

IOWA SECTION 319 PROJECT
FFY2010 Project #5
Final Report

Project Title: Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations

Grant Period(s):

FFY2010 Grant: 10/1/2010-9/30/2015

Project Beginning Date: 01/01/2011

Project Ending Date: 12/31/2014

Total Section 319 Project Expenditures: \$100,000

Background

As a result of a 5-year project initiated in the early 2000's, the water quality problems associated with Iowa's large cattle feedlots were largely identified and corrected. As the result of a project called the "Iowa Plan" DNR, EPA, and the Iowa Cattlemen's Association were able to bring the large feedlots (1000-head and larger) into compliance. The Iowa Plan incorporated voluntary feedlot registration with the DNR, environmental priority assessment, and a two-to-five year compliance schedule.

However, runoff from Iowa's smaller beef and dairy feedlot operations has continued to negatively impact the quality of Iowa's streams and lakes. Iowa Department of Natural Resources (IDNR) data indicates in recent years 57% of Iowa's non-natural fish kills were caused by manure runoff from livestock operations, with the majority caused by small unroofed feedlot operations.

The same coalition of Iowa agencies and organizations that successfully addressed water quality problems from the state's largest open feedlots also worked through this project to address water quality problems from Iowa's smaller beef and dairy operations, specifically those with open feedlots of 1,000 animal units or smaller. Agencies and organizations involved in the project were Iowa State University Extension and Outreach (ISUEO), the Iowa Department of Natural Resources (DNR), the Iowa Cattlemen's Association (ICA), the Iowa Department of Agriculture and Land Stewardship (IDALS), the Iowa office of USDA's Natural Resources Conservation Service (Iowa NRCS), the Iowa Beef Center, the Iowa State Dairy Association, and Iowa Learning Farms.

Summary of Project Accomplishments and Outputs

This educational project was a partnership between the public agencies and private organizations mentioned above to produce and provide water quality information to owners and operators of small beef feedlots and dairy open lots (defined as open feedlots with less than 1,000 animal units) in Iowa. The partners met at least twice annually during the project to plan and coordinate project activities.

The primary method of providing education to livestock producers for this project was through the Iowa Manure Management Action Group (IMMAG), led by Iowa State University Extension. IMMAG maintains an extensive webpage with detailed manure and nutrient management information, including a webpage devoted to the Small Feedlot Project, at: <http://www.agronext.iastate.edu/immag/smallfeedlotsdairy.html>. A detailed final project report from Iowa State University Extension follows this project summary (on page 5, below).

This project provided EPA Section 319 grant funding for a contract with ISU Extension to carry out the project activities listed in the ISU final report below. The Section 319 grant also provided partial funding for two DNR staff involved with this project, Gene Tinker, Animal Feeding Operations (AFO) Program Coordinator, and Paul Petitti, engineer in DNR Field Office #3, located in Spencer, Iowa. These two DNR provided technical review of the publications and materials produced through this project, and led or assisted with field days held through the project. Other DNR staff participating in the project included Steve Hopkins, Nonpoint Source Coordinator, Karen Grimes, Communications Specialist, Allen Bonini, Watershed Improvement Section Supervisor, Ken Hessenius, Field Office #3 Supervisor, and Roger Bruner, Water Monitoring Supervisor.

In addition to the list of project outputs mentioned in the ISU final report, there were several other informational products completed through the project. The DNR Publication "Testing the Waters: A Beef and Dairy Producers' Guide to Check Water Quality Below Open Lots" (DNR 118, January 2012), was produced by DNR Communications, with primary input from the Small Feedlot partnership team. Printed versions of the publication were made available through IMMAG, DNR, and partners, and an electronic version was made available on the IMMAG Small Feedlot webpage.

