

Get Vaccinating RIGHT

Vaccine Dosing and Resource Guide



BOVILIS[®]
Protect the future[™]



PRESTIGE[®]
EQUINE VACCINES

The Importance of Vaccines



Disease Risks, Efficacy, Etc.

Just like people, any animal can get sick at any time. However, animals with increased exposure to others, or increased stress due to travel, work, breeding or weather are especially susceptible to disease.

Vaccinations strengthen animal immune systems, so they are prepared to face the challenges that lie ahead. They are a vital and effective management practice that contributes to overall animal health and well being.

Side Effects

The most common side effect is temporary soreness and swelling at the injection site. Mild side effects can also include a low-grade fever and

unusual lethargy that goes away after a few days. Rarely, more serious side effects can occur, such as unusual weakness, severe diarrhea, difficulty breathing and extreme swelling at the injection site. Contact your veterinarian immediately if serious side effects occur.

Check with Your Veterinarian

Vaccination programs may vary depending upon needs specific to your horse or cattle herd. Considerations might include: environment, travel, age, gender, use and other factors.

Make sure you consult with your veterinarian concerning an appropriate vaccination program for your animal. Keep in mind that the plan should be re-examined as time and circumstances change.

What is a Vaccine?

Prevention vs. Protection

Vaccines are very important to stimulate immunity to lessen the negative health events associated with disease. There are three main principles to consider when planning your vaccination protocols—necessity, efficacy and safety. Each farm, ranch or stable is unique—ask your veterinarian to discuss all three principles when creating your customized vaccination program.

Not a Treatment

Vaccines raise the general level of herd immunity to minimize the spread of infectious disease or reduce the severity of clinical illness. Vaccines play

a critical role in protecting your animals and your pocketbook. Modern vaccines are an effective tool, but no vaccine provides 100% immunity all the time. Vaccines are not a replacement for livestock management best practices.

Vaccination is for Healthy Animals

Animals that have a fever, are currently sick, malnourished or stressed should not be vaccinated. Follow all vaccine label directions—pregnant, lactating and young animals require very specific protocols. Consult with your veterinarian if you have any questions.

Types of Vaccines

Killed vs. Modified Live Vaccines

Killed vaccines are made by growing an organism in a growth medium. The organism is then inactivated or killed by chemical or heat treatment. Modified live vaccines (MLV) are made with a virus or bacterium that is attenuated, or weakened, so the organism will not cause disease in animals, but will still stimulate immunity. MLV are light, heat and disinfectant sensitive. All forms of vaccines need to be kept cool and away from sunlight. Follow all label directions.

Intramuscular vs. Subcutaneous vs. Intranasal

Intramuscular (IM) vaccines are administered as an injection into a large muscle, routinely the neck of a horse. Subcutaneous (SQ) vaccines in cattle should always follow Beef Quality Assurance guidelines for proper injection site placement. Intranasal (IN) vaccines are administered in the nostril of the animal. IN vaccines are particularly effective against respiratory diseases and have been shown to be highly effective in young animals.¹

¹Stoltenow, C., Immunological Response of Beef Calves to Concurrent Application of Modified-Live Viral Vaccine (Intranasal and Systemic Administration) and Systemically Administered Mannheimia haemolytica Bacterin-Leukotoxoid. The Bovine Practitioner, Fall 2011.

Beyond Vaccinating

Nutrition

Five main groups of nutrients are required for a healthy animal: energy (simple carbohydrates), protein, vitamins, minerals and water. Energy for body maintenance, warmth during the cold and the building blocks for growth and development all hinge on balanced nutrition.

Management

Management best practices that increase the health and well-being of your animals include: good sanitation, adequate parasite control, stress reduction, protection from weather extremes, effective predator control and regular veterinary care.

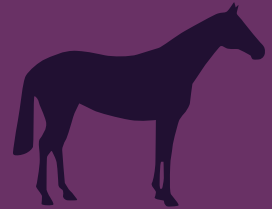
Biosecurity

Biosecurity measures are adopted to prevent infectious agents or diseases from coming into contact with your animals. Screening, testing and quarantining new or returning animals; and monitoring and controlling human and vehicle traffic on premise are just a few key biosecurity measures to ensure good health.

Know the Diseases That Affect Your Horse



PRESTIGE®
EQUINE VACCINES



Core Vaccines

The American Association of Equine Practitioners (AAEP) has created a category of vaccinations called core vaccinations. Essential vaccines have clearly demonstrated efficacy and safety, with a high-enough level of patient benefit—and low-enough level of risk—to justify their use in all horses.

