Animal Health International, Inc. is the leading full-line animal health products, services and technologies company in North America, representing and distributing products for more than 1,500 manufacturers in the areas of companion animal, equine, beef and dairy cattle, poultry and swine.

Continuing to meet the needs of beef cattle producers, dairy operations, cow/calf customers as well as veterinary professionals, Animal Health International has strategically-located distribution points, more than 400 sales and customer service representatives, innovative technologies, and the broadest offering in the industry.

From vaccines, pharmaceuticals and animal identification systems to dairy sanitation and milk quality solutions, and from breeding tools and calf wellness to micro-nutrient feeding systems and technologies, Animal Health International delivers what you need to keep your operation profitable, and your herd healthy and productive.
From the time of birth until weaning, dairy calves are faced with many disease challenges and stressors. Maternity pen management, timely administration of colostrum, sanitation, proper housing and pre-weaning nutrition are fundamental in increasing calf resistance to disease and reducing the calf’s exposure to harmful pathogens. Unfortunately, of the pre-weaned calves that die in the U.S., 56% suffered from diarrhea or other digestive disorders, and at least 22% suffer from respiratory disease (NAHMS 2007). Treatment of disease, death of potential replacement heifers and potentially delaying the age at which heifers calve for the first time can be very costly for the dairy.

Metabolic demands for growth, stress and fighting off invading pathogens by the immune system results in the formation of reactive oxygen species (ROS). ROS are very damaging to normal cells of the body including the immune system. Oxidative stress occurs when the antioxidant systems of the body are overwhelmed. Trace minerals such as zinc, manganese, selenium and copper are essential in the formation of antioxidants which neutralize the harmful effects of ROS. By maintaining the oxidative defense system, resistance to disease challenge can be maintained through protecting the immune system.

MULTIMIN® 90 is an injectable trace mineral supplement containing zinc, manganese, selenium and copper. Recently the administration of MULTIMIN® 90 into dairy calves at 3 and 30 days of age was evaluated in a large trial by Cornell University. At 14 days of life, calves supplemented with MULTIMIN® 90 demonstrated greater immune function and higher antioxidant activity. In addition, calves supplemented with MULTIMIN® 90 had a significantly lower incidence of diarrhea and the combined incidence of pneumonia and otitis.

HELPING 2.5 MILLION CALVES THRIVE EVERY YEAR

LIFELINE® IS THE VERY BEST START FOR CALVES.

LIFELINE calf nutrition products help ensure every calf gets off to the right start. That’s because each LIFELINE product is formulated to meet a specific nutritional need. When colostrum needs some help, Boost can be added directly to colostrum. Protect colostrum supplement, and Nourish and Rescue colostrum replacers provide essential Day One nutrition. Retention® delivers nutritional support for scouring calves. LIFELINE helps dairy and beef calves thrive and perform better—which translates to more profit for producers.

LEARN MORE AT WatchThemThrive.com

GET TO THE POINT

GET TO THE PROFIT.

We’ll keep this short. Your cattle are worth more than ever, which means protecting your profit potential is more important than ever. Make sure your investment reaches that potential, with the only implant that offers the added value of Tylen’s abcess defense to ensure you’re helping maximize your implant ROI.

The label contains complete use information, including cautions and warnings. Always read, understand and follow label and use directions. Administer one dose in the ear subcutaneously according to label directions.

To learn more about protecting your 24/7 ROI®, contact your Elanco sales representative or Elanco.us

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*Implant training does not guarantee zero defects.
*Evaluation summary 2018, 100 head each, 30 day test, 15 days on feed, 80% on test by 21 days, 150 lbs. of gains, 3 weeks post-implant.
*Statistical analysis performed by the FDA, Journal of Animal Science; Vol. 66, 3-16.

PRIMA TECH SYRINGES

AND IDEAL® D3™ NEEDLES

Because Accuracy and Detectability Matter

Prima Tech Syringes

Accuracy

100%

Durable

Robust Plastic & Stainless Steel Design

Practical

Accurate, Space Saving, Stainless Steel Gauge

Ideal® D3™ Needle

Dimensions

15/64” x 3/4”, Patented Stainless Steel Alloy

Strong

Stainless Steel: 20%, Thicker than Steel Long Needles

Long Life

Finger Guard with Sharp Precision Tip

For over 65 years All-Weather has been the leader in livestock marking for the farm, pen and feed lot. Most of our products are reusable and may be repaired. Our 24/7 customer service is available for your convenience. All-Weather, a division of Neogen, makes reliable animal identification equipment.

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For more information about Prima Tech Syringes and Ideal D3™ Needles, visit Elancous.com

Flomax® Component with Tylen

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Probios® is the world leader in probiotics.

**Probios® Probiotics**
Probios® supplements provide a stabilized source of lactic acid bacteria. When given as directed, helps maintain gut microflora, appetite, digestion, overall health and performance of calves. Can be mixed with milk, milk replacer, water or calf starter. Use at birth and during times of stress such as weaning, ration changes, depressed appetite, vaccination, shipping and receiving and weather changes.

