

Farmland Management for Mitigating Greenhouse Gas Emissions in China

Sponsor: Rice Family Foundation

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The goal of this project is to research best farming practices in different agroclimatic zones that maximize climate mitigation potential and at the same time sustain food production. Farming, the single most important land use type in China, plays a large role in shaping the future trajectory of the Chinese greenhouse gas portfolio. At present, the potential of cropland in mitigating greenhouse gas emissions is poorly understood. This research will (a) quantify soil and plant contributions to the global warming potential, (b) develop practical accounting methods that integrate on-site and off-site activities in relation to the three major greenhouse gases (methane, nitrous oxide and carbon dioxide), (c) compare and contrast greenhouse gas emissions between traditional versus industrialized farming practices, and (d) design prescriptions for farmland management that maximize climate mitigation potential.