BVS POULTRY Talk

Best Veterinary Solutions, Inc.

Winter 2015-16

www.bestvetsolutions.com

Willmar, MN
325 Lakeland Drive NE • P.O. Box 266
Willmar, MN 56201
320-235-8611 or 1-800-533-1899
Fax 320-235-8629

Ellsworth, IA
1716 Detroit
Ellsworth, IA 50075
888-378-4045
Fax 515-836-4464

Washington, IN
1854 Waller Drive
Washington, IN 47501
877-254-3410
Fax 812-254-2337

Mechanicsburg, PA
1 Brenneman Circle
Mechanicsburg PA 17050
844-561-4918

Dagsboro, DE
30124 Country Gardens Blvd.
Suite G2
Dagsboro, DE 19939
877-732-3894

CONTENTS

MEETINGS & EVENTS:

International Poultry & Processing Expo
January 25-28, 2016 | Atlanta, GA

National Turkey Federation Annual Convention
February 17-20, 2015 | Tucson, AZ

Midwest Poultry Federation Convention
March 15-17, 2016 | Saint Paul, MN

www.bestvetsolutions.com

Transitioning towards more judicious use of antibiotics

Robert L. Owen, V.M.D., Ph.D
Director of Technical Service

During the recently completed 2015 National Meeting on Poultry Health, Processing, and Live Production, Dr. Bruce Stewart-Brown presented a paper entitled "Removing Antibiotics from Chicken Production". In that paper, Dr. Stewart-Brown discussed the experiences of Perdue Farms in making the transition from conventional poultry production to the new world with which we all will be faced. While the experiences were those of Perdue Farms, the messages and lessons learned are universal and should be discussed by any company headed into the No Antibiotic Used (NAU) or Organic arenas. In the no antibiotic world the terms No Antibiotic Used (NAU), No Antibiotic Ever (NAE), and antibiotic free (ABF) are generally used synonymously.

The National Organic Standards and position statements for virtually all NAU programs have a disclaimer stating that in the event of a disease outbreak, the animals shall be treated and removed from the program. Unfortunately, these are usually just meaningless statements on a piece of paper and in practice this is rarely done. Excuses offered for not treating flocks include no available outlet for treated flocks, feed costs that have already been expended, or we need the meat or we will have to short our customers. In order to insure that the veterinary staff at Perdue can treat flocks if necessary, Dr. Stewart-Brown said that each complex at Perdue is given a ranking such as 80:20 based on the average number of flocks that may need treatment. The sales staff is then instructed not to sell more than, in this example, 80% of the product produced as "NAU" or "organic" because it is expected that, on any given week, up to 20% of the flocks will

continued on page 3

Biosecurity Update

Dr. Dale Lauer, Minnesota Board of Animal Health
Minnesota Poultry Diagnostic Lab
www.mn.gov/bah

BIOSECURITY – now is the time for you and your employees to implement your critical level biosecurity programs. Some important biosecurity practices to consider as part of your programs are:

1. Poultry should be kept away from areas in which they'd have access to or potentially share an environment with wild birds, especially waterfowl or shorebirds. Ideally they should be housed indoors.

2. Barn doors need to be closed at all times.

   a. Consider delaying total cleans of finishing farms during our high risk time period (now-May 15 or ice out). This is to protect you from accidentally dragging something onto your farm/into your barns as well as avoiding damaging thawing driveways which can create watering holes for migrating birds.

   b. Equipment (tillers, mortality carts, etc.) need to be inside barns now and not moved outside until May 15 or until ice out. Avoid moving equipment between barns as tires can't be cleaned well, especially when it's muddy outside.

3. Nothing can enter the barn unless it's been properly cleaned and disinfected. Equipment (spare parts, loading panels, etc.) need to be stored inside so that wild birds can't get to it. Trucks (poult trucks, shavings trucks, etc.) are not to driven into the barn.

4. Use barn specific coveralls and boots. These should be kept in the barn's entryway and changed into prior to entering the flock. Coveralls and boots should be removed and left in the entry. Do not wear them outside.

5. Eliminate standing water to prevent wild waterfowl from gathering on the farm property.

Use of antibiotics *, continued from cover*

have to be treated. This does not mean that this happens every week, but since disease is a random event we do not know when this might happen, and must plan accordingly. On some weeks we will be overproduced on NAU product, but that is the cost of insurance so that the veterinary staff can treat animals when needed, and the sales staff can still meet orders.

Accepting the fact that, in spite of our proclamations that our complex is now NAU or organic, disease is going to strike and animals will need to be treated is the first step in making a transition to husbandry driven poultry production, rather than sales driven poultry production. As companies wake up and accept this, they will realize that implementing and enforcing more reasonable density of animals in houses, and downtime between flocks are critical to preserving the health of animals and minimizing the use of antibiotics. According to Dr. Stewart-Brown, as we do these evaluations we will learn that not every producer is capable of NAU or organic production, and these producers can remain in conventional production so that they may have a reasonable chance of being successful.

So when the memo comes down from above telling live production of Complex XYZ that as of January 1, 2016 antibiotics will no longer be used, what are the chances of being successful? According to Dr. Stewart-Brown, not very great because transitioning to more judicious use of antibiotics is a process not a proclamation. The folks at Perdue Farms have been working at this for many years and have found that when you hit a barrier you put antibiotics back in the system, evaluate the reasons for failure, make corrections, and try again. Corrections may take the form of capital improvements that need to be made, retraining of staff or good old elbow grease to get things cleaned up. While it is unreasonable to think that flocks will never need to be treated, with persistence and perseverance the trend should be declining.

One of the casualties of this "marketing" revolution that never seems to be discussed are the animals. If animals need to be treated, should they not be treated with the very best that veterinary medicine has to offer? The answer is an unqualified yes. Yet, day after day, to preserve the hallowed NAU or organic status of a flock, we reach for "natural" products that have been Generally Recognized as Safe but have in no way been subjected to scientific scrutiny for effectiveness. Instead they are marketed as odor reducers or non-specific immune enhancers and used to treat whatever non-specified condition, not so much because it will help the animals, but rather so we can feel better because we are doing something. So if a broiler flock breaks with necrotic enteritis, in NAU or organic production instead of reaching for an antibiotic that will treat the condition, we reach for one of many copper sulfate preparations that, depending on the dose and duration, may cause intense oral ulceration in the animals that consume it. How do we justify that as caring animal husbandry professionals that are supposedly providing the very best care that veterinary medicine has to offer? And would somebody please teach this author how to treat organic flocks that, through no fault of their own, break with some exotic disease such as coccidiosis!

To Dr. Stewart-Brown and the folks at Perdue – thank you. Hopefully, coming out of the closet and opening up about your experiences on the road to judicious use of antibiotics will help other people as they go down this road. Unlike some of the major food supplier chains, the folks at Perdue Farms are not brand building. They are undertaking this challenge because it is the right thing to do. Consumers are asking questions about antibiotic usage in animal agriculture and it is our responsibility to respond to those questions. We really need a national dialog about how to achieve our goal of minimizing antibiotic use while preserving our moral obligation of treating our animals in the most humane fashion possible each and every day of their lives. If veterinarians are not going to be able to use the FDA approved compounds that have been used safely and effectively for 75 years, we need mountains of research on this new class of "natural" compounds to assure us that they are as safe and effective and fulfill the postulate that the animals are receiving the very best that veterinary medicine has to offer. And lastly, the entire industry needs to take a step back and answer the question of how we can transition from a sales driven industry to a husbandry driven industry. In order to minimize treatment of flocks, husbandry has to come first.

The Best We Have to Offer???

Robert L. Owen, V.M.D., Ph.D.
Director of Technical Services

The debate about the use of antibiotics in animal agriculture continues between consumers, retailers, legislators, and producers. The controversy may never be resolved, but there are certain things that we can all agree on. Certainly, we can all agree that over use of antibiotics, especially without veterinary supervision, is not acceptable. Fortunately, the Food and Drug Administration, with the publication of the Guidance for Industry documents 209 and 152, has taken steps to correct something that probably should have been corrected a long time ago.

Another point that we should all be able to agree on is that animals deserve the very best in both husbandry and therapeutics that veterinary science has to offer. Good husbandry will minimize the challenge and the effects of a challenge, thus minimizing the need for treatment. This does not mean that we need to go back to "Old McDonald" agriculture. That is neither sustainable, nor productive enough to fulfill our mission of providing a safe, economical protein source for anyone who wants to consume it. Rather it means that we need to do a better job at things we know to be important such as cleaning and disinfection, ventilation, water sanitation, and density and downtime.

The most disturbing aspect to a veterinarian about this push back against antibiotics is the expansion of "Natural" products to treat disease. These products are not subjected to the scrutiny of the FDA. Therefore, companies producing these products are not allowed to make any disease claim for the product. As a result, any discussion about efficacy against disease is "off the record". So the decision to use a product is basically just a guess based on hearsay evidence. Is that really providing the animals under our care the best we have to offer?

Most people, including a lot of veterinarians, do not understand the process a drug has to go through to obtain FDA approval. All of the data generated for a particular compound is assembled in that product's NADA or New Animal Drug Application. Within that dossier is information about manufacturing, efficacy, animal safety, environmental safety, and potency testing. No can disagree with the statement that the approval process has become unrealistically, arduous, and expensive. However, in the end when a veterinarian prescribes an FDA approved drug he/she can be assured of its potency, efficacy, and residue avoidance. All of the work done for approval is done under a very stringent set of guidelines entitled Good Laboratory Practices (GLP's) and meticulous records must be kept and inspected by the FDA. There is another set of standards for manufacturing FDA approved products called Good Manufacturing Practices (GMP's). Like the GLP's these require meticulous record keeping along with testing for potency and stability for each and every batch of product produced. Like the GLP's the FDA regularly inspects the manufacturing site for compliance.

