Real Men Don't Crush Beans

Actually, real men and real companies such as Bunge and ADM do crush beans. The soybean crush spread, like the crude oil crack spread, is one of the most commonly quoted and traded spreads in the world of commodities. Unlike crude oil, which is virtually useless until it is refined, raw soybeans do have a large export market, principally to East Asia.

A crush spread package is 11 contracts of soymeal, 9 contracts of beanoil and 10 contracts of soybeans. The crush margin is fairly easy to calculate: Multiply the price of soymeal expressed in dollars per ton by 0.022 and the price of beanoil expressed in cents per pound by .11. Subtract the price of soybeans expressed in dollars per bushel from the sum of the converted soymeal and beanoil, and you have the gross crush margin expressed in dollars per bushel of soybeans.

A second spread, the percentage of beanoil in the crush product value, hereinafter referred to as the "Oil%," is a critical determinant of crush margins. Soymeal competes with corn, feed wheat, fishmeal and other high-protein feedgrains. Beanoil competes with palm oil, canola, corn oil and other edible fats and oils. As these are different markets with vastly different demand and substitution structures, the Oil% always was volatile. Now that beanoil is affected by biodiesel and soymeal is affected by corn-derived ethanol, the economics of the soybean crush have changed dramatically.

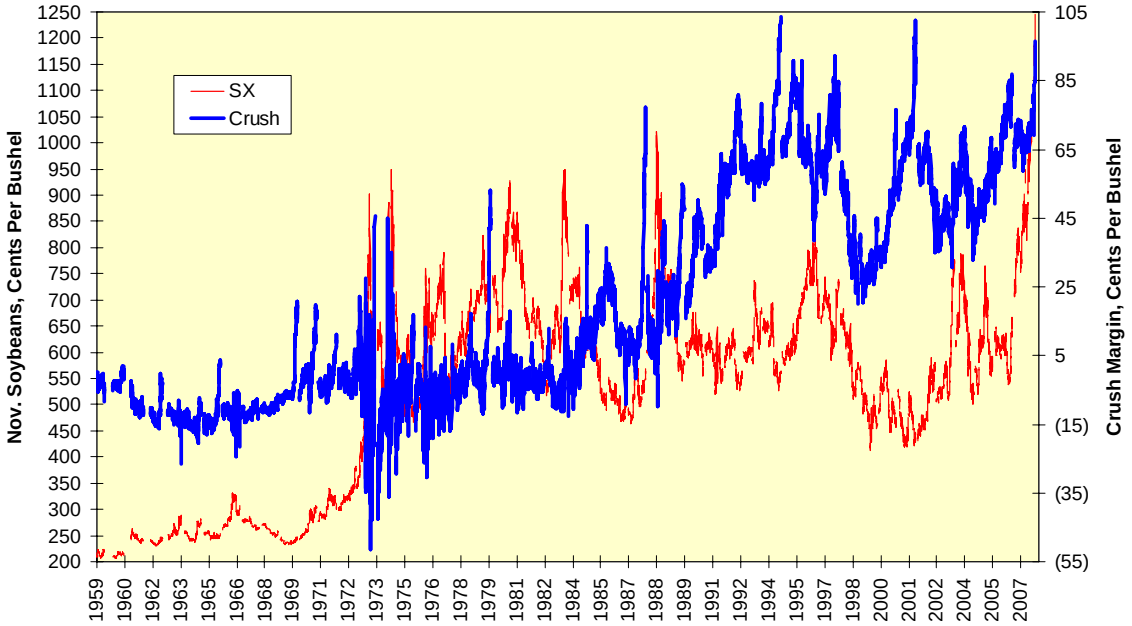
If we use the long-term data histories available on the CRB-Infotech CD-ROM as our data source and calculate the histories of both the crush spread and the Oil%, we see a secular rise in new crop crush margins since the mid-1980s. This is when the South American export market really emerged. The Oil% has remained in a broad trading range. Interestingly, the Oil% has been on a near-constant climb since the 2001 crop year; we can attribute much of this trend to biodiesel's impact on edible oil prices.

