Solar Harvest Farm
2008 Spring Newsletter

Fellow Connoisseurs of Food Raised in Sunshine! March 20, 2008

As you can see, we have much to talk about in this once-a-year missive! The hustle and bustle of the growing season rarely allows much time for details so we hope you take the time to fully absorb this newsletter. I believe this year will be a defining year for all of us. Globalization is reaching deep into the heartland, effecting every one of us in some way. Heightened demand for oil and farm commodities is changing everything faster than most of us can adapt. Even though some of these elements are not necessarily in our niche, nevertheless, their impact is nothing short of significant. If the small independent farm is to remain active in agriculture, it must adapt. Fortunately, as individuals, we are quite resilient. Unfortunately, as a society, we are not! This newsletter speaks to this difference. There are a lot of ways that we can all help ourselves - *today*, as opposed to waiting for society or government to implement pie-in-the-sky technology a decade from now. I suppose it comes down to *lead or follow*. Because of your involvement with this farm, you have not been following, you have been leading. We lead by utilizing locally produced sustainable energy to provide locally produced sustainable food. Your support has been the only thing making this possible. Together, we are blazing the trail to a sustainable future.

2007 Highs 'n Lows

Before we talk about things in the future, we should first talk a bit about things in the past season. 2007 could be described as bittersweet. On the sweet side, the chickens faired well in the pasture resulting in good-sized birds on harvest days. We've taken extra time to provide additional shade for them in midday. While the methods have been poor-boy, nonetheless they have been effective resulting in greater comfort. That said, 2007 was our worst season for storm damage. After many years without a hitch, we were hit with two particular storms that produced very localized straight-line winds. The cattle shade-wagon was rolled-over twice. The first time I repaired it. The second time it was totaled. This new design is steel. In early July another storm producing straight-line winds peeled a third of the roof up on our newest hen house, destroyed one poultry shelter, damaged the house and as mentioned, destroyed the shade wagon. This is trivial compared to what would have happened if the poultry shelters had been stocked with birds and in formation in the fields. Luckily, we were in between batches. Otherwise, I am certain we'd have lost the whole kit 'n ka boodle. We have a regular "storm-drill" we implement whenever a threat exists. Our shelters and anchoring methods have withstood extreme high winds from the west and south. This sucker-punch out of the northeast has now got me spooked. If we were ever to lose those fully stocked shelters, I don't know that I'd have the gumption to rebuild. Ah, but the summer was still young at that point. The icing on the cake was the 15" of rain that fell in mid August coupled with a deafening lightning strike that brought a surge into the house, (via the electric fence AC). I have since learned of a direct market farm in Northern Illinois that took a direct hit when the January tornado's came through. They lost their outbuildings, their old dairy barn, their house - everything but their lives. From this perspective, our problems seem trivial.

The July beef, (the larger beeves) weighed in very close to expectations. The feedback I received from folks who ordered from this group was all very encouraging. Larger beeves means bigger cuts of meat. As many of you recognized, the fall beef harvest was under weight. As a result, we had to cancel some of the latest orders in order to allow the beeves to grow larger. For those of you who had hoped for bigger quarters, we will have heavier animals this year if you order from the July harvest which includes 50% more animals than last year. If you want bigger quarters and/or you don't want to wait until fall, please reserve your July beef early.

The Pigs did well, with copious quantities of our succulent green cut forage. Unfortunately, we had to devote an incredible amount of time finding homes for the last ten pigs. A HUGE thank you to those of you who also sacrificed your valuable time to find homes for these final pigs. You really made a difference. As a footnote to this, we had no trouble selling the first 50 pigs, which is the same number as the previous year. In 2007, we moved up to 60 pigs. Given there are more than a million people within an hours drive, I hope 50 pigs isn't a tell-tale sign of market saturation? Pork is the only item on the menu with room for growth on this small farm. Being a gluten for punishment, we'll try 60 again this year. This is not progress, but at least it's not going backwards.

Certified organic feed costs for the chickens, hens and hogs increased 20% throughout the season. The gradual increase was tolerable for the June chicken harvest but the added expense cut deeply into the September harvest margins. Because of how we communicate pricing in the spring as well as the cost to mail out notices explaining a price increase, return deposit money to those who might've declined, rearrange the schedule, etc, we had to absorb it. (Remember, it was also at this time that we were desperate for homes for the last 10 hogs.) As it currently stands, 2008 feed prices are 40% higher than this time last year - and climbing. You will see some of this reflected on the pricing and schedule page, with price increases of between 5-10%. Please keep in mind that the 2007 pricing for chicken had remained the same from 2006. For those who ordered whole hog or half or more beef, the 2007 pricing was actually at or below that of 2006. Yet there was

still another sting in 2007. Only two weeks prior to the fall harvest, the butcher raised prices, adding an unexpected 7% to pork processing and 13% to beef - which we also had to absorb. (All of the butchers have since increased their pricing similarly). Because of the inability to lock in pricing with processors, we have gone back to pricing our beef and pork separate from processing costs, just as we did prior to 2006.

A Word About Butcher Shops: More and more butchers are either going out of business or no longer offering custom services. The workload of a closed processor is thus shifted upon the remaining. My dealings with these different processors tells me that many of these folks are fatigued by this burden. Business is good, but their quality of life is diminished, for, like us, many have not had a vacation in over a decade. I'm worried this trend will continue, these people will burn out and sell or close the business. If the business is sold, it's new owner will likely have to resort to drastic changes with it's workforce resulting in problems such as we experienced in 2005. While we will continue to expect high quality from the butchers we deal with, we must do so with appreciation for their services. This area cannot afford to lose anymore butcher shops. Without custom butcher shops, the direct-market farm is immediately extinct as it is illegal to butcher animals on the farm.

Egg Update & Recap: In 2007, an attempt was made to establish several egg routes. Customer interest was minimal thereby making the delivery costs for so few people unjustifiable. I had high hopes for this concept because delivery would eliminate the number one inhibitor of growth in egg sales, that being the inconvenience of driving to the farm to get them. What now? Good question. We have an investment in hen housing. I can't let go of this enterprise without further thought. Twenty-twenty hind site clearly shows we never should have entered the egg market. It is our poorest performer, consuming almost 30% of yearly hours, (because it's 7/365). The wrestling match in my head right now is centered on efficiency. We still have enough consistent egg customers to justify keeping some hens. The magic number for hens - the sweet spot for efficiency in conjunction with a practical, portable house size, is 400 hens. When I reduce the number of hens on my spreadsheet to meet the consistent demand, the return is very poor. I'm going to hate to see them go as they are integral to the diversity on the farm. Yet, they are a ball and chain on my time and the overall performance of the farm. No final decision yet.

