

November – January Edition



Management Solutions

Agronomic Solutions, LLC



Winter 2016-2017 Issue

*Merry Christmas
&
Happy New Year!*



This is a seasonal publication produced by Agronomic Solutions, LLC for the confined feeding operators. Issues and information addressed in the newsletter will be geared towards animal feeding operation owners and managers. Hopefully you will find its contents useful in your operations. (260) 593-2092



From all of us at Agronomic Solutions

Standing: Tiffany Rolin, Asher Gingerich, Melissa Lehman, Janice Gingerich, TJ Franks
Front row: Mandy Gangwer, Rachel Zeigler

Inside this issue:

Value of Manure	2
Making the Most of Manure Nutrients	2
Honoring Mandy—10 yrs	2
Manure in the News	2
Indiana News	3
Michigan News	3
4Rs of Nutrient Stewardship	4
Winter To Do Checklist	5
2017 Fertilizer Planning	5
IN Chemist—Category 14	5
Cost Share Opportunities	5
Dates to Remember	6

Value of Manure - Customer Averages ...

The charts below show the average manure value per acre.

Current Fertilizer Prices—Dec. 21, 2016

28% Semi- prepay	560# N / ton	\$177/ ton	\$0.316 / # N
11-52-0	1040# P ₂ O ₅ / ton	\$435 / ton	\$0.418 / # P ₂ O ₅
0-0-60 Semi	1200# K ₂ O / ton	\$260 / ton	\$0.217 / # K ₂ O

Swine Grower Pit			Dairy Lagoon		
N	32.2	\$10.18	N	7.4	\$2.34
P	20.5	\$8.57	P	6.2	\$2.59
K	26.3	\$5.71	K	12.2	\$2.64
	Per 1000 gal	\$24.46		Per 1000 gal	\$7.57

4000 gal / A = \$97.84 / acre

12,000 gal / A = \$90.84 / acre

Calf – Manure Pack			Duck—Liquid		
N	7.3	\$2.31	N	26.9	\$8.50
P	10.4	\$4.35	P	25.0	\$10.45
K	13.3	\$2.89	K	24.5	\$5.32
	Per ton	\$9.55		Per 1000 gal	\$24.27

15 ton / A = \$143.25 / acre

5,000 gal / A = \$121.35 / acre

Broilers (Layers) - Litter			
N	34.1 (34.1)	\$10.78	(\$10.78)
P	60.8 (85.6)	\$25.41	(\$35.78)
K	60.3 (60.3)	\$13.09	(\$13.09)
	Per ton	\$49.28	(\$59.65)

3.0 ton / A = \$147.84 (\$178.95) / acre

*...now worth an
average of
\$130.01 / acre*

Make the Most of Manure Nutrients...

When properly managed, manure can improve soil health by supplying nutrients to microorganisms and increasing the amount of organic matter in the soil. But if you don't test, you don't know the value.

Although there are general book values on the nutrient content of manure, there are many factors that affect the numbers, including animal species, rations, production management and facility type. Even the bedding type makes a difference. The type of storage, handling and agitation system can all move numbers as well.

Manage manure as a crop nutrient resource. Manure application rates should be based on soil testing and the crop fertilization requirements of your next crop. On most farms with a manure management plan, there will be a nitrogen or phosphorous limit that must be followed.

When sampling manure, use the proper container: NO glass containers! For liquid samples use plastic sample jars. These are available from the lab or use a CLEANED plastic bottle. Gator Aid bottles with the wider top are the easiest to use. For dry manure, use a zip-lock baggie. Label the samples clearly on the bag or jar.

Handle samples carefully! Remember, manure is a biologically active material. It is best to collect the samples and freeze immediately. Do not let manure samples sit in hot areas, such as a dashboard of a truck, for any length of time. If you get the sample to us, we will send it on to the lab for you.

Call Agronomic Solutions with any questions.



Melissa Lehman
and Agronomic Solutions honor
Mandy Gangwer
for 10 years of service

Manure in the News ...

"Diesel From Dairy"

Sustainability in farming is a phrase that's used a lot these days. It's all about continual operation with minimal impact on the environment. Scott Brothers' Dairy Farms in Moreno Valley, Calif., has reached a never-before-achieved level that's attracting attention from around the globe.

Manure plays a central role in the farm's 'Circle of Energy' concept: the 1,100-strong herd eats high-quality feed produced from the farm's 700 acres, and harvested with machinery powered by a no-sulfur diesel fuel derived from the cows' manure. The system also produces irrigation water, potable water, fertilizer, high-value wax, sulfur and valuable nutrients.

