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F21 C/Food Science & Engineering Unit
SEMINAR SERIES

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TITLE: **HIGH MOISTURE EXTRUSION FOR MAKING RESTRUCTURED
MEAT PRODUCTS**

ABSTRACT: Variety, nutritional balance and safety are significant driving factors in the meat and snack industry for the 21st century. Many of the latest advances in processing of restructured muscle foods address these factors and are being implemented at this time. Current research in academic, government and industry laboratories assures that the production and delivery of high quality and remarkably safe muscle foods will remain vital topics for the future. The advances to be described will be divided between the latest processing options being implemented and the current efforts to control microbiological hazards associated with high moisture extrusion of restructured meat products.

A broad spectrum of spectrum of foods can be produced through extrusion cooking processes with restructured meat products representing a high moisture product. Twin-screw extruders offer suitable means to prepare value-added products to satisfy demands for high protein snack items. Nearly continuous processing can result in economical production of cooked half-products and finished products. Challenges with viscosity changes during extrusion of high moisture ingredients can be controlled through temperature and shear modulation. Raw meat materials have a significant impact on extrusion performance and experimentation has led to the use of meats with differing particle sizes and composition that result in a variety of restructured products. Production of acceptable texture and flavor of extruded meat products also require selection of suitable adjunct ingredients. Experimental results using starch and soy proteins to modify quality will be described.

With the advent of high moisture extrusion of meat materials is a need to control the microbiological hazards associated with the products. The recontamination of extruded products is a significant possibility and thus efforts to evaluate the effectiveness of antimicrobial ingredients or post-processing repasteurization methods will be addressed.

Tuesday, October 12, 2004, 4:00pm,

AG ENGR Bldg. 105

Refreshments Will Be Served