CERVIDSOLUTIONS

EVOLVE YOUR HERD

LIFE CYCLES

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 sample compilation 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!"

CERVIDSOLUTIONS

What is Cervid Solutions?

Cervid Solutions, LLC is a Herd Health Management Company built on decades of research and dedication. With the introduction of LifeCycles our commitment is to provide a resource where serious professionals in the Cervid industry can enroll and retrieve solutions. LifeCycles Members unlock the largest resource library of tools resulting in enhanced herd health.

Two words; professional commitment. As a LifeCycles Member (LCM), you are committing to the health of your animals and the long-term prosperity of your operation. Becoming an LCM symbolizes your dedication to your animal's health, providing access to valuable information, products, and discounts.

LIFE CYCLES Membership

LIFE CYCLES Dashboard

LIFE CYCLES Newsletter

Vaccines

Evolve Your Herd and enroll as a LifeCycles Member today.

LIFE CYCLES Membership

Benefits of Membership

- Vaccine Info and Protocols
- Fawning
- Reproduction
- Nutrition
- Remote Delivery and Sedation
- Diagnostics
- Pen Management and Handling Facilities
- State and National Regulatory Review
- Chronic Wasting Disease Research and Education
- Genetics
- Marketing and Advertising

LIFE CYCLES Dashboard

Vaccine Info and Protocols

Understanding the basis for why we vaccinate is important. Described in this section are full length articles on vaccine recommendations and guidelines, autogenous biologics, handling and storage of vaccines, as well as detailed descriptions of each bacteria isolated in our vaccine products.

Fawning

Having a productive and healthy fawn crop is vital to the success of your operation. Over decades of development, we have compiled resources providing valuable insight into what works best when it comes to fawning. Our resources provided offer guidance on fawn care from birth to weaning.

Reproduction

Reproduction is a key component in the propagation of livestock, it is a metric of success. Resources include species-specific gestation charts for Whitetail Deer, Sitka Deer, Red Deer, Mule Deer, Fallow deer, Elk and Axis, as well as education on artificial insemination, embryo transfer, semen collection and natural breeding.

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 and Sedation

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.

Pen Management and Handling Facilities

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

Diagnostics

LIFE CYCLES Dashboard

Understanding diagnostics and the pathogens causing disease in cervid can be challenging. Most research on these disease-causing bacteria are focused on cattle or other farmed animals. Cervid Solutions has more than two decades of experience working with deer and has put considerable time and effort into understanding the bacteria that cause disease. Cervid Solutions offers consultation and instructions on obtaining samples from animals and guidance on sending those samples in for diagnostic testing and evaluation.

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

State and National Regulatory Review

Understanding your state and national regulatory environment is a large component of developing a long-term strategy for success. 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.

Genetics

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 and the use of DNA analysis.

Marketing and Advertising

In addition to health management and all that goes with maintaining your herd, whatever your goals may be, the business side of cervid farming is of key importance. Marketing and advertising resources are provided to assist you with making your goals year after year.

Newsletter

The LifeCycles Newsletter released monthly contains exclusive content for all things cervid. From articles to videos, and also access to North American Deer Talk +. The Newsletter is emailed directly to you and stored in the Newsletter Archives for future retrieval.

LIFE CYCLES Newsletter

The Pillars of Success – Cervid Health Management

Managing deer successfully often means navigating challenges without formal veterinary training or structured education in deer management. This reality is common across the industry, where experience and observation often guide decision-making.

When examining the path many operations have taken, it becomes difficult to ignore how frequently deer farming attempts to reinvent solutions that already exist. Livestock have been propagated successfully for thousands of years, and in today's world of advanced technology and readily available information, proven resources are abundant. Yet deer operations often function independently, without fully leveraging lessons long established in other livestock industries.

The following sections outline several foundational "Pillars of Success" related to general animal health. These principles are intentionally broad and focus on big-picture management rather than nuanced tactics that separate good operations from exceptional ones. The cattle, sheep, goat, and broader livestock industries offer tested frameworks. When these concepts are thoughtfully adapted to deer operations, long-term success becomes achievable.

Pillar 1 - "Pen Density"

Overstocking remains one of the most common challenges in deer operations. The tendency to place too many animals into limited space creates unnecessary stress and significantly increases health risks. Experience across livestock species consistently shows that controlling stocking density is one of the most critical factors in maintaining herd health.

For most deer operations, producing fawns—the next generation—is the primary source of profitability. Mortality and morbidity rates provide practical benchmarks for determining whether stocking density is appropriate, with fawns serving as the most sensitive indicator. Entering the world with naïve immune systems, fawns face the highest risk of illness and death, making them early warning signals for broader herd health issues.

