2009 Manure Applicator Certification Program
July 1, 2008 to June 30, 2009
Agreement Number 09-7112-01
Final Report

The attached report contains links to documents used in the FY09 Manure Applicator Certification Program. Not all materials were made available electronically. Some materials are not made available due to on-going certification training. If you would like a copy of the full report, including all attachments and materials found in the links, please contact:

Angela Rieck-Hinz
Extension Program Specialist
2104 Agronomy Hall Iowa State University
Ames, IA 50011
amrieck@iastate.edu
515-294-9590

Prepared by Angela Rieck-Hinz and Rachel A. Klein

This document prepared by Iowa State University in cooperation with the Iowa Department of Natural Resources through cooperative agreement number 09-7112-01.

1
Introduction

In 1998, the Iowa Legislature passed HF 2494. This bill required certification of commercial manure applicators and confinement site manure applicators with operations of a designated size. Legislative changes (HF 644) again in 2003 required rule changes for the 2004 program. These changes primarily dealt with the administrative changes to the commercial manure applicator program. The new law required manure application businesses to hold business licenses and allowed fees to be set for businesses, managers and employees. The purpose of this project, entered into by the Iowa Department of Natural Resources (IDNR) and Iowa State University Extension (ISUE) was to develop manure certification training and testing materials and to conduct certification workshops for commercial manure applicators and confinement site manure applicators. This annual report covers the eleventh year of the certification program.

Training Material Development

Confinement Site Manure Applicator Program

Training materials for the confinement site programs were developed into individual modules. The goal of the module concept was that the material could be used again in future programs with minimal time used in development of the presentation of the materials but instead, time focused on updating the subject matter of each module for future use. The modules were identified from email discussion and idea submitted by Extension Field Specialists and input from the Manure Applicator Certification Advisory Committee. An Extension campus and/or field specialist or IDNR staff member then develops and presents each module. For some modules, other speakers are identified and asked to participate in the program. The materials are developed into a PowerPoint presentation and then burned onto a CD for use at the annual workshops. Each module may be modified at the local level by Extension Field Specialists to adapt for regional or county use to meet certain manure application practices, crop, soils, or topography requirements.

Materials developed for the 2009 Confinement Site Manure Applicator program focused on 1) Review of Rules, Land Application Separation Distances, Fees, Paperwork and Recordkeeping Requirements; 2) Hydrogen Sulfide Safety during Deep-Pit Pumping and 3) Valuing, Pricing and Selling Manure.

A complete listing of modules by year, and time allocated is presented in Table 1.
Commercial Manure Applicator Program

Materials developed for the 2009 Commercial Manure Applicator program were via email and offers suggested by Extension Field Specialists and IDNR staff and input from the Manure Applicator Certification Advisory Committee. The program materials were delivered with PowerPoint presentations in live format via the annual satellite downlink held on January 7, 2009. In addition to DNR and Extension staff, two professionals from the National Education Center for Agricultural Safety provided programming on safety issues.

The 2009 Commercial Manure Applicator program included the following modules: 1) A Review of Rules, Land Application Separation Distances, Recordkeeping Requirements, Employee Substitution, Paperwork and Fees; 2) Economics of Hauling Manure; 3) Road Safety and Personal Protective Equipment Considerations; and 4) Hydrogen Sulfide Safety during Deep-Pit Pumping. A complete listing of modules by year, and time allocated is presented in Table 1 (prior to 2001, program was not developed into modules).

