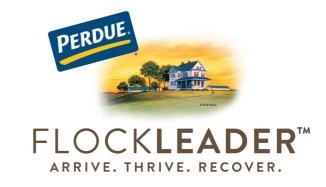
FlockLeader: A Backyard Solution from a Trusted Brand

Science based. Research driven.®

It's clear that people raising backyard chickens want help and support to ensure a healthy flock—not just when their birds gets sick or stressed.

Perdue has been a leader in developing the science behind raising chickens for over 100 years. Now we want to share our knowledge and technology with the Backyard Chicken Community.

Whether the backyard farmer needs a boost for their new chicks, is looking for a trustworthy daily supplement, or needs to troubleshoot issues with their flock, FlockLeader by Perdue has a product that can help.





Be a FlockLeader: Have A Healthy Flock

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Every backyard chicken owner wants to keep their flock healthy. FlockLeader supports that goal!

No single probiotic product can offer a "catch all" solution. That's why FlockLeader offers 6 unique products to help solve specific issues. Depending on the product, FlockLeader contains prebiotics, probiotics, electrolytes, plasma, and oregano. These ingredients feed good gut bacteria, improve the immune system, reduce stress, and provide natural antibacterial, antiviral, antibiotic, and antifungal properties.













What is Chicken Stress?

Challenges for Backyard Chicken Owners





Backyard chickens and their owners face a wide variety of challenges:

- Chick mortality
- Overall flock health
- Egg Production
- Salmonella/Coccidia
- Predators
- General Maintenance
- Waste/Odor

Why are Probiotics Critical?

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Chickens eat, live and poop in the same area. Their digestive systems are exposed to bad bacteria each and every day. It is critical to provide good Probiotics to help counteract bad bacteria like Salmonella. Very simply, cells that make up our digestive system die and reproduce every 3 days. New cells will interact with bacterial colonies in the intestines. If the overwhelming bacteria available is bad, the cells will interact to create digestive issues and health problems.



By providing large amounts of good, biologically appropriate and viable Probiotic bacteria, cells will work more efficiently, allowing for better nutrient absorption, better immune response, overall health, and reduced pathogens like Salmonella.

FUNCTIONS OF PROBIOTICS

Prevents reproduction of pathogenic microflora Regulate the absorption Antagonistic effect on of minerals, gases, water harmful microorganisms Digestion of Strengthen **Probiotic** carbohydrates the immune and proteins system Normalize the level Improved digestion, of cholesterol intestinal motility

Produce vitamin K, cyanocobalamin, thiamine, folic acid, biotin

Benefits of Probiotics for Backyard Chickens

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Probiotics serve many purposes for backyard chickens. Probiotics can:

- Establish and support intestinal health, which is the key to a healthy flock
- Help eliminate diarrhea
- Strengthen the immune system
- Increase GOOD bacteria, which helps to prevent BAD bacteria (including Salmonella and E. Coli) from colonizing
- Increase digestion and nutrient absorption, which:
 - > Reduces the amount of food needed to feed your flock
 - Lowered cost to feed your flock
 - Less waste and odor due to less food
 - > Speeds composting of waste
- Boost egg production, quality, and taste
- Reduce fly populations in and around the coop



Not all Probiotics are Created Equal!

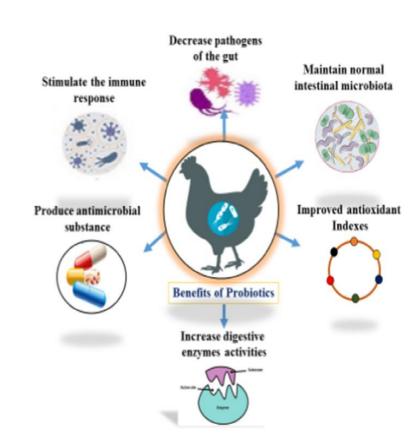
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Because Perdue knows chickens better than anyone. And that means we know probiotics, too. The strains in FlockLeader products are trustworthy, tested, and high quality.

Digestive Systems are a constant battlefield for Good Bacteria vs. Bad Bacteria. For this reason, more is not always better! Different bacteria strains perform different functions, and the most important thing is to achieve the right mix of good bacteria to achieve the desired goals.

Viability is key with probiotics. Live bacteria can affect change, while dead bacteria have no benefit in the digestive system. And that means preservation is key. (More on that later!) Most commercial products use a preservative to attempt to keep freeze dried bacteria alive.

Bacteria sourcing is also critical to its lifecycle. Spore Forming Bacteria (*Bacillus*) are sourced from the ground, and therefore reproduces in the ground. Non Spore Forming Bacteria are isolated from the Gut and therefore can reproduce in the Gut.



Know your Probiotics!

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So you're probably noticing that there's more to probiotics than just the CFU (Colony Forming Units) count. Did you know that guaranteed analysis labels count CFUs as they go into the package? In other words, those numbers do not reflect viable units available at use.

