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Predicting the First and Last Frost using Historical Data and Numerical Weather Predictions JOSEPH TROUT, COURTNEY WEBER, Stockton University — Community gardens have become and effective and popular way to increase the variety of nutritional foods in food deserts, especially inner-city food deserts. Community gardens in the city of Philadelphia have been experiencing problems with disease and pests, especially for the tomato plants. The tomato plants would mature until harvest time, and then experience problems when the tomato plants were stressed by the hottest part of summer. The heat of the summer is magnified by the urban heat island effect. One solution is to grow tomato varieties with short growing periods. In order for this to be effective, an accurate prediction of the last frost of the spring and first frost of the fall is required. This project looks at using historical data and the Weather Research and Forecasting (WRF) Model to predict the seasonal frosts.

Joseph Trout
Richard Stockton College of New Jersey

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