These are vaccines against diseases that:

- Are endemic to a region
- Are virulent/highly contagious
- Pose a risk of severe disease
- Have potential public health significance and/or are required by law

Eastern/Western Equine Encephalomyelitis (EEE/WEE)

EEE/WEE are viral infections of the horse's brain and spinal cord. The virus is maintained in reservoirs (primarily birds and rodents) and transmitted to the horse by the bite of an infected mosquito. The disease is fatal in 50-90% of cases.

Tetanus

Also known as “lockjaw”, this disease stems from exposure to *Clostridium tetani* bacteria. Tetanus toxins cause muscles to spasm and go rigid, and respiratory paralysis and dehydration can lead to death.

West Nile Virus

West Nile virus affects horses, humans and birds. Spread only by mosquitoes, it is not directly contagious from a sick animal. Symptoms vary widely and generally include neurological signs such as ataxia (wobbliness) and muscle twitching (especially in the lips, neck and chest). Most horses will also have a fever, lethargy and decreased appetite. Some horses show no symptoms at all. Mortality may be as high as 30%. Vaccination is strongly recommended for all horses regardless of location.

Rabies

Occurs through transmission of the virus from saliva of an infected (rabid) animal, usually through a bite. The virus migrates via nerves to the brain where it initiates rapidly progressive encephalitis. Always fatal. See your veterinarian for this vaccine.

Risk-Based Vaccines

According to the AAEP, risk-based vaccines are administered on the basis of a risk assessment performed by your veterinarian. Criteria can include your horse's age, exposure level and geography. Use of these vaccines may vary among individuals, populations and/or geographic regions.

Flu

Equine Influenza, the flu, has symptoms which include fever, dry cough, runny nose, dehydration, poor appetite, lethargy and sometimes secondary pneumonia. Death is rare and most horses recover, but the flu is highly infectious and results in lost time and money. Vaccination recommendations vary depending upon disease risk assessment.

Rhinopneumonitis

Equine Herpesvirus (EHV), sometimes called "rhino", has two main types: EHV-1 and EHV-4. EHV-1 is most virulent and can cause respiratory disease, abortion, foal death and neurologic disease.

EHV-4 is more common in young horses and usually only causes respiratory problems. Vaccination recommendations vary depending upon disease risk assessment.

Pregnant mares need specifically labeled EHV-1 vaccinations as an aid in the prevention of EHV-1 induced abortions.

Other Diseases

Other common diseases seen in North America include Potomac Horse Fever, Botulism, Strangles, Anthrax, Leptospirosis, Equine Viral Arteritis and Venezuelan Equine Encephalomyelitis (VEE). Consult your veterinarian on the risks in your area.

Flu Strains

Equine influenza (EIV) is caused by variable strains of the influenza A (H3N8) virus. It spreads rapidly with clinical signs appearing within 24 to 48 hours following exposure and can be transmitted more than 50 yards through the air by a coughing horse. In an unvaccinated horse population that has never been exposed to the virus, EIV has a nearly 100% infection rate.

The new line of PRESTIGE® flu-containing equine vaccines continues to set the standard in safety and efficacy you've come to expect along with updated influenza strains:

Florida '13 Clade 1:

Based on a highly pathogenic isolate from the 2013 Ocala, Fla. influenza outbreak that impacted hundreds of horses. **Florida '13 was exclusively identified and isolated through the Merck Animal Health Biosurveillance Program.**

Richmond '07 Clade 2:

Meets World Organisation for Animal Health (OIE) and American Association of Equine Practitioners (AAEP) guidelines for Clade 2 influenza protection.

Kentucky '02:

Influenza strain maintained from previous vaccine line.

Know the Antigens



Combination Vaccines

Less stressful and more economical than individual vaccines, combination vaccines provide protection from two or more diseases in the same injection. Be sure to read the label of any vaccine to be certain of the antigens it contains. It may be necessary to use two separate vaccine injections to completely protect your horse.



