THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

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April 5, 2013

RE: International Council on Clean Transportation comments on "Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards" Notice of Proposed Rulemaking (EPA–HQ–OAR–2012–0546; FRL–9678–8)

These comments are submitted by the International Council on Clean Transportation (ICCT). The ICCT is an independent nonprofit organization founded to provide unbiased research and technical analysis to environmental regulators. Our mission is to improve the environmental performance and energy efficiency of road, marine, and air transportation, in order to benefit public health and mitigate climate change. We promote best practices and comprehensive solutions to increase vehicle efficiency, increase the sustainability of alternative fuels, reduce pollution from the in-use fleet, and curtail emissions of local air pollutants and greenhouse gases (GHG) from international goods movement.

The ICCT welcomes the opportunity to provide comments on the U.S. EPA Renewable Fuels Standard (RFS) program. We commend the agency for its continuing efforts to promote a cleaner, lower-carbon transportation sector that uses less petroleum-based fuels. As we have commented before, the RFS program has set strong standards with thorough, comprehensive scientific analyses and rigorous life-cycle emission accounting. This proposed rule builds upon the impressive steps EPA has undertaken to promote low-carbon biofuels. The comments below offer a number of technical observations and recommendations for EPA to consider in its continued efforts to strengthen the program and maximize the program's benefits in mitigating the risks of climate change and reducing petroleum use.

We would be glad to clarify or elaborate on any points made in the below comments. If there are any questions, EPA staff can feel free to contact Dr. Stephanie Searle (stephanie@theicct.org) and Dr. Chris Malins (chris@theicct.org).

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International Council on Clean Transportation comments on
“Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards”
Notice of Proposed Rulemaking (EPA–HQ–OAR–2012–0546; FRL–9678–8)

Summary

In years when cellulosic biofuel production is expected to fall short of the original Renewable Fuel Standard 2 (RFS2) targets, as is anticipated for 2013, EPA has the option to reduce the total advanced and renewable biofuel requirements for that year by up to the same amount as the cellulosic requirement is reduced. In 2013, we believe that it is unlikely that sufficient advanced biofuel outside the biomass-based diesel (BBD) category will be available to fill the shortfall in the advanced biofuel requirement, due to the ethanol blendwall and likely restrictions on the availability of Brazilian sugarcane ethanol for import to the U.S. Given the reinstatement of the biodiesel blenders’ credit, we believe that it is more likely that if the advanced requirement is not reduced the shortfall would be met with an additional supply of biodiesel, primarily soy oil based. We present evidence that U.S. vegetable oil markets are well-linked and that increasing diversion of soybean oil to BBD over the past decade has resulted in higher imports of rapeseed and palm oils. We argue that marginally increasing production of soy oil biodiesel in 2013 is likely to result in a larger increase in palm oil production than modeled in the RFS2 soy biodiesel pathway, and that due to the known link between palm oil expansion, deforestation and peat drainage this would cause substantial indirect land use change (iLUC) emissions. In particular, we believe that it is likely that a marginal increase in the use of soy biodiesel to fill the shortfall in the advanced requirement would not meet the carbon reduction target of the RFS2 that advanced biofuel should deliver a 50% carbon saving. Given the combination of limits on supply and the likelihood that increasing supply would not meet the RFS2’s carbon goals, we encourage EPA to waive a volume of the 2013 advanced and renewable requirements equal to the reduction in the cellulosic requirement. In the long term we encourage the EPA to provide certainty for the market and investors, and confirmation of the U.S. commitment to a transition to cellulosic biofuel technologies, by committing to similarly reduce the advanced and renewable requirements in proportion to any reduction of the cellulosic requirement in future years.

Advanced ethanol availability

EPA has set the requirement for biomass-based diesel at 1.28 billion gallons in 2013. Assuming this requirement is met, biomass-based diesel (BBD) would account for 1.92 billion ethanol equivalent gallons of the overall 2013 requirement for the supply of advanced biofuels. According to EPA’s analysis in the 2013 Volumes NPRM, an additional 150 million gallons will likely be filled by domestically produced advanced ethanol, with the bulk of the non-BBD volume expected to be filled with Brazilian sugarcane ethanol (666 million gallons). It is not currently clear, however, whether the sugarcane ethanol supply will be able to fill this gap in 2013.

Total exports of sugarcane ethanol from Brazil have not exceeded 666 million gallons since 2009 – since then less than 600 million gallons have been exported in any given year (**Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards** Figure III.B.2-

1) and in 2012 virtually all of this was imported by the U.S. (**Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards** Figure III.B.2-2). The USDA has projected that the quantity of Brazilian sugarcane ethanol exports in 2013 will be similar to 2012 (USDA, 2012). Production of Brazilian sugarcane may be higher than normal in the current harvest season (UNICA, 2013), but it is not clear whether this will translate into higher availability of ethanol for export in 2013. Importantly, Brazil's Energy Minister has announced the country will return to the E25 standard in May or June of this year (Bloomberg, 2013). In 2012, Brazil consumed 20 billion liters of bioethanol (presumably almost all derived from sugarcane; USDA, 2012) under an E20 mandate. An increase to E25 for the remaining 7 months of 2013 is thus likely to increase domestic demand for sugarcane ethanol by 2.9 billion liters, or 771 million gallons; if the transition to E25 happens, this is likely to erase most if not all of Brazil's sugarcane ethanol availability for export.

