Salila Iamittipon 2011: The Application of Geographic Information System for Economic Crops Zoning in Uttaradit Province. Master of Science (Soil Science), Major Field: Soil Science, Department of Soil Science. Thesis Advisor: Associate Professor Anchalee Suddhiprakarn, Ph.D. 106 pages.

The application of geographic information system for economic crops zoning in Uttaradit province included an assessment of physical suitability of soils and analysis of data based on technique in geographic information system. The data comprised soil properties, soil suitability, land use status, rainfall, forest areas, irrigated areas and distance from processing plants relevant for cultivation of four economic crops namely season paddy rice, feed corn, cassava, and industrial sugarcane. Results of the analysis give three zones of season paddy rice; highly suitable zone of 238,518 rai, moderately suitable zone of 297,241 rai, and marginally suitable zone of 3,884 rai. For feed corn, four zones can be identified; highly suitable zone of 1681 rai, moderately suitable zone of 19,350 rai, marginally suitable zone of 31,405 rai and zone that needs proper soil and water conservation of 268 rai. Cassava growing consists of three zones; highly suitable zone of 16,597 rai, moderately suitable zone of 1,016 rai and marginally suitable zone of 7,630 rai. Industrial sugarcane growing comprises four zones; highly suitable zone in irrigated area of 1,492 rai, highly suitable zone of 26,537 rai, moderately suitable zone of 11,529 rai and marginally suitable zone of 21,204 rai. Whereas, the total area of Uttaradit province is 4,899,120 rai or 7,838.592 square kilometers.

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