

Linking Farms: A Financial Solution

Josh Betcher

Why is linking farms important?

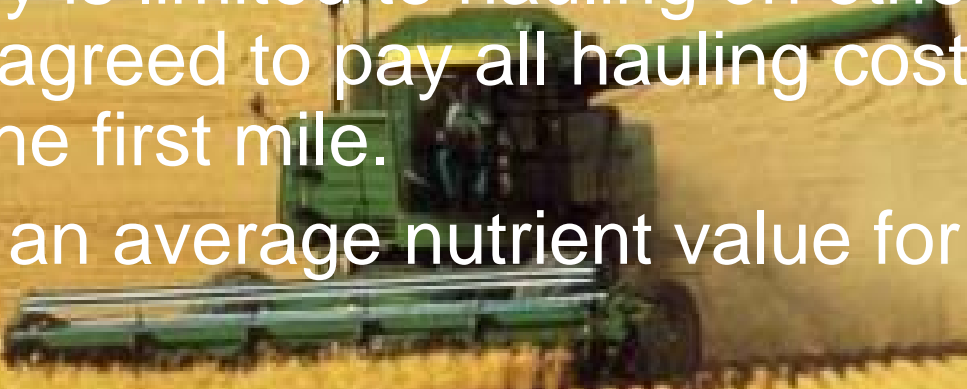
- As commercial fertilizer prices rise it is more and more cost effective to use manure as an alternate nutrient source.




Manure Benefits

	Commercial Cost (\$/Lb)	Total Nutrients Lbs/1000 gal	Surface Application 1st Year Available
Nitrogen	.35	20.08	6.02
P2O5	.33	6.08	3.65
K2O	.20	17.15	13.72
Sulfur	.22	1.84	1.10
		Total Value (\$/1000gal)	\$6.30

Example Assumptions

- The dairy has reached its limit for spreading manure on its own property.
 - Because the dairy is limited to hauling on other farms they have agreed to pay all hauling costs accumulated in the first mile.
 - The manure has an average nutrient value for dairy slurry.
 - The pumping and application will be custom hired.
 - The only change to the grain enterprise is the substitution of manure for most of the commercial fertilizer.
- 
- A green combine harvester is shown in the middle ground, moving through a field of golden corn. The harvester is viewed from a side-rear perspective, showing its large wheels and the harvesting mechanism. The field is filled with rows of corn, and the background shows rolling hills under a clear sky.

