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DAIRY PIPELINE

MILK2000 is a silage performance index used to evaluate corn silage varieties. Virginia Cooperative Extension faculty have been conducting corn silage variety testing for several years and since 2002 have been comparing results expressed as potential milk production expressed per ton of silage or per acre (MILK2000). Use of this index in comparing silage varieties is similar to comparing bulls using bull proofs. It is possible to rank varieties with MILK2000 taking into consideration both silage yield and quality. Milk2000 was developed by Undersander, Schwab and Shaver of the University of Wisconsin. In order to make the needed calculations it is necessary to know the silage dry matter, crude protein, neutral detergent fiber (NDF), NDF 48 hour digestibility, starch, NDF crude protein, ash, either extract, and dry matter yield. NDF crude protein, ash, and ether extract can be estimated by using book values such as the Dairy 2001 NRC if actual lab results are not available. Corn silage has relative little of these fractions anyway. The basic premise of this method is net energy of lactation is calculated for corn silage by projecting the digestibility of crude protein, fat, NDF, and non fiber carbohydrate. Non fiber carbohydrate includes the starch plus non starch carbohydrates. Starch digestibility is calculated by an equation using the dry matter % and considers kernel processing. Kernel processing increases the starch digestibility. Corn silage dry matter intake can be projected by knowing body weight, NDF of silage, and NDF digestibility. Fat corrected milk can be projected by knowing the net energy of the silage as calculated above, body weight, and % of the diet as silage. Dividing fat corrected milk potentially produced by corn silage dry matter intake will provide milk produced per ton of corn silage dry matter. According to Tom Stanley, Extension Agent in Augusta County, "Milk2000 can be a useful tool in making corn silage hybrid selection decisions. The Milk2000 score should be used along with other quality and agronomic characteristics such as relative maturity, disease resistance, standability, etc. in making a selection decision." If you would like to do some actual calculations go to the following web site for a spreadsheet that will do the actual calculation for you: http://www.uwex.edu/ces/forage/articles.htm#milk2000 or contact your local Cooperative Extension office for more information on results of this years variety testing.

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What do you think of when you hear the word agriculture? Close your eyes and envision a farmer? Where are they standing? What are they wearing? What is their ethnicity? Are they male or female? I have collected nearly 1000 responses to these and other questions as part of my work toward a PhD in Career and Technical Education at VA Tech. Let me take you back to 1995. Where are the farmers at? In 1995, Miss Andy (for those of you who don't know, my wife is the former Andy Echols of Union, WV) and I were happily milking 90 Holsteins and routinely hosting over 150 kindergarteners from Smyth County Schools each spring. One sunny May morning, children from Atkins Elementary School were to visit us. As their bus pulled into our barnyard, we could see the excited children who were to be our guests. We could also see the costume projects their teachers had worked on with their classes. Each child had a straw hat on their head and bandana tied around their neck.

They had taken milk cartons and made cow bells with their names on them. It was really cute and they had worked really hard on the project. However, we met them coming off the bus, and were confronting by one little chubby fellow who preceded to look Miss Andy and I over from head to toe and ask, "Where are all the farmers at?" We were cleaned up and wearing jeans and our farm polo shirts, and frankly, the little guy didn't recognize that we were the farm owners. After just a few questions, we realized that these children expected to get off that bus and walk right on to the stage setting of "Hee Haw." We were too normal looking to fit their stereotype.

While our rural heritage is important to all of us, how important is it that the public has a realistic, modern view of agriculture? The images we give to people, especially young people are **very** powerful tools. Do you present a modern positive view of agriculture or do you reinforce old stereotypes of farming and the people who farm?

The Survey Says…. Shortly after I began working for Virginia Cooperative Extension I began to collect information from school children regarding their knowledge of farming. I selected rural elementary schools that had farmland contiguous to the school campus. I wanted to see if students noticed the farms that they rode past twice a day and could see when they played outside. The results were unsettling even though they were not surprising. I began by showing kindergarten through fifth grade classes two overhead transparencies. The first one had clipart images of different people. One was a white man, wearing bib overalls and a straw hat. He was carrying a flower pot and a hand trowel. I also included a woman talking to employees, an African American couple, a student, a man working on a computer, and (to see if fifth graders would remember their 4th grade SOLs or at least their 4th grade Virginia History) George Washington. So that they would not misunderstand the intent, when I asked each class (K-5) to identify the farmers on the screen, I pointed out that there might be more than one answer. The results were that **99.6%** of the students picked out the individual wearing bibs and a straw hat. Only about **1%** pointed out that any of the choices could be farmers. Interesting, **less than 1% of fifth graders** remembered from their 4th Grade Virginia History that George Washington was a farmer. The next set of images produced even more troubling results. I presented the children with 10 tools used in farming. These included a tractor in a field, a satellite, computer, calculator, a dump truck, a brain, an arc welder, video camera, a pencil, and a garden hoe. I figured that the tractor (especially in its setting of an open field) would be an easy vote getter and it was, but the number one vote recipient among the tools with **94%** was the **hoe!**