Horse Vaccine Antigen Chart

PRESTIGE [®] Vaccines	EEE/WEE	Tetanus	WNV	Influenza	EHV-1/EHV-4	EHV-1/Abortion
PRESTIGE [®] 5 + WNV	●	●	●	●	●	
PRESTIGE [®] 5	●	●		●	●	
PRESTIGE [®] 4	●	●		●		
PRESTIGE [®] 3 + WNV	●	●	●			
PRESTIGE [®] 3	●	●				
PRESTIGE [®] 2				●	●	
PRESTIGE [®] WNV			●			
PRESTIGE [®] PRODIGY [®]						●
PRESTIGE [®] TETANUS		●				

Know the Vaccines



Horse 5-way + WNV

Effective against:

Eastern/Western Equine Encephalomyelitis (EEE/WEE), Equine Influenza Virus (EIV), Equine Herpesvirus types 1/4 (EHV-1&4) respiratory, Tetanus, West Nile Virus

When to Use**

PRESTIGE® 5 + WNV

Horse 5-way

Effective against:

Eastern/Western Equine Encephalomyelitis (EEE/WEE), Equine Influenza Virus (EIV), Equine Herpesvirus types 1/4 (EHV-1/4) respiratory form and Tetanus

When to Use**

PRESTIGE® 5

Horse 4-way

Effective against:

Eastern/Western Equine Encephalomyelitis (EEE/WEE), Equine Influenza Virus (EIV) and Tetanus

When to Use**

PRESTIGE® 4

**When to Use:

- Horses 6 months of age or older
- Administer 1mL dose intramuscularly
- Duration of immunity has been shown at 6 months for EIV
- Pregnant mares 4–6 weeks prior to foaling*

*Mare recommendations per AAEP vaccination guidelines

Horse 3-way + West Nile

Effective against:

Eastern/Western Equine Encephalomyelitis (EEE/WEE),
Tetanus and West Nile Virus

When to Use:

- Horses 6 months of age or older
- Administer 1mL dose intramuscularly
- Pregnant mares 4–6 weeks prior to foaling*

PRESTIGE® 3 + WNV

*Mare recommendations per AAEP vaccination guidelines

Horse 3-way

Effective against:

Eastern/Western Equine Encephalomyelitis (EEE/WEE)
and Tetanus

When to Use:

- Horses 6 months of age or older
- Administer 1mL dose intramuscularly
- Pregnant mares 4–6 weeks prior to foaling*

PRESTIGE® 3

*Mare recommendations per AAEP vaccination guidelines

Horse Flu/EHV (Rhino)

Effective against:

Equine Influenza Virus (EIV) and Equine Herpesvirus types 1/4
(EHV-1/4) respiratory form

When to Use:

- Horses 6 months of age or older
- Administer 1mL dose intramuscularly
- Duration of immunity has been shown at 6 months for EIV

PRESTIGE® 2

Horse WNV

Effective against:

West Nile Virus

When to Use:

- Horses 6 months of age or older
- Administer 1mL dose intramuscularly
- Pregnant mares 4–6 weeks prior to foaling*

PRESTIGE® WNV

*Mare recommendations per AAEP vaccination guidelines

Equine Herpesvirus Type 1 (EHV-1)

Effective against:

Abortion and respiratory disease caused by EHV-1

When to Use:

- Horses 6 months of age or older
- Pregnant Mares, administer a 2mL dose intramuscularly
in the 5th, 7th, and 9th months of pregnancy

PRESTIGE® PRODIGY®

Tetanus Toxoid

Effective against:

Tetanus

When to Use:

- Horses, cattle, swine and sheep 6 months of age or older
- Administer 1mL dose intramuscularly to horses, cattle
and swine, or 0.5mL dose to sheep
- Injuries incurred from wounds or surgery

PRESTIGE® TETANUS

Know the Vaccines



Make a Vaccination Plan



PRESTIGE
EQUINE VACCINES

Key to activity in the vaccination plan chart below.

Essential Vaccines:

Every horse, every year

Risks are everywhere for your horse—everything from trail rides to mosquitos can impact their health. Even horses that have lower risk and never travel should be protected against the five core diseases as identified by the American Association of Equine Practitioners. PRESTIGE® vaccines have clearly demonstrated efficacy and safety to justify their use in all horses.

Risk-Based Vaccines:

Competitive Horses

Risk-based vaccines are selected based on a risk assessment performed by your veterinarian. Risk assessment addresses the likelihood of disease introduction and the estimation of potential consequences, which include illness or death. Also, if your horse is on the move, travel stress can weaken the immune system horses use to naturally fend off illness. Risk criteria can include your horse's age, travel, environment, gender, exposure level and geography.

Vaccinating your horse at the right time, well before exposure to viral and bacterial diseases, is extremely important.

Breeding

Maintaining health throughout your breeding stock is imperative. Your mare or stallion needs to be up to date on their vaccinations prior to breeding.

Pre-Breeding Mare -

Incorporate the essential and risk-based vaccines into your vaccination program.

