

Feel free to contact us,
or talk with your herd-
health veterinarian
about any questions or
feedback you have on
our newsletter or any
of our services. We're
here for your benefit.

VALLEY VETERINARIANS, INC.
COW DOCS

Special points of interest:

- FARM Program evaluation
- Transition Cow Workup
- Mycoplasma Mastitis
- 'The Greatest Pus Story Ever Told'

A new service:

FARM Program Evaluation

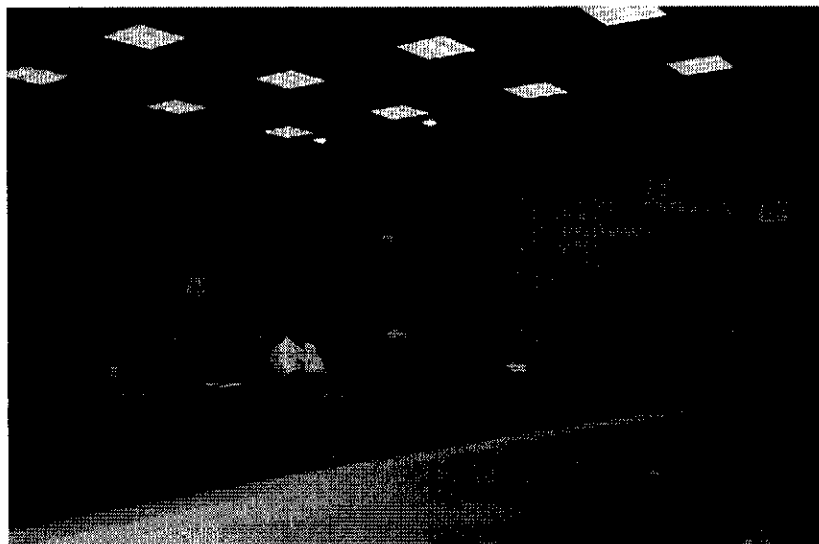
As most of you are aware, there is a new animal well-being and responsible management program sponsored by the National Milk Producers Federation. This program, called Farmers Assuring Responsible Management (FARM) has been created to assure our consumers, the milk-drinking public, that not only are the products we are selling for their families safe and nutritious, but that they are being produced in a humane manner.

The creameries and cooperatives that producers ship to are considering using the FARM program as the way to audit the production methods on the dairies they buy milk from. This means that at some point in the next few years, your creamery may likely ask you to undergo an evaluation.

These evaluations are meant to be comprehensive in scope, looking at everything from the youngest calves in the hutches to the freshening cows, dry cows and close-up cows. Even bulls being used or raised for breeding purposes will be evaluated. Some of the criteria include hygiene, lameness and body condition scores.

Verification of a valid client-patient-veterinary relationship would be necessary, and each dairy will be required to show evidence that they have protocols in place to assure colostrum management, drug-

These evaluations should not be viewed as intrusions, they can serve to easily identify problem areas where improvement in your facility and production methods are possible.



+ The vets of Valley Veterinarians getting certified to perform second party evaluations for the FARM Program.

residue prevention, proper euthanasia and suitable down-cow management procedures.

Should the creameries decide to require these evaluations, the vets at Valley Veterinarians are qualified to help you prepare for them. There is no pass-fail score associated with these evaluations at this point, but the scores are logged into the NMPF database, and will eventually be available to third-party auditors if it is required that the second-party evaluations are followed by third-party audits.

Valley Vets is also in the process of compiling a booklet that can be customized for your dairy that contains different protocols and other documents that you may find useful to have available in your office for either your employees, your auditor or even yourself. The evaluation will also serve you well to identify areas where improvement in your production practices will serve you best. If you are interested in the booklet, or in having an evaluation done, please call us or contact your herd-health veterinarian.

An older, but under-utilized service: Taking A Look At Your Transition

In the modern dairy industry, fresh cows and those recently fresh make the most milk, and give the most headaches to the dairyman. Fresh cows serve both as replacements for older animals who are a little stale in their production, and will soon enter the peak milk phase of lactation where the bulk of her production occurs. Healthier fresh cows give higher peak milk, have more persistence, and get rebred earlier than their sick counterparts, who cost money not only from the cost of treatment, but from lost milk, extended time to first breeding, and a lower lactation curve.

