• *Report on Fats and Oils*

Is Mother Nature Long Oil?

I AM NOT MUCH of a plant physiologist. As a matter of fact, I am not a plant physiologist at all. This leaves me free to discuss plants unencumbered by facts. One of the interesting facets of plants is that their composition is in some measure controlled by the environment in which they grow. Soil environmental conditions do not change perceptibly from year to year, but obviously weather environment does change. Many areas of the bean belt this past summer were plagued by the Sahara-like weather that sometimes characterizes Midwest summers. Yields in some areas were reduced sharply from initial prospects. Improvement in moisture caused some recovery in bean yield prospects particularly in the mid-South. Now some question is arising as to whether the bad weather before the recovery might not have done some sort of damage to the bean plants that is resulting in poor oil recovery. Both October and November oil yields from crushing were disappointing. Although there is always some tendency for the early crush of new beans to make poor oil yields, we are decidedly below trend and I have no idea whether we will recover. Even if oil yields improve later, a certain amount of oil production has been irretrievably lost. Among those who have noticed this phenomenon, and recognition is as yet by no means universal, various explanations are being put forth.

The original and still popular theory is that the beans were high in moisture this year—a fact that is undeniably correct. Obviously a ton of 15% moisture beans contains exactly 40 lb more water (and 40 lb less product) than a ton of 13% moisture beans. If Census input to plant are not calculated on standard moisture, and I am not sure that they generally are, then a ton or any other measure of beans will necessarily contain less oil. Obviously, you can't get bean oil out of water. I think that this theory will not hold water (no pun) because although you absolutely cannot get oil out of water, you should not be able to get meal either. But notice that meal yields are holding up reasonably well. I would concede one possibility in connection with the high moisture theory. It is that obviously high moisture beans have to be dried much more vigorously than low moisture beans in order to meet standard plant input specifications. Longer subjection to high temperatures (and probably necessarily less care in drying due to pressure on the dryer) may have damaged some of the beans so as to bond some of the oil to the protein thus making normal oil recovery either more difficult or impossible.

Another possibility that occurs to me is connected to the fact that conversion currently is good and the crush rate is very high. It would be my opinion that when both of these factors are present, crush plant care in extraction simply cannot be up to par due to pressure to create tonnage. Perhaps, the flakes are being made too fat or too wide or too long. Possibly they are being insufficiently exposed to solvent. At any rate, there are some signs that more oil is being left in the meal. Although oil is closer in value to meal on a per pound basis than ever before, oil is still 8½ cents a pound versus 3½ cents a pound for meal. When this is true, you do not leave the oil in the meal unless you cannot do otherwise or unless the extra time to get the oil out slows down the crush (which can't be afforded right now) or unless cost control tells you that you cannot afford the cost. I would add, however, that at least one processor reports trying to force down the oil content of the meal and finding that this year it can be done only with the greatest of difficulty.

As far as the market is concerned, the first element of importance is that the oil yield is down. The second element is that it may be down for the whole season. If it stays down, the same number of bushels of beans crushed (with crush being determined by meal demand) will produce substantially less oil. One-fourth pound less oil per bushel on a 450 million bushel crush will produce 115 million lb less oil than originally estimated. Although this is not a tremendous amount of oil it would make a pretty big puddle if you put it all in one place.

SOYBEAN OIL YIELDS

	1958–59	1959–60	1960–61	1961–62	1962–63
Oct.	10.53	11.07	10.99	10.88	10.73
Nov.	10.47	10.89	10.92	10.85	10.56
Dec.	10.33	10.93	10.87	10.79	.....
Jan.	10.51	10.93	10.92	10.80	.....
Feb.	10.46	10.94	10.94	10.88	.....
March	10.57	10.95	10.95	10.88	.....
April	10.57	11.07	11.01	10.89	.....
May	10.59	11.02	10.99	11.02	.....
June	10.71	11.14	11.07	10.98	.....
July	10.78	11.15	11.14	11.03	.....
Aug.	10.78	11.18	11.11	11.05	.....
Sept.	10.81	11.10	11.04	10.99	.....

