## 2021 Commercial Manure Applicator Certification Evaluation
Iowa State University Extension and Outreach

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>No Response</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DNR Commercial Rules</td>
<td>Percentage</td>
<td>313</td>
<td>374</td>
<td>32</td>
<td>1</td>
<td>3</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>43%</td>
<td>52%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>723</td>
</tr>
<tr>
<td>2. Land Application and Separation Distances</td>
<td>Percentage</td>
<td>322</td>
<td>366</td>
<td>30</td>
<td>2</td>
<td>3</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>45%</td>
<td>51%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>723</td>
</tr>
<tr>
<td>3. Manure Available Nitrogen &amp; Appl Rate Determination</td>
<td>Percentage</td>
<td>276</td>
<td>371</td>
<td>63</td>
<td>8</td>
<td>5</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>38%</td>
<td>51%</td>
<td>9%</td>
<td>1%</td>
<td>1%</td>
<td>723</td>
</tr>
<tr>
<td>4. MRTN &amp; Yield Goal: Mngt &amp; Water Quality Considerations</td>
<td>Percentage</td>
<td>266</td>
<td>372</td>
<td>64</td>
<td>14</td>
<td>7</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>37%</td>
<td>51%</td>
<td>9%</td>
<td>2%</td>
<td>1%</td>
<td>723</td>
</tr>
<tr>
<td>5. Fertility Mngt &amp; Water Quality</td>
<td>Percentage</td>
<td>274</td>
<td>344</td>
<td>73</td>
<td>22</td>
<td>10</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>38%</td>
<td>48%</td>
<td>10%</td>
<td>3%</td>
<td>1%</td>
<td>723</td>
</tr>
<tr>
<td>6. Manure Economics Activity</td>
<td>Percentage</td>
<td>261</td>
<td>381</td>
<td>56</td>
<td>10</td>
<td>15</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>36%</td>
<td>53%</td>
<td>8%</td>
<td>1%</td>
<td>2%</td>
<td>723</td>
</tr>
<tr>
<td>7. What is a Water Source</td>
<td>Percentage</td>
<td>292</td>
<td>360</td>
<td>42</td>
<td>3</td>
<td>26</td>
<td>536</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>40%</td>
<td>50%</td>
<td>6%</td>
<td>0%</td>
<td>4%</td>
<td>536</td>
</tr>
</tbody>
</table>

### Section 2 - Overall Evaluation

<table>
<thead>
<tr>
<th>8. The information presented today was useful to me as a commercial manure service employee?</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Does Not Apply</th>
<th>No Response</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>536</td>
<td>117</td>
<td>38</td>
<td>16</td>
<td>16</td>
<td>723</td>
</tr>
<tr>
<td>Percentage</td>
<td>74%</td>
<td>16%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
<td>723</td>
</tr>
</tbody>
</table>

### Section 3 - Discussion Topics | Biosecurity Activity

<table>
<thead>
<tr>
<th>9. The presenters were prepared and knowledgeable.</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Does Not Apply</th>
<th>No Response</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>624</td>
<td>74</td>
<td>10</td>
<td>4</td>
<td>11</td>
<td>723</td>
</tr>
<tr>
<td>Percentage</td>
<td>86%</td>
<td>10%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>723</td>
</tr>
</tbody>
</table>

### 10. Because of training, you have a better understanding of the nitrogen cycle and why it's important to wait until the soil is 50 degrees or cooler to apply manure.

| Percentage | 609 | 61 | 12 | 41 | 723 |
| Percentage | 84% | 8% | 2% | 6% | 723 |

### 11. Because of past training and learning, did you verify manure distribution from manifolds across the tool bars?

| Percentage | 517 | 90 | 22 | 94 | 723 |
| Percentage | 72% | 12% | 3% | 13% | 723 |

### 12. If no, how likely are you to verify manure distribution across toolbars before the 2021 Fall application season?

<p>| Percentage | 128 | 138 | 56 | 10 | 254 | 137 | 723 |
| Percentage | 18% | 19% | 8% | 1% | 35% | 19% | 723 |</p>
<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>No Response</th>
<th>Not Applicable</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Because of training, you can identify what is a water source.</td>
<td>680</td>
<td>22</td>
<td>12</td>
<td>9</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>94%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
<td>723</td>
</tr>
<tr>
<td>14. Because of training, you can identify where to measure water source setbacks.</td>
<td>676</td>
<td>22</td>
<td>15</td>
<td>10</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>93%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
<td>723</td>
</tr>
<tr>
<td>15. The nutrient reduction strategy details practices like cover crops, reduced tillage, and nutrient management to reduce nitrogen and phosphorus losses to rivers, streams, and lakes by 45%. Has the strategy changed what your customers expect from you during manure application?</td>
<td>388</td>
<td>184</td>
<td>39</td>
<td>112</td>
<td>723</td>
</tr>
<tr>
<td></td>
<td>54%</td>
<td>25%</td>
<td>5%</td>
<td>15%</td>
<td>723</td>
</tr>
</tbody>
</table>
16. Is there a topic you would like to hear about during next year’s training?

Actual manure application sections, Do a topic on digital records like Iowa Select Farms has.

Agitation
Antonio was hard to understand
Calibration on equipment
Compaction effect on yield - should I dragline vs tanks because of compaction? Why are there differences between deep pit manure and outside lagoon manure? Does the sun and temperature changes effect the manure

Compaction, Tank vs Dragline, Calibration
Comparisons of application equipment, Knife vs coulter vs covering disc - pros and cons, advantages and disadvantages cost and practice

Could not understand the one presenter at all
Could not understand the speaker on fertility management and water quality

Couldn’t understand Antonio Mallarino

Covered all topics
current nitrogen stabilizers

Dead zone in the Gulf of Mexico

Different and new types of rate controllers. About agitation, hauling safety, how other custom haulers operate, different types of tool bars, new styles of equipment, less about the cost of fertilizer that’s farms deal…we put on what MMP tells us to don’t make that!

