



FATS AND PROTEINS RESEARCH FOUNDATION, INC.

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THE DIRECTOR'S DIGEST

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Technical Director

November 4, 1964

No. 4

This issue of the "Digest" is a bit late because it seemed desirable to hold it until after the meeting of the Research Committee on October 21 and The Board of Directors on October 22.

The Research Committee recommended activation of the following new projects and The Board of Directors approved the recommendation.

1. Microbial Modification of Saturated Fatty Acids and Tallow. Jules D. Porsche and Associates. This is a one year project to determine the feasibility of preparing potentially useful compounds by the action of microorganisms on fats.
2. Animal Fats for Waterproofing Concrete. R.L. Johnson. This is a short term (6 months) project to evaluate the effectiveness of emulsions of animal fat for waterproofing concrete.
3. Use of Chemically Modified Animal Proteins for Structural Plastics. Southern California Laboratories, Stanford Research Institute. Researchers at Stanford Research Institute will attempt to produce structural plastics from chemically modified animal proteins. This is a six months feasibility study.

These projects will be activated just as soon as final contractual arrangements can be made. Also grants and contracts with colleges and universities on the use of fat-sugar complexes in agricultural sprays will be developed during the winter for activation next spring.

Current research studies outlined in previous issues of the "Digest" will be continued and followed up as results justify. It is most significant that The Board of Directors has approved a research budget of \$175,000 for the 1964-65 fiscal year in addition to expenditures from the Special Fund to evaluate the feeding quality of protein meal prepared by the enzymatic rendering process. Yes, research is expensive, but your membership contribution to FPRF may well be the best long-term investment you can make.

The September, 1964, issue of Food Technology carries two scientific papers covering the Battelle Memorial Institute studies on improved recovery of protein from rendering plant raw materials and products. These papers report the result obtained by Battelle researchers under the NRA contract. If you would like to have reprints of these papers, please request them from my office.

Those laboratory studies have been followed up with pilot plant studies at The Theobald Industries. You will be pleased to know that the pilot plant has now produced over 2,000 pounds of high protein meal for feeding tests. This partially hydrolyzed meal has the following composition: 73% protein, 7.9% fat, 7.1% ash and 5.0% moisture. Arrangements have been made to have an amino acid analysis and a mineral analysis made on the product prior to the feeding tests to be started soon at Cornell University, Rutgers University, North Carolina State University and the University of Illinois.

Your Technical Director attended and presented a paper at the International Conference on Food Irradiation held September 28-30 in Boston. This Conference was sponsored by the National Academy of Sciences, National Research Council, and included noted scientists from all over the world. Some of the European scientists suggested that ionizing radiations could be used to destroy Salmonellae in animal feeds. This is possible from a technical viewpoint but would be too expensive to be economically feasible at the present time.

There has been much interest recently in the development of "soft" or biodegradable detergents from fats. There is great promise for increased use of inedible animal fats as the result of these recent studies. Results of these research studies have been reported at several scientific conferences including the recent meeting of the American Oil Chemists Society. However, there are many factors that will influence the final decision of detergent manufacturers on this subject and there is no certainty that use of fat-based detergents will increase rapidly in the immediate future. This subject will be discussed in more detail in a later issue of the "Digest".