Pregnant Mare -

Work closely with your veterinarian to develop a vaccination plan that protects the health of the mare and her unborn foal.

Foal -

The neonatal foal has limited immune capabilities for a few months. Consult your veterinarian for a recommended foal vaccination schedule.

LIFESTYLE	DISEASES OF CONCERN	PRESTIGE® VACCINE OPTIONS
Essential Vaccines: Every horse, every year <ul style="list-style-type: none"> • Vaccinate annually prior to mosquito season.* • Evaluate booster needs based on geographic risks.* 	<ul style="list-style-type: none"> • Eastern Equine Encephalomyelitis • Western Equine Encephalomyelitis • Tetanus • West Nile Virus • Rabies* 	PRESTIGE® 5 + WNV OR PRESTIGE® 3 + WNV *Contact your veterinarian
Risk-Based Vaccines: Competitive Horses <ul style="list-style-type: none"> • Includes essential vaccines • Evaluate booster needs based on geographic and activity/exposure risks. 	<ul style="list-style-type: none"> • Eastern Equine Encephalomyelitis • Western Equine Encephalomyelitis • Tetanus • West Nile Virus • Influenza • Rhino (Equine Herpesvirus Types 1/4) • Rabies* 	PRESTIGE® 5 + WNV OR PRESTIGE® 3 + WNV AND PRESTIGE® 2 *Contact your veterinarian
Breeding		
Pre-Breeding Be sure vaccinations are up to date.*	<ul style="list-style-type: none"> • Eastern Equine Encephalomyelitis • Western Equine Encephalomyelitis • Tetanus • West Nile Virus • Influenza • Rhino (Equine Herpesvirus Types 1/4) • Rabies* 	PRESTIGE® 5 AND PRESTIGE® WNV OR PRESTIGE® 5 + WNV *Contact your veterinarian
Pregnant Mare		
<ul style="list-style-type: none"> • Include a vaccine labeled as effective against abortion at 5, 7 and 9 months of pregnancy. 	Equine Herpesvirus Type 1 which can cause abortion*	PRESTIGE® PRODIGY® *Contact your veterinarian
<ul style="list-style-type: none"> • Include essential and risk-based vaccines 4-6 weeks prior to foaling to boost maternal antibodies. 	See Pre-Breeding Diseases of Concern	See vaccine options for competitive horses above
Foal Vaccine needs and timing vary based on factors such as age, risk level and vaccination history of mare.	Consult your veterinarian for foal vaccination plan	Consult your veterinarian for a foal vaccination plan

*Contact your veterinarian for further questions.

Know the Diseases That Affect Your Cattle



Viral and Bacterial

The most common diseases affecting cattle fall into two main categories; viral and bacterial. For many diseases, treatment is not an option and the best defense against them is vaccines. An effective vaccination program gives you the power to get in

front of disease before it strikes, tackling it before it gains ground. Instead of treating disease, you can keep producing healthy, profitable cattle.

Viral Diseases

BRSV – Bovine Respiratory Syncytial Virus

Causes pneumonia and nasal discharge. Bacterial pneumonia often develops as a secondary infection. Primarily affects cattle less than 2 years old.

BVD – Bovine Viral Diarrhea

Types 1 & 2 - As the costliest viral disease in cattle, BVD causes digestive tract erosions, abortions, still births, infertility, birth defects, respiratory disease and immune system suppression. It is estimated that 70 to 90% of all BDV infections go undetected.¹ This costs producers up to an estimated \$2.5 billion a year in losses.² Infection of a pregnant cow in the first 4 months can lead to a persistently infected (PI) calf that will shed the virus throughout their life. Those cows infected between 100 days and 150 days of gestation may produce calves with deformities, particularly of the nervous system. Calves born to cows that were infected later in gestation are twice as likely as non-infected calves to experience severe illness in the first 10 months of life.³ Testing for BVD-PI calves and removing them from the herd as soon as possible may be beneficial to prevent further infections and loss of performance gains.

IBR – Infectious Bovine Rhinotracheitis (Rednose)

Virus causes upper respiratory disease, eye lesions, abortions, and infertility. IBR is extremely contagious and outbreaks can be severe with excessive death losses. The IBR virus is one of the most common agents involved in shipping fever pneumonia of feedlot calves.⁴

PI₃ – Parainfluenza Type 3

Virus causes mild respiratory disease that may lead to other respiratory infections, both viral and bacterial.