There are no such regulations governing the investigational research and manufacturing of the so called "natural" products. So when we reach for a product, not only do we not know what is really in the bottle, we have no idea about its purity or stability. Is that being an informed consumer? Do we not have the right to demand that knowledge? More importantly, is that providing the animals under our care the best we have to offer?

We in animal agriculture may be losing the antibiotic battle to, as David Kruse, president of CommStock Investments, Inc. puts it in a recent article, "brand building food supply chains such as Chipotle, Panera and recently Subway". We must never stop trying to provide the animals under our care the best veterinary science has to offer. If we are to be forced to use natural products we have the right to demand that the suppliers of these products guarantee the potency and purity of the active compound in the product. We have the right to know what is in the product that we are administering to our animals. We deserve more than some ambiguous statement such as "a blend of essential oils". What does a statement like that mean? Somehow a product is safe and

continued on page 8

Solutions for Organic Production

Acidifiers:

BVS Citric Acid

BVS Liquid Citric Acid

BVS Acidified Copper Sulfate

Essential Oils:

Biosupreme® L

Biosupreme® Organic Feed Grade

EnviroSupreme Green

By O Reg+

By O Reg Yucca

Cleaners/Disinfectants:

Keno™ X5

Keno™san

Pro Oxine®

Gil-O-Fact II

Supportive Care:

AviCare™

XPC™ Green

CitrisStim®

Hilyses™

Aspirin (Liquid or Dry)

Mucusol®

BVS Vitamin D3 Liquid

BVS Poult Start

BVS Vitamin EKA + D3

BVS Sol-U-K

BVS Solulytes Natural

Insecticides:

Essentria™ All Purpose Consentrate

Poultry Shield FG Sulfer

Yellowjackets Dust Sulfer

Litter Ammendments:

Klasp™

Please contact your BVS Salesman for more information on the products we offer for organic production

BVS
Best Veterinary Solutions

*Not all products mentioned above are OMRI Listed. Approval for use in organic production is subject to approval from company's/grower's organic certifier.

ADM kemira AGROIN Baja Agro International Bio-Cide International, Inc. Diamond V

Animal Science Products Incorporated CID LINES Lohmann Animal Health envincio

MERCK
Animal Health

INNOVAX®-ND

TSP-V-048278 2000 dose ampules
TSP-V-116951 4000 dose ampules

Marek's Disease - Newcastle Disease Vaccine
(Serotype 3, Live Virus, Live Marek's Disease Vector)

INNOVAX®-ND is a frozen, live, cell-associated Newcastle disease (ND) and Marek's disease (MD) vaccine. It provides proven protection against virulent NDV and MD. It is approved for *in ovo* injection of 18-day embryonated eggs.

Advantages:
- Provides extended protection for virulent ND and MD
- Offers effective protection in the face of NDV maternal antibodies
- Replaces a conventional live ND vaccination program in the absence of exotic ND
- Removes the potential for respiratory reactions due to live ND vaccines
- Allows the use of monovalent infectious bronchitis (IB) vaccines, improving IB protection

NEWCASTLE CLONED N-79

TSP-V-066953 1000 dose units

Newcastle Disease Vaccine (B_1 Type, clone-selected LaSota Strain)
(Live Virus, Chicken Embryo Origin)

Newcastle Cloned N-79 is a live virus vaccine of chicken embryo origin containing a clone-selected B_1 Type, LaSota strain Newcastle disease virus. This virus has the ability to stimulate protection against a wide variety of Newcastle field strains while causing a milder reaction, in healthy chickens and turkeys, than other LaSota strain vaccines.

Advantages:
- Clone-selected LaSota strain stimulates strong immunity against Newcastle disease, while producing only mild reactions
- Product of choice for immunization of turkeys against Newcastle disease
- May be used to revaccinate broilers in areas with strong Newcastle disease

ORALVAX-HE®

TSP-V-065396 5 x 2000 dose vials
TSP-V-065398 5 x 5000 dose vials

Hemorrhagic Enteritis Vaccine (Live Virus)

ORALVAX-HE® vaccine is a high titer vaccine that safely protects turkeys 6 weeks of age or older against the immuno-suppressive effects and death losses caused by hemorragic enteritis.

Advantages:
- Safe and efficacious: produced with a stable and avirulent strain of type II avian adenovirus of pheasant origin
- Produced under federal quality control standards, ensuring purity and sterility
- Consistent high potency titers to en sure protection of every vaccinated bird, flock after flock
- Recommended administration at 6 weeks of age or older helps assure no maternal antibody interference

NEWHATCH-C2®

TSP-V-053805 10,000 dose vials

Newcastle Vaccine
(B_1, Type, C2 Strain, Live Virus)

NEWHATCH-C2® is the patented, virtually nonreactive C2 strain of B_1 Type Newcastle disease (ND) virus. It is a lyophilized vaccine approved for spray vaccination of chickens one day-of-age or older for protection against Newcastle disease.

Advantages:
- Effective against field challenge of Newcastle disease virus
- C2 strain of B_1, Type Newcastle minimizes reaction to one day-of-age vaccination in broiler chicks
- NEWHATCH-C2 eliminates problems with lingering hatchery reaction prior to field boost
- Safe to use for hatchery application

MERCK
Animal Health

MERCK
Animal Health

PM-ONEVAX®-C

TSP-V-065417 1000 dose units

Pasteurella multocida Vaccine

(Avirulent Live Culture, Avian Isolate)

PM-ONEVAX®-C vaccine. The seed culture used to make this vaccine hs been laboratory tested for protection of chickens against challenge with the X-73 (Type 1) strain of *P. multocida* and in turkeys against challenge with the P1059 (Type 3) strain of *P. multocida.*

Advantages:

- A temperature sensitive mutant of the CU strain that produces stronger takes than the M-9 strain, but less than the CU strain
- Offers protection against naturally occuring field strains of *P. multocida*
- Easy wing-web administration in broiler breeders, layers and turkey breeders

M-NINEVAX®-C

TSP-V-065378 1000 dose units with diluent and wing-web stabbers

Pasteurella multocida Vaccine

(Avirulent Live Culture, Avian Isolate)

M-NINEVAX®-C vaccine is a live bacterial vaccine containing the mild avirulent M-9 strain of *Pasteurella multocida*, Heddleston Type 3-4 cross, in a freeze-dried preparation sealed under vacuum.

This vaccine strain has been shown to offer protection against fowl cholera in chickens and turkeys. The seed culture used to make this vaccine has been laboratory tested for protection in chickens against *P. multocida* serotype 1 and in turkeys against challenge with *P. multocida* serotype 3.

Advantages:

- Strong protection against *P. multocida* serotype 1 (chickens) and serotype 3 (turkeys)
- Mild. Less reactive than competitive products
- Safe. Avirulent live culture will not revert to virulence, will not cause mortality
- Specially formulated diluent provides excellent reconstitution stability

ART VAX®

TSP-V-065236 1000 dose units

Bordetella avium Vaccine

(Avirulent Live Culture)

ART VAX® vaccine is a live bacterial vaccine containing a chemically induced mutant of *Bordetella avium* which is immunogenic for turkeys when vaccinated by spray cabinet at day of age; then revaccinated in the drinking water at 2 weeks of age.

Advantages:

- Approved for spray administration at day of age followed by drinking water at 2 weeks of age
- Proven efficacy in preventing coryza in turkeys
- Time proven. This vaccine strain has been used effectively in the field for over twenty years
- Mild reaction
- Freeze dried product of proven quality and stability

BVS is the exclusive distributor and marketer of Merck turkey vaccines in the U.S.

MERCK
Animal Health

The best we have to offer?

continued from page 4

effective because someone says that it is "all natural" – really?

Forty years ago, a wise old professor told the Class of 1976 that we would not be able to save all the animals we treated, but if we do take on the responsibility of treating them at least we should be certain that we are doing no harm. Mother Nature has a way of helping us do our jobs. In the "good old days" administration of an oral form of penicillin or bacitracin would treat an enteric disease such as necrotic enteritis in short order. We knew the mechanism of action, the potency, and most importantly the withdrawal period to avoid residues. In today's world we administer copper sulfate for a variable period of time, and say to ourselves that we think it might have helped and the oral ulceration will eventually heal. Is that really the best we have to offer?

While those of us in production agriculture may be losing the battle to brand building food supply chains, we can make a difference. The next time someone comes into your office asking you to risk the health and welfare of your flocks by using a non-FDA approved natural product, ask some questions. Ask where the ingredients are produced. Ask what the active compound is, how it is extracted and how it is tested for purity and potency. Ask for a guaranteed analysis. Ask about dose, treatment times, treatment intervals, adverse interactions, and withdrawal time. The animals we are treating have a right to have these questions answered. These are the same questions that have to be answered for FDA approval of a product.

The last question to ask is what therapeutic indications are on the label. The only appropriate answer is that there are none. That is the reason for the obscuration in the background during the infomercials we hear ad nauseum on the television. This product is not intended to treat or prevent disease…… is that really the best we have to offer these animals?

To investigate some of the myths surrounding these so called natural products, Best Veterinary Solutions has recently constructed an animal testing facility. The first question being tested is whether some of these products have an effect on cycling of coccidiosis in birds vaccinated for the disease. The trials are still ongoing but at this point the results have been disappointing. If there is any effect, it is minimal and certainly nothing has been tested that comes even close to the efficacy of the gold standard compounds that we have used for years.

Coccidiosis is a ubiquitous disease that is diagnosed in animals placed in newly constructed houses, organic birds raised on pasture, and common every day Old McDonald backyard chickens. The ionophore class of anticoccidial products is safe, effective, and has zero residue concerns. They do have a secondary characteristic of antibiotic properties, but this class of compounds is not important or even used in human medicine. Even so, the brand building food supply chains have banned their use for controlling an important parasite in birds. As a last resort we are left to use natural products that are testing out to be ineffective. IS THIS REALLY PROVIDING THESE ANIMALS WITH THE BEST VETERINARY SCIENCE HAS TO OFFER?

