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## The Dismal Signs: Food Industry Prognostications 2012

To reinforce the point of last year's prognostications column (4), new year predictions are always risky, especially in times of roiling uncertainty. Last year I made several predictions. How did I do? And, how well can I project into 2012 and beyond? I propose that, this year, it's more important than ever that I be either right or wrong in my predictions!

Whether in business, agriculture, government, or academia, we cannot succeed without forecasting. In Aesop's fable of the ant and the grasshopper, the ant anticipated the winter and prepared accordingly, while the grasshopper danced the summer away. When winter came, the ant slept comfortably, while the grasshopper died of cold and starvation.

Our ability to project and anticipate is essential to our survival and ability to prosper. The prognostication industry can be hugely profitable, even when hugely wrong, so there is never a shortage of prognosticators and predictions. One shortcoming of the system is that only rarely are prognosticators held accountable for the results. By next year, many of this year's forecasts will be long forgotten as forward-looking people move on to the next round of forecasts.

There are distinct problems with foretelling events of course—the foremost being our inability to see the future and the second being our own biases. Among such biases is our tendency to straight-line project past trends into future outcomes (referred to as “hindsight” bias). This has been a recurring problem with economics, the other “dismal science”. Economists, as they themselves often admit, disagree mightily in their explanations of past events and fail miserably at predicting the future. Witness the prediction of current world events. “Confirmation” bias occurs when we select concordant data and deselect dissonant data to fit the templates we have built to better explain and anticipate perceived reality.

There is also the problem of “expertise.” Philip Tetlock (social psychologist, University of Pennsylvania) has conducted illuminating studies into the apparent inverse relationship between accurate forecasting and one's depth of expertise in the field in question (11). Tetlock builds on early-twentieth century philosopher Isaiah Berlin's (3) dichotomy of human thinkers, categorizing them as “hedgehogs,” people whose world templates are defined by single big ideas, and “foxes,” people whose world is defined by diffuse experiences, centrifugal analyses, and ever-shifting templates. People who are too expert in their field tend to be hedgehogs, suggests Tetlock. In his analysis of the various judgmental biases that interfere with accurate forecasting, he gives the forecasting edge to foxes, suggesting that foxes tend to

be more fluid in their projections and better able to recalibrate their assumptions. Despite this, the forecasting industry puts its premiums on hedgehogs.

Hovering over our attempts to forecast the future is the joker card—the ever-present “black swan” events (10) referenced in last year's column. Black swan events upend the most thoughtful and logical of projections. As Nassim Taleb, author of *The Black Swan: The Impact of the Highly Improbable*, observed, such events only appear logical in hindsight.

The point of this discussion is not just to recommend a provocative reading list, but to emphasize the inherent flaws in forecasting. Forecasts should be viewed as portfolios of probable outcomes, not templates for explaining the future. So, caveat emptor: read the rest of this column with warranted skepticism but don't forget that, in the end, the ant fed and slept well.

### Last Year's Predictions: How Did I Do?

In the interest of establishing my own credibility, how did I do with last year's predictions?

**Prediction:** “The pendulum will swing in favor of plant-derived ALA omega-3 as the preferred source of omega-3s.” Let's consider only one major source of vegetarian omega-3, flaxseed (others include chia, hemp, soy, and nutmeats).

In 2010, Datamonitor tracked 109 new food and beverage SKUs (worldwide) featuring vegetarian flaxseed. By October 2011, the number of introductions was at 334. New product SKUs that include fish oil or any related reference to marine omega-3s increased from 252 to 290 during this same time period but were almost overwhelmingly represented by supplements, personal care products, and companion animal foods. ALA omega-3 remains a very significant food product growth category that bears close monitoring.

**Prediction:** Obesity will remain the talk of the town, and food companies “will struggle to develop reduced-calorie foods to no public health avail” because obesity remains primarily a lifestyle problem.

Political theatrics aside, I stand by this projection. Although there have been a number of initiatives by governments, public action groups, and the food industry (e.g., manufacturers, retailers, and non-governmental organizations created the Healthy Weight Commitment Foundation in 2009 to “reduce obesity by 2015” [8]), I predict that such commitments will remain largely in the talking stage until consumers willingly change their lifestyle choices. In the meantime, the trend does mean there will be plenty of income for product developers and nutritionists. As part of the trend, packaging has changed to better display the caloric contents of foods. A great conceptual

marketing innovation, in my view, has been the Kcal-limited serving included on food packaging. Good move.

**Prediction:** Discussions on the use of grain foods to supplement vitamin D intake will continue to rise: grain foods, which are already used to vector a wide variety of vitamins and minerals, will be identified as natural candidates for vitamin D supplementation.

Datamonitor reports that there were 754 worldwide launches of products containing vitamin D in 2011 versus 924 in 2010, many of them cereal products. Granted, most of these include vitamin D as part of standard “12 essential vitamin and mineral” blends. October 2011 saw the introduction of C&S Wholesale Grocers’ Best Yet Toasted Oats cereal brandishing vitamin D’s soul mate, calcium, on the front label, as did Hyvee Nutty Nuggets Granola Crunch. Also, in an October 28, 2011, press release, Kellogg Company announced that it would begin fortifying children’s breakfast cereals at 25% of the United Kingdom’s recommended daily intake for calcium and vitamin D, citing a high incidence (20%) of calcium disorders and rickets among sun-deprived children in the United Kingdom (6).

Hmmm! Maybe vitamin D fortification in cereals is moving beyond talk and into action—a work in progress (WIP).