Table 1. Certification modules developed and presented at training meetings by program and year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Confinement Site Manure Applicator Program</th>
<th>Commercial Manure Applicator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Sampling Manure 20 min.</td>
<td>Recordkeeping 20 min</td>
</tr>
<tr>
<td></td>
<td>Manure Nutrient Research 20 min.</td>
<td>Emergency Action Plan 30 min</td>
</tr>
<tr>
<td></td>
<td>Emergency Action Plans 30 min.</td>
<td>Rules 30 min</td>
</tr>
<tr>
<td></td>
<td>Rules 25 min</td>
<td>Manure Application Techniques 45 min</td>
</tr>
<tr>
<td></td>
<td>Recordkeeping 25 min</td>
<td>Case Studies 30 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Questions and Answers 25 min</td>
</tr>
<tr>
<td>2002</td>
<td>Feeding Strategies for Nutrient Management 30 min</td>
<td>Rules</td>
</tr>
<tr>
<td></td>
<td>Equipment Calibration 20 min</td>
<td>Case Studies</td>
</tr>
<tr>
<td></td>
<td>Dead Animal Disposal 30 min</td>
<td>Pumping, Hauling and Land Application Issues</td>
</tr>
<tr>
<td></td>
<td>Equipment Options and Land Application Concerns 20 min</td>
<td>Interview with County Supervisor – road and bridge damage, weight restrictions (video)</td>
</tr>
<tr>
<td></td>
<td>Dry Manure Issues (optional) 20 min</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Phosphorus and Water Quality 40 min</td>
<td>Land Application Rules; Separation Distances and Review of Matrix Implications 40 min + 10 min Q and A</td>
</tr>
<tr>
<td></td>
<td>Review of Rules 40 min</td>
<td>Manure Application Equipment effects on Odor, Residue Cover and Crop Yields 40 min</td>
</tr>
<tr>
<td></td>
<td>Earthen Basin Inspection (video) 20 min</td>
<td>Case Studies and Manure Spill Responses 15 min</td>
</tr>
<tr>
<td></td>
<td>Recordkeeping 20 min</td>
<td>Pollution Liability Insurance 20 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Iowa Commercial Nutrient Applicators Association 10 min</td>
</tr>
<tr>
<td>Year</td>
<td>Topics</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td></td>
</tr>
</tbody>
</table>
| 2004 | Review of Rules; Land Application Separation Distances; Recordkeeping 50 min  
Manure Spill Response Kit and Simulated Manure Spill (video) 12 min  
Making your Manure Management Plan work for you 20 min  
Biosecurity Issues 20 min  
Manure Pit Storage Safety 20 min |
| 2005 | Review of Rules, Land Application Separation Distances, Fees, Paperwork and Recordkeeping Requirements 25 min  
Hydrogen Sulfide Emissions during Pumping and Agitation 25 min.  
Soil Sampling for Regulatory Requirements 20 min  
Introduction to RUSLE2 and the P Index and their use in Manure Management Plans 35 min.  
Question and Answers 15 minutes  
How to complete forms and review of fees.  15 minutes  
Additional Q & A section 22 min |
| 2006 | Review of Rules, Land Application Separation Distances, Fees, Paperwork and Recordkeeping Requirements 25 min  
Manure Sampling Strategies 25 min  
Best Management Practices—Feed Management 30 min  
Best Management Practices—Biofilters 25 min  
Question and Answers 15 min  
How to complete forms and review fees 5 min  
Additional Q & A section 15 min |
| 2007 | Review of Rules, Land Application Separation Distances, Fees, Paperwork and Recordkeeping Requirements 40 min  
Manure and Crop Production Issues including; K levels, soils sampling requirements and how to soil sample, P Index implementation schedule and other 20 Agronomic Issues 40 min  
Soil Compaction Issues 30 min  
Drag Hose Application Video 15 min  
Manure Spills 30 min  
Question and Answers 15 min  
Overhead Camera Form Demo 5 min |
<table>
<thead>
<tr>
<th>Year</th>
<th>Confinement Site Manure Applicator Program</th>
<th>Commercial Manure Applicator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergency Mortality Management 27 minutes (Glanville DVD)</td>
<td>DOT Regulations/Weight Restrictions 30 minutes Chris Boswell</td>
</tr>
<tr>
<td></td>
<td>Confinement Site Investigation Scenarios 50 minutes</td>
<td>Review of Land Application Issues from past 10 years 20 minutes Karen Grimes</td>
</tr>
<tr>
<td></td>
<td>DNR Case Studies on Manure Spills and Spill Response 25 minutes Ted Peterson</td>
<td>Injector effects on soil, odor, residue and manure 35 minutes, (Hanna Video)</td>
</tr>
<tr>
<td>2009</td>
<td>Valuing, Pricing and Selling Manure 60 minutes</td>
<td>DNR Land Application Rules, Separation Distances and Manure Management Plans 40 minutes</td>
</tr>
<tr>
<td></td>
<td>Hydrogen Sulfide Safety During Deep-Pit Pumpout 25 min (Swestka/Burns DVD)</td>
<td>Economics of Hauling Manure (Leibold video) 33 minutes</td>
</tr>
<tr>
<td></td>
<td>DNR Land Application Rules, Separation Distances and Manure Management Plans 35 min</td>
<td>Hydrogen Sulfide Safety During Deep-Pit Pumpout 25 minutes (Swestka/Burns video)</td>
</tr>
<tr>
<td></td>
<td>Road Safety and Personal Protective Gear 60 minutes</td>
<td>Mole Toolbar (video) 15 minutes</td>
</tr>
</tbody>
</table>

**Supporting Training Materials**

There were six fact sheets distributed to manure applicators via the training workshops in 2009. Two DNR fact sheets, and one ISU Extension Publication were distributed to the commercial applicators. In the Confinement Site program, two DNR fact sheets and two ISU Extension Publications were provided to workshop attendees.

- DNR 113, Separation Distances for Land Application of Manure (revised January 2003)
- DNR 115 Commercial Manure Applicator Certification (revised October, 2004)
- DNR 116 Manure Applicators Certification (revised October, 2004)
- PMR 1003X Using Manure Nutrients for Crop Production (2009)
- IMMS Vol. 10, Selling and Buying Manure in Iowa
- PM 632, Employer’s Instructional Guide (2009)

The six fact sheets were also linked on the Manure Applicators Certification web page-a component of the IMMAG web page, and were made available at field days, the Iowa Pork Congress and association meetings. Copies of the fact sheets are available in Appendix 1.
Certification Workshops

Confinement Site Workshops

Training workshops for the 2009 Confinement Site Manure Applicator Certification program began in January 2009 and continued through February 2009. There were 82 training workshops held in 74 county extension offices. In addition to the workshops, confinement site applicators could also meet training requirements by watching a two-hour videotape at their County Extension office.

ISU Extension staff has reported 1,678 confinement site applicators attended the certification workshops. Of those applicators, there were 1,157 who returned the evaluations to ISUE for the workshop they attended. There were 173 confinement site applicators who returned evaluations from watching a two-hour video at a county extension office, and 3 who watched the webcast for a total of 1,333 evaluations sent to Iowa State University Extension. The 2009 Confinement Site program was presented by 19 field specialists including: 4 Agricultural and Biosystem Engineers, 12 Extension Field Agronomists, 2 Livestock specialists and one Campus Specialist.

Commercial Applicator Workshops

The 2009 Commercial Manure Applicator program was delivered via satellite downlink on January 7, 2009. This downlink was broadcasted to 72 Iowa county Extension offices, one Nebraska County Extension office, and three Wisconsin County offices.

