry. This ultra-fine mist allows BotaniMax to suspend longer in the air, reach deep into crevices, vents, and equipment, and adhere to surfaces with a low contact angle for superior coverage. The result is a dry, residue-free application that maximizes pathogen kill rates while protecting sensitive electronics, animal enclosures, and plant environments.

### **Why It Matters:**

- Up to 80% of air recirculated in animal housing and grow rooms can carry microbial contaminants (AEM, 2023).
- Mold, bacteria, and viruses thrive in damp ducts and coils, spreading facility-wide.
- Poor indoor air quality decreases livestock performance and plant yield.

### **What It Does:**

- Automated HVAC-Integrated Misting -Genesis 360Mist™ infuses your airhandling systems with ultra-fine BotaniMax mist, keeping coils, ducts, and vents clean from biofilm and buildup.
- Continuously Reduces Pathogen Load -Kills airborne pathogens before they circulate back into your facility.
- Extends HVAC Lifespan Reduces moisture damage, corrosion, and airflow restrictions caused by biological growth.
- Quiet & Maintenance-Free Set it and forget it. Minimal upkeep, maximum performance.

### **Genesis Disinfection Roster**







AgGriGuard™ Mist

360HVAC™ Mist

### **Application Examples:**

- Animal housing and nursery air systems
- Post-harvest storage buildings
- Climate-controlled seed and propagation areas
- · Packhouses and processing facilities
- Greenhouses and hydroponic HVAC setups
- Offices, PPE Storage Areas, Breakrooms, etc.

Learn More. Visit us online. Scan the QR code











### The First EPA-Registered Botanical Disinfectant for Agriculture

### BROAD SPECTRUM DISINFECTANT, EMERGING VIRAL PATHOGEN, TIER 3 ANTIMICROBIAL.

HOSPITAL/REALTH CARE
OR USE AS A MODIFIEL DISNIFICIANT VIREICIDE\*, DECODILITE CLEARE
Per-cleans surface, 2. Apply solution to the disnifice to Jack, one-percess surfaces,
nop, auto scrubber, mechanical group device, hand pump tripger spay device,
per — listoches from unitación ben est buselle gospi, 1. Nivested ordiscre most remanda
UNIDE dey with a drain cloth or allow to air dry. Rinning of floors is not necessarior or allow. BOTANICAL HVAC COIL DISINFECTANT & FUNGICIDE. IER, FUNGICIDE AND DISINFECTANT ON COLS:

KILLS THE SARS-CoV-2 THE VIRUS THAT CAUSES
COVID-19 **CLEANER • DISINFECTANT • DEODORIZER** BACTERICIDE • VIRUCIDE\*• FUNGICIDE\*\*• FUNGISTAT

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side Panel for First Aid Statements and



Protect your people, animals, and crops with nature's most effective defense.

### **Key Benefits:**



128 Ft. Oz.

### 100% Plant-Derived Formula

• Made with thyme, wintergreen, and citrus oils no synthetic chemicals or harsh residues.



### EPA-Registered (25c)

• Fully compliant, approved for use in animal production, crop facilities, and food contact areas.



### 8 6-Log Kill Rate

• Destroys 99.9999% of bacteria, viruses, and fungi including E. coli, Salmonella, Listeria, and avian influenza.



### Multi-Modal Action

 Attacks pathogens through multiple mechanisms, preventing resistance over time.



### Safe for Daily Use

• No PPE required. Non-toxic to humans, animals, and the environment.



### (3) Compounding Disinfection Effect

 Gets more effective with consistent use, building long-term protection with each application.

### **EPA, FDA FIFRA Recognized product:**

- 40 CFR 180.910 / 40 CFR 180.920 FIFRA 25 B
  - For use on growing crops or raw agriculture products after harvest.
- CFR 180.930 for use on animals.

### **Applications:**

- Livestock pens & poultry houses
- Crop and greenhouse grow rooms
- Food storage, packing, and processing areas
- Equipment, trailers, and tool disinfection
- Feed and grain storage bins
- Offices, barns, sheds, and more

Contact us to get started today!









