

Soybean Mysteries

Market projections for the soybean complex at the beginning of a new calendar year should be fairly easy under normal conditions because part of the season has elapsed which should give clearly defined trends. This season, however, is far from normal in numerous respects, which is causing analysts to hedge their forecasts both as to consumption and price. At this point there are several important mysteries which can significantly vary the results and which the cautious observer would like to see resolved before venturing forth. But the market cannot wait for all the mysteries to become known fact, so it continues to grope in the dark, making certain assumptions until better information is available.

First we should identify these ominous mysteries, and then define present market thinking on how they will work out.

1. Dock strike—The Taft-Hartley injunction expired on December 20 with no resolution of differences. Traders are still hoping for a solution, without an extended port tie-up.
2. First quarter disappearance—This was unusually heavy in an attempt to beat the December 20 deadline on exports. Foreign buyers of soybeans built at least 30 days of inventory. U.S. crushers worked feverishly to satisfy export meal demand prior to December 20. These factors make it difficult to base season disappearance on what transpired in the first quarter.
3. Second quarter disappearance—If the dock strike is of extended duration it will be impossible to make up for lost consumption because the foreign users of oil and meal will have already consumed substitutes for unavailable soybean products.
4. Nationwide railroad strike—Some unions have given notice that a strike will begin in January 1969, but most observers are expecting governmental intervention.
5. European Common Market levy on oil and meal—This could become effective in the next month or two, but most observers are depending on U.S. governmental intervention to keep it from taking effect. It would apply to bean oil and meal regardless of whether it came from within the Common Market or from without. Thus it could seriously disrupt U.S. exports of soybeans and meal, and have a detrimental effect on the oil market even though very little U.S. soybean oil goes to Europe.
6. Soybean support for 1969 crop—This announcement is due any time in January or February. Most traders suspect there will be some reduction from the \$2.50 national average of the past three years, with \$2.25 generally agreed on as most probable. If there is no change then the distant futures are too low. If there is a change to \$2.25 they may be too high. However, with a lower loan, production may be reduced sufficiently to keep the market above loan level.
7. Acreage planting intentions for 1969—This will be released at mid-March and will be affected by the support level announcement.

Now that we have grappled with the major mysteries surrounding soybeans at this time, let's look at the other unknowns with which market observers are more accustomed to dealing and surrounding which there is less obscurity.

Soybean Meal—Crushers usually operate their plants in response to meal demand, rather than oil demand, because meal cannot be stored for any extended period of time while oil and beans are readily stored. Most of the time, therefore, crush will expand and contract depending on how well meal moves at a profitable return. But profits for a crusher are a combination of return for both oil and meal. So there are seasons when the meal portion of total

profit is greater than the oil portion, and vice versa. This creates a tug-and-pull reaction which defies any attempt to graphically demonstrate the inter-relationship.

As for the current season we know that hog numbers are expected to be 4% over a year ago, and more protein is being fed for faster gains with more lean meat. We are also witnessing a broiler expansion of 3% to 5%. Cattle numbers are also up, but this represents mostly increased consumption of cottonseed meal and urea. Similarly, the laying hen flock and turkey numbers are expected to increase. And not to be overlooked is the sharply increased use of soybean meal in rations of horses and in pet foods.

All this increase in animal numbers indicates larger protein needs, but it must be kept in mind that larger slaughter produces more meat meal, tankage and other feed derivatives in addition to the increased amount of feather meal from larger poultry slaughter. All these sources of protein, and most others, are by-products which must move into consumption, while soybean meal is one of two primary products of the crushing of soybeans. So if the demand for soybean meal increases, crush increases, and if the demand for soybean meal diminishes, crush contracts. Soybeans can be stored while most other protein sources cannot.

For these reasons it appears that total protein demand for domestic use will increase 3½% this season, but due to the availability of protein other than soybean meal the demand for this product will be about unchanged from last season's 10,700,000 short tons.

During the last half of the season, beginning March or April, there should appear a stronger than usual demand for soybean meal to move from the mid-west and mid-south into southeast and mid-Atlantic broiler states. This is because of the low production of soybeans in those states due to last summer's drought.

As for exports of soybean meal, they can be expected to remain about unchanged at 3,000,000 short tons, with expanded foreign demand satisfied by increased crushing of beans abroad. This outlook could be drastically changed, however, if the EEC imposes the proposed tax on soybean meal referred to in number 5 above. It would also suffer the effects of an extended dock strike.

Soybean Oil—As we said earlier, crushers realize a profit from the combination of returns for oil and meal. But the expansion and contraction in the demand for soybean meal is seldom synchronized with fluctuations in the demand for soybean oil. Most likely they operate in diverse directions.

We also have pointed out that nearly all the sources of meal and oil are as by-products of some other primary industry, with the outstanding exception being soybeans. Thus it follows that there are seasons when soybean meal is called upon to take up the slack in by-product meal supplies, and this is likely to produce too much soybean oil. And conversely there are times when soybean oil has to make up deficiencies in the total fats and oils picture, which can result in too much soybean meal.

Because of these swings in demand there tend to be swings in price. Most of the time higher priced meal means lower priced oil, and vice-versa. The swings are most noticeable in oil because its surpluses are storable for longer periods than meal. During the periods of lower priced soybean oil, it tends to displace other fats and oils where substitution is possible, with high usage rates continuing until price becomes too high in relation to other fats and oils. Then crushers cut back on soybean crush because of lowered demand for oil, and the meal supply quickly becomes tight which forces meal prices up. Then the whole cycle starts over again.

This soybean oil price cycle tends to be of irregular length because of extenuating circumstances in the realm

of politics, world economy, labor problems, international affairs, etc., but there is no difficulty in recognizing that there is a cyclical response.