The 2007 new crop crush spread's year ended with the November 16, 2007 expiration of November soybeans, which are spread against the December contracts for soymeal and beanoil. Data points thereafter are for the so-far thinly traded 2008 new crop crush spread.

The New Crop Crush

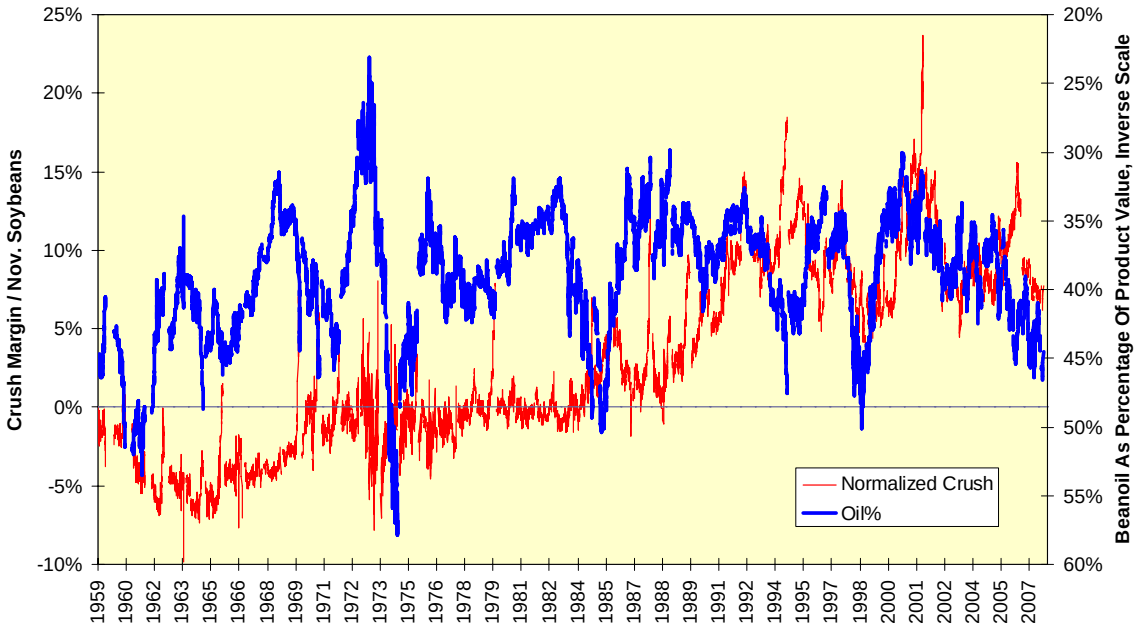
Novice petroleum traders always take the bait that higher crack spreads must pull crude oil prices higher; their agricultural counterparts similarly believe higher crush spreads must pull whole soybean prices higher. This is unsupported by the evidence. When crush spread margins rose in the 1980s, they did it off the back of lower soybean prices; when soybean prices shot higher in 2007 and finally achieved "beans in the teens" last Friday, crush spreads moved higher on the back of higher product values. The conclusion is the crush value and the feedstock costs are unrelated to a most surprising extent.

Crush Spreads And New Crop Soybeans Surprisingly Unrelated



If we normalize the crush spread by dividing it by soybean prices and map it against the Oil% plotted inversely, an interesting pattern emerges. The new crop crush spreads and the Oil% have been correlated negatively since the mid-1980s. A higher Oil% can reflect either lower soymeal values or higher soybean feedstock costs, or both; regardless, it is associated with lower normalized crush margins and vice-versa.