Portions of the program, which were delivered via the Commercial satellite downlink program, were also used to develop the training videotapes for the Commercial Applicator program.

The ISU Extension staff reported 1,018 commercial applicators attended the certification meetings, while ISUE has collected 1,138 commercial applicators evaluations. Please note the discrepancy in numbers reported for attendance as compared to the number of evaluations collected is due to the fact that not all county offices report attendance.

Dry Manure Workshops for Commercial and Confinement Site Applicators

In February, there were five dry manure applicator workshops held in the state of Iowa.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 4, 2009</td>
<td>Storm Lake</td>
<td>5 CFS; 46 Comm; 51 total</td>
</tr>
<tr>
<td>February 11, 2009</td>
<td>Thompson</td>
<td>2 CFS; 32 Comm; 34 total</td>
</tr>
<tr>
<td>February 18, 2009</td>
<td>Ellsworth</td>
<td>24 CFS; 2 Comm; 26 total</td>
</tr>
<tr>
<td>February 20, 2009</td>
<td>Clarion</td>
<td>6 CFS; 39 Comm; 45 total</td>
</tr>
<tr>
<td>February 24, 2009</td>
<td>Greenfield</td>
<td>2 CFS; 39 Comm; 41 total</td>
</tr>
</tbody>
</table>
These workshops provided the necessary three hours of training for those who were commercial applicators. The confinement applicators who attended these workshops benefited from the extra hour of information. The workshop topics discussed the current regulatory requirements for manure applicators; on-going changes to stockpiling rules and enforcement; manure sampling procedures for poultry manure; and poultry manure research looking at phosphorus in poultry manure and water quality implications.

Certification Workshop Evaluations

Evaluation forms were created with new questions for the applicators pertaining to the material given during the certification process. At the end of each workshop and at the end of each video, the applicators were asked to complete an evaluation on the information presented, overall evaluation of the program, and any changes in their manure management practices. The applicators were also asked if they had or would be willing to adopt the new practices. Some of the practices evaluated in 2009 Confinement site program were as follows:

- 19% of the Confinement site applicators reported they plan to adopt and implement an applicator safety program. 61% reported they already have a plan in place.
- 15% of Confinement site applicators reported they would consider hauling manure greater distances, where 49% of Confinement site applicators already do.
- 12% of the Confinement site applicators plan to adopt the practice of selling manure to maximize nutrient use, where 21% already have adopted the practice.

As a result of last year’s training, Confinement site applicators were asked if they had implemented a plan for mortality management:
- 45% of Confinement site applicators reported this year they adopted a plan for emergency mortality management; where as 11% reported they did not adopt a plan.

Confinement site owners/managers were asked two questions concerning Manure Management Plans, MMP:
- 64% of the Confinement site owners/managers were required to have a Manure Management Plan for their confinement operation. 13% said they were not required to have a Manure Management Plan.
- 93% of those owners/managers who said yes to having a Manure Management Plan, said they have updated their MMP to a Phosphorus-Index based plan to meet DNR requirements. 13% said they have not updated their MMP to a P-Index based plan.

In the commercial program, a question was asked to applicators which pertained to the previous year’s program to determine what changes had been made in practices in the past year. The goal in asking this question was to determine if the applicators, who attended a meeting in the previous year, made changes to their management practices.
As a result of last year’s program:

- 56% of Commercial applicators adopted a plan for a spill response, 8% responded they did not adopt a plan.

In addition, the managers/owners were asked if their businesses did any additional services to help producers with manure management issues. Of those who answered:

- 40% said they take manure samples for the producers. 11% said they did not take manure samples for the producers.
- 33% reported their business did discuss with the producers the pros/cons of using different types of manure application equipment to meet conservation requirements or to reduce the P-Index risk rating on a field receiving manure. 16% said they do not discuss the pros/cons of different types of application equipment or ways to reduce the P-Index risk rating.
- Of those who answered yes to discussing the different types of application equipment and reducing the P-Index risk rating, 94% of the managers/owners reported they or the producer made necessary changes to meet conservation requirements or reduced the P-Index rating. 15% of the managers/owners reported they did not.

Complete results of program surveys are included in Appendix 2. These results are continuously updated as we receive evaluations from County Extension offices. For the latest version of these files, please access the files on the web at: http://www.agronext.iastate.edu/immag/maceval.html. Evaluations from previous years are also available at this site.

**Advisory Committee**

The 2009 MAC advisory committee met on July 29, 2008, at the ISU Field Extension Education Lab. Member in attendance at the meeting included ISUE Campus and Field Specialists, DNR staff, NRCS staff, and a representative of the Iowa State Dairy Association staff. Program ideas were suggested, a review of forms was completed, and deadlines were set. This also included the development of the evaluation forms for both 2009 programs.

**Promotional Materials**

Promotional materials used in the 2009 Manure Applicator Certification programs were similar to that of previous years (Appendix 3). Brochures were developed for both programs to be used as an informational and recruitment tool. Copies of the brochures are attached in Appendix 3. Copies of the brochures were mailed to all currently certified confinement site and commercial applicators in December 2008.
Again this year, postcard templates were designed for use by the County Extension offices to remind the Confinement Site Applicators of the upcoming workshops in their area. A set of instructions on how to use the templates was also posted to the MAC “For Staff” Web page.

