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## **“Feed Grain and Livestock: A Reconciliation” and “Ethanol as Public Policy in Canada: Understanding the Broader Policy Context”**

### **Executive Summary**

The George Morris Centre (GMC) produced two papers titled “Feed Grains and Livestock: A Reconciliation” and “Ethanol as Public Policy in Canada” in which GMC reached some conclusions regarding the ethanol industry in Ontario and Canada. In my full review of these papers I provide in-depth commentary on the major conclusions of the aforementioned GMC papers is made. This executive summary summarizes the review.

**Major conclusions in GMC paper titled: “Feed Grain and Livestock: A Reconciliation”, Al Mussell, Graeme Hedley, and Douglas Hedley - January 2009:**

1. That the livestock and meat sector in Ontario will shrink in response to ethanol expansion. In order to erase the effect of the **import basis**, ethanol production will need to be of sufficient scale to offset the livestock meat decline i.e. that ethanol’s demand for coarse grains may eventually HARM cash crop demand.
  - The direction of the actual corn BASIS in Ontario during 2002-2008 has in fact been moving more towards an export (or surplus) situation. If BASIS is the measure of competitiveness of local/regional grain corn feeding for livestock producers, then grain corn BASIS in Ontario has been moving **to the benefit of livestock producers and increasing competitiveness of livestock production in Ontario** during the period in question i.e. years 2002 through 2008. There is therefore no BASIS “strengthening” problem to blame on the ethanol industry (or any other industry).
2. That economic performance in the ethanol segment has been heavily challenged through 2008, and this is expected to continue. That in 2008, high corn prices and corn price volatility heavily damaged ethanol plant profitability in the US, with at least one major ethanol producer in the US declaring bankruptcy, and widespread idling of capacity.
  - The ethanol industry in Ontario and elsewhere in North America has experienced economic prosperity since late 2008. Mussell et al. concede that high corn prices had subsided as a pressure point (on the ethanol industry).
3. Third, as a policy-driven initiative rather than a market-driven one, Mussell et al. posit that ethanol is subject to political risk that increases in an era of recession and government deficits. They conclude that “if the profitability of ethanol plants falters due to softening of mandates or subsidies, so too will the market for feed grains, especially given the negative impact on livestock that ethanol development will have had”.
  - While it is true that political agendas and government policy is dynamic, currently the Federal, Ontario, U.S. and European governments (among others), support Renewable Fuel Standards **that include ethanol from grains** in one form or the other.
4. Mussell et al. maintain that ethanol made from feed grains is in the peculiar position where intense effort is underway, supported by government, to develop ethanol production from alternative sources such as lignocellulosic biomass or algae. The conclusion is that “the most active area of research related to ethanol involves creating a substitute for grain-based ethanol, raising the question of whether ethanol is, in fact, in the long-term best interest of the Canadian feed grain production segment. Ethanol made from feed grains in Canada creates an imbalance between feed grains and livestock because of its impact on the **feed grain basis.**” Emphasis is mine.
  - The U.S., and Ontario RFS do not have either/or stipulations. In other words, increases in one source of renewable fuel does not occur at the detriment (or reduction) of support in another. Each renewable fuel source category (grain based, cellulosic, biomass etc.) has its separate mandated

