

2014 Commercial Manure Applicator Certification Evaluation
Iowa State University Extension and Outreach

Total of all Responses Collected: **1,192**

Section 1- Please rate today's information	Excellent	Good	Fair	Poor	No Response	Total Responses
1. Rules Update	383 32%	714 60%	83 7%	8 1%	4 0%	1,192
2. Update on Foaming in Swine Manure Pits	344 29%	646 54%	150 13%	43 4%	9 1%	1,192
3. PEDV Update: The Virus, Keeping it Out, and Advances in our Knowledge	543 46%	560 47%	66 6%	8 1%	15 1%	1,192
4. Manure Application to Conserve Nutrients and Minimize Odors	330 28%	674 57%	110 9%	14 1%	64 5%	1,192
Section 2- Overall evaluation:	Agree	Undecided	Disagree	Does Not Apply	No Response	Total Responses
5. The information presented today was useful to me as a commercial manure service employee?	949 80%	187 16%	29 2%	13 1%	14 1%	1,192
6. The presenters were prepared and knowledgeable.	1,056 89%	112 9%	8 1%	5 0%	11 1%	1,192

Section 3- Tell us about your use of equipment injection/incorporation:

1. What, if any, adjustments do you make to your equipment as you switch fields or manure application rates to make sure you achieve good injection of the manure? Choose all that apply:	Responses	Total Responses
a. Nothing	208 17%	208
b. Adjust injector depth	587 49%	587
c. Adjust travel speed	785 66%	785
d. Adjust injector down Pressure	573 48%	573
e. Adjust gang angle on disk/coulter	256 21%	256
f. Other, please describe: Please see tab Sec 3, 1. Equipment Adjustments tab below	95 8%	95
g. No Response	102 9%	102

2. Injector choices impact the amount of residue left on the surface, the volume of manure that can be injected, and the amount of power required (energy consumed) to pull the injector. Of these four, which would you rate as the most important? Rank from 1-4 with 1 being the most important to you and 4 being the least important to you:	1	2	3	4	No Response	Total Responses
1. Quality of Injection site Coverage	560 47%	245 21%	114 10%	72 6%	201 17%	1,192
2. Residue cover remaining	246 21%	368 31%	241 20%	135 11%	202 17%	1,192
3. Capacity of Injector	135 11%	234 20%	358 30%	258 22%	207 17%	1,192
4. Amount of Power required/energy used	118 10%	150 13%	213 18%	501 42%	210 18%	1,192

3. Have you heard about Iowa's Nutrient Reduction Strategy?	Yes	No/No Response	Total Responses
	325 27%	867 73%	1,192

If yes, please tell us how you think your commercial applicator businesses can best contribute to reducing nutrients in Iowa's water sources?
Please see tab Sec 3, 3. IA NRS Comments tab below

Section 3- Tell us about your use of equipment injection/incorporation:

1. What, if any, adjustments do you make to your equipment as you switch fields or manure application rates to make sure you achieve good injection of the manure? Choose all that apply:

Adjust 3 point depth

Adjust controllers inside tractor cabs.

Adjust fins in manifold, adjust pump RPM's

Adjust flow meter

Adjust flow meter

Adjust flow meter to set rate

Adjust flow rate monitor

Adjust GPA, contouring

Adjust monitor to each field

Adjust monitor

Adjust monitor to each field.

Adjust monitors to each field

Adjust monitors to each field

Adjust our flow rate

Adjust Raven rate controller

Adjust the flow meter

Adjust the rate

Adjust the seat and mirrors

Adjust your Raven in my situation/adjust rate on monitors

Agitate manure for better flow, well maintained toolbar.

Application rate

Application rates

Application speed

Be more specific on what to do with foaming when we encounter it and what safety precautions to take. I lost interest listening about results of experiments.

Change bar

Change equipment or tools depending on job or conditions etc.

Change injection type

Change injector tool bars

Change rate

Change rate in flow meter

Change rate in the flow meter controller.

Change rate on monitors

Change rate on Raven 440 controller.

