

pot-bellied, loose their muscle mass (protein) and become very anemic. Corral one of them and look at the membranes. They are white (eyes, gums, and vulva). Then take some loose skin on the neck, if you can find some white hair, and roll it in your fingers to see the skin. Most times their head is plugged into the skin with their butt in the air and they are thick – standing room only. Quite often one calf out of the group will literally be covered with lice and some to a lesser degree.

To correct the problem is two-fold: Treat the calf and her roommates and clean the

room. Lice will be in the bedding and pen. For treatment, one can use louse and mange spray which dissolves the exoskeleton. This is a liquid that is mixed with water and sprayed on with a 2–3 gallon pump-up garden sprayer. Repeat in one week because the nits (eggs) are glued onto the calf's hair and they incubate for a week. There are good essential oil sprays, Ecti-phytte and No-fly that also work well. Clean the pen out and lime it down or spray it with a mild hydrogen-peroxide. If the calf is anemic, they should be given iron shots and B-vitamins, both can be injected. Put the animals on humates and kelp. Both of these products build blood.

I am not a big fan of DE (diatomaceous earth) for lice as it is not safe to breathe for the animal or human. It acts like asbestos in the lungs. It also will not work very well on the underside of the animal. Check with your certifier as Ivomec may be used with permission from your certifier. For some reason, animals on free-choice kelp do not seem to have lice problems. I am speculating from "Acres" seminars, that calves on kelp have higher levels of iodine. Kelp free-choice is your best prevention tool.

**CROPP Cooperative Membership  
Services Hotline: 1-888-809-9297**

*The advice and techniques presented in this bulletin are provided as an educational service. No guarantees are implied or given. Always check with your certifier to ensure inputs are permissible under organic standards.*

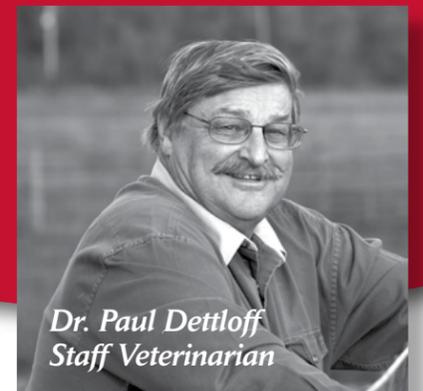


**CROPP COOPERATIVE**  
INDEPENDENT *and* FARMER-OWNED

One Organic Way • LaFarge, WI 54963  
1-888-809-9297 [www.organicvalley.coop/farmer](http://www.organicvalley.coop/farmer)

## Organic Valley/CROPP Cooperative Organic Farming Technical Bulletin

Number 2 ~ Edition 1.0



Dr. Paul Dettloff  
Staff Veterinarian

## Natural Calf Care

### Begin with the Dry Cow

Good calf care starts with the dry cow. Proper nutrition will produce a balanced, highly mineralized calf born with vigor and all the minerals and trace elements it needs to run all its systems as nature intended.

I like the dry cow to be provided with the following: trace mineral salt – I would prefer Redmond Salt as it is unrefined. A natural product, a mineral, either 1:1 mineral or dry cow forage. I really like free choice kelp and humates fed separately during the dry period. All dry cows should receive this and don't forget the springing heifers. Kelp and humates are an excellent

source of colloidal minerals. I think these two items influence colostrum's quality more than anything we can give the dry cows.

### Feeding Regimen for a Healthy Start

Upon birth, get colostrum into that calf as soon as possible. Put iodine on the naval. Don't cut it off. Leave it to dry up. Tip the calf over and cover completely with iodine. Use 7% strong iodine. If there are extra teats, remove them at this time.

Give colostrum and lots of it. It is very important to know your Johne's situation. Only use Johne's negative colostrum,

or if unknown, then pasteurize the colostrum, knowing that you are destroying some of the beneficial enzymes in the process. When using pasteurized colostrum, you need to give more than you would when feeding it raw. Recent information shows us that if we pasteurize at 140 degrees F for one hour, you will destroy the Johne's bacteria and do very little harm to the colostrum enzymes.

