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How Much Ethanol, Ultimately?

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Market Report	Yr Ago	4 Wks Ago	10/12/07
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	$87.10	$92.75	$91.19
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	121.01	127.68	121.17
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	116.15	123.72	118.85
Choice Boxed Beef, 600-750 lb. Carcass	143.02	147.07	145.08
Western Corn Belt Base Hog Price Carcass, Negotiated	62.87	62.89	58.08
Feeder Pigs, National Direct 50 lbs, FOB	50.71	50.28	45.64
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	69.59	67.67	61.21
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct	*	102.37	93.25
National Carcass Lamb Cutout, FOB	248.16	259.49	266.64
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	4.99	7.64	7.49
Corn, No. 2, Yellow Omaha, bu.	2.92	3.10	3.20
Soybeans, No. 1, Yellow Omaha, bu.	5.45	8.60	9.05
Grain Sorghum, No. 2, Yellow Columbus, cwt.	4.64	5.34	6.21
Oats, No. 2, Heavy Minneapolis, MN , bu.	2.51	2.70	*
Hay			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	135.00	135.00	135.00
Alfalfa, Large Rounds, Good Platte Valley, ton.	87.50	87.50	87.50
Grass Hay, Large Rounds, Good Northeast Nebraska, ton.	82.50	*	*

* No market.

Ethanol prices are low in the Midwest, prompting suggestions that the boom is over. It is perhaps slowing down for the next couple of years, but is likely to resume after that. Today's gross processing margin (ethanol price minus net corn feedstock cost) is in the range of $.80/gal – high by historical standards – but low relative to 2006 (see Figure 1 on next page). Also, the low ethanol price appears to be partly due to transportation and distribution bottlenecks, and those are not permanent.

As the ethanol infrastructure adapts, the price of ethanol will surely reflect the price of gasoline, adjusted for ethanol's lower energy content, which is only 70 percent of gasoline. Petroleum price will eventually determine ethanol price, and that, in the long-run will determine corn price and how much of the crop is devoted to fuel rather than food.

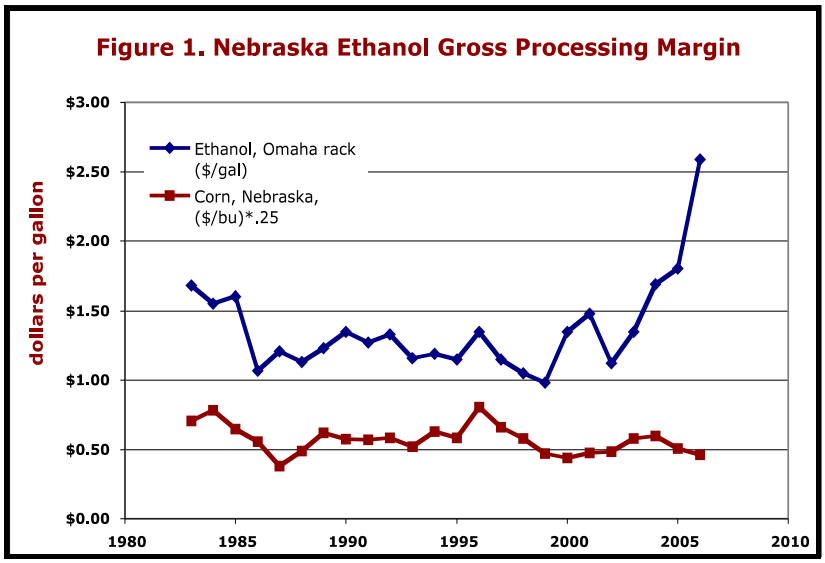
In Nebraska, when current construction projects are complete, total grind capacity will be well over half of the current corn crop. In the United States, operating plants have the capacity to grind about 20 percent of this years' crop, while plants under construction will lift this capacity to 35 percent or more. Plans exist for many more plants. Some, but not all, are now on hold. Is the expansion over, and if not, where will it ultimately end?

Why Any Ethanol?

Arguments offered in the national debate for ethanol are that substituting ethanol for gasoline will: (1) reduce greenhouse gas (GHG) emissions to ameliorate climate change; (2) achieve greater energy security by reducing petroleum imports; (3) provide rural development; and (4) support farmers.

