



Decades in the making...

Cervid Farming is hard.
We have learned from our mistakes.
Education is never ending.
Let our experience be your guide.

EVOLVE YOUR HERD

"The following is a brief compellation of services, products, and education components found within the Cervid Solutions brand. Our driving mission is to be the definitive resource for all things deer.

Our work is never done!"

— Josh Newtor

Achieving Immunity

Successful vaccination programs utilize both the administration of correct pharmaceutical products and the knowledge and science of immunology. Disease protection is based on several factors, the cervid environment, proper nutrition, genetics and housing. A vaccination protocol is always a key to disease prevention and a basic understanding of immunity is helpful.

It is important to remember that fawns, when born, have no immune system in place. This happens over time and is a "learned" process. The process happens when animals are exposed to pathogens within the environment, thus antibodies are created and then "stored" in the body for a later time. This process of immunity is done in two ways.

There are two forms of immunity; active and passive.

With active immunity the body produces antibodies in response to infection or vaccination. When following a vaccination protocol of administration to pregnant does you are actively causing antibodies to be produced in the doe.

Passive immunity occurs when antibodies are acquired from colostrum (first milk) or anti-toxins. Anti-toxins are antibodies that bind to the toxin itself (not the bacterium producing it) and either cause its rapid removal or block its active site. The duration of immunity in the fawn is brief, only weeks to months, but critical. This immunity passed to the fawn is important to the health of young animals and is most commonly acquired through colostrum.

A recommended time frame of vaccinating your does to ensure passive immunity to fawns is 50-60 days prior to fawning and a second dose 14- 28 days after the first administration for the initial use of the vaccine. To maintain immunity in the doe, it is recommended to administer a booster dose in the fall and a booster in the spring, 30 days prior to fawning.

Disclaimer

All materials and related information within this brochure are recommendations as such the content contained within is to be used for informational purposes only. The content is not intended for use as a replacement of professional medical advice from your herd veterinarian. Always seek advice from your veterinarian and maintain a current and up to date VCPR.

What is Cervid Solutions Membership?

Two words; professional commitment. As a Cervid Solutions Member (CSM) you are committing to the health of your animals and the prosperity of your operation. As a CSM, not only are you symbolizing your dedication to the animal's health, you will gain access to valuable information, products and discounts from a variety of resources.

As part of your Cervid Solutions Membership, you gain exclusive access to the Life Cycles Program, Cervid Solutions Health Divisions, professional education content, Vaccine Service Packages (VSP) including "Open Ordering," North American Deer Talk (our podcast), and a variety of other benefits including discounts on cutting edge products and services. Being a member gives you all the tools and resources needed to Evolve Your Herd.

Benefits of being a CSM

- Vaccine Service Package
- Discounts on product
- · Herd Health software
- Custom Vaccine Schedule
- Basic Farm History Review
- Educational content and resources:
 - Preventative Health Management
 - Fawning protocols
 - Gestation charts
 - Nutrition
 - Remote Delivery/Chemical Immobilization
 - Diagnostic Consultation and Bacterial Assessments
 - Farm Layouts and Handling Facility Designs
 - State and National Regulatory Review
 - Chronic Wasting Disease Research and Education
 - Genetic Evaluation



Life Cycles Program-Changing the mindset of Cervid Livestock Owners and how operational health management continues to evolve.

Decades in development, the Life Cycles Program during this time and only through the experience and practical application of animal husbandry techniques, was this achieved.

Cervid Solutions has engineered our cutting-edge Life Cycles Program with you, the member, in mind. The program we provide is in-depth, professionally developed and available as part of our Cervid Membership Program. It consists of three primary technologies.



Herd Health Software



Vaccine Service Package



Educational
Content & Resources



What is Open Ordering?

"Open Ordering" is a benefit for existing CSM's and all new enrollees in the CSM program.

This program is designed to ensure two things;

- adequate inventory supply
- ample time for NAP (Non-Adjacent paperwork, regulatory)

During the "Open Ordering" dates a significant per bottle discount will be applied to your order.

"Open Ordering" occurs two times a year.

Fall Open Ordering (Nov/Dec)

- 50% deposit is required
- Balance due upon shipment, prior to Spring administration of vaccine

Spring Open Ordering (May)

- 50% deposit is required
- Balance due upon shipment, prior to weaning/Fall administration of vaccine

Benefits of "Open Ordering"

Substantial cost savings

- Inventory management (vaccine stock)
- Consultation with herd Vet promoting a robust VCPR
- Shipment of vaccine product prior to scheduled utilization.

Due to limited quantity and unique composition of PV3 and EV1 products, Cervid Solutions accepts only a select number of new clients on a yearly basis. We encourage new clients to apply for vaccine service requests within the "Open Ordering" timeframe.