What the Children Think. After they completed the survey, I visited with each class about their answers. It was fascinating to see the wheels turn as they contemplated their answers. The older children realized their judgments most quickly, but they also produced to most argumentative responses. One young lady denied vehemently that women could farm. That was just not possible. The topper came from a fifth grade boy in my own daughter's class who conceded that the African American couple "*might* have been farmers **back when they were slaves."** Yikes!!! In that vein, I close by asking the children if it is any less wrong to judge someone by what they do (or what children think they do) than it is to judge someone by their skin color, or religion, or country of origin or whether they are a man or a woman. Thus far, after collecting all these responses and visiting many school classrooms, I have determined that my data shows that even rural children have definite ideas about who farmers are and what farming is about—and it isn't too flattering. As a general rule, children see farmers mainly as:

Caucasian, Male, Poor, Uneducated
Manual laborers

They also have definite judgments about the appearance of farmers. As one child put it, "farmers are dirty, smelly, and wear dirty clothes."

So what am I supposed to do about it? While being judged isn't any fun, knowing what these

tendencies are can be harnessed. A good place to begin is to not play into those stereotypes. Be yourself and be aware that the best way to influence people is to show them that you have common ground with them. If you are asked to speak at a civic club or school, dress as your audience would. If people see you as an equal, they remember you as an equal. A future attack on you is an attack on their friend and neighbor. They are a lot less likely to stand for it.

Be influential, not a victim! The main questions of my dissertation are 1."How do 5-6 year old school children of the 21st century get a view of agriculture that is based in the 1950s?" and 2."How can they see agriculture as part of their future if they see it as part of their grandparents' past?" The answers are first, the media (TV, children's literature, parents, teachers) and second, they won't be interested in agriculture at all. Put your best foot forward. Promote not only what we do but **why** it is done that way and **why** it is important. For example, there are some folks who would like to see soy oil replace our cows' milk in this nation. The reality is that we already crush enough beans to produce **1,200,000,000 tons** (yes that's billion with a "B") of soybean meal per year. If our nations pigs, chickens, and dairy animals didn't eat that waste, we would bury the entire Commonwealth of Virginia (all 26 million acres) a foot deep in SBM in less than a quarter century. The public may not understand dairy farming. They definitely won't be able to grasp the sheer scope of 1.2 billion tons of soybean meal, but they can get their arms around the idea of a foot of trash on everything they own. Promoting our industry means that we must promote ourselves; not as better than anyone else, just as normal business owners in the community. Showing respect for ourselves means that we expect the respect of others.

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Genetic base to change in February 2005. National genetic evaluations will use a new base beginning in February 2005, and average proofs for most traits will decline as a result. The genetic base is the zero point against which all cows and bulls are compared for each trait. For the past five years, the genetic base has been set by cows born in 1995. Under the previous base, the average cow born in 1995 had a PTA of zero for most traits evaluated by USDA – production, productive life, other fitness traits. The breed societies used similar genetic bases for evaluations of type traits. In February 2005, the genetic base will be set by cows born in 2000. These cows have inherited all the genetic progress that has taken place in the five-year period between the two genetic bases. The table below summarizes the average change in PTA's for Holstein and Jersey cows. If a bull's PTA for each of these traits was unchanged from Nov 04 to Feb 05, his PTA in Feb 05 would be his Nov 04 PTA minus the values shown in the table. Keep in mind that proofs also change because of new information added between the summaries.

Table 1. Average change in PTA's for different traits for Holstein and Jersey cows born in 2000 compared to cows born in 1995.

Trait	Holstein cows	Jersey cows
Net Merit ($)	155	128
Milk (lbs)	592	442
Protein (lbs)	19	16
Productive life (mo)	0.3	0.4
SCS (scores)	0.01	0.01
Udder composite (sd units)	0.36	0.25
Feet/legs composite (sd units)	0.31	0.15
Daughter pregnancy rate (%)	-0.1	-0.1
Daughter calving ease (%)	-0.4	

The figures show how rapidly cows are changing for the various traits, but the information is historic. Mating decisions that produced the cows born in 1995 were made at least ten years ago, while the decisions that produced cows in the new genetic base are already five years old or more. The figures may not represent current rates of genetic change. Some facts are clear, however. Genetic progress for production and type traits was strong and genetic progress for fitness traits

other than productive life were small but undesirable. We did make some nice gains in productive life in the period represented in the table. It is my view that dairy producers should pay more attention to SCS, fertility, and calving ease traits and less to type and production in the years ahead. That doesn't mean that progress for type and production needs to cease, but the kinds of cows that make the good milk records certainly does need to change. We need cows that are able to sustain body reserves through the months of high production to improve the odds that they remain fertile, healthy, and relatively trouble-free. That's a different standard of type (specifically dairy form) than we have emphasized in the past.

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**** Upcoming Activities****

Nutrition Cow College, *Virginia Tech*	Jan 11-13, 2005
PCDART Workshops *Virginia Tech*	March 17-18
Ninth National Dairy Calf and Heifer Conference, *Sioux Falls, SD*	March 30-Apr 1

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