# Wheat Growth Following Amaranth in a Sequential Rotation. (C03-horrocks171605-Poster)

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## Abstract:

Amaranth (Amaranthus cruentus L.) was evaluated as a rotational crop for wheat (Triticum aestivum L.) and its effects compared to the benefits of applied N. Field experiments were conducted from 1998 to 2001 on a Timpanogos silty clay soil (Calcic Argixerolls, fine loamy, mixed mesic) near Spanish Fork, UT. Wheat height and yield were stimulated when amaranth whole plant residues were incorporated into the soil in the fall prior to wheat planting. Phenotypically, wheat response was similar to wheat grown on plots fallowed during the year of amaranth growth and then fertilized with 44 to 66 kg N/ha. Over the three experiments wheat yield on plots where whole amaranth plants were incorporated averaged 34% more than wheat yield from plots fallowed prior to wheat planting. When above-ground amaranth was removed from the plots and only roots were incorporated, no wheat height or yield responses were observed.

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