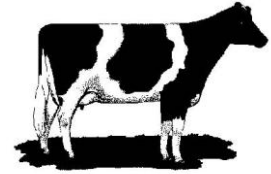


Kentucky Dairy Notes

December 2009



Basketball and Dairy Farming **George Heersche, Jr.**

What are the two key elements of a winning basketball team? It takes talented players and good coaching. What about your dairy farm? What are two of the key elements of a winning milk-producing team? It takes talented cows (players) and good management (coaching).

Let us use a series of questions and answers to expand on this metaphor.

Do talented players or talented cows just show up? No, it takes more effort to get talented players or talented cows.

What determines the talent level of your milk producing team? Genetics ... ability is determined by genetics.

Where can you find the best talent for your milk producing team? Artificial insemination provides the best talent, because A.I. sires are the best of the best.

How much better is A.I. talent? Daughters of active A.I. Holstein sires receive genetic merit for 720 more pounds of milk per lactation than daughters of non-A.I. Holstein bulls born in the last 8 years. That difference is much larger if you use the top end of the A.I. sires. In addition, cows with more talent pass that talent on to future generations.

Is the level of talent predictable? High school players recruited on four years of game stats are more likely to be good college players than those recruited based on their performance in a few high school games. A.I. sire proofs contain much more information than the information available on natural service bulls. Therefore, we can more accurately predict the ability of the future herd by using proven A.I. sires.

Do all of the players on a basketball team have the same talents? No a winning basketball team has some tall players, some shorter players, and some players who run faster than others.

Do all the cows on the milk producing team have the same talents? No, but through A.I. you can select in advance what talents your milk producing team has and what they will look like. If you

want high production, you can select for high production. If you want correct feet and legs, you can select for correct feet and legs. If you want correct udders, you can select for correct udders. If you want to improve production and type, you can select for both. Furthermore, A.I. allows you to use several different sires which spreads the risk if one does not do as well in your herd. If you use a natural service bull, all of your eggs are in one basket so to speak. If he is a dud, you have a team of duds to coach.

How much of the milk producing teams performance is due to talent and how much is due to coaching? Milk production is 30 percent talent/genetics/ability and 70 percent coaching/environment/opportunity.

Can we have winning milk producing teams with just talent or just coaching? No, it takes both. For examples, see table.

Talent and coaching influence performance.

Talent	+	Coaching	=	Performance
30% (great talent)		70% (great coaching)		100% performance
10% (poor talent)		70% (great coaching)		80% performance
30% (great talent)		35% (poor coaching)		65% performance
10% (poor talent)		35% (poor coaching)		45% performance

Do teams which stay healthy have a better chance of winning? Yes! Healthy players spend more time in the game and less time with the trainer - ditto for healthy cows. In addition, we can use A.I. to plan for healthier cows. Using calving ease sires on heifers yields fewer bad starts in the rookie season. Breeding for correct feet and legs and correct udders yield cows with fewer problems. Selecting for Productive Life results in cows which have a greater chance of having a more productive life.

Do coaches who stay healthy have a better chance of winning? Yes! Anywhere there is a dairy bull there is a chance of injury or death. If the coach is laid up, the team suffers. If the coach is dead, the game is over. Do we really need any other reason to use A.I.?

Please A.I. your heifers and cows. Do not do it because I made the suggestion. Do it for yourself and your family. Do it to make your farm a safer place. Do it because you deserve to have the best talent to coach.



**Do Your Cows Have A Comfortable Place to Rest?
Jeffrey Bewley**

Providing a comfortable, soft surface cushion may be the most important factor affecting freestall usage and lying time. An ideal stall bed (1) conforms to the cow's shape, (2) provides cushion while the cow is getting up and lying down, (3) maintains effective traction to minimize slipping, and (4) remains dry to minimize bacterial growth and promote optimal udder health. Many different combinations of stall bases and bedding types can be effective; however, sand bedding generally best meets the cows' needs. Stall usage and lying time tends to be higher for sand bedded

freestalls than for mattress freestalls. Keeping sand filled to the curb increases stall use. In one study, daily lying time was 1.15 hours longer when sand stalls were filled to the curb compared to stalls with sand levels 2.44" below the curb. Although mattresses, waterbeds, and mats may reduce the amount of bedding needed, bedding still must be used to minimize friction while the cow rises from the stall and to absorb moisture (Figure 1). In a British Columbia study, cows spent 1.5 hours more lying down in mattress freestalls bedded with 16.5 pounds of sawdust than those with no sawdust. Thus, lying time can be improved considerably by providing cows with more bedding (Figure 2).