Rotavirus and Coronavirus –

Leading viral causes of calf scours (diarrhea) in young calves. May weaken the calf and slow growth, and may cause death in highly-compromised calves. Calf scours is the number one cause of death in calves from 2 to 30 days old.⁵ As many other scour causing pathogens can also be lethal to the calf and are difficult to treat, a broad spectrum vaccine administered to the cow at the proper time before calving is important to produce good colostrum.

Bacterial Diseases

Brucellosis -

A reproductive system bacterial disease nearly eradicated in the United States. May cause late-term abortions, weak calves or retained afterbirth. May be spread to other species, including humans—although with different symptoms.

Histophilus - Somni (*Haemophilus somnus*)

Family of gram-negative bacterium that can cause pneumonia, neurological disease and abortions. Can be primary cause of pneumonia and secondary bacterial invader. Outbreaks can be triggered by stress combined with viral infections.⁶

Leptospirosis -

This bacterium causes milk drop, abortions and infertility in breeding cattle. May also cause urinary disease and anemia in all cattle groups. Five different types of “lepto” can cause disease. Most vaccines contain all five.

Vibriosis -

This bacterium is a venereal disease spread by bulls during natural service. *Vibrio* infection can cause early embryonic death and repeat breeders.

Pasteurella and *Mannheimia* - (*Pasteurella multocida* and *Mannheimia haemolytica*)

A group of gram-negative bacteria commonly found in the environment and animal itself that lead to mild to severe pneumonia when the animal is stressed and/or infected with other bacteria or viruses such as IBR, PI-3 or BRSV. Use vaccines that are effective against the three common causes of bacterial pneumonia to lessen lung damage.

Pinkeye - (caused by *Moraxella bovis* and *Moraxella bovoculi*)

Bacterium along with other factors causes infection and irritation that can lead to corneal ulcers with temporary blindness and/or permanent eye damage. Pinkeye is one of the most common non-fatal diseases of cattle.⁷ It is easily spread by flies feeding on the infected eye drainage.

Clostridial Diseases

Clostridia are a class of anaerobic bacteria that form spores and are commonly found in soils and in the digestive tracts of people and animals. Cattle can be exposed to these spores through eating contaminated feed or pastures and also through open wounds. There are three major types of clostridial diseases: hepatic group, intestinal group and muscle group.

Hepatic Group - *Cl. novyi* (Black Disease) and *Cl. haemolyticum* (Redwater)

Black disease causes liver necrosis, blood vessel damage, and produces a toxin that causes rapid death, usually within 48 hours. Red water is triggered by local liver damage and necrosis typically caused by migrating liver flukes. The disease destroys red blood cells leading to tissue death in the liver, red urine, and death.

Intestinal Group - *Cl. perfringens* Types B, C & D (Enterotoxemia)

Commonly called “overeating” disease⁸ or “purple gut”, this group produces toxins that are absorbed

into the cattle’s intestines. Stress can activate the disease and nursing calves who overeat can also trigger the disease when surplus milk enters the small intestine too rapidly. Oftentimes the disease onset is very rapid, with calves dying within 12 hours or less, and often showing few symptoms. Hemorrhagic Bowel Syndrome (HBS) is a newly emerging, highly fatal intestinal disease that leads to sudden death in adult dairy cows.⁹

Muscle Group - *Cl. chauvoei* (Blackleg), *Cl. septicum* (Malignant Edema), and *Cl. sordellii* (Sord)

These organisms produce toxins arising from bacterial growth in necrotic/bruised tissue. Blackleg is nearly 100% fatal and typically starts after a deep bruise or injury and can result in muscle and/or heart lesions and death. Blackleg typically occurs between 4 month and 2 years of age in cattle.¹⁰

⁶Hairgrove, Tom; Beckham, Tammy; and Banta, Jason. “Understanding Bovine Viral Diarrhea in Beef Herds” Texas A&M AgriLife Extension Library Online. Texas A&M University. <https://agrilifeextension.tamu.edu/library/ranching/understanding-bovine-viral-diarrhea-in-beef-herds/>

⁷Ishmael, Wes. “How Much Money Have You Lost to BVD?” BEEF Magazine. April 13, 2016.