As noted in the proposed rulemaking, some stakeholders have expressed the opinion that even if achieved, an increase in U.S. imports of sugarcane ethanol during 2013 would have the result of increasing consumption (in Brazil) of fossil fuels or other biofuels (rather than coming from an increased ethanol supply). In particular, in some recent years the U.S. has exported to Brazil substantial volumes of corn ethanol, a biofuel with a lower greenhouse gas saving than Brazilian sugarcane ethanol. Given the timing of this rulemaking, it is impossible that Brazilian sugarcane farming could respond with increased production to meet U.S. demand, and so any increase in U.S. sugarcane ethanol imports can only come from five sources:

1. Absolute reduction in Brazilian transport fuel consumption.
2. Replacement of sugarcane ethanol by fossil gasoline in the Brazilian fuel pool.
3. Replacement of sugarcane ethanol by other ethanol (most likely corn) in the Brazilian fuel pool.
4. Increased sugar production in Brazil.
5. Draw down of stocks to meet increased demand.

As to the possibility of substantial reductions in Brazilian transport fuel demand in the event of increased ethanol exports, this seems unlikely and we would expect that Brazilian fuel consumption would change relatively little. While such demand reduction would deliver indirect carbon savings, we doubt demand changes would be the dominant response, given the availability of comparably priced corn ethanol and gasoline.

If, on the other hand, the dominant response were to either increase Brazilian gasoline consumption or increase Brazilian imports of U.S. corn ethanol, then this response would substantially undermine the greenhouse gas savings presumed from sugarcane ethanol. It is necessary, in order to achieve the emissions reductions identified by the EPA's sugarcane ethanol lifecycle analysis, that the ethanol displace the use of gasoline from the market as a whole. If the net effect were to simply shift gasoline consumption to Brazil from the U.S., there would be no saving. If the net effect were to increase Brazilian consumption of U.S. corn ethanol, then the saving would not meet the requirement for advanced biofuel.[1].

There are two other ways to supply the additional fuel – drawing down stocks, or reducing sugar consumption. Either of these options is possible, but both could increase food prices and/or price volatility, although according to USDA, global sugar stocks were relatively high at November 2012, at about 38 million metric tonnes[2], which suggests that in principle global sugar stocks could be somewhat drawn down without unduly increasing market volatility providing harvests are robust. Still, given the risk of fuel usage displacement effects undermining carbon savings, and the risk of marginal negative impacts on food markets from increased demand, we believe that EPA would be well justified under the Clean Air Act in setting the 2013 advanced biofuel requirement to be consistent with a less ambitious level of sugarcane ethanol usage in the U.S.

Aside from sugarcane ethanol availability, it is not clear that the U.S. market will be readily able to blend increased volumes of sugarcane ethanol in 2013, and it will certainly become increasingly challenging in the years following. EPA has suggested that the ethanol 'blendwall' may be exceeded from 2014 (Volumes NPRM). Platts reported in March 2013 that the blendwall may already have been reached for some firms, with a general perception that it will limit ethanol supply during 2013 leading to a sharp increase in renewable RIN prices (http://blogs.platts.com/2013/03/07/rins-blendwall/). Similarly, an analysis by agricultural economists at the University of Illinois shows that with RFS-mandated volumes of renewable biofuel (i.e. corn ethanol) and a constant 500 million gallons of sugarcane ethanol per year, the supply of ethanol will exceed capacity to blend it after 2013 without unprecedented increases in use of E15 and E85 (Irwin & Good, 2013a). For these reasons – that sufficient sugarcane ethanol may not be available for export from Brazil and that the blendwall will limit capacity of the U.S. to absorb increased volumes of ethanol – it seems likely that it will be very difficult for Brazil to supply 666 million gallons of ethanol to the U.S. in 2013.

Given the potential limitations on the supply of cane ethanol from Brazil to the U.S., it is reasonable to consider what the alternative scenario would be for advanced mandate compliance. While it has generally been assumed that Brazilian sugarcane ethanol is the marginal advanced biofuel[3] the reinstatement of the biodiesel tax credit may have affected the validity of this assumption for 2013. Irwin & Good (2013b) find that with the recent reinstatement of the biodiesel tax credit, biodiesel may well be more economical than Brazilian ethanol for meeting the RFS advanced requirement – remembering that the U.S. biodiesel industry currently has installed capacity to produce more than two billion gallons of biodiesel per year (EIA, 2013). In this case, it is important to consider the implications of further biomass-based diesel meeting the marginal demand for advanced biofuel.