Also, a short video (dvd) was produced through this project to show livestock producers how they could take water samples downstream of their feedlots to test whether runoff was causing a water quality problem. The video, "Clean Water in Our Hands: A Guide for Water Testing for Beef and Dairy Producers", was produced by DNR Communications. The video featured Dave Petty, cattle producer from Eldora, Iowa, and Jeremy Klatt, of DNR Field Office #2 in Mason City, who showed how to collect water samples below open lots. DNR Communications produced the video, and dvd copies were made available to the Iowa Cattlemen's Association, Conservation Districts of Iowa, and to other organizations through ISU Extension and DNR. The video may be seen on the IMMAG website at: <http://www.agronext.iastate.edu/immag/smallfeedlotsdairy.html>.

A survey of livestock producers who participated in field days and other event through this project showed that the project succeeded in raising the level of awareness of participants in the impacts of small and medium-sized open lots on water quality. The survey also indicated, however, that a majority of livestock producers attending project events were either not aware of or had not used the printed materials produced through this project. The survey results suggest more outreach efforts to livestock producers are needed to better utilize the printed materials produced through this project.

Finally, the survey results indicate that the field days and demonstrations conducted through this project were valued by participating livestock producers, which suggests the project succeeded through offering these educational events. The survey also suggests that more one-on-one educational efforts with livestock producers are needed, as quoted below from ISU's report:

“Results of the survey indicate livestock producers, as well as others, value their field days and demonstrations of management and structural practices. Due to the highly variable nature of each individual feedlot situation, such as topography, proximity to streams, land base available, access to technical and financial resources; the primary education effort for these small feedlots needs to continue on a case by case basis as producers seek out information and technical assistance that can be specifically adapted to their feedlot.”

In the final project meeting, held in May of 2014, project partners felt that the project successfully met its objectives. However, it was agreed that continued outreach efforts to producers are needed to more effectively increase producer awareness of water quality issues related to feedlot and open lot runoff.

Total Section 319 Project Expenditures: \$100,000

Budget Category	Total 319 Expenditures	Other Expenditures
Personnel salaries/benefits*	\$28,301	\$0
Fringe*	\$7,075	\$0
Travel	\$0	\$0
Equipment	\$0	\$0
Printing		\$0
Supplies**	\$1718	\$0
Contract***	\$55,414	\$9,586
Other****	\$2,302	\$0
Total Direct	\$94,810	\$0
Indirect Costs	\$5,190	\$0
Total 319 Costs (direct & indirect)	\$100,000	
Total Project Costs		\$109,586

*Salary/benefits and fringe costs for DNR staff Gene Tinker and Paul Petitti (at less than .10 FTE each for the duration of the project)

**Publication costs for the DNR Publication “Testing the Waters: A Beef and Dairy Producers’ Guide to Check Water Quality Below Open Lots” (DNR 118, January 2012).

***Contract with ISU Extension, paid with 319 funds. The total ISU contract costs were \$65,000, with the balance (\$9,586) paid by other DNR funds.

****Costs for materials and kits for water testing kits made available for producers at 20 ISU Extension offices throughout Iowa

Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations

“The Small Feedlot Project”

Final Project Report

April 30, 2014

Angela Rieck-Hinz, Shawn Shouse and John Lawrence

Iowa State University

This report constitutes the final project report for the Water Quality Initiatives for Small Iowa Beef and Dairy Feedlots (Small Feedlot Project), contract number ESD7150SHOPK110252, between the Iowa Department of Natural Resources (DNR) and Iowa State University (ISU).

A list of project field days and press releases relating to field days or availability of educational materials is listed in Appendix A. This list also includes a list of events where the Small Feedlot Project was featured as an educational talk, or display materials and handouts were made available.

Task 1. Development of two producer handbooks, one for beef feedlots and the other for dairy operations.

The beef feedlot manual, [*PM 3018 Small Open Beef Feedlots in Iowa- a producer guide*](#), was completed in March of 2012. The dairy feedlot manual, [*PM 3019 Small Open Lot Dairies in Iowa – a producer guide*](#), was completed in September 2012. The work plan required the manuals to include information on: water quality impacts; applicable state regulations, physical and management factors affecting a feedlot’s water pollution potential; structural and management practices available to address identified problems, and sources of technical and financial assistance. To demonstrate fulfillment of this requirement, please consult the table of contents of each manual.