Change raven rate flow rate
Changing rate
Check flow meter numbers and distances between all tanks, cover direct are used all the time.
clean equipment
Clean the poop
Closing wheels, size of shoes
Combination of B, C, D.
Contour apply manure on hills.
Dan did not talk about issues with double disk closures which are the most widely used application method.
Decrease rate--wash equipment-grease equipment
Depending on application rate, we adjust rpm and rate of speed in incorporator tractor. Also the pressure in hose rises so we keep close eye on lines to ensure no leaks happen. Also when moving fields we adjust the depth of which we incorporate the manure.
Depending on rare, RPM on the pump to keep speeds manageable.
Different contour injection
Don't apply or spread manure , only haul with trucks.
Don't have one yet
Drive around field to make chicken litter off tires of loader
Evaluate coverage and make necessary changes
Flow meter
Flow meter
Flow meter
Follow rate for field
GPM sent through the hose
Have flow meters and radar, GPS, and Raven monitors
I adjust all the time, each field is different.
I haul chicken litter, but I do know that the owner likes to get it worked into the soil ASAP after the spreaders have gone over fields
I haul it to the field in a big truck.
I won't be applying manure directly
If on contour, follow contour
Make sure sweeps are in good shape, adjust coulter depth, watch equipment and maintain proper maintenance.
More info on future changes would be nice. They just touch issues. Info on Rates!
N/A
N/A not a manure opp.
Now sweeps more often for higher rates

Program new rate into Raven monitor.
Rate
rate
Rate
Rate
Rate gallons per acre
Rate-depending on field and what the farmer wants.
Raven monitors and accouters
Replace worn out parts
Run pump tractor
See if ground is hard or soft and adjust accordingly.
Set rate on flow meter
Slope of ground
Speed and rate
Switch manure rate
Talk to Paul
The rate that is applied
Tillage prior to injection
Trucking only
We do hauling only!
Weather, slope of land, dampness of soils
Whatever you have to do to get good injection and coverage of manure.
Whatever you have to do to get good injection and coverage of manure.
Winske knife injectors with cover disks go deep enough no change is needed.
Work around end rows and water ways. Drive around field to map and so we know surroundings.

Section 3- Tell us about your use of equipment injection/incorporation:

3. If yes, please tell us how you think your commercial applicator businesses can best contribute to reducing nutrients in Iowa's water sources?

Always apply the proper amount.

Always try to do better

Application during optimum time.

Application rates, residue coverage

Apply according to MMP and follow distance requirements already set out by DNR>

Apply correct rates in proper manner.

Apply on contour

Apply only enough manure the plants can uptake

Apply right amount

Applying at a good rate.

Be aware of all conditions impacting distribution.

Be aware of areas where nutrient loss can occur.

Be careful

Be more aware of field/soil condition and potential weather to ensure that manure is applied into soils that can absorb the manure and its nutrients. Also controlling application rates to ensure that manure is not over applied to a given field or soil type

Being careful of amounts applied and where applying.

Being well educated with commercial application. Knowing your location, and where you should/should not apply manure and how much to apply and to where.

Beware set back distance and weather.

Buffer Distances

Buffer distances, injecting

By adequate injection of manure.

By Applying at proper timing, incorporation where we can.

By following mmp of produces.

By making sure we keep the manure in the ground to reduce run-off. We also try to put on just enough nutrients as the farm needs for the next crop.

By Making sure you are safe and take precautions on how much you apply on the field so you don't apply too much and run off.

By not getting manure in the water sources.

By running in the best weather conditions when possible and getting the best coverage possible.

By using smart application and business practices. I don't think that a 3 hour class is necessary to educate us on the rules. I also don't like paying for cert for something we are doing to do anyway. Drivers license per year doesn't cost this much.

By working with state custom Manure organization to work with other custom operators to ensure operators are doing their best & 2 work with the DNR.

Careful application

Clean up the streams in Iowa and by removing trees and vegetation that will remove the nitrates or lower them. Dead trees and grass in the streams contribute to most of the phosphorus in the water. Should have producers watch this training.

