U.S. Beef Production and Greenhouse Gas Emissions

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Cradle-to-farm gate environmental footprints
Greenhouse gas emissions by source

Enteric CH4 56%

Anthropogenic CO2 4%

Upstream CO2 13%

Manure CH4 3%

Manure N2O 5%

Land N2O 18%

Enteric N2O 1%

17 – 27 kg CO$_2$e / kg carcass weight
National GHG emissions
Mean = 21.5 kg CO$_2$e/kg of carcass weight

242.618 MMT CO$_2$e

- Northeast: 4%
- Southeast: 21%
- Midwest: 17%
- Northern Plains: 12%
- Southern Plains: 29%
- Northwest: 9%
- Southwest: 8%
Soil C sequestration rate (Conant et al., 2017) | Total C sequestered per year, Mg C | Total CO₂ removal equivalent, MMT CO₂
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0.105 | 14,307,115 | 53
0.28 | 38,152,307 | 140

Grazingland area used by beef cattle farmers and ranchers (conservative estimate) = 136,258,238 hectares

Source: https://www.farmland.org/initiatives/farms-under-threat
THANK YOU

For more information, please visit:
http://beefresearch.org/beefsustainability.aspx