



# MinnesotaCorn

## RESEARCH & PROMOTION COUNCIL

### PROGRESS REPORT

PROJECT TITLE: Vegetative cover crops as a nitrate reduction strategy for tile drainage.

PROJECT NUMBER: MCR&PC / 4121-16SP, (CON00000060901)

REPORTING PERIOD: October 1 – December 31, 2018

PRINCIPAL INVESTIGATOR: Jeffrey Vetsch

ORGANIZATION: Univ. of Minnesota, Southern Research and Outreach Center

PHONE NUMBER: 507-837-5654

EMAIL: [jvetsch@umn.edu](mailto:jvetsch@umn.edu)

- 1.) PROJECT ACTIVITIES COMPLETED DURING THE REPORTING PERIOD. **Activities for this quarter were to perform procedures as outlined in the research protocol (proposal) including: harvesting soybean, measure tile flow, collect water samples, take volumetric soil water content measurements weekly, take soil samples for inorganic N, perform strip tillage and band apply P and K fertilizer, calculate yields, and submit quarterly report.** All tasks have been performed in a timely fashion. Did not take cover crop biomass samples. A cold wet fall resulted in very little growth.
- 2.) IDENTIFY ANY SIGNIFICANT FINDINGS AND RESULTS OF THE PROJECT TO DATE. Tiles flowed in October and November due to 10.54 inches of rainfall in September and 3.14 inches in October. Nitrate concentrations in tile drainage water averaged < 3 ppm.
- 3.) CHALLENGES ENCOUNTERED. Poor growth of cover crops. Didn't allow biomass sampling.
- 4.) FINANCIAL INFORMATION. Expenses during the period were for lab services (tile water NO<sub>3</sub>-N analyses, soybean seed nutrient content and fall soil samples) and labor (salary and fringe). The budget table and invoice are attached. All other categories are within or less than quarterly budget projections.
- 5.) EDUCATION AND OUTREACH ACTIVITIES. No outreach activities during this period.

**Budgeted and spent funds for each quarter during project year 2016.**

Category	Budgeted	Spent	Apr-Jun 16	Jul-Sep 16	Oct-Dec 16	Jan-Mar 17
			-----\$-----		-----\$-----	
Salary		8,250.09	2,359.25	3,754.84		2,136.00
Fringe		1,312.37	344.27	412.74		555.36
Salary+fringe	12,300	9,562.46	2,703.52	4,167.58	-	2,691.36
Supplies	700	2,402.46	200.00	1,104.42	1,082.86	15.18
Services	2,800	3,402.75	-	1,743.75	975.00	684.00
Travel	400	27.00	-	-	27.00	-
<b>Total</b>	<b>16,200</b>	<b>15,394.67</b>	<b>2,903.52</b>	<b>7,015.75</b>	<b>2,084.86</b>	<b>3,390.54</b>

**Budgeted and spent funds for each quarter during project year 2017.**

Category	Budgeted	Spent	Apr-Jun 17	Jul-Sep 17	Oct-Dec 17	Jan-Mar 18
			-----\$-----		-----\$-----	
Salary		11,875.64	7,696.62	2,020.54	279.00	1,879.48
Fringe		3,140.59	2,003.88	549.59	75.89	511.23
Salary+fringe	26,600	15,016.23	9,700.50	2,570.13	354.89	2,390.71
Supplies	800	29.96	-	-		29.96
Services	6,950	4,448.04	2,394.00	235.25	702.79	1,116.00
Travel	500	405.90	89.35	245.57	41.20	29.78
<b>Total</b>	<b>34,850</b>	<b>19,900.13</b>	<b>12,183.85</b>	<b>3,050.95</b>	<b>1,098.88</b>	<b>3,566.45</b>

**Budgeted and spent funds for each quarter during project year 2018.**

Category	Budgeted	Spent	Apr-Jun 18	Jul-Sep 18	Oct-Dec 18	Jan-Mar 19
			-----\$-----		-----\$-----	
Salary		22,339.48	6,372.15	7,446.31	8,521.02	
Fringe		6,267.93	1,733.20	2,114.77	2,419.96	
Salary+fringe	26,600	28,607.41	8,105.35	9,561.08	10,940.98	-
Supplies	800	18.37	-	18.37		
Services	6,750	8,124.04	1,880.00	2,176.75	4,067.29	
Travel	500	85.57	85.57	-		
<b>Total</b>	<b>34,650</b>	<b>36,835.39</b>	<b>10,070.92</b>	<b>11,756.20</b>	<b>15,008.27</b>	<b>-</b>

**Total Budgeted and spent funds from grant inception through current budget.**

Category	Total Budgeted	Total Spent
Salary	51,849	42,465.21
Fringe	13,651	10,720.89
Supplies	2,300	2,450.79
Services	16,500	15,974.83
Travel	1,400	518.47
<b>Total</b>	<b>85,700</b>	<b>\$72,130.19</b>

# INVOICE

Invoice No. 2010618344

REGENTS OF THE UNIVERSITY OF MINNESOTA

**PAYABLE WITHIN 30 DAYS**

MN CORN RES AND PROMOTION COUN  
 PAUL MENTS, PHD, RESEARCH DIRECTOR  
 738 1ST AVE E  
 SHAKOPEE MN 55379-1547

**Invoice Date:** 01/17/2019  
**Contract No:** CON00000060901  
**Agency No:** 4121-16SP  
**Federal Tax ID:** 41-6007513

Invoicing Period	Description	Previously Billed Expenses	Current Expenses	Cumulative Total
10/01/2016 - 12/31/2018	Salaries and Wages	33,944.19	8,521.02	42,465.21
	Fringe Benefits	8,300.93	2,419.96	10,720.89
	Consulting and Prof. Services	0.00	0.00	0.00
	Supplies and Services	14,358.33	4,067.29	18,425.62
	Participant Expenses	0.00	0.00	0.00
	Travel	518.47	0.00	518.47
	Student Assistance	0.00	0.00	0.00
	Subcontracts	0.00	0.00	0.00
	Repairs&Maintenance/Rent&Lease	0.00	0.00	0.00
	Equipment	0.00	0.00	0.00
	Other Expenses	0.00	0.00	0.00
	Indirect Costs	0.00	0.00	0.00
	<b>Total \$</b>	<b>57,121.92</b>	<b>15,008.27</b>	<b>72,130.19</b>
	Program Income and TP	0.00	0.00	0.00

Title: Vegetative cover crops as a nitrate reduction strategy f

Principal Investigator: Jeffrey Vetsch

Cost Share \$ 0.00 0.00 0.00

For questions please contact: Angela Lane  
 E-Mail: lanex134@umn.edu  
 Telephone: 612/624-8265

**Total Amount Due: \$ 15,008.27**

I certify that to the best of my knowledge and belief, all expenditures reported (or payments requested) are for appropriate purposes and were made in accordance with the agreements set forth in the application and award documents.

Regents of the University of Minnesota

Make Remittance Payable To: REGENTS OF THE UNIVERSITY OF MINNESOTA

Mail To: NW 5957  
 PO Box 1450  
 Minneapolis, MN 55485-5957

Nicole Pirman  
 Director  
 Sponsored Financial Reporting

Customer: 5005221  
 DUNS #: 559917996

**PLEASE REFERENCE ABOVE INVOICE NUMBER ON REMITTANCE**