

# STEWARDSHIP ANALYSIS

## 2022 PORK CARES FARM IMPACT REPORT

### About Phillips Family Farms

The Phillips Family started farming in Drexel, Missouri in 1967 and has lived on the land ever since. Scott Phillips was in the Air Force and flew in the reserves while farming with his father and brother since the early 1990's. They are proud to grow crops that provide nutrient-dense food to their pigs. Phillips Family Farms runs a 2,000 sow farrow-to-finish operation and has recently expanded with an additional 2,500 sow farrow to wean operation with extended family members to continue their pork production.

Their mission of Pigs, People, and Profits align with the National Pork Board. They are proud to be family owned and their employees are treated as part of the family. "Our desire is to be joyful and faithful stewards of the blessings God has entrusted to us," says Scott Phillips. "The blessings are the pigs, the people that work here, the land around us, and the profits gained." Brothers Scott and Marty have spent years living by this statement which has laid a solid foundation for the third generation to now be involved.

### Quantifying the Impact of Actual Farm Practices

The EcoPractices® platform determines environmental benefits through its unique process that can pinpoint specific influences of individual 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. Phillips Family Farms 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.

**2,816** acres from **36** fields



**Swine Inventory: 27,830**

*Defined as Sow and/or Finished Pigs per Year*

### WE CARE® 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

#### CROP

#### YIELD

Corn Grain	141 bu/ac
Pasture	-
Soybean	36 bu/ac
Winter Wheat	50 bu/ac

## MANURE APPLICATION & SAVINGS

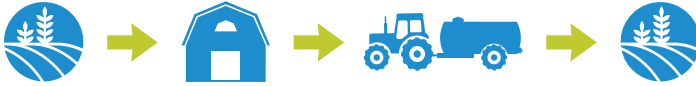
**50%** of acres received liquid manure fertilizer at an average rate of **17,538 gallons/ac.**



The average **cost savings** from manure applied to **1,404 acres** was estimated to be **\$103 per acre** based on a reduced need for commercial N, P & K resulting in a **total savings of \$144,547.**



Manure produced during pork production has many benefits. Manure provides macro- and micro-nutrients to the crops that are grown. The soils applied receive **organic matter** which increases **carbon storage**. In addition, **microbial activity** is stimulated. Producers prioritize **stewardship** by properly applying manure to benefit the fields that are applied.



## IN-FIELD ENVIRONMENTAL OUTCOMES

The data is reflective of weather and soils influence in addition to implemented in-field management practices for the project year.<sup>†</sup>

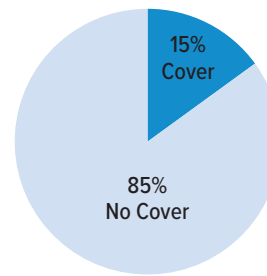
	OVERALL FARM
<b>Net GHG Emissions</b>	<b>-0.51 T CO<sub>2</sub>e/ac</b>
<b>Soil Carbon Sequestered</b>	<b>0.29 T C/ac</b>
<b>Soil Erosion Rate</b>	<b>5.49 T/ac</b>

## EROSION AVERAGE

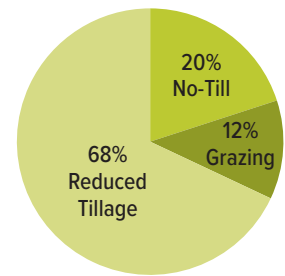
The USDA National Resources Inventory provides estimates on average erosion for different systems across the US.\*

Missouri Cropland	National Average
<b>6.1 T/ac</b>	<b>4.6 T/ac</b>

## 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

Soil Conditioning Index (SCI) is an NRCS tool that shows soil health trajectory. 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

87%

## MIXED FORAGE

2%

10%

## IN-FIELD PRACTICE COMPARISON IMPACTS

When compared to conventional practices (i.e. conventional tillage, no cover crop scenario), in-field farm practices generated:<sup>‡</sup>

**2,590 fewer tons of CO<sub>2</sub>e**, which is the same as

**503 average passenger cars** off the road for a year

**722 tons of soil carbon sequestered**

**4,771 tons of soil saved** instead of being lost to erosion, which is the same as

**298 dump trucks of soil**



Powered by **ECO**PRACTICES

Data provided by Phillips Family Farms through a program funded by the Pork Checkoff.

<sup>†</sup>Sustainable Environmental Consultants, through its EcoPractices platform, 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

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