WHITE PAPER

START EARLY.
END STRONG.

Why the Strongest Peanut Programs Are Built Below the Canopy

A Different Way to Think About Soilborne Disease Management

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UMBRA® FUNGICIDE CONVOY® FUNGICIDE

A morning in August and the red clay is already warming beneath your boots.

The crop looks good from a distance, but something doesn't feel right…

As you kneel down and part the canopy, you spot the familiar signs of white mold wrapped around the base of the plant. For many growers, this is the moment concern sets in. However, while the symptoms may only now be visible, the disease process did not begin this week. In reality, the infection likely started weeks earlier, developing quietly below the canopy and below the soil surface long before it could be seen.

This is one of the greatest challenges in managing soilborne diseases in peanuts. Growers naturally focus on what they can see above the ground, yet the most important battle for yield is often taking place where visibility is lowest. By the time white mold becomes obvious, yield potential may already have been affected. The most successful disease management programs therefore focus less on reacting to symptoms and more on creating protection before disease pressure develops.

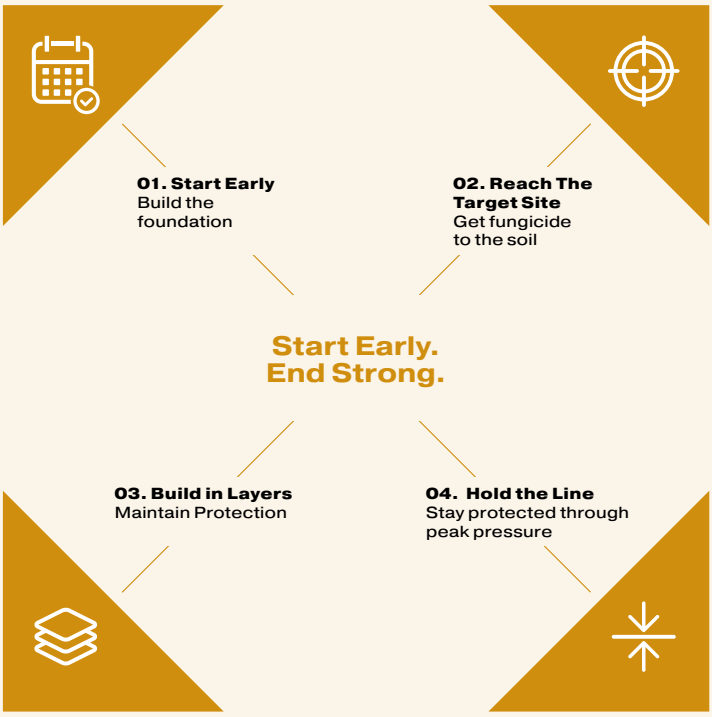
Over the past two decades, fungicide technology has advanced significantly, giving growers access to a wide range of highly effective products. Yet as the industry has become more focused on products, chemistry groups and application schedules, less attention has been paid to a simple reality: soilborne diseases are controlled in the soil. Success depends not only on what fungicide is applied, but on when it is applied, where it lands, how long it remains active and whether protection is maintained throughout the season.

> "GROWERS NATURALLY FOCUS ON WHAT THEY CAN SEE ABOVE THE GROUND, YET THE MOST IMPORTANT BATTLE FOR YIELD IS OFTEN TAKING PLACE WHERE VISIBILITY IS LOWEST."

At Nichino, we describe this approach as **Start Early. End Strong.** It is not a product recommendation or a spray schedule. It is a philosophy for building stronger, more resilient disease management programs.

THE FOUR PRINCIPLES OF START EARLY. END STRONG.

The most successful soilborne disease programs share four common characteristics. Together, they create a framework for protecting yield, preserving quality and reducing the risk of late-season disease outbreaks.



01. START EARLY

THE STRONGEST FINISH STARTS WITH THE STRONGEST FOUNDATION.

One of the most common mistakes in soilborne disease management is waiting until disease pressure becomes visible before strengthening protection. By that stage, growers are often reacting rather than preventing. White mold and other soilborne pathogens do not operate according to a calendar. They respond to environmental conditions, infecting susceptible plant tissue when temperature, moisture and canopy conditions allow.

The most successful growers understand that disease management begins long before symptoms appear. They establish protection before disease pressure develops, ensuring that fungicide activity is already in place when the crop enters its most vulnerable stages. This early-season protection creates the foundation upon which the rest of the program is built.

Much like a successful residual herbicide program, the objective is not to respond to a problem after it emerges. The objective is to create conditions where the problem is less likely to develop in the first place.