Healthy profits start from within

Good intestinal health is key to maximizing uniformity, productivity and profitability in your operation. New **Safe-Guard® AquaSol** helps you optimize treatment of poultry gastrointestinal worms with an innovative, farm-friendly drinking water formulation.

- **Smaller particle size helps prevent sedimentation and clogged pipes, filters and nipple drinkers**
- **No pre-slaughter withdrawal**

safe-guard® AquaSol
(fenbendazole oral suspension)

No withdrawal period is required when used according to the label. Do not use the drug in laying hens and replacement chickens intending to become laying hens. Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitism.

THE SCIENCE OF HEALTHIER ANIMALS.

US/PAQ/0815/0002

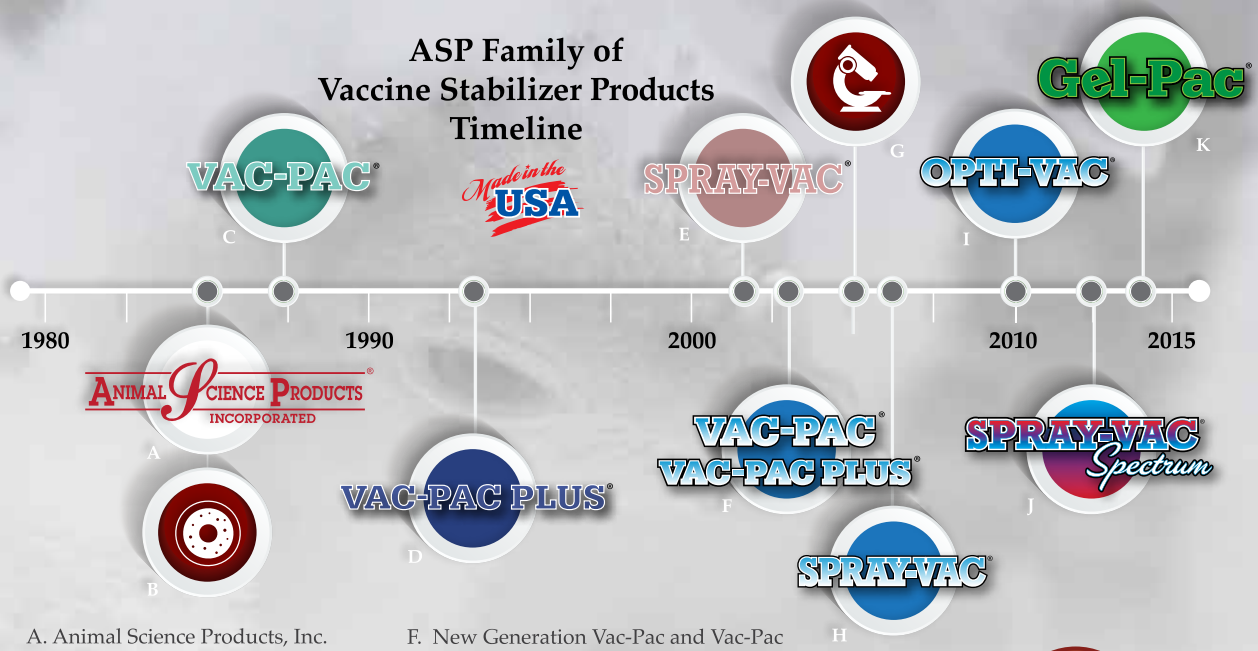
MERCK Animal Health

Vaccine Stabilization and Protection: A History of Innovation

Since its humble beginnings in 1985, Animal Science Products has expanded the boundaries of product development. For nearly twenty years, ASP has established a reputation as an innovator and industry visionary, eventually leading to the 2002 break-through we know today as New Generation vaccine stabilization. Once Spray-Vac, ASP's first New Generation vaccine protection product, was introduced to the market, the race was on to develop even more efficient, reliable, and cost-effective delivery methods for proper vaccination.

In just over 10 years, ASP has introduced five additional vaccine protection products, ranging in delivery methods from drinking water, to eye-drop application, to novel sprays that stimulate preening and feeding behaviors. Together, these products are changing the way poultry producers around the world protect their flocks against disease. Consumer demand for healthy poultry is on the rise globally. This demand calls for better ways to inoculate the entire flock, and is a driving factor behind ASP's commitment to innovation in vaccine protection.

ASP Family of Vaccine Stabilizer Products Timeline



A. Animal Science Products, Inc. chartered and founded as a water soluble packaging company

B. ASP introduces its first powdered milk-based vaccine stabilizer

C. Vac-Pac® vaccine stabilizer first appears, incorporating enhanced solubility and improved dose recommendations

D. Vac-Pac Plus® is introduced with added blue dye for visual vaccine monitoring

E. Introduction of Spray-Vac® – a New Generation vaccine stabilizer that eliminated the need for distilled water

F. New Generation Vac-Pac and Vac-Pac Plus introduced with patent-pending technology that improves solubility and effectiveness

G. Product development laboratory expansion

H. Spray-Vac improved to protect both viral and bacterial vaccines

I. Introduction of Opti-Vac®, a tonically-balanced ocular delivery stabilizer

J. Spray-Vac Spectrum developed with enhanced spectral response and increased preening

K. Introduction of Gel-Pac® new generation gel delivery system of vaccines, probiotics, and nutritional ingredients

Learn more at www.asp-inc.com
or contact your local BVS Sales Representative

Animal Science Products® Incorporated

BVS Personal Protection

Poly-Pro Ez Tie 4 & 6 mil

Elastic Top Boots 3 & 6 mil

Treader Boots XL & Jumbo

Shoe Cover 4 mil Clear

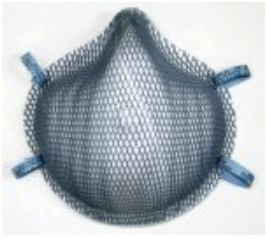
Shoe Cover 6 mil Blue

Latex Powdered Gloves

Latex Powder Free Gloves

Nitrile Powder Free Gloves

Yellow Rubber Boot Cover LG & XL



Moldex 1200N95 Mask

Moldex 2400N95 Mask

Moldex 2200N95 Mask

Nuisance Mask

Moldex Mask 7000 Series

Moldex Cartridges Multi-Gas

Moldex P100 Filter Disk

Moldex Piggyback Adapter

Navy Polypropylene Coveralls

White Micromax Coveralls

White Coveralls with Hood and Boot

Best Veterinary Solutions, Inc
1716 Detriot St.
Ellsworth, IA 50075
(888) 378-4045

Best Veterinary Solutions, Inc
325 Lakeland Dr NE
Willmar, MN 56201
(800) 533-1899

Best Veterinary Solutions, Inc
1854 East Waller Dr
Washington, IN 47501
(877) 254-3410

Best Veterinary Solutions, Inc
31024 Country Gardens Blvd
Dagsboro, DE 19939
(877) 732-3894

Best Veterinary Solutions, Inc
1 Brenneman Circle
Mechanicsburg, PA 17050
(844) 561-4918

BVS Sanititizing/Cleaning Equipment

BVS Handy Foamer

BVS Handy Foamer with Tank

Hydro Foamer 481

0.5 Gallon Foam Unit

1.3 Gallon Foam Unit

15 Gallon Conentrate Foam Unit

Concentrate Foam Unit

Doorway Foam Unit

Footwear Sanitizing Unit with Boot Scrubber

10 Gallon Fog Unit

Wall Mounted Fog Unit

Disinfection Mat

Doorway Foam Unit

0.5 Gallon Foam Unit

Best Veterinary Solutions, Inc
1716 Detriot St.
Ellsworth, IA 50075
(888) 378-4045

Best Veterinary Solutions, Inc
325 Lakeland Dr NE
Willmar, MN 56201
(800) 533-1899

Best Veterinary Solutions, Inc
1854 East Waller Dr
Washington, IN 47501
(877) 254-3410

Best Veterinary Solutions, Inc
31024 Country Gardens Blvd
Dagsboro, DE 19939
(877) 732-3894

Best Veterinary Solutions, Inc
1 Brenneman Circle
Mechanicsburg, PA 17050
(844) 561-4918

ProOxine®(AH) Disinfecting Solution

For Animal Drinking Water

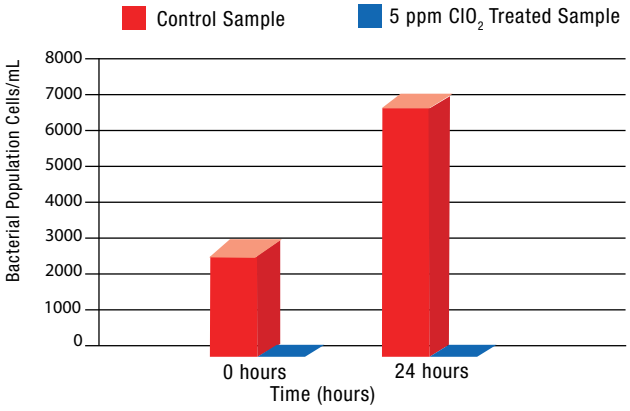
ProOxine® is the most effective tool for water management in animal facilities. ProOxine® keeps the bacteria level down in the water lines, and prevents biofilm from developing thus keeping the animals healthier by keeping down the pathogen level that could potentially travel from one animal to another. ProOxine® makes drinking water more palatable to poultry and livestock and therefore they drink more. Additionally, ProOxine® is highly effective in keeping water systems free of build up.