- **Probios® Dispersible Powder**
  - 240g jar, 5 lb jar, 25 lb pail
- **Probios® Feed Granules**
  - 5 lb jar, 50 lb bag
- **Probios® 1/4 oz Boluses**
  - 50 ct jar

**Revilityle™ Electrolyte Supplements**
When given as directed, Revilityle™ oral electrolyte supplements help maintain normal hydration, energy levels and electrolyte balance in calves.

- **Revilityle™**
  - 3.5 oz pouch, 5 lb pail
- **Revilityle™ Gelling**
  - 3.5 oz pouch, 5 lb pail
- **Revilityle™ Plus**
  - 25 lb pail

**AchievePRO Feed Supplement**
Improved Formulation!
This highly palatable feed supplement for newborn calves contains beneficial bacteria, proteins and energy sources to help maintain gut health. Reformulated to contain charcoal and Cryptex®, a unique proprietary blend of yeast extract and dehulled. Dissolves fast and stays in suspension longer! For optimum results, start using AchievePRO 24 hours after birth.

- **AchievePRO**
  - 800g jar, 4000g pail, 8000g pail

**T.D.N. Rockets™ Mini**
Each fast-dissolving capsule provides 750 million CFUs of multiple strains of lactic acid bacteria, select vitamins and minerals to help maintain appetite, digestion, overall health and performance in calves during periods of stress. Use during ration changes, freshmen, depressed appetite, shipping and receiving and weather changes.

- **T.D.N. Rockets™ Mini**
  - 50 ct jar, 500 ct pail

Visit www.probios.com - 800.468.3877
What are probiotics?

Probiotics are live bacteria that benefit the health of the host animal. Probiotics, or direct-fed microbials, support the growth of beneficial microbes in the gastrointestinal tract, unlike antibiotics which indiscriminately kill both good and bad bacteria, upsetting the natural balance in the gut.

Probiotics, including lactic acid bacteria and yeasts, are given to calves and cattle to support digestion and improve intake. These beneficial bacteria support the immune system and improve performance, making them an economically smart decision for producers looking toward their bottom line.

Benefits of probiotics

Animals are born with a sterile gastrointestinal tract, but bacteria are needed to facilitate proper digestion of food. The GI tract is naturally populated with bacteria from the mother and the environment within a few days of birth. The intestine becomes a natural host to 100 trillion microbes which may include several hundred beneficial and pathogenic species. Introducing probiotics to a newborn calf accelerates growth of the right bacteria and helps to ensure that the beneficial microbes, rather than pathogenic microbes, are adhering to the intestine. Feeding probiotics helps to crowd out the bad bacteria to create a proper balance of microflora in the gut as soon as possible after birth.

It is essential that the right bacteria are present for optimal nutrient absorption and digestion. Certain probiotic strains influence enzyme activity to increase nutrient absorption. Bacteria and enzymes help the body to break down food so that animals get the essential nutrients from forage. Probiotics support a healthy appetite and increased food intake. Increased dry matter intake during the transition period generally leads to fewer metabolic problems, thereby reducing cost for clinical treatment and reliance on antibiotic therapy.

Because 70% of the cells that comprise the immune system are contained in the wall of the intestine, a healthy gut is critical in maintaining an animal’s overall health. When the gut microflora is well balanced, the animal is less susceptible to disease. During times of stress or infection, the balance of bacteria may shift so that a greater number of the pathogenic bacteria are present. Probiotics are especially recommended during times of stress such as birth, weaning, shipping and receiving to avoid the proliferation of the bad bacteria. After antibiotic treatment, probiotics can help get the good microbes back up to speed and re-balance the digestive system.

Probiotics can reduce the intestinal pH to create a negative environment for the growth of pathogens, consume their nutrients, and crowd out binding sites so that the bad bacteria do not have a chance to colonize. A balanced rumen pH prevents acidosis and the associated conditions including lameness.

Healthy cows cost less for treatment of clinical conditions and generate more milk. Probiotics help support healthy cows, resulting in this twofold economic benefit. Supplementing calves with a probiotic helps them start out with a balanced gastrointestinal tract, and stressed cows will benefit from targeted supplementation to help maintain the natural balance of bacteria in the gut and continue with optimal production.

Choosing a probiotic product

The specific benefit of a probiotic product is dependent on the particular strain or combination of strains it includes. For the maximum benefit, it is important to choose a product with strains carefully selected to survive the manufacturing process and the gastric pH once ingested. Commonly seen in probiotics for dairy cattle are lactic acid bacteria including Lactobacillus species and Enterococcus faecium. Various Bacillus bacteria are also used; these are a hardier, spore-producing bacteria that can withstand harsher manufacturing and storage conditions. Probiotics are delicate microorganisms so manufacturers use varying processes to ensure the bacteria are stable and available for use once consumed by the animal.

Every animal needs good bacteria in the gut to facilitate the proper digestion of their feed. Probiotics are good bacteria that can help boost the levels of naturally occurring, beneficial bacteria in the gut. Promoting the growth of good bacteria supports the overall health of the animal, leading to a more productive herd.
PNEUMONIA CAN DROWN A CALF.
PYRAMID® 5 + PRESPONSE® SQ HELPS YOU BOTH BREATHE EASY.

Every cattleman knows a calf fighting for its breath is a calf that isn’t eating. A calf not eating is a calf that isn’t making you money. Luckily, one easy shot of Pyramid® 5 + Presponse® SQ® protects against breath-stealing pneumonia, giving your calves protection against 5 viruses and 1 bacteria associated with bovine respiratory disease (BRD).