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[1] EISA requires that lifecycle analysis include 'the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes)', and we believe that the effect of increasing Brazilian consumption of other fuels fits within this definition as an indirect effect.

[2] Although only a fraction of that, 500,000 tonnes, was reported as held in Brazil, USDA (2013) http://www.fas.usda.gov/psdonline/psdReport.aspx?hidReportRetrievalName=World+Centrifugal+Sugar+++&hidReportRetrievalID=2226&hidReportRetrievalTemplateID=8

[3] Due to a traditionally relatively low price (compared to biomass based diesel etc.) and relatively large overall supply in Brazil.

U.S. biomass-based diesel

As identified in the RFS2 lifecycle analysis, increased use of biomass-based diesel above the 2013 BBD requirement would result in indirect land use change, and associated emissions. The type of land that is cleared for new production matters critically, and we are concerned that given current vegetable oil market dynamics the original RFS impact analysis (under which soy biodiesel is assigned an expected carbon saving of over 50%) may not be representative of the likely marginal impact of further increases in soy biodiesel consumption. In particular, we believe that increased demand for U.S. soy biodiesel is likely to result in expansion of palm oil demand, with the consequence of significant emissions from deforestation and peat drainage (as identified as major risks from palm expansion in the EPA NODA on the proposed palm biodiesel pathway).

More biomass-based diesel (BBD) means more soy BBD

BBD produced in the U.S. is mainly sourced from soybean oil, animal and waste fats, canola oil, and corn oil, with soybean oil and waste fats contributing to the majority of BBD (EIA, 2013). A recent increase in BBD production, peaking in late 2011, was fed by soybean oil to a greater degree than by waste fats. The contribution from animal and waste fats responded initially, but leveled off from about April 2011, while soy biodiesel production continued to rise until the end of the year (Figure 1). During this time, prices of waste fats rose sharply, such that lard and tallow were more expensive than soybean oil, an unusual price inversion (Figure 2; USDA datasheets). These patterns suggest that the availability of economically appropriate waste fats for biodiesel was exhausted at about 25 million gallons per month, with soybean oil being used to meet additional demand. This makes sense as one would expect the supply of animal and waste fats to be relatively inelastic to demand – production of these items is driven by demand for meat and primary goods (e.g. in the case of used cooking oil). EPA's 2013 BBD Volume rule indicates that soybean oil is expected to fill slightly less than half of total BBD production in 2013 (600 out of 1280 million gallons). 380 million gallons of BBD is expected to come from waste fats, and 300 million gallons from corn oil. In past years including 2012, corn oil has actually accounted for less than 10% of total BBD production (Figure 3). Indeed, the only time that the monthly production rate was adequate to meet 1.28 Bgal per annum (December 2011) coincided with a peak soy biodiesel share of over 70% (Figure 1, Figure 3). Given this, it seems possible that the NPRM overestimates the potential for expansion of corn oil based biodiesel production and that an expansion of total U.S. BBD production to satisfy the advanced requirement would be met largely by increased use of soybean oil, with relatively modest contributions from canola and corn oils. Any marginal increase beyond 1.28 Bgal per annum similarly seems likely to require increased soy oil supplies.

Figure 1 **Monthly U.S. biodiesel production and feedstock inputs, million gallons. Source of data: EIA (2013)**

