FATS AND PROTEINS
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"THE DIRECTOR'S DIGEST"
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It was my privilege to spend two weeks in Western Europe recently and I would like to share with you some of the interesting observations that were of special interest to me.

The express purpose for my trip was to present a paper "Fat-Derived Materials for Cement Compositions" at the International Information Day on Tallow and Derivatives which was organized by the National Renderers Association, West Europe Area, and the Italian Society for the Study of Fats. This symposium, held in Milan, Italy, June 21, 1967 was well attended by scientists concerned with the industrial utilization of fats. There was great interest in all the papers presented at the symposium, especially in those that outlined potential new uses for tallow or described new and improved techniques for preparing soap, fatty acids, alcohols and other tallow derivatives.

At this conference and in visits with research organizations in several European countries I obtained the impression that there is a definite preference in Europe for soap and other tallow-derived detergents over petroleum-derived detergents. Extensive investigations are underway to improve soap and other tallow-derived detergents to maintain this preference.

The Italian Experimental Station for Fats in Milan, Italy is a well equipped laboratory with an excellent staff of well trained scientists. Most of their research has been on the minor constituents of vegetable oils but currently some research on the refining of tallow is underway with contract support from the West European office of NRA.

You will recall that FPRF has tested sucroglycerides and related material from Ledoga in detergent studies and in our spray surfactant investigations. Dr. Condorelli of Ledoga informed me that Ledoga could now produce surfactant materials with almost any desired characteristics by proper adjustment of the amounts of sugar, tallow and ethylene oxide in ethoxylated sucroglycerides.

Engineers, biochemists and microbiologists at the Danish Meat Research Institute in Roskilde, Denmark, are studying a number of rendering problems. They are especially interested in the development of improved rendering systems, in the treatment of waste from rendering plants for water pollution control and in feeding value of meat and bone meal, especially as it is influenced by the amount and nature of the fat present.

Dr. Olle Dahl, College of Technology, Uppsala, Sweden, is continuing his studies designed to improve the utilization of by-product animal protein for livestock feed and human food. Currently he is working on methods for modifying blood to make it more acceptable for food and feed. Dr. Dahl, as well as many other scientists with whom I talked, feels that increased use of meat and bone meal in livestock feed would be quickly attained if it were more uniform in composition and if the collagen protein could be upgraded to higher nutritive quality. (These are of course the objectives of some of the FPRF sponsored research projects).

With support from FPRF, scientists at The Gelatine and Glue Research Association in Birmingham, England are doing some fascinating things with collagen. Some new chemical derivatives of collagen look promising for such widely diverse uses as micro- and mini-encapsulation, beer and wine clarification, floculation of clay and minerals, and for use in sealants and coatings.

In the countries I visited (Italy, West Germany, Denmark, England) there was only minor concern over the presence of Salmonella in <u>domestically</u> produced animal protein meal. Although Salmonella is present, there have been few instances where livestock have developed salmonellosis from consuming contaminated feed - hence the lack of concern in the feed and feed ingredient industries. Of course, <u>imported</u> protein meal must be free of Salmonella or be given rather drastic heat treatment to destroy Salmonella and other organisms.

In all of the organizations I visited in Western Europe I found intense interest in and respect for the research program of FPRF. This interest is undoubtedly intensified by the threatened world shortage of food and the consequent need to make the best possible use of our animal fats and proteins. This is our challenge and our opportunity.