For more information, visit www.bi-vetmedica.com, talk to your veterinarian or Boehringer Ingelheim Vetmedica, Inc. representative, or call 1 800 325 9167.

Extend Your Reach

New QuikStrike® Spray Gives You More Fly Control

QuikStrike® products take fly control to a whole new level with this convenient formulation. Fast-acting QuikStrike® Fly Bait Spray easily covers walls and other surfaces in and around dairies, swine and poultry operations, and other livestock facilities, attracting and quickly killing house flies in hard-to-reach places where scatter baits can’t reach. Extend the reach of your integrated pest management (IPM) program with this new, easy-to-apply formulation of our unique, proven active ingredient.

Learn more about QuikStrike® Fly Bait Spray at starbarproducts.com, call your local distributor or call 1.800.347.8272.

Always read and follow label directions. Starbar with design, and QuikStrike are registered trademarks of Wallmark International. The Red-to-Black Color Gradation is a registered trademark of Farnam Companies, Inc. ©2014 Wallmark International.
Pharmacy Advantage Program  For Large Animal Veterinarians

The amount of resources required to manage your client’s prescriptions can be time consuming and costly. Animal Health International developed a prescription service program called Pharmacy Advantage that puts the hassle of prescription ordering, tracking, reporting, dispensing, monitoring and billing on us, so you can focus on your client’s animal welfare. When you partner with Animal Health International to manage your prescription fulfillment, you’ll have the peace of mind that your prescriptions are being handled by licensed pharmacists, customized to meet your needs and adhere to your state’s rules and regulations.

Prescriptions filled when you need them

• Standing prescriptions are in stock and available when needed.
• Prescriptions are tracked and you are notified ahead of time when prescriptions are due to expire, so you can renew as needed.
• Our Vet Prescription Template by Species is tailored to help you save time writing prescription for clients with same needs.
• You can provide verbal authorizations on prescriptions via phone, when you are on the go.
• Prescriptions are dispensed only when there is a VCPR (veterinarian-client-patient-relationship) in place.
• Most prescription drugs are tracked by lot number, so if there is an adverse reaction or drug recall, prescription information can be shared with the manufacturer or tracked to a specific customer.

Meets State and FDA rules and regulations

• Licensed pharmacists ensure all dispensing is accurate and manage required prescription record keeping, so you can focus on your client’s animal welfare.
• Animal Health International is setting the bar for monitoring Veterinary Feed Directive (VFD) products. Manufacturers’ legend status on their water soluble antibiotics and medicated feed additives is continually tracked to ensure you are in compliance with FDA regulations.
• Reports are made available based on your choosing or your state’s reporting requirements, allowing you to track your client’s prescription usage.
• Animal Health International is a member of GlobalVetLINK (www.globalvetlink.com), an electronic service that makes it easier to send your VFD forms to us.

Flexible billing options

Invoices can be sent to you or your client to best meet your client’s business requirements.

Fast and convenient delivery

Next-day delivery to most U.S. locations. Free shipping on qualifying orders.

Complete prescription information at your fingertips

Easily obtain detailed product information, product images, special promotions, and links to Compendium and SDS information on any prescription.

Modular Live Viral Vaccine Label Comparisons

<table>
<thead>
<tr>
<th>Category</th>
<th>Indications</th>
<th>Comments</th>
<th>Precautions/Contraindications</th>
<th>Adverse Reactions</th>
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Restrictions

- None
- None
- Hypersensitivity
- Hypersensitivity
- Do Not Use In Pregnant Cows
- Do Not Use In Pregnant Cows
- Do Not Use In Pregnant Cows

Dose Size 2 mL, 50

- YES
- YES
- 2 mL / 5 mL
- US & US, US only
- YES
- YES

Whole Herd Claim (Multi-Calving Cows)

- YES
- YES
- YES
- NO APPROVED
- NO APPROVED
- NO APPROVED
- NO APPROVED

Age Restricions

- No age restrictions
- No age restrictions
- 3 months = 10.5
- 3 months = 10.5
- 6 months or older
- 2 weeks or older
- No age restrictions

Compendiuo/SDS Information

- North American Compendium as of 9-01-10
- Source: North American Compendium as of 9-01-10

Modified Live Viral Vaccine Label Comparisons

- Approved for fetal infection including persistent infection. DOI is based on fetal infection studies, not on PI studies. Demonstrated DOI 704 days, DOI 132 - 121 days.
- Approved for fetal infection including persistent infection. Demonstrated DOI 704 days, DOI 132 - 121 days.
- Prevents establishment of L. hardjo in the genital tract and aids in preventing infection of the fetus.
- PregGuard® 10 requires a booster.
- Requires prior pre-breeding vaccination. Follow label directions.
- Available with H. somnus.
- Only contains a non-cytopathic BVD Type 1.
- Aids in Reduction on Pyramid 10 and Pyramid 2 + Type 2 BVD LPH.

Pharmacy Advantage Program is not available in every state nor outside of the U.S.