Some folks might take exception to my cost return figures simply because other farms are offering organic eggs for similar prices - therefore they must be doing okay. I have studied the methods of other farms, compared our costs to those of others and made many cost and efficiency improvements. I am extremely confident that our costs meet or exceed that which is typical. I say this with complete confidence: Most farms are selling certified organic eggs at or below the cost of production. I know this sounds presumptuous, but if any farm with a 200-400 bird pastured flock were to refute my statement while at the same time allowing me to audit their process, I am certain I would identify the financial hemorrhage in their egg operation.

Even ignoring the intricacies of materials, labor and overhead expenses, the consumer has an obvious tell-tale which illuminates the problem: A dozen eggs such as we typically offer weigh close to 2 lbs. At $3.50/dz, this yields $1.75/lb - about half the return as compared to other organically raised protein sources.

Raising Grassfed Beef In Wisconsin

We've proven that we can consistently produce healthy, tender and delicious grassfed beef that folks come back for year after year. However, we're still working on achieving true *grassfatness* within a 20 month or so timeframe. It all boils down to thermodynamics as we operate in a very cold and increasingly windy winter climate yet we have one grade of fuel to stoke their metabolic fire. A wood stove makes a good analogy: If we stoke the stove with the same quantity and type of wood on a calm 35 degree day as we do on a windy subzero day, the temperature in the room will fall. Like a firebox, the cattle's gut can only hold so much fuel. When the fuel is hay, it will be sorely lacking in energy on too many of the winter days that we experience in Wisconsin. We gain weight on the calm days. The windy days with temps below twenty probably consume much of their intake just for body maintenance. By keeping a greater percentage of cattle a second winter, we realize a respectable finished weight, however, the additional 270 days requires more labor, reduces our capacity and assumes more risk. The genuine success stories involving grassfed beef reaching finished weights in a time span that avoids the expensive second winter are generally located in the southern states or states like Virginia which is tempered by the ocean. In these states, the winters are not severe while the days off pasture are a fraction of Wisconsin conditions. These two elements, winter heat loss and days off pasture, represent the greatest expense and resultant challenge for Wisconsin grassfed beef producers. We will continue to make improvements and advance new ideas to overcome these regional elements. Meanwhile, we will carry more over a second winter.

In the News...

New USDA Grassfed Labeling Claim

The new USDA standards were implemented in late 2007. Grassfed beef bearing the USDA grassfed seal of approval may be legally marketed as grassfed with the liabilities that follow. Liabilities and assets are a matter of perspective. To the consumer who was expecting a genuine grassfed product, (cow's milk, hay and finished on rotationally-grazed forage), these allowances demonstrate a liability as it also does to the farm which invests in truly grassfed methods. For those farms that only wish to capture a market premium without investing in the actual methods, the following allowances are more than an asset, they are a godsend.

- Participation in the government verification process is voluntary, therefore the grassfed claim can be used by anyone.
- As long as the feedings are recorded, the unrestricted supplementation of energy, (corn or other) is allowed.
- The standard uses the term "access to pasture". "Access" does not stipulate the cattle must actually be on pasture.
- Artificial hormones are allowed.
- Both therapeutic and sub-therapeutic antibiotics are allowed.
- Milk replacers, including those made from bovine blood meal are allowed.

NAIS Update The National Animal Identification System has stepped up it's recruitment of "associations" as a means of forcing this mandate upon livestock owners. This is to say that in order for any livestock owner to become a member or renew membership in a breed association, 4H, FFA, breed registry etc, the livestock owner must first submit to premises registration. While the USDA has given money to the FFA, Pork Producers Council and others to promote NAIS, it's too early to tell how many breed registries and associations will cave in to the same bribery. The WLIC, which is the WI trade group representing the agribusiness corporations that sell animal ID gear, is the official Wisconsin entity driving this mandate. They are currently lobbying the county fair boards to enforce their business agenda. WLIC was deputized by the Wisconsin DATCP as

the contracted agency responsible for implementing NAIS in Wisconsin. If you haven't yet put this together, I'll clarify: The taxpayer funded Department of Agriculture, Trade and *Consumer Protection*, has given a consortium of private businesses the exclusive contracted power and tax-payer-sourced funding to implement a mandatory program that will increase their sales and resultant earnings exponentially.
Proponents of premises registration, animal ID and animal tracking state the process is not only needed, but must be mandatory in order to mitigate the spread of disease. Clearly, this process is designed to protect agribusiness markets while exponentially enhancing market share for companies selling animal identification technology. The USDA/NIAA WDACP/WLIC alliance deserves recognition as one of the most egregious examples of corruption between government and industry. Read further to examine what these alliances between government and industry are NOT promoting and decide for yourself if their intentions are towards animal/public health, or simply enhancing shareholder value.

Meat Recalls The volume of meat recalled from USDA inspected slaughter plants reached unprecedented levels in 2007 leading to the failure and closure of Topps Meat Co, in business since 1940. The vast majority of the meat recalled in this case as well as others was already consumed by the time the recalls were announced. The e-coli 0157:H7 strain is the pathogen found in the beef from these recalls, primarily as ground beef products.

E-Coli Recalls: Why So Many? The bovine gut, (the rumen) is designed to process forage. When a bovine is fed like a hog, that being to consume large quantities of corn, (or now, dried distillers grains from ethanol plants) the rumen fluids become acidic. This acidic environment is harmful to the bacteria that normally hold e-coli in balance. Unfortunately, this acidic environment is favorable for the e-coli 0157:H7 to proliferate. 10,000 or more cattle are slaughtered each day in a typical plant. In spite of USDA HACCP and other strict plant requirements, the pathogen inevitably contaminates the carcass by a slip of the knife into the intestines, the hide touches the carcass or the contents on the kill floor splash onto the carcass. (Recall last year's newsletter describing the USDA documented case in which the contents of the kill floor drain were accidentally sprayed onto the carcasses, this because of an operator error with a valve, yet the USDA allowed the carcasses to be processed for consumption after being cleaned.) The trimmings from these 10,000 head per day are batched for grinding. A typical hamburger patty from any store or restaurant is not meat from one animal, but rather, bits and pieces of the 3000 cattle that had been killed by that point in the production day. These bits and pieces are collected to form the 500,000 lb batches needed to justify the grinder operation. If just one of the 3000 carcasses received accidental pathogen contamination, the entire batch of ground beef becomes contaminated.

COOL Country Of Origin Labeling has been a legislative hot potato that neither the USDA nor the meatpackers are interested in implementing. More accurately stated, they are lobbying to deny passage. When a pathogen forces a recall, or worse, when people get sick or die as a result, not only is there no traceability to the source of the animal that shed the pathogen, there is also no traceability to the country. In spite of overwhelming data demonstrating consumer demand to know the origin of their food, both the government and the meat industry have been successful at stalling implementation.

Mad Cow BSE has previously caused significant losses in the beef *market.* Canada continues to find more cases of BSE. The current USDA procedure requires that packers test less than 1% of all cattle for BSE. A small beef marketer, Creekstone Farms Premium Beef, wants to use the same USDA approved testing procedure to test 100% of it's cattle for BSE. The USDA disallowed this 100% testing. Creekstone Farms took the USDA to court. A U.S. District Judge ruled such tests must be allowed. The USDA has appealed effectively delaying the 100% testing until the litigation is complete. The USDA rationale is that 100% testing could lead to false positives that would harm the beef *market*.