⁸Hairgrove, Tom; Beckham, Tammy; and Banta, Jason. “Understanding Bovine Viral Diarrhea in Beef Herds” Texas A&M AgriLife Extension Library Online. Texas A&M University. <https://agrilifeextension.tamu.edu/library/ranching/understanding-bovine-viral-diarrhea-in-beef-herds/>

⁹Sprott, L.R. and Wikse, Steve. “Infectious Bovine Rhinotracheitis” Texas A&M AgriLife Extension Library Online. Texas A&M University. <https://agrilifeextension.tamu.edu/library/ranching/infectious-bovine-rhinotracheitis/>

¹⁰Stokka, Gerald and Perino, Louis. “Calving Tips: Going to War on Calf Scours”. BEEF Magazine, April 1, 1999

¹¹Arnold, Michelle - DVM (Ruminant Extension Veterinarian) University of Kentucky. “Pneumonia in Feeder Calves? Don’t Forget *Histophilus somni*” Ohio BEEF Cattle Letter published by Ohio State University Extension Beef Team, October 31, 2018.

¹²Arnold, Michelle - DVM (Ruminant Extension Veterinarian) University of Kentucky. “Preparing for Pinkeye” Ohio BEEF Cattle Letter published by Ohio State University Extension Beef Team, June 20, 2018.

¹³Van Anne, Travis - DVM. “Preventing Overeating Disease in Your Cattle Herd” BEEF Magazine. February 25, 2018 <https://www.beefmagazine.com/animal-health/preventing-overeating-disease-your-cattle-herd>

¹⁴Van Metre, Dave - DVM; Callan, Rob - DVM. “Hemorrhagic Bowel Syndrome” Integrated Livestock Management Colorado State University Veterinary Teaching Hospital. <http://csu-cvms.colostate.edu/vth/livestock/integrated-livestock-management/Pages/hemorrhagic-bowel-syndrome.aspx>

¹⁵Rodning, Soren P. - DVM; Owsley, W.F.; Gard, Julie A. “Blackleg and Other Clostridial Diseases in Cattle” ANR-0888 by the Alabama Cooperative Extension System (Alabama A&M University and Auburn University). Updated December 2011.

Know the Antigens

BOVILIS[®]
Protect the future[™]

Combination Vaccines

Protect your cattle against multiple diseases in one injection and minimize side effects and stress. Combination vaccines are available to fight the most common viral, bacterial and clostridial diseases affecting your herd. Be sure to read the label of any vaccine to be certain of the antigens it contains. It may be necessary to use more than one vaccine to completely protect your cattle.



Cattle Vaccine Antigen/Disease Chart



Viral Vaccines**	IBR	BVD Type 1	BVD Type 2	PI ₃	BRSV	Mannheimia haemolytica	Pasteurella multocida	Leptospirosis	Vibriosis
BOVILIS® VISTA® ONCE SQ									
BOVILIS® ONCE® PMH IN									
BOVILIS® VISTA® 5 SQ									
BOVILIS® VISTA® 5 VL5 SQ CFP									
BOVILIS® NASALGEN® 3									
BOVILIS® NASALGEN® 3-PMH									
BOVILIS® NASALGEN® IP									
BOVILIS® VISTA® BVD CFP									
Clostridial Vaccines	Blackleg	Malignant Edema	Sordellii	Black Disease	Enterotoxemia	Redwater	Tetanus	Somni	
BOVILIS® VISION® 7*								*	
BOVILIS® VISION® 8*								*	
BOVILIS® CAVALRY® 9									
BOVILIS® COVEXIN® 8									
BOVILIS® VISION® CD-T									
BOVILIS® VISION® CD									
*(with optional Somni available in BOVILIS® VISION® 7 SOMNUS or BOVILIS® VISION® 8 SOMNUS)									
Pinkeye Vaccines	Moraxella bovis	Blackleg	Malignant Edema	Sordellii	Black Disease	Enterotoxemia			
BOVILIS® 20/20 VISION® 7									
BOVILIS® PILIGUARD® PINKEYE									
Scours	Rotavirus	E. coli K99	Enterotoxemia	Coronavirus					
BOVILIS® GUARDIAN®									
BOVILIS® CORONAVIRUS IN									

****Modified Live Vaccines:** All BOVILIS® VISTA® vaccines are labeled as being safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccine(s) in this product line. Read product label carefully. If cows have not previously been vaccinated with modified-live vaccines consult your veterinarian before use.

