

Talk Given By Dean Searles at the Monthly Meeting of the Midwest Association of Golf Course Superintendents at the Woodridge Country Club, July 9, 1951

I suppose many of you have wondered why the Dean of the College of Pharmacy is interested in such a station as the University is proposing to establish at Lisle. I only need an example to closely identify our close relationship to agriculture. Charles F. Kettering, Director of Research at General Motors, established a grant of \$50,000.00 at Antioch College because he said he wanted to know what made the grass green. His concern was very simple as the action that takes place in the growth of a blade of grass and makes it green is comparable to the completed reaction of the carbon atom in the combustion of an automobile engine. He felt that if he could reproduce this reaction in the laboratory he could increase mileage five-fold. And again, because of the chlorophyll of that green grass which I noted was turning brown already and getting dollar spot, as you call it, was due to the failure of the proper interchange between oxygen and the $C O_2$, the same thing by which you and I live. Or again, if you think of the rotting sweet clover in Northern Wisconsin which gave birth to one of our most important blood anti-coagulant. It took us 6,000 years to discover that grandma's bread poultice was not such a bad thing after all. Bread was the first fabricated food of man and the molding of bread may have contained penicillin but it took 6,000 years for Fleming to discover it. In the very short period of three years time, pharmaceutical industry had formed a source of supply from less than enough to inoculate one white mouse to 2,100 billion units.

You can probably see, therefore, why we in Pharmacy are interested in agriculture. There is a long list of vegetable plant materials the chemist has not yet prepared and probably will not for generations to come. I was interested about 1 $\frac{1}{2}$ years ago to learn that Armour and Co. was interested in garden sage. They asked me where there was a reasonable supply. I named two or three drug firms and they replied they had taken their entire supply. Further inquiry brought out that they wanted 1000,000 pounds as they were still making sausage. The products of the garden are the backbone of medicine or pharmacy. It might interest you to know that throughout this vast area surrounding Lake Michigan, there formerly grew some 765 drug plants but in our zest to grow corn, make golf courses and highways, we turned over the soil and took away from ourselves many natural products, saying "What good are they?" I recently witnessed the first injection of a substitute for blood plasma. This is a pretty important item now in view of a request for blood plasma by civil defense authorities. This substitute plasma was derived from something usually found in your soup—it was an extract of the okra plant. We have further interest in chlorophyll as derived from grasses other than the two-bits a hole because of its commercial value.

On behalf of the University I came to the station shortly before our entrance into World War II. My experience in World War I in the Medical Division, Chemical War Service, clearly indicated to me that the United States of America had stripped itself of the natural source of drug plant materials, even quinine. So we are in-

terested to see what we can do to restore to our own country those valuable drug materials which are essential to many phases of medical research and investigation. When we proposed that the State of Illinois re-investigate the possibility of re-establishing drug plants not only native here but that could be brought here from foreign countries and successfully grown, we discovered that the Desplaines Station had one man and a broken-down plow. We were given two acres and successfully grew and supplied to our hospitals many drugs for a period of 3 $\frac{1}{2}$ years. This was sufficient evidence to the President of the University that it was appropriate for us to establish a station here (Desplaines). A Federal project started in Florida in 1915 on castor beans to supply oil for airplane engines ended up in tung oil. This gives a few ideas upon the vast potentialities of a Research Program.

Although the President of the University was in accord with the plans for the Station, we lost our land to the Douglas Airport. I had long been attracted to the Morton Arboretum principally because of the labeling of plants on the grounds. Of course my interest was in those drug plants of which there are some 400. Upon inquiring from Dr. Gotshalk whether there was any adjacent land available for sale to the University at a figure less than \$600.00 per acre, he replied that he felt that the directors would be willing to sell to the University a portion of land if we would agree to establish on that site Educational Experiment Station commensurate with thoughts and concepts of their organization, namely to provide an educational opportunity for the people of the State of Illinois to further their interests whether in their homes, in their hospitals or wherever it may come. I was able to return to the University and assure them that we had the chance to obtain land upon which we could place a permanent Station and buildings. Further, Dr. Gotshalk gave us the opportunity of signing a lease for an additional forty acres. His actions pointed out the type of cooperation that can be expected from the Arboretum.

The University has failed through three legislative sessions to secure appropriations for the creation of that building simply because Dr. Dior pointed out there were not a sufficiently large number of citizens in Illinois aware of or interested in their own University. I hope you will not be offended when I tell you that the University is yours—not mine. I only work there and you own it, it is up to you to present in very logical order a proposal to the Senators and Representatives of your Program. There should be no question of your securing one man for the work. In fact, if your story is good enough, you can get ten. As has been stated in the papers, Governor Stevenson has promised to spend 1 $\frac{1}{2}$ billions of your dollars for your benefit. If you don't have, therefore, experimental greens on that ground which you are not going to have to buy, if they are not properly cared for, as some of you seem to doubt, it will be your fault for not having told us specifically what you need. Then, having secured our blessing as to your judgment, it will be your next responsibility to tell a certain group, called the Budgetary Commission—and may I tell you that I know all of them personally and they begin working in October of every legislative year and they stay in session continuously until the session closes in June. They are the men that give you the money.