

## The 2007 Sizzling Succotash Market

You would be amazed how few traders are sure about uncertainty. Yet this unquantifiable concept, far more than its quantifiable cousin, risk, is what makes markets and indeed entire economies move.

Let's address this in the context of how farmers have to make decisions. They have had the benefit of more than 150 years of deciding whether to grow corn or soybeans in the regions where both can be raised successfully. This gives them a database from which to assess the relative profitability of one crop versus another.

We can inject a little game theory into this mix, too. In a multiple-player non-cooperative game, your best move is not some objective standard, but rather a response to your opponents' anticipated best move. This is why the U.S. Department of Agriculture (Motto: Come here, sit down and shut up, and we will teach you how real welfare works) issues reports on planting intentions before the crop year gets underway. This sort of signaling might raise an antitrust eyebrow or two if done under the aegis of the private sector, but newcomers to Washington, D.C., are advised to check their idealism at the door.

The 2007 planting intentions report released at the end of March indicated farmers intended to respond to the ethanol boondoggle, sneered at here in [January](#) and again in [June](#), by planting more acres with corn than at any time since World War II. The actual acreage planted, as [released by the USDA](#) on June 29, 2007, exceeded those numbers. As soybean plantings were devoted to corn, prices for new-crop corn plunged and prices for new-crop soybeans surged in response.

### Note On Spreads

Let's take a quick diversion into the world of spreads. Many agricultural traders like to trade the corn/soybean spread, trading two contracts of corn against one of soybeans. While the fundamental economics behind this trade are sound, all and sundry are advised spreads such as this are not less risky than outright positions. Mathematically, the higher the covariance between two markets and the lower the standard error of estimation surrounding the beta between the two markets, the lower the expected risk. We will return to this below.

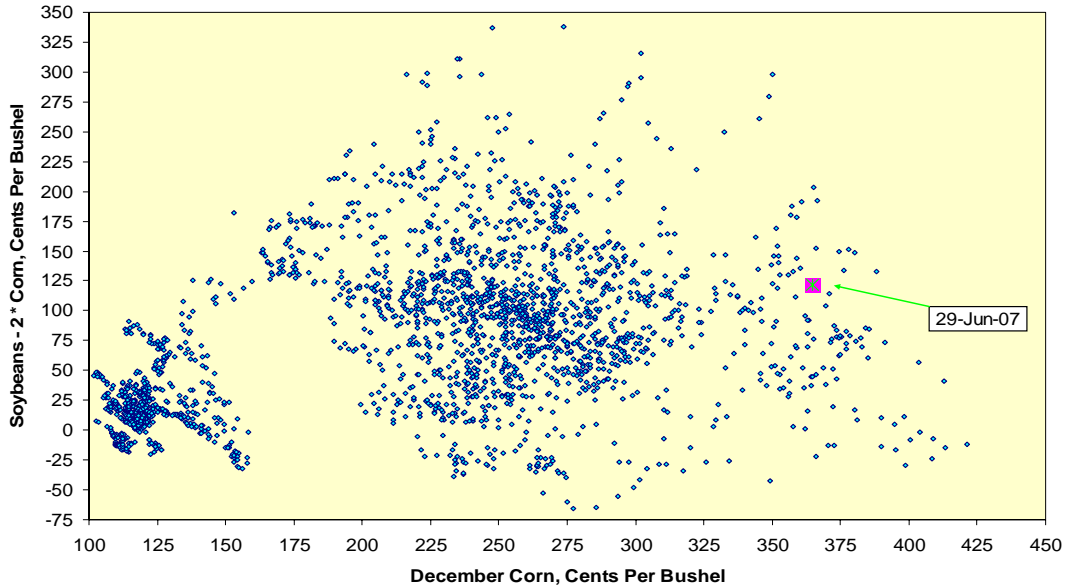
But all you have to do is recall the list of quantitative traders who have come a-cropper in recent years by confusing the measurement of risk with the actual management thereof. No retail traders require multibillion dollar bailouts of their hedge funds because no retail traders dare tread in the exotic mathematics of subprime CDOs and the like. A reality of modern Wall Street is you have to be really smart to be allowed to do really stupid things.

If stock margins are changed along the lines I noted back in [May](#), more stock traders will engage in long-short spreads so familiar to futures traders. Take the above warning to heart. There is a reason why a standard question on the NASD Series 3 exam for futures trading forces you to recognize spreads are not less risky.

