

ORAL HISTORY INTERVIEW WITH J. SINCLAIR MARKS, VICE-PRESIDENT,
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MARYLAND -

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Fertilizer industry in Baltimore

As an introduction prior to the 1930s Baltimore was one of the principal ports with a preponderance of fertilizer plants on the east coast. These east coast locations were basically Baltimore, Norfolk, and New Bern, North Carolina, Charleston, South Carolina, and Savannah, Georgia. The reason being that in the mid and late eighteen hundreds ships from South America brought their guano into these ports. Later, when it was recognized that fertilizers other than manures from birds were required, potash from Europe was brought into these locations, and also in the mid and late 1800s it was recognized that the use of sulfuric acid to assidulate bones from the slaughter houses presented a good source of phosphates, which when accompanied by nitrogen

aing *ga [can't read correction in my father's hand!] materials and potash made for a balanced plant food. Up until after World War II the states in the mid-west, really the bread basket of the nation as we know it now, used no fertilizer, and all fertilizer, that is the bulk of the chemical fertilizer consumed was in the South Eastern states, with Maryland, Virginia, North Carolina, South Carolina and Georgia predominating. This is changed now with chemical fertilizers and the fact that the whole east coast has become largely urban. We still have, however, quite large consumption in the Carolinas and Georgia.

Baltimore - a lot of the old families of Baltimore had their roots in the fertilizer business - the Leverings, the Obers, the Baughs, which is now the Brewster family, the Davisons, and so no. Davison, for example, originated in the business here in 1832. The others followed at a bit later date. These fertilizer plants were all around the Baltimore harbor area - Davison's plants were in the Canton area and also the Curtis Bay area, Baugh, Levering, Obers were again all around the Baltimore harbor area.

My first introduction into the business was in the late 1920s, at which time fertilizer composition was primarily a mixture of nitrogen, phosphates and potash, as it had always been. The phosphates being the result of phosphate rock brought up from Florida by vessels and assidulated with sulfuric acid in order to free the phosphates locked up in the rock. Potash came from Europe, mostly Germany. The organic materials, though, were sulfate of ammonia from the steel mills, and fish scrap from the Eastern Shore of Maryland. Tobacco stems, cotton seed meal, garbage tankage, which came from the more progressive cities like Rochester, New York, shipped as garbage tankage, and all these things, these nitrogen bearing materials were a bit odoriferous; and as a

result, why, one did not want to get on the trolley from Curtis Bay to Baltimore. It carried all of the fertilizer plant workers, who were all negro - I mean this was negro labor in all the fertilizer plants.

Now, the quality of the fertilizer depended on the amount of nitrogen, phosphate and potash in any given bag of fertilizer - now, these organics were quite expensive, the garbage and the fish scrap, and so on. Fertilizer was sold by the ton - 2000 lb. of fertilizer packed in 167 lb. bags generally burlap bags - in those days. And each maker wanted to have a nice - a BIG bag. When you bought a bag of fertilizer and paid \$1.50 for it, why the fellow that had a little bag maybe it weighted the same 167 lbs., he didn't do so well. So this is why we used such things as these organics to a great extent to give the fertilizer bulk. It didn't do anything more for the plants, you can get just as much organic crops that you may have had on the field. As a matter of fact, at one time we even used ground cork; that was nice and light and gave a nice BIG BAG, and had a lot of sales appeal. Also we would sell a ton of fertilizer that was a 2-8-3 or something like that, which meant it was that 13% of it was plant food and the rest of it wouldn't do a darn thing for soil and we put in 200 lb. of garbage tankage and 50 lb. of fish scrap - 'cause that really gave it the smell, that was the important thing - and we'd call it "Fish Brand" perhaps - so really we had perhaps no more than 1000 lb. of material in there that was truly plant food of had locked in it the plant food like the fish scrap. After all, even the fish scrap was only about one % nitrogen and 2% phosphate and 1% potash and so you didn't get great plant food but you got a lot of bulk. So a ton of fertilizer very often was a 1000 lbs. of these materials that we bought that contained these plant food materials and another 1000 lbs. of a product that we called "Wet Bigham." Well "Bigham" actually, well "Bigham" was just plain sand. Sometime we went real far out and bought sand from Cape Henlopen Sand Company - and that was nice white sand. But most of it we got from around the Baltimore area, but you can imagine the embarrassment to have a customer visiting one of our plants and seeing all of this sand going into his product. Lord knows it he was from Anne Arundel he didn't need any sand, and pay freight on it and labor to mix it, the price of the bag to put it in - so we called "bigham." And there were other names for it - "organic earth" which of course was a complete phony, I mean, 'cause there wasn't anything organic about it.

This was the pattern. This is all changing now, our potash, instead of coming from Europe, is coming from Saskatchewan, up in Canada. The great fertilizer consumption now is in Illinois, and the mid-west breadbasket of the nation. Then the nitrogen material is practically no more use of these organics in fertilizers. They really didn't do anything - you get chemical organics. You now use anhydrous ammonia, which is a by-product, of produced from natural gas, and there is an abundance of natural gas. This is a much less expensive, much more efficient material. So the fertilizer

or natural gas, primarily ammonia, which is a by-product concentrated, with phosphate rock, which is mined mostly in Florida, and potash, which comes to us mostly from Saskatchewan. Instead of buying a bag of fertilizer now that contains only about 10 or 11% plant food, a bag you buy now and the farmer uses, will contain 30 or 40% -

today is a mixture of primarily ammonia, which is a by-product of natural gas, assimilated phosphates, which are now highly concentrated, with phosphate rock, which is mined mostly in Florida, and potash, which comes to us mostly from Saskatchewan. Instead of buying a bag of fertilizer now that contains only about 10 or 11% plant food, a bag you buy now and the farmer uses, will contain 30 or 40% plant food. Guano hasn't been used since the mid-1800s. However, we have one plant in Florida, which serves the vegetable business in Florida, where you have this extreme sandy soil, and so on and I can't explain quite why, but we use a lot of exotic materials down there in mixtures. We still use guano in Florida - we still have a market for it there - a little bit in South Carolina - a few old timers down there just plain want guano in their fertilizer. And we have it - we the fertilizer companies bring it in - it all comes from the west coast of South America. And also, in Florida we even use chicken feathers, in some of the mixtures. This is primarily to give the soil bulk, to give a nitrogen bearing material that is slow in releasing its nitrogen. The problem with these chemical nitrogen materials, is that, and all this is in the nitrogen area where you are dealing with guano and chicken feathers, and so on the chemical fertilizer releases its nitrogen quite fast, which is good - if you put it on at the right time it gives the plant a start, but it doesn't stay with it, where in the - some of these organic nitrogens, that are locked up in manure, and tobacco stems, and garbage tankage, there slow releasing, so that allegedly in the sandy soils in Florida, why the nitrogen stays with the plant if you feed it to it in these organics. However the real bulk of the use of these plant foods is in - in Illinois and Iowa, and - I mean the corn belt, and so on where they now use fertilizer quite intensively where 30 years ago they didn't use any - their soil was so rich they said they didn't need it. They still don't need it, but now they are using it to get instead of 75 bu. per acre of the corn crop, they can fertilize heavily and get upwards to 200 bu. So they have good soil, but the use of these chemical fertilizers makes quite a lot of profit for them.