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Democracy and socialism have nothing in common but one word, equality. But notice the difference: while democracy seeks equality in liberty, socialism seeks equality in restraint and servitude. -Tocqueville

KOW Ruminations

A book everyone should read, ***The 5000 year leap, Principles of freedom 101*** by Skousen (ISBN 10:0-88080-148-4, National Center for Constitutional Studies, ph 208-645-2625, www.nccs.net).

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Will TMR Feeding Go the Way of the Dinosaur?

Economics ahead may put total mixing out of biz.

What?! Is Tom going too far with the attention-getting title this time? *Surely*, after 20 years or so of the "*benefits*" of total mixed rations, we're not about to go "*backwards"* to *component* feeding are we?! Well . . . I *could* be wrong (Yep, anything I write *could be* [Hope I am in this case!] –*please* read, consider and tell me how so ☺.), but as I see what's coming on the horizon and "*connect the dots*," I would recommend against re-investment in a new TMR mixer. Here's why . . .

Let me preface this with *my thoughts only apply to small business dairy* –those *independent* (free!), for profit (*intention* anyway!) dairy farms that are fully managed by private enterprise. I think it's reasonable to expect that the *government managed* (highly regulated *with reporting to government entities* –as with ***comprehensive*** nutrient management) Dairy Business Centers (DBCs) will continue to feed TMRs because they will be one of the major **ag** *benefactors* of the *coming* (carbon) Cap and tax (trade - *redistribution*), and will therefore be able to (artificially) afford the high level of mechanization / energy use. TMRs will also be deemed necessary for the *hoax* of "*precision feeding"*. You see, the *multi-thousand* cow dairy will be judged "too big to fail" and there will be far too much *invested* by government-banks (banks owned [nationalized] by the government) to let them go bankrupt. Hope that's the *craziest* thing I have ever written. Unfortunately, this is the path I *believe* we are on ***unless*** **America comes to her senses!**

Just *consider* the *investment* in the big manure digester[1] alone (purported to save us from the "global warming /

[1] For a view of what *you* and I may be bankrolling for DBCs, read "Manure system gets cooking" by Sally Schuff in 5-4-09 *Feedstuffs* or go to www.earthrenew.com. This is a *great* idea / solution if the free market alone (no public funds) can support it! If not, a tax money *sinkhole*, and ***collective*** farm dream.

climate change *destruction"* caused by methane). After *sinking* that many dollars into the slurry pit, the consensus of the "*wise"* politicians will be that we should *all (collectively)* dive in after it! Oh, the joy of contemplating the benefits of big government control (fascism by definition)! Best trade in the barn boots for waders ☺ or scuba gear! *Unless* you *intend* to be *manager* of a multi-thousand cow DBC (there will be no such thing as an "owner," by the way –these are owned by *favored* "groups" [ultimately all taxpayers will pay the bill]), I don't think you should be shopping for a new TMR mixer. Still think I have gone too far? I would like to meet the manager of a DBC or even *owner* of a CAFO (Concentrated Animal Feeding Operation –over 1000 *animal units* with a *mandated* CNMP) that can tell me he is *free* to operate as he chooses / pleases. Bailouts for mega-dairies? Naw, that'll never happen . . . I was just informed last week of a multi-thousand cow California dairy that was judged "too big to fail" (hope it actually does if it has!) - and when the bank can't bankroll now-a-days, where do you suppose the money will come from? The government *prints* (borrows) more –and adds it to our *grandchildren's* bill. However, there's actually a limit to the amount of debt we can pass along to our posterity (this is immoral!) and we can expect ***huge*** monetary ***inflation*** and **tax increases** *on energy* (electricity, LP gas, diesel, gasoline) in the *near* future.

2-25-09 Hoard's Dairyman (Emphasis added)

Help is needed to get a handle on greenhouse emissions from dairy farms. The dairy industry is working **collectively** on a major initiative to measure greenhouse gases for fluid milk from farm to table. Answers are needed so our industry can respond to **changes** in the consumer and retail marketplace sectors, as well as protect our industry from undue **regulations**. Dairy Management, Inc., and National Milk Producers Federation are working with co-ops that are sending surveys to **selected** producers. About 1,000 completed surveys are needed. The surveys will not identify farms involved, and all information gathered will be completely confidential. Dairy processors already have completed an extensive survey documenting greenhouse emissions at the plant level. The University of Arkansas which is overseeing the project has a technical support line producers can call, and there's a how-to guide at www.**dairycheckoff**.com.