Know the Vaccines

Antigens & Diseases

BOVILIS®
Protect the future™

Viral Vaccines

5-way Viral + Mannheimia and Pasteurella combo

Infectious Bovine Rhinotracheitis (IBR),
BVD Type 2, and BRSV,
BVD Type 1, Parainfluenza-3, *Mannheimia*
haemolytica, and *Pasteurella multocida*

BOVILIS® VISTA® ONCE SQ
50 Dose and 10 Dose

Intranasal Mannheimia and Pasteurella combo

Pasteurella multocida and
Mannheimia haemolytica

BOVILIS® ONCE® PMH IN
50 Dose and 10 Dose

5-way Viral

IBR, BVD Type 2 and BRSV,
BVD Type 1 and PI-3

BOVILIS® VISTA® 5 SQ
50 Dose and 10 Dose

5-way Viral + 5 Lepto + Vibrio

IBR, BVD Type 2, BRSV, and
Leptospirosis, BVD Type 1 and
Parainfluenza-3 and *Campylobacter fetus*

BOVILIS® VISTA® 5 VL5 SQ CFP
50 Dose and 10 Dose

Intranasal 3-way BRD Vaccine

IBR, Bovine Respiratory Syncytial Virus
(BRSV) and Parainfluenza-3 virus (PI3)

BOVILIS® NASALGEN® 3
50 Dose, 10 Dose and Single Dose

Intranasal 3-way BRD Vaccine + Mannheimia and Pasteurella combo

IBR, Bovine Respiratory Syncytial Virus
(BRSV) and Parainfluenza-3 virus (PI3),
Pasteurella multocida and
Mannheimia haemolytica

BOVILIS® NASALGEN® 3-PMH
50 Dose, 10 Dose and Single Dose

Intranasal 2-way BRD Vaccine

Infectious Bovine Rhinotracheitis (IBR)
virus and Parainfluenza-3 virus (PI3)

BOVILIS® NASALGEN® IP
50 Dose and 10 Dose

BVD Vaccine

Bovine Virus Diarrhea virus (BVD)
Types 1 & 2

BOVILIS® VISTA® BVD CFP
50 Dose and 10 Dose

Clostridial Vaccines

7-way Blackleg Vaccine (+ *Somni**)

Blackleg, Malignant Edema, *Sordellii*,
Black Disease, and Enterotoxemia
and (*Histophilus Somni**)

BOVILIS® VISION® 7 (+SOMNI*)
250 Dose, 50 Dose and 10 Dose

*(with optional *Somni* in BOVILIS® VISION® 7 SOMNUS)

8-way Blackleg Vaccine (+ *Somni**)

Blackleg, Malignant Edema,
Sordellii, Black Disease, Enterotoxemia,
Red Water and (*Histophilus Somni**)

BOVILIS® VISION® 8 (+SOMNI*)
50 Dose and 10 Dose

*(with optional *Somni* in BOVILIS® VISION® 8 SOMNUS)

9-way Blackleg (Including Tetanus)

Blackleg, Malignant Edema,
Black Disease, *Sordellii*, Enterotoxemia,
Red Water and Tetanus

BOVILIS® CAVALRY® 9
125 Dose, 50 Dose and 10 Dose

8-way Blackleg (Including Tetanus)

Blackleg, Malignant Edema,
Black Disease, Enterotoxemia,
Red Water and Tetanus

BOVILIS® COVEXIN® 8
50 Dose and 10 Dose

Multi Species CD + Tetanus

Enterotoxemia and Tetanus

BOVILIS® VISION® CD-T
50 Dose

Pinkeye Vaccines

7-way Blackleg + Pinkeye

Blackleg, Malignant Edema, *Sordellii*,
Black Disease, Enterotoxemia,
and Pinkeye caused by *Moraxella bovis*

BOVILIS® 20/20 VISION® 7
50 Dose and 10 Dose

Pinkeye Vaccine

Pinkeye caused by *Moraxella bovis*

BOVILIS® PILIGUARD® PINKEYE
50 Dose and 10 Dose

Scours

Pre-Calving Scours Vaccine

Rotavirus, *E. coli* K99, Enterotoxemia,
Coronavirus

BOVILIS® GUARDIAN®
50 Dose and 10 Dose

Calf Scours Vaccine

Coronavirus

BOVILIS® CORONAVIRUS
50 Dose and 10 Dose



Make a Vaccination Plan

BOVILIS[®]
Protect the future™

No need to go it alone—make sure to work with your veterinarian to create a proper vaccination plan to meet the needs of your operation and combat routine threats to your herd that may be specific to your local area and weather conditions. Developing a long-term vaccination program for the life of your herd is top of mind for most producers. In a 2017 survey of beef producers conducted with BEEF Magazine

and Colorado State University, 57% of respondents identified cow-calf health as the number one challenge facing the cattle industry.¹

One of the biggest keys to a successful herd health plan is vaccinating the right animal at the right time. Start by planning and documenting the breeding and calving seasons and other routine management events. Use guidelines (like those listed

in the chart below) as a starting point to develop an effective vaccination program with your herd-health veterinarian. Always remember to safely store and administer vaccines according to label directions; adhere to designated meat withdrawal times; booster primary vaccinations when recommended; and follow all Beef Quality Assurance (BQA) guidelines.