Common sense

Constant analysis of affluent--rate adjustments

Cover tile intakes and if manure is spilt call help hotline right away.

Covering all manure

Direct injection and applying on low erosion fields.

Direct injection, observe separation distances

Do a good job applying manure.

Do a good job injecting and covering. Stay with the proper application rates.

Do a good job.

Do not apply manure to frozen ground. Avoid application around point source.

Do not consider the most important factor is gallons pumped. But the quality of injection of N, P, K and micro nutrients. We must rise to the level of commercial Fertilizer application. Its down to quality of work.

Do proper injection and obey setbacks.

Doing a good job of making sure the manure is incorporated so it doesn't move once you are finished.

Doing the best job we can without contaminating water sources.

Don't have any spills. Stay the safe distance away from a water source.

Don't spill

Don't spill

Don't spill manure

Don't spread on top of frozen ground-ever! Stay away from streams, rivers, and lakes or any water source.

Don't spread on water ways make sure you are applying proper amount and use common sense. Don't Spill.

Dry Haulers, dump loads clear of designated areas. Also use sanitary practices!

Educate

Education

Follow all guidelines on distances.

Follow all rules-rates- where to apply manure-set back distances-field conditions

Follow application rates and distances

Follow application rates is distances

Follow good application practices.

Follow guidelines and use common sense.

Follow MMP and do a good job of injecting.

Follow recommended application practices.

follow rules, common sense, watch application rates, and follow MMP.

Follow safety protocol, use common sense, follow distance separation requirements.

Follow set back requirements

Follow set-backs and distances for applications. This class should be 2.5 hrs not over 3 with no break.

Follow setback guidelines

Follow the rules and step taught in the training programs.

Follow the rules.

Follow the rules.

Following mmp

Get manure incorporated well fast to reduce runoff.

Get the manure in the ground at the correct application rate.

Getting information about field intakes and covering them before applying. Examine culverts before laying hose through them and have a spill response plan ready.

Go by rules

Good injection

Good training, good injection

GPS auto shutoff

I believe we do a great job of following regulations on distances from water sources.

I can't believe how much of this info has nothing to do with me hauling it. I feel like you're making us sit through 3 hrs of blah just to make use feel like your not just taking our money for the certification.

I don't think applicator effects residue on impact amount. Look at what the farmers do before or after.

In the case of dry manure, I would say that the rate on which it is applied, slope of land and incorporation would be largest factors.

Incorporate

Increase buffer zone

Inject all manure when possible and obey separation distances.

Inject the manure if possible and make sure the ground and hold the manure so there is no runoff.

Inject. Try to apply at opportune times based on weather and soil moisture content.

Injecting

Injection

Injection

Injection site coverage/capacity

Just follow your rules. Why do I need a biology class on foam?

Just have set separation distances for every operation. Small or large-everyone that spreads manure has the same rules. Everyone. MMP, NMP, NPDES or nothing. One set for liquid. One set for Dry. There needs to be set standard for everyone & all manure.

Just using a little common sense and be aware of your surroundings in every field as they are all different.

Keep all tile intakes covered. IF there is a spill, call for help and get it contained so it does not spread through the water more.

Keep injecting manure

Keep injecting manure

Keeping distances, not overflowing injector slits.

Keeping spills around the pump site to a minimum. Less run off by getting all the manure into the soil. Closely observe injection sites to insure that the trenches are being closed. Keeping a safe distance away from water sources and tile inlets.

Knife injection rather than disk covers. Using a minimum till type injector.

Know what you are doing

Know what you are doing. Last part about survey not needed until results are done.

Know your surroundings, pay attention, communication.

Limit manure left on the surface, apply proper application rate.

Limit runoff

Maintain equipment so covering of manure is done properly.

Maintain good injection practices.

Maintaining equipment so that we can apply manure properly.

Make sure all manure is injected, work end rows to prevent any runoff or surface manure.

Make sure following separation distances and that manure is being injected well, yet leaving adequate residue cover.