Different distributor options, cover crops?

Divide it. Drivers don’t need that much information,

DOT weight rules

Dragline turn arounds. Compare a direct u-turn vs. overlapping to reach the edge of field and completely cover the field.

Dry manure pile placement and pile conditions/management

Effects on organic matter - manure, nitrogen needed, effect from manure equipment, importance of stir pumps

Explain graphs in more detail, provide a more detailed legend

Focus more on applicators

Good job!
good topics and speakers
good topics today; economics - what about extra fertility from yield goal application
guys that have done this class for 20 years should only have to go every 3 years

Harvest lab

Have presenters that are easy to understand. Need topics that apply to manure applicators.

How not to gas pigs or yourself.

How to be efficient in pumping, using bigger pumps and hoses to maximize gallons moved per hour to get more sleep per day and be safer.

If there is a spill what is the best way of stopping it?

ISU guy could not understand

It seems to be more geared toward a farmer. More about day to day operation on applying manure. I was disappointed in the information.

Keep up with new info

Lagoon agitation - boats vs lagoon pumps, different boats on the market, how do they compare? Pit agitation - new barns, some have agitation built in versus agitation. Slurry stores with agitators built in vs over the wall pumps. Self contained vs tractors in job performance. Stop talking about money - employees don’t need that information.

Legal side of the business as far as money collections from customers.

Legal tank weight and widths on roads and regulations in NE Iowa. 7,300 gals or 10,500 gals

Legal tank weight on road and widths in Northeast Iowa.

Leon Sheets

Less nutrient studies, we just apply manure

Lighting requirements - can we be too bright? Health & safety: as we sit in tractors for extended periods of time and eating & drinking habits, are we at increased risks of strokes and other health issues? If so, what are ways to mitigate risk (water, exercise, stretching)

Lots of information was not relavant to a CMS employee

Low disturbance injection vs. doing more tillage work with the applicator

Maintain equipment

Manure nitrogen stabilizers - worth it or not; side-dressing with manure

Manure rate selection - should not be applicators problem to know how much to put on for his farm

More about hauling in semi tanks

More about pumping and less about the farming side

More about safety/equipment safety, equipment maintenance. Sounds like we need to find a costs effective way to get phosphorus out of manure to be able to ship it elsewhere.

More comparison of N available, also P & K, S

More economics on manure hauling. Survey of custom manure rates. Is the dead spot in the Gulf of Mexico growing.

More equipment

More incident pictures and clean up procedures. Less numbers and application equations. More actual application equipment and methods. More dry litter transportation and DOT regulations.

More information for applicators

More information on application practices - ideas vs. practicality

More on bedded pack or solid manure

More on commercial pumping, less on what the farmer does

More on cost to haul liquid manure

More on custom manure applicators job. What they do. Most of class doesn’t pertain to the operators. Need more videos on manure equipment and how to run it. DNR Rules are good. Lot of good information for farmer, but not so much for the custom operators.

More on manure application and equipment used.

More on tankers and drag hose

More pictures and videos of custom operators applying manure to see how they do it.

More real manure application
More safety on hydrogen sulfide gases
More videos on applying manure would be ideal
Most of it does not apply to us
Need technology - sidedressing manual in standing corn
new equipment technology
No - all good
no, but less on the soil sampling part
No, everything was covered.
no, it's good enough
no, you do a good job covering it.
nope, all topics were covered
more on new equipment or new ideas
Fertilizer remedies
Pit gas
Program was geared toward nutrient management. I understand the importance of this topic. However, as a first time attendant, I would have liked to see more topics related to manure application such as safety, proper procedures, gas management practices, etc. Thank you.
proper agitation and pit stirring
Put in place a class for transporting manure as three hours is tedious. I haul it, I don't spread it.
Review of tool bar application in no-till - which leaves the most residue after application?
Rules hauling dry for stock piling
safety
Segment on new or farmers hauling for pay - not to mud up roads and highways, making us who are conscious of not doing this look bad.
Setbacks - show an overall view to show field layouts from water sources
should be no longer than an hour. The value of manure isn't important to applicators
sidedressing liquid manure in row crop
soil sampling and process of nutrients consumption by crop do on pertain to CMS recertification
Soil test guy was very hard to understand
something that pertains to us a CMS
speakers hard to understand
swine pit gas
Thanks, you did great!
The ability to change rates on hog manure throughout the field. Problems to ID on sites, fields, equipment. Routes/ right of ways that tanks take.
They were hard to understand - not good English
This training should be shorter. 1/2 the information provided has little to do with actual manure application. I feel like they just talk to fill the 3 hours.
This was better than previous years
tillage equipment
topics are getting long - have more topics
Trucking manure with semis
the true cost to haul
Type of tillage on?
Variable rate manure systems for swine; strip till with manure
very good presentation
Very good presentation
Video could be shortened because of some repetition which is not necessary
Video is very well done
videos of new equipment used for application
water source
water spreading from lagoons
We don't care how much nitrogen we are putting on - the farmer does, not the people that haul it
We don't need to know anything about manure values. We haul the manure and put on the rate the farmer tells us to.
what to do during a spill
Would like to see more about pumping manure.
would like to see some videos of new applications or different types of cultures would be really interesting.
You guys covered everything well
Your corn yields are off, we are trying to grow 250 bu/acre