This brings me to the reasons why I think **you** should consider how you would operate *without* so much mechanization – electricity and diesel fuel. **Yes, even *without a TMR mixer*.** *Because of* government meddling / spending (debt), we can *expect* energy (including *grain*) costs to climb significantly *and inflation to explode*. For our sake in dairy, I do *hope* price inflation on milk will *precede* price inflation on input *costs* required to produce it. ***Small business* dairy dare not hope in the carbon tax redistribution payments *soup line* to keep us profitable**, as *small* business is not favored in the central planning model. The model I see emerging is one of "public-private partnership" geared mostly to serve **big** business (from rbst and amino acid sales to manure "digesters") with the power (force) of **big** government. Again, expect *significant taxes* to be added to electricity and *fuel* to pay for all the new redistribution of government "help." (I'm from the government and I'm here to . . .Scary! Yes.) The only energy we small business folks should be focused on using is *solar* -and **brainpower**.

Let's back up and consider why TMRs were promoted / implemented in the first place. Does anyone remember the industry that adopted TMR feeding *before* dairy? Yep, you have it, beef feedlots. This to aid them to feed with *relative accuracy* (precision ag is an oxymoron) very high grain (to all grain) and by-product diets. Dairy adopted TMRs to move in the same *direction* –and to mix in otherwise *unpalatable* or difficult to handle by-products. **I don't think the future will *afford* cheap concentrates** if our country continues (*fuel*ishly) to subsidize turning corn / soy into fuel while (politically) preventing the use of our own *abundant* "fossil" sources, nuclear, etc. **TMR feeding is *all* about blending in lots of (*cheap*) grain and protein concentrate.** Apart from the availability of *cheap* concentrates (and possibly the benefit of being able to blend low palatability forages with better quality / more palatable ones), the TMR mixer might be better left next to the threshing machine in the ag museum. Sure it has a scale and some of them help you haul the feed to the barn, but how much are these things worth?

Have you ever added up the labor, *fuel* and maintenance / replacement cost per year to feed TMR? Beside the purchase price of the hunk of heavy metal, how many hours are going on the tractor that powers yours? How much more milk must your herd produce simply to break even? Like so many inputs / technologies, it's the *consistent* payback (*that includes a profit margin*) that can be difficult to achieve. This even if you are told "you can't afford not to" and "It'll pay for itself." I think, considering the current economic model and the significant potential for rising energy costs in the future, ***replacing*** your current TMR is going to be nearly impossible to justify (*unless you are getting some sort of bailout)*. While I could go through a bunch of *average* numbers on what it costs to operate a TMR, **your** actual cost is what matters. Go back to you tax records and get a figure for machinery operation and maintenance, then see how many *hours* your TMR runs per year. Include labor costs. (Of course, I'm not suggesting anyone abruptly cease to feed TMR if they have a machine in good working condition and *that's paid for*.)

Consider the top costs associated with producing milk.

1. Feed (you can grow it or you can buy it).

2. Labor (it's number two-especially for those who must hire outside the family).
3. Replacements (this is your heifer and dry cow program and/or purchases -if necessary).

Each of these areas *can be* ***significantly*** reduced in cost not by *borrowing* huge amounts of money in order to adopt new technologies and install new equipment, but rather by re-implementing old, ***proven*** methods.

How many years now have dairymen been told that the *cheapest* way to feed cows is to *base* their ration(s) on the *tonnage king* (corn silage)? Yeah, those that follow that advice just can't find ways to spend all their excess cash ☺. (Don't worry, the folks in Washington, D.C. are "*helping*" –to spend our great grandchildren's money!) If we really want to lower feed costs we must *consider* yield (Yes, it's *important* considering the cost of land) ***and*** what it costs to put it into a ration (transport, mix and supplement? Harvest and storage?). I am of the considered opinion that small business dairymen *must* move back toward a ***legume based*** (grass mixed) forage program ***harvested by the cow*** in order to stay in this business into the future. Again, as we look to the future, there are valid reasons to believe energy costs will ***significantly*** increase (including *grain*) –excepting *solar*. (Let's keep this just between you and I, but I don't think the government has yet come up with a way to add a *tax to sunshine*. They *only* have plans to tax the air [CO_2]). Increased energy cost will significantly increase the cost of **everything** from nitrogen fertilizer (corn-on-corn needs it) to *chopping* -to spreading manure. Any feedstuff that *needs* to be *trucked*-in (instead of grown on-farm) will cost more. Any feedstuff that can be **homegrown** *without* commercial fertilizer (1st year corn using manure and legume nitrogen credits fits), and especially, any forage that ***a cow can harvest*** (and manure that *a cow* can spread) will be a **significant** savings. When rations are intentionally built ***primarily*** upon *low* protein forages that must be harvested by big investments in chopping, hauled to the barn, then hauled back out (manure) *after being mixed* / fed with ***significant*** amounts of supplement, it "locks" you into the highest cost program for all 3 of the *greatest* costs to milk production. Really, the ***organic graziers*** have the **most sustainable** model for the future –not because they get paid more for milk (kiss that good-bye if the big government tax / spend machine *continues* to destroy the wealthy upper-middle class *organic* consumer), but only because they (the good managers) **know how to use *legumes / manure and rotate crops* and *graze* livestock**.