When cows are not provided with a comfortable place to rest, they will not utilize or occupy freestalls well. Hock injuries are commonly observed in situations where cows are forced to lie on a hard surface or when insufficient bedding is provided (Figure 1). Of course, the worst scenario is when cows are lying on concrete without any bedding. Bedding helps to minimize friction between the hock and the stall surface. In deep-bedded stalls, cows may dig out the bedding and effectively reduce their resting area if bedding is not replaced. This situation may also increase the effective height of the brisket board and stall dividers. In turn, cows may have difficulty getting in and out of the stall. Moreover, the potential for abrasions between the now-protruding rear curb and the cow's hocks can lead to severe hock abrasions and ulcers. When mattress or mats are used, inadequate bedding may also lead to hock injuries and poor stall use. This problem is exacerbated when the mattress cushions have lost their flexibility and are utilized past their useful life.

The solution to this problem may often be as simple as using more bedding. This is particularly true for sand. Sand provides such a good resting material for cows that it will often mask other freestall design limitations. Hard or worn-out surfaces may need to be replaced with deep-bedded sand or new mattresses. When adding a mattress on top of concrete, caution must be used to be sure that the height for the cows stepping up into the stalls does not exceed 8 to 10." In a deep-bedded scenario without a mattress or mat, a minimum of 6" of bedding material is required. When mattresses or mats are used, at least 3" of bedding must be added to the top of the stall base. Freestalls should be groomed, removing manure and wet areas 2 to 3 times per day. Deep-bedded stalls should be leveled at least twice per week. Bedding should be added at least once per week and possibly once per day depending on the type of bedding used, environmental conditions, and observations of cow cleanliness. Bedding savers may be used to minimize bedding waste. These small changes to freestall surfaces can have a dramatic impact on cow comfort, lameness, production, and animal well-being.

Figure 1. Although mattresses provide cushion for cows, adding bedding on top of the stalls is still essential.



Figure 2. Deep bedding minimizes potential for hock injuries, improves stall usage, and increases lying times.



Figure 3. When cows do not have an adequate resting surface or when bedding levels are insufficient, the resulting friction that occurs as the hocks rub against rough surfaces may result in hock abrasions and injuries.



UK Students Compete in Southern Dairy Challenge

Six University of Kentucky students participated in the 2009 Southern Dairy Challenge in Russellville, KY. The Dairy Challenge provides an opportunity for students to evaluate all facets of a dairy operation (nutrition, facilities, herd health, reproduction, genetics, milk quality, animal well-being and financials) and present strengths, weakness, and improvement recommendations to a panel of judges. These students represented UK with class and poise and demonstrated a thorough knowledge of the dairy industry. Dr. Donna Amaral-Phillips and Dr. Jeffrey Bewley coached the team for this event. This group has the option to participate in the National Dairy Challenge in Visalia, California next spring as a UK team. At the regional competitions, students participate on composite teams with students from other universities. Here is a list of the participating students and their placings: Brady Core-Platinum 2nd Place, Curtis Coombs-Gold, Beka Chmielewski-Gold, Katie Sheaffer –Gold, Carilynn Gravatte-Silver, and Kristin Heilmeier-Silver. Congratulations to each of these students for an outstanding performance.



The University of Kentucky Southern Dairy Challenge participants: Brady Core, Kristin Heilmeyer, Katie Sheaffer, Beka Chmielewski, Carilynn Gravatte, and Curtis Coombs.

2010 Kentucky Dairy Partners Meeting Agenda
Cave City Convention Center
Registration: \$25/person
(Kentucky Dairy Farmer's registration Free compliments of KDDC)

Tuesday, March 2, 2010

3-5 PM CST Set up exhibits
 6-8 PM Reception and exhibit hall open

Wednesday, March 3, 2010

8:30 AM CST Registration and View Exhibits
 9:20 AM Welcome
 9:40 AM Educating the public regarding our dairy industry -- Chuck Cruickshank, DMI
 10:10 What's new and working in feeding dry cows? -- Dr. Mike Hutjens, Univ of IL
 10:40 Past research and extension gave us today's practices... What does the future hold? -- Dr. Jack McAllister
 11:00 ADA of KY/SUDIA Annual Meeting -- Cheryl Hayn and Terry Rowlett
 11:30 KDDC Annual Business Meeting -- Jim Sidebottom and Maury Cox
 12:00- 1:30 Lunch and Visit Exhibits
 1:30 PM Nutrition lessons learned with low milk prices -- Dr. Mike Hutjens, Univ. of IL
 2:00 Incorporating and Validating Animal Practices on Farm—the FARM program -- Chuck Cruickshank, DMI
 2:30 Farmer Panel- Lessons learned from Weathering the Storms -- John Harrison (TN), Joe Kelly/Mark Rauscher (IN) and Stewart Jones
 3:20 Wrap up and door prizes
 3:30 Adjourn

This event is a joint effort by ADA of Kentucky/SUDIA, Kentucky Dairy Development Council, Kentucky Department of Agriculture and the University of Kentucky Cooperative Extension Service.

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