NAIS is designed by agribusiness to remedy the fears of agribusiness. The science that it promotes is myopic and self serving exclusively to the conditions associated with confined animal feeding operations, promoting containment and slaughter of millions of animals as the primary means of disease control. This demonstrates an ideology that is focused exclusively on cure with total disregard for prevention. To suggest otherwise in light of the government positions and actions regarding e-coli, COOL and BSE is to ignore reality. The NAIS and it's state run counterparts will cause little disruption to operations utilizing high density confinements. Conversely, the details imposed by NAIS onto diverse, pasture-based farms will be financially unpalatable. If you and I do not make our representatives aware of this NOW, the NAIS will continue to gain momentum, establish mandatory compliance ultimately forcing non-confinement farmers out of business. Please make a call or send a letter to your representatives today!

Peopleculture Tired of reading conflictive nutritional advice from highly credentialed authors? Me too. As one author demonstrate their zeal for a carb-based diet, another author of similar credentials demonstrates equal zeal for a protein-based diet. Interestingly, a book I recently read promoting a carb-based diet never once mentioned amino acids. Often, carb-based authors speak to the dangers of animal based proteins based on the familiar mantra extolling the liabilities of saturated fats. These authors will recognize the importance of obtaining omega 3 fatty acids via specific plants yet there is no mention nor recognition that the fat content of animal proteins is not simply the result of being derived from an animal, but in fact by the feed source provided to the animal. Some protein-promoting authors are equally guilty of failing to recognize the different effects that simple and complex carbs have on the body. In many respects, both authors are using facts to paint their picture, yet they are both painting with a broad brush. After studying and implementing different feeding regimes for organic livestock as well as further reading of cutting edge authors, I think both camps have missed a critical link: We are not simply feeding ourselves, we are first feeding the livestock inside us. Trillions of microbial livestock are busy "grazing" in your body right now - most of them in your GI tract. Your "farm" contains a multitude of species that get along alright as long as they are well fed and live in an environment that suits them. Failure to provide proper food and/or environment leads to antagonizing relationships between species, with one species benefiting by another's demise. The parallels to feeding livestock are unmistakable. Like the differences between conventional and organic agriculture, we each

make a decision regarding the animal husbandry we are willing to provide to our private herd of microscopic livestock. Today's conventional nutritional advice is philosophically in concert with conventional agriculture: Nutritional recommendations are an afterthought, influenced by the availability of pharmaceuticals capable of lowering mortality. This is the "almost, but not quite fatal" method of taking care of yourself and your livestock. It allows you to eat foods that satisfy your hunger without satisfying your *livestock's* essential requirements, ultimately leading to disease - this because of the role these livestock have in processing your food and synthesizing essential elements in your metabolism.

Is it realistic to expect that so many of society's most pressing health concerns can be prevented by nutrition and environment alone? Yes! Many of today's most advanced and forward thinking doctors and holistic practitioners are demonstrating this daily. (A few web resources: www.mercola.com www.jonbarron.org www.westonaprice.org.) As a comparative model, pasture-based farms have consistently proven that when the animal's nutrition and environment are the top priority, pharmaceuticals are rarely, if ever required. If a farmer isn't cognizant of the inputs and environmental factors that will suppress the animal's microbial and immune systems, the farmer is literally allowing these systems to be overwhelmed, then waiting for sickness to appear - thereafter requiring harsh treatment. This applies directly to we humans as well.

The Farm Economy - Micro vs Macro

We all know this past winter has been a doozer as we've all put in extra time and money dealing with the 9' of snow and ice we've been blessed with. (Hey, at least the water table will be high!) Perpetually wet animals and feed has no doubt diminished performance. Many of you on the egg schedule already know how it dropped egg production to a crawl. Maybe we'll get a decent start on pasture and we can make some of this up? Maybe, but right now it's a *wait-and-see*, as by mid-May we'll know if the flooding and ice in the fields has killed the forage. Managing costs in these fickle conditions is a form of calculated gambling. A list of "what ifs" are analyzed. Many of these can be successfully routed with plan A, B or C. The big events brought on by Ma Nature are too extreme to allow any recoup of investment. These local events, in conjunction with global economics, are the predominate variables influencing red or blank ink on the ledger. In our case, relative to livestock farms that do not direct market in a niche, our returns are excellent. Paraphrased: *Excellent compared to farms that operate in the red*. My present concern is that depreciation is outpacing the farm's ability to provide replacement funds. This expensive overhead creates less than optimum utilization against our smaller relative volume. (A primary motivator that pushes conventional farmers to "get big" as it allows the asset expense to be distributed amongst more animals and income.) To the point, because our pricing is higher than conventional, some folks think we're "making a killing" so I really need to speak to this. My objective is to answer and clarify an assumption such as this: *If farmers selling conventional beef are selling for a fraction of your grassfed beef, you must be doing very well.* The challenge lies in providing a brief response to a topic that deserves a book.....but here goes:

First of all, the words chicken or pork could be substituted to the same effect. Beef will provide the greatest clarification as I have recognized bovines to be the keystone species, if you will, of farming in the Midwest and especially Wisconsin. Try as you may, but the odds that you will find a farm that obtains their living from raising beef cattle is about nil. The statistics bear out that which is obvious - off farm income constitutes almost all of the income on beef farms; beef farms operate at a loss or at best break even. Skeptical? Why would farmers put in so many hours, assume so much risk, maintain so much capital expense - for little or no profit?

1). The market is globally-influenced. The market does not allow for local cost variances to be captured. This creates farmer complacency and apathy.

2). Farms of this nature have never been able to incorporate living wage labor costs as an expense to be captured in their sales price. To this day, university extension routinely issues cost reports utilizing $7-$10/hour as a constant. Even this is unobtainable at conventional sales prices.

3). The Century Farm Syndrome - this describes the emotional bond that exists on many multi-generational farms. Pride, guilt or emotional attachment to a farm that has been passed down for generations lead to a sideline farming enterprise that keeps the farm in play, even if only to cash flow. Every farmer knows what happens to the buildings when the animals leave.

4). The direct interjection and conflation of dairy economics into beef economics thereby depresses beef pricing.

