History of The V. D. Anderson Company

THE HISTORY of The V. D. Anderson Company is actually a history of the development of and improvement in the Expeller and its attendant equipment, and the adaptation of this basic equipment to the chemical process industries.

In 1909 W. D. Ennis in his book entitled "Linseed Oil and Other Seed Oils" states that "the first practical mechanical press for the continuous extraction of linseed oil was built about five years ago by The V. D. Anderson Company of Cleveland. A capacity of eight bushels per hour is now guaranteed on tempered meal with a cake test not exceeding 8% and sometimes falling nearly as low as 5%."

It was back in 1876 however that Valerius D. Anderson conceived the idea of a continuous mechanical screw-press for pressing oils from oleaginous seeds and nuts. For years he labored on this idea. Some of his earlier efforts were adapted to pressing moisture out of various materials, but it was not until 1900 that the first successful continuous press, called an Expeller, was produced. Curiously enough, it was the packing houses rather than the vegetable oil mills that were the first to use the early units. Although one of these No. 1 Expellers was employed in the processing of vegetable seeds, it was not until 1906 that the Expeller was proven commercially successful on such commodities. This machine was used in a flaxseed mill. By 1909 there was a considerable number of these No. 1 Expellers in operation in packing houses and in linseed, cottonseed, and corn germ mills.

The Anderson Company was founded in Cleveland, Ohio, in 1880 as a home industry for the manufacture and sale, principally, of fertilizer dryers. In 1888 Mr. Anderson with his four sons, F. B., A. D., C. O., and Fred incorporated this operation as The V. D. Anderson Company. The early years of development of the Expeller concerned primarily the increasing of the strength of the barrel housing and the worm elements and the decreasing of frictional losses within the machine. In 1926 the RB Expeller (roller-bearing) was developed for commercial use, and the choke jaw mechanism was being developed to replace the cone choke. In 1933 the Red Lion Model was produced, which, with modifications over the years, is still sold as the smallest commercial size of Expeller. Also in 1933 the steam tube dryer was introduced, which recently has been used for the drying of poultry feathers as well as grain commodities.

IN ORDER to increase volumetric capacity, pressing worm efficiency, and yields of oil, studies concerning a change of the quill worm feed

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mechanism of the No. 1 and the spiral feed of the RB were undertaken. These studies culminated in 1934 with the introduction of the Duo Expeller, which applied a short feed worm and pressing barrel at 90° to the horizontal pressing section of the Expeller. This model with subsequent improvements, including an independent hopper feeder drive, is also employed today.

The Super Duo Expeller, with its extended vertical compression and drainage barrel, was introduced in 1936 to eliminate the previous necessity of pressing high-oil-content materials in two stages in two separate machines. Because of the greater frictions developed when pressing oilseeds to lower-oil-content cake in the Super Duo, the oil-cooling system was introduced in 1943 to dissipate the higher temperatures encountered.

In 1946 Anderson provided equipment for the solvent extraction of vegetable seeds. In 1949 the prepress solvent-extraction Exsolex Process was developed. During this same year and, in cooperation with several different oil millers, High Capacity Expeller pressing was initiated.

In subsequent years equipment was introduced for the expanding of cereal grains to a low-density, precooked commodity for use in the feeds industry and for the dewatering of pulp and paper products, plastics, and synthetic rubbers. Finally in 1960 an entirely new concept in press design was incorporated into what is called the No. 5 Expeller. This is being used in the synthetic rubber industry and is being introduced into the vegetable seed prepress, pulp and paper, and plastic industries.

AT THE present time there are approximately 5,000 Expellers in service throughout the world employed in the meat packing, rendering, vegetable oil, paper and pulp, rubber, plastics, animal and poultry feed, coffee, chemical, distilling, insecticide, food, and paint industries. For the sale of these machines The V. D. Anderson Company is represented world-wide by 45 different agencies.

In addition to the Expeller, solvent extraction, and related equipment Anderson has built a line of steam specialty items since 1893. In June of 1951 Anderson engaged in the manufacture of steam purifiers, which are known as Hi-ef Purifiers and have been well received by the chemical, petrochemical, vegetable oil, and similar industries where removal of liquids from vapors is a necessity.

In 1945 The V. D. Anderson Company was purchased by The Chesapeake Industries as a wholly-owned subsidiary; Carl Zies in 1946 succeeded F. B. Anderson as president. The International Basic Economy Corporation (IBEC) purchased Anderson from Chesapeake in 1956. Anderson thereby became a division of IBEC, the management functions of Anderson were autonomous within the Anderson management personnel, and Mr. Zies retained the title of president.

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• *Report on Fats and Oils*

Cloudy Crystal Ball

FOR BETTER OR FOR WORSE, the government has made its first official bean and cotton estimates. For cotton they expect 230,000 bales below a year ago, indicating for the marketing year around 110,000 tons less seed. This should mean some 40 million pounds less cottonseed oil. This is probably just as well since we are having to carry a little too much cottonseed oil (particularly refined) into the new season. The bean market has paid some attention to this potential cottonseed oil output-cut, feeling that it means that much less cottonseed oil will have to be hammered into consumption this season by cheap price. The seed output-cut could allow perhaps 3½ million bu. additional bean crush; the bean crush is permissive in contrast to the seed crush, which is compulsive. This, of course, assumes that seed will stay out of the clutches of CCC. This appears likely since the cottonseed meal-hulls-linters markets all appear reasonably sound, and early-season seed prices have been well above support. In the last few years the August cotton estimate has been about correct to a shade high so we probably do not have a great risk of an increase in the estimate later on.