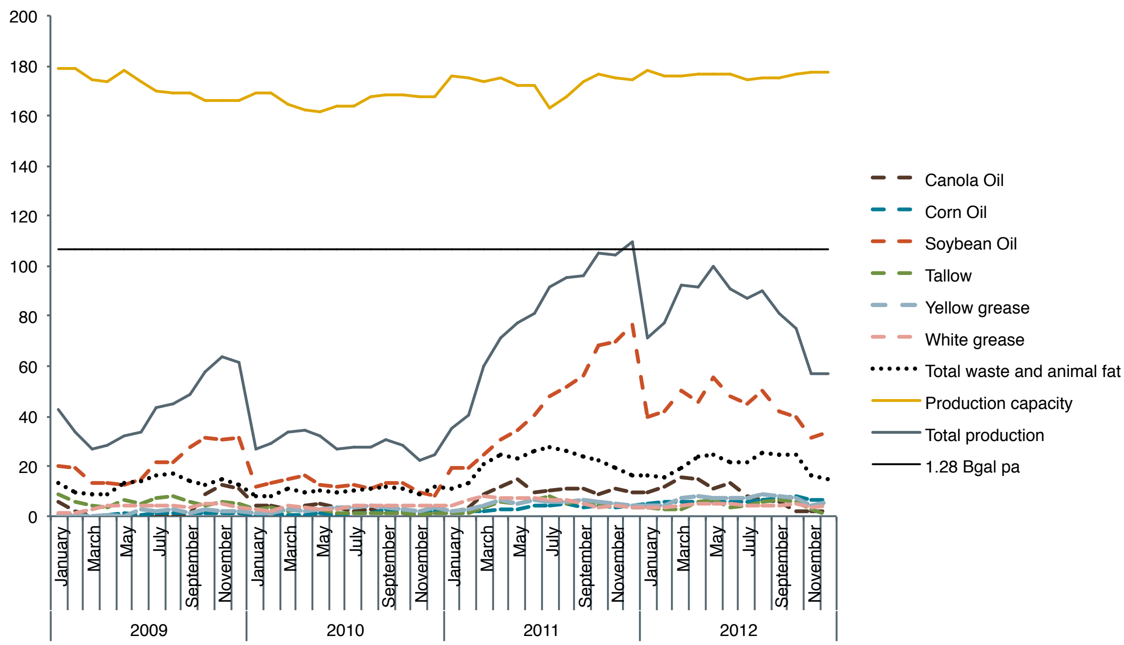


Figure 2 **Prices of soybean oil and waste fats. Source of data: USDA**

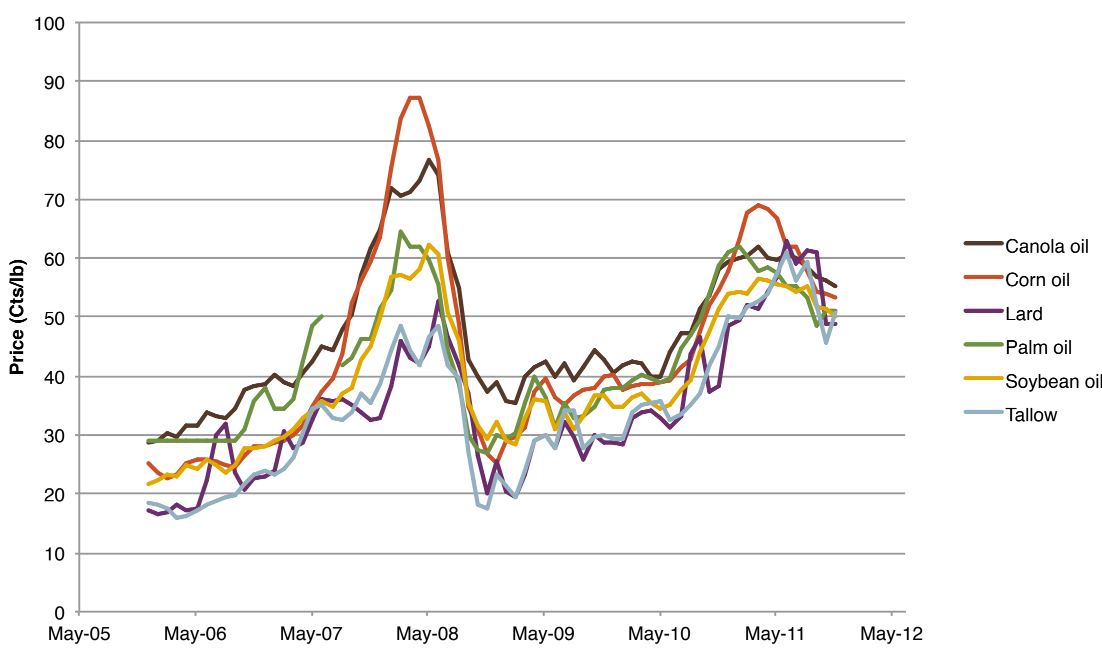
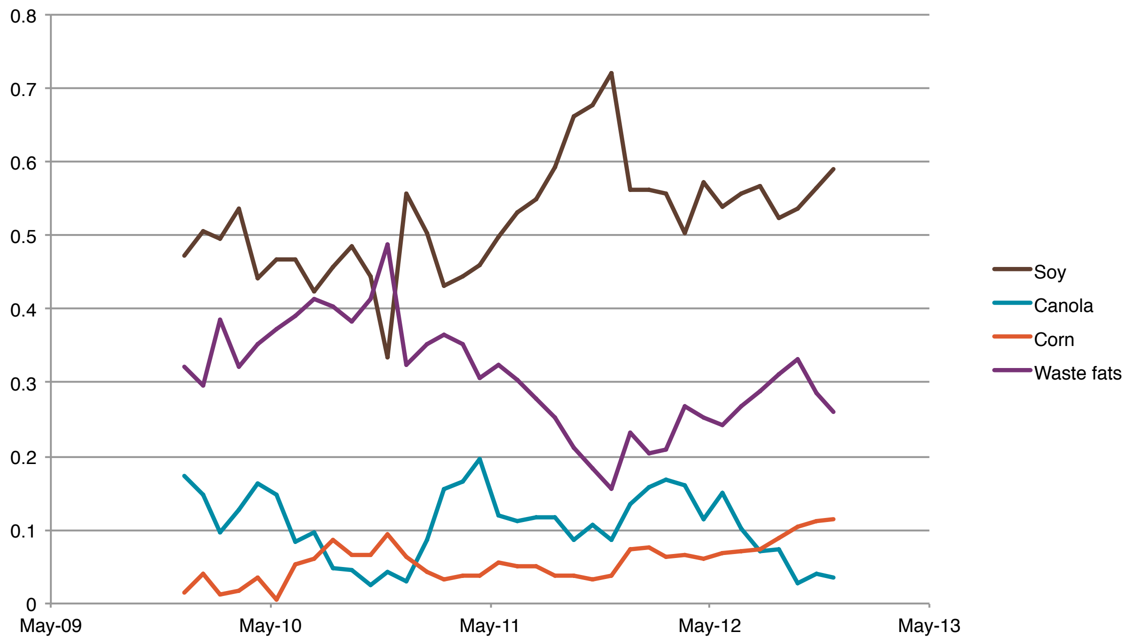


