# Viewpoint

## Taking Prophets in Soybean Oil

**(also known as "propheteering")**

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*(David M. Batholomew is a regular contributor to* JAOCS. *In this article, originally presented Oct. 18, 1983, to a meeting of the North Central Section of the American Oil Chemists' Society, he describes how supply-demand balances for the current crop year tend to increase the value of soybean oil in a bushel of soybeans relative to the value of the meal content.)*

There is a saying among market analysts, a bit wistfully I might add, that doctors can bury their mistakes. Not so with this business of being an analyst. The mistakes, as well as the successes, are preserved for all to see and refer back to at will.

I recently re-read the story of the prophet Jonah. Now there was a stubborn fellow! He tried to run away from having to prophesy the inevitable. Don't we all at one time or another? When proven to be wrong it is a humbling experience, and sometimes downright humiliating. But thankfully never the equal of Jonah's experience of nearly drowning in a wild sea and then being vomited onto a beach just so that he could be a successful prophet!

No, market analysis has come a long way. The disciplines may not be so dramatic or so traumatic. In fact they have evolved into a fascinating array of techniques of the space age never before thought possible. But there is a serious danger lurking behind all this mathematical elegance. It still is possible to end up in the briney deep and be the cause of piscine indigestion.

Regardless of strategies and methodologies chosen, one's instincts must be allowed to function. Today's prophet, like those of old, usually knows the likely course of events if he can attain a suitable degree of objectivity. The indigestion comes when resisting that objectivity; when running away from what is known to be right; when arguing with reality.

Here, of course, I'm not concened so much about day-to-day price action. Rather I mean the primary trend over a longer period. In this the reality of objective appraisal can shine. Here the intuitive discernment can pay off nicely. Here is where the prophet can be made.

### THE SEASON AHEAD

A new trading season has begun – with a bang! What first looked like another monotonous season for soybean oil, and vegetable oils in general, with perpetual over-supply, quickly evolved into an exciting one indeed. Unfavorable weather has plagued nearly all sectors of the world and in some notorious cases, such as the United States and China, was accompanied by sharply reduced acreage.

U.S. acreage was cut drastically by the government PIK (payment-in-kind) program. That program was put into effect because government forecasters predicted an ideal summer both as to moisture and temperature. Just the opposite was true in most extreme terms. The previously burdensome government inventories of grains and cotton would have been sufficiently reduced by weather to a comfortable level. Thus, the PIK program was a case of "overkill" – a concept I put forward in April during a Time magazine interview, but which the magazine did not use. Every time in history that the U.S. government has taken measures to drastically influence supply or demand, in either direction, it has been an "overkill" situation because weather or markets or both already were in the process of correcting the problem.

Well, here we are so now we must determine what can be done about it from a marketing point of view. For this purpose it is best to define the basic dynamic situations that are likely to induce market response. Then as the weeks go by you can plug in the events that will modify those influences to freshen your market decisions.

### SUPPLY

This season began with a surplus supply of soybeans, a record quantity. But the crop is approximately 32% smaller than last year, so total supply is down by 25%. That's very significant when considering that the oilseed industry is accustomed to an annual growth rate of 4 to 5%.

The season also began with a larger than normal supply of soybean meal. It was twice the amount of one year ago. The supply of soybean oil was comfortable, but on the decline from a record amount not many months ago. This set of circumstances is highly significant. We will deal with it in the demand section. Just now it is sufficient to say that these relationships will continue through this season and the next and possibly longer, i.e., an ample supply of meal and a declining supply of oil, even becoming tight or very tight.

Beginning early in 1983 several things happened almost simultaneously to bring this about. Production of coconut oil, and palm and palm kernel oils was, and still is, affected by unfavorable weather. Fish oil has had the same experience. More recently all the major oilseeds in the world have suffered disappointing yields to varying degrees. Taken as an entire group it is now estimated that oil supply will decline by 700,000 metric tons compared to a usual increase of 2.0 million metric tons.

Lard and tallow production recently has increased as herds are liquidated due to high cost of feed, but will drop sharply as animals come to market at lighter weights and, ultimately, also in reduced numbers. Butter production remains high in the United States and the EEC but corrective measures are beginning in both areas.

