

# MucuSol® & UNI-SOL®

## TAG-TEAM FOR RESPIRATORY RELIEF

Shorter days and longer nights bring the sounds of poultry respiratory distress; snicking and raling alerts you to a threat... flu season is here.

You can now breathe easier yourself, knowing you have the two main causes of respiratory problems, airway inflammation and congestion, under control. You've got two powerful problem stoppers working for you... the top performing anti-inflammatory Uni-Sol, and MucuSol, the market's newest and strongest expectorant. When flu or other respiratory problems threaten to plug-up your production, Uni-Sol and MucuSol clear it out.

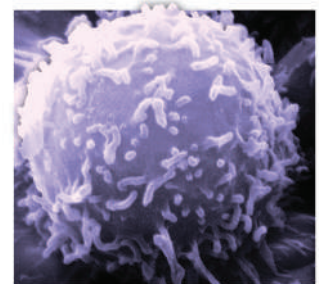
### Diseases and Irritants in Pig and Poultry Respiratory Systems

<i><b>Viral</b></i>	<i><b>Bacterial</b></i>	<i><b>Fungal</b></i>	<i><b>Other</b></i>
Influenza	Mycoplasma	Aspergillosis	Dust
Bronchitis	Bordetella		Noxious gas
Laryngotracheitis	Pasteurella/Actinobacillus		
Newcastle/Paramyxovirus	E. coli		
PRRSV	S. cholerasuis		
Pseudorabies/Aujeszky			

#### Tackle prostaglandins and inflammation

Injured airways release prostaglandins, responsible for fever, fluid, swelling and congestion. They suppress immunity and depress white blood cell and antibody production. Uni-Sol antiinflammatory blocks harmful prostaglandins. Uni-Sol not only relieves redness, fever, edema and swelling, it also allows more natural defensive lymphocyte white cells to join the fight by creating memory, recognizing pathogens and rallying protective antibodies.

Researchers successfully increased resistance to respiratory challenge using Uni-Sol. In their research, turkeys with respiratory infection suffered significant air sacculitis, swollen bursa, liver, spleen and heart tissue, resulting in high mortality. The researchers protected half the poult with Uni-Sol in their drinking water throughout the infection. The other half remained unprotected.

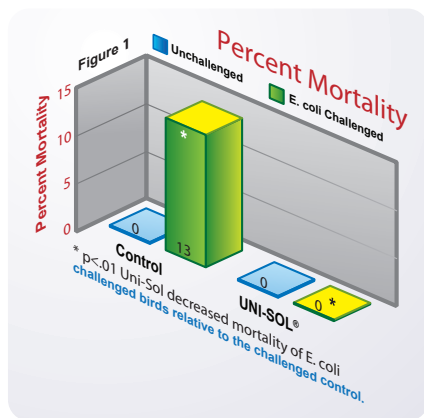


Lymphocytes like this one create the body's memory to attack invading pathogens

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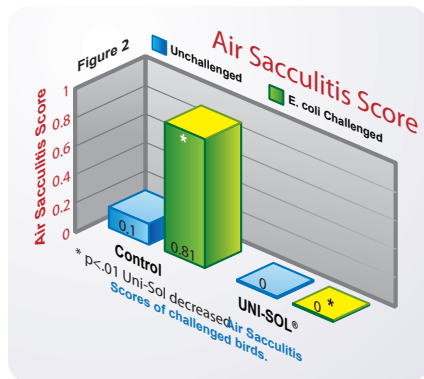
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The researchers found respiratory-infecting bacteria had spread to %17.4 of the control turkeys' livers, compared to none spreading to the livers of birds drinking Uni-Sol. Uni-Sol also significantly reduced swelling among the organs. Uni-Sol boosted white blood cell status in challenged turkeys, increasing leukocytes by %20. A much more dramatic improvement occurred among the memory- and antibody-building lymphocytes. Uni-Sol increased these cells more than seven times higher than the poulters not drinking Uni-Sol.

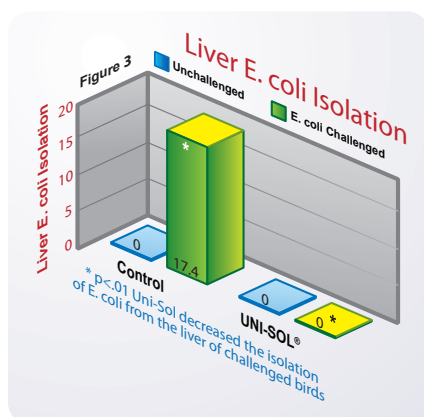


### Blown away by MucuSol

MucuSol expectorant syrup is a powerful partner to combine with Uni-Sol and fight respiratory distress. Uni-Sol holds the animal's inflammation down while MucuSol clears the airway to make coughs more productive. It loosens and dislodges mucous phlegm and expels irritants.



MucuSol is a stable water-miscible syrup that delivers more power to eliminate congestion. That's because MucuSol contains the richest concentration of expectorant for human and animal use. MucuSol thins phlegm in the airway by pulling water into the respiratory tract, lubricating and stimulating the flow of secretions. It helps cilia carry irritants up the airway and it generates a hearty cough to send them out. Efficient, clear airways speed up the recovery, eliminating costly secondary effects of respiratory disease.



This season you can breathe easier knowing your animals can too. When you control respiratory inflammation and congestion, you've conquered the problem; and ASP's two powerful problem stoppers... Uni-Sol and MucuSol can give you a clear advantage.