Why use an Autogenous Biologic

Cervid Solutions custom vaccines are Autogenous biologics, consisting of herd specific (homologous) antigens. Under federal regulation, they are manufactured from bacterial or viral strains isolated in conjunction with animal disease. The disease-causing microorganisms are grown in culture, killed and mixed with an adjuvant. An adjuvant is simply an immunological agent that enhances the immune response to a vaccine. Autogenous Biologicals are regulated by the USDA's Center for Veterinary Biologics according to the Virus-Serum-Toxin Act, 9CFR 113.113. State veterinarians have regulatory oversight.

Autogenous biologics can be an important component in managing herd health. They are extremely helpful when a commercial vaccine is not available for specific bacteria. Autogenous products are also valuable if antigen variation has occurred and is outside the spectrum protection of commercial products.



Vaccine Service Package

Bottle size: 100ml (50 doses)

Dosage: 2cc

Our Vaccine Service Package promotes two custom vaccines. Developed in conjunction with one of the leading Cervid veterinary practices in the country, Applied Reproductive Concepts, ARC.

PV3 and EV1 help manage the risk of infection from a wide range of pathogens found throughout the Cervid industry. Progressive Cervid Livestock operators will attest the implementation of PV3 and EV1 vaccines into their management program delivered unprecedented health.



PV3

Protecting your Cervid From:

Pneumonia | Lumpy Jaw | Foot Rot | Abscesses

Now Covering:

Fuso-bacterium (1), T. pyogenes (1), Pasteurella (1), Bibersteinia (1), Mycoplasma bovis (2) Mycoplasma ovipneumoniae (1) Industry leading multivalent Myco-plasma coverage.



EV1

Protecting your Cervid From:

Scours | Diarrhea | Bloat

Now Covering:

E-coli (4), Clostridia Type A (1)

EV1 is our five-isolate vaccine, developed to manage digestive tract issues caused by E-coli and Clostridia Type A.

Cervid Solutions-Vaccination Schedule

Spring:

New to vaccination program

Bred does:

2cc - 60 days prior to fawning

2cc - Booster, 3-6 weeks after dose 1

Males: (prior to antler growth)

2cc - Anytime between February 1st to April 1st

2cc - Booster. 3-6 weeks after first dose

Already on the Cervid Solutions program

Bred does:

2cc - 30-45 days prior to fawning

Males: (prior to antler growth)

2cc - Anytime between February 1st to April 1st

Fall:

New to vaccination program

Females:

2cc - at weaning of fawns or 3-6 weeks prior to CIDR insertion

2cc - Booster 3-6 weeks after first dose or at CIDR insertation

Males:

2cc - After antler growing season and prior to breeding

2cc - Booster 3-6 weeks after first dose

Fawns: prior to 6 months old - MUST READ - <u>Assessing health</u> of fawns/calves prior to vaccination

1cc - 3 weeks prior to weaning

1cc - Booster upon weaning (Physical Separation from Mom)

Already on the Cervid Solutions program

Females:

2cc - Upon fawn weaning/separation for breeding or CIDR insertion for A.I.

Males:

2cc - After antler growing season and prior to breeding (September/October)

Pre-Weaning- A different way!

Weaning is a time of year that can increase stress levels in your fawns causing morbidity and mortality in severe cases. This can be costly long term as your fawn inventory plays a significant role in future breeding options as well as consistent revenue streams.

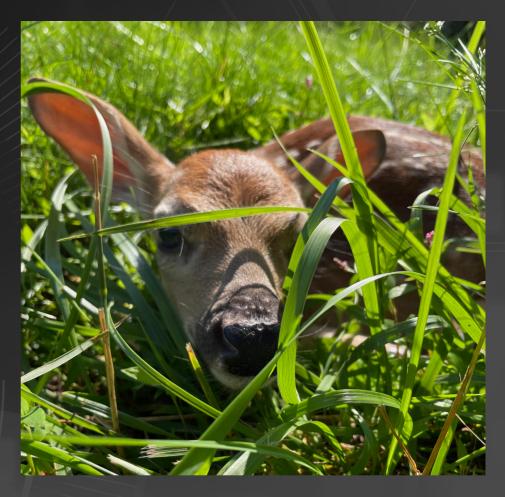
Traditionally whitetail deer producers wean fawns between the ages of 3-4 months. This is a good time to handle animals as the weather (temperature) is changing in the northern regions of the country and the breeding season is right around the corner. During this time period, does are physically limiting the amount of milk to their offspring and the fawns themselves have increased their consumption of grain and forage. They no longer need any milk from the doe to survive or flourish.

When we think of weaning in mother raised animals, conventional practices have always taught us to "pull" or physically separate fawns from their mothers and move them to separate pastures. This has been a long-standing practice for many farmers. At this time of weaning, vaccines, vitamins, minerals, pastes, antibiotics, wormers etc. have and can be administered. While I do not oppose this method, I have experienced a better way.

As I mentioned earlier, stress levels increase greatly at this physical weaning time when animals are taken from their mothers and placed in separate pastures. Many of these fawns are being handled for the first time outside of the initial protocols from birth. To more effectively manage this stress and potential onset of bacterial infection, I would strongly recommend that you consider the method of handling fawns 3 weeks prior to traditional weaning and implementing preventative medicine programs at this time...In other words, give all vaccine shots to your fawns three weeks prior to your physical separation.

