

1. **PROJECT NAME:** Livestock Waste Education, Information, and Assistance Program
2. **PRINCIPAL INVESTIGATOR:** M. Bridget Johnson, Livestock Waste Management Specialist
3. **REPORTING PERIOD:** Semiannual report – November 1, 2004 to April 1, 2005
4. **PROJECT PERIOD:** July 2002 through December 2006
5. **PROJECT STATUS:** On schedule
6. **SEMIANNUAL PROGRESS UPDATE:**

Task 1 Develop and assemble educational materials that focus on location, design, and management of livestock facilities, focusing on waste management to prevent impacts on water quality.

- Over the last several months four publications have been developed, two of which are currently available from the NDSU Extension Service distribution center and website. The first publication is the Assessment Tool for New and Existing Animal Feeding Operations (NM-1284). This publication will be used by all 319 project coordinators to make environmental assessments of animal feeding operations. A numerical value will be assigned to the operation and coordinators will be able to use this value in ranking or prioritizing operations based on an environmental assessment. The publication applies to small and medium animal feeding operations that are either housed facilities or open lot operations. The second publication is Unintended Impacts of Fertilizer and Manure Mismanagement on Natural Resources (NM-1281). This publication highlights the impacts mismanagement has on water quality, human health, aquatic health and odor and gas emissions. The last two publications are still going through review. The first, Producer's Guide to Livestock Waste Systems, is a general guide designed to familiarize producers with the process of completing a livestock waste containment system. This publication is expected to be completed and available by May 1, 2005. The second, Manure Utilization in No-till Cropping Systems, is a guide to proper management of livestock waste for no-till crop producers. This publication is expected to be completed and available by June 1, 2005.

Task 2 Hold meetings, workshops, and tours to educate producers and those who advise and work with producers about livestock waste management to prevent impacts on water quality. Use mass media and newsletters to inform producers and the public about efforts to reduce impacts on water quality.

- Presentations have been given at the following locations:
 - i. Backgrounding Short-course, Hettinger Research Extension Center, Hettinger
 - ii. Livestock Producer Meeting, Carson
 - iii. Mercer County Livestock Producers Update, Beulah
 - iv. NPS Watershed Coordinator's Meeting, Bismarck
 - v. Issues Facing Livestock Producers, Mott
 - vi. Dickinson Research Extension Center Beef Field Day, Manning
 - vii. Morton County Producer's Meeting, New Salem
- The following are workshops that have been developed.
 - i. Soil & Water Updates, Dickinson, Minot, Carrington
 - ii. Technical Service Provider Training for Nutrient Management, Carrington
- A press release in the Dickinson Press included an interview and information on livestock facility design and management practices to reduce wet pen surfaces.

Task 3 Develop and deliver educational materials and programs that focus on utilization of livestock waste nutrients for crop production.

- Several presentations focused specifically on the utilization of livestock waste nutrients for crop production. Those presentations were made at the:
 - i. NPS Watershed Coordinator's meeting, Bismarck
 - ii. Morton County Producer's Meeting, New Salem
 - iii. Soil & Water Updates, Dickinson, Carrington, Minot

- iv. Technical Service Provider Training for Nutrient Management, Carrington
 - v. Wells County Manure Day, Fessenden
 - vi. Jamestown Ag Expo, Jamestown
 - vii. ManDak No-till Conference, Brandon, Manitoba, Canada
 - viii. McHenry County Ag Association Meeting, Drake
 - ix. Northern Plains Cropping Conference, Mandan
- A publication titled Manure Nutrient Utilization Under No-Till Cropping Systems is currently under review and is expected to be released by June 1, 2005. The publication will be available through the NDSU Extension distribution center and the NDSU Extension website.

Task 4 Provide technical and education support for 319 funded projects that have livestock waste components.

- Technical and educational training was provided to 319 Coordinators at the NPS Coordinator's meeting, the Technical Service Provider Training for Nutrient Management and the Soil & Water Updates held throughout the state. In addition, 319 project coordinators have been involved in the development and revision of the educational publications completed to date.
- Collaboration with other 319 programs, including the ND Dairy Pollution Prevention Program, ND Stockmen's Association Stewardship Support Program and the Livestock Facilities Assistance Program, has included site visits, program planning and resource coordination.
- Eight on-site visits have been made with 319 Watershed Coordinators.

Task 5 Provide individual consultations with livestock producers.

- In the past six months, contacts and site visits have been made with eighteen livestock producers. Visits include completing the Assessment Tool for New and Existing Animal Feeding Operations, consultation on management practices, containment systems and non point source regulations. Of the eighteen, four have completed designs for livestock containment systems, two are awaiting revision to their designs, two are seeking consultation from the ND Department of Health for No Potential to Pollute designation, and ten are awaiting surveys. In addition, extensive work has been done with NRCS on the development of a containment and monitoring system for the Dickinson Research Extension Center Ranch.

7. ANTICIPATED ACTIVITIES: April 1, 2005 through October 1, 2005

- Continue development of new publications and revise the following existing publications:
 - A Check-list for Feedlot Siting and Environmental Compliance (AS-1155)
 - Water Quality: The Animal Component (AS-1023)
 - Water Quality: The Rangeland Component (R-1028).
- Continue to deliver information on Nutrient Management at educational meetings.
- Continue involvement on monitoring of the Hettinger Research Extension Center water spreading system.
- Develop a regular publication dealing specifically with livestock waste, nutrient management, management strategies to improve environmental stewardship, etc. Ideally this would be a monthly or quarterly publication that Soil Conservation Districts, County Agents and other agencies could use as a tool to deliver information to producers.
- Increase information delivery and educational programs on composting.
- Implement pertinent research projects.
- Implement four Filed Demonstrations on utilization of livestock manure nutrients on crop production in four counties in North Dakota.