Figure 3 Feedstocks as proportion of U.S. biodiesel production. Source of data: EIA (2013)



U.S. vegetable oil markets are linked

While recent experience suggests that soy oil may be the primary source of biodiesel feedstock, increased diversion of soybean oil to BBD production will have indirect impacts on the use of other vegetable oils. Vegetable oil markets are well linked, as evidenced by clear correlations between prices of various major oils (Figure 2, Table 1). Soybean, palm, rapeseed, and (edible) corn oils are particularly closely correlated, strongly suggesting that these oils are broadly fungible in the market. For instance, if the U.S. soybean harvest is poor one year, we'd expect the price of soybean oil to rise, and for the prices of other oils to follow – perhaps bakers would start substituting palm oil for soybean oil in cakes, increasing the demand and thus the price of palm oil as well. Prices for lard and edible tallow are still correlated to vegetable oil prices, but rather less so, suggesting (unsurprisingly) that in food markets inter-substitution of vegetable oils is more likely than a switch between vegetable and animal fats.

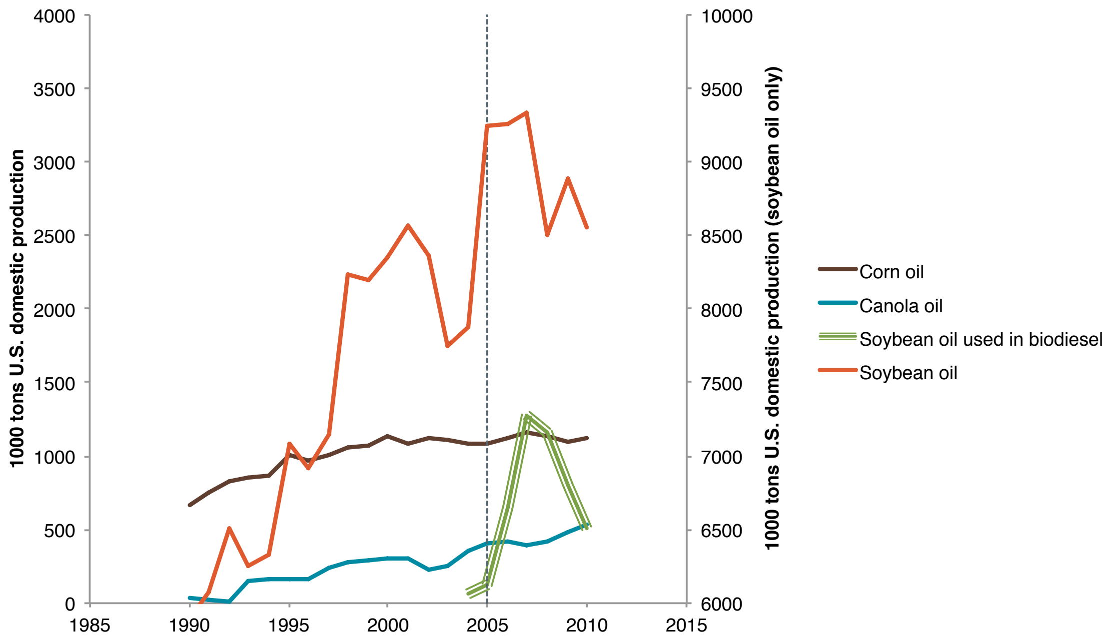
Table 1 Correlation matrix for prices of various edible oils. R^2 values shown, n=72. Source of data: USDA

	SOYBEAN OIL	PALM OIL	RAPESEED OIL	CORN OIL	LARD
Palm oil	0.867				
Rapeseed oil	0.941	0.822			
Corn oil	0.916	0.831	0.958		
Lard	0.782	0.685	0.638	0.617	
Edible tallow	0.871	0.818	0.731	0.726	0.901

Historical substitution between soybean, palm, and rapeseed oils in U.S.