Steve McCorkle, CEO of Ag Waste Solutions of Westlake Village, Calif., got the idea of making diesel from manure during years of travelling the globe. "It appeared to me that farmers all over the world seemed to share two very strong, common goals: a desire to be the best possible stewards of their land, and a desire to be as independent as possible," he says. When McCorkle was working in remote deserts in the Middle East with no infrastructure for hundreds of miles, he and his colleagues had to convert waste gases into electricity and recycle wastewater.

By 2012, he was collaborating with the Scott brothers. With funding help from the California Energy Commission, the current pilot system was up and running by April 2015.

How it works: The system first removes almost all suspended solids and 40 percent of dissolved solids from the dairy's liquid manure. Some of the extracted water is further purified to make it potable (satisfying manure application requirements). The solids go into a pyrolysis gasifier and the resulting syngas is purified. Using the Fischer-Tropsch process, the hydrogen and carbon in the gas is converted to completely sulfur-free renewable diesel products. A refined wax (worth up to three times the price of diesel) can be processed further and/or blended with fuels such as kerosene – a significant additional farm revenue stream. Ag Waste Solutions can also recover elemental sulfur and other nutrients from the process for either sale or re-use on farm.

Indiana News

Update on the Changes at IDEM ...

In our last newsletter we reported on the major changes in the IDEM Confined Feeding Permitting personnel. We said that their rearranging may affect length of time required to get Permits approved. Now we can report that this is definitely the case.

It is taking about 3 months to get the approvals processed. This is not the fault of the IDEM permit writers. It's just that everything got backed up and everyone from IDEM engineering, and all the stages of the permitting process, are totally swamped

So, if you anticipate needing to get an IDEM Permit, you need to plan ahead and start the process sooner.

County Rules ...

Be aware that you can submit an application to IDEM and receive state approval but still not be able to pull a building permit from the county if their rules and setbacks are not met. Counties are allowed to have additional setbacks, zoning requirements, and rules pertaining to the site establishment of a new CFO/CAFO.

Some of our area counties are in the process of updating or changing their rules. When planning a new construction project, be sure to contact your local plan commission or building department early on in the process. It could be money and time saved to ensure being able to pull a building permit once IDEM has completed their application process. You need to apply for a county zoning change or a special use permit. It would be a good idea to check this out before spending money on the IDEM application process.

NRCS CNMP Changes

NRCS has recently updated their checklist and producer expectations when completing this practice for an operation. The biggest change is that all resource concerns listed in the plan must be corrected with conservation practices with a year, with or without NRCS cost share. This is going to require an improved communication line between the NRCS DC, producer and TSP. Additionally, all CNMP's must be completed BEFORE the producer can even apply for a 313 manure storage structure. In the future new storage projects will need to be planned further ahead of time or just understand that the cost share process will take longer to complete. There is also a new focus in these plans on air resources, so we are required to complete a NAQSAT evaluation of all IDEM permitted operations.

Michigan News

Attention: Michigan DEQ CAFOs ...

Your annual reports are due on April 1st. We would like to get them done as soon as possible to avoid the "office chaos" of trying to meet the deadlines in the last week.

Michigan CAFO operators, please contact us to set up an appointment for us to come see you or for you to come to our office. We would like to collect all of your information before March. You should have received a letter from us outlining all of the information we need to file the new report. Call us at your earliest convenience.

MI 2017 Siting Gaamps Changes ...

In 2017 Siting Gaamps are required for all sites over 50 animal units.

A few of the additional (change) Considerations for all Livestock Production Facilities to be voted on the week of Jan. 16th.

The following circumstances or neighboring land uses constitute conditions that are considered unacceptable for construction of new and expanding livestock production facilities, or may require additional setback distances or approval from the appropriate agency, as indicated, to be considered acceptable.

1. **Wetlands** - New and expanding livestock production facilities shall not be constructed within a wetland.
2. **Floodplain** - New and expanding livestock production facilities and manure storage facilities shall not be constructed in an area where the facilities would be inundated with surface water in a 25 year flood event.
4. **High public use areas** - Areas of high public use or where a high population density exists, are subject to setbacks to minimize the potential effects of a livestock production facility on the people that use these areas. New livestock production facilities should not be constructed within 1,500 feet of hospitals, churches, licensed commercial elder care facilities, licensed commercial childcare facilities, school buildings, commercial zones, parks, or campgrounds.

MiWaters Update ...

DEQ now requires that all correspondence and reporting be completed thru their new online MiWaters reporting system. This transition over the past year has gone well and we appreciate your help in getting these accounts set up and working properly. DEQ has been working to process all of the General Permit renewals that were due this past year, and most of these applications have had final COC's issued and public notices completed. We were first told we would need to map all of the land application fields onto this program by now, but this process has been delayed. At some point in the future, this task will probably need to be accomplished with producer assistance. We are working now to gather information for NDPES Annual Reports that will be due on MiWaters by April 1, 2017.