Originally, 2,000 copies of the beef feedlot manual were printed. However, due to demand, an additional 2,000 copies have been printed. As of April 2014, 1,643 copies remain available for distribution. There were also 2,000 copies of the small open lot dairy publication printed, 435 copies are still available. The manuals were publicized in the Iowa Manure Management Newsletter (IMMAG) newsletter as well as within partner newsletters and press releases. The manuals were distributed to NRCS state office staff, Extension staff, DNR field office staff and to the Iowa Cattlemen’s Association. Copies were distributed to watershed coordinators, service providers and individuals upon request. Copies have been distributed to beef and dairy producers at Extension meetings, field days and conferences. It should be noted that 200

copies of PM 3018 were shipped to Nebraska Extension staff for use in their environmental programming. Please see Appendix A for a complete list of activities.

The manuals are available electronically through the links listed above or via the Iowa Manure Management Action Group (IMMAG) web page on the Small Feedlot Project site at: <http://www.agronext.iastate.edu/immag/smallfeedlotsdairy.html>. In addition, hard copies can be obtained for free from any ISU County Extension office, or via the ISU Extension [Distribution Center](#) (shipping charges may apply).

Task 2. Development of practice fact sheets.

This task has two subtasks included, the first being the development of technical design notes to supplement the NRCS Field Office Technical Guide (FOTG), and the second being the development of practice fact sheets that provide more specific details on individual practices' design, construction, and operation and maintenance requirements.

A discussion that occurred at the October 18, 2012 small feedlot committee meeting identified concerns about how materials developed by ISU to meet DNR (State) requirements for manure control may or may not meet NRCS design standards. Mark Garrison, the NRCS representative, agreed to work with ISU on development of the practice fact sheets, but agreed that NRCS would likely not be able to use the technical notes developed by ISU. It was agreed at that time to forgo the development of the technical notes for use by NRCS and to only pursue the development of the practice fact sheets that would be used by livestock producers, consulting engineers and other service providers.

Three practice fact sheets and one video were developed to meet the objectives of Task 2. In addition, several companion pieces were developed to support the practice fact sheets or to provide additional information to educate livestock producers on regulatory requirements. One of the goals of these practice fact sheets was to provide livestock producers with practical, cost-effective practices that could be easily implemented on farms. These fact sheets are suitable for non-permitted open feedlots, or smaller livestock farms.

[PM 3058 Clean Water Diversions for Open Feedlots.](#) This four-page, color fact sheet was completed in November 2013. Clean water diversions are used to divert clean water away from the animal areas and reduce the amount of runoff to be handled, stored and distributed. They can include diverting roof water away from animal areas as well as diverting surface water that may come into contact with manure, animals, or feed storage. The fact sheet includes information on sizing, designing and maintaining clean water diversions. This publication is available electronically through the link above or through the [Small Feedlot Project web page](#), and is also available in hard copy from the ISU Extension Distribution Center. Copies have been distributed to livestock producers via field days and meetings. Originally 1,000 copies were printed, currently 489 remain in stock.

[PM 3059 Settling Basins for Open Feedlots.](#) This four-page, color fact sheet was completed in October 2013 and replaces an earlier version also developed at Iowa State University. This

fact sheet was revised to better reflect new information about how settling basins perform and subsequently how to better manage settling basins. Solid settling is a requirement of all open feedlots below the permitted threshold of 1,000 animal units (a.u.), so consequently, this is an important piece of information producers need to have to best manage manure and effluent off open lots. The publication contains information on design, solids storage capacity needed, basin size needed, different basin outlets, effluent management and management of the basin for continued performance. This publication is available electronically through the link above or through the [Small Feedlot Project web page](#), and is also available in hard copy from the ISU Extension Distribution Center. Copies have been distributed to livestock producers via field days and meetings. Originally 1,000 copies were printed, 560 remain in stock.

