FATS AND PROTEINS
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THE DIRECTOR'S DIGEST

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PESTICIDES USAGE INCREASES DRAMATICALLY

A recent article (Chemical Week, April 12, 1969) discusses the rapid increase in pesticides production and sales during the last decade. Sales to farmers have tripled since 1960. Sales this year will total $1.7 billion and are projected to reach $3 billion by 1975. Herbicides have played the biggest role in the pesticides boom with production value increases in excess of 20% per year. Sales of DDT and other "hard" insecticides are expected to decline because of public pressure against their use; they persist in soil and water and tend to accumulate in animal fat.

This information is of particular interest to rendering, meat packing and related industries for two reasons: (1) Problems resulting from the presence of unacceptable levels of residues of DDT and other pesticides in animal fats; (2) the possibility of using fat-derived surfactants in formulations of herbicides and foliar nutrition sprays. FPRF has sponsored research in both of these areas (see Director's Digest Nos. 21, 25, 31, 32, 38).

SYNTHETIC FATTY ALCOHOL AND ACIDS

Producers of natural fats and oils continually face the possibility that other products, especially petroleum fractions, may replace the natural products as starting raw materials for the manufacture of such compounds as alcohols and fatty acids. J. G. Moffett, Jr. and W. DeAcetis have recently reviewed the technological and economic factors that are favorable toward the trend away from the natural fats and oils (J. Am. Oil Chemists Society 46, 194-198, 1969). The abnormally high price of coconut oil and the current high production capacity for producing synthetic

detergent alcohols in the C_7 - C_{14} range has led to consumer (alcohol users) preference for the synthetic alcohols. Because of the limited demand for tallow range alcohols and the current low tallow price, no synthetic producer desires to make these alcohols. The situation is somewhat different for fatty acids. The price margin between tallow and both oleic and stearic acid has increased steadily for the past ten years. This makes it more attractive for synthetic acid producers to invade this market. However, it appears unlikely that it will be possible for synthetic acid producers to compete economically with the natural fatty acid producers in the United States for some time. High value specialty synthetic fatty acids are produced in modest volumes and this market for "tailor-made" acids will undoubtedly continue to grow.

REPORT ON USE OF ANIMAL BY-PRODUCTS

In a recent report to the Iowa Development Commission "Opportunities for Use of Meat Byproducts in Human and Animal Foods" Arthur D. Little researchers emphasize the potential income that could be realized by (1) better utilization of blood protein for human food, (2) development of new acceptable food products from offal, (3) upgrading of collagen for use in human and animal foods, (4) the use of enzymes in rendering and for the preparation of new liquid protein foods, (5) conversion of keratins to products acceptable for food and feed and for industrial use.

It is gratifying to note that research in all these areas is in progress or has been performed by FPRF. But the report also states very pointedly that there is currently no adequate, effective research program on the problems of meat industry by-products. Obviously this is the area of FPRF research. It is just as obvious that our current program is not adequate to solve the many problems of animal by-product utilization. But our program cannot be expanded without additional funds from the rendering, meat packing and related industries. Unlimited funds may not produce meaningful research results immediately, but certainly limited funds can support only a limited program with consequent limited results. In this connection it is interesting to note that eight rendering companies pay more than 60% of the Class II Membership contributions to FPRF. Is your company one of these industry leaders?