This means the viability* of bacteria can diminish over time as bacteria die due to preservation method, extreme temperatures, light, and shelf time before use.

Probiotic bacteria can only colonize their natural environment. And since probiotics can be sourced from the Ground or the Gut, that means:

- Ground sourced Probiotics reproduce best in the ground
- Gut sourced Probiotics reproduce best in the gut

^{*}Through lab testing, Perdue has found that over 85% of available Chicken Probiotics sold at retail do not contain the level of viable bacteria that is listed on the package.



Different Strains Perform Different Functions

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FlockLeader offers a whole suite of products so the approach can be tailored to each flock.

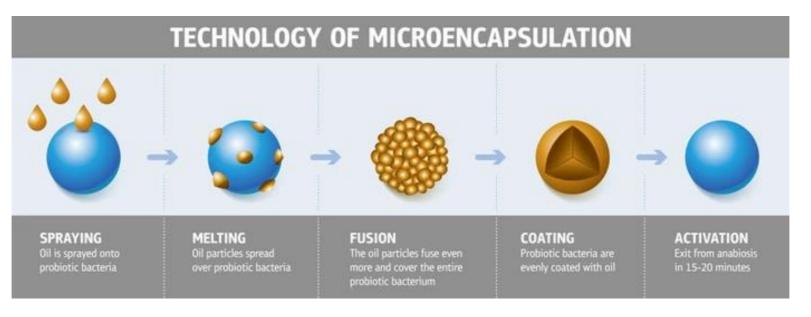
- It is critical to choose the right probiotic strains for your chicken's life stage, stress, or health issue is critical
- Different strains of probiotics do different things, so "catch all" products that attempt to address every issue with one solution are not as effective
- Bacterial diversity is key. Even "Good" bacteria can actually work against each other in the digestive system if they are not compatible and properly matched, causing digestive upsets
- Biologically appropriate strains can reproduce in their natural environment (gut vs. ground)

Product	
Arrive	We selected bacteria to help develop the immune system and stimulate intestinal development and limit pathogens in new chicks that need to establish their Probiotic colonies. This is a key factor in avoiding and addressing issues like "Mud Butt".
Thrive	We selected bacteria to support the immune system and limit pathogens. Our good bacteria competes with bad bacteria to ensure a healthy digestive system which can help reduce bad bacterial colonies like Salmonella
Recover/Recover Plus/ Recover 911	We selected bacteria to reduce the amount of leaky gut, limit pathogen growth and reduce the amount of tissue damage caused by various stresses such as illness, predation, injury and extreme environments and temperatures.
Healthy Coop	We selected bacteria that are ground sourced to allow them to reproduce within the coop to limit pathogen growth like Salmonella and speed up the breakdown of organic waste which can reduce odor.

Preservation Method is Critical to Viability

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Most probiotic companies preserve their bacteria through spray drying or freeze drying, but Perdue has a unique drying process that is a combination of these two processes. Perdue uses a microencapsulation process to protect the bacteria by preserving it within microscopic bubbles. This process ensures that the bacteria stay alive and viable through manufacturing, shipping, warehousing and its entire shelf life.



• Source: National Center for Biotechnology Information https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093624/

FlockLeader: Reducing Salmonella





One of the main goals of our FlockLeader line is to help reduce Salmonella bacteria in the coop.

Certain bacteria strains in the FlockLeader products reduce the amount of bad bacteria (including Salmonella) in the chicken's digestive system and feces.

Other strains reduce the pathogen load on the ground in the coop.

With this two-step approach, FlockLeader can effectively reduce bad bacteria.

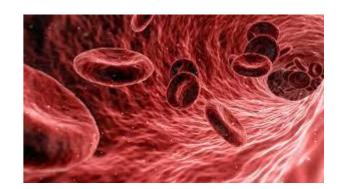
Source: Public Library of Science https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0223577

Plasma = Turbocharged Immunity

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Another component of FlockLeader is plasma, which works in tandem with Probiotics to speed recovery.

Whereas Probiotics signal cells to initiate an immune response, Plasma contains all the beneficial proteins and components required to support immune system responses such as Antibodies, Salts, and Enzymes. This dual approach jumpstarts new immunity in chicks and rapidly reduces stress in established birds. Plasma has been shown to reduce mortality up to 50%.