Key to activity in the vaccination plan chart below. *Be sure to follow label directions.*

Pre-Calving

Scours vaccine should be given 3 months prior to calving, followed by a booster dose 3-6 weeks later. This is far enough before calving to minimize the stress and possible effects from handling cattle near calving time. For subsequent calving, revaccinate with a single dose 5-7 weeks before calving.

Calving

Healthy calves can be vaccinated as young as 1 week of age with an intranasal respiratory vaccine against the leading causes of early onset BRD.

First Working or Branding

For calves 1 to 3 months of age, this is a crucial time as maternal antibodies decline and it is important to vaccinate calves for optimal production. Respiratory and

clostridial vaccines may be administered during this time period.

Branding/Turnout -

If giving a tetanus vaccine when castrating or banding bull calves, two doses are required prior to banding or castration procedure.

Pre-Weaning -

Vaccinate calves at 14 to 21 days prior to weaning. Avoid the stressful weaning period to ensure stronger immune response to respiratory and clostridial vaccines prior to the high risk period of weaning.

Weaning -

If you must vaccinate during this time, delay working calves until the stress of weaning is over (typically 2-3 days). It is best to wait until the calves are eating,

drinking and most (if not all) have stopped walking and bawling. Parasite treatment should also be performed at this time or earlier—depending on the product label instructions.

Second Working/Weaning

If you have followed a pre-weaning or first working schedule, the second working will typically occur 2-6 weeks after the first working, or at weaning.

Pre-Breeding

All pre-breeding MLV vaccines should be done 14-60 days prior to breeding to avoid any possible side effects or complications that could affect fertility. Consult with your veterinarian before using any vaccine on a pregnant or lactating cow.

¹USDA. 2020. Beef 2017, "Beef Cow-calf Health and Management Practices in the United States, 2017, report 2."
USDA-APHIS-VS-CEAH-NAHMS. Fort Collins, CO. #.782.1119

ACTIVITY	CATTLE TYPE	CATEGORY OF TREATMENT	BOVILIS® VACCINE OPTIONS
Pre-Calving	Pregnant Cows	Scours	BOVILIS® GUARDIAN®
Calving	Calves	Respiratory	BOVILIS® ONCE® PMH IN OR BOVILIS® NASALGEN® 3-PMH
First Working If giving a tetanus vaccine when castrating or banding bull calves, two doses are required prior to banding or castration procedure.	Calves	Respiratory	BOVILIS® VISTA® ONCE SQ* OR BOVILIS® NASALGEN® 3** OR BOVILIS® NASALGEN® 3-PMH** **For use in calves 1 week of age or older
		Clostridial	Choose one: BOVILIS® VISION® 7/8 OR BOVILIS® VISION® 7/8 SOMNUS
		— OR — Clostridial + Tetanus	Choose one: BOVILIS® CAVALRY® 9 OR BOVILIS® COVEXIN® 8
		Pinkeye <i>6 weeks prior to peak fly and pinkeye season. Follow label directions for booster and booster interval.</i>	Choose one: BOVILIS® PILIGUARD® PINKEYE OR BOVILIS® 20/20 VISION® 7
Second Working	Heifers/Steers	Respiratory Booster	Choose one: BOVILIS® VISTA® ONCE SQ*
		Clostridial Booster	Choose one: BOVILIS® VISION® 7/8 OR BOVILIS® VISION® 7/8 SOMNUS
		— OR — Clostridial + Tetanus	Choose one: BOVILIS® CAVALRY® 9 OR BOVILIS® COVEXIN® 8
		Pinkeye <i>Administer at least 6 weeks prior to peak fly season</i>	Choose one: BOVILIS® PILIGUARD® PINKEYE OR BOVILIS® 20/20 VISION® 7
Pre-Breeding	Replacement Heifers/Cows	Respiratory + Lepto + Vibrio	BOVILIS® VISTA® 5 VL5 SQ CFP*

***Modified Live Vaccines:** All BOVILIS® VISTA® vaccines are labeled as being safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccine(s) in this product line. Read product label carefully. If cows have not previously been vaccinated with modified-live vaccines consult your veterinarian before use.

