



## August 2019

### Manure Budgets: Digging in deeper

[Last month](#) we looked at a map of what county-level manure supply relative to a measure of crop nutrient removal, but this month I wanted to look at this data just a bit differently. Annually in Iowa about 58,000,000 million tons of manure is generated, not counting any rainfall that enters manure storages or runoff water generated. From this, I'd estimate somewhere are around 12.5 billion gallons of liquid manure and another 6.5 million tons of solid manure.

To put this in perspective, average soil temperatures generally reach around 50°F in Iowa around November 1, and hopefully don't freeze until around Christmas time, giving about a 60-day application window in the fall and hopefully another 30 days in the spring. This means if half of those days are suitable for field-work, we'd have to average around 280 million gallons of liquid manure application every day, or about 190,000 gallons a minute. Add to it another 70,000 tons of solid manure being applied at the same time, and you can see why Iowa has almost 5,000 individuals certified to haul manure and help turn this by-

product from animal production into a fertilizer resource we can use.



Figure 1. Solid manure application.

### Manure Scoop

This month we take a look at the ways we can effectively use manure resources, while ensuring we are limiting in field nitrate loss, so be sure to check out the latest [Manure Scoop](#).

### Manure Applicator Certification

Is your manure applicator license up-to-date for 2019? If you are in a commercial manure business (hauling, handling, or applying manure) or a confinement site applicator (a confinement operation with more than 500 animal units) you must complete certification prior to hauling or applying manure.

If you still need to complete training, three options are available:

- View the training video at a [local extension office](#).
- Call the [local DNR field office](#) and set up a time to take the test.
- Complete training [on-line](#).

## Options Available for Livestock Odor

As summer arrives, so does the return of outdoor living. As people head outdoors, concerns increase about odor from livestock, feed, and manure, either from storage or land application. Handling odor emissions and dust at your livestock operation becomes extremely important this time of year.

Resources are available to help you find mitigation techniques that will best suit your operation. The Air Management Practices Assessment Tool (AMPAT) was developed by Iowa State University Extension and Outreach specialists, with major funding from the National Pork Board, and is [available online](#). This tool allows you to compare different practices to reduce odor and emissions of gases and dust caused by animal production.

To use the tool, go to the [website](#) and select an odor-source category ([animal housing](#), [manure storage and handling](#), or [land application](#)). Each category compares different odor mitigation techniques, as well as the effectiveness of mitigating different gases. This is done using an easy to read, color-coded score card, which allows you to quickly identify the level of impact of each technology. If you want to learn more about a technology, simply click on it, and you are directed to more resources, including a short video about how it works, cost considerations, and the pros and cons.

Are you wondering about the science behind the ranking system? A summary published academic studies used to develop the rankings was recently published and is [provided](#). A team of ISU researchers reviewed journal articles regarding reducing odor and gas emissions from livestock production. The study found about 25 percent of all mitigation practices examined made it to field trials, as only a few of the practices are successful enough in the lab setting to make it to the field. The article is available [online](#) and will be used to strengthen the performance summary in AMPAT.

## Update RUSLE2 Software to Version 2.6.11.1

A new version of RUSLE2 was released earlier this year. Caution is needed when updating to this

version of RUSLE2. It has a new soils file structure and the method to import soils files is not the same as rest of the database files. Due to the new soils file structure, all of the older work when imported into the new version, will need links to be re-established and saved for soils files. This will create additional workload not experienced in the past updates. Secondly, the soils files import is from SSURGO Server online and is a slow process taking up to 30 minutes per county. Thirdly, the new RUSLE2 Software Version does not install the NRCS Simple Template as this template is missing in the installation package. It will need to be installed separately as this template is used to calculate RUSLE2 Soil Loss in Iowa. Instructions on installing or updating to Version 2.6.11.1, installing NRCS Simple Template, and installing and managing soils files, are available at <http://www.agronext.iastate.edu/immag/>. Please contact Kapil Arora at 515-291-0174 or [pbtiger@iastate.edu](mailto:pbtiger@iastate.edu) if help is needed with this process.

## Events

[Manure Phosphorus Inventories at Various Scales webinar](#)

September 20<sup>th</sup>, 2019, 1:30 pm