Not all fresh cow problems originate in the fresh cow pen. Often they can be traced to feeding or housing problems in the dry or close-up pens. This entire period, from 45 days pre-freshening to 21 days post-freshening is called the *transition period*.

For the past two years, Dr Kenneth Acre has done transition cow workups based in part on research by Dr. Kenneth Nordlund at the University of Wisconsin School of Veterinary Medicine.

The comprehensive program is organized to require only a couple hours on the dairy, and then a few more on calculations and analysis. Some of the sampling can be performed by Valley Vets employee Erik Alcaraz.

A pH meter is used to test urine pHs on cows very close to freshening to look for subclinical milk fever. See our article from the November newsletter of last year for more on testing urine pHs. We also draw blood from these animals to be tested for trace elements such as calcium, potassium and phosphorus which are vital to fresh cow health. Blood levels that are outside the normal range can indicate nutrition problems.

We also use a human diabetic ketone meter to test for levels of betahydroxybutyric acid (BHBA) in the fresh cows, to check for subclinical ketosis. This is not a difficult process, and the equipment is not expensive, so we have also set up some of the dairies that Ken has done transition cow workups on to do their own BHBA testing in the future.

Another component of the workup is feed analysis. At

least three separate samples over the course of a week are taken from the dry cows, the close-up and the fresh-cow rations. They are tested for things like crude protein, net energy of lactation and acid detergent fiber, as well as calcium, phosphorus, magnesium and potassium. These results are compared to the recommendations from the National Research Council, and evaluated in relation to the results from the other tests. Also part of the evaluation are records analysis of the transition, stocking rates for the close-up and fresh pens, and the dairy's screening and treatment programs.

This transition cow monitoring program has been used on several of our dairies to find the reasons why fresh cows were crashing, and on several other of our dairies just to identify risk factors that were preventing the fresh cows from performing at the desired level.

Sick fresh cows are a headache. They take up a high percentage of the hospital time, and typically don't recover to the point where they will produce at the same level as animals that have a smooth transition. It would be virtually impossible to eliminate all fresh cow problems, but it's well worth your time to minimize slow-doers and rough starts. This transition cow workup may help you identify what needs to be addressed.

If you are interested in more information on this subject, or wish to schedule a workup, call our office, or talk to your herd health veterinarian at your next herd check.



+Dr. Kenneth Acre discusses transition cows at Hynes Dairy in Tulare

Disease Overview: Mycoplasma Mastitis

Many a dairyman has been plagued by periodic outbreaks of mastitis caused by various species of Mycoplasma. The most common and most virulent species is *M. bovis*, but there are several others that can be problematic, and the steps you take to control and contain an outbreak are the same, regardless of the causative organism.

Mycoplasma is an organism that can be found in various parts of the cow's body, and can travel via blood or other body fluids to the mammary gland. It causes an untreatable mastitis that can be contracted when treatment tubes force Mycoplasma organisms up into the teat. It can also be spread on milkers' fingers, especially when treating the hospital. It leads to cows experiencing multiple entries into the hospital for mastitis, and elevated somatic cell counts.