4Rs OF NUTRIENT STEWARDSHIP

Economically, Environmentally & Socially Sustainable Crop Nutrition



The 4Rs promote best management practices (BMPs) to achieve cropping system goals while minimizing field nutrient loss and maximizing crop uptake.

4R Principles of Nutrient Stewardship



RIGHT SOURCE
Matches fertilizer type to crop needs.



RIGHT RATE
Matches amount of fertilizer to crop needs.



RIGHT TIME
Makes nutrients available when crops need them.



RIGHT PLACE
Keeps nutrients where crops can use them.

The 4Rs—Guided by Science, Proven by Research

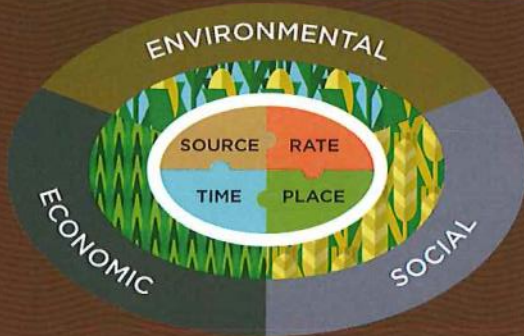
The 4R Research Fund was established by contributions from fertilizer industry members and stakeholders.

\$7,000,000 COMMITMENT

The Research Fund is an industry-funded effort committing \$7 million to 4R research. A portion of this money has already been raised and implemented in initial research projects.



IMPLEMENTING 4Rs ON THE FARM



STEP 1:

Identify farm-specific economic, social and environmental goals that the cropping system objectives should address.

STEP 2: Select BMPs that are specific to the grower's goals, soil, climate and cropping system.

STEP 3: Integrate BMPs for all goals and adjust as needed.

STEP 4: Document the 4R nutrient stewardship plan.



Although goals will vary among farm operations and even among fields, the following are commonly identified grower goals:

- Improve net farm income and regional economic development.
- Improve the quality of farm family housing, diet and education.
- Reduce losses of nutrients to the environment.

Nutrient Stewardship Across the Nation



4R STATE EFFORTS

Several states are helping lead the way for nutrient stewardship by developing governing methods such as certification programs, codes of practice and sustainability programs. State by state, 4R BMPs are gaining ground in local communities through demonstration and outreach efforts.



4R ADVOCATE

Each year the Nutrient Stewardship 4R Advocate program recognizes outstanding agriculture retailers and farmers dedicated to sustainable crop nutrition. These advocates travel the country educating local communities about the 4R principles as well as promoting the benefits of sustainable farming to the general public.



4R EDUCATION

Industry partners have come together to help producers learn more about sustainable farming. These partners have developed webinars, learning modules and online interactive training to provide essential information about the basic components of soil fertility and nutrient BMPs as they pertain to implementation of the 4Rs.

4Rs & THE INDUSTRY

OUR PARTNERS

Over 90 U.S. organizations are embracing 4R nutrient stewardship and are working to bring you the most current information about fertilizer best management practices. These partners include conservation groups, agriculture equipment manufacturers, agriculture retail companies, fertilizer companies and other various agricultural stakeholders.



SUSTAINABILITY

The underlying aim of sustainable agriculture is to increase economically viable food production while retaining the ecological integrity of food systems. The fertilizer industry's engagement with Field to Market allows us to collaborate with stakeholders across the agricultural supply chain.



Winter To Do Checklist ...

Winter is a time to step back and catch your breath from the busy cropping seasons. But to keep your competitive edge you must keep organized and educate yourself.

- Research & choose the best hybrids for your farm.
- Attend Farm Shows and meetings to see new ideas and equipment.
- Visit your NRCS DC to learn about cost- share programs and opportunities.
- Update manure spreading and distribution records.
- Update IDEM/DEQ operating records binder.
 - ⇒ Send us any updated manure samples
 - ⇒ Send us any new soil test information
 - ⇒ Make sure weekly inspections are completed
- (MI) Complete annual ND PES report. Call and make an appointment if you want help or to review.
- Analyze yield maps with a professional, if available.
- Complete your planned nutrient budget for the 2017 crop

You can either update these items yourself or call our office for help. It is much easier to do it once a year, than in a panic when your inspector calls to schedule a visit ☺

Winter time spreading ...

Any state permitted farm (IDEM or DEQ) should NOT be spreading manure on frozen or snow covered ground. If you find yourself in a situation needing to spread, please call our office to discuss your options.

2017 Fertilizer Planning...

If you have applied manure to a field, you must account for these nutrients in your planned budget, if you are a state permitted farm.

Please call our office if you have any questions about developing your 2017 plan. All state permitted farms are required to disclose this information either on your spread records (IN) or in your annual report (MI). Our area specially, has extra people watching what we do out in the fields due to our proximity to the Great Lakes. Right now there is a huge initiative promoting the 4R's of nutrient management voluntarily in our area to try to improve water quality. I would advise all producers to take a look at this program and consider adding BMP's and conservation practices to your farming operation.