The latter is why I referred to bovines as a sort of keystone species in farming. A young springing dairy heifer is ultimately a beef animal that hasn't yet fully depreciated. When she no longer provides milk, she will ultimately provide ground beef, about seven hundred pounds of it, and the price the packer will pay for her will be far below the cost of beef production. Regardless of the fact that her age diminishes her meat quality, (compared to a young beef breed), the ground beef market does not demand the same grading system as steaks and roasts. Hence, this volume of dairy beef depresses overall beef prices. Whereas the old dairy cow depresses ground beef prices, the young dairy steer competes directly with the highest quality beef breeds. Dairy calves are an unavoidable consequence of an induced lactation period. Milk is the desired product. Impregnation is required to induce lactation. Calves are the unnecessary by-product. Hence, dairy bull calves are sold for as little as $50. This creates two economic ripples. The first ripple goes towards the dairy producer. The breeding and gestation costs associated with the dairy cow that gave birth to the calf are incorporated into his dairy expenses. Reworded: The five tons of feed the cow consumed during her gestation period as well as all the farmer's labor, was paid for in the milk check. Because he does not have to capture this cost as a beef farmer, he can afford to let the calf go for $50 - and market conditions bear this out. The second ripple is obvious - the calf purchaser has just entered the high end beef market by obtaining a calf hundreds and hundreds of dollars below the cost of beef production. There were 1.2 million dairy calves born in Wisconsin last year. 600,000 were steers, virtually all of which were interjected immediately into the beef market, (a small percentage went to veal). Not all of the 600,000 heifer calves are needed as dairy replacements so a percentage of these heifers were also interjected into the beef market.

Regardless of conventional or organic, dairy steers that are raised for beef don't suckle their mother's milk. Her very reason for existence is to provide milk for dairy products, not the unintended calf. Dairy beef calves, be it conventional or organic, are raised on a bottle filled with milk replacer - a replacement that, at least in conventional dairy beef, is derived from waste milk, pasteurized milk and/or a non-dairy substitute including components such as bovine blood meal. Meanwhile, the cow-calf beef farm, with it's calve's naturally raised at the cow's side for eight months, must compete and market their animals into a system that does not differentiate between the two. Neither the cost to feed the beef cow during gestation nor the quality and premium associated with the calf receiving it's own mother's milk, can be captured as a consequence of this conflation of dairy and beef economics. How many folks care if the beef calf was raised

by it's mother's side on it's own mother's milk vs the dairy scenario in which the calf is immediately taken away from the mother to be raised artificially? I've never heard anybody ask this, reason being, I don't think most folks realize that this is what is occurring. This is further borne out by farms that dairy and direct market beef, their beef pricing always being considerably less than beef cow-calf farms. At issue is not a judgement against dairy for undercutting the beef market. This IS what the market will allow. The judgment that is needed is a decision from society: Speaking in terms of non-confinement farming, is society willing to accept dairy beef, (calves that do not suckle their mother's milk) as the exclusive source of beef? Failure to first ask, then answer this question will allow the continued erosion of pasture-based cow-calf beef farms.

Statistics reveal that the average "profit" from each beef animal in the past twenty years has been $3/head, (this again without factoring a living wage). Sustainable farming advocates, not the farmers, but the potential customers of sustainable farms, would do well to grasp this issue firmly: If smaller scale farms are to succeed, (loosely defined as farms in which the farm family does most of the work), how many head per acre are you willing to accept? Even if a small scale farm could obtain not $3, but $300/head profit, in order for this to accumulate to anything resembling non-farm careers, a "small farm" would have to raise and sell 167 head each year - that's close to 400 head total, factoring in the brood cows, bulls, replacement heifers and mortality. 400 head in a drylot/feedlot setting is common these days. But this isn't the environment these consumers demand. Furthermore, as the size of the herd was increased to obtain a wage comparable to a city job, so too were the labor hours. That fifty thousand dollar income is now totally inadequate as it must be divided amongst the full time labor hours worked by the farmer, farm spouse, part-time farm teenagers and with 400 head, very likely additional full time farmhands. Even if we take the kids and the farmhands out of the equation, a twenty-five thousand dollar income each for the farm couple is far below par, easily obtained with a city job that will not only pay better, but will require zero personal financial risk, less hours, less knowledge and fringe benefits that would cost tens of thousands to purchase in a private business. With this said, the "renaissance" in farming that is written about these days cannot actually be determined until we see generational stability on these farms. This will only occur when there is parity, expressed in dollars per hour worked, between the city and the farm occupations. Dawn to dusk farming-as-a-way-of-life may be palatable to a forty-something, but in the eyes of a young adult, it's a ball-and-chain to run away from - really fast. The grass can't be greener on the city side of the fence. That's an irony that will continue to erode the future of farming.

The Progress Perception

I've always felt that we humans misrepresented "progress" in our mind's eye. I think that we, as an advancing society, have miss-conceptualized progress as a chart of sorts, visualizing "progress" over time, much like a business depicts growth. But that's out of step with reality. I think societies actually advance and retreat through a maze. Ironically, it was about this time during the last century that we *advanced* down a path in this metaphorical maze and into the oil era. Who would have guessed in 1908, the year Henry Ford began marketing his first Model T, that this path would lead to an expensive, turbulent and violent dead end that we are now forced to "back out" of? It's hard to "back up" an entire economy - an entire way-of-life. We've put all our "eggs" in this one basket - each egg representing different essential and non-essential aspects of our lives, the "basket" representing the infrastructure of oil. Heck, we can't even blow our noses without oil much less feed, clothe and shelter ourselves. It appears as though you, I and everyone else who likes to eat and stay comfortable, will be the lucky ones blessed with "backing" this economy up. Our actions will be recorded in posterity as perhaps the greatest challenge ever imposed upon a society. We will have to change the oil on the "machine" - the world's largest economy, while the machine is still running. Our motivation: Maintaining a similar way of life.

Chicken Little "*The Sky Is Falling*"?

It's not that the oil is going to dry up soon - there's lots of oil yet to be pumped. It's not Chicken Little and "the sky is falling" via climate change, which is inaccurately depicted as a race to save the planet. The planet will be here regardless of our inactions. The real race is the race to save our way of life on this planet. Oil will flow, war will be waged and large sums of money will continue to be made until the last drop is burned. This is playing out before our eyes and will continue for decades <u>if we allow it</u>.

China and India are at this moment building the infrastructure that will require incredible amounts of oil to fill the cars and trucks for their two billion people. In agriculture, the farm papers are flush with articles speaking to the shortage and high prices of fertilizer yet rarely is this important news projected in mainstream media. Natural gas and petroleum-based products are primary ingredients in these fertilizers. Conventional agriculture is 100% dependent upon these fertilizers to obtain the incredible yields of the last 50 years. The use of these fertilizers for so long has greatly depleted the organic matter in these soils. As a result, these soils are now <u>incapable</u> of yielding even a small fraction of these former yields without petro-fertilizers. Fertility will have to come from another source or means if we are to feed everyone. For anyone to make a conscious decision to remain complacent in light of these facts is to be grossly uninformed or isolated.

Crisis or Consensus?