©2010 Boehringer Ingelheim Vetmedica, Inc. BIVI 5000-12
The future of the dairy herd is dependent on the production of superior heifers to replace culled lactating animals. Therefore, it is imperative that the health status of the replacement animal is optimized to present a healthy first calf heifer to the replacement facility. A strategic deworming protocol is necessary, as poor management and treatment programs for internal and external parasites are essential to improve heifer performance. At the Virginia Tech dairy facility, we use a strategic deworming protocol. This protocol not only deworms the heifers, but decreases the parasite (worm) larva population on the pasture. Heifers are first dewormed in early May, using an ivermectin or eprinomectin product. This reduces the heifers of the initial parasite burden obtained during the early warm, moist days of spring, when parasite loads are beginning to peak in cattle and on the pastures. The second deworming occurs 5 weeks later, dependent on whether the product is a pour-on, injectable or bolus. The reason for this second 5-week interval is two-fold. First, the verminex has residual antiparasitic activity for 2 weeks. Therefore, any parasitides developing in the digestive tract during this time period of 2 weeks will be eliminated. After this 2-week period, many parasite larva ingested on the grass or pasture contamination will develop into adults. This development period is approximately 3 weeks (larva to adult parasite). The second injection, 5 weeks later in mid June will eliminate or kill these adults. By keeping the adult population on the pasture, we maintain minimal parasite burdens on the pasture as well. These two injections give adequate protection during the peak period of parasite contamination.

When using the eprinomectin pour-on product the second deworming should be administered at 5 weeks, as well. There is some data to support a residual activity of 4 weeks with the eprinomectin product; however, to date, this is not supported with adequate information. Typically by early July, pasture parasite loads will begin to decrease due to hot weather and decreased moisture. If good parasite management has been implemented, parasite burdens on the pasture will be negligible. Producers should be cautious against introducing heifers that have not been dewormed, as they can be a source of parasite contamination for the pasture and the original dewormed heifers. A third deworming of a single dose of either product may be beneficial in late October. This would eliminate internal and external parasites (grubs and lice) obtained during the summer and decrease the parasite load prior to winter feeding. Also, if the summer season has been mild and moisture has been high, parasites will survive in higher numbers on the pasture, causing a higher heifer parasite load. Coccidia control measures should be started in baby calves at 5 to 10 days of age and continue until 30 days prior to calving. These products are found in some milk replacers as well as a feed additive in concentrate. Medicated feeds may improve performance and can aid in the prevention of coccidiosis, when calves are fed a specific coccidistat like decauxine, Rumensin®, or Bovatec, Ionophores, such as Bovatec or Rumensin, are effective as an aid in reducing coccidiosis, but have the added benefit of improving feed efficiency. However, ionophores are not effective as a treatment against coccidia. If calves have been diagnosed with coccidiosis, they should be treated with Coccid (ampouls) or sulfonamides (sulfa) and then feed one of the ionophores for prevention. Supplemental corn meals before the heifers to which more than offset by decreasing the amount of grain required per pound of gain, or supporting adequate growth with lower quality forage for older heifers. The use of ionophores in confinement-reared heifers or those fed excessive energy rations may lead to over-conditioning. This is especially important during the time calves are 3 to 9 months old or the pre-pubertal phase of rapid mammary gland development. Excess feeding during this period can lead to a decrease in milk secretory tissue. Cryptosporidiosis is perhaps one of the larger problems we face in nursing replacements. It has been diagnosed on essentially every dairy farm in the United States. In our experience, it strikes calves at approximately 8 to 14 days of age, causing a profuse diarrhea with subsequent dehydrations. Morbidity (number of calves with the disease) is high, however mortality is low with the proper administration of fluids and supportive therapy. Therapy and vaccinations are now being tested to eliminate this problem, but at this time, precautionary have not been adequately tested to advocate their use. Adequate intake of quality colostrum and keeping calves clean, dry, and comfortable, thereby reducing stress, are the essential components to combat cryptosporidiosis.

Vaccination protocols
Vaccination programs in the heifer herd are tailored to protect against the diseases prevalent in the area and specific diseases on individual farms. Herd owners should consult their herd veterinarians for specific vaccination protocols for your area. Most vaccinations are initiated between 4 and 5 months of age, when maternal protection gained from colostrum has subsided. These vaccinations may need to be repeated 3 weeks later, following label directions to ensure peak immunity or protection. Follow all label directions, as some vaccinations must be repeated, while others are single injections. Vaccinations should be repeated 45 days prior to breeding or at approximately 12 to 13 months of age. Injections are then repeated at 18 months of age and 45 to 60 days prior to calving for sufficient levels of immunoglobulins (antibodies) in the colostrum for the calf. Many of the diseases that cause infertility and early embryonic death or abortion can be prevented with proper vaccination procedures. Again, the type of vaccination will depend on the diseases that have been isolated on a specific farm or are found in your specific region. Following is a list of typical management procedures and vaccination protocols. These can vary depending on the area of your farm location or specific diseases that have been isolated on your farm. This protocol should only serve as a guide, as specific vaccination questions should be directed to your veterinarian.

