

Record-Breaking 1965-66 Soybean Crop Year Drawing to a Close

SOYBEAN PRICES are enjoying one of the most sustained creeping bull markets in their history. Since early in October prices have advanced 64 cents with only one major correction of 18 cents in late February-early March. The market has featured a steady strong demand for soybeans as well as a general attitude of mild disbelief on the part of speculators and trade interests who did not foresee the total utilization of a record soybean crop which was about 140 million bushels above the previous record crop. As the season draws to an end, it appears that five of the six major demand outlets will establish new records for a season. They are crushings and exports of soybeans; domestic disappearance of oil and meal as well as exports of meal. The only demand factor to lag was soybean oil exports where the usual quantity of P.L. 480 authorizations issued by our government was less than expected. The price rise in soybeans which began last fall was due primarily to the low stocks of food fats and oils as well as reduced production of butter and lard. This placed a heavy burden on soybean oil and on March 1, 1966, the stocks of the major food fats and oils were still at their lowest levels in the past 8 years for that date. Relatively unnoticed in the first half of the season, however, was the heavy rate of soybean meal disappearance. Inflation in Western Europe and the corresponding increased demand for meat and poultry products resulted in further expansion of their commercially mixed feeds industry. Thus, exports of our soybean meal were running well above last season's record while at the same time our domestic consumption was also setting records and was showing the largest increase for a single season since the 1958/59 marketing year. In fact, soybean meal has been currently disappearing at a rate which is higher than the remaining soybean supply can permit even after allowing for the usual seasonal declines. This would imply that the price level must rise to a point where utilization would be severely affected. Yet, the average monthly price for 44% protein soybean meal basis Decatur, Illinois, during May of 1966 was \$80.30 per short ton for the highest monthly price since August of 1954 while at the same time domestic disappearance is expected to have been well over 900,000 tons which would be the third or fourth heaviest month on record. There are both general and specific explanations for the increasing domestic disappearance of soybean meal. The general reasons are more long term and are basically due to the higher protein content and protein quality of soybean meal in relation to other oilseed meals. Soybean meal is a better source of protein because it contains less fibre material than the other meals. It has a higher quality of protein because it has a better balance of amino acids, the basic constituents of protein, which makes soybean meal superior to other meals in food value. The specific reasons for the increased usage of this particular season rests in the answers to the following questions:

- 1) What are livestock numbers (cattle and hogs) and what are poultry numbers (hens, pullets, broilers and turkeys) in relation to last year.
- 2) What are the current price levels of these items in comparison to last year.
- 3) What are the current price levels of other protein feeds in relation to last year.

The number of cattle and calves on feed for slaughter market on April 1, 1966, was 13% more than a year earlier but the number placed on feed during the Jan.-March quarter was 24% above the same quarter of 1965 so that total cattle numbers in mid-June are likely to be more than 13% above last season. In fact the number on feed in the 5 major cattle states of Arizona, California, Colorado, Nebraska and Texas on June 1, were 16% above the previous year. The importance of the larger cattle numbers can be seen by

(Continued on page 331A)

TENOX[®] Antioxidant TIPS

One of the penalties of progress

When some enterprising Hittite decided five or six thousand years ago that iron was a pretty good material out of which to fashion any of a number of articles, he didn't realize that he was going to cause a lot of grief for 20th century food chemists concerned with the pro-oxidant properties of this element.

Chemists in Eastman's Food Technology Laboratories try to do their part expiating for this ancient technologist's act. We have already reported some of our efforts to use phytic acid as an iron scavenger, for example. Now we want to note briefly a little work using phosphoric acid for the same purpose.

Samples of lard and inedible grease containing 1 ppm iron as ferric oleate were made up with 0.01% TENOX BHA or with 0.01% TENOX BHT, and with either citric acid or phosphoric acid in amounts ranging from 0.0025% to 0.02%. Treated and control samples were tested by the AOM, and the times required for the samples to reach 20 meq. peroxide content were determined.

Here are the results:

In lard, citric acid and phosphoric acid seem to be equally effective, within the experimental error of the test. In the low grade grease the same is the case for very low concentrations of chelating agent, but at higher concentrations phosphoric acid is the better scavenger of the two.

That's it. We hope the information is of interest.

In closing, we wish to call attention to the fact that the expert advice of Eastman's Food Laboratory personnel is available to all users of TENOX antioxidants. Highly trained, with a broad knowledge of antioxidants plus invaluable practical experience, these technologists are well equipped to help solve your oxidative rancidity problems.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Boston; Chicago; Cincinnati; Cleveland; Dallas; Detroit; Greensboro, North Carolina; Houston; Memphis; New York City; Philadelphia; St. Louis. **Western Sales Representative:** Wilson & Geo. Meyer & Company, San Francisco; Los Angeles; Salt Lake City; Seattle.

