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# Localizing Food Production and Purchasing for Schools

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**Abstract**
Participants will be able to compare dietary requirements and consumption of school-aged children with respect to local food production capabilities in one state/region.

**Keywords**
food production, purchasing, school foodservice

**TITLE**

# Localizing Food Production and Purchasing for Schools

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**LEARNING OUTCOME**

Participants will be able to compare dietary requirements and consumption of school-aged children with respect to local food production capabilities in one state/region.

**Learning Codes:**
**8018: Environmental, agricultural, and technologic influences on food systems**
**8070: Food production, purchasing**
**8110: School foodservice**

**TEXT** (Limit to 250 words maximum, no exceptions.)

With the introduction of the Healthy, Hunger-Free Kids Act (2010) and emphasis on fresh fruit and vegetable consumption, school lunch meals are being transformed. Local food sourcing including school gardens and purchasing from local farmers have become popular objectives for some school districts yet notable challenges exist. The purpose of this research was to assess and compare the dietary needs and consumption patterns of school-aged children in relationship to available food from local sources using a foodshed mapping approach. A multidisciplinary team including a dietitian, two industrial engineers and a transportation specialist, were involved in developing the model. Using linear programming, the supply potential and demand were mapped given the dietary consumption patterns and the land available for production in Iowa. Localization of food production for schools can be assessed based on the availability of cropland and the density of local populations. For the state of Iowa, preliminary results of the optimization software rate the average distance to meet demand at 1.2 miles from the population center, the minimum distance at 0.7 miles, and the maximum distance at 5.1 miles. The maximum distance corresponds with the area surrounding Des Moines, the capital city. The minimum distance is 0.7 miles and the average is 1.2 miles. Suggestions are given for utilizing this type of foodshed mapping approach in other states. Researchers and practitioners can apply this innovative approach when assessing how self-sustainably a region can meet the dietary patterns of its population.

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