Does our society confront it's problems by way of crisis or consensus? Are we collectively capable of coming to consensus on issues that have such great impact on all our lives, or conversely, will we withdraw inwards, speaking out only once the problem has become an apparent crisis to ourselves and the majority of people around us? I'm afraid we are too much of a social animal. Far too many of us are unwilling to risk the cajoling, the ridicule or even the ostracizing that can occur when we realize our viewpoint might not be popular with the crowd we normally hang with. To folks who privately, secretly realize we are on a bad path yet don't dare speak out because of these fears, I say fine, "don't say anything - just do something". Talk has always been cheap anyway. What matters is what we do. Your support of organic agriculture and/or organic energy production (solar, wind, etc) need be the only evidence of your opinion and difficult for others to refute. This because, with one decision to support organic ag & energy, you have eliminated the need to waste petroleum and natural gas on farm fields, eliminated reliance on foreign oil, eliminated the need to defend oil fields and consequently, eliminated a huge piece of the federal deficit. All this and much more, for food that is alive with nutrition and tastes absolutely delicious!

Successful Living: Make More Than You Spend or Spend Less Than You Make!

In spite of and because of the world's problems, we're still moving forward! We're optimistic enough to plop another $100K of personal risk out in the fields, hoping it won't literally blow away. Many will take much greater risks. Planting 1000 acres to corn this year will require almost half a million dollars - all at extreme risk. Escalating fertilizer, diesel and land prices are driving these costs. As for us, even though we don't utilize these fertilizers or have the diesel bill associated with row-crop, we are on the losing end of the new farm economy - we feed livestock. I haven't heard the experts say this explicitly yet, but I'd speculate that the period we are entering is the beginning of the worst period ever to be feeding livestock. Prior to the past year, these commodity prices had changed little since the early 70's. It appears that they will now "catchup" in just a few years. This will drastically alter the cost of living for everyone. If we can't capture these added costs in our sales price, we won't survive the turbulence. Furthermore, because of the turbulence and the resultant risks, I am unwilling to put capital into the "make or buy" decisions that may allow greater self-sufficiency and isolation from this turbulence. This is the catch 22.

Meanwhile, I held back on plans for a machine shed even though it's desperately needed. I did get bids which showed me one thing - we'll have to put it up ourselves if we move forward on this. Same thing held true with the grading job I worked on this past fall for the cattle area north of the pond. It was far more cost-effective to buy a tired old excavator and do it myself than hire a contractor. And those long white sock-type thingamabobs you see hanging from the cattle shade wagon are our latest effort at keeping flies off the cattle. They are actually designed to be used with diesel fuel and insecticide - the conventional approach. (Yummy thought huh?) We obviously don't use neither. I've been experimenting with different methods that are non-toxic - materials that, unlike diesel and insecticides, won't poison you if you ingest them. We've had some success with biodegradable soap products, however, the cost for five gallons of concentrate is $175. Because it is water-based, it unfortunately evaporates, rapidly depleting supply while requiring perpetual labor to apply. Here's just another example of the extreme differences between conventional and organic. Even with diesel fuel at $4/gallon, just a few bucks of diesel in conjunction with $20 of insecticide would last us all season. Instead, we used $250 of concentrate and several hours of applications to achieve marginal results. Life is easier when we follow the beaten path - but it's also very toxic in the long run! I will try new ideas this summer. We have to get this cost in control though. We've also invested in several snazzy hay feeding rings that will greatly reduce hay losses. All evidence is that full payback will be achieved in one season. Soooooo....it's not all sour grapes. You're witnessing and participating in the building of a farm from a blank sheet of paper. We remain a very immature and vulnerable business. When I look at some of those beautiful century old farms, I see them in a different light. It took several generations for these farms to build and pay for all that infrastructure. I have to remind myself to be patient, yet Mother Nature keeps prodding me to hurry up.

The good news for us continues to be our base platform - efficiency of operation and discretion in spending. Our electric bill for 5 people, 40 head of beef, 60 hogs, 400-700 laying hens and thousands of chickens is typically under $20. This with the full spectrum of household stuff, 3 full size chest freezers, tractor engine heaters and, did I mention teenagers? Teenagers don't come with Energy Star labels, but it sure would be sweet! Our combined monthly business/personal phone bill - $48. The sun is our primary furnace. Our heating bill is $0. Our TV cost $300, not $3000. My little car gets 43 mpg. And hey, both the car and truck are '93' vintage - they were paid for a long time ago so car/truck payments = $0. Another nice thing about having older vehicles is cheap insurance saving hundreds per year. As far as farm equipment goes: *My equipment is so old*.... I need a tetanus shot before I can work on it! *My equipment is sooo old*.....when I bought it, I was bidding against the Smithsonian! *My equipment is sooooo old*.....the start and stop instructions just say "Giddyup" and "Whoahhh"! Seriously, some of the gear I have is worth more as yard-art than farm-mart! I was afraid to leave my hay rake on the rental ground for fear I'd return and find that someone painted it purple and planted a petunia pot on the seat! One thing about farming this way - if a guy can get past the pride part, you know, the "new paint disease" that is endemic in farmworld, it's downright satisfying knowing it was paid for with cash. They say form follows function so maybe we'll get some paint on things to pretty them up, (sans the petunias). Petunias or not, the point is, we are lean and mean. The solar gear and all the energy efficiency elements designed into this farm have created a scenario in which the basic needs are met by local, sustainable means - prepaid no less. Our use of solar and wind energy in producing your beef, pork and chicken probably isn't going to make your food taste any better, but we certainly hope you realize how these methods for producing food and energy resolve some of the most critical issues of our time. This is the added bonus obtained by supporting our farm. You obtain so much more than delicious, healthy food. By supporting the change that you wish to see in the world, you become that change. We couldn't do this without you - absolutely could not!

Thank you!

Steve, Michelle, Richie, Sheri, Sarah

Ruminations

The image of transitioning to a sustainable economy is a daunting thought - especially the financial aspects. By displaying our farm's low cost of subsistence, as noted above, in conjunction with a reasonably normal quality of life, I hope only to provide hope and potential for others to lean on. We know food and energy costs will continue to demand a greater share of society's earnings. As many ponder how they're going to swim with this much baggage, consider the weight of the elements below and their relevance to what is most important in life. Much of today's financial baggage didn't even exist 15 years ago. Were we still just as happy with life then? As food for thought , (and okay, maybe for just a little bit of fun to stimulate the brain), I've opted to end this year's newsletter with a display of some typical family expenditures. For those of you over 45 or so, you may know and want to hum the tune "Where have all the flowers gone, long time passing" only switch it around a bit to say "Where has all my money gone, long time passing". I'm not a "monthly payment" kind of thinker. I operate on a "total cost" mentality. Here is how I look at expenses, analyze their relevance and justify alternatives. When people ask me what it costs to own our solar and wind gear, I first ask them how much it cost them to rent their energy needs from the utility. This changes the frame of mind completely. Any other comparison is apples and oranges.