[PM 3060 Small Feedlot Runoff Management Using Low-Pressure Flood Irrigation](#). This four-page, color fact sheet was completed in November 2013. Traditionally, effluent from settling basins is released into grassy areas, grassed waterways or cropland. This fact sheet describes how small feedlots not subject to NPDES permit requirements and precise nutrient management plans may be able to capture and land-apply settled effluent using low-pressure flood irrigation systems. The concept of pumping and distributing effluent is widely used in Nebraska, but is a relatively new concept in Iowa. This system allows effluent to be distributed in growing crops where the water and nutrients may have some benefit to the crop. The fact sheet contains information on system design, storage requirements, pump capacity, and options for effluent distribution. This publication is available electronically through the link above or through the [Small Feedlot Project web page](#), and is also available in hard copy from the ISU Extension Distribution Center. Copies have been distributed to livestock producers via field days and meetings. Originally 1,000 copies were printed, 565 remain in stock.

One of the requirements of Task 2 included development of a fact sheet that addressed dry manure stockpiling. All open feedlots, regardless of size are subject to stockpiling regulations. This fact sheet, [Open Feedlot Manure Stockpiling Regulations](#), developed by DNR, was already in existence prior to the start of this project. It was linked on the [Small Feedlot Project web page](#) for easy access by livestock producers and their technical service providers and has been distributed via field days and other meetings. . As a result of this project the video [Open Lot Stockpiling Video](#) was developed as a complimentary piece to the DNR fact sheet. This 10-minute video was recorded and embedded on the Small Feedlot Project web page as a resource for producers who need to follow these regulations. This video is accessible to all and can easily be embedded on other web pages and used at meetings or viewed individually by livestock producers at their convenience.

Supporting Information to the Small Feedlot Plan. The companion piece to PM 3060 is the research report [Inexpensive Pumping Systems to Manage Small Feedlot Runoff](#). In order for this system to be a valid practice for livestock producers in Iowa to manage feedlot runoff, research on the systems components and cost needed to be completed. This report documents the research in using low-pressure irrigations systems and the associated costs. This project was funded by Iowa Beef Center at Iowa State University, but the data was used to support educational efforts in the Small Feedlot Plan.

An additional supporting piece was the development of the fact sheet [Medium CAFO Summary](#). Again, this fact sheet was not a direct part of the Small Feedlot education component, but was developed in conjunction with this effort and has been distributed at all of the field days that were part of the Small Feedlot Project as well as the series of Medium CAFO workshops offered by ISU in 2011.

Task 2 also suggested developing fact sheets that addressed land application issues such as manure sampling and determining manure nutrient content. These resources already existed and when reviewed it was determined the information was current and there was no need to update the publications.

Task 3. Development of guidance for conducting assessments of a feedlot's pollution potential.

Existing assessment tools were evaluated and deemed sufficient as tools to be used in the Small Feedlot Plan. Those resources reside on the [Small Feedlot Project](#) web page. The *Iowa Beef Center Feedlot EMS Assessment* was distributed at all field days associated with this project. It was also determined that a separate assessment tool should be developed for dairy operations. Dairy operations face additional challenges regarding pollution potential, such as a wider variety of feedstuffs, multiple housing systems for various animal sizes and groups, and milkhouse wastewater disposal. Due to some changes in regulatory interpretations over the course of the past 3 years, the dairy assessment tool is still under development, but will be added to the Small Feedlot web page once it has been finalized. The available assessment tools have all been linked on the Small Feedlot Project web page.