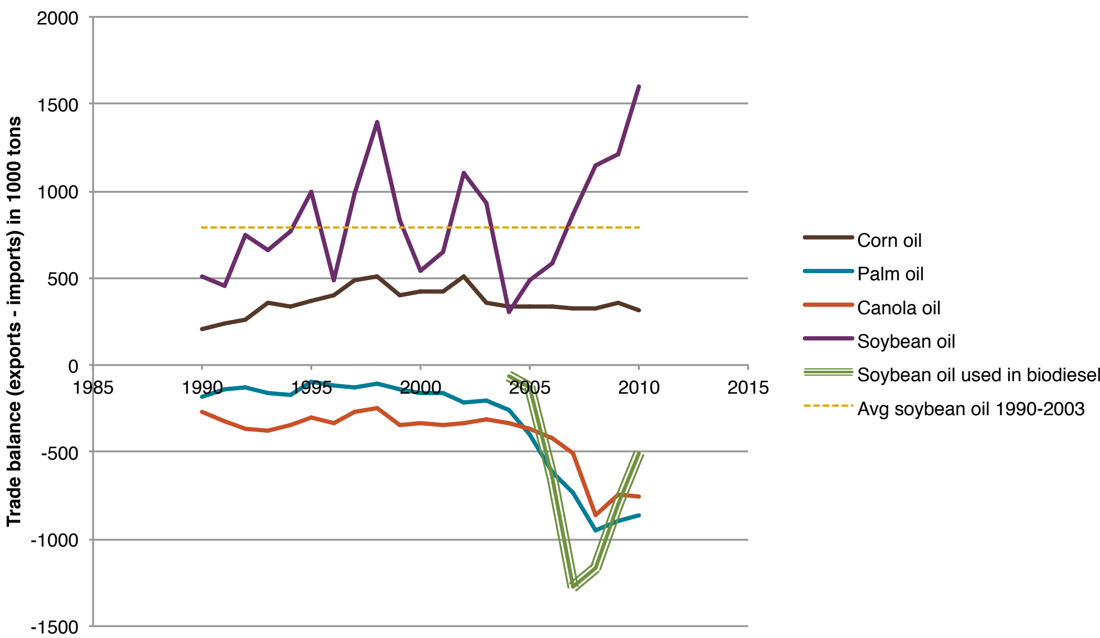
There is evidence in vegetable oil production and trade data that this type of substitution between vegetable oils has been taking place in the U.S. over the past decade. As shown in Figure 4, the amount of soybean oil used for biodiesel production rose substantially after 2004 and peaked in 2008 (larger volumes of soybean oil have been used in biodiesel production in 2011-2012, but vegetable oil production and trade data are not yet available for these years; NBB, 2013). For various reasons biodiesel production has slowed since then, but can be expected to increase as the advanced requirement rises and with the reinstatement of the biodiesel blenders' credit. As the use of soybean oil in biodiesel rose rapidly from 2004 to 2008, total demand grew and a substantial amount of soybean oil was removed from the market for edible vegetable oils. In EPA's FAPRI-FASOM modeling for the 2010 RFS2 rule, the primary response expected to increased soybean oil demand was increased soy oil production (in terms of land use change, 71% of land expansion in the FAPRI modeling was expected from soy, compared to just 3% for palm and 9% for rapeseed). However, it is not clear from the production data how strongly soy area responded to the biodiesel mandate – for instance, there was little overall increase in soy production from 2000 to 2010, but substantial year on year variation within that period. There are agronomic reasons to expect soybean oil production to be less sensitive to demand than production of some other oils. Soybean oil is represents only a fraction of the value of the soybean – the most valuable co-product is soy meal for livestock feed, and we therefore expect soy area to be more responsive to meal demand than oil demand.

Figure 4 **U.S. production of vegetable oils and use of soybean oil in U.S. biodiesel (thousand tons). Note soybean oil production is plotted on secondary axis to allow easier comparison. Dotted grey line marks the year 2005. Production data from FAOSTAT; biodiesel data from the National Biodiesel Board (personal communication).**



