



## News Details

# Grazing Produces Less GHG?

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An Agricultural Research Service [modeling study](#) of four farms hypothetically sited in Pennsylvania suggests year-round crossbred Holstein/Jerseys emit fewer greenhouse gas emissions than large framed Holsteins.

The caveat is that it takes nearly 1.5 HoJos to produce the same amount of milk solids as one large Holstein. But if they are seasonally calved and housed outside year round, they'll produce 6% fewer greenhouse gases.

The modeling was done by ARS ag engineer Al Rotz. He compared four hypothetical herds: 85 large Holsteins and 76 replacements, producing 22,000 lb./cow/year fed in confinement; 100 moderate-sized Holsteins and 80 replacements, producing 18,500 lb./cow/year in confinement; 100 average frame Holsteins and 80 replacements, producing 18,500 lb./cow year that grazed seven months/year, and 130 HoJos and 95 replacements, producing 13,000 lb./cow/year.

All four systems were set to produce the same amount of milk, adjusted for fat and protein, on the same land base. The biggest benefits from grazing came from lowered ammonia emissions from stored manure and increased carbon sequestration as crop land was converted to pasture. In the end, a well-managed herd kept outdoors year round left a carbon footprint 6% smaller than that of a high-production herd kept in confinement, says Rotz.

The ARS study runs somewhat counter to a major, 3-year study of 540 farms by the [Innovation Center for U.S. Dairy](#). That study, which followed greenhouse emissions from feed production all the way through to the consumer's refrigerator, showed conventional dairies had a lower footprint than grazing herds. More importantly, the study found a wide variance in footprint among dairy production systems, with the most efficient conventional or grazing dairy having the lowest footprint in its peer group.

“In our model and research, we weren't really trying to compare the carbon footprint of various dairy practices, but we were looking at the efficiency within each,” says David Pelzer, spokesperson for the Innovation Center. The goal: To help dairy producers make informed choices on practices that will increase efficiency and profitability while reducing carbon emissions. Later this year, the Innovation Center will be releasing a calculator to do just that.

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