In addition to physical assessment of livestock facilities using scoring tools to rank conditions as stated above, ISU staff spent considerable time at Small Feedlot Project field days and other meeting and conferences teaching livestock producers and their service providers how to find, download and interpret aerial photographs of farms. This included how to identify flow paths of potential runoff from open lots, manure storage structures and stockpiles. It also included demonstrating how to measure distance from streams to point of concern. This specific practice was not evaluated in the Small Feedlot Project survey because the majority of these interactions took place at events outside of the field days associated with this effort. Anecdotal evidence and specific comments shared by producers indicate this was an attention-grabbing moment for many producers who had not considered how situations on a farm may appear to others looking at aerial photographs, or that others could actually see runoff in aerial photographs. It should be noted that reviewing aerial photography is now a primary step for inspections of animal feeding operations due to the EPA-DNR workplan signed in September 2012. And while these two things are not directly related, many producers now have the capacity to use aerial photographs as part of their own on-farm assessment.

A third tool in the assessment tool-box is the availability of water quality testing kits. While somewhat tangential to this work plan, the Iowa DNR made test kits available in 20 ISU County Extension Offices for livestock producers to use anonymously to determine if runoff from their

open lots was impacting surface waters, primarily streams. Extension was instrumental in developing and distributing information about the availability of these kits and the use of the kits was demonstrated at many of the field days as well as at meetings and workshops. The survey indicates a very low percentage of use by livestock producers, but we do know that several consultants, building companies and other service providers purchased identical kits to assist livestock producers with this assessment and to be able to add value to the services they provide. In addition to the kits being available, each kit contained a fact sheet on how to use the kit and potential water quality impacts and a video demonstrating how to use the kit. The fact sheet, video and location of the kits are also linked on [the Small Feedlot Project web page](#). It should be noted that beginning in the spring of 2011 through the winter of 2013-2014, much of Iowa was experiencing severe to moderate drought conditions and runoff from feedlots was far below normal making the use of the water quality kits difficult.

Task 4. Establish at least four farm demonstration sites and determine site criteria.

Due to several unforeseen circumstances finding livestock producers who were willing to have their farms be demonstration sites was difficult. Some of the concerns expressed by producers included 1) willingness to host a field day, but not demonstration sites that might convey unlimited access to their farm or facilities for viewing practices and structures, 2) they didn't want to be contacted outside of the actual field day, 3) concern about increased scrutiny from EPA and or DNR, 4) flyovers by EPA, 5) they didn't want written information developed about their farms. In lieu of developing farm demonstration sites we chose to host field days at existing operations to demonstrate best management practices and structures or facilities that address feedlot runoff. Rather than developing written materials for each farm, aerial photographs of the farm were shared showing before and after conditions where possible, and farmers were asked to share their stories about how they evaluated their feedlot, how they arrived at a decision to alter management or put structures in place, costs of those practices, what they would do differently and plans for the future. Results of the survey completed in January of 2014 indicate that livestock producers and field day attendees are talking to others about practices they observed at field days to manage runoff and to protect water sources. One field day host shared that he installed a clean water diversion, rerouted runoff, and installed a basin and low-pressure pumping system as a direct result of a similar system he viewed at an ISU field day held the previous year.

Task 5. Develop small feedlot website.

The [Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations](#) web page, more commonly referred to as the *Small Feedlot Project* web page, was initiated in 2011 and continues to be updated today. This site resides within the *Iowa Manure Management Action Group (IMMAG)* web page which serves as the primary source of manure management information in Iowa.

The Small Feedlot Project web page was designed to be a clearinghouse of information for this educational outreach plan. In addition to hosting all the printed materials developed for this program, the site also listed field days as they occurred, a list of County Extension Offices that

offer the water quality testing kits and additional resources for livestock producers with small feedlots (under 1,000 a.u.).

Task 6. Conduct survey(s) and analyze results.

