

ABSTRACT

Thesis Title : An Analysis of Land Suitability for Sugarcane and the
Location of Sugar Mills in the Upper Central Plain

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Degree Sought : Master of Science

Major : Geography

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Advisory Committee :

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The main objectives of this research were to study the physical suitability of sugar cane planting areas, the level of land suitability for planting sugar cane, and suitable locations for sugar cane mills in the upper central plain.

The results of the study showed that in the past 20 years (1980-2000) the sugar cane planting areas increased during 1980-1994, but decreased during 1994-2000.

By analyzing the maps of land use, soil series, average rainfall, the number of rainy days, flood risk areas, drought risk areas and field data, the sugar cane land suitability could be classified into four categories: highly suitable, moderately suitable, marginally suitable and unsuitable areas. These areas were 5,513 square kilometers (3,445,625 rai), 15,194 square kilometers (9,468,125 rai), 3,080 square kilometers (1,925,000 rai) and 522 square kilometers (326,250 rai), respectively.

After employing Geographic Information System to identify the most suitable areas for sugar cane mills and the buffer zones, it was found that there were three highly suitable areas, the center of which were appropriate locations for sugar cane mills.