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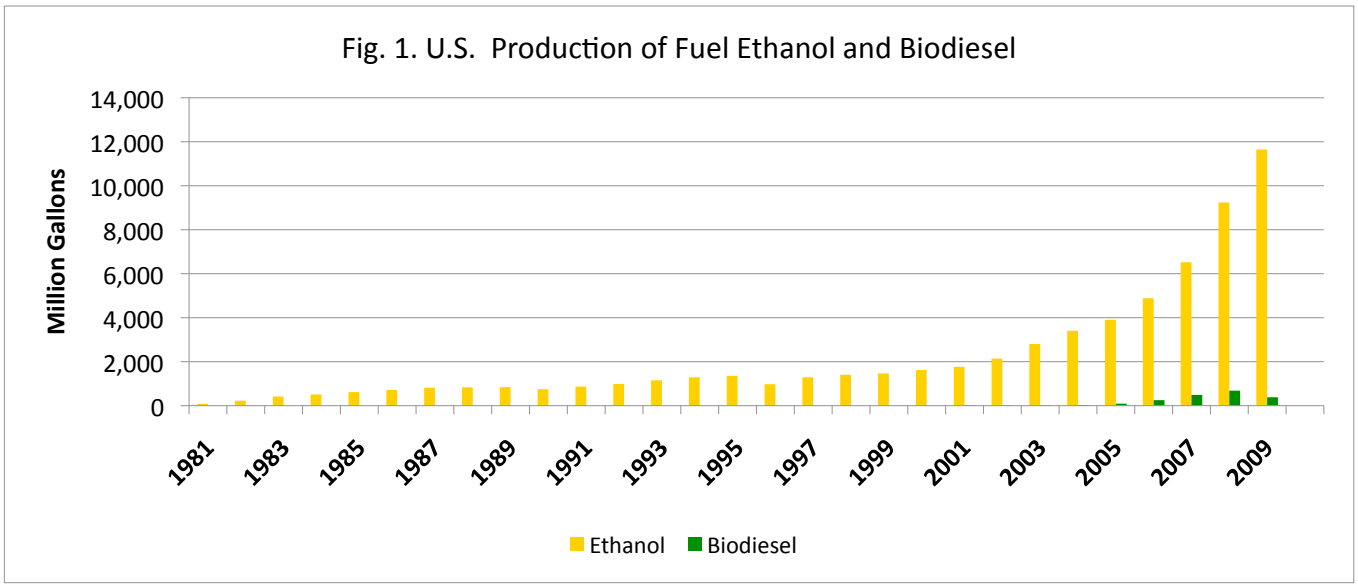
Aggregate Economic Effects of Not Extending the Biodiesel and Corn Ethanol Tax Credits

C. Robert Taylor
Ronald D. Lacewell[1]

The tax credit for biodiesel production ($1/gallon of agri-biodiesel and $0.50/gallon of waste-grease biodiesel) expired on December 31, 2009. Expiration of the tax credit combined with relatively low gasoline and diesel prices has brought domestic production of biodiesel to a standstill. There is considerable speculation that Congress will soon consider extending the biodiesel tax credit, perhaps retroactively to Jan. 1, 2010. Legislative proposals to extend the biodiesel tax credit may also consider the ethanol tax credit (45 cents/gallon) and ethanol import tax (54 cents/gallon), as both expire at the end of this year, 2010.

Figure 1 shows annual biodiesel production in the U.S.[2] Domestic production of biodiesel dropped significantly during 2009 because of relatively lower fuel prices and relatively higher feedstock prices. If the biodiesel tax credit is not restored, it is expected that production in 2010 will be near zero because the cost of vegetable oil feedstock alone exceeds recent diesel fuel prices.



Soybean oil has been the dominant feedstock for biodiesel, although use of tallow, grease, and lard as a feedstock increased considerably in 2008. Corn has been the dominant feedstock for ethanol production. Although ethanol plants have struggled at times to be profitable with low fuel prices and high corn prices domestically, production of ethanol continues to increase, as shown in Figure 1. In particular, ethanol production increased in 2009; however, domestic production of ethanol is expected to decline sharply in 2011, if the ethanol tax credit expires this year.

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[1] We are appreciative to Emily Seawright (Research Associate, Texas AgriLife Research) for reviewing and editing this briefing paper.
[2] Production for 2009 was estimated based on soybean oil utilization through November.

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This briefing paper presents estimates of the aggregate economic effects of not restoring biofuel tax credits. Two scenarios are considered: (a) the biodiesel tax credit is not restored but the ethanol credit is extended indefinitely, and (b) the biodiesel tax credit is not restored and the corn ethanol tax credit is allowed to expire at the end of 2010.

Short-term uncertainty about continuation of the ethanol tax credit, and uncertainty about whether the biodiesel tax credit will be approved retroactively to Jan. 1, 2010 influence commodity markets. If biofuel manufacturers and commodity traders were certain that biofuel tax credits would not be extended, the soybean and oil markets would have been more strongly impacted than what has been observed. Because short-term uncertainty about tax credit extension has such a dominant influence on commodity prices, only the longer-term (after markets adjust) economic effects of not extending tax credits are presented.

Estimates of the major economic impacts of not extending biofuel tax credits on major commodity prices are presented in Table 1. Extending the ethanol credit indefinitely, but not renewing the biodiesel credit is estimated to lower soybean prices by $0.81/bu, but have minimal effects on other crop prices. Expiration of both the ethanol and biodiesel credits is estimated to lower corn prices by $0.83/bu and soybeans by $0.72/bu. If market participants were convinced that the tax credits would be eliminated permanently, the negative short-run commodity price effects would likely be larger than those shown in Table 1.

Table 1. Change in Key Economic Indicators Due to Biofuel Tax Credits Not Being Extended

Change in:	Biodiesel Tax Credit Not Extended	No Biodiesel or Ethanol Tax Credits
Corn Price ($/bu)	-$0.03	-$0.83
Soybean Price ($/bu)	-$0.81	-$0.72
Wheat Price ($/bu)	-$0.07	-$0.24
Cotton Lint Price ($/cwt)	$0.00	-$0.01
Hay Price ($/T)	-$0.99	-$2.38
N Price Index	0.5%	-3.1%
P Price Index	0.4%	-2.7%
K Price Index	0.1%	-2.6%
Acreage Planted (million acres)	-1.36	-5.03
Change in Economic Surpluses (billion dollars annually)		
Food Consumers' Well Being	$3.03	$19.37
Net Farm Income	-$4.03	-$16.85
Cost of Tax Credit to Taxpayers	-$1.00	-$8.21
Net Economic Surplus Change	**$0.00**	**$10.73**

The aggregate economic surplus impacts of terminating the first generation biofuel tax credits are shown in the lower part of Table 1. The economic effects shown in Table 1 are the net impacts of the biofuel subsidies on farm income, taxpayer expense, and food consumers' surplus (consumer well-being). Food consumers' well being is increased through slightly lower food prices.

Net farm income would be reduced by about $4 billion annually if the biodiesel tax credit is not extended, and by almost $17 billion if both tax credits end. Net economic well being in the domestic food sector is estimated to increase by over $10 billion annually if both tax credits expire. This positive impact on the domestic food sector must be weighed against presumably negative impacts on the agricultural economy. Not considered in this briefing are issues of national security and technological advances that could be expected with continued research and experience by the biofuel industry.

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