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# SITE LOCATION MODEL FOR REGIONAL WHOLESALE FOOD DISTRIBUTION CENTERS

by

Trang T. Vo  
Jarvis L. Cain  
University of Maryland  
College Park, Maryland

## Problem

Industry leaders, public officials, government and university researchers have long needed an appropriate site location model to assist in decision making regarding the development of regional wholesale distribution centers. Under a cooperative agreement between the Market Research and Development Division, AMS, USDA and the University of Maryland, such a model was developed and tested.

## The Model

The model is designed to find the best location for a specified number of food distribution centers from among several possible sites so that specified demand areas will be served with least costs. The best solution may be chosen from locations which will minimize total transportation costs and site preparation costs in satisfying the expected demand for a particular product at all demand centers.

A FORTRAN program was developed to compute transportation costs for a maximum of 100 firms shipping to 20 possible sites. The best locations are those with least cost combinations of transportation and site preparation costs. Other site selection factors may not be as readily quantifiable as

transportation and site preparation costs. Therefore, the program user has the option of qualitatively rating each site against another according to a scale of 1 to 10. Some variables which may be rated are accessibility to alternative transportation, local ordinances, utilities availability and land acquisition. These qualitative factors along with the site and preparation costs will provide the basis for planners to locate the optimal food distribution site(s).

## Results

Testing of the model with actual market data is currently on-going.

## Significance of Findings

Utilization of this model will provide both private and public decision makers with an easy to use, relatively simple analytical tool to aid in the location of future regional wholesale food distribution centers or in the relocation of existing facilities to meet changing conditions.

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