In 2001, nine field plots at the University Horticulture Research Center in South Burlington, VT were amended with compost at a rate of 0 kg·ha⁻¹, 7,344 kg·ha⁻¹, or 14,688 kg·ha⁻¹. A split-plot design was used to determine the effects of varying compost amendment rates on tuber yield. The study was conducted to examine the effects of varying compost amendment rates on tuber yield and quality, as well as the effect of compost on soil physical and chemical properties.

Materials and Methods

The trial was conducted on a Daerfield loamy fine sand at the Horticulture Research Center, Univ. of Vermont in South Burlington, Vermont. All field plots were at the same elevation and had been tilled by the same tractor. The plots were each 4.9 m wide and 21.8 m long (Figure 1A). When PAW was below 65%, based on the mean of treatment replicates, digging was then resuming leaving a 1-2 m area between sub-blocks. Tubers were harvested on September 27 using a commercial potato digger (Figure 1D). Tubers were individually sized and marketed by weight.

Conclusions and Future Directions

The results of this study indicate that the 14,688 kg·ha⁻¹ dairy manure compost amendment treatment produced the same marketable yield as the 0 kg·ha⁻¹ treatment, received no supplemental fertilization, and did not require irrigation to maintain 65% PAW. The use of dairy manure compost may be a way to reduce soil nutrient leaching by using farmyard waste in non-traditional applications.