South Puget Sound Discovery Farms®
American Farmland Trust, Discovery Farms®, Washington, King Conservation District, and Whatcom Conservation District worked together to engage producers in a cooperative, on-the-ground research and demonstration project to assess, promote, and improve adoption of on-farm conservation practices that enhance water quality in Puget Sound.

Project Activities
Working on two farm sites in King County, this project measured water quality, manure, and weather data associated with four different types of manure storage:
- Pile on dirt, uncovered
- Pile on dirt, covered with a tarp
- Pile in concrete bin, uncovered
- Pile in concrete bin, covered with a roof

Between October 2020 and May 2021, the project team measured soil samples from beneath the piles on dirt, stormwater runoff from the piles on concrete, manure composition from both, and tracked meteorological events. The project analysis focused on nitrogen, nitrate+nitrite, and phosphorous with assessment of fecal coliform, salinity, and sediment parameters.

Data Analysis & Findings
Findings from the data analysis showed:
- Covered manure has less runoff and leaching of manure nutrients.
- Manure on slab has no leaching to groundwater and can contain stormwater when designed properly.
- Manure composition is reflected in the analyte profile seen in stormwater runoff.
- Covered manure achieves a greater temperature to enhance the composting process and create a better end product.

Key takeaways for farmers and agricultural service providers include:
- Management makes a difference!
- Cover your manure: covering manure has less impact on water and creates a better composted manure project.
- Put your manure on an impermeable surface whenever possible to reduce nutrient losses.

Future Opportunities
Additional research is needed to fully understand the soil and water quality impacts of different manure management strategies over seasons. A single year of sampling, combined with an unusually dry winter and spring, contributed to a relatively small data set. The project team has applied for supplemental funding and hopes to pursue additional research.

Farmers and landowners interested in exploring manure management strategies and other conservation practices should contact their local Conservation District for technical assistance.

For More Information
https://farmland.org/project/south-puget-sound-discovery-farms/
https://www.wadiscoveryfarms.org/