- supports. Mussell et al. may argue that alternative sources will render corn based ethanol obsolete by virtue of more competitive pricing. There are at least two obvious responses to that argument:
- As at this review we are yet to achieve large scale commercially viable production of biofuel from these second generation biofuel sources.
  - The viability of any alternative fuel to gasoline will continue to be driven by the price of gasoline itself. At the July 28, 2009 crude oil price of about US\$67 barrel and US\$1.91/gal for un-blended gasoline (RBOB) ethanol producers have a cost/revenue profile that generate significant profits.
5. Mussell et al. maintain that their observations suggest the need for a more holistic or sector-oriented strategy for feed grains, livestock, and meat in Canada, or at least a strategy in which the segments are not placed in conflict with one another.
- A thoughtful observer will have difficulty seeing how this can translate into significantly different actions than presently occurs. For one, the largest producers and Industry leaders in the livestock and coarse grain sectors in Ontario are largely one and the same. Furthermore bearing in mind that Ontario still operates a competitive free market system where will non market driven pricing and strategic concessions come from?
6. Mussell et al. end the paper by proposing that Ontario feed grain producers “should back away from support of grain-based ethanol as being against their own long-term best interest. The livestock and meat segments should rally behind the feed grain segment as key partners, and work together on a holistic and far-reaching strategy to add value to Canadian feed grains by conversion to meat.”
- How can this be put into practice? Hog and cattle prices since about late 2006 have mostly been at levels so low that achieving profitability or trying to “add value to Canadian feed grains by conversion to meat” has been near impossible. The writers seem to be suggesting that corn producers either sell their products at below market driven prices or work to eliminate an important buyer (the ethanol industry) to their own detriment. Both alternatives are not rational within a free market system.

**Main conclusions and observations on paper titled: “Ethanol as Public Policy in Canada: Understanding the Broader Policy Context” Al Mussell and Larry Martin – November 2007**

- i. They identify three policy reasons for the support of the ethanol industry in the U.S.
  - a. The reduction of dependence on imported petroleum
  - b. Support of farm product prices
  - c. The achievement of environmental objectives through biofuel adoptionMussel and Martin then argue that none of these policy objectives makes sense in the Canadian context.

Despite the scepticism, in recent studies by the U.S. Congressional Budget Office (CBO) and J. Liska and others at the University of Nebraska the conclusion reached was that ethanol as a replacement to gasoline offers significant reductions in Green House Gas (GHG) emissions. The University of Nebraska study estimated that ethanol’s direct effect GHG impact are equivalent to a 48% to 59% reduction compared to gasoline. Canadian and Ontario ethanol production therefore indeed helps in reducing greenhouse gas emissions.

Additionally, as outlined earlier in this report, ethanol used as an oxygenating agent in gasoline eliminates the use of compounds such as MTBE that pose an environmental threat to ground water.

- ii. Mussell and Martin propose that Canada “...consider working within established agricultural marketing policy” and “... (consider) assisting the livestock and meat industry with its current difficulties, and by recapturing its historic competitive advantage with renewed investment”

While we agree with the conclusion that financial pressure due to negative margins is hurting the Canadian swine (and cattle) industries. Negative profitability is not significantly due to higher grain corn prices but largely to lower absolute hog and cattle prices.

To illustrate, our analysis indicates that since 2005 as much as \$34 per hog in lost revenue has occurred due to the strengthening of the Canadian dollar versus the US dollar. Furthermore, in April 2009 with the occurrence of H1N1 influenza, unfortunately dubbed “Swine Flu”, we have seen a marked reduction in pork exports from North America which has impacted U.S. hog prices which are in turn used to set Ontario’s domestic hog price.

We agree with Mussell and Martin that government backed financial assistance to the swine and cattle industries is needed to facilitate restructuring and to help weather the current financial downturn. Such assistance would be a well spent investment in ensuring the survival of the Canadian meat production sector.

- iii. Mussel and Martin propose that environmental issues that grain-based ethanol purports to address could more easily be solved through “innovation” such as:
  - a. More fuel-efficient engines
  - b. Cellulosic ethanol production

It seems obvious to us that policy aimed at reducing GHG emission will always be multi-facetted. No single initiative or law is likely to finally solve the environmental challenge posed by GHG emissions. Ethanol production from corn in its present form, as a replacement to unblended gasoline, certainly contributes to GHG reduction. Other initiatives such as more fuel-efficient engines certainly have a place within a multi-facetted GHG reduction strategy. As for the suggestion to focus on cellulosic ethanol production, a commercial process to achieve this does not yet exist. If and when a commercial cellulosic ethanol production process is achieved, cellulosic ethanol production can become a part of Canada’s multi-facetted GHG reduction strategy.

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