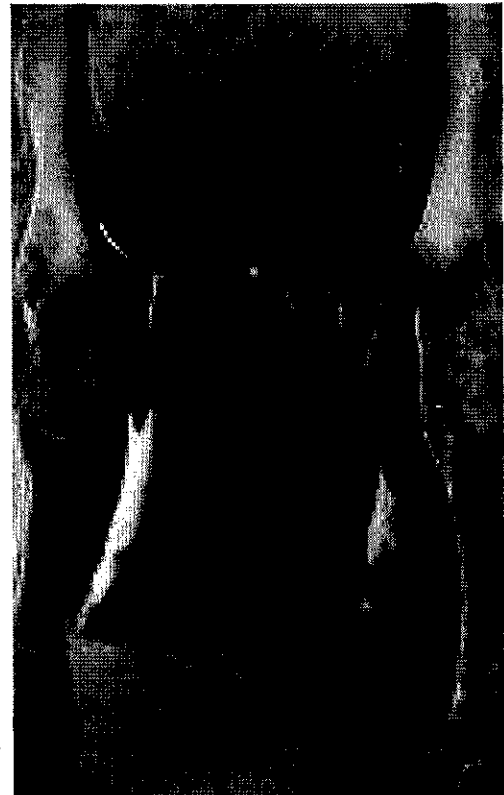
Affected cows show mastitis, typically without showing systemic illness, and eventually end up in the hospital, which is where it spreads the fastest between cows. For this reason, when you are in the middle of an outbreak, we recommend not only taking entry samples as animals enter the hospital, but also as they leave the hospital. We use the hospital as a filter to identify affected animals.

Mycoplasma does not grow on the normal blood agar plates that we

use to culture for the environmental and other infectious organisms (such as *Staph aureus*.) and is a slow-growing organism, which requires 3 to 7 days of growth before it shows up on the culture plate. When a new outbreak occurs, or when the organism looks a little different on the culture media, we may recommend speciation of the organism, to identify the type of Myco, which can be used somewhat to predict the ease of transmission and the virulence.

Myco is an organism which does not respond to any of the antibiotics we are able to use in milking animals in the United States. When a dairy identifies a positive Myco cow, she should be culled. We do this to protect the rest of the herd from infection.

In the midst of an outbreak, communication with the milking staff is important to explain the disease, and to emphasize that it is vital to identify each and every affected animal. It is important to commu-



+Culturing the milk is the only way to tell what organism is causing a case of mastitis.

nicate that they will not get in trouble for holding out too many cows into the hospital.

If you are not on a regular schedule for culturing with our milk quality lab, you should notify your veterinarian as soon as you receive a report that your creamery found Mycoplasma colonies in one of your bulk tanks.

Steps To Take During a Mycoplasma outbreak:

1. Ensure your milking staff holds out all cows with mastitis into the hospital.
2. Take samples of the mastitic milk for culturing as the cow enters the hospital.
3. Get on our milk quality lab sample pickup route so the samples get plated for Myco as fast as possible.
4. During treatment (after the machine has come off), change gloves between each cow.
5. Change gloves between each cow when you treat cows at dry-off.
6. Submit a tank sample to the Valley Veterinarians milk quality lab once a week so we can see how much Myco is out in the milk strings.
7. There is zero tolerance for Myco. All cows identified by the milk quality lab as positive should go to beef.

Ken Mitchell:

The Greatest Pus Story Ever Told

Almost all good veterinary tales involve filth. It's nothing to be ashamed of, just a natural by-product of the profession. Sure, there may be stories for the public of medical success, melodramatic emotional drama, or even people who write about whacky clients. But the disaster stories veterinarians tell each other invariably end up with someone plastered by some unspeakable form of animal extract. Now, a small animal practitioner may be able to gloss this over, to incorporate the blood or muck factor into his story in an innocuous manner that allows an actual plot to unfold. But a large animal vet's tale is often overwhelmed by the sheer volume of filth they deal with. So now, with no further fanfare, I unveil the "Greatest Pus Tale Ever Told".

Before I begin, let me say that pus has gotten a bad rap. The term pus evokes unsophisticated visions of sloppy, filthy fluid. The definition of pus in Dorland's Medical Dictionary is a "liquid inflammation product made up of leukocytes". But further research reveals to us many categories of pus. There is ichorous pus, the classic smelly thin brown fluid. There is sanious pus, a bloody ill-smelling fluid. There is laudable pus, a friendly and impressive name for a creamy inodorous pus secreted by a healthy granulating surface. There is pus characterized by color (green, blue) and by texture (creamy, cheesy, curdy). There is even an "anchovy sauce" pus associated with amebic abscess of the liver, undoubtedly named by a person who was not impressed by his last exposure to anchovy sauce. With so many kinds of pus, and so many possible locations and type of abscesses, one can see that pus has a world all its own.