AANE (Automated Activation Non-Electric) System

Efficacy of ProOxine® against Biofilm

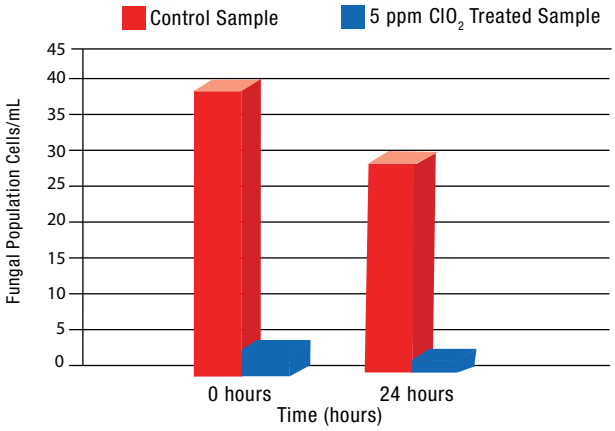
CONTROL EFFECT OF 5 ppm ClO_2 AGAINST BIOFILM BACTERIA

On Bacteria	Control Sample	5 ppm ClO_2 Treated Sample
0 Hour	3000	30
24 Hours	7000	2



CONTROL EFFECT OF 5 ppm ClO_2 AGAINST BIOFILM FUNGI

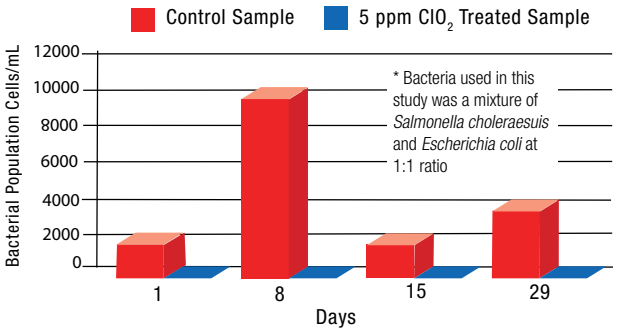
On Fungi	Control Sample	5 ppm ClO_2 Treated Sample
0 Hour	40	4
24 Hours	30	2



Efficacy of ProOxine® against Salmonella and E-coli

REDUCTION OF BACTERIAL POPULATION* IN WATER AFTER CONTACT WITH 5 ppm CHLORINE DIOXIDE

On Bacteria	Control Sample	5 ppm ClO_2 Treated Sample
1 Day	2000	20
8 Days	10000	2
15 Days	2000	2
29 Days	4000	2



Bio-Cide INTERNATIONAL

Exceptional Chemistry • Extraordinary People • Excellent Service
www.bio-cide.com • 2650 Venture Drive, Norman, OK 73069
405.329.5556 • 405.329.2681 fax • 800.323.1398
Bio-Cide International is ISO 9001:2000 certified

BVS BEST VETERINARY SOLUTIONS, INC.

Distributed by:
Best Veterinary Solutions, Inc.
515-836-4001 • 888-378-4045
www.bestvetsolutions.com

Pure *Yucca schidigera* powder

BIOSUPREME®

ORGANIC FEED INGREDIENT

ENHANCES FEED EFFICIENCY
BIOSUPREME® contains saponins (active ingredient), which have surfactant properties, playing an important role in animal nutrition. The glycocomponents within saponins have a natural affinity to bind ammonia and other noxious gases, therefore improving the environmental air quality within the poultry houses, swine barns, and other livestock commercial facilities.

REDUCES THE NEGATIVE EFFECT OF AMMONIA
BIOSUPREME® is produced under strict certified Food Safety Management System guidelines as well as certified organic manufacturing process. We use only mature and over mature *Yucca schidigera* plant stems obtained under an environmentally conscience sustainable harvesting program, monitored by our own in-house forestry engineers.

BIOSUPREME® L
Available in concentrated liquid, which can be included in drinking water systems.

AGROIN
BAJA AGRO INTERNATIONAL

Ensenada, Baja California, México
www.yucca.com.mx

BVS

Distributed in the United States by:
Best Veterinary Solutions, Inc.
325 Lakeland DR., N.E. Willmar, MN 56201
Toll Free: 1-888-378-4045
www.bestvetsolutions.com

BAJ-AN-BSP-EN-01

The world's leading disinfectant Virocid has become even more powerful.

Thanks to the extraordinary cleaning power of **Kenosan**, the world's most powerful disinfectant **Virocid** is able to penetrate deeper and disinfect even more thoroughly than you were used to.

Kenosan combines ultra-strong adhesion power and deep penetrating cleaning action at very low dilutions! The high-level formulation guarantees a unique cleaning result in the most heavy-duty circumstances in the pig, poultry and dairy houses. Even the most thick and dried up dirt (manure, litter, etc.) like in farrowing crates, fattening pens, turkey or broiler rearing houses, milking parlours etc. stands no chance against the penetrating and dissolving power of Kenosan. The cleaning action also gets amplified by extended contact time due to the sticky foam that remains attached upon all types of surface.

CID LINES
innovative hygiene solutions

www.cidlines.com

Let's Start Doing What is Right...Not Popular!

By Ross Thoreson
Best Veterinary Solutions Sales Manager

Did you ever think it would be possible to be too good at your job? I think that is exactly what chicken, turkey and all farmers in this country have done. With the help of innovation and technology from suppliers, farmers have simply become too good at their job in supplying this country with affordable, safe and nutritious food options. The agriculture industry has continued to produce more food with less land, water and resources than ever before. Farmers are so good at producing safe and affordable food that in the United States the average person only spends 6% of its total income on food. While other developed and 'wealthy' nations like Sweden, France and Germany average around 12% of their total income being spent on food. Brazil averages around 16% while Mexico, China and Russia average around 27% between the three countries. Can you imagine spending twice as much of your income on food like those European countries? What about 4 times as much like Mexico, China and Russia? We continue to make government policies that want the United States to be more like those countries but I think I am good with spending 6% of our income on safe, nutritious food. I don't really want to be more like them but we continue to move in that direction.

Since we have such a diverse and easy way to buy food in this country we have created what many call 'food elitist'. People who take for granted what they have for food options and don't have a clue where their safe and affordable food options come from and / or how it is made. Now these people that make up a large part of the consumer base are becoming more interested in their food and where it comes from. That is great. The problem is this consumer base continues to be bombarded on a daily basis with myths and misinformation about how farmers raise their animals and how their food is produced. Activists groups continue to push their agenda by getting these consumers to demand changes be made in their food supply. And when consumers push enough things change. I don't blame suppliers for listening to the demands of their customers.

The more I think about it though, are the activist groups really the only ones to blame for all the misinformation that the consumer is getting? Are they the only ones to blame for 'outside' groups dictating what are the best practices for you the farmers to raise your animals? The answer is NO. Unfortunately we are to blame just as much as anyone. You all know the old saying 'every time you point a finger, there are three pointing back at you'. I think that applies here as well.

Have you ever looked at all the different labels and statements on packaged food products these days? All natural, no hormones or steroids added and antibiotic free are probably the most popular. Companies add these statements to their labels to gain a competitive advantage from their competition. However that leads people to believe that some poultry meat actually has added hormones or steroids even though that practice is illegal and government regulated. Guess what, ALL food you eat has some levels of hormones, even organic. In fact organic and conventional food display little to no differences in hormone levels. So why do we confuse the consumer with these labels? ALL meat that consumers buy is antibiotic free. Even if the farmer used antibiotics at some point in that animals life there are strong government regulations that dictate no residue ever be present when that meat is processed. Because of this we are now saying 'No Antibiotics Used' instead of 'Antibiotic Free' which is good. All of this leads to a lot of misinformation and confuses the consumer as to what farmers are and are not doing when raising animals for food. Activist groups aren't the ones responsible for these confusions.

The use of antibiotics in animal production has and will be a hot topic for a while. You continue to see food suppliers call for more judicious use of antibiotics or no antibiotic use at all. This was brought to light in a big way when Subway, a huge restaurant food chain in North America, announced it was moving in this direction.

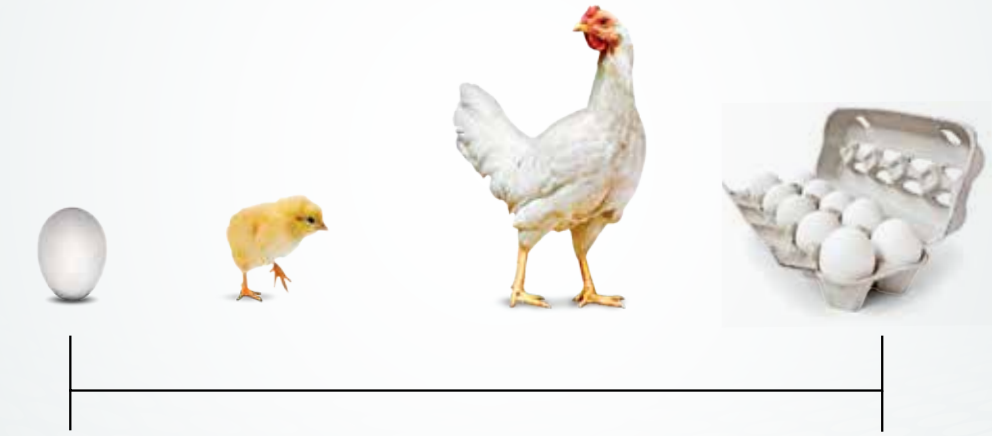
continued on page 18

Unfortunately for Subway it didn't handle this announcement very well. It received a lot of push back from the agriculture industry on its statements, actions and decision to move in this direction. Subway actually came out with a revised statement saying "that antibiotics are critical tools for keeping animals healthy and that they should be used responsibly to preserve their effectiveness in veterinary and human medicine." I don't think anyone disagrees with that. However it doesn't look like Subway at this time is going to change its plans from its original statement which is too bad. The judicious use of antibiotics like many other agriculture innovations is necessary in allowing our farmers to produce safe, affordable and nutritious food to the consumer. By 2030, food demand is predicted to increase by 50% and 60% of that is predicted to come from animal food sources. How are we going to meet these demands and remain environmentally sustainable by not using ALL the tools at hand? For decade's hen production of eggs increased per year. Now over the past several years that productivity trend has reversed due to more disease, changing practices and removing innovations. So to meet the demands for meat or eggs we will need to use more land, more water and raise more animals. So we know we have to increase food demand but are doing things that are actually decreasing production. Remember those percentages each country spent on food, what do you think will happen if we continue on this pace? The most important part here though is by continuing to freely eliminate the judicious use of antibiotics we are sending a message to the consumer that what we are currently doing with antibiotics is not right. I can see why the consumer is so confused. Even though there is no scientific evidence that animal use of antibiotics has led to any harm or decrease in antibiotic efficacy for humans it doesn't matter. However when we as an industry continue to move down this path we are in fact telling the consumer what we are currently doing is wrong and a part of the problem.