### Back To The Farm

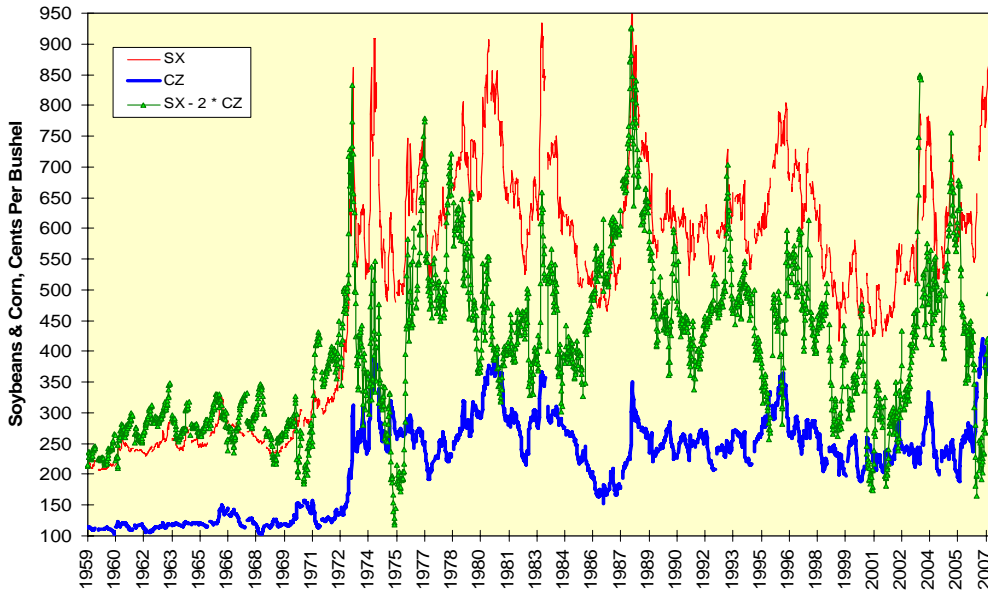
How unusual is this broken relationship between corn and soybeans? I ask this rhetorically because I was asked this in fact by some grain traders. First, let's restrict the long-term data set to the new-crop months of December for corn and November for soybeans. We can go back to 1959 and map the spread against the December corn price. The "shock" value of June 29, 2007 does not stand out at all as a statistical outlier.

### Current Spread/Price Combination Not That Unusual



What is unusual, and stands out a little more in a time series chart, is how both corn and soybean futures prices have witnessed major spikes in 2007. Corn's spike is over, barring a drought in the growing region. Soybeans can go much higher: The red line in the chart below is of nominal prices. November soybeans, currently hovering near \$9 per bushel, would have to exceed \$27 per bushel to match 1974 prices. Inflation plays some real mind games.