A practical starting guideline is maintaining approximately 4–6 adult does per acre prior to fawning, ideally on fresh, winter-rested pasture or ground that has experienced minimal impact. Higher stocking rates may be possible in some circumstances, but exceeding these thresholds consistently leads to increased health challenges. Reducing animal density remains one of the most effective and underutilized tools available to improve overall herd outcomes.

Pillar 2 - "Vaccination Program"

Vaccination strategies are often debated within the deer industry, particularly when drawing comparisons to free-ranging populations. However, managed deer operations differ fundamentally from wild systems, especially as animal numbers increase and land is reused year after year.

As herd size grows and animals remain on the same ground over extended periods, bacterial challenges tend to increase. While commercial livestock vaccines may appear to be a convenient solution, their effectiveness depends entirely on whether the pathogens they target align with those actually present within a herd.

In many cases, post-mortem diagnostics reveal a mismatch between commercially available vaccine coverage and the bacteria identified in necropsy reports. This gap has led many operations to adopt autogenous biologics—custom vaccines formulated from herd-specific (homologous) antigens designed for cervids.

The implementation of herd-specific vaccination programs has been shown to significantly reduce mortality rates. Continued improvements in morbidity often require additional management changes, including reduced animal density, controlled animal introductions, consistent vaccination schedules, and long-term adherence to biosecurity principles. When applied together, these measures produce measurable and lasting improvements in herd health.

Pillar 3 - "Nutrition"

Nutrition remains a foundational component of herd health, yet it is often overcomplicated. Whitetail deer are remarkably adaptable and represent one of North America's most successful wildlife populations, rebounding from near scarcity a century ago to tens of millions today.

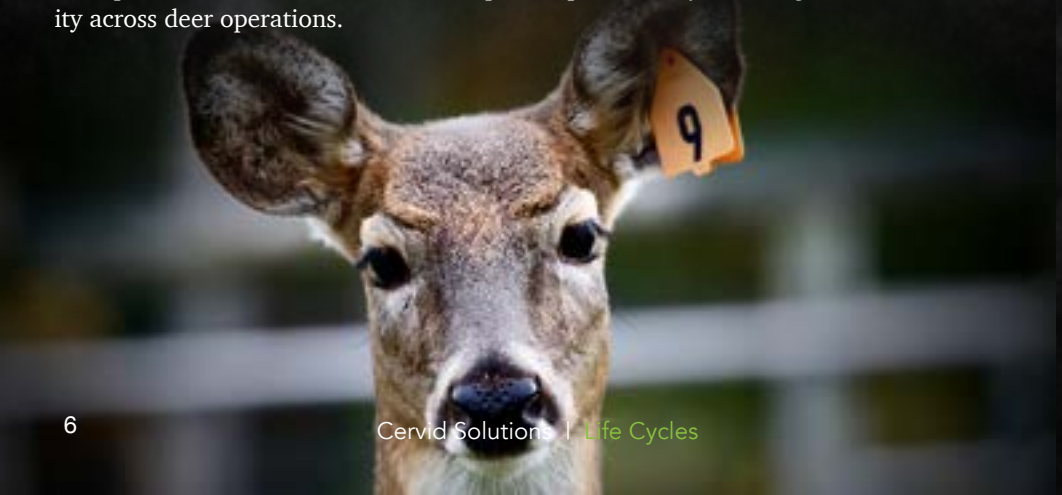
While deer do have specific nutritional requirements to thrive, excessive intervention—such as overly high protein or fat levels—can introduce unnecessary complications. Balanced, consistent feed programs generally outperform complex or frequently changing formulations.

Feed represents the largest single input into most operations, both financially and biologically. As such, quality and consistency are critical. Nutrition establishes the baseline for immune function, genetic expression, reproduction, and overall resilience. Simple, well-balanced rations made from high-quality ingredients remain the most reliable approach for supporting long-term herd health.

Conclusion

These pillars—pen density, vaccination, and nutrition—are most effective when implemented together rather than in isolation. Each reinforces the others, creating a management framework that prioritizes prevention over reaction.

The cervid industry stands to benefit greatly from adapting proven livestock management principles rather than attempting to solve familiar problems independently. When foundational practices are applied consistently and thoughtfully, they provide a clear path toward healthier animals, improved productivity, and long-term sustainability across deer operations.



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.

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

Bottle size: 100ml or 50 doses

Dosage: 2cc

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

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

ONE DOSE

No Booster Required!