When are we as an industry going to say ENOUGH is ENOUGH!! We cannot simply stand by and allow our own industry along with outside organizations like activist groups send out misinformation that dictates how we raise our animals and allow nonscientific information on the use of antibiotics dictate what is really best for our animals. After all isn't that the point? Do what is best for the animals? I am waiting for someone to tell their suppliers we simply do not believe in this direction and will not and cannot supply you with meat from animals that are raised this way. Is that wishful thinking? I give credit to the NPPC (Nation Pork Producers Council) for their stance on the judicious use of antibiotics and Subways recent announcement. They have two fundamental drivers in their antibiotic stewardship plan: 1. Zero is NOT an option and 2. Commitment to Responsible Use of Antibiotics. They also put out the following "We want to send a clear signal that the Pork Industry is committed to responsible use of antibiotics but will not stand by and be dictated to by customers who have a marketing differentiation agenda." Wow. Kudos to the NPPC for taking a stance on what it believes is right for its growers and most importantly, the animals they raise.

I think the reactions we have seen from a lot of people tells me that we can make a difference and it needs to be a priority for us as a federation and its members to get the proper information out to the consumers so they can make a sound decision on the food they purchase. 'The most common way people give up their power is by thinking they don't have any.' What a great quote. We have the power to make a difference. The question is…..Will we?

A lifetime of immunity.[1]



from hatch

to harvest

VAXXITEK® HVT+IBD

The company you trust

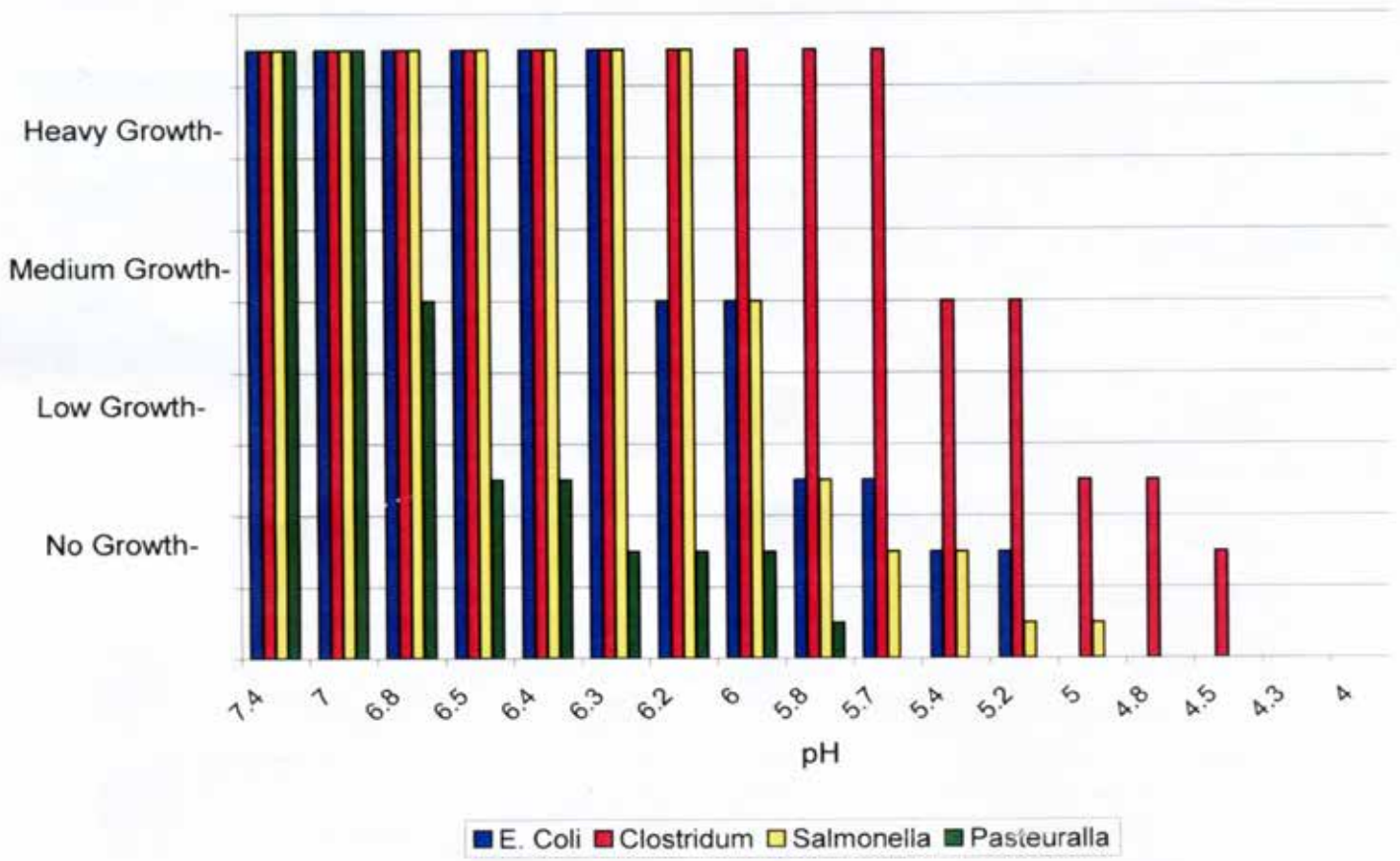
MERIAL
A SANOFI COMPANY

One single vaccine dose never did so much. Vaxxitek® HVT + IBD provides lifelong immunity[1] which leads to healthy birds, better performance and operational profits.[2] Talk to your local Merial representative for more information.

1 Merial Study 99-0763-R, data on file. Merial, Inc.
2 Merial Study VAX-10-0120-FS, data on file. Merial, Inc.

Effects of pH on Selected Bacterial Pathogens Growth in Drinkers

Boyd E. Hardin - C.S. Roney, DVM, MAM



OMEGAMUNE-PLUS®

JUST RECEIVED! Patents #8,298,593 #8,460,719

WITH ANTIOXIDANTS FOR TURKEYS & BROILERS

For Use in Closed Drinking Water Systems for Poultry

GUARANTEED ANALYSIS

$CuSO_4$.....18%

INGREDIENTS: Copper, Organic Acids, BioSupremeL, Buffers, Dye #40, Extract from Essential Oils.

Omegamune-Plus *Precautions*

- Acidic solution
- Corrosive to galvanized and mild steel equipment, piping and/or fittings.
- Wear goggles or full face shield when handling
- For animal use only; not for human consumption
- Keep out of the reach of children

WARNING: ***Follow label directions***

MIXING DIRECTIONS

Standard Dosage - 1:1024 gallons drinking water. Administer 1 part Omegamune-Plus in 1024 parts drinking water. For injectors/proportioners administer 1 oz. stock solution per gallon drinking water. Prepare stock solution by mixing 1 gallon Omegamune-Plus with 7 gallons water.

Optimum Dosage - 1:512 gallons drinking water. Administer 1 part Omegamune-Plus in 512 parts drinking water. For injectors/proportioners administer 1 oz. stock solution per gallon drinking water. Prepare stock solution by mixing 1 gallon Omegamune-Plus with 3 gallons water.

Available in the following packaging:

4 x 1 gallon cases.....(Product # 100801)
5 gallon pails.....(Product # 100810)
55 gallon drums.....(Product # 100820)

Manufactured by: **Best Veterinary Solutions, Inc. • Willmar, MN 56201**

1-800-533-1899 • FAX 320-235-8629

"Marketed Exclusively by Best Veterinary Solutions"

Contact the BVS sales representative or distributor in your area for more details.

Get into the Zone

The Manage® Zone
Dietary Agent for Poultry and Swine

- is considered GRAS (generally recognized as safe).
- has a pH of 1.3.
- when mixed at recommended levels will reduce drinking water to pH 3.5-5.5.
- will hold pH down longer than other commercially available acidifiers.
- contains higher levels of copper than other liquid copper products on the market.
- is a dark purple solution that stays in solution without any settling out like that of competitive products.
- fits well into an antibiotic free program.
- works very well to maintain waterlines. Prevents scale build up.
- is friendly to the environment. 40% less copper excreted by using Manage versus feed grade copper.
- Is the only Patented product of its kind!

The Acid Sol® Zone
Dietary Agent for Poultry and Swine

- is considered GRAS (generally recognized as safe).
- has a pH of 1.3.
- when mixed at recommended levels will reduce drinking water to pH 3.5-5.5.
- will hold pH down longer than other commercially available acidifiers.
- is a red solution that stays in solution without any settling out like that of competitive products.
- fits well into an antibiotic free program.
- works very well to maintain waterlines.
- is a combination of buffered acids.
- contains No copper.