Weather in Arkansas and Mississippi would have to take an immediate and spectacular turn for the better. (Up until a few years ago the August cotton estimate tended strongly to the low side.) In beans a low-August habit appears to be still with us. This may be that August is a much more critical month for beans than for cotton. It might also be that bean reporting is substantially more haphazard. The tendency seems likely to repeat this year because of the much-worse-than-normal weather mid-June to mid-July but nearly perfect weather mid-July to mid-August. This is probably one reason why the 548 million bu.-bean estimate did not bring much buying into futures. If the 548 should stand unchanged, we would have a total supply (crop plus carry-over) of 580 million or so, about 15–20 million below the supply of the previous two seasons.

In as delicately balanced an item as beans, this is a fairly significant reduction. Assuming that crush and exports are roughly equal to this year's probable finals of about 390 and 135, respectively, a cut of this size would mean reduction in carry-over at season's end to only 20 million bu. or so. With such a small amount on hand, it is easy to see how any underestimation of either of the demand items or any international scare could result in considerable tightness. At present, prices seem to have taken the potentially reduced supply situation into account. Price changes will be forced as any increase or decrease from the August figures becomes apparent. (Arkansas, Mississippi, and Minnesota are probably the critical states in bean changes this year.) What is really puzzling traders at this point is whether crush and exports will equal, exceed, or fall short of the levels of the current season.

SOUTHERN Europe is likely to take more PL 480 oil than this past year since this is scheduled to be an "off" olive crop along the northern rim of the Mediterranean. How much more is a debatable point since a great deal of the Spanish taking of soybean oil this year was replacement of olive oil sold for export. Just as a guess, Northern Europe may take somewhat less fats and oils. Price pressure on copra/coconut oil continues. Argentina will be a much more aggressive seller as her supplies are larger and export taxes have been cut sharply. On the other hand, it seems certain that Congo shipments of oil palm products will be greatly reduced, and this is an important factor in Northern Europe's supplies of oils. West African peanuts are not off to a good start. Again as a guess, the North Europe cut might about offset the South Europe increase, with perhaps somewhat more emphasis on soybean oil this year at the expense of cottonseed oil. India is an enormous question mark. For years we have been trying to get shipments going to that country, and this might be the year. (Some day this could be a huge source of buying power.) The distribution of cotton acreage suggests that a heavy portion of Pakistan sales plus Indian sales is likely to be West Coast cottonseed oil.

It seems likely at this time that, although European demand for beans may be a bit higher than this past season, the European meal demand is going to be down, perhaps sharply. West Europe crush-capacity has been expanded since last season. Beans are popular for crush there because they furnish protein for a growing livestock economy but do not add oil to an already burdensome situation. European observers feel that last winter's heavy spate of U. S. meal exports was largely because protein demand there was not realized until late in the season and extraction capacity was not adequate to deal with it until the late winter. (October-June soybean meal exports were 524,000 tons *vs.* 397,000 during the same period the year before. Any backing off could hurt.) Domestic meal demand is likely to be reduced in the early part of the season, owing to less demand for swine feeds, but could pick up later on. That even small changes in swine feed can be important factors is pointed up by the extreme weakness in meal in recent weeks. This late season weakness, coupled with potentially lower meal exports, is preventing analysts from forecasting crush above this past season. However, based on lard and cottonseed oil supplies, we could easily absorb the oil from a 10-million-higher crush.

Since bean exports could easily be up 5 million bu. or so, depending on what China does (who knows?), and since the bean crush might edge up 10 million bu. if we could bury the meal, the total "perhaps" increase is critical when we are talking carry-over of only 20 million. (Remember now we're talking no change from the August bean estimate.) Beans are a high leverage item, and this close a balance can do all sorts of things to the market. The trouble is that too early a recognition of potential tightening factors may well serve to put prices to a point that some of the factors will not come into play. Exports of 150 million bu. might well make beans worth $2.40 or $2.50, but there is nothing that would kill 150 million exports as surely $2.40 or $2.50 beans. A similar situation obtains in oil where cheap prices will attract the big European consumer to the point that the market will tighten up. But if it tightens up first, that same buyer is likely to demur. Herein lies the need for a crystal ball. Unfortunately mine seems a bit clouded.

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Production Rises

JUNE PRODUCTION of fatty acids classified under Categories Nos. 1 to 12 totalled 49.4 million lbs., up 7.6 million lbs. from May, and up 7.4 million lbs. from June 1959, according to the Fatty Acid Producers' Council, New York. Production of tall oil fatty acids as defined by Category No. 13 was 8.1 million lbs., compared with 7.7 million lbs. in May.

Disposition of all fatty acids, except Category No. 13, amounted to 47.2 million lbs., compared to 42.9 million lbs. in May 1960 and 43.2 million lbs. in June last year. For Category No. 13 disposition totalled 7.5 million lbs. Disposition, as a total of all types now in the census, was 54.7 million lbs. in June *versus* 50.6 million lbs. the previous month.

Finished goods inventories for Categories Nos. 1 to 12 were 47.1 million lbs. on June 30, up 4.6 million lbs. from the May 31 level. Work-in-process stocks, as a total for all categories, was 19.8 million lbs., down 1.5 million lbs. from the end of May.

A.O.C.S. Commentary

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Although improvements have been made in the Expeller since Mr. Ennis' writing in 1909, Anderson personnel plan that the continued program of studies in engineering design, manufacturing techniques, and process development will result in increased savings in those operations where their equipment is employed.

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