A total of seven press releases were prepared and were used by County Extension offices for local media. Workshop dates were maintained on the MAC section of the IMMAG web site (http://www.agronext.iastate.edu/immag/mac.html) and were also linked on the Iowa Pork Industry Center’s web page http://www.ipic.iastate.edu/pastevents09.html. A list of workshop dates was distributed to attendees at the Iowa Pork Congress in January 2009. In addition, an article was prepared and distributed through the November 2008 Iowa Pork Producer Magazine found at http://www.iowapork.org/Portals/iowapork/Nov%2008%20Mag.pdf. Another article was also prepared for the Iowa Commercial Nutrient Applicators Association newsletter. A copy of this article is included in Appendix 3. In addition, livestock commodity groups are provided with information regarding training opportunities that they use in their monthly email newsletters to their members.

All of the certification materials have been distributed electronically through the IMMAG site. The Manure Applicator Certification Program button on the IMMAG site links users to a site solely devoted to the Certification Program (http://www.agronext.iastate.edu/immag/mac.html). The site contains a description of who needs to be certified, how to get certified and a list of questions and answers most commonly received about the program. The site also has a “staff only” link for ISU Extension employees to download program-planning materials. This site serves as the primary location for MAC information in the state of Iowa.

**Reporting Requirements**

This contract requires quarterly reports and a final project report. This document serves as the final project report. The quarterly reports were submitted to the Iowa Department of Natural Resources point of contact, Jeff Prier, via email on October 20, 2008, January 12, 2009; April 10, 2009 and July 7, 2009.

**Partnerships**

In FY09 the manure applicator certification program partnered closely with the National Education Center for Agricultural Safety to include a module on personal protective safety equipment considerations for applicators as well as a module on road-way safety. These modules were well received among commercial manure applicators who scored these modules as 28% excellent and 61% good.
**Future Needs**

Fiscal year 09 has seen an increase in the number of both confinement site and commercial manure applicators. This is reflected by attendance at our workshops, video showings and by the number of applicators who have met training requirements by the end of the fiscal year. This increase in numbers may warrant exploring new or additional means of providing certification training. Commercial certification hours will be offered at the Upper Midwest Manure Handling Expo on July 22, 2009. And again this year ISU Extension will offer a statewide re-show of the commercial manure applicator training program on August 19, 2009. While technically this event happens in FY10, it will meet the 2009 training requirements for commercial applicators who still need to meet training requirements. This event will be offered in 37 county extension offices by showing the archived webcast or the video tape of the January 2009 training.

Other future needs may include offering more dry manure certification opportunities that focus on confined bedded beef operations. These types of operations are gaining in popularity in Iowa and due to size of operation, will require owners/manager to meet manure applicator certification requirements. Discussions are also underway with the Iowa Pork Producers Association to offer a certification workshop at the 2010 Iowa Pork Congress.

**Budget**

A copy of the budget expenditures as of June 30, 2008, is attached in Appendix 4 per article 5.12 of the contract.
Appendix 1.

- DNR 113 Separation Distances for Land Application of Manure

- DNR 115 Commercial Manure Applicator Certification

- DNR 116 Manure Applicators Certification

- PMR 1003X Using Manure Nutrients for Crop Production (2009)
  http://www.extension.iastate.edu/Publications/PMR1003.pdf

- IMMS Vol. 10, Selling and Buying Manure in Iowa (2009)

- PM 632 Employer’s Instructional Guide (2009)
  http://www.extension.iastate.edu/Publications/PM632.pdf
Appendix 2.
Evaluation Summaries

2009 Confinement Site Manure Applicator Evaluation Summary

2009 Commercial Manure Applicator Evaluation Summary
# 2009 Confinement Site Manure Applicator Certification Evaluation

Iowa State University Extension

Iowa Summary of Data Collected as of 6/30/09

| Workshops=1157 | Video=173 | Total Responses Collected: 1333 |

## Section 1- Please rate today's information

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>No Response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>688</td>
<td>610</td>
<td>29</td>
<td>4</td>
<td>2</td>
<td>722</td>
</tr>
<tr>
<td>52%</td>
<td>46%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>56%</td>
</tr>
</tbody>
</table>

### 1. Rules Update

- Total Responses: 1333
- 52% Excellent
- 46% Good
- 2% Fair
- 0% Poor
- 0% No Response

### 2. Applicator Safety

- Total Responses: 1333
- 46% Excellent
- 49% Good
- 3% Fair
- 1% Poor
- 1% No Response

### 3. Valuing Manure

- Total Responses: 1333
- 56% Excellent
- 41% Good
- 2% Fair
- 0% Poor
- 1% No Response

## Section 2- Overall evaluation:

<table>
<thead>
<tr>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Does Not Apply</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1195</td>
<td>96</td>
<td>6</td>
<td>31</td>
<td>5</td>
</tr>
<tr>
<td>90%</td>
<td>7%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

### 4. The information presented today was useful for my farm operation.

- Total Responses: 1333
- 90% Agree
- 7% Undecided
- 0% Disagree
- 2% Does Not Apply
- 0% No Response

### 5. The presenters were prepared and knowledgeable.

- Total Responses: 1333
- 94% Agree
- 3% Undecided
- 0% Disagree
- 1% Does Not Apply
- 1% No Response

## Section 3- As a result of today's training workshop will you:

<table>
<thead>
<tr>
<th>Plan to Adopt</th>
<th>Adopted Prior</th>
<th>Choose not to Adopt</th>
<th>Does Not Apply</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>248</td>
<td>811</td>
<td>50</td>
<td>147</td>
<td>77</td>
</tr>
<tr>
<td>19%</td>
<td>61%</td>
<td>4%</td>
<td>11%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### 6. Develop and implement an applicator safety program?