TMR mixers loose their advantage when grazing is implemented and very low levels of concentrate are (must be) fed. The grazing cow cannot be fed TMR anyway, only partial **(P)TMR** –which must be controlled the same as **grain** (review on my website the title "It's impossible to feed a TMR while grazing" from 2003).

Thomas Jefferson said: "I place economy among the first and most important virtues, and ***public debt*** *as the greatest danger to be feared. To preserve our independence, we must not let our rulers load us with* ***perpetual debt****. If we run into such debts we must be taxed in our meat and drink, our necessities and our comforts, in our labors and our amusements. If we can prevent the government from wasting the labor of the people, under the pretense of caring for them, they will be*

5-10-09 Hoard's Dairyman (Emphasis added)
"Greenhouse emissions create cloud over dairying."

If you're both confused and concerned about how this whole environmental sustainability thing will affect the dairy industry, you are not alone. We've read and heard more on the subject already than we would like to think about, and we still don't feel very informed.

We're glad that Dairy Management, Inc., and others in the industry are making a **serious** attempt to put together some sound and needed information through the Innovation Center for Dairy. **The Center has formed a "cow of the future" working group with the goal of seeing what can be done to reduce methane emissions from our cows** (the single largest component of the dairy industry's carbon footprint). DMI CEO Tom Gallagher recently said that cutting the dairy industry's emissions by **25 percent** would be equivalent to removing 1.25 million passenger cars from the nation's roads.

In the background of sustainability issues is what kind of **public policy** will evolve and how that will affect dairying and agriculture and other businesses and industries. A total of 65 Senators rejected a procedural move that would have limited debate on any "**cap and trade" legislation**. In other words, any "**cap and trade" legislation** would need 60 votes in the Senate, not just a simple majority of 50.

That should give some comfort to those in our industry that economic impacts will be considered along with environmental impacts as we address climate-related issues.

Thomas Jefferson warned: "When all government, domestic and foreign, in little as in great things, shall be drawn to Washington as the centre of all power, it will render powerless the checks provided of one government on another, and will become as venal and oppressive as the government from which we separated."

The *typical* supplementation (concentrate) program appropriate to complement high quality legume-grass mixed pasture only mounts to ***a few*** lbs/day (see the KOW guide sheet " . . . Feed rec's for lactating cows on top quality pasture"). Therefore, (less than) 4 to 8 lbs of concentrate *per milking* (2x/day) could be fed (depending upon breed/bodyweight / total DMI) without concern about causing rumen health problems. **In parlor grain feeders** could accomplish this (without the need for a TMR) and *at the same time* encourage cows to *eagerly* enter the parlor. If not this, **lock-up headgates** (alone) could be used to control grain intake, and/or would allow for an *additional* grain feeding (or two) in a 24 hour feeding period –which *may* be appropriate while feeding lower quality forages throughout the winter months. That 3rd ***grain*** meal *could be* in the form of ***corn silage*** at mid-day **year round** (especially **if** cows are brought back from the pasture at noon to **avoid heat stress**). **If** corn silage is part of a *component* fed feeding plan it should always be *controlled -as with any other grain* (most well eared silage contains at least 50% grain –and often more –on a dry matter basis). Following is a corn silage top dress mix I often use to balance out its *deficiencies*. Notice it *doesn't* contain additional corn (or other starch sources) –only protein, minerals, and buffer.

