GIS Analysis of Farm Distribution Across Vermont Counties

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ABSTRACT

Agriculture and dairy farming are important industries for the state of Vermont. Using GIS technology, this project attempts to display types of farms, particularly organic farms and dairy farms, as they are distributed across the state to determine possible areas of agricultural specialization and define key counties for agricultural production. Data from the US Department of Agriculture National Agricultural Statistics Survey (NASS) 2007 Agricultural Census was displayed on Vermont counties base map from the Vermont Center for Geographic Information (VCGI) and symbolized for total farms, organic farms and dairy farms by country as well as by market value of agricultural products sold by county. Addison, Windsor, and Franklin counties have the highest number of farms (respectively 773, 767, and 740 farms), containing the top quartile of Vermont farms. Of the total, Franklin, Essex and Addison counties have the highest percentage of dairy farms at 35%, 31% and 24% and are therefore the counties that have the heaviest representation in all dairy farms. Of organic farms, Orleans, Franklin, and Addison represent the top quartile at 70, 62, and 59 farms. Of the organic total, Orange, Caledonia and Orleans counties have highest percentage of dairy farms at 65%, 55% and 54% and show that the organic dairy distribution differs from non-organic dairy. The top agricultural producers, measured in market value of all agricultural products sold, are Addison and Franklin counties at 161.4 and 160.6 million dollars and Orleans County 82.3 million. Addison and Franklin also had the highest income in farm operations, while Bennington and Windsor suffered losses. Analysis of this data would improve with the inclusion of data for farm size based on type of farm and market value of sales and income data based on type of farm to better determine the main source of agricultural specialization in terms of economic importance per country.