My most memorable practice experience with pus occurred on a Friday afternoon. I was on my way home to clean up for a weekend trip. My wife and I had been invited to go on a large group bus excursion to Lake Tahoe. A call to pull a calf came in, and I gladly volunteered to take care of it on my way home. Upon arrival at this small dairy, I found a thin heifer (with sale tags still on her back) locked up in the maternity pen. A quick visit to the milk barn for water acquainted me with a friendly, non-english speaking milker who was THE man for the weekend. The boss was gone for a

few days, and he was the only worker around. Apparently concerned with our lack of ability to communicate, and overcome with his newfound responsibility as interim manager of the dairy, he sent his wife out to help me. A small, timid woman, she arrived as I began to examine the cow and she was able to confirm for me that, yes, this was our patient and the calf needed to come out. She then stood back in the far corner of the stall, obviously in awe of the monumental task I was about to undertake.

Aware of my audience, I cleanly and professionally evaluated the situation and found a huge intra-vaginal abscess obstructing the passage of a relatively small calf. After some probing of the area elicited concern of vascular complications, I elected to use some traction to help evaluate where the best site for lancing and drainage would be. Using a rope-pulley system available in the stall, gentle traction allowed the calf to engage and move significantly forward. Realizing how ridiculously easy this would be, I joyfully leaned forward and put downward pressure on the rope to examine my site of potential incision.

I'm sure there must have been an explosion, perhaps even a sonic boom. It all happened so fast I just didn't notice it. Or maybe I couldn't hear, with my left ear plugged with pus and all that.

Stunned by the impact of the explosion, I was unclear what had happened. For that matter, I was unclear as to where I was, why I took this call, and why I had ever become a veterinarian in the first place. As I scraped away debris from my face, I cracked open one eye to provide myself a clouded but all too real view of the situation I was now in. The stall and fence were covered with a thick, creamy, not entirely non-odorous form of pus. The one side wall present had the distinct appearance of having been ravaged by a powerful and very wet, sticky snow flurry. The roof of the structure was white with pus. The silence was broken only by the plop, plop, plop of pus dripping from the rafters, and by a quiet whimpering in the corner. Through my one open eye, I saw the milker's wife huddled in the corner, spattered with an impressive amount of the cow's ample granulation tissue excretions that had so

graciously been bestowed upon us. She stared out at this horrifying scene with a mixture of wonder and nausea. My chest, face and head were covered. My left temple must have caught the brunt of the blast. My hat had been blown off by the impact and my hair cascaded upward wildly as if treated with a thick white mousse. The stray thought that this would no doubt qualify as a mildly noxious form of laudable pus provided no consolation to me, and I'm sure would not have won any points with the milker's wife, either. As an afterthought I looked at the cow, half expecting to see a deflated sack of skin where my patient had been. Amazingly, she was calmly standing there chewing her cud, apparently unfazed by the whirl of activity that gone on around her.

I groped my way to the barn to wash out my eye and ear, no doubt shocking the milker with my snowman / punk rocker-like appearance. I returned to the cow and easily pulled a live calf, finding the new mother relatively normal internally. The milker's wife was standing now, but still in apparent shock from the disastrous episode she had played a part in. I cleaned myself and the facility as best as possible and when I turned around again she was gone. No doubt she had concluded the operation was successful, and that such performances were routine for me.

When I resumed work Monday, after a relaxing and uneventful weekend in Tahoe, two memories of the episode remained with me. One was of the poor milker's wife who observed this bizarre spectacle. Without any explanation, she surely must think this is the way things are done, and will be very unimpressed with the next vet who simply pulls a calf or does a boring c-section without any special effects to accompany the service. My other memory was unbelievable but true. An image of me walking through a casino floor that next morning on my way to a brunch, 300 miles from my practice area. One of me noticing the owner of the dairy leaning joyfully over some dice at a craps table, oblivious to the fact that only the day before I had "exploded" his cow.