



Dairy Newsletter

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Nov/Dec 2009

Social Networking and Agriculture

Many popular dairy publications have touted the benefits of using social networking web sites as advocates for agriculture. Therefore, much of this article may seem like review but the ideas and topics are important. The more popular social networking sites are: Facebook, Twitter, and YouTube. In addition, there are numerous blogs related to farming and Flickr is an enormous source of photos. In this article, we will discuss the three social networking sites. Each of these web sites can be powerful tools to help be an advocate for dairy production and agriculture in general.

Twitter can be thought of a short burst of information available through multiple platforms. It allows individuals to read posts on cell phones, via mobile web viewers, or on their computer. Numerous tools have been developed to assist people in reading, posting, and following ideas. In addition, a set of 'rules' have developed to allow users to link posts and make what are known as threads while giving full credit to the original post. To explore the potential, either join or find a user who will search for #dairy to see some of the more recent posts that have been tagged as relevant to dairy production.

Facebook is a probably the most used social networking application worldwide with over 300 million users. This relatively simple program links individuals with their 'friends' and allows chats by writing on virtual walls. Think of it as an electronic bulletin board. As with Twitter, there are other applications available to help manage an account. Because Facebook allows longer and more detailed post (along with larger amounts of personal information) the hierarchy or 'rules' are not as well developed yet numerous people manage to effectively use it to educate their friends about important issues.

YouTube is a web-based service that houses short video clips and makes them available to users. This one does not require joining to view videos but does require you to join to post. A

quick search for 'dairy farm' returns numerous videos that can be used to show how a modern dairy operates. If the old adage that a picture is worth 1000 words is true then imagine how valuable a video can be.

Bed Calves Deep with Straw

Bedding calves deeply with straw is likely the best cold weather management option available. Deep straw as bedding traps warm air around the calf much like a jacket does for us. This helps to keep the calf warm in unheated nurseries and hutches. Thus, the calf has a micro-climate that is much warmer than air temperature. So if there are no drafts or wind and the calf is dry, a 20 °F nursery might be more like 60 °F to a calf nested in deep straw.

Published research from the University of WI has reported that deep straw bedding greatly reduced the chance for respiratory infections in calves housed in cold, commercial calf nurseries in WI compared to shallow straw, wood shavings, or other bedding types.

Data Akey has published showed that calves bedded with straw gained 5 to 12% faster (or gained 5 to 9 lb more weight over 56 days) than calves bedded on dry, hardwood shavings. The straw bedding was worth considerably more to the calf in terms of body weight gain than feeding an additional ½ lb of milk replacer powder in these trials. In those trials about 150 lb of straw were used per calf in 4 by 8 feet nursery pens. This is a small expense. If straw would cost \$130 per ton, the bedding cost would be less than \$10 per calf per 56 days. In some situations, more than 150 lb of straw per calf per 56 days will be needed, but this would still be a very small expense for improved health and weight gain of calves.

Heat Abatement

Although the summer of 2009 will be remembered as cooler and wetter than normal,

the month of August was about 1.0 °F warmer than the average for New York. On 2 dairies about 5 miles apart from each other in Seneca County, NY milk production was monitored as normal farm routine. Weather data for that area was gathered from a local weather station and Temperature Humidity Index (THI) was calculated based on the following formula (NRC, 1971):

$$\text{THI } (^\circ\text{F}) = T - (0.55 - 0.55 \cdot \text{RH}) \cdot (T - 58)$$

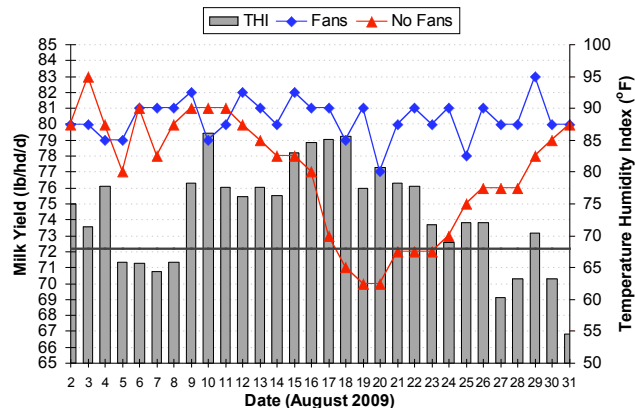
T = Temperature (°F), RH = Relative Humidity (%)

Both herds were housing ~450 cows in a 6-row barn and had similar design. Barns were approximately 10% overcrowded above stall capacity. Although diets were different, feed management was similar; both dairies were feeding a TMR 1 time per day. The major difference between the two farms is that one farm had fans in the barn while the other barn did not. The barn with fans had one row of fans over the feedline and one line over the center of the free stalls. Fans were 36 inch in diameter and were 30 feet apart of each other. Fans were switched on by a thermostat set at 70 °F.

Milk production of the month of August on average for the farm without fans was 69 lb/hd/d, while the farm with fans averaged 80 lb/hd/d. In the first week of August the average milk of the herd with no fans was about 8 lb/hd/d lower. This difference was used to adjust milk production of the herd with no fans.

Average THI during the month of August for the area was 74 °F. During the first week of August milk production differences between the herds stayed similar. Average THI during those days was 69 °F. This is at the level of 68 °F that Zimbleman et al. (2009) defined as the upper THI before productivity is affected. In figure 1 the THI and milk production are shown. Milk production between the two herds stayed similar at THI below the threshold level of 68 °F. When the THI was above 68, milk production was negatively affected without fans, especially if the period of THI above 68 °F was longer. Although these are data from field observations and there might have been other factors than fans that increased the difference in productivity between these two herds, it shows that heat abatement increases productivity. In this example, the farm with no fans could have shipped an additional 40,000 lb of milk in the month of August if heat abatement was used.

Figure 1. Field observations of production for two farms.



Cold Weather Milk Replacer Rates

Analysis of several published data sets suggests that there was little benefit to feeding more than 1.8 lb of milk replacer powder per calf. In fact, there was a marginally low return of 1.8 lb of powder over 1.5 lb of powder. In 2 winter trials that Akey has published, increasing the amount of Pinnacle milk replacer (26% protein, 17% fat) from the recommended rate of 1.5 lb to 1.8 lb per calf daily for the first 3 weeks of life and then reducing the feeding rate to 1.5 lb until weaning at 6 weeks of age if a viable cold weather option. Added gain was observed from feeding the extra powder during cold weather but the efficiency of gain and the cost of gain for feeding this extra 0.3 lb of powder were not justifiable. However, feeding this extra 0.3 lb of powder may be justifiable in extreme cold. It is important not to feed the extra milk beyond 3 weeks. If fed beyond 3 weeks of age, the extra powder fed depresses starter intake and depresses post-weaning gain and feed efficiency. If one is feeding a 20% protein milk replacer, switch to Pinnacle during the cold months and feed at least 1.5 lb of powder daily.

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