Expenditure	Essential for Life?	$/Month	$/1 Year	$/20 Years	$/Lifetime Age 20-90
Heat & Electric (Ignoring inflation)	Yes	$300	$3,600	$72,000	$252,000
Cell Phones	No	$200	$2,400	$48,000	$168,000
Cable /Broadband//Phone - Bundle	No	$100	$1,200	$24,000	$84,000
Dial-up Internet	No	$12	$144	$2,880	$10,080
Gasoline - Car $3.50/gal 12,500 miles/yr 30mpg	Probably	$122	$1,458	$29,160	$102,060
Gasoline - Suv $3.50/gal 12,500 miles/yr 15mpg	No	$243	$2,916	$58,320	$204,120
2 Sodas/Day @ Work - Vending Machine - $1 ea	Hazardous	$43	$520	$10,400	$36,400

Can a Vegan-based Agriculture Feed Six Billion People?

As we step into the post-petroleum era, we are taken back by the shear magnitude of our petroleum dependency. The dominant role of petroleum and natural gas products in food production has been largely imperceptible to the average consumer. As we are now forced to evaluate and implement alternatives to oil-based agriculture, a vegan-based agriculture is touted by some as an efficient, viable alternative. The platform most often utilized by the vegan fellowship extols the inefficiencies that are assumed as a result of feeding grain to animals: Utilize the land base to feed people directly rather than the inefficiency of feeding so much grain to livestock only to achieve less bulk in protein. On the surface, this appears to be a logical argument. After all, even the best feed efficiencies, (chicken) requires 3 lbs of feed to produce 1 lb of meat, therefore we could simply feed three times the number of people by feeding the grain directly to people, right? There are two major shortcomings to this ideology. The first involves the human metabolism, which for much of the populace requires the enzymes and complete amino acids as are derived from animal proteins. I will leave the details of this critical aspect to Dr. Joseph Mercola and Sally Fallon, (www.mercola.com; www.westonaprice.org). What I will speak to in the following brief essay is the critical element of fertility.

Long before we ever brought an animal onto this farm, we first converted the land from row-crop to oats and hay fields. We sold the oats to the elevator and the hay to horse folk. We also planted 1000 raspberry plants and a large area to asparagus. We knew we were moving the farm off conventional and into organic, but at that time we did not have a clear plan on how to get there. Everything did fine the first few years but then either slowed down or succumbed to disease. Our ancestors of thousands of years ago likewise utilized the land until it became infertile at which point they abandoned it for virgin ground. Our neighbors wouldn't appreciate this so we had to address fertility. We'd kept a large garden in the past and had experience with using home-based compost, tilling in leaves and such. But on a larger scale, this wasn't practical - perhaps not even possible when considering business economics. This brought us to a crossroads. Now years later, a diverse and symbiotic rotation of livestock provide all the fertility for this farm. As a result, this farm does not require petroleum based chemicals, herbicides or pesticides - the primary motivation that led to this farm's conception.

But what if we had taken the other road - to raise vegetables exclusively? How do organic vegetable farms maintain fertility without some interaction with animals. The answer is...they don't. Most, if not all organic vegetable farms rotate their fields. Planting the same crop in the same ground in consecutive years depletes the soil of specific nutrients while at the same time establishing a favorable environment for disease - be it disease induced by infertility or pest, (the two are interrelated). By rotating into the right type of crops, the assets and liabilities of different crops create a successful growing environment. One of the most important rotations for a plot of ground is the years in which the plot is planted to a legume. Typically this is done every fourth rotation. The effect is significant in that legumes harbor rhizobium bacteria on their root systems. These beneficial bacteria actually "fix" nitrogen into the soil. These legumes are best established with a cover crop - a crop that establishes itself much faster than the legume, thereby holding the soil in place as well as shading the delicate legume sprouts as they emerge. Oats are a common cover crop. By mid-summer, the oats need to be harvested. However, because the farm owner is a vegetable farmer, he or she contracts the removal of the grain, straw and forage to....a local livestock farmer. The financial loss the vegetable farmer realizes by not planting this plot to an annual is offset by the livestock farmer's payment. While a very large percentage of organic vegetable farms are actually spreading animal manure or animal manure composts on their land, it is clear that even if the vegetable farmer chooses not to spread manure, he/she would still be sustaining their farm with the interaction of livestock via plot rotations. With this reality in mind, there are but three choices:

1). Buy organic vegetables. Even though the organic farm exhibits a direct or indirect dependence on livestock, you know the fertility was provided by a sustainable source. You know that no petro- chemicals were applied to the vegetables or soil. You know the farm is diverse and more likely to be economically sustainable. You will be allowed to witness humane and natural conditions for livestock.
2). Buy conventional vegetables. You know the vegetables and soil will have been treated with non-sustainable and toxic petro-chemicals. You know the farm was more likely to be a monoculture. You know the quality of the vegetables are scientifically proven to contain less nutrition than organic.
3). Grow your own vegetables using home-made, non-animal based compost. You put in the work. You know how it was raised. You are no longer complicit in supporting animal agriculture.

The third option demonstrates the only true vegan diet. However, to be successful in providing complete nutrition, the vegan gardener would have to raise foods containing the full spectrum of amino acids (as well as understanding how to combine these amino acids in order to synthesize essential amino acids in the body). There is no doubt that if one apply's the necessary hours and expertise, one will be successful in their endeavor. Clearly, if the remaining six billion hungry people could be enrolled into this method, many problems in the world would be alleviated. We could then allow all domesticated livestock to become extinct as they would no longer be needed for food nor would there be land available to raise them much less people willing to feed them as pets. The soil formerly used to feed livestock would be divided and worked by all peoples, each for his/her own personal consumption. Perhaps chamber pots would be in vogue for the added fertility this would provide.

It comes as no surprise that most organic omnivores agree with the vegan concerns regarding animal welfare. But these vegan concerns are not spoken from one unified front. The most outspoken and militant vegans are not content with the improvement of animal welfare, but rather, they are explicit in their intent of abolishing all forms of animal agriculture - fully recognizing that to do so would lead to the extinction of domesticated species. While it is fair to say that no one should be told what it is they can and cannot eat, it is equally true that if consumers are to make an educated decision about food production methods and nutrition, they must pay attention to the details. It was only a few generations ago that each one of us had direct ancestry with their hands directly involved in agriculture. Imagine how much less traction the activist agenda would obtain if more people were still farming for a living. Extremism never works when people are informed enough to see through it.

We can certainly disagree with someone, yet respect them for the integrity of their argument. It is truly inspirational to witness someone devoting their life to their passion. An individual or group which promotes a vegan lifestyle and feels strongly enough about their convictions that they are willing to implement the changes and make the sacrifices of themselves, deserves this respect. While I'm sure some of these folks exist, I'm equally sure that most of the *noise* coming from the animal rights speaker is from individuals who've been indoctrinated into an emotional supposition - a sort of alternative utopian reality fed by their passion for animal welfare - which to some degree, but not all, is fed by anthropomorphism, (see opposite page). Unless these outspoken folk have their hands in their own personal compost pile - doing the work that will be required in an animal-free agriculture - making the sacrifice that they militantly demand of others, they deserve neither our attention nor our respect. Meanwhile, the only realistic response to animal welfare, nutritional deficiencies and sustainable fertility is found on organic and pasture-based farms. Fertility knows of no free lunch.