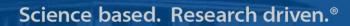
ARRIVE by FlockLeader

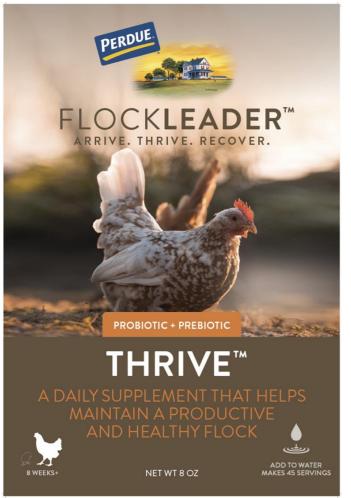




- A unique blend of Probiotics, Prebiotics, and Plasma specifically designed for young chicks up to 8 weeks of age
- Properly establishes good bacteria within the digestive system
- Helps reduce mortality in new chicks
- Aids in addressing Pasty Butt, Diarrhea, and pathogens like Salmonella and Coccidia
- Plasma provides essential proteins and nutrients needed to ensure a healthy immune system during the growth stage
- Just add to water. Makes 45 Servings
- 20 Million CFUs per serving

THRIVE by FlockLeader





- Use with birds over 8 weeks of age to help maintain a productive and healthy flock
- A unique blend of Prebiotics and Probiotics specifically formulated for established flocks
- Boosts Immunity
- Helps address health issues related to stress
- Decreases harmful bacteria, such as Salmonella, within the coop
- Improves and supports egg production
- Increases food absorption which reduces costs, waste and odor
- Just add to water. Makes 45 Servings
- 20 Million CFUs per serving

RECOVER by FlockLeader

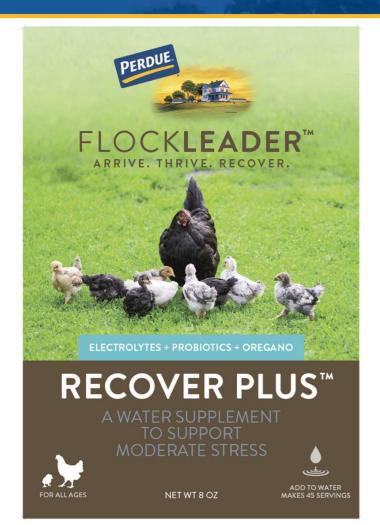




- A unique blend of Probiotics and Electrolytes designed to help alleviate mild stress
- Stress within the flock can trigger inflammatory immune responses
- Mild stress is exhibited through:
 - Panting and/or rapid breathing
 - Lifting wings away from the body
 - Mild reduction of appetite
 - Loose Feces
- Formulated to help overcome the effects of mild stress, such as inflammation or digestive issues, in all life stages.
- 7 Individual single serve packets. Just add to water
- 2 Billion CFUs per serving

RECOVER PLUS by FlockLeader

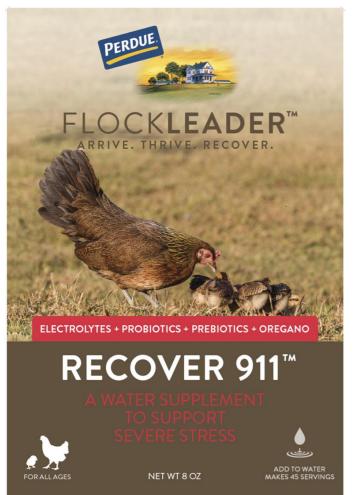




- A unique blend of Probiotics, Electrolytes and Oregano designed to help alleviate moderate stress
- Stress within the flock can trigger inflammatory immune responses
- Moderate stress is exhibited through:
 - Significant panting and/or rapid breathing
 - Lifting wings away from the body
 - Reduction in appetite
 - Any negative change in behavior
 - Loose Feces
 - Dirty Eggs
- Formulated to help overcome the effects of moderate stress, such as inflammation or digestive issues, in all life stages.
- Just add to water. Makes 45 Servings
- 2 Billion CFUs per serving

RECOVER 911 by FlockLeader





- A unique blend of Prebiotics, Probiotics, Electrolytes, Oregano and Plasma designed to help alleviate extreme stress
- Stress within the flock can trigger inflammatory immune responses, disease or even death
- Extreme stress is exhibited through:
 - Extreme panting and/or rapid breathing
 - Reduction in appetite and thirst
 - Birds stop producing eggs
 - Lethargy
 - Dirty Eggs
 - Isolation from the flock
 - Severe digestive issues/Pasty Butt
- Formulated to help overcome the effects of extreme stress, such as inflammation or digestive issues, in all life stages.
- Just add to water. Makes 45 Servings
- 2 Billion CFUs per serving

Healthy Coop by FlockLeader



REFRESHER + LITTER ADDITIVE TO KEEP YOUR FLOCK & FAMILY SAFE



- Unique blend includes probiotics, odor absorbers and moisture control
- Helps reduce bad bacteria (Salmonella), mold, insect outbreaks in and around the coop
- Great for enhancing composting
- Great source of calcium

Key Differentiators Science based, Research driven.®

- The Perdue Brand
 - Science Based, Research Driven
 - One of the most trusted brands with over 100 years experience raising chickens
- Shelf Stable
- Plasma to boost and support the immune response
- Products address bad bacteria within the bird AND on ground
- Gut sourced AND Soil sourced bacteria to allow for better colonization
- Flock Advisors available to answer and address consumer questions