Long-Term New Crop Soybean Margins: Normalized



Looking Forward In 2008

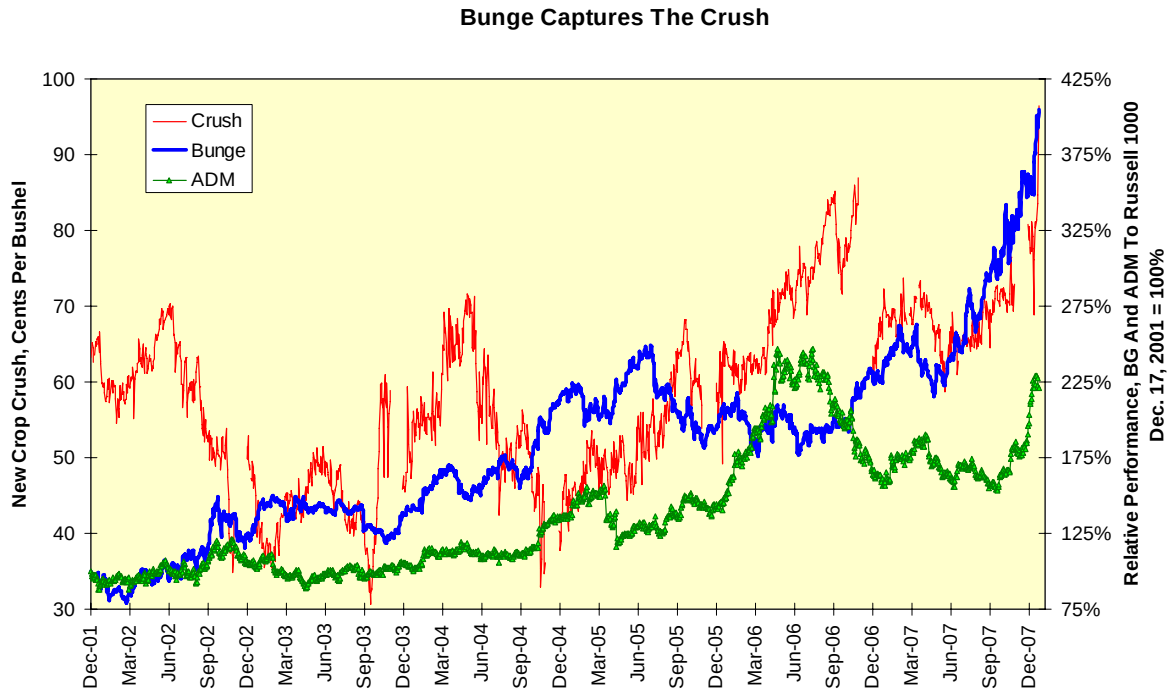
Biofuels, either ethanol derived from corn or from sugar, or biodiesel derived from soybean, rapeseed or palm oil, have been wreaking havoc on agricultural economics. As discussed here last June, higher food price inflation is now baked in the cake.

The European Union seems to be backing away from some of its more ambitious biodiesel targets discussed here in March 2006. If this occurs or if U.S. ethanol-derived corn demand collapses under the weight of its own folly, the effects on beanoil and soymeal prices will be direct, negative and severe.

This is not your father's crush spread. Grain and oilseed traders are now energy traders, too, whether they like it or not.

This raises the question as to who would be most exposed to rumbles in the soybean crush spread. Many of the largest crushers, such as Cargill, remain privately held and for good reason: Investors tend to blanch at commodity price volatility. While ADM is a huge crusher, its exposure to ethanol dwarfs its exposure to crush margins at present.

If we map the relative performances of Bunge and ADM to the Russell 1000 index against the new crop crush spread from the start of the 2002 crop year onwards we find Bunge has become, for better or worse, a direct play on this spread.



If soybeans continue their record surge past nominal highs last seen in the Nixon administration, it will not follow perforce that crush spreads will narrow. The crushes are now a prisoner of biofuels, which in turn are the prisoner of politicians meddling in the energy markets to reward agricultural interests at the consumer's expense.

If the political foolishness continues, both soymeal and beanoil can remain bid by the biofuels market. If we come to our senses – please stop laughing – the crush spreads could collapse and take Bunge and other crushers down with them. This may explain why real men both crush beans and remain active politically around the world.