Suggested Vaccinations and Procedures in a Dairy Heifer Program

**Birth to Calving**

- **The Newborn** (*1 to 10 days of age*)
  - Inject with 3 cc VfL and selenium at birth (white muscle disease)
  - Inject with 2 cc VfL and D (calves are born with small reserves)
  - Tattoo and/or identify calf
  - Begin ionophores at 4 to 5 days of age for coccidiosis prevention (in milk replacer or calf starter)

- **One Month**
  - Dehorning with electric dehorners
  - Vaccinate with 7-way clostridium
  - Measure height and weight when removed from the hatch

- **2 to 5 Months**
  - Clean and disinfect hutch when calf is removed
  - Start fly control program (summer months), concentrate on under area if using sprays
  - Monitor weight, height, and body condition score

- **5 to 6 Months**
  - Vaccinate for brucellosis
  - Vaccinate with 7-way clostridium (repeat in 3 weeks)

- **6 to 13 Months**
  - Monitor weight, height, and body condition score
  - At 13 months: **,* repeat IBR, P13, BVD, BRSV at least 45 days prior to breeding
  - * (Use the modified live product – keep calves away from adult cows)
  - Vaccinate for leptospirosis
  - Vaccinate for vibrio infantile disease in used

- **Pregnant Heifers**
  - Monitor weight, height, and body condition score
  - Maintain sound nutritional management for adequate growth
  - Maintain coccidia control and strategic deworming program
  - Vaccinate against leptospirosis at 18 to 20 months
  - Vit E and selenium 45 to 60 days prior to freshening
  - Vaccinate with E, coli, rotavirus and coronavirus beginning 60 days prior to freshening

Source: Virginia Tech and Virginia State University Cooperative Extension; Tom Bailey, Extension Specialist, Virginia-Maryland Regional College of Veterinary Medicine; Julia M. Murphy, Extension Specialist, Virginia-Maryland Regional College of Veterinary Medicine; Robert James, Professor, Department of Dairy Science, Virginia Tech.

Dairy Heifer Health, Disease Control and Vaccinations

Animal Health International

animalhealthinternational.com
Founded by an Upstate New York dairy farmer in 1931, Conewango has grown into a leading manufacturer of precision milking liners and accessories for progressive dairy operations nationwide. Today, producers count on Conewango liners to help them meet their unique milking goals—from improving cow comfort, to increasing milking speed.

Like all milking liners, Conewango liners are designed to extract milk from the teat by opening and collapsing under alternating vacuum pressure. But the similarities end there. Conewango Replacement liners offer advanced formulations, expert design and reliable performance that is superior to virtually all other liner models.

And with Conewango’s new line of high-performance Evolution X liners, dairy farmers now have more options than ever for meeting their unique milking goals. For producers who value cow comfort, Evolution X liners are designed for gentle, fast milking at low vacuum levels.

This inner walls and reinforced outer walls cause the Evolution X barrel to assume an oval shape during milking. This unique shape shortens the distance required for barrel wall movement, and reduces the amount of vacuum needed for milking. The variation in barrel wall thickness causes a progressive, two-stage collapse that provides greater stability with virtually no slip at low vacuum levels. Low vacuum means less ringing and congestion—faster tissue recovery and greater cow comfort.

For producers who value milking speed, Evolution X2 liners are designed for fast milking while maintaining good teat end health.

Evolution X2 liners assume a square shape during milking, creating three channels for faster, more complete milk-out, with less risk of slip. This controlled collapse reduces pressure on the teat end for less hyperkeratosis.

And for producers currently using low-slip liners, new Evolution XLO offers a unique combination of features found in all Evolution liners, but not in any other low-slip model. Such as a larger, more flexible milk tube with two hinge points, for better unit alignment and unrestricted milk flow. Anti-twist features from top to bottom to secure the liner in the shell—and the ability to fit perfectly into stainless steel 06 style shells.

No matter what your milking needs, there’s a Conewango liner that’s right for you! For more information, visit us online or call 1-800-828-9258 today. Conewango—The right liner for the right job.
Living in a volatile industry where you have to worry about feed costs, available workforce and unpredictable milk prices, one thing you don’t need to worry about is having the products you need for your animal health. As a customer of Animal Health International, you can depend on us having the products and solutions you need, when you need them; and trust that we care about your people, animals and business.

PEOPLE. Knowledgeable professionals collaborate with you to identify the right products, equipment and services that best meet your needs, at a competitive price and delivered in a timely fashion.

PRODUCT. With the largest breadth of products in the industry, we are your single-source supplier. We supply your business the necessary items needed for both the animal and employee. From vaccines and pharmaceuticals to state-of-art equipment and software, to office products and work apparel, allowing you to focus on what’s important—your business and animal health.

SOFTWARE. Easy-to-use micronutrient feed systems combine state-of-the-art technology with accuracy, reliability and flexibility, reducing feed supplement cost and ensuring feed supplements are evenly distributed throughout the feed.

TECHNOLOGY. Progressive inventory management saves you time and reduces loss, by streamlining your inventory management and simplifying your business processes.

SERVICE. Innovative sanitation products and service improves cleaning and sanitation, enhancing milk quality and production.

ONLINE ORDERING. Fast and convenient online ordering offers complete product information at your fingertips including special promotions, tracking of orders, details on past orders, invoices, statements and customized templates as well as access to Compendium and SDS.
INTRODUCING THE NEW Z2 NO-TEAR-TAGGING™ SYSTEM FROM Z TAGS.