The next thing to address is how much to feed a calf. The standard rule of thumb is a calf should get at least 10% of its body weight in whole milk per day. A gallon weighs 8.6 pounds. This means an 86 pound calf should get one gallon. A 125 pound Holstein calf should get about 1.5 gallons. We are so scared to push the envelope on extra milk because in our earlier lives, if we overfed milk replacer, we would scour them because of the 29% fat (poor quality fat besides). When calves get rolling, they can drink a lot of milk and really grow. I've experienced quite a few bigger operations where they mob feed their calves on a drum with 12 to 14 nipples, where they are on free choice, full-time, all-you-want-to-drink milk;



and they raise some beautiful calves. On those systems a calf will normally drink 6 to 8 times in a 24-hour period.

There are three things to keep in mind about the milk when a calf is first born. Milk should be as close to mama's as possible.

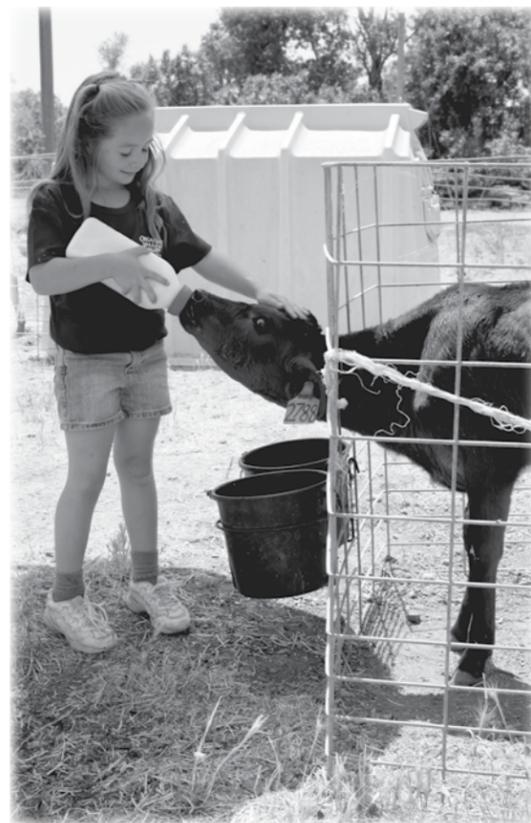
1. Milk is best if it is between 100 and 102 degrees Fahrenheit. That is mom's temperature and that is the temperature Mother Nature has provided that newborn calf to accept milk. So what happens when milk is fed at 70–80 degrees? The milk will normally go down the esophagus, bypass the little undeveloped rumen where roughage is digested and go into the abomasum. The rumen has not started work yet as the calf has to start producing amylase, the enzyme needed for starch digestion. This does not happen until the calf is about three weeks old. This little calf has a defense mechanism in the esophageal lining that says this 70 degree stuff isn't mom; she is 101–102 degrees, so we will divert it into this undeveloped rumen. What happens when most of the milk is diverted is that the calf will go into a hypoglycemic (low blood sugar) state and basically go into a 12 hour starvation mode. This is major stress on that little undeveloped immune system. What about the two quarts of cold milk that is sitting in the rumen? What happens there? Nothing good. It turns into a yellow mass of

coagulated, cheese-like mass that is indigestible and can't be good for the digestive system. Milk feeding temperature is so important! Buy a thermometer, don't trust your hand. Men with their beat-up, calloused hands have no idea what 101 degrees feels like. Know the temperature or don't feed it. On a postmortem of a scouring calf, the first organ I open is always the rumen. If I find a big old clotted mass of milk in there, I won't prescribe any medicine until feeding temperature is corrected. The mob raised calves are not put on free choice milk until they are 7 to 10 days old. They do not seem to have this problem with cooler milk. I suspect that's why they feed 6 to 8 times a day, as they take in smaller amounts and possibly warm it up. Plus mob raisers all use nipples so they drink slower.

2. Position of the head while drinking is the second rule of feeding a young calf. Where is the udder in Mother Nature's world? It's under the cow's legs. This means that as a calf nurses, a calf's esophagus is at least horizontal or higher. If you take milk, put it in a pail, and set it on the ground, a calf has to put its head down to drink. What does that mean? That's not mom, folks! Mom is up, so this must be grass. The natural defense mechanisms that have developed over centuries of natural selection say that this goes to the rumen, not the simple stomach

(abomasums) where it is supposed to go. The esophagus only has to be horizontal and that doesn't take much for the average calf. If you set the pail on a block or hang it (all it takes is about 5 inches off the ground), the esophagus will be horizontal.