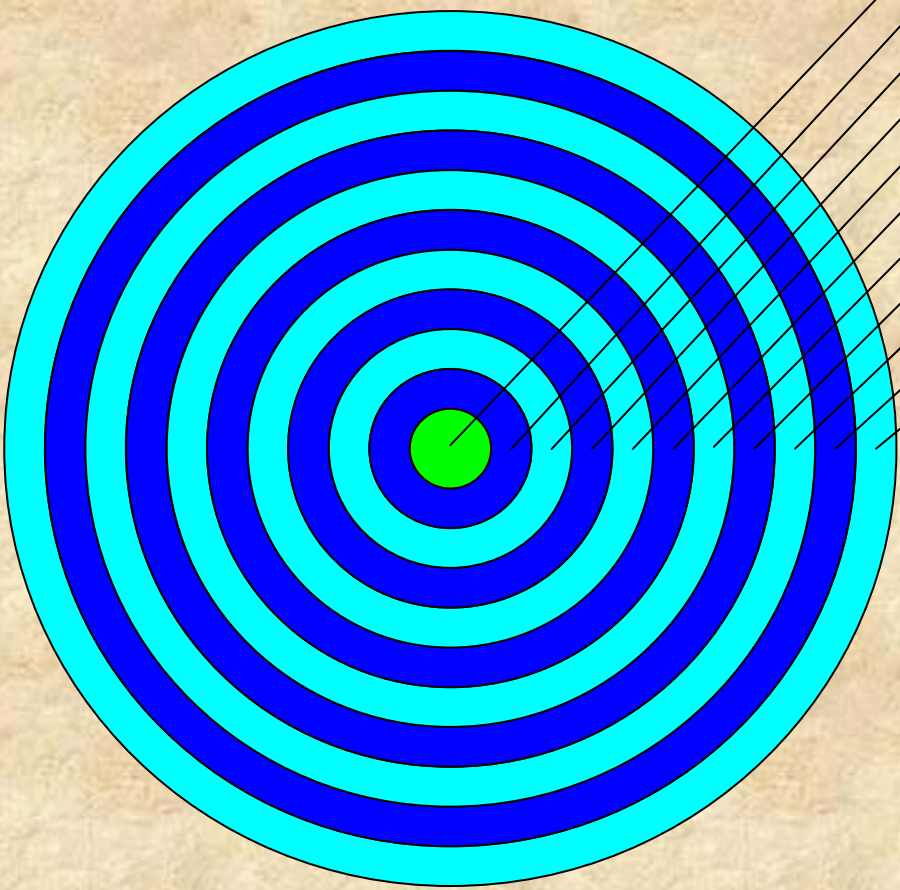
Example Assumptions

- The manure is being added into a corn and soybean rotation.
 - The grain farmer is incorporating the manure.
 - All custom hauling charges were derived from Wisconsin haulers.
 - Nutrient levels were derived from the Marshfield, WI sample testing lab.
 - Fertilizer prices are current values also from the Marshfield labs.
 - Enterprise budget yields, prices, and expenses were derived from PEPS five year averages.
- 
- A green combine harvester is shown in the middle ground, moving through a field of golden corn. The harvester is positioned slightly to the right of the center, and its long auger is visible. The field is filled with rows of corn, and the background shows rolling hills under a clear blue sky. The overall scene is a typical agricultural landscape during harvest time.

How the template works

- Grain farmers enter
 - Corn enterprise budget
 - Current fertilizer prices
 - Estimated corn yields
 - Corn Price
 - Diesel price
 - N requirements
 - Previous crop credits
 - Starter rate
- Dairy farmers enter
 - Pit size
 - Hauling method
 - Nutrient value
 - Application rate
 - Custom charges
- The template shows
 - A manure value for miles one through ten.
 - This value can be used to determine a bargaining price for both sides.