- Total Responses: 1333
- 19% Plan to Adopt
- 61% Adopted Prior
- 4% Choose not to Adopt
- 11% Does Not Apply
- 6% No Response

### 7. Consider hauling manure greater distances?

- Total Responses: 1333
- 15% Plan to Adopt
- 49% Adopted Prior
- 11% Choose not to Adopt
- 20% Does Not Apply
- 5% No Response

### 8. Consider selling manure to maximize nutrient use?

- Total Responses: 1333
- 12% Plan to Adopt
- 21% Adopted Prior
- 23% Choose not to Adopt
- 38% Does Not Apply
- 6% No Response

## Section 4- As a result of last year's training workshop: (Do not answer if you did not attend)

### 9. Did you implement a plan for mortality management?

- Total Responses: 1333
- 11% I did not adopt
- 45% I adopted
- 6% Choose not to Adopt
- 21% Does Not Apply
- 17% No Response

## Section 5- For owners/managers only:

### 10. Are you required to have a MMP for your confinement operation? If yes, please answer Question 11.

- Total Responses: 1333
- 64% Yes
- 13% No
- 23% No Response
11. As a result of education delivered in MAC in 2005, 2006, and 2007 on P-Index Requirements for Manure Management Plans, have you updated your MMP to a P-Index Based Plan to meet DNR requirements?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>789</td>
<td>114</td>
<td>430</td>
</tr>
</tbody>
</table>

93% of those who answered yes in qt 10.
### 2009 Commercial Manure Applicator Certification Evaluation

**Iowa State University Extension**

Iowa Summary of Data Collected as of 6/30/09

<table>
<thead>
<tr>
<th>Section 1- Please rate today’s information</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rules Update</td>
<td>308</td>
<td>735</td>
<td>87</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>27%</td>
<td>65%</td>
<td>8%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>2. Road &amp; Equipment Safety Issues</td>
<td>324</td>
<td>690</td>
<td>99</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>61%</td>
<td>9%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>3. Hydrogen Sulfide Concerns</td>
<td>477</td>
<td>562</td>
<td>83</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>42%</td>
<td>49%</td>
<td>7%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>4. Economics of Hauling Manure</td>
<td>378</td>
<td>617</td>
<td>108</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>33%</td>
<td>54%</td>
<td>9%</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 2- Overall evaluation:</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Does Not Apply</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. The information presented today was</td>
<td>924</td>
<td>153</td>
<td>30</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>useful to me as a commercial manure</td>
<td>81%</td>
<td>13%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>service representative?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The presenters were prepared and</td>
<td>983</td>
<td>123</td>
<td>23</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>knowledgeable.</td>
<td>86%</td>
<td>11%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

| Section 3- As a result of last year's      | I adopted | I did not adopt | Did not Apply | No Response |
| program: (Do not answer if you did not     |           |                 |              |             |
| attend)                                    |           |                 |              |             |
| 7. Did you adopt a plan for spill response?| 635       | 95              | 114          | 294          |
|                                            | 56%       | 8%              | 10%          | 26%          |

<table>
<thead>
<tr>
<th>Section 4- For completion by managers/owners only:</th>
<th>Yes</th>
<th>No</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Does your business take manure samples for</td>
<td>458</td>
<td>121</td>
<td>559</td>
</tr>
<tr>
<td>producers?</td>
<td>40%</td>
<td>11%</td>
<td>49%</td>
</tr>
<tr>
<td>9. Does your business discuss with producers pros/cons of using different types of manure application equipment to meet conservation requirements or to reduce the P-Index risk rating on a field receiving manure?</td>
<td>377</td>
<td>180</td>
<td>581</td>
</tr>
<tr>
<td></td>
<td>33%</td>
<td>16%</td>
<td>51%</td>
</tr>
</tbody>
</table>
10. If the answer to question 9 was yes, do you or the producer make the necessary changes to meet conservation requirements or reduce the P-Index rating?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>Percentage of those who said yes to qt 9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>355</td>
<td>56</td>
<td>727</td>
</tr>
<tr>
<td></td>
<td>94%</td>
<td>15%</td>
<td>193%</td>
</tr>
</tbody>
</table>
Appendix 3
Brochures and Press Releases

Annual Confinement Site Manure Applicator Workshops Scheduled for 2009
http://www.extension.iastate.edu/news/2008/dec/161405.htm

2009 Confinement Site Manure Applicator Training Scheduled in -- County
http://www.extension.iastate.edu/news/forstaff/2008/nov/161404.htm

Commercial Manure Applicator Training Scheduled for Jan. 7, 2009
http://www.extension.iastate.edu/news/2008/dec/161406.htm

Commercial Manure Applicator Training Scheduled for --County
http://www.extension.iastate.edu/news/forstaff/2008/nov/161403.htm

2009 Confinement Site Manure Applicator Workshop Schedule - - Iowa Pork Producer
Magazine, November 2008

Manure Management Workshops Make a Difference in Iowa

Dry Manure Applicator Certification Offered

Instructions for the New Confinement Site Manure Applicator Reminder Postcards

2009 Confinement Site Manure Applicator Workshop Reminder Postcards Templates (2)

2009 Confinement Site Manure Applicator Brochure

2009 Commercial Manure Applicator Brochure
Annual Confinement Site Manure Applicator Workshops Scheduled for 2009

12/1/2008

AMES, Iowa -- Confinement site manure applicators and anyone interested in learning about applying manure should plan to attend a two-hour workshop offered by Iowa State University (ISU) Extension in January or February 2009. There is no fee to attend the workshops, but certified applicators will need to pay certification fees to complete certification requirements.

