

# Interpreting Cropland/Pasture/Orchard/Range Report

## Demo Project Summary

A single 60 acre parcel in Newell, IA. Baseline management, 2000-2021, consisted of conventional corn-soybean management with intensive tillage (corn) and reduced tillage (soybean). Scenario management remained identical to baseline management, however, all tillage transitioned to a no till planter 2022-2031.

Step 1 Activities | Step 2 Field Management | Step 3 Report

Cropland, Pasture, Range, Orchards/Vineyards | Cropland Graphical Report | Available Water Holding Capacity

Report finished: 00:02:16 100% Complete

NAME: Haley Nagle  
PROJECT: Croplands Demo Project  
REPORTING YEARS: 2022 - 2031  
Daycent Service Version: 2018 Daycent Service

Version: WQ Test version 2.4.3, build 3.2.8294.14538 (16-Sep-2022)

USDA United States Department of Agriculture  
Natural Resources Conservation Service

Show uncertainty as percentage

Show IPCC Soil C

Source	Baseline Emissions			no till			Change
	Emissions	+/-	Emissions	+/-	Emissions	+/-	
<b>F1 (60 acres - Soybean, Corn)</b>							
C (tonnes CO <sub>2</sub> equiv./yr.)	-2.4	+0/-0	-32.1	+0/-0	-29.7	+0/-0	
CO <sub>2</sub> (tonnes/yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
CO (tonnes CO <sub>2</sub> equiv./yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
N <sub>2</sub> O (tonnes CO <sub>2</sub> equiv./yr.)	33.6	NR <sup>†</sup>	33.6	NR <sup>†</sup>	0.0	NR <sup>†</sup>	
CH <sub>4</sub> (tonnes CO <sub>2</sub> equiv./yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
<b>Total</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>	
<b>Total (all parcels)</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>	

Source Categories. Select "+" button to expand emission source and sub-source emission estimates. See image below.

Average annual tonnes of CO<sub>2</sub> equivalent (IPCC global warming potentials) per parcel over a 10 year period assuming the last ten years of the baseline is continued into the ten years after the end of the baseline.

Average annual tonnes of CO<sub>2</sub> equivalent (IPCC global warming potentials) per parcel over a 10 year period assuming the management changes made in the future scenario.

Change in emissions compared to baseline scenario.

\*Negative results (green in the change column) indicate a reduction in emissions or increase in carbon sequestered.

Source	Baseline Emissions			no till			Change
	Emissions	+/-	Emissions	+/-	Emissions	+/-	
<b>F1 (60 acres - Soybean, Corn)</b>							
C (tonnes CO <sub>2</sub> equiv./yr.)	-2.4	+0/-0	-32.1	+0/-0	-29.7	+0/-0	
CO <sub>2</sub> (tonnes/yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
CO (tonnes CO <sub>2</sub> equiv./yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
N <sub>2</sub> O (tonnes CO <sub>2</sub> equiv./yr.)	33.6	NR <sup>†</sup>	33.6	NR <sup>†</sup>	0.0	NR <sup>†</sup>	
CH <sub>4</sub> (tonnes CO <sub>2</sub> equiv./yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0	
<b>Total</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>	
<b>Total (all parcels)</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>	

Source	Emissions	+/-	Emissions	+/-	Emissions	+/-
Direct N <sub>2</sub> O Emissions	26.1	+12.3/-9.3	26.1	+12.3/-9.3	0.0	+0/-0
Direct - Soil	26.1	+12.3/-9.3	26.1	+12.3/-9.3	0.0	+0/-0
Direct - Biomass Burning	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0
Direct - Drained Organic Soil	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0
Indirect N <sub>2</sub> O Emissions	7.5	+8.2/-5.1	7.5	+8.2/-5.1	0.0	+0/-0
Indirect - Volatilization	3.0	+5.4/-2.5	3.0	+5.4/-2.5	0.0	+0/-0
Indirect - Leaching and Runoff	4.5	+7.1/-3.7	4.5	+7.1/-3.7	0.0	+0/-0
CH <sub>4</sub> (tonnes CO <sub>2</sub> equiv./yr.)	0.0	+0/-0	0.0	+0/-0	0.0	+0/-0
<b>Total</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>
<b>Total (all parcels)</b>	<b>31.2</b>	<b>NR<sup>†</sup></b>	<b>1.5</b>	<b>NR<sup>†</sup></b>	<b>-29.7</b>	<b>NR<sup>†</sup></b>