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Worthy of special attention is a phenomenon which began early this year, but which has had little or no publicity. Cottonseed crush dropped to almost half of last season and half of what had been expected. This is because dairy farmers have sharply expanded the feeding of whole cottonseed to milk cows. It had been done previously on a small scale but now it is of major proportions. It has spread to the upper Midwest. Barges, that otherwise would go empty, take it up the Mississippi River.

Animal nutritionists give their blessing to this feeding technique. Economically it makes sense. It increases the butterfat for which there is a premium of 17¢ for each 0.1% above 3.5%. It displaces protein meals, but mostly it takes the place of corn which became very expensive with the PIK program and then the drought. It will continue until corn gets cheaper or cottonseed gets too expensive or the government reduces the butterfat premium incentive. As long as it continues there will be reduced supply of cottonseed oil which in turn will shift consumption principally toward soybean oil, resulting in more soybean meal production. The concept is beginning to spread to other countries. Already it is being adopted in Australia and therefore could be operational in New Zealand as well. It is well known in India and probably therefore in Pakistan and Bangladesh. Quickly it can spread to other countries where economically feasible.

Soybean oil stocks in the United States are declining. At the end of August stocks were 1,400 million pounds which is just about 33% of the peak 19 months previously. The last three months of the decline was spectacular considering it came while soybean crush was at a record rate for those months. Price was doubling during that time (more on that subject later)! But stocks of soybean meal piled up and were at least double what they were last year.

## OIL VERSUS MEAL

Most of the time a soybean processor realizes one-third of his profits from oil and 2/3 from meal. But this ratio fluctuates since, in soybeans, the quantity of each is relatively static, while demand for one is seldom in such a balance with the other. Usually it is the meal demand that dictates the rate of crush, while oil stocks accumulate. Under extreme conditions of meal demand, that fraction returns up to 75% of the crushers' profit and the oil only 25%. Occasionally (about every 9 to 10 years) it is the oil demand which dictates the amount of crush. When that happens, oil returns over 40% of the profit and has sometimes even approached 50%. Again this season, that could be realized if soybean meal is $233 per short ton and soybean oil reaches 51¢ which incidentally is the peak reached in 1974. It is difficult to make a prediction that soybean oil will reach such an astronomical level, but it has been there before and it could do it again. That would require soybeans to be around $11 but that is not unreasonable either.

## DEMAND

So now it is essential to speak of demand. This is always more mysterious. Speculators and some others shy away from it because it requires much more expertise than supply. There are frequent and reliable estimates of supply. But demand fluctuates with so many variables.

We have already established that demand for vegetable oil, and soybean oil in particular, is less elastic than the demand for protein meal. This is largely because the retail price of products containing vegetable oil is less responsive to wholesale price than in the case of protein meal. When the price of soybean meal doubles, the price paid by the consumer – the livestock feeder – also has doubled and he will respond accordingly as quickly as possible. But when the price of soybean oil doubles it may cause no more than a 30% increase in consumer product price, and a gradual one at that.

In times of extreme price strength, of which 1974 was a classic example, demand for vegetable oil was retarded because wholesale price more than quadrupled when compared with early 1973 and retail price of major items more than doubled. Two things happened. Margarine consumers shifted to butter as, much to everyone's amazement, butter was temporarily "the low price spread." The other event was a shrinking of household inventory. Smaller containers were purchased instead of the large economy sizes. As one major industry member said, "We're doing a fantastic business in little bottles." Housewives had to spread a shrinking dollar among many necessary items so they just had to buy smaller containers of cooking oil, salad oil, etc. And this automatically dictates reduced consumption. When preparing meals from small containers there is a natural instinct to be more conservative than when dispensing from the large "jumbo" size. Partly this is because obviously it will run out sooner and partly because the pain of high price (and realization that per unit it was more costly) is still remembered and there is a desire to delay as long as possible inflicating that pain again.

Are we on the way to a repeat performance of the 1974 events? There are similarities. Wholesale prices doubled from June to September. Trebling is entirely possible; in fact, quite likely. My conservative nature restrains me from saying it, but all the ingredients are present that can make it happen.