There were two specific surveys conducted in conjunction with the field day events. The first was an evaluation conducted of the attendees at the 2012 Wall Lake and Andover field day sites. This was a paper survey conducted at the end of each of the two field days. There were a total of 48 responses. The results of this evaluation are presented in Appendix B, but examples of knowledge gained by attending these field days include:

1) my understanding of the impact feedlot runoff can have on stream water quality – 29% said it increased a lot; 56% said it increased a little;

2) my understanding of available technical and financial assistance – 31% said it increased a lot, 58% said it increased a little; and

3) behavioral impact indicated that 35% of the attendees plan to install additional improvements to feedlot runoff controls on their farms.

The primary evaluation of this educational effort was conducted in January 2014. Results of this survey are summarized in the report [Small Beef and Dairy Feedlot Evaluation Summary](#), which is linked on the Small Feedlot Project web page.

Task 7. Final report submission.

This report constitutes the final project report.

Total Federal Section 319 funds expended: ISU: \$65,000
DNR: \$35,000
Total: \$100,000

A summary of other funds expended on the project:

While other ISU efforts and funds were used to develop supporting materials, no other funds were spent directly on this effort.

A summary or accomplishments and objectives by the project during the term of the contract:

Please see details in Tasks 1-6 listed above.

A comparison of actual accomplishments to the objectives established for the project in accordance with the Statement of Work:

Please see details in Tasks 1-6 listed above.

A summary of water quality improvements made, including, but not limited to load reduction calculations for targeted pollutants, where applicable:

The objectives of this project were outreach and education to 1) raise awareness about pollution potential of open feedlots; 2) train producers to accurately assess water pollution potential of their feedlots; 3) assist producers to identify and evaluate appropriate runoff control alternatives;

and 4) provide technical assistance to producers to implement solutions that improve the environmental performance of their feedlots. There were no specific tasks identified in the statement of work that would lead to load reduction calculations. Specific water quality improvements that can be anticipated are an increased awareness and implementation of practices that would have potential impact on water quality improvements.

If the project objectives were not met, an explanation as to why, future goals, and any other relevant data from the Small Feedlot Project.

It is the opinion of ISU, that with the exception of the final copy of the dairy assessment, that all objectives were met, even if they did not specifically follow the subtasks stated in the Statement of Work. Specific changes to the work plan were identified in Tasks 1-6 above and were implemented as solutions to challenges encountered during the project duration. One large challenge during this time was the occurrence of drought conditions that significantly reduced runoff from these facilities and thereby caused the mentality of “out of sight, out of mind” reducing the need or desire to address runoff issues.

Summary

Results of this project indicate awareness of the impact of small and medium-sized open lots on water quality was elevated among those attending field days and other events. It should be noted that implementation of specific management practices and structural practices takes time and resources that may not be accurately reflected in a project covering a time-span of two and a half years. Results of the project survey indicated that livestock producers were not engaged in the availability of the printed material developed as a result of this educational program. There could be several reasons for this: 1) lack of awareness of availability of materials; 2) less time to read materials; or 3) desire to have material in alternative format such as videos or apps.

Results of the survey indicate livestock producers, as well as others, value their field days and demonstrations of management and structural practices. Due to the highly variable nature of each individual feedlot situation, such as topography, proximity to streams, land base available, access to technical and financial resources; the primary education effort for these small feedlots needs to continue on a case by case basis as producers seek out information and technical assistance that can be specifically adapted to their feedlot.

Because this effort is a primary outreach and education effort for the Iowa Beef Center at Iowa State University, work will continue outside the scope of this grant to work with small and medium-sized animal feeding operations to raise awareness and provide technical assistance. The materials developed in this project will continue to be distributed at field days and other educational events.

Appendix A.
Timeline of activities.

FY11

July 31, 2011. Bettin Small Dairy and Open Lot Manure Management Field Day was held near Odebolt, Iowa. 42 people attended this field day.

August 26, 2011. ISU Armstrong Research Farm Setting Basin and Manure Pumping Field Day was held near Lewis, IA. Approximately 15 people attended this field day.