There are indications that the low soybean oil prices of the 1967-68 season resulted in a significant switch from other fats and oils to soybean oil. It also appears that the price recovery in the early months of the 1968-69 season have not caused the high usage rate to abate, and will probably continue for some time to come until eventually soybean oil price gets out of line with its competitors.

This leads us to the conclusion that domestic use of soybean oil during this season will be 5,200 million pounds, vs. 5,086 million pounds last season.

As for exports, this can be estimated at 1,000 million lb., virtually unchanged from last season. This, of course, is subject to PL 480 and other government assistance exports, and to the outcome of the proposed EEC tax referred to in number 5 above. The dock strike should not impair oil exports since they can be accomplished without handling by longshoremen. An extended dock strike would, nonetheless, affect oil prices in two ways. First, it would raise world prices for foreign-produced soybean oil because we could not export soybeans to foreign crushers. Second, it could raise domestic oil prices since U.S. crushers would reduce crush due to the absence of an export market for meal.

Soybeans—Now that we have considered the demand for the end-products, it is easy to calculate the size of soybean crush. And in so doing one might expect to reach the conclusion that we will crush beans primarily for meal or primarily for oil. It just so happens that entirely by coincidence the above projections of meal and oil demand both point to a crush of 580 million bushels, using average yields of 10.7 lb. oil and 47.4 lb. meal per bushel of beans. So at this point it can only be said that everything is in equilibrium, subject to change in demand for one or the other product or difference in yield of one or the other.

As for bean exports, this is largely dependent on the results of the dock strike and the EEC tax structure. If the strike lasts no more than seven weeks and the EEC does not effectively reduce imports of soybeans, then the export figure should reach 280 million bushels.

With crush of 580 and exports of 280 plus seed use of 50 million bushels, total disappearance would be 910 million bushels. This would leave a season carryout of 337 million bushels, mostly in government hands or tied up in the loan program. Since there were 314 million bushels not available to the free supply at the end of November due to encumbrance under these programs, and since farmers still appear to be holding for better prices, it can be expected that additional quantities will be reported in the loan program through January after which there is normally a movement out of loan into free supply. This will largely be accomplished by price improvement. But this improvement cannot be too great or too many beans will come into free supply. Most of the improvement will be in the cash price in the country rather than in the futures market.

As for the 1969 loan support price, if this is reduced there will be a tendency greater than normal for the industry to have only the minimum essential carryover supply of beans, oil and meal, with one exception. If plantings are curtailed as a result of price support reduction, then prices in the 1969-70 season could be even higher than in the current season as free market supply and demand resumes the leadership it once enjoyed in place of the current surplus-into-loan situation.

All of these influences will be closely watched in the following months by those whose responsibility it is to unlock the soybean market mysteries.

DAVID M. BARTHOLOMEW,
Commodity Analyst
Merrill Lynch, Pierce, Fenner and Smith
Incorporated

• Industry Items

PENNSALT CHEMICALS CORPORATION, Equipment Division, has announced the formation of a special department to deal with problems encountered in the field of waste treatment.

In announcing the move, Mr. Hugh C. Land, Vice President-Equipment Operations, stated that responsibility for waste treatment operations is being placed under the direct control of one department to deal more effectively with customers' problems in this area, and to help establish Pennsalt as a reliable source of waste treatment technology.

J. R. Townsend has been named Manager of Waste Treatment Engineering, and has been assigned responsibility for the new department, to be headquartered at the company's Warminster Pennsylvania manufacturing plant. Mr. Townsend joined The Sharples Corporation as a process engineer in 1957, prior to its acquisition by Pennsalt. Since that time, he has been active in the development of centrifuges for both industrial and municipal applications.

For further information on the new Waste Treatment Department or Sharples capabilities in the field of water and waste treatment, write Equipment Division, Pennsalt Chemicals Corporation, P.O. Box 100, Warminster, Pa. 18974.

The DE LAVAL SEPARATOR COMPANY has acquired the centrifugal machinery business of the American Tool and Machine Company of Hyde Park, Mass. A.T.M. manufactures basket-type centrifugals for separation, extraction and clarification of large quantities of liquids with high solids content. New designs have recently broadened the use of these machines for such unusual separations as stearine from vegetable oil, metal oxides from electrolytes in electro-chemical milling, and salt crystals from mother liquor. Largest potential for the basket centrifugals is in the chemical process and food industries. W. A. Neumann, Jr., President of DeLaval said, and the A.T.M. equipment will be sold through DeLaval's Industrial and Food Equipment Divisions.

American Tool and Machine Company was founded in 1843 and has been a major supplier to American manufacturers for 125 years. DeLaval has marketed A.T.M. equipment for over 20 years.

DeLaval manufactures centrifugal separators, filters, heat exchangers, homogenizers and spray driers for the milk, food, chemical process and other process industries. It also manufactures milking equipment and accessory dairy farm equipment.

PHARMACIA FINE CHEMICALS announces the availability of the Sephamatic System, the first completely automated chromatographic process for industrial applications with Sephadex gel filtration. The Sephamatic System consists of a Sephamatic gel filter and a control unit. The Sephamatic gel filter is a specially constructed stainless steel chromatographic vessel. It employs gel filters covering a range of 70-2,500 liters bed volume with a capacity of up to 1,500 liters of charge solution per hour. In some cases, process costs are as low as one cent or less per liter of treated material. (Pharmacia Fine Chemicals, Inc., 800 Centennial Avenue, Piscataway, New Jersey 08854.)

THE POPE TESTING LABORATORIES Analytical Chemists

2618½ Main

P.O. Box 903

Dallas, Tex.