

Advanced repro start-up

Ashley Swenson, DVM

Midwest Embryo Transfer Service
Osceola, WI 54020

Introduction

Advanced reproductive technologies (ART) and their respective services have been part of my repertoire since my childhood days. Flushing cows (in vivo collections) has been routinely performed on my family's farm for decades. In more recent years, in vitro embryo production has become more prominently utilized by my farm as well as by my clients. Since purchasing Midwest Embryo Transfer Service in 2016, we have expanded the services offered to include: in vivo collections, ovum pickup (OPU) for in vitro fertilization, fresh and frozen in vivo and in vitro embryo transfers, cryopreservation of both in vivo and in vitro embryos, and export services.

Pros and cons

The utilization of ART has skyrocketed over the past 50 years. Since the commercialization of in vivo embryo collection procedures in the 1980s and now with the improved outcomes of in vitro embryo production, the total number of embryo transfer performed annually in beef and dairy cattle has nearly tripled. Both the beef and dairy industries have recognized the enormous genetic potential and advantage from utilizing advanced reproductive services. The following will discuss the pros and cons when considering incorporating such services into your practice.

Pros

The pros of ART in regard to veterinary practice include: 1) providing a valued added service to clients; 2) scheduled work; and 3) increased revenue potential for your practice. ART is a valued-added service and the need to transfer embryos is growing in demand. Clients are willing to pay for your skills; the need sells itself as opposed to convincing clients "why," for example, early pregnancy diagnosis saves them money by reducing days open. Within a staff setting, this also provides some predictability in your work week. As clients learn to communicate recipient synchronization times and desired donor flush times, you will always have at least 7 days' notice as to whether or not an animal expressed estrus and will be ready for embryo implantation, or if the donor expressed estrus and will be ready for embryo collection the following week. Both of these points feed into why the practice has increase revenue potential. Again, clients are willing to pay for your skilled service due to the exponential return they anticipate from the genetic advancement of the resulting offspring!

Cons

While the pros seem simple, they can also serve as cons in certain settings. The cons of ART in regards to veterinary practice include: 1) developing a new skill; 2) learning new protocols; 3) scheduled work in the face of clinic emergencies; and 4) additional overhead expenses. In an existing practice setting, finding the time to develop and ART skill may be difficult in the midst of our other work obligations. Often learning these new skills falls to the end of the day or after all the routine work is complete; we will further discuss this in the training

timeline. In addition to developing a new skill, you have to identify animals to work on. If you have a farm or cull animals at your disposal, your training will likely progress more quickly than those individuals who must practice on productive client animals, or increase the training investment by purchasing cull animals. Much like physically learning the skill, the classroom and paperwork side of things must also be learned. Understanding the superovulation/super stimulation protocols and recipient synchronization protocols is a new experience for most. The third challenge that may cause tension in a practice and that must be communicated about amongst all staff, is how emergency work will be addressed if the face of a schedule ART procedure. As the individual taking the more scheduled work during the week and leaving emergency calls to their colleagues, you may consider swapping weekend shifts or some other compromise to balance out the strain being dictated by the employee. Lastly, additional overhead expenses. Depending on what equipment your practice may already own, such as a dissecting microscope, you could have \$1,000 to \$100,000 in high-quality collection and laboratory equipment. Some supplies to consider include: microscope, disposables (flush filters, petri dishes, embryo safe syringes, flush media, embryo handling/culture media, pipettes, 1/4cc straws, foley catheters), cassou transfer gun(s), stylets, FSH, +/- cryopreservation equipment (freezer/cryochamber, freezing media, +/- OPU equipment (ultrasound, OPU probe), chute and laboratory disposables.

Tips

- **Make a "pros and cons" list** – does adding an ART service make sense for you and what you enjoy doing?
- **Ask yourself** – do you have a passion for the work or are you romanticizing the idea of a value-added service?
- **Ask your clients** – do they truly have a need for you to perform these ART services?
- **Ask your clinic/partners** – can the clinic handle more services? Are they willing to support the time and financial commitment it takes to develop proficient ART skills?