### The New Crop Soybean - Corn Spread



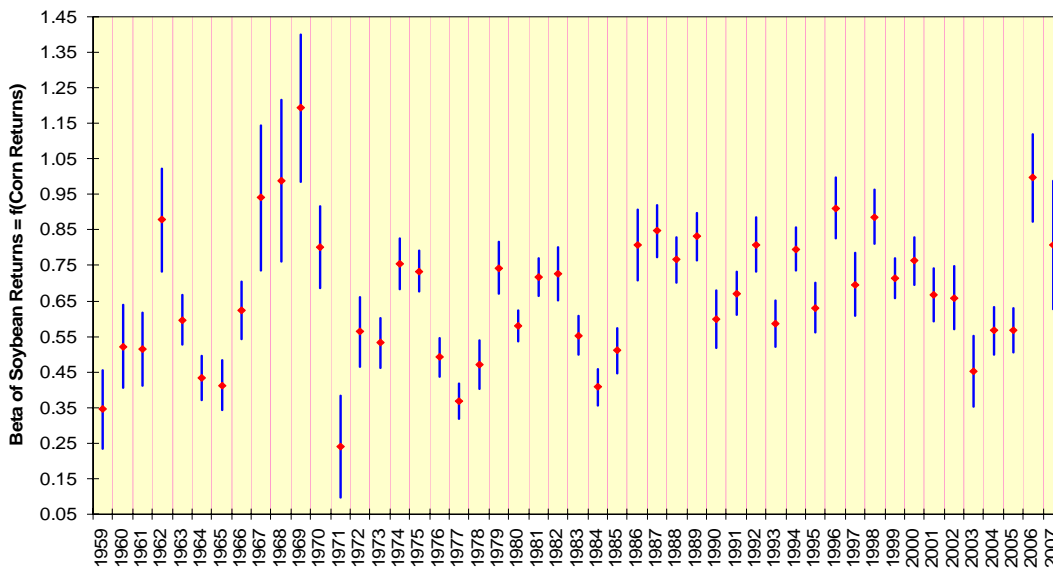
### Uncertainty

What will the outcome of this year mean for next year? Let's return to the topic of spreads and the concept of covariance and the standard error of estimation mentioned above. The long-term regression coefficient, or beta, of new-crop soybean returns as a function of new-crop corn returns bounces around pretty widely from year to year. It ranged from 1.19 in 1969 to 0.23 in 1971; in 1969, soybean returns were 19% more volatile than those for corn, while in 1971, they were 77% less volatile.

The betas are shown in red diamonds on the chart below; the 90% confidence interval, a multiple of the standard error, is depicted by the blue bars. The high and variable regressions of the late 1960s were followed by the worst

years of food price inflation in recent decades; the low and non-variable regression of the 1980s and 1990s were characterized by stable food prices. You are free to draw your own conclusions so long as they agree with the one above. Yes, we are heading into an era of high and volatile food prices created by greater uncertainty.

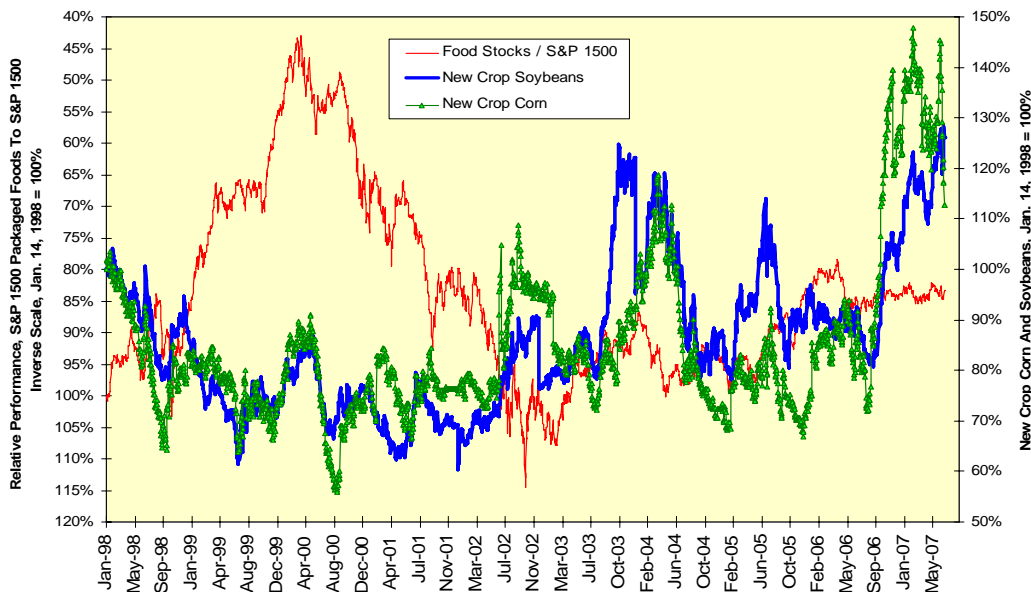
**Uncertainty Increasing For New Crop Corn & Soybeans**  
Beta  $\pm$  90% Confidence Interval



**Impact On Food Companies**

Is there a way to play higher food prices with food-related stocks? If we map the relative performance of the S&P 1500 Packaged Foods group against the S&P 1500 itself on an inverse scale, we find almost no correlation between the relative performance of food stocks and prices for new-crop corn and soybeans.

**Food Companies Not Much Of A Play On Food**



This group contains Kraft Foods, General Mills, HJ Heinz, ConAgra, Kellogg, Sara Lee, Wrigley, Hershey Foods, Campbell Soup, Tyson Foods, Dean Foods and Smithfield Foods, amongst others. It has underperformed the market slightly since the market bottom in 2002 and the rise in grain prices, but the effect has been minor.

The least important factor for food-related stocks is grain prices, and the least effective way to trade grain prices is through commodities.