While a lot of things have changed in the cattle business over the past 60 years, two-piece taggers aren’t one of them. In fact, the basic design of the tagger you’re using today isn’t much different than the first taggers that hit the market back in the 1950s.

But now there’s a better way to tag your cattle. The all-new Z2 No-Tear-Tagging™ System from Z Tags.

VIRTUALY ELIMINATES TORN EARS.

This new Z2 No-Tear Tagger™ features a revolutionary dual-action kickback jaw that automatically retracts once the tag is inserted. Together with its unique flip-out pin, the Z2 tagger virtually eliminates ripped and torn ears, even when tagging young calves.

PROMOTES FASTER HEALING AND IMPROVED TAG RETENTION.

It’s a proven fact that faster healing of the insertion site means improved tag retention. And that’s where the new Z2 No-Tear Tagger™ really shines. In official trials conducted by the government of Australia, the Z2 No-Tear-Tagging System™ delivered retention rates of up to 99.9%.

DELCIVERS LEGENDARY READABILITY AND DURABILITY.

Z Tags have long been known for their unsurpassed readability and durability. And the new Z2 No-Tear Tags™ are no exception. Whether you choose laser-printed or blank tags with our special marker, you can rest assured your Z Tags will remain readable for years to come. In fact, our laser-printed tags are guaranteed readable for the life of the animal.

And unlike some brittle two-piece tags, new Z2 No-Tear Tags™ feature flexible polyurethane panels that bend without breaking. So they won’t snap off when the weather turns cold or your cattle get tangled up in fencing, bale twine or thick brush.

THE NEW Z2 NO-TEAR TAGGER™ WITH ITS REVOLUTIONARY DUAL-ACTION KICKBACK JAW AND FLIP-OUT PIN
Everyone who applies ear tags to livestock has had problems with tag retention. In this article, I will review the basic tagging techniques you may be aware of and hopefully identify a few new techniques that will help you get closer to that goal of 100% retention.

Even slightly torn ears lead to lost tags
To be successful, you must get the tag applied to the ear without tearing the ear. Most tag applicators have a stationary pin or needle that must be retracted from the ear before the animal jerks away. This is a guessing game for the producer and most find that they are successful about 80 to 90 percent of the time. Unfortunately, that 10 to 20 percent of the time where the animal is quicker than the human leads to torn ears and lost tags.

Retention starts with application
Most producers blame the tag for not staying in the ear. They find tags on the ground or see an animal without tags and think the tags failed. This may be true, but in some cases, a tag gets lost because it was not applied correctly. Remember, tag retention starts with proper application.

Take time to be precise
When working livestock, it’s not uncommon for the least experienced individual does not have the proper training and the awareness about the importance of being precise with tag application. One must be sure to avoid the circulatory system in the ear and the cartilage that supports it. Severing a vein or artery is messy and may lead to frost bite and tag loss in cold environments. Breaking the cartilage may lead to dropped ears that may never recover from this injury.

Promote rapid healing
You want the ear tissue to heal quickly and snugly around the shaft of the tag. You do not want the tag to be loose in the ear after the ear has healed. Loose tags become lost tags. A loose tag will wallow out of the ear and the tag will be easily pulled off if the animal rubs its ear against fencing, brush or other obstacles in its environment.

Remove twine or netting from hay bales
Twine and netting on hay is the most common reason for tag loss. When the animal feeds and then removes its head from the bale, the twine or netting catches the button or male panel on the back of the ear and breaks or separates the tags. You may find broken tags or whole tags on the ground around feeders, or they may fall out later as the animal roams around the pasture. Simply removing the twine or netting may improve tag retention to nearly 100%.

Remove sharp edges
Check the environment for sharp edges where the animals stick their heads. Check all head catches, gates, hay rings and stanchions where rust or welds may be cutting the tags from the ears.

Use brand-name tags made from quality materials
This is one area where you can get what you pay for. Most producers are looking for performance over price. Do you really know the true cost of a lost tag? It depends on your management scheme, but it’s usually much more than what you paid for the tag. Well known ear tag manufacturers use high-quality polyurethane that outperforms so-called “low-cost products.”

Make a new hole every time
Never put a tag in an existing hole in the ear. Remember the goal of tag application is to place the tag into the ear without tearing the ear. It sounds simple, but causing harm to the ear can be deceiving. The reality is that you tore the ear slightly when you inserted the tag. It’s easy to do without the right tools. Those applicators with stationary pins are tricky to get out of the ear without a scratch or rip.

Ten Tips for Improving Ear Tag Retention

1. Educate your crew about the proper placement of tags. Visually divide the ear into four quadrants horizontally and vertically. When tagging cattle, always place tags on the inside half of the ear, closest to the head. Reference the diagram provided for proper tag placement.

2. Never wound the ear
The primary goal is to apply the tag without tearing the ear. It sounds simple, but causing harm to the ear happens quite often. You might catch a glimpse of the tag as the animal leaves the chute, but looks quite simple. The reality is that you tore the ear slightly when you inserted the tag. It’s easy to do without the right tools. Those applicators with stationary pins are tricky to get out of the ear without a scratch or rip.