Training timeline

While learning an ART skill, the trainee must breakdown the procedural steps in to one-by-one attainable goals. For example, if you cannot retract the uterus, learning to do that singular skill individually is a must, and moving on is futile until the skill is mastered. The initial steps if you were training to perform in vivo collections would include proficiently administering a caudal epidural, proficient and complete development of palpation skills (retraction of the uterus, manipulation of the cervix, manipulation of the uterus past the point of the greater curvature), manipulation of the ovaries, completing an AI training course, passing a foley catheter, placing a foley catheter, balloon insufflation, establish media flow in and out of the uterus, and complete flush media recovery. Moreover, the laboratory side of the equation has a list of skills including: record keeping and documentation of progress, rinsing a filter, micropipetting skills, identifying embryos, washing/manipulating embryos, loading embryos into straws for transfer, and loading straws into guns for transfer.

Tips

- **Be humble.** You may have experience palpating or with successful AI outcomes. However, this is a completely different ballgame.
- **Be patient.** Make small goals! Unfortunately, the likelihood that a new trainee with no experience will perform a successful flush on the first day of practice is essentially zero. Passing the catheter may be the only thing accomplished in the training period and must be recognized as large achievement. As a reminder, these are large catheters with flimsy stylets being passed through diestrus cervix. Take the small victories as they come.
- **Put training first.** Make time in the morning, or before you're fatigued by the day's routine, to practice these skills. Attempting a new skill at the end of the day will only be confounded if exhaustion has already kicked in.
- **Set realistic expectations.** If you're working on client animals, help them understand the expectation difference between training versus a paid service. Likewise, as the trainee, continue to set realistic expectations for yourself.

Mentorship

Educational opportunities

Seek out organization such as the American Embryo Transfer Association (AETA). The AETA Annual Convention is full of practitioner forward education sessions. You will also have the opportunity to network with founders of the industry and leaders in today's industry. Additionally, you may meet fellow trainees who can share in your training milestones and share their experiences as to how they navigated various scenarios. And you never know, you may meet a practitioner who is approaching retirement and looking to sell or expand their practice. The AABP partners with the AETA through the Edwin Roberston Beginning Embryo Transfer Seminar. This unique opportunity provides intense individualized classroom and wet lab training.

Mentors

Reach out to existing ART practices/practitioners. You never know who may be looking to expand their business or who may be looking to retire and sell the practice over to you.

Tips

- **Mentors will expect you to put in the effort to educate yourself.** They will be a resource but make sure you educate yourself independently to most efficiently and effectively utilize each other's time.
- **Find mentors outside of the ART field.** Financial advisors, business managers and farmers and ranchers who have successful ET programs. The aforementioned may provide another perspective to help with your training, business transition, or even at the beginning of deciding if ART services are right for you and your practice.

Business and finances

Business

How do you buy a business? Well, in my experience, you ask! Back in 2015, I simply ask what the previous owner's plans were as he approached retirement, followed by "would you ever consider selling your practice?". Right or wrong, I bought "blue sky." With that, I gained an extremely loyal and welcoming base

of clients. The flip side was the business had less than \$150,000 of assets. To offset the lack of assets, I "bought" a mentor. Within the agreement, the previous owner became an employee and trained me every day. Asking was the easy part. Next comes the preparation and homework. Consider hiring a 3rd party CPA to interpret the financial strengths and weaknesses of the business. You can also utilize bankers or financial advisors to help you understand your potential financial position. Lastly, put in the work. Just because you buy a business doesn't mean you don't have to work. To be the best requires the best effort; that often means more than 40 hours per week!

Finances

How do you negotiate terms? Do your homework. In my instance, a seller's note with no down payment was most advantageous for both parties. The seller has the advantage in spreading out capital gains, while the buyer has the advantage in improved cashflow. In this instance with a low asset portfolio, we leveraged the 3-year average of the gross revenue to determine the purchase price. For stability of the company, you will also want to consider what employees currently work with you and if they would plan to stay with the company through acquisition. Lastly, the understanding that ART is a service-forward industry and your must set your profit margin accordingly.

Tips

- **Be prepared.** Do your homework and understand the basics such as how to read a balance sheet and profit and loss statement. Understand cash flow projections and how your account receivable will affect that.
- **Negotiate.** If you're prepared you will have evidence to support your business proposals and financial position during the negotiation period.
- **Be creative.** The standard business model and purchase transaction/service introduction may not work the best for both parties. Ask questions and propose new ideas. It never hurts to understand your term or negotiation options.

Conclusion

"There is a difference between interest and commitment. When you're interested in something, you do it only when it's convenient. When you're committed to something, you accept no excuses; only results." Kenneth H. Blanchard.

While the initial phases of an advanced repro start-up may be challenging, the outcomes and reward of the work are great. My challenge to you is this: determine if you are interested in an advanced repro start-up or if you're committed to it.