By doing this we are preparing the fawns for the stresses of weaning. As mentioned previously, the physical separation of weaning creates stress. We know that stress suppresses immune responses and consequently will suppress the fawn's ability to maximally respond to vaccine. When we vaccinate 3 weeks prior to weaning, we are priming the immune system so that the fawns can optimally respond to the booster vaccination at the time of weaning approximately 3 weeks later. This approach enables the fawn to develop a foundation of immunity that should be protective for 6 months to 1 year when applied with other management techniques.

It has been thought that many bacterial problems start in the gut and then transfer into the body during stressful periods when immune system is suppressed. It is common for weaned fawns to reduce their intake of feed during the days following weaning. These are the conditions that can sometimes facilitate bacterial transfer. If we can have an immune system response on board through vaccination prior to physical weaning, it is logical to assume the problems associated with weaning can be reduced greatly. Probiotic regimens can be implemented prior to weaning that provide beneficial bacteria loads that promote rumen health and help to reduce this risk in conjunction with vaccination.



Member Resources-Categories

Preventative Health Management

The idea of preventive health management is an underutilized concept that Cervid Solutions continues to champion. Cervid species particularly excel when this management practice is implemented. The core focus of preventive health is fortified on two pillars; 1) cervid specific vaccine program and 2) pen density of 4-6 adults per acre.

Fawning protocols

Over the past 20 years, Josh Newton and now Cervid Solutions, has developed a protocol for Whitetail Deer that is the backbone of our health management program. Recommendations for both Mother-raised and Bottle-raised fawns on vaccines and supplements is located within the CSM area. These simple and easy-to-follow guides can be implemented into your cervid health program and bolster the health of your animal.

*Each farm may vary in its application and faces its own set of unique challenges, as such please consult with your veterinarian prior to implementing a herd health program.

Gestation charts

Included with your membership are gestation charts for a variety of Cervid species. Gestation charts are a helpful tool to assist you in the planning and implementation of your reproductive program. Each chart has a summary of the specific species breeding season, length of gestation, age of maturity and birth rates. Currently there are charts for Whitetail Deer, Sika Deer, Red Deer, Mule Deer, Fallow Deer, Elk and Axis.

Nutrition

Our Cervid Nutrition area consists of information on the unique aspects of deer and requirements for a well-rounded deer diet. Needs amongst deer vary greatly depending on their stage of life, species and season. We have resources to assist you in creating a solid nutritional plan for your deer.

Remote Delivery/Chemical Immobilization

Cervid Solutions vaccine products can be delivered remotely. Exclusively using Pneu-Dart remote delivery systems allows us to rely on their more than 50 years of expertise in product development and manufacturing. Pneu-Dart has the lightest and most accurate Remote Delivery Device on the market. Resources and charts for chemical immobilization, sedation and handling are also within the membership area.

Diagnostic Consultation and Bacterial Assessments through our "covered campaign"

Understanding diagnostics and the pathogens causing disease in cervid can be a challenge. Most research on these disease-causing bacteria are focused on cattle or other farm animals. Cervid Solutions has more than two decades experience working with deer and has put considerable time and effort into understanding the bacteria that cause disease. Through our "Covered Campaign", we provide information on each bacteria in the vaccines and discuss their symptoms in deer, how they are spread and preventive measures.

"The most valuable animal on your farm is the one that just died."

— Unknown

Cervid Solutions offers consultation and instructions on obtaining samples from animals and guidance on sending those samples in for diagnostic testing and evaluation.

Farm Layouts and Handling Facility Designs

Handling facilities are a key part of any health program allowing for bulk administration of preventive care items such as PV3 and EV1. A full-length feature video of our "Handling Facility" is available for review within your CSM dashboard. Also, onsite farm consultation of new and existing facilities, design review and planning is available upon request.

State and National Regulatory Review

Understanding your state and national regulatory environment is a large component of developing a long-term strategy for succuss. Having the resources for review of these items in one place is helpful in the review and planning process.

Chronic Wasting Disease Research and Education

We offer a comprehensive library of CWD videos, articles, podcasts and presentations focused on CWD along with its biologic and political impacts.

Genetic Evaluation and Long-Term Goals

Review of animals' pedigree, performance and production are essential for success of any Cervid Livestock operation. We offer an exploratory process of developing long term plans revolving around your genetic goals.



For decades Josh Newton, Chief Operations Officer at Cervid Solutions LLC, has emersed himself into whitetail deer. His captivation with cervid has developed into a platform used across the deer industry. It is considered by many the definitive resource for herd health management.

His never-ending drive for excellence fuels his daily commitment in the private deer industry. Josh continues to develop new and innovative concepts around whitetail deer management and promotion and asks that you join him on his journey through Cervid Solutions.







Follow us on our various Social platforms!

We have content for everyone to enjoy from fawns, huge bucks, pasture management, fencing, DNA sampling, remote delivery, seasonal advice, deer handling and more. Cervid Solutions shares it all!

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