3. The third important, non-medical factor to be aware of is timing. By that I mean feeding at regular intervals. If you feed at 7:30 in the morning, stick as close to that time as possible. Don't let it be 6:30 one day and 8:30 the next. These little baby stomachs are sensitive to timing. The organisms that live normally in the gut, that are there for a purpose, need to be fed regularly to keep them in check and balance. This applies mainly to



the two times a day feeding as they are slug feeding the milk. The free-choice milk calves have very little trouble with over-eating which leads to enterotoxemia.

### Maintaining Vigor Through the First Year

Another tip that helps organic calves is access to free choice kelp and humates from day one. The calf can go lick and ingest some colloidal minerals. These are best fed separately, as they will usually only feed on one, then they may switch for awhile and try the other one. This gets to be a challenge when calves are in hutches or individual pens. If you have fifteen hutches lined up you have to figure out a way to keep it in front of them. I've seen some ingenious ways. It is worth the bother. Those that do it like it. They can raise some nice calves on kelp and humates free-choice. It is a huge aid that supplies the immune system with its building blocks. Hay should be in front of the newborn calf to nibble on to slowly start the undeveloped rumen. At birth, calf starter can be introduced any time after the first week to 10 days. Remember, a calf's saliva does not contain much amylase for digestion of seeds until they are about 3 weeks of age. Any calf that is really hitting the calf starter hard at 2 weeks is being shorted on milk. Calves fed adlib milk would prefer milk to grains prior to 3 weeks of age. I also notice some really good look-

ing calves that are being fed whole oats. There are a fair number of organic farmers using good test weight oats for some of the calf's ration and a growing number that are using it as 100% of the ration.

The first system to address is the immune system. This is being jump-started with kelp and humates free-choice. But a second help is liquid aloe vera in the milk. One ounce or about 30cc's in the milk night and morning for the first 20 days of life gives the calf a good boost.

Cryptosporidia needs to be addressed. Herds that hold down this population have less scours (E.coli, salmonella, roto-corona). Holding crypto populations low is done by using Calf Shield or Enterogard. These products have a garlic fraction in them that keeps crypto in check. I like to put this in the milk for the first 3 weeks of life. Organic farmers soon recognize the value of whole milk and are not in a big rush to wean calves. I like to see dairy calves on milk for 8 weeks and even more if the calf isn't what you want it to look like. Conventionally, we have been told to get a bag of milk replacer into the calf as quick as possible and wean it as soon as you can. We have forgotten to look at the calf. The healthy, well-fed calf is setting the stage for the rest of its life. Let's not short change it in the beginning. In the heat of the summer, make sure there is water available at noon so it doesn't dehydrate.

When the calf is a couple of weeks old, get that calf dehorned. Use an electric version to burn the button or a Bud-dox gas dehorner, which also works fine. Learn how to do a nerve block. A 12cc syringe with 18x1 needle and a little Lidocaine deadens the horn area. Have your veterinarian show you how to deaden the nerve or have him do it. Lidocaine is quite inexpensive and it's easy to do once you've been shown how.

### Parasite Control

A very common problem seen every winter, one that sneaks up on farmers, and one they can never believe when the animal is dead – is lice. The most common louse is the sucking louse. It should be looked upon as a silent thief, as it is robbing the calf of blood (protein) every day. The reservoir for lice is mom. They migrate over summer in the ears and on the lower body. You see, sun is a louse's enemy as they cannot make it when it gets hot. When the skin temperature hits 106 degrees, their numbers drop off, and when temperatures hit 125 degrees, they will perish. The scenario is this – it's January, it's cold, the pen of 400 to 500lb heifers is in an outbuilding or back pen or someplace away from the cows. The owner may not even feed then or see then himself as the family or hired help is taking care of them. Bingo – they are loaded with lice. A red flag is licking. They itch terrible. They get thin,