FY 12

- January Sioux County Feedlot Forum- Shawn Shouse and Kris Kohl gave talk “Environmental Regulations and Runoff Control Project” to 151 people
 - ISU also had a display on the small feedlot plan, that included a poster and a water quality kit to demonstrate how to use the kit
- February Spencer Ag Day- Beth Doran and Kris Kohl manned a display that included the Small Feedlot Project poster and the water quality kit. 500 people attended.
- February 2012. Wallace Farmer Article “Helping smaller feedlots, dairies adhere to rules- written by Angela Rieck-Hinz
- February 2012. Helping Small Feedlots and Dairies reduce impacts on water quality- written by Shawn Shouse and Angie Rieck-Hinz- appeared on the IMMAG web page; Iowa Beef Center Newsletter; ISU Dairy Team e-Newsletter
- March 2012. PM 3018 Small Open Beef Feedlots in Iowa- a producer guide is published. 2,000 copies printed, only 733 remain in inventory.
- April 2012. Press Release regarding availability of beef producer guide.
<http://www.extension.iastate.edu/article/small-open-feedlot-producer-guide-looks-environmental-improvements> This press release appeared in the Iowa Ag Connection; Farm Progress on-line;
- June 2012. ISU Press Release “_____County Extension Office Offers Water Quality Test Kit for Small Livestock Producers” see attached.
- July 2012. ISU Press Release “Small Beef Feedlot Tour”
<http://www.extension.iastate.edu/article/small-beef-feedlot-manure-control-tour-set-northwest-iowa>
- August 7, 2012. Small Beef Feedlot Tour, 3 tour stops. Approximately 20 people in attendance
 - Mogler- Mogler-Twedt Farms

- September 2012. PM 3019 Small Open Dairy Feedlots in Iowa- a producer guide is published. 2000 copies printed; 1200 remain in inventory.
- September 2012. Newsletter article for ISDA and ISU Dairy Team newsletters “New publication from ISU Extension helps dairy producers recognize and manage manure impacts on water quality” Angie Rieck-Hinz and Shawn Shouse

Additional information:

Small Feedlot Web page stats: 782 page views from Feb-October 18, 2012; Average time: 3 minutes and 26 seconds; 315 people use this bookmark this site.

In the April 2012 IMMAG Newsletter; the beef producer guide was downloaded (opened) 190 times

In the September 2012 IMMAG Newsletter; the dairy producer guide was downloaded (opened) 603 times

FY13

- October 29, 2012. Small Feedlot Field Day at the Bob Ziegmann farm near Wall Lake, IA. 26 people attended
- October 31, 2012. Small Feedlot Field Day at the Ray Naeve farm near Andover, IA 36 people attended
- January 2013. Newsletter article for ISU Dairy Team newsletter: The small feedlot plan for Iowa Dairies
- January 2013. IMMAG Newsletter
- April 2013. IMMAG Newsletter “Spring Manure Issues for Small Unpermitted Dairies and Open Beef Feedlots <http://www.agronext.iastate.edu/immag/info/springmanureissues.pdf>
- April 2013. Press release: _____ County Extension Office Offers Water Quality Test Kit for Small Livestock Producers
- April 4, 2013. Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations (Small Feedlot Plan) Shawn Shouse and Angie Rieck-Hinz
 - Waste to Worth: “Spreading” Science and Solutions Conference, Denver, CO
 - Electronic Proceedings: <http://www.extension.org/pages/67682/water-quality-initiatives-for-small-iowa-beef-and-dairy-feedlot-operations-small-feedlot-project#.UpzxPMRDsV8>
 - Video Recording: <http://www.youtube.com/watch?v=1qscZW4bIPI#t=42>

- Powerpoints: <http://www.slideshare.net/LPELC/iowas-small-feedlot-plan>
- June 11, 2013. Small Feedlot Poster and Dairy and Beef Manuals on Display at Dairy Iowa Conference in Independence
- June 19-20, 2013. Small Feedlot Poster and Value of Dairy Manure Poster on Display at the Hay Expo, near Waukon, IA
- August 27, 2013. Small Feedlot and low-cost pumping and flood irrigation field day at the Galles feedlot near Marcus, IA Event postcard mailed to 485 people. 45 people attended this field day.

