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SUSTAINABILITY ANALYSIS

2021 ON-FARM PRACTICES REPORT

About ABC Farm

In Central Iowa John and Jane Doe established their farrow to finishing operation in the early 2000s. As they continued to grow, new facilities were built in 2005. John and Jane have three children, Jack, Joey, and Jill. Each member of the family plays a role in the day to day operations.



X,XXX acres from **XX** fields

TYPE BARNs

Sow
Farrowing
Finisher
Total



X,XXX Total Pigs/Year

Quantifying the Impact of Actual Farm Practices

The benefits were determined through EcoPractices' unique process that is able to pinpoint the influence of specific agricultural practices. While agricultural practices have progressed to better care for natural resources, the ability to quantify the influence these practices have on sustainability has not kept pace. ABC Farm seeks to put evidence-based measurements to its farm practices. Having such data brings more depth to decision-making. Short- and long-term goals can be based upon more meaningful information.

Conservation Practice	Fields with Practice	Acres of Practice
Grassed Waterway	x	x
Forest	-	x
Buffer	x	x
Wetland	x	x

CROP	% ACRES	YIELD
Corn Grain	xx%	xxx bu/ac
Soybean	xx%	xx bu/ac

WE CARESM ETHICAL PRINCIPLES

The We Care initiative was launched in 2008 as a joint effort of the National Pork Board, the National Pork Producers Council (NPPC), and state organizations representing farmers. Through the We Care initiative, they hope to earn the public's trust by making this industry better for all concerned — animals, farmers, food industry partners, and consumers worldwide.



- › **Food Safety**
- › **Animal Well-Being**
- › **Environment**
- › **Public Health**
- › **Our People**
- › **Our Communities**

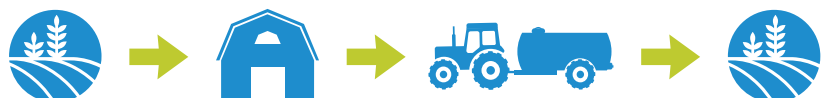
NATIONAL PORK BOARD'S ENVIRONMENTAL INITIATIVE



One pillar of the We Care Ethical Principles is Environment. This includes the use of manure as a valuable resource in a manner that safeguards air and water quality, includes air quality from production facilities to minimize the impact on neighbors and the community, and includes managing operations to protect the quality of natural resources.

- › **Air Quality**
- › **Carbon Footprint**
- › **Emergency Action Plan**
- › **Manure & Site Management**
- › **Feed Management**
- › **Mortality Management**
- › **Water Conservation**

Feed is grown for pork production. The manure produced provides macro- and micro-nutrients to the crops while adding organic matter to the soil.



MANURE APPLICATION & SAVINGS

XX% of acres received either solid and/or liquid manure fertilizer at an average of **X.X tons/acre**.



The average **cost savings** from manure applied to **XX** acres was estimated to be **\$X.XX** per acre based on a reduced need for commercial N, P & K resulting in a **total savings** of **\$X,XXX**.



Weather, Soils, and In-Field Management Practices influence the following environmental metrics

ENVIRONMENTAL OUTCOMES

From the management practices at ABC Farm, which was xx% no-till and xx% cover crops during 2021, the following environmental outcomes resulted.*

OVERALL FARM

CO₂e Emissions	-0.X T/ac
Carbon Sequestered	0.X T/ac
Soil Erosion	0.X T/ac

EROSION AVERAGE

The USDA National Resources Inventory provides estimates on average erosion for different systems across the US.**

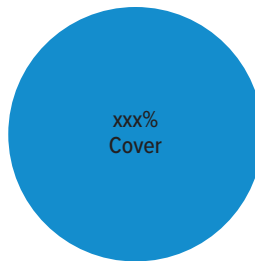


State Cropland
X.X T/ac



National Average
4.6 T/ac

COVER CROPS



TILLAGE



According to the 2017 US Ag Census, the national average is **4% cover crop adoption**, **37% no-till adoption**, and **35% reduced till adoption**.

SOIL CONDITIONING INDEX (SCI)

Soil Conditioning Index (SCI) is a tool from NRCS that shows the trajectory of soil health. A positive SCI means a positive trajectory of soil health and vice versa.

The fields in the project are an overall **+** trajectory for **SCI**.

CROPLAND

xxx%

MANAGEMENT PRACTICE IMPACTS

Significant environmental benefits resulted from cropland acres compared to a conventional tillage, no cover crop scenario.*



X,XXX tons reduction of CO₂e, which is the same as



XXX average passenger cars off the road for a year



or **X rail cars of coal** saved from being burned



XXX tons of soil carbon sequestered



XX,XXX tons of soil saved instead of being lost to erosion, which is the same as



XXX dump trucks of soil

ECO PRACTICES

Data provided by ABC Farm for the 2021 growing season and calendar year.

* EcoPractices estimates an environmental impact value for reducing greenhouse gas emissions, reducing soil erosion, and reducing nutrient loss due to reduced leaching. These estimates adhere to processes that are documented by the NRCS Technical Guides and publications from the EPA. These values are tailored to a specific location and participant's operation. Models used are supported by USDA, NRCS, other government agencies, and major universities. Modeled results include input data from public resources for weather, soils, and historical crop rotation. Greenhouse gas simulations were produced from the Greenhouse Gas Inventory (GGIT) tool developed by Soil Metrics, LLC (2021) <https://soilmetrics.eco>. The GGIT tool implements the USDA-sanctioned greenhouse gas inventory methods described in Eve et al. (2014) 'Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory'. The GGIT tool utilizes greenhouse gas modeling technology developed for the COMET-Farm tool, licensed by Colorado State University to Soil Metrics, LLC.

**USDA, NRCS 2017 National Resource Inventory

This summary must not be edited or altered in any way without the involvement and consent of EcoPractices.