

Abstract: Effects of Composted and Raw Manure and Ammonium Sulfate Applications On the Chemical Properties of the Soils at Chorro Creek Ranch, San Luis Obispo, CA. (2009 Annual Meeting (November 1-5, 2009))



ASA-CSSA-SSSA
November 1-5, 2009 | Pittsburgh, PA
2009 International Annual Meetings
Footprints in the Landscape: Sustainability through Plant and Soil Sciences

[Start](#) | [View At a Glance](#) | [Author Index](#)

/AnMtgAbsts2009.52811 Effects of Composted and Raw Manure and Ammonium Sulfate Applications On the Chemical Properties of the Soils at Chorro Creek Ranch, San Luis Obispo, CA.

*Sunday, November 1, 2009: 4:20 PM
Convention Center, Room 403-404, Fourth Floor*

Renee Nall, Craig Stubler, Christopher Appel, Tanner Campbell, Jose Gomez, Nathan Lurie, Russell Morgan and JJ Scurich, Cal Poly State Univ., San Luis Obispo, CA

The majority of agricultural systems, especially large-scale, require inputs of nutrients. In addition, many large scale dairies produce vast quantities of waste that can be potentially recycled as nutrients. This study was conducted to determine the differences in properties of soils amended with manure, compost, and fertilizer, and to assess implications of using animal waste products for forage crop fertilization. Forage crops, wheat, barley, and oat mix have been grown on the Chorro Creek Ranch part of Cal Poly farmland, for 15 years. Ammonium sulfate fertilizer has been applied at a rate of 200 lbs/acre/year for the past 4 years. In 2008 two parcels were altered from the norm, and Cal Poly compost and dairy cattle were applied as nutrient sources instead of ammonium sulfate fertilizer. Manure was broadcast at a rate of 4000 lbs/acre and compost was broadcast at a rate of 400 lbs/acre. Nitrogen, phosphorus, potassium soil EC, pH, CEC and % OM were investigated on all 3 parcels. The organic amendments increased the EC and the pH. The ammonium sulfate decreased the EC, pH, nitrate and P, and increased the CEC. Though applied at the highest rate of 4000 lbs/acre, the manure was not significantly different from the control. Cal Poly has a large dairy unit and has had a history of waste management problems. We believe applications of manure on forage crops to be a good solution to this problem.

See more of: [National Student Research Symposium Oral Contest](#)

[Previous Abstract](#) | [Next Abstract >>](#)