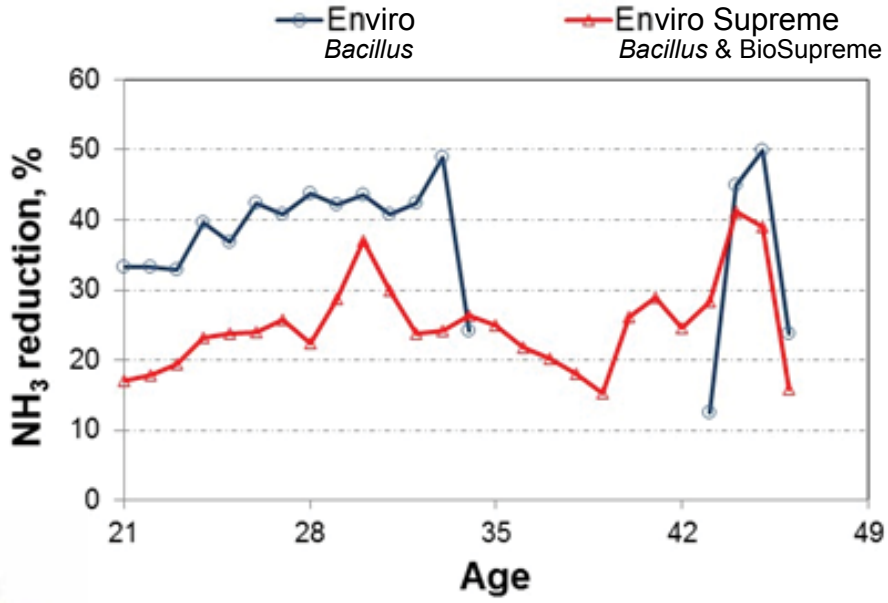
Marketed Exclusively by Best Veterinary Solutions, Inc.
Wilmar, MN 56201
800-533-1899
FAX 320-235-8629

Contact the BVS sales representative or distributor in your area for more details, or call 1-800-533-1899.

Reduce Daily Ammonia Levels During Grow Out with **Enviro**™ and **Enviro Supreme**™

- University Research shows Enviro Supreme reduced NH_3 throughout the flock by 15-40%
- Results indicated that both Enviro and Enviro Supreme reduced NH_3 throughout the 7 week trial period
- This data supports the ammonia reduction seen in commerical production systems

Daily mean ammonia reduction rates of two dietary additives (data points from 35 to 42 for En and 47 to 49 for both are missing due to water leakage and room temperature control malfunction)



Powered by

Microbial Terroir™

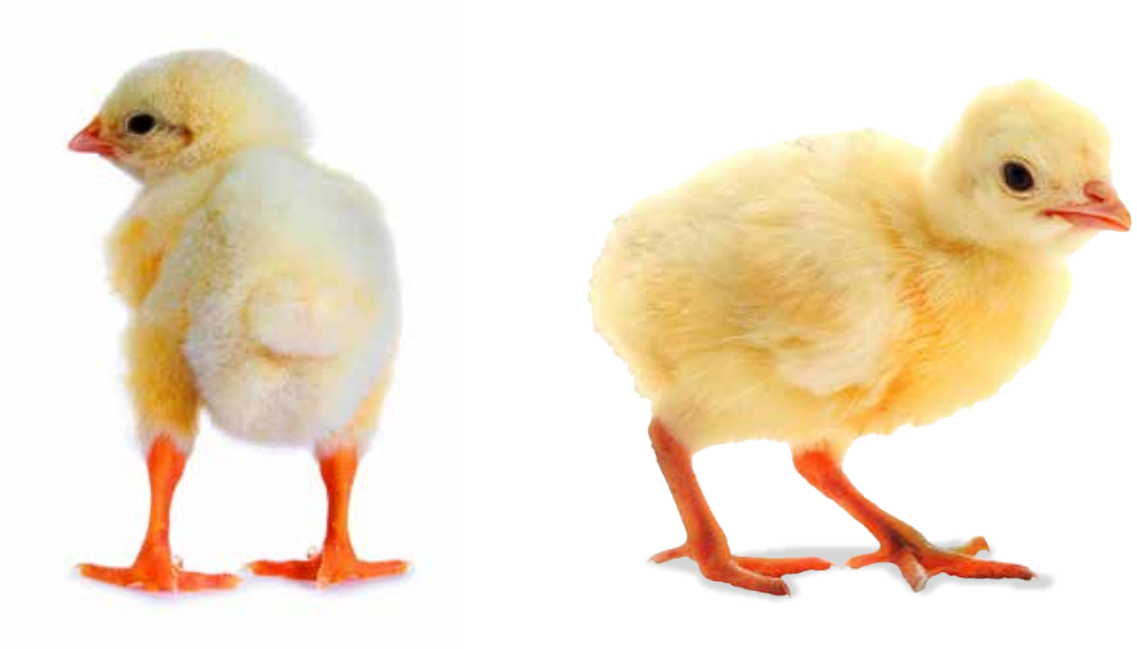
Technology by Agro BioSciences, Inc.

For More Information Visit www.bestvetsolutions.com
or contact your local BVS rep

GUT START® & GUT PRO™

Powered by Microbial Terroir™

Technology by Agro BioSciences, Inc.



Now with **new strains.**

BioProteXion
by CID LINES

COMPLETE SANITATION PROGRAM FOR FIELD AND HATCHERIES

BIOGEL

- The strongest cleaner
- Gel clings on longer than classical foam = superior cleaning result

KENOSAN

- Deeply penetrating alkaline foam for farms, incubators, trucks, …
- Apply at 1 to 1 ½ oz / gal only with a foam wand.
- Non corrosive in dilution.

VIROCID®

- EPA approved "broad spectrum disinfectant"
- QAC/glutaraldehyde based, dil 1/3 oz – ½ oz/gal
- Non corrosive
- Apply by spray, foam or (thermo) fog
- Maintains pad cooling systems

KENO™ X5

- EPA approved "broad spectrum disinfectant"
- Per Acetic Acid based, dil ½ oz/gal
- 100% biodegradable

CID 2000

- H2O2 removes heavy soils
- Peracetic Acid removes scale / mineral build up
- Equipment friendly
- Proven "greatest reduction in microbial load" by U. of Arkansas

CID CLEAN

- 50% Stabilized Hydrogen Peroxide
- H2O2 removes heavy soils
- Equipment friendly
- NO heavy metals

BEST VETERINARY SOLUTIONS,INC.
Ellsworth, IA.....888-378-4045
Willmar, MN.....800-533-1899

Washington,IN.....877-254-3410
Dagsboro, DE.....877-732-3894
Manheim,PA.....717-940-4805

CLEARVIEW ENTERPRISES
Tontitown,AR.....866-361-4689
Monroe, NC.....704-219-7959

K SUPPLY CO.
Albertville, AL.....256-894-0034

VET SERVICE
Fresno, CA.....559-485-7474

POULTRY TECH SERVICE
Gainesville, GA.....770-287-7891

CID LINES
innovative hygiene solutions

www.cidlines.com
www.bestvetsolutions.com

Replacing formaldehyde in hatcher disinfection

Each hatcher is equipped with a spraying nozzle which automatically sprays the Virocid solution according to the time intervals that are set on the control box.

The hatchery sector has proven their dynamic attitude to replace formalin in the disinfection area by a safer and better alternative. This rapid movement has been instigated by the latest developments. Promising results of the formalin-free hatcher disinfection protocol pave the path for the hatcheries to finally implement their protocols for egg disinfection without formalin, from start to finish.

By Lieven Dambre, product manager CID Lines

Hatcheries are on top of the poultry production pyramid with a lot of high skilled, experienced and well educated people leading them forward. Furthermore the industry is a very international one where certain decisions on hatchery level can relatively easily and quickly be implemented throughout, for example a breeder company or an integration within a certain region and even beyond. Consequently the hatchery industry is very much in tune with new developments and innovations in the market worldwide. This is also reflected in the way information is shared by specialists communicating through scientific seminars, fairs, world congresses and specialised press.

Banning formaldehyde

An alternative application for formaldehyde is one of those developments that the hatchery industry has picked up well. Banning formaldehyde out of the hatchery is becoming more and more a part of the standard protocol in hatcheries. It's a well-known fact that legislation in terms of the exposure limit of formaldehyde to the people working in the hatchery is getting stricter by the day since many years now.

There are two ways of defining the exposure limits to formaldehyde. The first way gives a combination of a time-weighted-average concentration over 8hrs (TWA) and a short-term-exposure-limit during 15 min (STEL), from which the values can vary from country to country. The TWA in the Netherlands for example is 0.12 ppm when in France its 1 ppm. The STEL has more or less the same variation. The second way is the MEL, the maximum exposure limit. This is the strictest legislation which states that nobody can be exposed to more than 0.3 ppm formaldehyde at all times. Belgium, Canada and Denmark for example have implemented this legislation. It's fair to say that the exposure limits to formaldehyde and according legislations have become stricter every year, regardless which method of monitoring (TWA, STEL or MEL) is opposed.

Therefore the difference between several years ago and today is that the hatcheries are not only talking about it anymore but are actually also taking action. Tests are set up everywhere with various products and applications in order to find a true alternative for formaldehyde.

A true alternative for formaldehyde

So it's clear that these human health issues are putting a lot of pressure on the current formaldehyde protocols implemented in the hatcheries. In 1953 Lancaster & Crabb found that, in order to kill S. pullorum on the eggshell using a 20 min fumigation period, a minimum concentration of 600 mg formaldehyde per m^3 (10g paraformaldehyde or 45ml 40% formalin and 30 g $KMnO_4$) at 21°C is necessary. The reason why this amount of 10g paraformaldehyde per m^3 never was exceeded, is because research has shown a significant relationship between embryonic mortality, duration of fumigation and the concentration of formaldehyde.

A significant decrease (8 %!) in hatchability was reported when the formaldehyde fumigations were used at higher duration (40min) and higher concentration (12.5g/m^3). So from an economical point of view, using more formaldehyde never was an option. Now with a MEL of 0.3ppm it is definitely out of the question. It's needless to say that the human health issue in 1953 was not taking into account or less relevant.

The problem lies also with infrastructural difficulties. If formaldehyde is used it will mean that bigger air evacuation systems must be implemented and a much longer air evacuation time needs to take place before people can enter the fumigation rooms. In practice this turns out to be an almost impossible nut to crack. Two hours after air evacuation and fumigation of only 5g/m^3 of paraformaldehyde, the MEL of 0.3 ppm still is exceeded by 14 times. Therefore using less formaldehyde doesn't really makes it any easier to stay working within the allowed exposure limits, it also of course raises questions on its bactericidal efficacy.