Additional information: October 1, 2012 through September 30, 2013

Small Feedlot Web page: Number of Visitors: 516 Number of page views: 1,205 Average Length of Visit: 2 minutes 46 seconds

PM 3019 # of Downloads from Web: 319 from IMMAG Site + 27 from Extension Store = 346

PM 3018 # of Downloads from Web: 1,484 from IMMAG Site + 45 from Extension Store = 1,529

Other press:

January/February 2013 Manure Manager Magazine pg 14-17:

[http://www.bluetoad.com/publication/?i=143074#{"page":0,"issue_id":143074}](http://www.bluetoad.com/publication/?i=143074#{)

Affordable Answers: Field day at the Ziegmann Brothers Farm demonstrates creative solutions

FY14

- October 2013. The fact sheet PM 3059 Settling Basins for Open Feedlots was published. 1,000 copies were printed.
- November 2013. The fact sheets PM 3058 Clean Water Diversion for Open Feedlots and PM 3060 small Feedlot Runoff Management Using Low-Pressure Flood Irrigation were published. A 1,000 copies of each were printed.
- November 2013. Press release Small Dairy and Beef Feedlot tour appeared in the:
 - Iowa Beef Center November 2013 Growing Beef Newsletter <http://us1.campaign-archive2.com/?u=757e526920d2f01d926ab00b9&id=a4c259d748>
 - ISDA Web Page
 - ISU E-Dairy News and Views http://www.icontact-archive.com/thBuNgU9b1O_TM_K2BEdgso3cdYX20Xs?w=3
 - Wallaces Farmer on-line magazine
- November 19, 2013. Northeast Iowa Dairy and Beef Manure Tour (3 stops –two dairies and one beef feedlot).
 - We mailed out 400 letters inviting people to this event.

- 33 people attended this tour
- November 21, 2013. The small feedlot poster was on display along with the handout materials at the Beef Facilities Conference in Sioux Falls, SD. 320 people attended this event.
- January 2014. The Small Feedlot Project evaluation was initiated on January 10 and responses were collected until January 31, 2014. Data summary was completed in April 2014.

Appendix B.

Evaluation Summary for Andover and Wall Lake Field Days

IOWA STATE UNIVERSITY

Extension and Outreach

2012 Small Feedlot and Dairy Field Days									
Andover	26	Wall Lake	22	Total	48				
As a result of today's field day, please indicate the change in your understanding of the following subjects:		Increased a lot	Increased a little	Did not change	Decreased	No Response	Total		
My understanding of the impact feedlot runoff can have on stream water quality		14	27	7	0	0	48		
		29%	56%	15%	0%	0%			
My understanding of low-cost methods to better control and manage feedlot runoff		18	25	5	0	0	48		
		38%	52%	10%	0%	0%			
My understanding of the values of feedlot manure for crop production		14	29	5	0	0	48		
		29%	60%	10%	0%	0%			
My understanding of available technical and financial assistance for feedlot runoff control improvements		15	28	4	0	1	48		
		31%	58%	8%	0%	2%			
		Yes	No	Not Sure	Does not apply	No Response	Total		
As a result of today's field day, are you more likely to plan and install additional improvements to feedlot runoff controls at your farm?		17	1	9	20	1	48		
		35%	2%	19%	42%	2%			
		Open lots/pens	Bedded Confinement	Slatted Confinement	Pastures	Comb. open lots/pens/bedded confinement	Comb.open lots/pens/slatted confinement	Comb.open lots/pens/Pastures	Comb.open lots/pens/bedded confinement/pastures
What types of cattle/dairy housing do you have on your farm?		7	0	0	3	3	1	8	2
		15%	0%	0%	6%	6%	2%	17%	4%