Has anyone here seen any evidence that demand for products made of vegetable oil is down? If so, I would be most interested in learning of it. But supply is down and will continue to decline for six months at least and maybe longer.

Let's look at that demand expansion, in terms of both foreign and domestic demand. It grows following growth in supply. Ten years ago the oilseed industry here and in Europe was stunned by the growth of Malaysian palm and palm kernel oil prospects. There was the inevitable price disorientation that followed. But now the world has become dependent upon having over three million metric tons of palm oil annually and seems resigned to the fact that this can double by 1990. Maybe even more, as plantations are being developed in other countries as well. Just how dependency has developed has been seen in past weeks.

Palm oil production in Malaysia for the first eight months of this year was 11% below last year. Its growth curve should have been at a plus 5% at least. This is a large

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part of the doubling of soybean oil prices recently.

But world production of soybean oil has not been stagnant during this time. It has doubled during the past 10 years. When that growth curve is interrupted we also have a period of dynamic price action. Anticipation of that reduction in supply in the months ahead has been part of recent price strength. But as of now there has been no shortage at all—just a draw down of the surplus. Makes one wonder what can happen to prices as the shortfall in production is actually experienced. We'll get through somehow but it will not be easy and probably can be accomplished only by more strength in prices than we have witnessed so far. As livestock numbers decline due to high feed costs, it will be necessary for soybean oil to carry a larger burden of crusher profits. In other words, crushers will have to charge more for the oil fraction because of reduced demand for meal. And U.S. crushers will have an increasing meal inventory problem, another similarity with 1974 when inventory reached an unprecedented level of one million metric tons. Moreover, crushers will have to pay a high price to farmers for soybeans as the farmers know, better than anyone else, how poor the crop was, and they have a vast oversupply of storage capacity.

## CONCLUSION

It's a tough year on farmers as well as on industries that use farm products. It is no simple matter for the analyst either. "Propheteering" can be dangerous to your health, as Jonah and others before and since his time have learned.

What was the final chapter in the experience of Jonah? He finally got to Nineveh and made his prophecy about the coming destruction of the city if the citizens did not repent. They did change their ways and the city was saved. Consequently Jonah felt that he was a failure since the city was not destroyed. Well, it can happen to all of us.

**TABLE I**

**Changing Monthly Projections for 1982/83 and 1983/84 Marketing Years**

| | Soybeans (million bushels) | | | | Soybean oil (million pounds) | | | | Soybean meal (1,000 short tons) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Domestic crush | | Exports | | Domestic use | | Exports | | Domestic use | | Exports | |
| | 82/83 | 83/84 | 82/83 | 83/84 | 82/83 | 83/84 | 82/83 | 83/84 | 82/83 | 83/84 | 82/83 | 83/84 |
| April | 1130 | 1135 | 950 | 970 | 9800 | 10200 | 2205 | 2050 | 18870 | 19100 | 8050 | 7950 |
| May | 1130 | 1130 | 930 | 940 | 9800 | 10200 | 2205 | 2050 | 18870 | 19100 | 8050 | 7800 |
| June | 1105 | 1140 | 910 | 930 | 9900 | 10350 | 1985 | 2100 | 19000 | 19800 | 7400 | 7400 |
| July | 1100 | 1140 | 900 | 890 | 9900 | 10350 | 1900 | 1950 | 19100 | 20000 | 7100 | 7200 |
| August | 1100 | 1105 | 900 | 830 | 9850 | 10300 | 1900 | 1900 | 19100 | 19450 | 7100 | 6900 |
| September | 1100 | 1010 | 900 | 740 | 9850 | 9800 | 1900 | 1500 | 19100 | 18000 | 7100 | 6150 |
| October | 1108 | 975 | 905 | 720 | 9850 | 9750 | 1900 | 1450 | 19450 | 17750 | 7050 | 5700 |

Figures reflect projections made during the indicated month as to expected total use by the end of the marketing year. Thus, in July and August of 1983 it became clear that reduced soybean supplies would require reductions in demand projections for the 1983/84 marketing year.