CS-1

Whitetail and Elk

- **Low Dose administration (2cc)**
- **Single administration**
- **Reduced handling stress**

Protecting your Cervid From:

Pneumonia | Scours | Diarrhea | Bloat | Lumpy Jaw | Trench mouth | Abscesses

Now Covering:

Fusobacterium, Trueperella pyogenes, Pasteurella multocida, Mycoplasma, Bibersteinia trehalosi, Clostridia Type A, Ecoli

CS-M

Mule Deer

- **Low Dose administration (2cc)**
- **Single administration**
- **Reduced handling stress**

Protecting your Cervid From:

Pneumonia | Scours | Diarrhea | Bloat | Lumpy Jaw | Trench mouth | Abscesses

Now Covering:

Fusobacterium, Trueperella pyogenes, Pasteurella multocida, Mycoplasma, Bibersteinia trehalosi, Clostridia Type A, Ecoli

Cervid Solutions-Vaccination Schedule

Purpose of vaccination

Animal diseases are often incredibly complex, and no vaccine or medication is 100% effective 100% of the time. Vaccinations are a part of your overall herd health plan and should be regarded as a tool to minimize risk of disease. Immune system responses to pathogens are complex and each animal has numerous factors that influence their response. If an animal becomes compromised, meaning it's been exposed to an extremely high percentage of pathogens, the vaccine may fail to protect from clinical disease. Ideally, vaccination should prevent or aid in the prevention of clinical disease and is to be used in conjunction with a comprehensive health plan.

Administration- Hand inject or Via Remote Delivery

Subcutaneous (SQ) administration in the neck and upper shoulder region, instructions on bottle. If delivering remotely, a 2cc RDD with a 1/2 inch cannula is recommended to secure a SQ injection.

What to expect after vaccination

It is common for animals to experience some or all of the following symptoms after receiving a vaccine:

- Discomfort and/or swelling at the injection site.
- Mild to moderate fever
- Decreased appetite and activity, depression (24-96 hours)
- Potential lameness and/or soreness seen as limping.

Recommended Vaccine Schedule:

The vaccination schedule is simple, with the new one-application formula of CS-1. Directions of use on bottle.

SPRING	FALL
Bred Does: 2cc - 30-45 days prior to fawning No booster required	**Fawns at weaning (2-6 months old):** 2cc 1 does to fawns No booster required. MUST Read - Assessing health of fawns/ calves prior to vaccination for guidelines on dosage.
Males 2cc - Anytime between February 1st to April 1st. No booster required See bottle-fed fawn protocol for imformation on fawn vaccination schdeule.	**Adult Female:** 2cc - Upon fawn weaning / separation for breeding or CIDR insertions for A.I. No Booster Required **Adult Males:** 2cc - After antler growing season and prior to breeding (September - November) No Booster Required.

Assessing health of fawns/calves prior to vaccination

Always consult with your herd veterinarian on the health of your fawn/calf and what supplements, worming, medications, and vaccinations they may need. This may even be very specific to your geographic area.

Our recommendations are a case-by-case analysis. This means each fawn/calf is evaluated on its individual merits prior to administration. This should happen several weeks prior to weaning.

Here are some questions to help you assess your fawn/calf:

- Has your fawn/calf's health been challenged?
- Have they dealt with chronic issues throughout the summer?
- Specifically, have they been dealing with health issues 4 weeks prior to weaning and what are the symptoms and what have the treatments been?

If your fawn/calf has been treated with antibiotics due to illness or has struggled prior to weaning, it may be wise, alongside consultation with your veterinarian, to provide a 1cc dose of vaccines or not vaccinate at all.

If your fawn/calf has had no health issues, the 2cc standard dose is warranted.

Taking the whole herd's overall health into consideration:

It is also important to assess your overall herd health at the time of weaning and if you have multiple animals with chronic symptoms and clinical illness. There may be something on your ranch that needs to be dealt with. As discussed previously, we always recommend striving for the three pillars of success on your ranch and pillar # 1, proper pen density, is of the utmost importance in maintaining a healthy herd.

What is Open Ordering?

"Open Ordering" is a benefit for existing members and all new enrollees in LifeCycles Membership.

This program is designed to ensure two things;

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

"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

Due to limited quantity and unique composition of our 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.

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.

SAMPLE ARTICLE

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.

ELK

Cervid Solutions has positioned itself as the industry leader in developing disease prevention strategies and products for the Elk market. Through years of experience and working with top-tier elk ranches around the country our products and services can **Evolve Your Herd**. Contact our office today to learn more or visit our website at www.cervidsolutions.com

LIFE CYCLES

Vaccines

Photo courtesy of Cedar Breaks Ranch

MULE DEER

Cervid Solutions has positioned itself as the industry leader in developing disease prevention strategies and products for the Mule Deer market. Through years of experience and working with top-tier Mule Deer ranches around the country our products and services can **Evolve Your Herd**. Contact our office today to learn more or visit our website at www.cervidsolutions.com

LIFE CYCLES

Vaccines