Alternative products

It's quite remarkable that this protocol was the reference for > 50 years. However in the last 2-3 years the industry has really picked up speed in search of alternative products and methods to overcome this issue. Disinfecting hatching eggs by fumigating or cold fogging them with a disinfectant solution is a practice which is widely used and appreciated. Mainly

Control box of the fog system.

PHOTO: CID LINES

because during this procedure the eggs don't get wet and the protocol also can be fully automated.
Virocid, a combination of glutaraldehyde and multi chain quaternary ammonium produced by CID Lines, has proven to be one of those true alternatives for formaldehyde for the disinfection of hatching eggs before setting. The Virocid-protocol for egg disinfection is based on extensive field trials and up to date feedback and information from hatcheries that currently are applying the protocol.

Every droplet counts

The research has shown that the relation between the droplet size of the vapour ("fog"), the contact angle (wettability), the type and concentration of the chemicals used, have a huge impact on the success of the disinfection results of the hatching eggs. There is a significant difference between the log reduction of formaldehyde and Virocid. In ultrasonic fogging Virocid has the same disinfection value as formaldehyde. In cold foggers Virocid is significantly better then formaldehyde. This can be explained by the different droplet sizes of both fogging principles. A very small droplet has a big contact angle, a bigger droplet a smaller contact angle (see *image 1*).
The contact angle will determine the wettability. The wetter a surface gets by a disinfectant solution, the more the solution can act upon that surface, and therefore disinfect. That's also why the eggs when fogged with an ultrasonic fogger stay dry. The droplets are so small they bounce against the surface without bursting open and wetting it. With cold fogging the eggs are slightly moist to moist. With cold fogging the eggs are slightly moist. To create an optimal fog, for maximum disinfection results, CID Lines offers a spraying nozzle which guarantees even spread of droplets with the required micron diameter droplet size.

Swabbing method

The eggs were swabbed with the 'EGG SHELL RINSE METHOD'. An egg is swirled in a bag with 10ml warm, buffered salt solution. The bag is sealed afterwards and kept at 4° until it arrives at the lab. There the 0.1ml of the solution is gets plated on an AGAR for incubation at 37°C. After the incubation period the CFU's are counted from the AGAR plates. In this way 100% of the egg shell surface could be swabbed which gives a much higher, but also a much more accurate, bacteria count than would have been the case if eggs were sampled by contact agar plates.
Every time the two batches, one that was fumigated with formaldehyde and the other fogged with Virocid, were swabbed. The eggs compared within the batches were originated from the same flock/house with the eggs having a similar age.
After fogging and air evacuation times, the air was sampled in the fumigation room to measure the remaining glutaraldehyde in the air. For glutaraldehyde (a.s. in Virocid) the maximum exposure limit is 0.05 ppm. Thus, in order to be in compliance with legislation people cannot enter the fumigation room before the MEL is below 0.05 ppm.
The aim is to define if personnel entry after 30 min active ventilation is possible and in compliance with legislation. When respecting the Virocid-protocol, the maximum exposure limit of 0.05 ppm is not exceeded and disinfecting procedure from start to finish can be concluded within the hour (*Table 1*).

Disinfection before setting

Several trails were done repetitively. The complete procedure was limited to 1 hour, from start of fogging to taking out the trolleys for setting (personnel entry). In *Table 2* the methods and results are summarised. Due to the positive results and reactions from the field, CID Lines has further investigated the possibilities to also replace formaldehyde with Virocid for hatcher disinfection. After 18 days the eggs are transferred to the hatchers were they are ready for the final stage of the hatching process.
Before the hatching eggs can enter the hatchers, the hatchers should of course be well cleaned and disinfected. To support the hygienic circumstances during this period in which the chicks are finally going to hatch, the common practise today is to evaporate formalin in the hatcher. Hence this is a labour intensive activity and the goal is to ban formaldehyde completely from the hatchery, CID Lines has developed a fully automated protocol for hatcher disinfection.
Each hatcher is equipped with a spraying nozzle which automatically sprays the Virocid solution according to the time intervals that are set in the control box. Field trials (*Table 3*) have shown a significant lower mortality % during the first week of the birds' lives when hatcher fumigation was being applied with a Virocid solution of 2%.

Table 1- MEL glutaraldehyde.

	result	confidence interval		TLV	MEL	Notation	LOD	LOQ	CVan	CVtot
Measured volume : 3,004L	ppm	ppm		ppm	ppm		ppm	ppm	%	%
glutaraldehyde	0,049	+/-	0,006	-	0,05	M	0,003	0,013	4,0	6,4
*The results are corrected by the results of a blank test										

Table 2 – Egg disinfection results before setting comparison.

	Dilution	Consumption	Fogging time	Circulation during fumigation	Circulation time after fogging	Ventilation time (air extraction)	Log reduction
Formaldehyde		450 g	20'	YES	NO	40'	2,11a
VIROCID Ultrasonic fogging	20%	420 ml	20'	NO	10 min	30'	2,21a
VIROCID Cold fogging CID Lines nozzle	10%	220 ml	20'	NO	25 min	15'	4,32b

Table 3 – hatcher disinfection results comparison.

Disinfection methods	n farms	Birds in test	av % mortality	Min % mort	Max % mort
Electro-Chemically Activated Water.	82	2.132.000	1,34a	0,33	3,12
formaline	72	1.872.000	1,34a	0,68	4,50
ViroCid protocol	98	2.630.000	0,83b	0,24	2,63
Different subscript a and b represent the statistical significant difference ($P \leq 0,0024$) between Anolyte, formaline and Virocid.					

CAL STAT® PLUS
ANTISEPTIC HANDRUB WITH ENHANCED EMOLLIENTS

Cal Stat Plus Antiseptic Handrub with Enhanced Emollients is a 63% (v/v) isopropyl alcohol-based handrub designed to effectively decontaminate visibly clean hands of healthcare workers before and after patient contact, and after contact with inanimate objects. In a time kill study, Cal Stat Plus Antiseptic Handrub with Enhanced Emollients demonstrated complete kill in 15 seconds against a broad spectrum of transient microorganisms including methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant Enterococcus faecium (VREF). The product is formulated with a moisturizing system, adding moisture to the skin after every use. This dermatologist-tested, dye-free isopropyl alcohol-based handrub can be used in all areas of healthcare settings.

PHYSICAL PROPERTIES

Form ..... Liquid
Color ..... Colorless
Fragrance ..... Baby powder
Typical specific gravity 0.891
Antiseptic ingredient ..... Isopropyl alcohol (63% v/v)

DIRECTIONS FOR USE

Wet hands thoroughly with Cal Stat Plus Antiseptic Handrub with Enhanced Emollients and rub until dry.

Storage: Do not store at temperatures below 32° F (0° C).

Flammable, keep away from fire or flame.

ALCARE®
FOAMED ANTISEPTIC HANDRUB

Fast-acting, broad-spectrum antimicrobial action, including MRSA and VRE

Alcare Foamed Antiseptic Handrub is an alcohol-based handrub with fast-acting, broad-spectrum antimicrobial action against pathogenic microorganisms. Alcare Foamed Antiseptic Handrub also has proven activity against multiply resistant microorganisms such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococci* (VRE). The Alcare Foamed Antiseptic Handrub formulation of 62% ethyl alcohol and emollients provides hand antisepsis and moisturizing at the same time. Alcare Foamed Antiseptic Handrub spreads easily to facilitate even distribution over all skin surfaces for effective disinfection. Alcare Foamed Antiseptic Handrub is convenient to use when there are no handwashing facilities available and hands are physically clean, but in need of degerming and can be used as an adjunct to handwashing when extra protection is desirable.

Storage: Protect product from freezing. Store and use at 55-85˚F (12-29˚C); do not store above 120˚F (49˚C).

PHYSICAL PROPERTIES

Form ..... Foam
Color ..... White
Fragrance ..... Mild alcohol
Antimicrobial ..... 62% (v/v) ethyl alcohol

DIRECTIONS FOR USE

Surgical Scrub

Clean under nails with a pick. Nails should be maintained with a 1 mm free edge. Dispense 5 g (about the size of a tennis ball) onto one hand. Spread on both hands paying particular attention to the nails, cuticles and interdigital spaces and forearms. Rub into skin until dry. Dispense 2.5 g (approximate size of a golf ball) onto one hand and spread over both hands and the wrists and rub into the skin until dry.

Healthcare Personnel Handwash

Apply product to hands and rub until thoroughly dry.

NEEDS NO WATER · CONTAINS EMOLLIENTS

STERIS®

STERIS Corporation
5960 Heisley Road
Mentor, OH 44060-1834
440-354-2600 · 800-548-4873
www.steris.com

PWT is now

pH Safe

Same product from Jones-Hamilton Co.
is now available from BVS as **pH Safe**

pH Safe water acidifier is the first FDA-approved feed grade inorganic acid water treatment available to the poultry and livestock industries. Due to the unique chemistry of **pH Safe**, the consumption of treated water does not decrease at higher concentrations, as has been reported for organic acids. **pH Safe** contains the strongest animal feed grade mineral acid available. A much lower addition rate is required to acidify drinking water to biologically effective low pH levels. This lower addition rate provides pH reduction with no bitter taste. Birds won't back off from **pH Safe** treated water, so optimum water consumption is maintained. This advantage gives producers the flexibility for administration in a wide range of application in all livestock and poultry species.

NEW!

AviCare™

PRODUCTION CHALLENGE?

AviCare is an all-natural nutritional health product for inclusion in poultry drinking water during production challenges.

Add AviCare to your risk management program.

Distributed by:

BVS
Best Veterinary Solutions

Diamond V®
The Trusted Experts In Nutrition & Health®

For more information call 800-373-7234. Subscribe to our *PoultryAdvisor* e-newsletter at www.diamondv.com

Who's Getting into Your Barn?