Make sure getting good coverage

Make sure manure is covered.

Make sure manure is incorporated properly and understand separation distances-common sense.

Make sure we don't over apply, follow the separation distances for land application

Making sure no manure ever gets into water system.

Making sure of incorporation and coverage.

Manure is an excellent source of nutrients.

Manure is valuable resource and all my customers realize that and use it and apply it accordingly.

Maybe have a table so you can take notes if you wanted. Afternoon meetings better for people with livestock.

More grass water ways.

More pictures, more videos

More residue on surface

the people watching. Needs to be short and to the point. I can not stress this enough!! I understand the need to cover these topics.

Need to restrict the crop farmers on their heavy use of nutrients

Never exceed the amount on the MMP and don't get too close to intakes or water sources.

No more government intrusion. We have enough. Just enforce what is now on the books. Enough is enough. Stop the EPA. Reduce the DNR. Yes, I'm an ultra conservative.

No runoff of manure.

No runoff of the manure.

Not educated
Not over apply
Not over apply manure.
Not sure, still working on an idea.
Obey setbacks
Obey the laws
Pay attention
Paying attention to conditions
Place nutrients in the ground where the crops can use them.
Plant the ground back to grass around water ways and creeks.
Possibly variable rate sown the road as technology become available at a reasonable price.
Practice proper application practices and always be aware of where you are at and THINK.
Presentation could be condensed in a 2 hour span. Too much redundancy.
Proper application rates and lower disturbance tool bars
Proper cover to reduce runoff, apply recommended rate, proper calibration of equipment.
Proper distances from water sources.
Properly apply when conditions are conducive to good application. Be cautious and follow ground contour to minimize runoff and slow erosion.
Put manure where we are told to put it. Pretty simple.
Radio
Reduce manure runoff, keep residue, reduce erosion
Reduce runoff
Residue management, promote cover-crops

Restrict amount of fertilizer on lawns in cities/towns. Due to the runoff directly goes in to storm drain into the river. Also applied at much higher rates than farms generally apply.

Retain as much residual cover as possible

Separation Distances

Shorten you class!

Soil testing

Start teaching instead of attending

Stay 100 feet away from water ways.

Stay 100 feet away from waterways and make sure there is no manure running.

Stay away from waterways

Stay back

Taking proper precautions before each job on how to handle the manure properly.

Timely injections, cover up manure with opener

Timing of application. Placement of manure and maintaining quality of application coverages. Soil test/variable rate.

total incorporation

Try to inject instead of surface applying, use common sense, avoid protected areas.

Try to keep residue in place.

Use flow meters, monitors and mapping with manure application. Its hard for hog farmers who have chores to attend course that starts at 9am especially in winter with frozen trucks and extra chores & time in hog movements w/cold weather. Maybe afternoon.

Use aerobic lagoon systems to reduce the nitrogen levels of the bio solids being applied. IF you happen to have a spill and it does get in a waterway, maybe the lower N content won't cause so much damage.

Use an injector that gets the manure in the group with good coverage, injector with low residue disturbance, being informed by landowner of soil tests and what rate is proper.

Use of injection application methods/flow meters/land buffer strips

Use proper rate by manure analysis.

Using low disturbance knife injectors

Vertical tillage injection

Vertical tillage Injection-@ Phil Reed Washington, IA

Watch for tile intakes and waterways, try to keep grass buffer around open water source

Watch separation distances. Reduce application rates when possible.

Watch setback and slot closures

Watching how much is on top and ends in field.

We only use high capacity injectors. Be aware and follow setbacks, close monitoring of pumps and hoses.

We train our employees and follow the rules.

We use separation distances even when incorporating an example would be a field intake in the field or a ditch we stay 50 feet or more away.

Why can't it be arranged to take written test here instead of going to Spencer?

Why can't we take test here instead of having to run all the way to Spencer?

Work with customers to apply on more acres. Better educate customers on correct application rate, limit manure left on surface.

You could use tractor or GPS technology to make sure you are the right distance away from any water source.

Zero runoff to surface water