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UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
WASHINGTON, D.C. 20250

ISN-22938

March 19, 1975

SUBJECT: Review: Contract AID/csd 2804, Development of a Process for the Preparation of Coconut Protein Products for Use in Foods (Texas A&M University)

TO: Office of Nutrition, AID/TA/N

The subject contract was reviewed in Washington, D.C. on February 3, 1975 by a review panel consisting of Dr. Herbert Kraemer (General Mills, Inc.), Dr. Frank Horan (Archer Daniels Midland), Dr. Roy Morse (Rutgers University), and Dr. Harold Wilcke (AID Consultant). Dr. Irwin Hornstein (TA/N), Dr. Miloslav Rechcigl (TA/RUR), and Mr. Rod Crowley (USDA) also participated in the review. Drs. Robert Hagenmaier and Carl Cater represented Texas A&M. (Dr. Karl Mattil of Texas A&M, the Project Director was unable to attend due to illness).

SUMMARY

The review panel concluded that the overall objectives of the contract had been met; that the economic analyses, nutritional assessment, and product utilization studies were satisfactory and consistent with the scope of the research project; and, that the utilization of the work through installation of a pilot plant in the Philippines is an appropriate follow-up activity. It was recommended that the Philippine activity give heavy emphasis to product utilization and market development activities and to nutritional/physiological evaluations of the product. The review group commended Texas A&M for its efforts and its technical accomplishments and noted in particular that the contractor effectively covered an unusually broad spectrum of disciplines (engineering/economics/nutrition/food technology/physical chemistry/agronomy/et al) in reaching its objectives. It was also noted, as a general observation relevant to all AID research projects involving broad ranges of activities, that it is especially important to have clear statements of objectives.

CONCLUSIONS AND RECOMMENDATIONS

- (1) The review panel concluded that the updated economic analyses of the aqueous process and alternate processes provided by Texas A&M are entirely adequate in view of the objectives of the project. It was noted that more comprehensive economic

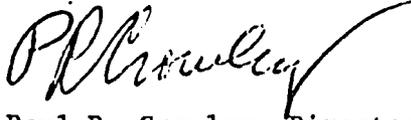
studies should probably await the results of market assessment activities (arising from the Philippines pilot plant project) in order to be able to define the product and process requirement with greater certainty. However it was suggested that in future analyses byproduct recovery should be given careful attention in that it may not be possible to dispose of the by-product at no net cost (as assumed by Texas A&M) due to environmental protection constraints. It was also recommended that any further analyses of the food grade copra flour be limited to an economic comparison of that product with alternative food materials.

- (2) It was concluded that Texas A&M had collected appreciable information on nutritional values of the products, including PERs, amino acid analyses, proximate analyses, etc. (except physiological values in humans) but that a more comprehensive nutritional assessment of the product should be made when the product is available from the Philippine pilot plant and when product uses and consumption patterns are more firmly in mind. However, it was suggested that the existing information on nutritional properties of the product should be analyzed in relation to non-fat cows milk during preparation of the final report (based on the anticipation that the primary market for the product is likely to be as a replacement for non-fat milk solids). It was also suggested that analyses of the products be made in comparison with whey protein and other replaceable or competitive products.
- (3) The reviewers concurred in Texas A&M's assessment that the coconut protein product is likely to have maximum market potential as a cows milk replacement product, and that intensive effort should be applied by a skilled market development specialist before and during the pilot plant project activity in the Philippines. It was suggested that as much of the residual research project resources as possible be applied to potential market analyses with primary emphasis on the Philippines. Specifically, it was recommended that existing data on milk markets and potential new milk markets in the Philippines should be analyzed and that a plan of action should be developed for exploring the potential for extending or replacing milk with the coconut protein product during the Philippine project. The panel mentioned that a specific market application for the product might be the toning or extending of reconstituted milk and this should be looked at in some detail. Also it suggested that a market development program be sure to consider potential competitive protein products, such as cheese whey protein, and the affect of these products on markets for coconut protein products.

Research!

It was noted that consideration was being given to a reduction in market development inputs to the Philippine project; the review panel expressed the strong opinion that market development is vital to the success of the development project and efforts in this area should not be reduced but should perhaps be expanded.

- (4) It was suggested that Texas A&M update the cost figures to be presented in the final report to AID to reflect any major changes which have occurred due to inflation or market swings.



Paul R. Crowley, Director
Nutrition & Agribusiness Group

- CC: Dr. Irwin Hornstein, AID
- Dr. Karl Mattil, Texas A&M University
- Dr. Herb Kraemer, General Mills
- Dr. Frank Horan, ADM Co.
- Dr. Roy Morse, Rutgers University
- Dr. Harold Wilcke, Ralston Purina
- Dr. Miloslav Rechcigl, AID ✓