The "*Walt-Disnification*" of Farm Animals

As only .005% of our society now has direct daily contact with farm animals while the other 99.995% obtains exposure via the media, it was inevitable: Too many people now project human values and emotions onto animals. After all, the human voice-overs, lip synced to friendly-faced animals, are hard not to like. But they are just movies. Unlike Run Chicken Run or a host of other movies, when a member of a flock or herd dies, there is no mourning period. The reality associated with omnivores like chickens and hogs is that if the victim is not removed by the farmer, the body will soon be devoured. Because farming involves the full cycle of life and death many observations are readily witnessed. What follows are this farmer's observations, thoughts and feelings about the emotions of domesticated farm animals, as they live their lives, and ultimately at the moment their life ends.

Before I provide specific examples of witnessed animal behavior, it is beneficial to recognize a response that is common to cattle, hogs and chickens. This common behavior involves the fight or flight response which is inherent in all animals, including us. This is to recognize that fear is contagious. If one animal feels threatened, the body language of that one animal is instantly transmitted, received and reacted to by every other animal- even across species. It can also be observed that the animal that does not respond to this chain reaction can more readily become lunch for the perpetrator of this fear episode. And these are indeed episodes, for as quickly as the alarm is sounded, the atmosphere can revert back to business as usual.

Chickens We keep a rooster with the hens. Even though he eats more than a hen and never gives us a single egg in return, his contribution is significant. When he talks, the hens listen. It's not a paternal type of dominion as it might sound, but rather, a survival mechanism. Here's a short story of my most prized animal emotion event involving the chickens:

We feed the hawks here too. They are our #1 predator of the hens, capable of depleting one hen a day. One morning, I heard the rooster sound the distress call, I look out to witness an attack. The ten second warning the rooster provided gave enough time for all the hens to scramble for cover. The hawk lost round one. Still, all the chickens now stayed close to the hen house. The rooster went inside. Sometimes, he let's his guard down, just smoozing with the ladies in the henhouse. For all I know, maybe he was officially "on break". Regardless, that hawk was still hungry and returned when the "air raid siren" wasn't able to sound. This time, I became aware of the attack due to the sound of a hen in distress. The hawk had her pinned down as it began to strangle her. It was pure pandemonium in the field. The more the victim vocalized distress, the more the others instantly responded, first with a run towards their downed flockmate, then a rapid retreat. (For the first few moments of distress, other hens will provide aid, only to quickly retreat as they experience direct danger.)

Then, out from the door of the henhouse fly's, (yes, he was flying), SUPERrrrrrROOSTER to the rescue. (Que the Mighty Mouse music: "Here I come to save the day".) It was almost as if he had thought "not on my watch" and out he came with a vengeance. His squawking was as aggressive as his speed as he charged the hawk, risking his life in the process. I couldn't help but apply a sense of chivalry to his valiant response. But the hawk somehow knew something the rooster did not. Even though, pound for pound the rooster outweighed him, the hawk held his grip on that hen while lashing out and screaming at the rooster. The rooster retreated, screaming at the hens to do the same. This time, the hawk won.

If I end the story right here, clearly, we would all recognize human-type emotions in these birds. We feel that they think about each other and care about each other. But, as Paul Harvey would say, it's time for... the rest of the story.

To you and I, it is a morbid thought to think of a predator eating one of our own kind directly in front of us. But there that hawk sat, ripping the feathers and flesh from the head and neck first, (hawks always eat the head and neck meat first), as the entire flock of hens watched nervously from a distance. But the nervousness didn't prevail, not like you or I would think. Instead, the hens gradually released their fear and ventured out cautiously close to the hawk, still feeding on their flockmate. Now the behavior I began to notice was similar to the "you've got something and I want it too" that is innate in chickens. Because the hawk was feeding, it was content with the kill that it had. The hens not only demonstrated less fear of the hawk, they now wanted the hawk to share. A bit later, after the hawk was gone, the balance of the carcass was fought over by the hens - each ripping off a piece of flesh and running with the prize as a line of others chased in close pursuit.

Similar behavior is observed on chicken process days. As I reach for the next victim, for a brief moment, the flock panics. However, as long as the predator, (me) is not directly threatening them, they go about their business of pecking the ground or drinking, - this within direct sight of the previous victim. Inevitably, a few chickens sneak out of the shelters and begin wandering around the yard. It is not uncommon for them to sneak a snoot of blood or other scraps from the work area. Without burdening you with further examples, I will say that, after many years of reflecting on their behavior, I am confident that they know nothing of their fate and have no comprehension whatsoever of death. Their behavior demonstrates that they will instinctively respond in fear as a survival mechanism without actually knowing what it means to "survive". Certainly, their fear is turned on and off by the behavior of their flockmates. If the animals did not vocalize or otherwise transmit fear, there would therefore be no contagion of fear. As in the case involving the hawk, as soon as the victim was no longer capable of vocalizing and transmitting distress signals, the remaining chicken's fear was eliminated - even in the direct presence of the predator.

Cattle & Hogs Sometimes, for our own consumption only, we'll hire a mobile slaughter facility to butcher a beeve or hog here at the farm. (In spite of the fact that this is by far the best for the animal, the farmer, the customer and the butcher, it is illegal to sell the meat from beeves or hogs killed on the farm - but that's a topic for another time). In each case of the many I have witnessed, the following animal behavior is observed: First of all, it should be known that the animal is killed in it's pasture, amongst it's herdmates. One second, the animal is grazing contently, the next second it is dead before it hits the ground - this by way of a carefully placed .22 caliber bullet slightly above and between the eyes. In the case of a beeve, the only sound after the report of the bullet is a rapid exhalation that sounds like "umphh" followed by instant collapse. Death occurred painlessly between these two reports. Hogs make no sound or exhalation, they just drop. The butcher then bleeds the animal - this in and amongst the herdmates that these animals had been living with for months, if not years. Some cattle will come over and smell the victim, then casually walk away to graze. Others appear indifferent and simply continue grazing. Hogs will also smell the victim. Because we quickly remove the animal from the paddock, I won't say I've witnessed it, but I'm certain hogs would eventually begin feeding on their former herdmate.

Slaughter facilities are certainly different from slaughter on the farm. The animal is out of it's element. It has been loaded on a trailer, bounced around on the highway and unloaded into an unfamiliar, often noisy area that virtually overwhelms it's hyperactive senses. While it would certainly escape if it saw the means, it's reason for escaping is fear itself, not death. If these animals understood the concept of death, their behavior during the on-the-farm slaughter events would reflect this, as they had ample room to greatly distance themselves from death yet they chose to do nothing.

I have witnessed many other incidents that draw the same conclusion: Farm animals have no concept of death. Their behavior at abattoirs is a result of being deprived of their comfort zone as well as being deprived of routine, natural actions.