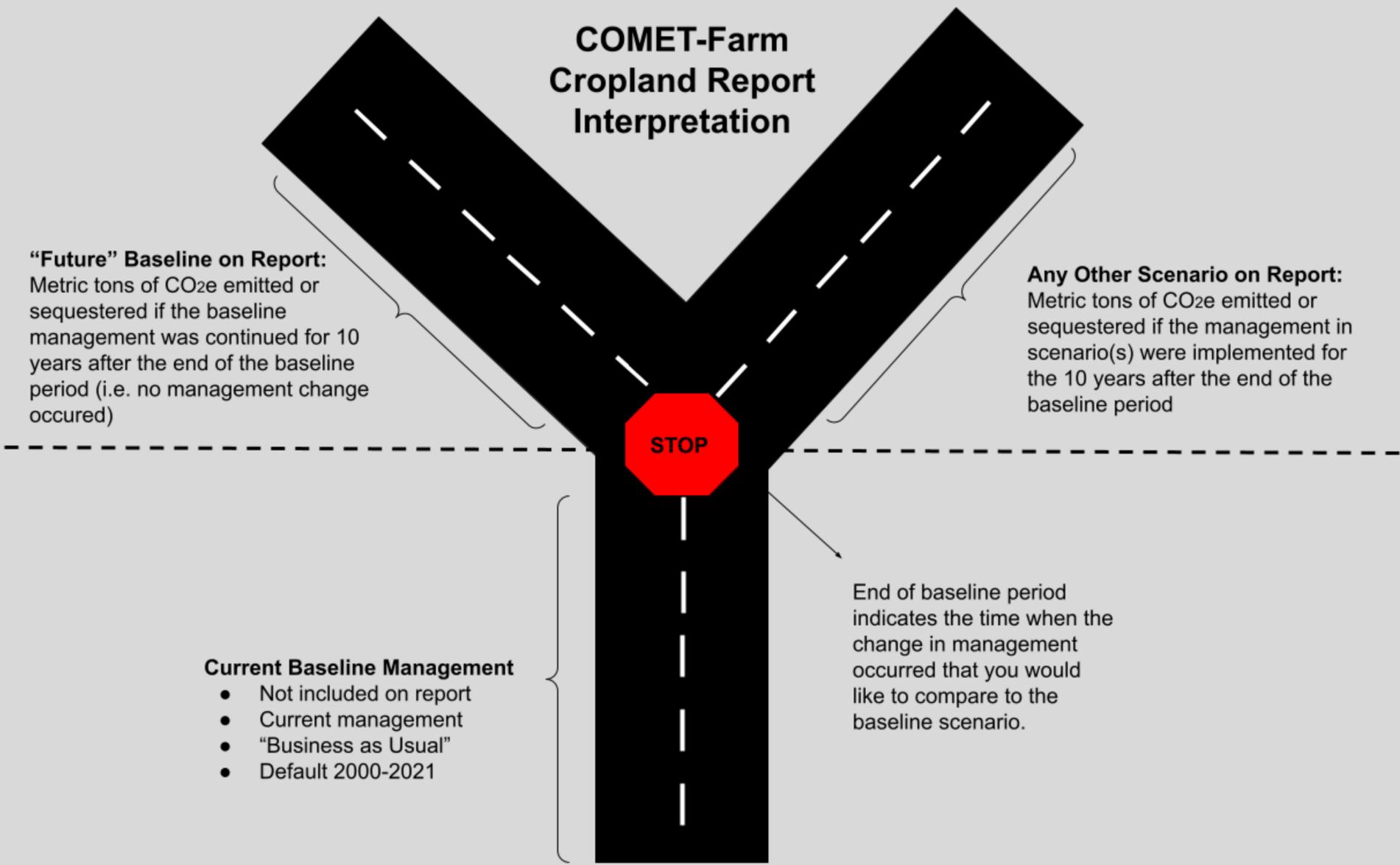
**Histogram**

The image above is a histogram generated by the COMET-Farm system to illustrate the frequency distribution of the greenhouse gas emissions associated with this parcel and project. COMET-Farm uses the Monte Carlo method to estimate the mean and 95% confidence intervals (also called "uncertainty") associated with the greenhouse gas emission or carbon sequestration category for each parcel. These calculations were completed based on the greenhouse gas emission models and the uncertainty calculations recommended in the USDA Methods Document: Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory.

Please note that the uncertainty of soil carbon is currently not included in this calculation, but will be added during the spring of 2019.

Total estimates for ALL parcels defined.

# Interpreting Cropland/Pasture/Orchard/Range Report Continued...



## Cropland/Pasture/Orchard/Range Graphical Report:

Step 1  
Activities
Step 2  
Field Management
Step 3  
Report
Graphical Report

Cropland, Pasture, Range, Orchards/Vineyards
Cropland Graphical Report
Available Water Holding Capacity

Parcel Name:  ▼

**Total GHG Emissions (metric tons CO<sub>2</sub>-eq per year)**

☰  
↓  
Print or download graphs

Use your cursor to hover over each bar to view the source emission estimates.