**Developing Inoculum to Increase Anaerobic Digestion Efficiency in Winter Months.**

**NESARE Project (GNE11-030) Annual Report 2011**

**Appendix A**

Table 1: Revised timeline for *Developing Inoculum to Increase Anaerobic Digestion Efficiency in Winter Months*, NESARE Project (GNE11-030). Start Date: 8/1/2011-5/31/2013

|  |  |  |  |
| --- | --- | --- | --- |
| **Activities** | **Start Date** | **End Date** | **Status** |
| Search for local sources of inocula and obtain legal permission | 10/24/2011 | 12/8/2011 | Completed |
| Collect inocula, conduct and modify SMA tests  | 12/8/2011 | 1/22/2012 | In Progress |
| Collect new sets of inocula | 1/22/2012 | 2/5/2012 |  |
| Conduct biochemical methane potential tests (BMP) to determine the best inoculum | 2/6/2012 | 6/6/2012 |  |
| Collect new sets of inocula | 6/7/2012 | 6/21/2012 |  |
| Start inoculum incubation | 6/21/2012 | 12/21/2012 |  |
| Conduct first BMP to determine optimal incubation period and substrate to inoculum ratio | 6/21/2012 | 10/21/2012 |  |
| Conduct second BMP to determine optimal incubation period and substrate to inoculum ratio | 9/21/2012 | 1/21/2012 |  |
| Conduct third BMP to determine optimal incubation period and substrate to inoculum ratio | 12/21/2012 | 4/21/2013 |  |
| Field tour | 9/1/2012 | 9/1/2012 |  |
| American Ecological Engineering Society and Agstar National Conference | 5/2013 | 5/2013 |  |
| Publication | 5/31/2013 | 5/31/2013 |  |

Figure 1: Preliminary data of cumulative methane production from the anaerobic digestion of dairy manure at 3°C (blue line), 14°C (red line), and 24°C (green line) conducted from 3/20/2011-8/18/2011 to inform the current NESARE funded project.