SOYBEAN MEAL YIELDS

	1958–59	1959–60	1960–61	1961–62	1962–63
Oct.	46.91	46.55	46.68	46.74	46.60
Nov.	47.06	46.52	46.74	46.89	46.95
Dec.	47.51	46.66	46.42	47.09	.....
Jan.	47.57	46.36	47.21	46.94	.....
Feb.	47.11	46.24	46.93	47.24	.....
March	46.58	45.86	46.96	47.11	.....
April	46.16	46.41	46.98	46.98	.....
May	46.31	46.34	46.56	47.19	.....
June	46.45	46.90	47.30	47.16	.....
July	46.73	45.94	47.23	47.37	.....
Aug.	47.10	46.93	46.87	47.51	.....
Sept.	46.27	46.12	47.28	47.51	.....

COTTONSEED OIL YIELDS

	1958–59	1959–60	1960–61	1961–62	1962–63
Aug.	326.00	337.00	351.00	338.60	327.39
Sept.	314.00	326.00	323.00	327.30	325.86
Oct.	336.00	336.00	339.60	340.00	326.81
Nov.	343.00	336.00	335.10	340.90	331.60
Dec.	338.00	336.00	335.90	334.40	.....
Jan.	344.00	335.00	335.50	332.60	.....
Feb.	346.00	341.00	340.50	335.70	.....
March	344.00	343.00	340.30	337.90	.....
April	360.00	350.00	329.40	334.60	.....
May	365.00	343.00	344.60	329.86	.....
June	356.00	354.50	343.30	348.05	.....
July	359.00	359.50	336.10	347.33	.....