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The objective was to evaluate the efficacy of an organic-certified product (Optimum UterFlush, Van Beek Natural Science) on the treatment of toxic puerperal metritis (TPM) in cows in an organic dairy farm. Evaluation included clinical cure, survival, and reproductive performance. The TPM was defined as an abnormally enlarged uterus and fetid watery red-brown vaginal discharge, associated with systemic illness and fever (rectal temperature > 39.5°C), within 12 d postpartum. Cows diagnosed with TPM (n = 220) were randomly assigned to 2 intrauterine treatments (every other day for a total of 3 treatments): 1) Control (CON) = 200 ml of Povidone iodine diluted in 2 l of distilled water (n = 113) and 2) UterFlush (UF) = 3.75 ml diluted in 116.25 ml of distilled water (n = 107). All treated cows received hypertonic solution (500 ml of 25% calcium borogluconate IV) and oral aspirin (5 boluses/d). Outcome variables for treatment efficacy included fever and presence of fetid vaginal discharge at d 6 and 14 after diagnosis, survival at d 6, 14, and 30, and reproductive performance. Control variables were parity, BCS at enrollment, and calving season. Logistic regression and ANOVA were used for the analyses (PROC GLIMMIX and PROC GLM, SAS). The odds of surviving at d 6, 14, and 30 for cows in the UF treatment were 4.7 (95%, CI = 1.4 to 15.8), 2.8 (95%, CI = 1.3 to 6.1), and 3.6 (95%, CI = 1.7 to 7.7) times the odds of cows in the CON treatment. Occurrence of fever at d 6 and 14 was not different between the 2 treatments. Presence of a fetid vaginal discharge at d 6 and 14 was lower in cows treated with UF compared with cows in the CON group [11% vs. 28% (P < 0.001) and 1% vs. 8% (P = 0.017)]. The odds of breeding until 150 d in milk (DIM) and the time to first breeding were not different for the 2 treatments. The odds of pregnancy at the first breeding and at 300 DIM for cows treated with UF were 2.2 (95%, CI = 1.1 to 4.4) and 2.0 (95%, CI = 1.1 to 3.5) times the odds of cows in the CON group. Days to pregnancy were similar in both treatments. The number of breedings per pregnancy was 1.96 vs. 2.58 for cows in the UF and CON treatments (P = 0.01), respectively. Results indicated that cows with TPM treated with Optimum UterFlush had higher odds of recovering and improved reproductive performance, compared with cows treated with Povidone iodine.

P. J. Pinedo*, J. S. Velez, H. Bothe, D. Merchan, J. M. Piñeiro, and C. A. Risco,
1Texas A&M AgriLife Research, Amarillo, 2Aurora Organic Farms, Boulder, CO, 3Aurora Organic Dairy, Boulder, CO, 4College of Veterinary Medicine, University of Florida, Gainesville.


Effect of an Organic-Certified Treatment (Optimum UterFlush) for Toxic Puerperal Metritis on Cure and Reproductive Performance of Dairy Cows
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### Gestation Table for Cattle

*The Probable Date of Birth Listed Below May Vary a Few Days.*

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While nearly all operations would benefit from some sort of immunization program, vaccination protocols may vary considerably between individual operations. Protocols must be tailored to an operation's specific needs including, perhaps, the eventual marketing plan. The operation's veterinarian is in an ideal position to make optimum recommendations.

The U.S. Department of Agriculture's National Animal Health Monitoring System (NAHMS) conducted the Beef 2007–08 study, which focused on beef cow-calf health and management practices in 24 states.* These major beef cow-calf producing states represented 79.6 percent of U.S. operations with beef cows and 87.8 percent of U.S. beef cows.

One of the goals of the Beef 2007–08 study was to take an in-depth look at vaccination practices on the nation's beef cow-calf operations.

**General vaccination practices**

Overall, almost 7 of 10 operations (68.9 percent) vaccinated any beef cattle or calves in 2007. Operations with 1 to 49 beef cows were less likely than operations with 50 or more beef cows to vaccinate any beef cattle or calves.

A relatively small percentage of operations vaccinated calves less than 22 days of age (11.7 percent). When calves in this age group were vaccinated, they were vaccinated most commonly against clostridial disease agents. Less than 10 percent of operations vaccinated calves in this age group with any particular vaccine type.

Nearly two-thirds of operations (62.3 percent) vaccinated any calves aged from 22 days to weaning. Operations with 1 to 49 beef cows were less likely than operations with 50 or more beef cows to vaccinate any beef cattle or calves.

For cows, the most commonly used vaccine was for leptospirosis (31.7 percent of operations) followed by BVD (28.1 percent of operations) and IBR (24.6 percent of operations). Less than a third of operations (31.5 percent) vaccinated bulls for any of the listed diseases.

Vaccination for BVD and leptospirosis occurred on approximately one of five operations (24.3 and 21.2 percent, respectively).

**Percentage of Operations by Type of Vaccine Used and by Cattle Class**

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**Summary**

Over two-thirds of operations (69.4 percent) vaccinated some cattle or calves. Among the various classes of cattle and calves, calves aged from 22 days through weaning were the animals vaccinated most commonly; 62.3 percent of operations vaccinated some calves in this age group for some disease agent.