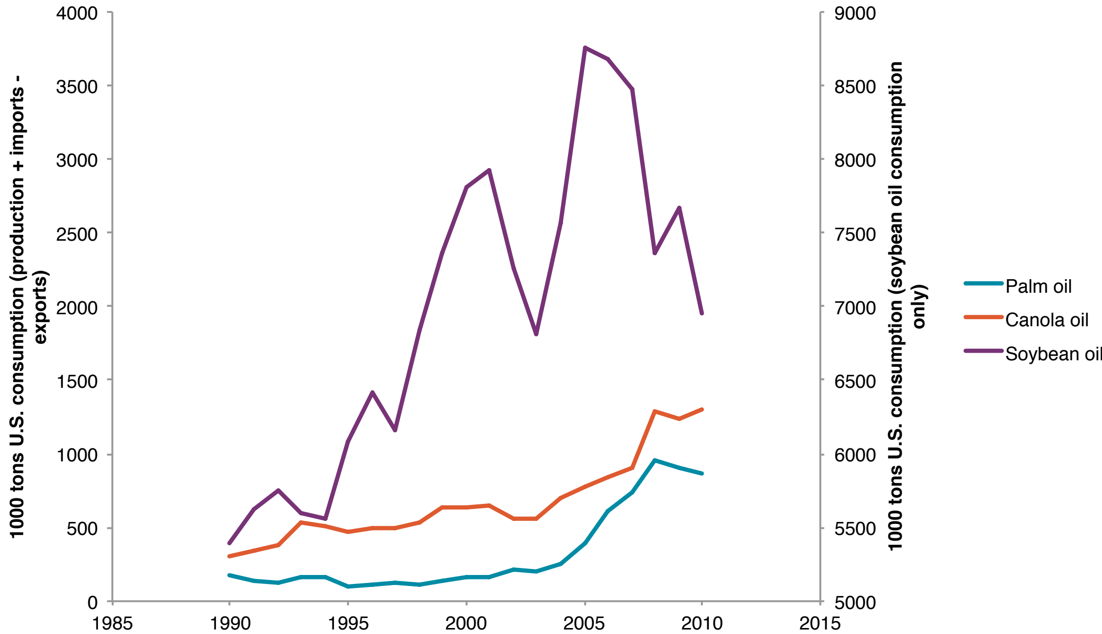
Trade data does however show clearly that net *imports* of palm and canola oils have increased markedly in the same period that biodiesel production has increased. Figure 5 shows the trade balance of various vegetable oils over time, along with the quantity of soybean oil used in biodiesel for reference (positive values indicate net exports and negative values indicate net imports). Net imports of palm and canola oils began to rise rapidly around 2004 – which coincides with the growth of soy biodiesel. Indeed, the magnitude of this increase in palm and canola oils combined is similar to the magnitude of soybean oil diverted to biodiesel. One should always be cautious in interpreting this type of correlation, but the increased importance of these oils in the U.S. market in this period does suggest that palm and canola oils may have made a greater contribution than anticipated in the RFS2 lifecycle analysis to meeting the gap in the vegetable oil market due to increased soy use for biodiesel. Soy oil exports have actually risen in the same period, although this is in a context of significant historical year-to-year variability and it is as yet unclear whether this marks a persistent departure from the average.

Figure 5 Trade balance (exports – imports) of various vegetable oils and soybean oil used in biodiesel (thousand tons). Positive values indicate net exports; negative values indicate net imports. Import data from FAOSTAT; biodiesel data from the National Biodiesel Board (personal communication).



When we look at net U.S. consumption of these vegetable oils (calculated as production plus imports, minus exports in Figure 6), the same pattern appears. U.S. consumption of palm and rapeseed oils increased dramatically above the historical trend starting around 2004. Consumption of soybean oil (including in biodiesel) declined slightly over this period, in part due to an increase in exports as described above.

Figure 6 **U.S. consumption of various vegetable oils, calculated as the balance of production + imports - exports. Note: consumption of soybean oil shown on secondary axis. Production and trade data from FAOSTAT.**



In summary, there is reason to believe that an increasing diversion of soybean oil to biodiesel production results in increased imports of palm and canola oils, and that this substitution may be stronger than expected in the EPA lifecycle analysis of the soy biodiesel pathway. Modeling with the IFPRI-MIRAGE model for the European Commission, IFPRI expected that an increase in (EU) soy biodiesel demand would be met only 40% with increased supply of soybean oil – the other 60% would be met with demand reduction and by other oils, primarily palm oil (Laborde, 2011).

Indirect GHG emissions from soy biodiesel

The soybean-palm linkage in particular is critically important to correctly estimating the lifecycle carbon intensity of soybean biodiesel, because palm oil cultivation on peat is associated with much higher GHG emissions than typical expansion of soybeans or other oilcrops (c.f. the EPA Palm biodiesel NODA and ICCT's corresponding submitted comments). In EPA's original pathway analysis for soy, the modeled contribution of palm to meeting increased vegetable oil demand was quite modest, with a strong domestic soy area response expected. In the FASOM modeling, this domestic expansion of soy was predicted to lead to a significant reduction in rice paddy area (the link to U.S. rice paddy area was predicted to be weaker in the FAPRI modeling) and this reduction in rice paddies yielded a substantial emissions credit due to reduced methane emissions. If future marginal soy biodiesel expansion drives more international change in palm oil area than suggested by the original modeling, with less domestic soy expansion, which seems likely given current market conditions, then it can be expected that emissions deficits from deforestation and peat loss will be greater than expected, while credits from reduced rice paddy area will be smaller. In that case, marginal soy expansion above the 1.28 Bgal already allocated to BBD would be unlikely to achieve a 50% carbon reduction, and hence maintaining the advanced mandate by allowing soy biodiesel use to expand would not be expected to meet the carbon reduction objectives of the program.

Palm fatty acid distillate

With the biodiesel blenders' tax credit and potential for BBD to fill the increasing gap in the advanced requirement from cellulosic shortfall, there is a growing potential for BBD from palm fatty acid distillate (PFAD) to enter the U.S. market. EPA has classified PFAD as a waste product with no associated iLUC emissions, but this classification may not be appropriate. PFAD is a product of relatively high value – in 2012 it sold at 85% of the price of palm oil as export products from Malaysia (calculated from data in MPOB, 2013). PFAD has significant uses other than in biodiesel: it is used as an ingredient in animal feed and soaps. Although PFAD is a byproduct of palm oil production, it has high value and several uses, and cannot reasonably be classified as a waste product. Displacing PFAD from other markets is likely to create overall demand increase for other vegetable oils, which is likely in turn to increase overall oil palm area, with associated peat drainage emissions.

