

## MARIA STEIN ANIMAL CLINIC, INC.

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### Heartland Veterinary Care

315 East Main St.

Versailles, OH 45380

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### Heartland Animal Clinic

1018 B West Auglaize St.

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### Minster Veterinary Services

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*Brandy A. Liles, DVM*

*Emily L. Stayduhar, DVM*

*Angela M. King, DVM*

*Paul J. Hunter, DVM*

**Teat Sealants – Yes** Research and our experience show a 50% reduction in mastitis in the first 30 days when a teat sealant is used properly at dry off. Properly means re-prepping after dry cow therapy, pinching off the base of the teat, slowly expelling air and only filling the streak canal. The patent product Orbaseal has been in spotty supply for the last several months. The patent is now off and several “me too’s” have entered the market. MWI’s private label **Bovi Block** is similar to Orbaseal. We were looking for a price break, that may be in some buying programs, but not all.

BI has created a new and improved teat sealant called **Lockout** that has a somewhat more ergonomic tube and a blue color. The blue color may have some advantage at freshening where instead of training our milkier to strip every teat 12 to 15 times to get all of the Orbaseal out, we can just say strip until it isn’t blue anymore. Lockout is a little more expensive than the others and maybe the blue color for cleaner milking systems is worth that to you.

**Pen G – Yes** A six month disruption of supply of pen G is predicted. We don’t use much, but we bought a year’s supply. Ampicillin and Tetracycline would be alternatives if Pen G runs out.

**Ampicillin – Polyflex – Maybe** Most of the time, Ruth has been able to keep Polyflex or Ampicillin on the shelf. Supply should be short for 6 more months. This mainstay of many of our treatments will keep us focused on keeping a supply.

**Drs. Hardesty & Lefeld Attend Cargill Meeting** at Romer’s. Timely topics included Heifer Age at First Freshening, Starch Digestability, and Hoof Trimming. We appreciate invitations to these types of meetings and sometimes we can make it.

### Age at First Freshening – How Low do You go?

**Building a Better Heifer** We have followed the work of the last decade showing that heifers calving at 23 months milk just as well and stay in the herd as long as those that calve later. There is a savings of \$100 a month in feed costs and the heifer herd doesn’t need to be as large.

Now there an evaluation proposing first lactation milk at 10 to 15 weeks equals the herd average milk and that first lactation production sets the ceiling for milk production. I could poke holes in this premise knowing that reducing average days in milk increases herd average milk with no effect on first lactation production. We might decide to take a good look at these relationships in your herds until a good geneticist proves or disproves that first lactation milk sets the ceiling for milk production.

The factors that make heifers high producing are:

- 1) Genetics
- 2) Average Daily Gain at key life stages
- 3) Health Events as a heifer
- 4) Maturity at Calving
- 5) Transition, which can negate everything

Maturity is more related to size than age. We want the heifers to grow before they freshen on less expensive diets. One pound of weight takes the same amount of energy as 7 pounds of production. To find the mature body weight of your herd, weigh a representative group of 2<sup>nd</sup> and 4<sup>th</sup> lactation cows between 80-120 DIM. Heifers should be 55% of this weight when they are bred and 85% of this weight post calving. Springers at 260 Days Carried Calf should be 95% of this weight. Forget about age, figure out how to hit these targets.

Everything is a math problem but Faith and Love.

Dr. Todd Birkle

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### **Sprinkler systems**

Spring is right around the corner. With spring comes warm weather. Already in February, as I write this we were 1 degree from hitting the record high set back in 1939 of 70 degrees. We have seen many barns starting their fans up & know that the sprinklers are the next thing to allow cows to remain comfortable in this unseasonably warm weather.

Sprinklers aren't just something that you can turn off before winter, ignore & just turn right back on again in the spring. They require a little care. Hopefully this will give you some tips & serve as a reminder to get started on some of the maintenance requirements before you get started in the fields, because, by the time you finish planting, the sprinklers should already have been on.

Cows ideally like cool, 55 degree days, but we are hard pressed to find any of those in the summer months. This is the major reason we need to prioritize cooling for these hard working girls. I don't (or shouldn't) need to tell you about the negative effects cows start showing in feed intake & milk production as soon as heat stress starts.

Let's start with the basics. Sprinklers are generally placed over the feed bunks. System components usually include a timer, thermostat, valves, pressure reducers, pipes & sprinkler nozzles. The timer is set to run every 15 minutes, running for 1-3 minutes (just enough time to adequately get water through the hair coat & down to the skin, but not enough to have it run down the udder)& the thermostat should be set to turn on when the temperature reaches 70-75 degrees. The pressure reducer limits the sprinkler line pressure to 20-40 psi. Low pressure systems will produce a larger droplet, which has the ability to penetrate the

haircoat & reach the skin. Water usage can vary from 500-1500 gallons per cow during a summer.

The range the sprinkler nozzles should reach is 8-10 feet behind the feed line. This range will cover most of the alley, but not spray into the freestalls. The bottom of the nozzle should be approximately 7 feet off the floor. The nozzles are set to deliver a certain number of gallons per minute or hour. Recommended flow rate should be 0.5 gallons per minute (or 30 gallons per hour). Most feedline nozzles have a 180 degrees spray pattern. If the spray diameter is 8 feet, then the maximum spacing distance between nozzles is 7.6 feet allowing for a slight overlap to give full coverage to every cow at the bunk & allowing for wind movement from the fans. It is strongly recommended to keep the sprinklers functioning at night because heat stress in Ohio isn't a dawn to dusk process. Night time is a great time to get ahead on cow cooling.

Yearly maintenance is required to help keep these systems functional. Repair or replace nonfunctional nozzles as needed. The system should be drained before the first freeze (most likely in October). The nozzles should be removed & soaked in a solution to help remove the mineral deposits. The lines can then be blown out with compressed air or solutions to help remove excess iron deposits that tend to clog the lines up & decrease flow rates to the entire length of the water line.

As usual, we are always happy to assist you with any questions you may have in setting up or maintaining sprinkler systems along your feed bunk or in your holding pen. We can also direct you to the local experts that will help you figure out line blockages, flow rate issues and other common concerns. Enjoy the cool weather before the heat hits!  
-Dr. Laura Nusbaum