

Smith, J. H. and C. L. Douglas. 1967.

The Relationship of Particle Size and Nitrogen Content to
Decomposition of Wheat Straw in Soil. Agronomy Abstracts
p. 93.

Straw samples of different particle size and N content were selected from three spring wheat (Triticum aestivum) varieties; added to Walla Walla, Palouse, and Portneuf silt loam soils at 0.5 and 2.0% rates; and incubated. At the 0.5% addition rate, straw samples containing 0.2 to 0.7% N decomposed at the same rate. When 2.0% straw was added to soil, the decomposition rates increased with increasing N percentage. The N-supplying capacity of the soil apparently influenced decomposition at the higher straw rates. After incubation, considerable nitrate was found in the soil with 0.5% straw but little was found in the soil with 2.0% straw. Different particle sizes of straw with the same N contents decomposed at approximately the same rate. Soil nitrate concentrations were lower for each successively smaller straw particle size after incubation.