### Truth in Packaging

**Prediction:** “Under increased food price pressures, disillusionment with traditional brands will grow, and more consumers will investigate emergent brands.”

I admit it, I don’t know the full answer to this one yet. The data I have seen are too contradictory to sort out. Judging from the Natural Products Expo (East and West) and Supply Side West retail shows held in the United States in 2011, however, there is plenty of new food branding and company start-up activity in North America, even in this difficult economy. I consider this a “too early to tell” prediction—another WIP. Maybe the major food brands are doing a better job of policing their serving and packaging portion claims?

### Food Price Inflation—The Most Dismal Signs

**Prediction:** Food price inflation will continue, driven both by currency devaluations and crop shortfalls.

This prediction has been very much on target. Reasons include climate and environmental challenges (the Canadian prairie “breadbasket” had another bad year in 2011), rising demand for meat products, competition from biofuels, and political turmoil (much of this driven by rising food prices). It is on this issue that I prefer to focus the rest of this column, because issues of food supply security carry the most serious economic, political, and humanitarian implications for us all, as an industry and as human beings.

Food inflation is here and is probably here to stay for the foreseeable future. All major regions of the world experienced food price inflation in 2011. According to the World Bank (7), the global food price index was close to its 2008 peak in 2011. In a March 2011 report by the Asian Development Bank (2), the February 2011 FAO benchmark food price index increased 34.2% year to year. More worrisome, the report noted a steady and significant erosion in global commodity grain reserve stocks since 1999.

The reasons provided for price inflation were many, including expanding populations, upgrading of diets in rapidly developing economies (e.g., China and India), and competition from the biofuels industry for foodstuffs. One very major factor cited in

the both the World Bank (7) and Asian Development Bank (2) reports is climate change, specifically cooling in the Northern Hemisphere and major flooding in equatorial regions and the Southern Hemisphere. Separately, my conversations with Argentinean grain traders and South African food scientists suggest that it is not just the Northern Hemisphere that is under climate stress.

Europe and North America have been suffering longer, colder than average winters in recent years, and forecasts predict more of the same in 2012. The primary explanation for this trend is extended La Niña-driven northern Pacific Ocean cooling. If Donald Easterbrook (professor emeritus of geology, Western Washington University) is correct (5), this cooling is linked to a combination of reduced solar activity cycles and the Pacific Decadal Oscillation, which drives 30-year cycles of warming and cooling periods in the Pacific. If his forecast is correct, this current cooling cycle is likely to last another two decades. Granted, theories on climate change are highly controversial, and many disagree with Easterbrook’s forecast. Forecasts, however, should be viewed as portfolios of probabilities to be anticipated and addressed, and the fact is that in recent years the European and North American “breadbaskets” have experienced colder, wetter growing seasons.

If we are in fact experiencing a period of extended cooling, crop production zones will contract, and we may have to accept that international grain stocks will continue to decline and that food security concerns will be exacerbated, as they have been for the past decade. For the food industry, rising food prices are probably a good thing (provided that profit margins hold). For humanity, however, this is definitely not good, especially in countries where food expenditures command large shares of disposable incomes. I dread the thought that large segments of the world will once again experience famines such as we experienced in the 1960s and 1970s—experiences that encouraged my own career choice to pursue food science and nutrition graduate studies.

### What to Do?

If the winter of 2012 proves to be mild across the Northern Hemisphere, perhaps climate concerns will be thought to be overblown, and we can all go back to dancing the summer away and enjoying a good night’s sleep. However, if the winter of 2012 once again proves to be more bitter and extended than normal with harmful effects on 2012 crop production, be it in the Northern or Southern Hemispheres or both, it would be irresponsible not to consider that climate cooling may be a very real trend with severe negative consequences for global food supply security. This trend should provide unique opportunities for the food and agricultural sectors to take leadership roles in enhancing global food security to everyone’s benefit. This can be accomplished by improving supply-chain efficiencies. Nobody and no entity knows better how to do this than the private food and agricultural sectors!

There remain enormous swaths of the world’s crop production land that are amenable to massive modernization of food production, preparation, and distribution infrastructures. Countries like Brazil and companies such as Brazilian-based Bunge have shown the way. Companies such as McDonalds (1) have shown the way in the foodservice sector. The Ukraine, Europe’s breadbasket, claims to possess 30% of the world’s “black earth” and is poised to undertake massive reforms in its agricultural legal and capital infrastructure to boost production

by as much as threefold, according to Ukrainian Minister of Agricultural Policy and Food Mykola Prisyazhnyuk (12). Similarly, there are aggressive agricultural and food developments in Manchuria, another “black earth” breadbasket. In Africa, Asia, and certain lagging economies in South America, new (i.e., mobile) communication infrastructures are boosting local business development and entrepreneurship. Emerging markets, including those in Africa, are attracting significant investor capital for development projects (9). In sum, there are many incremental gains to be made in the ongoing fight to secure the global food supply.

This is not a job for large international organizations distracted by world events and restricted by internal and external conflicts of interest. There are no government organizations or NGOs (non-government organizations) capable of providing the targeted, focused investments and decisive economic analyses that are required to take the international food industry to the next level in ways that are economically justifiable. All should profit and all should prosper in this activity if it is to be successful.

This is my take on global food supply security. This is only my prediction for the coming year. I recognize that I, like all people, view the world through my own distorted prism of biases. Whether my prediction in the end proves me to be a hedgehog or a fox, is for evolving world events and you to determine. Whether to be an ant or grasshopper, however, is a choice with which we all will be presented.

Until next year!

A paid ad appeared here in the printed version of the journal.

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