“Iowa law requires confinement site manure applicators to attend two hours of continuing education each year of their three-year certification period, or take and pass an exam once every three years,” said Angela Rieck-Hinz, ISU Extension program specialist and coordinator of the manure applicator certification program.

A total of 82 workshops will be held in 75 different counties. A series of five dry manure certification meetings will be held in February. ISU Extension county offices have a complete list of workshop dates and locations, or view a list at: http://www.agronext.iastate.edu/immag/certification/2009ConfineSP277.pdf

Workshop participants will learn about land application rules, separation distances for land application of manure, valuing and selling manure, road and equipment safety and will review ISU's new fact sheet on manure management planning. This is the eleventh year that ISU Extension has offered the training in cooperation with the Iowa Department of Natural Resources.

“By investing two hours of time each year, producers are much more aware and better educated about the way their actions affect not only their land and animals but how it affects worker safety, their neighbors, water quality and Iowa in general,” said Jeff Prier, DNR environmental specialist. “The workshop is a great way for anyone to learn about regulations and how we can work together.”

The workshop serves as initial certification for those applicators that are not currently certified, recertification for those renewing licenses, and continuing education for those applicators in their second or third year of their license. If a confinement livestock operation has more than 500 animal units the operator must be certified to apply manure unless the manure is applied by a commercial manure applicator. The certification fee is $100 for a three-year certificate. Confinement site applicators must also pay the $25 annual education fee. All fees are submitted to Iowa DNR.

Due to uniform certification deadlines, applicators are encouraged to attend workshops prior to March 1 to avoid being assessed a late fee of $12.50. Training video tapes are available for viewing by contacting an ISU Extension county office and scheduling a viewing time. Applicators renewing their license cannot apply manure until they have met the certification requirements and submitted the correct forms and fees to the Iowa Department of Natural Resources. If applicators can’t attend the training workshops, they can take the certification exam at their DNR regional field office to complete certification requirements.

Contact your ISU Extension county office for more information about the Manure Applicator Certification Program or visit: http://www.agronext.iastate.edu/immag/mac.html

--30--

Contacts :

Angela Rieck-Hinz , Agronomy, (515) 294-9590, amrieck@iastate.edu

Rachel Klein, Agronomy, (515) 294-6685, raklein@iastate.edu

Willy Klein, Extension Communications, (515) 294-0662, wklein@iastate.edu
2009 Confinement Site Manure Applicator Training Scheduled in _________ County

11/18/2008

Confinement site manure applicators should plan to attend a two-hour workshop offered by Iowa State University (ISU) Extension and the Iowa Department of Natural Resources in January or February 2009 to maintain manure applicator certification requirements. The ______(county)_______ workshop will be offered on ______(date)_______ at ______(time)_______ in _____(location)_____.

“Iowa law requires confinement site manure applicators to obtain two hours of continuing education each year of their three-year certification period, or take and pass the exam once every three years,” said Angela Rieck-Hinz, ISU Extension program specialist and coordinator of the manure applicator certification program. “If applicators fail to get the two hours of continuing education each year, they will be required to pass a written exam to be eligible to recertify.”

Workshop participants will learn about land application rules, separation distances for land application of manure, valuing and selling manure, and road and equipment safety and will review ISU’s new fact sheet on manure management planning. The workshop serves as initial certification for those applicators that are not currently certified, recertification for those renewing licenses and as continuing education for those applicators in their second or third year of their license.

“Even crop and livestock producers that do not need certification will find the workshop to be an excellent way to stay on top of manure regulatory requirements,” said Rieck-Hinz. “Producers who are receiving manure from confinement facilities with manure management plans will need to meet certification requirements if they are handling, transporting or applying manure from those facilities.”

Operators must be certified to handle, transport and apply manure if the confinement livestock operation has more than a 500 animal unit capacity, unless the manure is applied by a commercial manure applicator. The certification fee is $100 for a three-year certificate. This fee is paid when applicators initially get certified and then every three years when they re-certify to apply manure. Confinement site applicators also are required to pay an annual education fee of $25. All fees and application forms must be sent to the Iowa Department of Natural Resources to complete certification requirements. There is no fee to attend the workshop and only those needing to be certified must pay the certification fees.

Applicators are encouraged to attend workshops prior to March 1 to meet certification deadlines and avoid being assessed a $12.50 late fee for re-certification. Training video tapes will be available for viewing sometime in February by contacting the ISU Extension county office and scheduling a viewing time.

If you have questions about meeting dates and locations, contact the ________ County Extension Office at ______(phone)_______ or visit http://www.agronext.iastate.edu/immag/mac.html to see the 2008 workshop schedule.

--30--

Contacts:

Angela Rieck-Hinz, Agronomy, (515) 294-9590, amrieck@iastate.edu

Wiletta Klein, Extension Communications and External Relations, (515) 294-0662, wklein@iastate.edu
Commercial Manure Applicator Training Scheduled For Jan. 7, 2009

12/1/2008

AMES, Iowa -- Commercial manure applicators can attend three hours of annual training to meet commercial manure applicator certification requirements on Wednesday, Jan. 7, 2009. Iowa State University (ISU) Extension and the Iowa Department of Natural Resources (DNR) will conduct a Commercial Manure Applicator Satellite uplink from 9 a.m. to noon. Registration begins at 8:30 a.m. There is no fee for the workshop but applicators must register with the ISU Extension county office where they plan to attend.