Prot / Mineral Mix to Correct *Corn Silage* Deficiencies (appropriate to "top-dress" on a *meal* of corn silage of *up to* 20 lbs wet basis)		
% of Mix	**Ingredients**	**Lbs per 4000 lbs**
2%	Magox (56% magnesium-oxide)	80 lbs
6 1/4%	Lime (38% calcium-carbonate)	250 lbs
8 1/3%	Buffer (27% sodium-bicarbonate)	335 lbs
80%	Soymeal* (48% CP solvent ext.)	3200 lbs
3 1/3%	Liquid molasses (no NPN)	135 lbs
Feeding rate: 3/4 lb/hd/day **for each 5 lbs of corn silage fed /hd/day** (wet-as fed-basis). *If USDA Cert. Organic, use ground raw soybean or other organic source of soluble / degradable crude protein. If the corn silage is used to supplement a ***pasture*** *based* ration, use ground *roasted* soybeans in place of 48% soymeal.		

Another lower cost (than TMR) *suggestion* I would make to *ease* the feeding of grain and / or corn silage (with your skid loader) at a fenceline feeder (with lock-up headgates) is to consider purchase / use of either a bedding "side-shooter" (contact Mensch Manufacturing, ph 269-945-5300, fx 5584, www.menschmfg.com) or auger bucket for your skid loader (contact Danuser at 573-642-2246, fx 2240, www.danuser.com for info on their side discharge *auger bucket –which is also capable of* ***mixing*** *minerals* into grain or pre-mixing minerals *alone*).

Although it adds back a little fuel and labor, there is also the option of *bringing* the ***lock-up headgate lined*** bunk

> *" . . . Our nation didn't become the envy of the world because of what government did. It became the worldwide beacon of hope and the unmatched seat of prosperity because of what government was forbidden to do. Those who understand this understand why the constitution limited the government, not the people. They deserve the label "Constitutionalist," and it is they who are so sorely needed to reverse our nation's downward slide."*
>
> *- John F. McManus*

to the *corn silage* silo for loading. The following two manufacturers make (can even custom design) **feeder *wagons*** with ***headgates*** along each side (cows face each other like an in-barn center feed system): contact Peterson Manufacturing Corporation at 715-823-6247 or Zimmerman, Inc. at 717-738-7365. Again, the reason for use of ***lock-ups*** is to *prevent individual* cows from eating *more* corn silage (or grain) than is *healthy* for them (prevent acidosis). A feeder wagon (or two or three) *could be* placed (frequently relocated to prevent mud[2]) along a *shady* tree line or breezy hilltop if used to *supplement* a grazing herd at mid-day. Best have a plan to cope with *extremely* wet or hot weather (concrete or well groomed, crowned-drained limestone pad area under shade cloth?). While cows can run into the woods ***several hours*** per day to avoid heat stress, **they won't be eating** during those *several* hours. When cows stop eating they drop in milk production and reproductive efficiency (you already know this ☺). Have a plan or plan to have poor results. *A little* balage or dry hay could

[2] There may be **significant** *unforeseen* advantages to the mobile bunk system ***without concrete***. Although mud is the first concern that comes to mind in wet, poorly drained areas, there may be benefits to keep cows completely off concrete. I have observed **significant** *hoof health* benefits (less potential for laminitis, etc.) when cows are kept off concrete –***so long as kept relatively dry (well scraped / drained)*** and maintained ***without*** **sharp rocks (to injure)**. *Confinement* facilities recognize the benefit of *rubber* flooring. With less invested, I do think that an outdoor *well drained area* could be kept as a wet weather (only) feeding area. This *could possibly be* made with a base of rock (with highway fabric to keep it in place) and then covered with a **significant** amount of fine limestone and /or woodchips / sawdust. **If only** used as / when needed, and ***maintained*** (scraped, groomed, recovered occasionally), it *could be* a *healthier* surface for hooves, yet relatively low cost. This *presumes* that whenever the weather is dry enough to do so, the cows would be fed in the *paddock* following the grazing rotation (to reduce manure hauling, let *cows* spread fertility). Of course, each farm situation is different, but it's an idea that could be used on many without a great investment. Possibly one could even contract -out the maintenance thereof to a local excavation or landscaping company(?).

be tossed over top of this wagon of corn silage –the "top dress" recipe too (see box). Release the headgates after they all get their ***equal share*** (*popular* socialist concept ☺) of the silage and hang a **free choice buffer** feeder on the front of each. Make sure water is available if / when cows are expected to stay on the paddock through the heat of the day (*not necessary* if back to the barn at noontime and only overnight in the pasture).