Biofuels

Scapegoat for Rising Food Prices

Contrary to what many experts in the media say, biofuels are not the cause of recent commodity and food price increases. Rather, biofuels are an *effect* of this volatility. This does not imply that biofuels are not causing further upheaval. They certainly are. Yet biofuels would not be cost effective, and therefore a non-player, were it not for increased world demand for conventional fuels and food. To argue that the current financial success of biofuels is subjugated to mandates is to ignore the like subjugation of conventional oil to the mandates of military intervention and tax royalty relief that accompanies new takings and exploration, respectively. At this point in time, both fuels are dependent upon government intervention. It is unrealistic to suggest that conventional oil could meet future demand without these government interventions. The same cannot be said of biofuels. Once the playing field has been leveled allowing the entrepreneurial spirit to realize potential, the diversity of raw materials capable of producing biofuels will establish a decentralized, innovative and competitive market. As equally important as the type of fuels our society invests in lies the issue of efficiency. Clearly, a change of fuel is not society's exclusive panacea. If we are to power our future with the resources that we have, we must do more with less. What follows is an abridged summary outlining the causes, effects and perplexities associated with "changing the oil" of America.

Key Elements Forming the Foundation for Rising Food Costs:

1). CHINA/INDIA World demand for fuel, food and resources as two billion new capitalists rapidly enter the modern era has upset the market creating significantly higher demand against steady or diminishing supply.

2). AGRIBUSINESS DEPENDENCE UPON OIL/GAS/COAL NPK fertilizers are derived from natural gas. Row cropping monocultures are diesel dependant. Animal confinements are diesel and coal dependant. This embodiment of oil, gas and coal into literally every aspect of agribusiness has created a debilitating and compounding of expenses as the price of this one systemic component is increased.

3). **PARITY** There were two brief periods in the past century in which farm earnings have been at parity with non-farm earnings. In all other years, farm income was not in balance with costs it must pay to non-farm labor for goods and services. Until recently, prices paid to farmers for commodities had changed little since the 70's, yet the cost of production had gone up significantly. As a result, millions quit farming. Those remaining implemented agribusiness techniques, greatly increasing efficiency and yields. These techniques were dependent upon fossil fuels. These petro-dependent techniques created excessive supply, effectively lowering commodity prices below the cost of production - to be rectified via subsidy. Agribusiness has effectively served as a vacuum pump of sorts, sucking every last bit of yield from the field, the carcass and the teat. Due to escalating prices and diminished supply of fossil fuels, this vacuum "bubble" has now imploded, drawing to it the equilibrium that had been denied for decades.

The Double-edged Sward As $100+per barrel oil induces a new market for alternatives, biofuels have, at least temporarily threatened to fill that void. This coupled with increased demand for corn exports has outstripped corn supply resulting in record prices for corn and many other crops as well as raising prices proportionately for certified organic grains, (even though no one is converting certified organic grains into biofuels). As conventional grain prices encroached upon the prices paid to organic farmers, organic prices had to rise to keep many of these farmers from defecting back to conventional. (There is currently very high demand for organic grains - so much so as to induce imports from China.) As the price of corn increases, more land is taken out of beans, wheat, hay etc, effectively lowering the supply of these commodities. Competition for additional corn acreage has also led to increases in farmland prices and land rental rates. Most significant of all, the price farmers receive for livestock has risen only marginally, if at all, yet the cost to feed livestock has risen dramatically. If the farmer raises row crop with intent to feed his own livestock, his *opportunity cost* associated with feeding the animal, (as opposed to the opportunity to sell the grain) is significant. Many hog and poultry operations are already in crisis, liquidating their herds and flocks which only serves to further depress livestock pricing due to the glut these liquidated animals impose upon the marketplace.

As you can see, on the surface, biofuels *appear* to be source of these tremors. Yet, when we follow the seismic waves to it's source, we find that world demand for oil and food is at the epicenter of this quake. But talk is cheap, so let's add further clarification. This is important as there are many highly credentialed talking heads in the media who assert that biofuels are the cause of high food prices. Let's dissect the price structure on an expensive $3.50 box of corn flakes. Here are the variables :

Price of a 1 pound box of corn flakes: $3.50 Amount of corn in this box: 1 lb. Amount of corn in a bushel: 56 lbs
Farmers share of $3.50 box of corn flakes at $2.50/bushel corn (pre-biofuels): $0.045 per box
Farmers share of $3.50 box of corn flakes at $5.00/bushel corn (present price): $0.09 per box

Consumers are understandably frustrated with a forecast predicting $4/lb or more for a box of cereal. This frustration has been whipped into anger towards farmers as consumers respond to the media. Yes, the farmer's share of a $4 box of cereal has indeed doubled.....from a 1% share to a 2% share. Instead of focusing on the costs comprising 98% of the retail price, the media has aligned it's sites on the farmer's 2%.

Corn has become the darling of biofuels only because the infrastructure already exists to produce and handle this commodity, ("infrastructure" includes the lobbying groups that maneuvered the mandates.) There are numerous other crops that achieve much greater crop-to-fuel efficiencies. Perennials capable of sustenance on marginal soils as well as biomas-based ethanol are just a few examples that demonstrate greater efficiency but lack existing infrastructure, lack of lobbyists included. Biofuel opponents argue that the planet does not have the resources to biofuel cars and people. This is correct as worded yet the outcome is changed if we finish the sentence: The planet does not have the resources to biofuel cars and people *if we remain complacent with our present crop allocations.* We haven't yet asked all the questions that need asking. Even with the mistake of corn as the prime biofuel, we haven't asked: Should we be diverting so much corn to produce corn syrup? It's ubiquitous presence in our food has made us fat, perpetually spikes our blood sugar leading to diabetes and inflammation of our arteries. Should we continue to feed so much corn to cattle even though we now recognize the acidosis and subsequent e-coli response this creates? Should we ignore the science which demonstrates that corn-fed beef burdens our bodies with an excess of hazardous omega-6 fatty acids while being almost devoid of essential omega-3 fatty acids? Should we as a society, most farmers included, continue to respond as if shell-shocked, when someone reminds us that a bovine by nature, is not a corn-eating animal? If it's come down to food vs fuel, how much acreage should we continue to allocate for alcoholic beverages? Concerning our vehicles, wouldn't a doubling of the fuel economy standards, something technologically feasible at this time, provide the inverse effect on land required to produce biofuels? Furthermore, does it make any sense at all to be in the midst of an energy conundrum such as this without questioning why society condones using 5000 lb vehicles as commuter vehicles for a single 150 lb occupant? Certainly we can all see how questions like these create more enemy's than converts. The freedom - the prerogative to do as one pleases is as systemic in our culture as is the oil that has enabled this very freedom. In this light, it appears this prerogative will determine the result. Regardless, change is inevitable. The longer we wait, the harder we'll have to work , only to obtain diminished results.