02. GET FUNGICIDE TO THE TARGET SITE

PROTECTION ONLY WORKS WHERE IT LANDS.

Soilborne diseases begin at or below the soil line. This means the target for disease management is not the canopy but the soil surface, crown area, pegs and developing pods where infection occurs. Yet as peanut canopies grow and close, fungicide placement becomes increasingly difficult.

A significant proportion of an application can be intercepted by foliage before it ever reaches the soil. This creates what can be described as the interception penalty. Every ounce of fungicide trapped in the canopy is an ounce that is not protecting the soil.

The later a program begins, the greater the risk that product placement becomes compromised. While irrigation can help move fungicide from foliage to the soil surface, applications made before canopy closure generally provide the greatest opportunity for active ingredients to reach the target site directly. Strong programs recognize that effective disease management starts with ensuring fungicide reaches the place where disease develops.

03. BUILD PROTECTION IN LAYERS

STRONG PROGRAMS ARE BUILT THROUGH CONTINUITY, NOT INDIVIDUAL APPLICATIONS.

Every fungicide begins to degrade after application. Heat, rainfall, microbial activity and natural environmental processes all influence how long active ingredients remain available in the soil. As a result, disease management should never be viewed as a series of isolated applications.

The objective is to maintain protection.

Successful growers understand this concept from residual weed control. They know that season-long control is achieved by maintaining activity over time rather than relying on a single application. The same principle applies to soilborne disease management.

As one layer of protection begins to decline, another should already be in place. Overlapping residual activity helps maintain consistent protection throughout the season, reducing gaps in coverage and protecting pegs, pods and crown tissue during critical stages of crop development. This layered approach not only improves disease suppression but also creates greater consistency under changing environmental conditions.

04. HOLD THE LINE THROUGH PEAK PRESSURE

SEASON-LONG SUCCESS REQUIRES SEASON-LONG PROTECTION.

The highest-risk period for white mold often extends across more than sixty days. Warm temperatures, increasing humidity and a closed canopy create ideal conditions for disease development and spread. This is the period that ultimately determines whether a program succeeds or falls short of expectations.

Programs that begin late often arrive at this window attempting to rebuild protection or compensate for earlier gaps. In contrast, programs built on early applications and overlapping residual activity enter this period with protection already established.

The goal is not simply to survive peak pressure. The goal is to enter peak pressure with confidence, knowing that the crop has been protected from the outset and that effective fungicide activity remains in place when disease pressure is at its highest.

“SOILBORNE DISEASES ARE CONTROLLED IN THE SOIL. SUCCESS DEPENDS NOT ONLY ON WHAT FUNGICIDE IS APPLIED, BUT ON WHEN IT IS APPLIED, WHERE IT LANDS, HOW LONG IT REMAINS ACTIVE AND WHETHER PROTECTION IS MAINTAINED THROUGHOUT THE SEASON.”

The Hidden Value of Soil Resilience

When evaluating fungicide programs, it is easy to focus on visible outcomes. Growers can see crop response, canopy health and disease symptoms. What is much harder to see is the protection occurring below the canopy. Yet this hidden protection is often where the greatest value is created.

Protected pegs. Protected pods. Reduced disease pressure during pod fill. Preserved yield potential. These outcomes rarely generate immediate visual proof, but they ultimately determine profitability at harvest.

This is why soil resilience matters. The strongest disease management programs are built around products and practices that continue working where disease develops, even as environmental conditions change. The goal is not simply short-term activity. The goal is reliable protection throughout the season's most critical periods.

New Doesn't Always Mean Better

Agriculture thrives on innovation, and new technologies will continue to play an important role in helping growers address emerging challenges. However, newer chemistry does not automatically create stronger disease management programs.

The most successful growers focus less on what is new and more on what consistently delivers results. They understand that placement, persistence, reliability and program design often have a greater influence on outcomes than novelty alone.

When evaluating a fungicide program, the most important question is not, "What is the newest option available?" It is, "Will this help maintain protection when disease pressure is at its highest?"

Strong programs are built on proven principles. Products may change over time, but the fundamentals of effective disease management remain remarkably consistent.

Strong Harvests Start Early

The next time you walk a field in August and see the first signs of white mold, remember that the season was not decided that week.

It was decided weeks earlier when protection was established before disease pressure developed. It was decided when fungicide reached the target site rather than being trapped in the canopy. It was decided when residual activity was maintained and when protection remained in place through the season's highest-risk window.

The most successful growers do not think in individual applications. They think in systems. They think in layers. They think ahead.

Because when it comes to soilborne disease management, strong harvests don't start when disease appears.

They start long before it does.

Start Early. End Strong.

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