While vaccination can be considered costly to an operation, it can also be an effective risk management tool. Often, when a new disease is introduced into a naïve unvaccinated herd, it can have devastating effects on pregnancy, calving, weaning rates and weaning weights. Producers should work with their veterinarians to assess the true risks of disease exposure and the tolerance for risk. Based on that information, they can decide an optimum vaccination strategy for their herd.
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Socorex Syringe

To view the complete line of livestock equipment available from Stone go to www.stonemfg.net
Animal Health International sales representatives are trained professionals who understand the importance of animal health and are here to assist you with all your needs.

Our experienced sales staff possess the product knowledge and deep-rooted industry experience to assist you with recommendations. We want to help you achieve your overall animal health and business objectives.

**Our sales staff**
- Provide up-to-date information on products, programs, new technologies and animal health issues.
- Are trained in product offering, regulatory compliance, immunology, pharmacology, merchandising and management.
- Are a resource for improved animal health management and product information with our partnered manufacturers.
- Network with over 350 outside and inside sales representatives nationwide to assist in your animal health needs.

**Sales and delivery**

Animal Health International provides marketing, distribution, information management and logistics to help make our customers' job easier.

**Benefits of working with our sales team**
- Knowledgeable and professional sales staff.
- Single-source supplier for all your animal health needs.
- Emergency and weekend service available.
- Split order option.
- Large national, multi-location distributor.
- Inventory management.
- Safe and efficacious products that meet manufacturers’ handling specifications.
- Reliable source of information.
- Assured compliance and handling to meet the standards with regulatory agencies and prescription drug handling.
- Interface between customer, consulting veterinarian and nutritionist.
- Delivery to multiple locations.
- Volume purchasing which ensures competitive pricing.
- Flexibility and convenience in managing inventory.

**Corporate Headquarters**

**Greeley**
822 7th St. Suite 740
Greeley, Colorado 80631
(866) 228-2659
(970) 353-2600

**Online Ordering Support**
Order online 24 hours a day at your convenience!
(800) 203-5620
Monday-Friday 6:00am-3:00pm MT
webteam@animalhealthinternational.com

**Call Centers:**

<table>
<thead>
<tr>
<th>State</th>
<th>City</th>
<th>Contact Information</th>
<th>Phone Numbers</th>
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<tr>
<td>California</td>
<td>Visalia</td>
<td>Call Center</td>
<td>(559) 651-1930</td>
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<tr>
<td>Indiana</td>
<td>Wolcott</td>
<td>Call Center</td>
<td>(800) 541-5547</td>
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<tr>
<td>Iowa</td>
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<td>Nebraska</td>
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<tr>
<td>Florida</td>
<td>Ocala</td>
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<td>(800) 342-5231</td>
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<td>Lancaster</td>
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<td>(888) 313-4587</td>
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<td>Texas</td>
<td>San Antonio</td>
<td>Call Center</td>
<td>(800) 292-5692</td>
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<tr>
<td>Hawaii</td>
<td>Kamehua</td>
<td>Sales Office</td>
<td>(808) 885-9015</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Buffalo</td>
<td>Vet Call Center</td>
<td>(800) 959-3836</td>
</tr>
<tr>
<td>Companion</td>
<td>Animal</td>
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Animal Health International, Inc. is the premier animal health company in North America and has been serving the needs of customers for more than 40 years. No other distributor has a broader product offering. Animal Health International represents over 1,500 manufacturers that supply products focused on equine, beef, dairy, poultry and swine as well as companion animals. Animal Health International offers products ranging from vaccines and pharmaceuticals to state-of-the-art equipment.

Animal Health International has direct, long-standing relationships with all major animal health manufacturers. In addition, we offer beneficial niche products from select international, national, regional and local suppliers which provide a unique and specialized breadth of products.

Animal Health International reps are in constant contact with our customers and partners to assure that product needs are met, questions are answered, and important information is shared. Our reps work to become a vital part of our customer’s business through building long-lasting relationships and providing outstanding customer service.

At Animal Health International we have the most knowledgeable, consultative, and seasoned sales force in our industry. We pride ourselves in knowing our customer, their industry, and how they make money in their business. Our customers and partners rely on their Animal Health International sales representative to provide them with the latest information on products, programs and protocols that help them maximize their animal health outcomes.

**Key features of Animal Health International**

- Largest privately-held animal health distributor in North America
- Over 70 distribution centers and sales offices across the U.S.
- 300 Outside Sales Representatives and 200 Inside Sales Representatives (1,500 employees nationwide)
- Single source of supply for all animal health products and needs
- Distribute over 80,000 products from over 1,500 manufacturers
- Next-day service to over 90% of our customer base

**Segments serviced include:**

- Beef, Dairy, Cow/Calf  •  Equine  •  Swine  •  Poultry  •  Sheep  •  Companion Animal as well as Exotics

**Product offerings include:**

- Pharmaceuticals  •  Nutritional Supplements  •  Identification Systems  •  Insect and Pest Control
- Vaccines and Biologics  •  Reproductive and OB Supplies  •  Grooming and Show Supplies
- Cleaning and Disinfecting Supplies  •  Barn, Stable and Feedlot Supplies

**Our proprietary product lines include:**

- Animal Feed Technologies
- Aspen Veterinary Resources
- First Companion Veterinary Products

animalhealthinternational.com