As it is likely that PFAD biodiesel causes iLUC, it would be appropriate for EPA to conduct a full modeling analysis of PFAD, using the same modeling framework as implemented for the final palm oil rule.

Conclusions

There are three likely responses to a decision to preserve the overall 2013 advanced biofuel mandate despite the expected shortfall in cellulosic biofuel availability. The first possibility, identified by the EPA, is that sugarcane ethanol from Brazil will be available to meet the requirement. We have noted that because of limits to the sugarcane ethanol supply, and limits to the capacity of the U.S. market to absorb additional ethanol on top of the expected domestically produced volumes, it is likely that importing the required 666 million gallons would be difficult. We have also noted that there is reason to believe that, given recent patterns of corn ethanol exports to Brazil and the limited ability to respond to this 2013 EPA RFS2 determination by planting additional sugarcane, importing more sugarcane ethanol may result in the use of more gasoline and/or corn ethanol in Brazil, neither of which result would deliver the carbon savings required to meet the EPA program's objectives.

If adequate volumes of sugarcane ethanol are not available, the likely pathway to deliver the additional volumes is soy biodiesel. We have argued that, given the reinstatement of the biodiesel tax credit, this is currently a likely outcome. However, we believe that an additional marginal increase in soy biodiesel production is likely to be associated with increased U.S. palm oil imports, associated with GHG emissions from increasing peat drainage and deforestation. As a result, the associated emissions profile of this palm oil-driven marginal increase will be less favorable than modeled in the EPA soy pathway under RFS. Thus, we are concerned that neither of the likely sugarcane or biodiesel responses to maintaining the advanced biofuel requirement would deliver the 50% carbon reduction targeted by the RFS program. We also note the well-documented concerns that excessive production of biofuels from food crops cause negative impacts on international welfare through food prices and volatility. Such impacts could be mitigated by limiting the expansion of food based fuel production under the advanced biofuel requirement. Of course, in the event that neither adequate volumes of sugarcane ethanol nor soy biodiesel were available, the advanced biofuel requirement could be extremely difficult to meet, which would also be highly undesirable.

Recommendation #1: Consider reducing advanced biofuel requirements for 2013 and publishing guidelines to do the same in future years with potential shortfalls in cellulosic fuel production

Given these concerns, and that the original advanced biofuel requirements were based on the expectation of a larger supply of cellulosic fuels than is currently available, we believe the agency should consider modifications to the RFS volume requirements. It would be appropriate for the EPA to consider reducing the advanced biofuel mandate, and then the full renewable fuel mandate, by a volume equivalent to the expected shortfall in cellulosic fuel production. In the longer term towards 2022, we believe that similar concerns could accompany the use of 'first generation' biofuels. For example, if there is an increasing shortfall in achieving the advanced biofuel mandate, assuming that cellulosic biofuel production is unable to scale to 16 billion gallons per year by 2022, the expansion of first-generation biofuels could fill this gap. The risks of this would be greenhouse gas savings falling short of the program goals, increased food price volatility, diversion of investment from cellulosic biofuel production to first-generation biofuels and competition with cellulosic fuels for infrastructure access. We would encourage the EPA to provide a degree of certainty to first generation and advanced biofuel producers, as well as the oil industry, by proposing a general statement about its intentions on handling ongoing discrepancies between expected and delivered cellulosic fuel production. More specifically our recommendation is for EPA to state its intent to waive, as applicable in 2013 and any future calendar year, volumes from the overall advanced and renewable fuel mandates that exactly match the expected shortfall in cellulosic fuel production. This would provide the non-cellulosic advanced biofuel industry with a well-defined trajectory for controlled growth to 2022, and the certainty to make the investments to deliver that growth.

We note that reducing the advanced biofuel mandate for 2013 and subsequent years should not endanger investment in cellulosic biofuel production. Indeed, less competition under the blendwall would if anything allow greater market certainty for cellulosic ethanol. A clear signal that cellulosic ethanol is the preferred pathway for the long term would provide investors a signal to move investment to cellulosic production, rather than diluting investment through building up a less sustainable non-cellulosic advanced biofuel industry.

Recommendation #2: Consider tightening the definition of waste biofuels to restrict feedstocks with other uses from the category

We also note that there is the potential for palm fatty acid distillate to increasingly enter the U.S. biomass-based diesel market under the current waste definition, and we are concerned that this pathway would in fact have significant indirect emissions. We encourage EPA to reconsider the categorization of palm fatty acid distillate as a waste, and to exercise caution in defining as wastes products that have other productive uses, especially products that compete in oil and fat markets. Without a more strict and accurate waste definition, the overall RFS2 programs GHG targets could be increasingly compromised.

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