Certified commercial manure applicators should receive a copy of the program registration brochure containing workshop locations in the mail in early December. If you do not receive a copy, please contact your local ISU Extension county office or download a copy off the Web at: http://www.agronext.iastate.edu/immag/certification/SP278CommApplCert2008.pdf. In addition to the training offered on Jan. 7, ISU Extension will also offer five dry manure workshops for commercial manure applicators in February 2009. Information regarding these workshops and locations is also contained in the link to the brochure listed above.

Commercial manure applicators wishing to recertify and those wanting to certify for the first time should attend. The workshop will provide the required three hours of annual training and will cover applicator rules, recordkeeping requirements, hydrogen sulfide safety issues, road and equipment safety issues, economics of hauling manure and management practices for winter application of manure.

All currently certified commercial manure applicator licenses will expire on March 1, 2009. Those wanting to renew must complete training requirements and submit forms and fees to the DNR prior to March 1, 2009, to avoid paying late fees. If an applicator attended training for the first time in the fall of 2008, they should make plans to attend training again in January 2009 to meet the annual requirements.

Those unable to attend the program on Jan. 7, need to schedule time with their ISU Extension county office to watch the training videotape. Please note that training videotapes may not be available until mid February so applicators should make every effort to attend the satellite program on Jan. 7. Due to scheduling conflicts, many extension offices will no longer accept walk-in appointments to watch these tapes. If attending the satellite program or watching the three-hour tape is not convenient, commercial applicators may contact their local DNR field office to schedule an appointment to take the certification exam to meet certification requirements.

Applicators who want to take the exam may wish to access a copy of the study guide manual to help prepare for the exam. The study guide is available at the following Web address: https://www.extension.iastate.edu/store/ListItems.aspx?Keyword=PM%201778

If you have questions about the satellite downlink program, contact your ISU Extension county office or on the Web at: http://extension.agron.iastate.edu/immag/mac.html

—30—

Contacts:

Angela Rieck-Hinz, Agronomy, (515) 294-9590, amrieck@iastate.edu

Rachel Klein, Agronomy, (515) 294-6685, raklein@iastate.edu

Willy Klein, Extension Communications, (515) 294-0662, wklein@iastate.edu
Commercial Manure Applicator Training Scheduled for ____________ County

11/18/2008

Commercial manure applicators should plan to attend the Commercial Manure Satellite downlink scheduled for Wednesday, Jan. 7, 2009, from 9 a.m. to noon. Iowa State University (ISU) Extension and the Iowa Department of Natural Resources (DNR) will conduct the required three hour training workshop at that time. There is no fee to attend the workshop, but commercial applicators must register by Dec. 31 by contacting the ____________County ISU Extension Office at ______________(phone number).

Commercial manure applicators wishing to recertify and those wanting to certify for the first time should attend. The workshop will provide the required three hours of annual training and will cover applicator rules, recordkeeping requirements, hydrogen sulfide safety issues, road and equipment safety issues, economics of hauling manure and management practices for winter application of manure.

All currently certified commercial manure applicator licenses will expire on March 1, 2009. Those wanting to renew must complete training requirements and submit forms and fees to the DNR prior to March 1, 2009, to avoid paying late fees. If an applicator attended training for the first time in the fall of 2008, he or she should make plans to attend the training again in January 2009 to meet the annual requirements.

Applicators unable to attend the program on Jan. 7 need to schedule time at their ISU Extension county office to watch the training videotape or webcast. Please note that training videotapes may not be available until mid February so applicators should make every effort to attend the satellite program on Jan. 7. Due to scheduling conflicts, many ISU Extension offices will no longer accept walk-in appointments to watch these tapes. If attending the satellite program or watching the three-hour tape is not convenient, commercial applicators may contact their local DNR field office to schedule an appointment to take the certification exam to meet certification requirements.

If you have questions about the commercial applicator satellite downlink contact the ____________ County Extension Office at ______(phone)________ or go to http://extension.agron.iastate.edu/immag/mac.html

--30--

Contacts:

Angela Rieck-Hinz, Agronomy, (515) 294-9590, amrieck@iastate.edu

Rachel Klein, Agronomy, (515) 294-6685, raklein@iastate.edu

Willy Klein, Extension Communications, (515) 294-0662, wklein@iastate.edu
Manure Management Workshops Make a Difference in Iowa

2/1/2008

AMES, Iowa -- During January and February, more than 2,000 Iowans attend local workshops for manure applicator continuing education. They are livestock and crop producers, and people wanting to know more about the rules, regulations and issues related to manure management and good stewardship.

Many come because it is required – two hours of annual continuing education, or pass a written exam every three years, for those applying manure from confinement livestock operations of more than 500 animal units. Last year, 2,125 confinement site applicators attended the workshops to maintain certification. They come to hear the latest rules and regulations, better understand how to be in compliance, and when to contact the Department of Natural Resources (DNR) about issues related to handling and applying manure from confinements.

But what they take away from the workshop is more than rules and regulations. For the last 10 years, Iowa State University (ISU) Extension has provided the workshops in partnership with the DNR. Program content varies each year and is determined with assistance from DNR and ISU Extension crops, livestock and agricultural engineer field specialists.

“That first year they told us about manure nutrient research and sampling manure,” said a Kossuth County producer at a recent workshop. “At that time proper application was a new concept. But we did it, and after a couple of years we saw that our yields stayed up and we realized the benefits. Last year they talked about phosphorous-based manure management plans. There’s always new research, more to know.”