Why Subsidies?

Despite the potential benefits, ethanol production has not been consistently profitable during the more than one



hundred years that it has been considered as a motor fuel. Because of this, a number of subsidies have been established for ethanol production, both at state and federal levels. The most significant subsidy is the federal $0.51/gal VEETC (volumetric ethanol excise tax credit), payable to the blender who mixes the ethanol with gasoline to make E10 or E85.

In addition to VEETC, a few states such as Nebraska have established limited direct production subsidies for ethanol. A number of states have also established mandates for minimum levels of ethanol use. Finally, Federal Clean Air mandates effectively require the use of ethanol in some areas under certain conditions.

Incentives for Expansion

Even with subsidized demand, the gross processing margin hovered around $0.50/gal during the 1990's (Figure 1). With production costs estimated to be at least at that level, these prices did not provide incentive for new plants without additional direct subsidies such as Nebraska's $0.20 EPIC credit of the 1990s.

The unfavorable gross margin for ethanol ended as petroleum prices doubled from $31/barrel in 2004 to $66/barrel in 2006, simultaneously with additional mandated uses. Expansion followed.

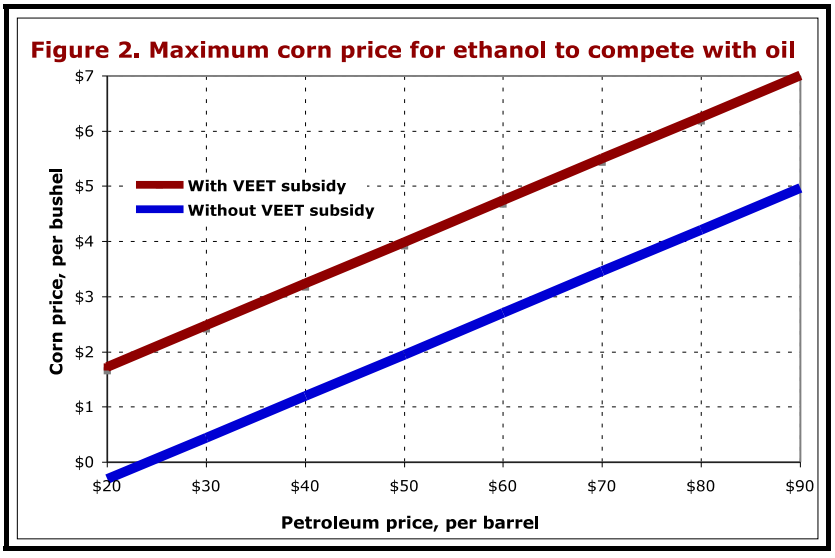
When Will the Expansion End?

Grain ethanol will always be a bit player in the motor fuel market – even the entire U.S. corn crop could provide only enough ethanol to substitute for about 15 percent or so of our gasoline consumption. Because of this bit role petroleum price will determine ethanol price, not the other way around. Ethanol plants will be built as long as the corn price is low enough to compete with gasoline. For example, Figure 2 shows that with the VEETC subsidy and $60 oil, it would be profitable to build and operate ethanol plants until the price of corn is bid up to about $4.75 per bushel, or about $6.30 per bushel with oil at $80. Without VEETC these two corn prices would be reduced to $2.75 and $4.30, respectively.

Expansion will continue as long as the anticipated corn price – oil price intersection is below the upper line in Figure 2 (below the lower line without VEETC). So if $70-$80 oil persists, expansion will continue until ethanol demand drives corn prices to about $6/bu with VEETC, or $4/bu without VEETC.

The implications of corn prices as high as $6 are not yet fully understood. Although it would be a boon for corn producers, it would wreak substantial havoc with food prices, and would probably result in two-thirds or more of the corn crop being processed for ethanol. In this case, the VEETC would surely no longer be needed as an incentive for industry expansion.

Now is a good time to consider alternative ethanol policy strategies. Congress is considering a reduction in VEETC, but given the price uncertainties involved, another possibility would be a variable subsidy or similar scheme to limit the incentives when gross processing margins are high.



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