While there's no such thing as a *zero* labor dairy (although our clients with the *robotic* milkers[3], at times, give the impression ☺), I do observe *well managed intensive grazing* dairies having a much better (lower stress, more flexible) lifestyle than those who appear to be serving the needs of mechanization (repairing / operating equipment *designed to replace cow labor*). Mixing TMR takes much longer than breaking open some balage. While *chopped* forages fed in large quantities require *more than a loader* for transport to the bunk, the balage system does not –and **if** any sort of processing is needed to spread it out along a bunk, it does not *have to* be extensive, complicated and expensive. Of course, ***whenever the weather conditions are favorable*** for cows to *feed themselves* (**graze**) and *spread their own manure*, it just can't be more fuel and *labor* efficient.

Much is made of ***feed efficiency*** now-a-days. The *true and significant drivers* of increased feed efficiency are not *additives* (as some salesmen or even well known *dairy scientists* might have you believe ☺), but rather **forage quality** and ***early lactation* (peak) milk** production (by-product of good repro-efficiency –which ***requires*** good feet and legs [not high grain!]). One (*significant*) way to have *higher* quality forage is to *reduce* storage ***quality*** losses. The ***greatest*** way to do this is not to search for a better silage additive, but rather to ***eliminate*** storage (graze)! Did you know cows ***grazing*** confound the researchers energy / predicted DMI numbers? Yep! They can't yet explain how cows milk so well (efficiently) on so little "energy" / dry matter ☺. The "numbers" / *predictive "models"* (computer equations) don't work out the same on *grazing* cow as those fed *stored* feedstuffs (heck, they don't tell all in confinement either ☺). It's because the short trip from the cow's tongue to the rumen leaves little opportunity for loss of sugars / pectins –**the most digestible portion of forage lost during wilting (and *especially* in silage systems that cannot *eliminate oxygen)*.**

Hoard's Dairyman, May 10, 2009, Editors
"What happens to our free stall cows?

The Holy Grail of the dairy business –cows that produce a lot of milk, *stay healthy and injury free, and last four or five lactations or more –remains elusive*. We've learned so much about caring for cows you would think we would be making more progress on lifetime milk and *longevity. . .*

Finally, the third most expensive part of dairy farming is *having cows* ☺, I mean ***replacing*** them -as they must *eventually* turnover due to health and reproduction problems. **Did you realize that it's *possible* for this part of your dairy business to be *self-supporting*?** Yes, it is! **If** you *sell* 50% of your heifer crop yearly it *can* bankroll the cost of raising the other 50% -that simple. Impossible? I *don't* think so. This is (has always been) the "secret" to *profitable* dairy farming (or "riding out" *unprofitable* months). The ***average*** dairy has a turnover rate *exceeding* 35% / yr. With a 50% heifer crop (average per year –long term [no calls about too few heifer calves *please*! Try sexed semen on heifers! ☺]) and allowing for a 10% death / cull loss from that, you *don't* accomplish the goal of selling ½ of the heifers ***unless the milking herd turnover rate is less than* 20%.** Impossible? Not. ***Many*** low grain / high forage ***grazing*** based dairy farms can and do achieve this –and they **feed** replacements with *less labor* and lower costs than anyone (by grazing).

Dairy Herd Management, May 2009
"Save 50 cents per cow per day"

Improvement in your herd's feed efficiency is one solution for surviving tight profit margins.

In the Midwest, for example, one pound of dry matter is priced at 9 cents, says Mike Hutjens, University of Illinois extension dairy specialist.

If you can support 70 pounds of milk with 44 pounds of dry matter instead of 50 pounds of dry matter, you can save 56 cents per cow per day.

"That's a huge number," Hutjens stressed during a dairy Webinar hosted by the University of Illinois in March. "I would argue that all of us should be able to find 50 cents (per cow) per day."

Aim for a feed efficiency of 1.5 or more.

[3] Are robotic milkers the solution to high labor costs, *hired labor headaches*? I'm really not sure what I think at this time. The Lely system (that a couple of our clients use) *appears* to do a good job of milking / feeding –and I think I could use it *without* (P)TMR. Success with grazing? I'm skeptical, but open to learn (cows need lots of *time* ***near*** the robots and I'm concerned about *location* in relation to the paddocks. *Possibly* [?] they can still be used successfully if cows are *herded* back to the barn [with *some* dry hay or balage to eat?] on a regular schedule 2 or 3x/day and penned so they *must go through the robot before returning to pasture.*). Verdict still out on *long term* economics (maintenance and repair).