(Continued from page 315A)

the fact that cattle feeding normally accounts for about 35% of the annual domestic consumption of soybean meal. Prices received for cattle have dropped sharply in recent months but are still about equal to last year at this time. The total number of hogs on June 1, will be reported shortly and is expected to be about 5% above June 1, 1965. The number of farrowings should indicate intentions for still further increases in the hog population in the months immediately ahead. Hogs usually account for 12% to 14% of the domestic consumption of soybean meal annually. Hog prices have also dropped sharply from their recent highs but are still \$2 to \$3 above last year at this time. The number of chicks placed in the 23 major broiler-producing states is reported on a weekly basis and continues to average 7% to 9% above last year. Turkey production is also running 7% to 9% above last year. Broilers normally account for about 25% and turkeys for about 6% of the annual domestic consumption of soybean meal. Commercial broiler prices are still 1 to 2 cents above last year and the 5-year average while turkey prices are around last year's levels but still above the 5-year average. The only major aspect of livestock and poultry populations to show an actual decrease from the levels of June 1965 are the numbers of hens and pullets as of June 1, which are 1% less than last year. Hens and pullets usually account for about 14% of annual soybean meal domestic consumption. Thus the present increased rate of domestic disappearance of soybean meal could be expected to continue unless there was an unavailability of soybean supplies for crushing at the end of the season or unless prices were to reach a level somewhat higher than the current high levels which could force some substitution by less desirable feeds. This brings us to the final question of price relationships of soybean meal to other protein feeds. Table I reveals prices of the major protein feeds as of June 7, 1966, and compares them to the prices of June 8, 1965, as reported by the USDA in its weekly summary and statistics publication, *Feed Market News*.

Although Table I reveals that the price of protein is higher this year, it also reveals that the advance in soybean meal has not equalled that of its most competitive counterparts. If this should create a demand for soybean meal in the final months of this season which exceeds that of last season it would also create some mathematical improbabilities for statisticians. Assuming that the April 1, stocks of soybeans in all positions is accurate there is no room for any expanded usage during the June-August period, if the government's forecast for a 48 million bushel carryover is to be achieved on September 1. Historically, the April stocks report is not only more accurate than the January and July stocks reports but it also has a tendency to be slightly higher than the final 5 months' crushings and exports plus carryover would indicate. Thus, the 376 million bushels of soybeans on hand on April 1 must be assumed to represent as many if not more than the actual quantity available on April 1. In addition, although soybean meal stocks have been building in recent weeks, on June 1 they were still close to 100,000 short tons or the equivalent of about 4 million bushels of soybeans

TABLE I
(Dollars Per Ton)

	6-7-66	6-8-65	Increase
Soybean meal, 44% protein, Chicago	84.00	73.50	10.50
Cottonseed meal, 44% protein, Memphis	71.00	57.50	13.50
Linseed meal, 34% protein, Minneapolis	77.50	64.00	13.50
Meat meal, 50% protein, Chicago	107.50	82.50	25.00
Fish meal, 60% protein, Buffalo	171.00	156.00	15.00
Gluten meal, 41% protein, Chicago	92.00	74.00	18.00

TABLE II
(Million bushels)

April 1, stocks	372
Seed and feed	47
April-May crush	94
April-May exports	43
Total stocks--June 1	188
June-August 1965	
Crush and exports	156
Carryover, Sept. 1, 1966	32

less than on June 1, 1965. Thus, in terms of potential soybean meal supplies, there were only 372 million bushels of soybeans on April 1. Table II reveals the current supply and demands of soybeans if the June-August utilization only equals last year.

These figures do not represent a forecast but merely reveal the numbers which statisticians are currently looking at. It would appear that the 1966 harvest period could be as tumultuous as last fall, should poor weather cause the slightest delay in harvesting this year's crop.

P. J. MALONE
Merrill Lynch, Pierce, Fenner & Smith, Inc.

Third ISA Short Course on Gas Chromatography

The Instrument Society of America (ISA) will sponsor the third five-day Short Course on Gas Chromatography for Practicing Chromatographers. Organized and directed by the Society's Analysis Instrumentation Division (AID), the course will be held on the campus of Colorado Woman's College, Denver, Colorado, Aug. 8-12, 1966.

Course Coordinator is C. E. Borchers, University of Arkansas, Graduate School of Technology and Educational Affairs Committee Chairman of ISA's Analysis Instrumentation Division.

The course is designed to provide practicing chromatographers, and others having a working knowledge of chromatography, with the opportunity to receive the latest theoretical, operating, and applied techniques. It is keyed for those having responsibilities for process or laboratory instrumentation, and those concerned with various aspects of gas chromatography.

The course consists of daily lectures plus related discussion sessions guided by the teaching staff, all well-known and currently active authorities in the field, on advanced theoretical topics and general applications of problems in gas chromatography.

Subjects to be covered include the historical development of chromatography; theory of retention; peak broadening; the chromatographic system; column types; qualitative and quantitative analysis; chromatographic detection; special techniques; process chromatography; and biomedical chromatography.

Registration will be limited to 90 attendees, with preference given to those most closely concerned with gas chromatography who have not attended previous ISA/AID Gas Chromatography Short Courses. The registration fee (\$175) covers the course tuition as well as room and board, a copy of the printed lecture notes, and a standard reference text on gas chromatography.

Advance registrations are now being accepted. Detailed information and/or registration requests should be directed to: Dr. C. E. Borchers, ISA Gas Chromatography Short Course Coordinator, Instrument Society of America, 530 William Penn Place, Pittsburgh, Pennsylvania 15219.

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