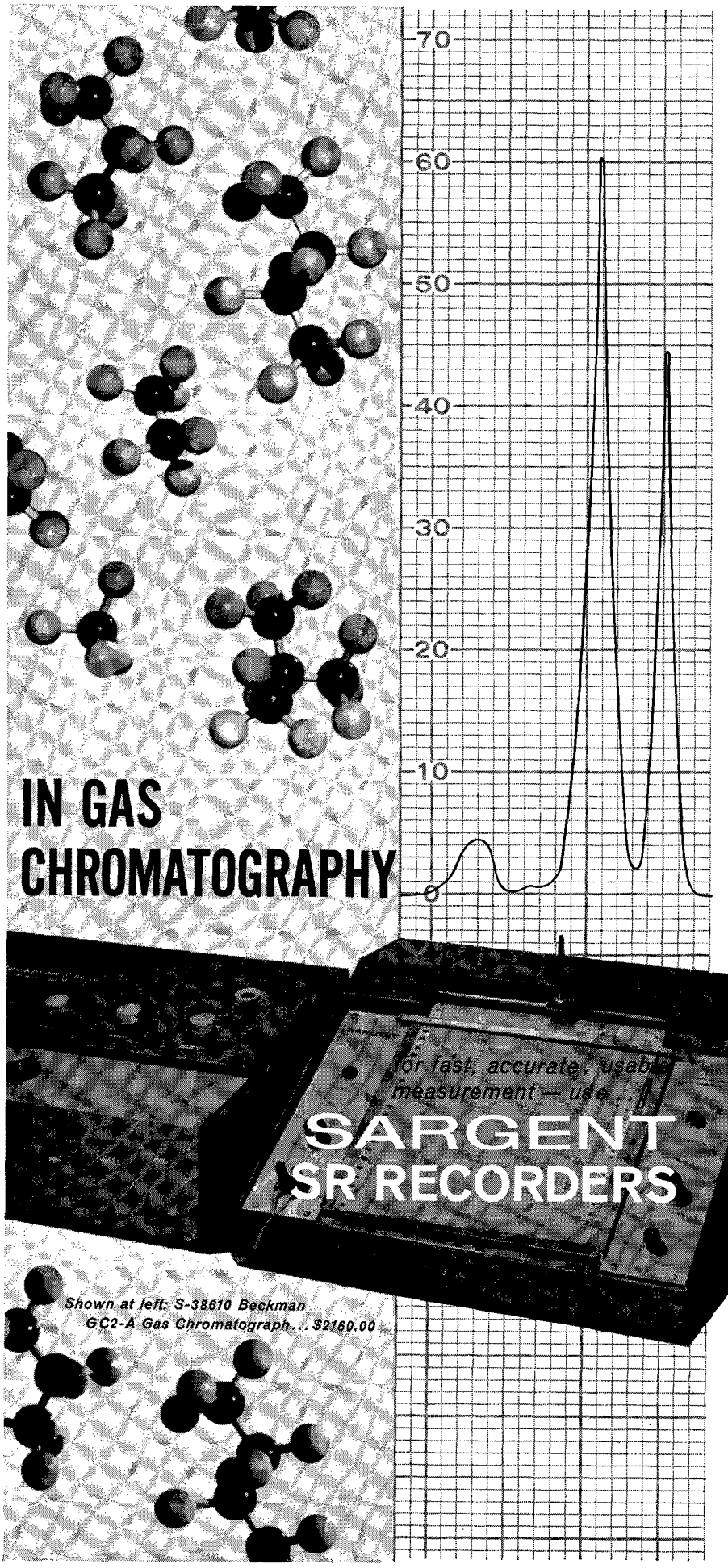
COTTONSEED MEAL YIELDS

	1958–59	1959–60	1960–61	1961–62	1962–63
Aug.	940.00	939.00	929.80	950.10	905.26
Sept.	881.00	906.00	917.00	871.30	927.30
Oct.	924.00	925.00	929.00	906.20	933.40
Nov.	948.00	930.00	930.80	912.20	942.35
Dec.	949.00	924.00	938.30	912.10	.....
Jan.	920.00	915.00	929.00	951.20	.....
Feb.	915.00	926.00	941.00	898.30	.....
March	900.00	934.00	936.30	900.50	.....
April	936.00	941.00	905.70	878.80	.....
May	959.00	926.00	944.30	879.41	.....
June	945.00	940.00	966.40	928.44	.....
July	934.00	981.00	930.80	929.12	.....

One thing that makes it appear to me that weather may be responsible is that the state-to-state oil yield experience this year varies much more widely than normal. Minnesota mills appear to be having a particularly hard time keeping oil yields up. Private mill reports say that beans from northern Iowa are also yielding poorly. Illinois mills, on the other hand, are not doing too badly. These state experiences imply that weather may have had a lot to do with oil yield. If correct, it may mean that oil yields will not improve later in the season.

A fascinating sidelight on all this is that cottonseed oil yields are not particularly impressive either, while cottonseed meal yields are quite good. I am pretty sure that this is weather-caused. So at the moment, meals, which are in very short supply, are being produced heavily. Oils, which are in burdensome oversupply, are being produced lightly. Since it seems unlikely that Mother Nature is long the oil market and/or short the meal market, I suppose we have to assign all this to the category of fortuitous coincidence.

JAMES E. MCHALE
Merrill Lynch, Pierce, Fenner & Smith Incorporated



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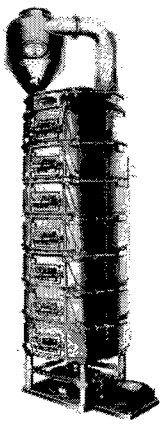

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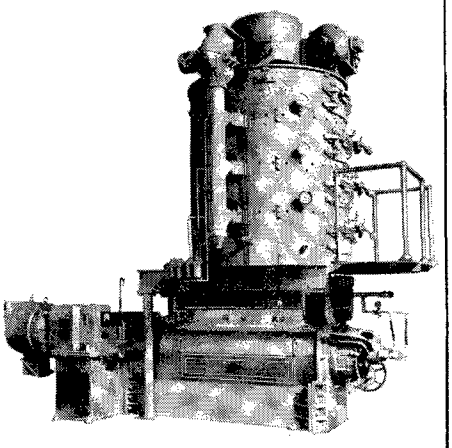

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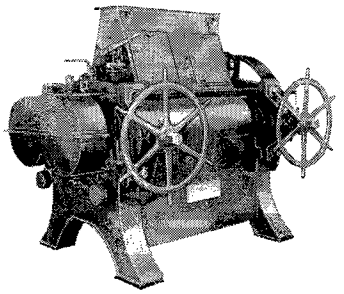

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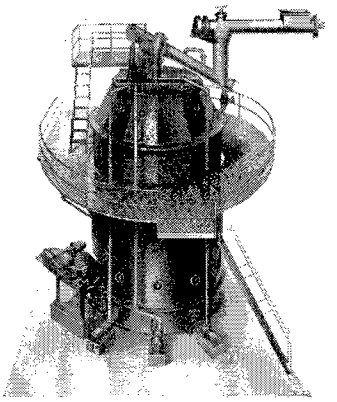

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