At a time when the value of manure is increasing, crop producers as well as livestock producers are interested in workshop information.

“I come to the trainings so I can understand my manure plan better,” said another Kossuth County attendee. “These workshops keep good information in the forefront of my mind and help me understand the regulations even though I’m not a certified manure applicator.”

Topics covered at 2008 training sessions include land application rules, mortality management and investigating confinement site issues. Confinement site applicators are required to pay an annual education fee of $25 -- the workshop is free to all others.

“By investing two hours of time each year, producers are much more aware and better educated about the way their actions affect not only their land and animals, but how it affects worker safety, their neighbors and Iowa in general,” said Jeff Prier, DNR environmental specialist. “The workshop is a great way for anyone to learn about regulations and how neighbors can work together.”

Learn more about the location, date and time of remaining 2008 workshops by contacting your local extension office or going to http://www.agronext.iastate.edu/immag/certification/08confdates.html

Contacts:

Angela Rieck-Hinz, Agronomy, (515) 294-9590, amrieck@iastate.edu

Jean McGuire, Extension Communications and Marketing, (515) 294-7033, jmguire@iastate.edu
Dry Manure Applicator Certificate Workshops Offered by Extension

1/14/2009

AMES, Iowa — Iowa State University Extension will offer a three-hour manure applicator certification workshop for dry manure operators on five different dates and locations in February 2009.

The certification workshop is for both confinement site manure applicators and commercial manure applicators that primarily handle, transport and apply dry manure. Although confinement site manure applicators are only required to attend two hours of annual training, this meeting will be three hours in length to provide training to commercial applicators. All attendees will be required to stay for the entire three-hour workshop.

“The information in this workshop will benefit not only those needing certification, but anyone who uses poultry manure or other sources of solid or bedded manure as a fertilizer source,” says Angie Rieck-Hinz, coordinator of the Manure Applicator Certification Program. “Producers interested in best management practices to get the most from the manure as fertilizer should stay current on recent research results looking at poultry manure nutrients.”

Workshop topics will include land application rules, stockpiling requirements, how to sample poultry barn manure, agronomic update on poultry manure use, and application on snow-covered and frozen ground.

“We also will cover applicator safety issues, from personal safety concerns to equipment safety,” said Rieck-Hinz.

The workshops are free to attend and open to all. Applicators will be required to submit certification forms and fees to the Iowa Department of Natural Resources to meet manure applicator certification requirements.

Please register for one of the workshops by calling the site where you plan to attend. Workshop locations and dates include:
• Feb. 4, 1 p.m., Buena Vista County Extension Office - Storm Lake, (712) 732-5056
• Feb. 11, 1 p.m., Branding Iron Restaurant - Thompson, (641) 584-2261
• Feb. 18, 1 p.m., Trinity Lutheran Church, Ellsworth, (515) 832-9597
• Feb. 20, 1 p.m., Heartland Museum, Clarion, (515) 532-3453
• Feb. 24, 9 a.m., Greenfield Chamber of Commerce meeting room, Greenfield, (641) 743-8412

-30-

Contacts:

Angela Rieck-Hinz, Agronomy, (515) 294-9590, amrieck@iastate.edu

Willy Klein, Extension Communications and External Relations, (515) 294-0662, wklein@iastate.edu
Instructions for the NEW Confinement Site
Manure Applicator Reminder Postcards

New this year, Confinement Site Manure Applicator Reminder Postcards! These postcards replace the Confinement Site Manure Applicator Certification Brochure Template we have used in the past. So instead of a brochure, you will have a postcard to send to the applicators in your county. This is just a reminder for the applicators in your county. The applicators who are currently certified with the DNR will receive the state-wide brochure listing all of the counties having a workshop.

The templates are for either the:
2-Up Post Cards on 8-1/2" x 11" sheets or
3-Up Post Cards on 8-1/2" x 11" sheets (formerly EDC 31)
They are on the County Extension Office Envelope Order Forms page
https://www.extension.iastate.edu/forms/envelopes/county.html

The postcards are ready for you to:
- Type in your Confinement Site Workshop Date
- Type in your Confinement Site Workshop Time
- Type in your Confinement Site Workshop Location
- Type in your Confinement Site Workshop Telephone Number
- You can adjust the text boxes as necessary to fill in the appropriate information.
- Then print off the number of postcards needed in your county
- Address to the Confinement Site Applicators in your County
- CNS list is on IMMAG MAC “For Staff” page
  o Confinement Site Column
  o The list is sorted by counties
Appendix 4.
Budget Summary
MANURE APPLICATOR CERTIFICATION EXPENSES
July 1, 2008 to June 30, 2009

Salary .................................................. 76,047.38
Benefits (Salary & Hourly) .................... 24,272.96

**Subtotal Personnel .................... 100,320.34**

Travel..................................................... 7,084.26

Supplies................................................. 1,396.38

Printing/copying ............................... 2,609.66

Other
- Contracted services ....................... 1,110.00
- County extension workshops, meeting rooms and office asst. ...... 19,634.03
- Phone and computer ......................... 984.08
- Satellite downlink expenses .............. 2,835.00
- ICN in-service .................................. 0.00
- Postage ........................................... 2,309.18

**Subtotal (other) ..................... 37,962.59**

**Total Spent to Date ............... 138,282.93**

Encumbrances (field specialists’ salaries and benefits)

............................................................ 32,395.07

**Projected Balance.................... $0.0**