Tips for controlling barn access

By Chanelle Taylor[1], Dr. Michele Guerin[1], Dr. Gregory Bedecarrats[1], Sarah Thompson[2] and Dayna Sills[2]

[1] *UNIVERSITY OF GUELPH*
[2] *POULTRY INDUSTRY COUNCIL*

Keeping barns safe and secure is one of the best things you can do to keep the health and welfare of your birds in check. Once poultry facilities are contaminated by pathogens, such as bacteria and viruses, it can be extremely difficult and costly to correct. Therefore, it is imperative to **stop micro-organisms from entering the barn** in the first place.

"We want to make sure to keep whatever bacteria and viruses that are inside the barn area inside and anything that is outside, keep it outside," says Dr. Mike Petrik.

According to experts, the most effective ways to control access to your barn are to:

- **set up protective zones around the barn**
- clearly **identify** where those zones are **by using signs and/or barriers**
- **set up an enclosed area (or anteroom)** that:
  - 3 **can be kept clean**
  - 3 **serves as a buffer** zone between the exterior and interior of the barn
  - 3 **prevents the entry of unauthorized people and animals**

Biosecurity Matters

Farmers should also set up a protective zone around the barn with clearly identified access points.[1] This **"Restricted Access Zone" (RAZ)**, should be a highly restricted area that is tightly controlled. The RAZ should be within a "Controlled Access Zone" (CAZ), which encompasses the entire property where poultry are housed.[1]

Give employees, service personnel, and visitors clear directions about where to go and what to do when entering the CAZ and RAZ.[1]

The RAZ should also have **visual and physical barriers** (e.g., signs, doors, locks, etc.) to prevent easy entrance. It should be obvious to anyone entering the RAZ that these barriers surround areas where tightly controlled biosecurity protocols are in place and that they need to proceed with

caution and look for instructions on how to enter appropriately.

"The farmer is the most common person to cross this barrier," says Dr. Mike Petrik, so it is critical that the farmer follows – and enforces – these protocols.

Instructions can be **posted in the anteroom** with readily **available booth and clothing**, as well as **hand washing stations** to maintain proper biosecurity. This anteroom will also prevent wild and domestic animals from entering the barn.[1]

Keeping it Consistent

Everyone who enters the barn (including family members, permanent or temporary employees, service personnel and visitors) must understand the importance of these barriers. Helping them understand why these are important, will help increase compliance and reduce the "overlooking" of procedures.[1]

Farmers should also strive to maintain a **logbook** inside the anteroom to monitor who is entering the barn, when they enter, and where they came from. This is crucial for tracking diseases in case of an outbreak.[1]

"**Many pathogens are brought into the barn on clothing, footwear, dirty equipment, and hands**," says Dr. Lloyd Weber. "Stations that contain barn-specific clothing where anyone entering the barn can change out of their street clothes into clothing that is only worn in the barn – to prevent the introduction of outside pathogens – should be set up and maintained."

Lastly, separate barn-specific footwear and clothing (including a hat) and effective hand sanitation reduce the possibility of carrying bacteria that can be harmful to humans, such as *Salmonella*, into the farmhouse. Barn-specific clothing and equipment (e.g., shovels, tools, writing materials, buckets) will also prevent pathogens from spreading from your barn to neighboring poultry farms[2], which will thereby reduce the risk of disease transmission and outbreaks on other farms.[3]

If you keep your procedures and instructions quick and easy, employees and visitors will do it, says Sandy Brock, a broiler hatching egg producer.

References

1. National Avian On-Farm Biosecurity Standard, Canadian Food Inspection Agency Office of Animal Biosecurity, http://www.inspection.gc.ca/english/anima/biosec/aviafrme.shtm.
2. Ontario Veterinary Biosecurity Initiative Protocol On-Farm Veterinary Biosecurity, Ontario Veterinary Medical Association (OVMA), http://www.ovma.org/files/biosecurity_protocol_on_farm_biosecurity_apr09.pdf
3. Practical Biosecurity Video, Poultry Industry Council, http://www.youtube.com/watch?v=E6nKrr949CY.

Reprinted from canadianPOULTRYmag.com, September 2012

Powerful start

Optimization of energy supply via drinking water.

LOVIT LC-ENERGY

Get your chicks started with our liquid supplement Lovit LC-Energy. This balanced liquid formulation consists of L-carnitine, betaine, sorbitol and magnesium sulphate. These increase the conversion of energy and protein in the first days of life and during all critical production phases which are characterized by metabolic stress. Lovit LC Energy also supports liver functionality.

Lohmann Animal Nutrition

Lohmann Animal Nutrition GmbH
Zeppelinstr. 3
27472 Cuxhaven - Germany
Phone: +49 (0) 4721 5904 0

www.lohmann-animal-nutrition.com

Gil Bio Bleach

Long-Lasting Stabilized Chlorine
Effective for up to 2 Weeks

pH-buffered for enhanced efficacy

Ready-To-Use; NO MIXING

Does not provide a source for bacterial growth
Greatly reduces cross-contamination potential

Does not Freeze nor Evaporate

TRUE PAN POWDER
Ultra-dry, fine composition resists moisture clumping while providing superior foot coverage

Effective Cleaning, Bleaching and Deodorizing Properties

Economical way to clean footwear

Available in 11, 35, 50, 100 and 400 pound Re-Sealable Containers

DIRECTIONS

- Add as needed to foot pan to maintain a half-inch layer.
  (A thicker layer will not increase effectiveness.)
- Remove organic contaminates as necessary.
- Change out pan powder every 2 weeks for optimal results.

Gilmer Industries has been manufacturing top-quality cleaners and disinfectants for over 40 years.

GILMER INDUSTRIES, INC. *Products that Perform*

560 Stone Spring Road
Harrisonburg, VA 22801

PO Box 1247
Harrisonburg, VA 22803

phone 800/200-4162
info@gilmerindustries.com

Gil Io-Poult & Gil Medic-Dyne

Multi-Purpose Iodine Supplement

Gil Io-Poult: 1.75% titratable iodine

Gil Medic-Dyne: 3.50% titratable iodine

Cold Weather Stable

Concentrate mixes readily in cold, hard water

Provides Essential Iodine to Poultry

Cleans and conditions water drinking systems, keeping them free of slime and mineral scale

Effective Deodorizer

Consult your local sales or service representative for use directions.

Available in 1, 5, 15, 55 and 275 Gallon Containers

Gilmer Industries has been manufacturing top-quality cleaners and disinfectants for over 40 years.

GILMER INDUSTRIES, INC. *Products that Perform*

560 Stone Spring Road
Harrisonburg, VA 22801

PO Box 1247
Harrisonburg, VA 22803

phone 800/200-4162
info@gilmerindustries.com

LIVE VACCINE

cevac® MD Rispens

• Marek's Disease

APPROVED SPECIES
- Chickens

VACCINE TYPE
- Rispens (serotype 1)
  - CVI 988 strain

DISEASE PROTECTION
- Very Virulent Marek's Disease

VACCINE PRESENTATION
- Cell associated
- Deep frozen / liquid nitrogen

ROUTE OF ADMINISTRATION
- Subcutaneous injection
- *In ovo* injection

AGE OF ADMINISTRATION
- 1-day-old chickens (SC)
- 18- to 19-day-old embryonated chicken eggs (*in ovo*)

PACKAGING (PRODUCT CODE)
- 10 x 4,000 doses (B344K1US)

QUALITY
- Thoroughly tested for purity, sterility, potency, and safety, and compliant with all applicable USDA and Ceva standards.

Key Advantages

- Cevac MD Rispens strain is derived from original European Rispens strain, providing strong protection against Marek's disease
- Provides protection to very virulent field strains of MDV
- Flexible administration by subcutaneous and *in ovo* application
- Compatible with Vectormune HVT and monovalent Cevac MD HVT and Cevac MD SB-1

See reverse side and package label for complete use directions and information

HER FUTURE LOOKS BRIGHT

IMMUCOX® I

IMMUCOX® T

cevac® MD Rispens

vectormune® HVT IBD & Rispens

vectormune® HVT LT

vectormune® HVT IBD

ceva

Why Go Soft On Rodents?

Because It's Their Favorite Last Meal.

Q: What is soft bait?
A: *Fast*Draw or Revolver no-wax rodenticide.

When you purchase an 18 pound pail of red or green wax blocks, you are spending money on approximately 4 pounds of wax filler.

When using *Fast*Draw or Revolver soft bait, rodents consume 0% wax and you gain 100% control in every bite they take!

FASTDRAW® SOFT BAIT
FastDraw takes 4-5 days to work.

Revolver® SOFT BAIT

*Fast*Draw & Revolver soft bait fit in hard to reach places where rodents live and breed.

- *Replaces red or green wax blocks or pellets*
- *Low cost per placements*
- *Increased acceptance & control*
- *Less bait waste, saving you money*
- *Will not melt in high temperatures*
- *Pouches fit in hard to reach places*
- *Single feed control*

No wax = no melting and maintaining palatability in hot & cold environments.

Contact your Liphatech District Sales Manager or Best Veterinary Solutions Sales Representative for samples or more information today!

LIPHATECH®

ADVENT®

Your Clear Choice For Coccidiosis Control

The ONLY cocci vaccine with a USDA approved, 18-month shelf-life

Patented VIACYST® assay ensures an accurate LIVE sporulated oocyst count and consistent potency

ADVENT-The Clear Solution does not contain visible extraneous organic solids

Freeze indicator included in every box of ADVENT

Available in 10K and 40K dose presentations

Premeasured green dye with 40K presentation

HUVEPHARMA®

Huvepharma
525 Westpark Dr., Ste. 230
Peachtree City, GA 30269
770.486.7212
customerservice@huvepharma.us

BVS

Best Veterinary Solutions, Inc.
325 Lakeland Drive NE
P.O. Box 266
Willmar, MN 56201

RETURN SERVICE REQUESTED

PRSRT STD
U.S. POSTAGE
PAID
WILLMAR, MN
PERMIT #644

CID LINES®

Believe in hygiene!