

April 2006 News Grassland Veterinary Service

Many thanks to Pat Hoffman from the Marshfield Agriculture Experimental Station. Pat provided an excellent discussion of heifer rearing at our client meeting March 29. As always he provided good common sense concepts to consider when raising your valuable replacements. He suggests a reasonable goal for heifer rearing: **strive for heifers calving at a consistent age and body condition.**

We predicted it when the Canadian border closed several years ago. The value of Holstein heifers shot up to record levels. It's in your best interests to raise heifers as economically and efficiently as possible! They're worth a lot, and it's really nice to have extra animals to sell! What follows is a brief visit of highlights from Pat Hoffman's presentation.

COST EFFECTIVE FEEDING: It makes sense, but we often don't bother to consider it-what are we feeding heifers? Pound for pound calves do a lot more skeletal growing than older animals. Therefore we know that the younger the animal, the more protein they need to accommodate that growth. Remember, calories (energy) provide for body condition, and protein provides for body growth (height/frame).

Good quality **milk replacers** (20/20) are vital to the growth of young calves. A quality calf starter (18-20%) is also needed for these baby calves to provide energy as well as adequate protein for growth. Calves eating such milk replacers grow very well, provided temperatures are above 20 degrees F. Higher feeding levels of milk replacer are necessary for calf bodily maintenance at housing temperatures below 20 degrees F, and particularly when the thermometer drops below zero.

For dairies feeding **whole pasteurized milk** and accelerated growth milk replacers; these calves don't have the same needs for calf starter and might not eat starter as well. However these calves will need to begin eating dry feed to be weaned. As these calves get over 4-5 weeks of age, begin cutting back on the quantity of milk fed to encourage the intake of starter. A common problem noted with feeding whole milk on conventional/smaller dairies is the reliable availability of waste milk. Unless you're feeding milk from the bulk tank, you wind up feeding milk from different cows at different times. Quality and components of the milk can vary greatly, meaning that you don't have a 'consistent' source or quality of milk to feed. This can lead to digestive upsets.

As heifers get older, their **protein and energy needs** decline. Interestingly however it is rare for dairies to 'balance' a diet for heifers. Corn silage tends to have too much energy and not enough protein for heifers. Haylage and even hay often has too much protein for older heifers, with maybe adequate energy. The common result is fat heifers. Fat heifers are harder to get bred, tend to have difficult first calvings, and have poorer first lactations. Balancing a ration for heifers could drastically change your feeding practices to heifers, actually saving the dairyman money. Balancing rations for heifers will encourage proper mineral feeding to heifers, thereby improving breeding performance.

Bunk space is important to heifers. All heifers need to have the room to eat and compete and grow. Heifers on 'full feed' can get by with somewhat restricted bunk

space as they generally get to eat their fill. Please note however that ‘full fed’ doesn’t mean that there’s feed available above and beyond what the heifers can eat. The Marshfield Experimental Station manages their heifer population so that the farm manager knows what the heifers need to eat to maintain and grow and get pregnant. They feed that required amount of forage. The heifers eat that feed up, with little to NO waste. Feeding heifers ‘full fed’ in this manner avoids having heifers eating much above and beyond their true needs, and avoids fat heifers. By contrast, ‘free choice’ feeding heifers is NOT the same as having heifers on full feed. Free choice feeding (‘all you can eat’!) is what we do to steers on grain to get them to grow and finish well for market.

Can heifers be ‘limit fed’? Yes they can! Again the Experimental Station did research on feeding heifers. Diets were formulated for full fed diet dry matter, protein and energy requirements. Then diets were formulated for the same energy and protein levels, but with a 10 and 20% reduction in total dry matter available. The results? Heifers all performed similarly. The difference? Bunk space is particularly important to heifers being ‘limit fed’ versus those on full feed. Limit fed heifers are used to eating ‘meals’ and need bunk access to eat that meal. Another difference-limit fed heifers made 10-20% less manure. Over a years’ time you can use a significantly smaller amount of forage to feed heifers, and have a lot less manure to spread. The big difference, limit feeding heifers requires good dietary management and feeding care. Not many dairies will care to take on that challenge. The lesson-balance diets for heifers and feed what they need; not more and not less.

BREEDING MANAGEMENT is critical to efficient heifer performance. **Remember the goal should be to have heifers calving at a relatively consistent age and body condition.**

Two dietary factors heavily influence heifer breeding; body condition and mineral feeding. Therefore avoid fat heifers and feed adequate heifer mineral. We’ve already discussed this.

Breeding protocols also affect breeding performance, and are very important. At breeding age, heifers should be gaining around 2lbs. per day. This means catching heifers in heat, breeding them, and finding open heifers as soon as possible is very important. Every extra month that a heifer stands open means an extra 60 lbs at calving. Heifers taking an extra 5 months to get bred often are carrying an extra 300lbs (fat) at calving (if they get bred). Be aggressive about handling heifers. Take steps to insure insemination in heifers not caught in heat. Examine heifers for pregnancy and re-breed heifers found open as soon as possible. Open days cost money.

HEIFER HEALTH also significantly affects heifer growth, reproduction, and future milk production. Address diarrhea and pneumonia factors in heifer management, vaccinations, and particularly housing. Go through a **Johne’s Risk Assessment** to identify weaknesses in heifer housing and management. Such a risk assessment is educational. The purpose is to reduce the chances of spreading Johnes’ to your replacement animals. Herds completing risk assessments and following recommendations also see reductions in the incidence of other common heifer ailments. Dr Harmening and Dr Marti are certified for performing Risk Assessments should you be interested.