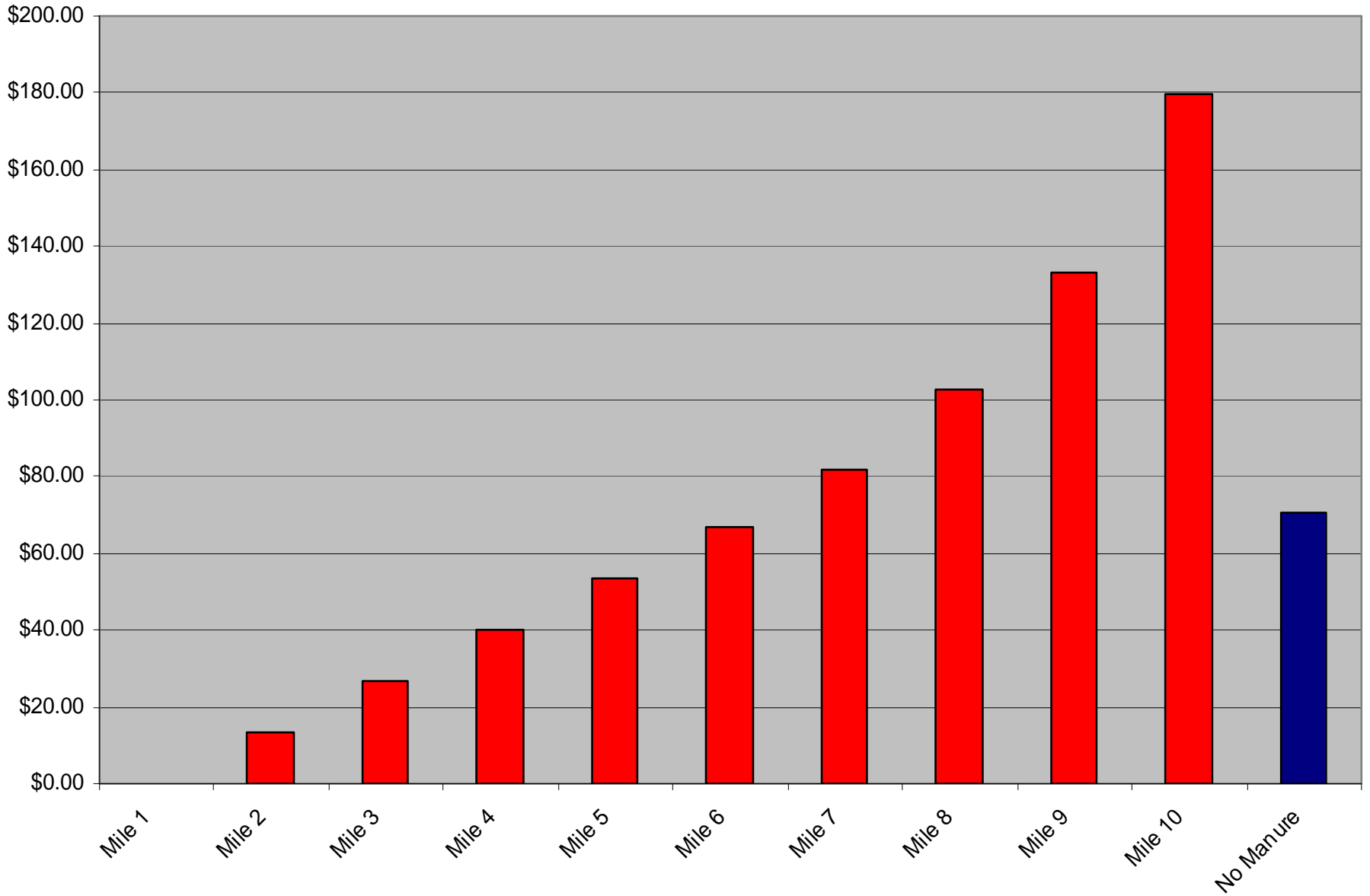
PEPS Example



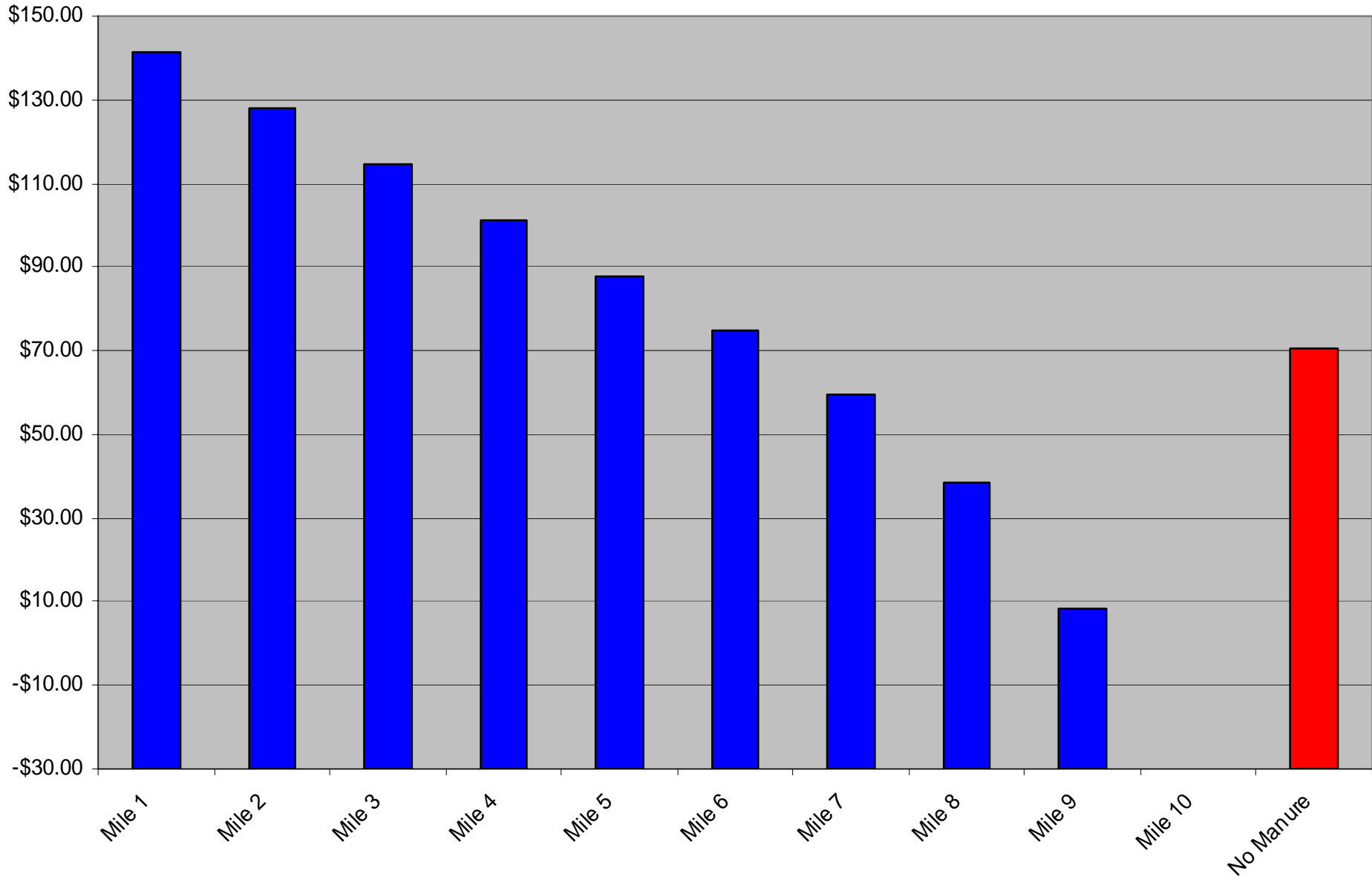
Dairy Farm	Hauling cost	Change in Rev/Acre
Mile 1	\$55.45	\$63.37
Mile 2	\$68.91	\$49.92
Mile 3	\$82.28	\$36.55
Mile 4	\$95.61	\$23.21
Mile 5	\$108.92	\$9.91
Mile 6	\$122.21	-\$3.38
Mile 7	\$137.29	-\$18.46
Mile 8	\$158.33	-\$39.51
Mile 9	\$188.51	-\$69.68
Mile 10	\$235.07	-\$116.24

When the dairy farm pays for the hauling costs for the first mile, there is an economic benefit for the grain farmer to use manure even up to 5 miles away from that dairy farm.

Fertilizer Cost Per Acre



Returns Per Acre



Future Use of Template

- Swine slurry budgets
- Poultry litter budgets
- Template will be accessible on UW Extension website



Resources

- AgStar Financial Services
- Gregg Hadley-UW River Falls Ag Economics/ UW Extension
- Josh Posner-UW Madison Agronomy
- Gregg Sanford-UW Madison Agronomy Graduate Program
- Amy Cook-UW Madison Agronomy Graduate Program
- Kevin Erb-UW Extension
- Paul Kivlin-UW Extension
- Chris Lindstrom-UW Extension
- Mike Rankin-UWEX Fond du Lac Co
- Dana Cook-Nutrient Hauler
- Bruce Dankers-Nutrient Hauler
- Tom Manke-Farmer
- Walter Meinholtz-Farmer