Their website is: nutrientstewardship.org

Cost Share Opportunities with NRCS ...

There are many programs with money for environmental improvements, especially in our area due to impaired watersheds. **EQIP, NWQI, MRBI, WLEB, GLRI** all have funds available thru this sign up period to improve the soil erosion and water quality issues on their land. Producers interested in EQIP should submit a signed application to the local NRCS field office. Applications submitted by **Jan 20, 2017**, will be evaluated by NRCS staff for the funding period being submitted.

Practices are available for pastures, confined feeding and row crop land. The practices have changed this year, from year's past, so be sure to checkout the 2017 Indiana Conservation Program Practice User Guide available on NRCS's website. Practices range from nutrient management, manure storages, cover crops/filter strips, drainage practices, and many grazing practices. There are many more practices listed and available for cost share on the User Guide. Please contact your local DC or our office if you are interested in exploring these cost share options.

Code to list in first paragraph:

(Environmental Quality Incentives Program (**EQIP**), National Water Quality Initiative (**NWQI**), Mississippi River Basin Healthy Watersheds Initiative (**MRBI**), Western Lake Erie Basin Initiative (**WLEB**), Joint Chief's Landscape Restoration Initiative, Monarch Butterfly Habitat Development Initiative, Working Lands for Wildlife Initiative and the Great Lakes Restoration Initiative (**GLRI**)).

OISC—Office of Indiana State Chemist ...

Category 14 Distribution License

**There is an annual fee that needs to be paid each year to keep your license valid. An invoice for \$45 should have been mailed to you from the OISC at the end of 2016.*

Category 14 Test Sites ...

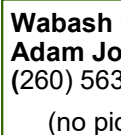
Exams one day each month—Purdue University, West Lafayette Campus to schedule call: 800-893-6637

Exams may also be taken at Ivy Tech Testing Centers
Locations: Anderson, Fort Wayne, Goshen, Greencastle, Indianapolis, Kokomo, Logansport, Marion, Muncie, South Bend, and Warsaw. **to sign up for an exam call: 877-533-2900 (leave a message)**

**Regional Exam: Noble Co Fairgrounds,
Kendallville Feb 27, 2017 - 3-6 PM**

**LaGrange Co.
Jennifer Walker**
(260) 463-3471
ext. 3

**NEW DISTRICT
CONSERVATIONISTS
in our area:**

**Wabash Co
Adam Jones**
(260) 563-7486 ext. 3
(no picture available)

**Kosciusko Co.
Chad Schotter**
(574) 267-7445
ext. 117

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Join us at:

Fort Wayne Farm Show January 17, 18, & 19, 2017

Expo IV Booth 928

Tuesday 9:00 AM – 5:00 PM
Wednesday 9:00 AM – 8:00 PM
Thursday 9:00 AM – 4:00 PM

PARP/CCH credits available on Tuesday 1/30-3:30
at Allen County War Memorial Coliseum

Northern Indiana Grazing Conference February 3–4, 2017

at Michiana Event Center

"Make Your Soil Great Again" March 1, 2017

8:30 AM – 3:30 PM

PARP/CCH credits available
Lunch will be provided

at Elkhart Co Fairgrounds, Goshen
To register contact SWCD at 574-533-4383 ext 3
by Feb. 24

Notice Michigan CAFOs...

April 1, 2017: MI CAFO Annual Reports are due
(call Mandy to get started)

Notice for EQIP ...

January 20, 2017: Application deadline for EQIP & EQIP-RCPP

PARP and/or CCH Credits (\$10 per PARP credit hour)

*Call the phone #'s given for questions about PARP/CCH points and registrations

*Check our website for more information and dates

- | | |
|--|--------------------|
| Jan 23: Crop Management Workshop | 9 AM-4 PM |
| location: Grace College, Winona Lake | 574-372-2340 |
| Feb 6: Irrigated Corn and Soybean Production | 9 AM-3:30 PM |
| location: Blue Gate Restaurant | 260-499-6334 |
| Feb 13: Managing Herbicide Resistant Weeds | 7- 9 PM |
| location: Heartland REMC, Wabash | 260-563-0661 |
| Feb 21: Whitley Parp | 9 AM-11:30 PM |
| location: Whitley Co 4-H Center, Columbia City | 260-244-7615 |
| Feb 21: Noble Co Parp | 1:30-4 PM |
| location: Noble Co. Extension Ofc. | 260-363-2111 |
| Feb 27: Parp Cass | 8:30 AM-11:30 AM |
| location: Cass County Fairgrounds. | 260-363-2111 |
| Feb 28: 2017 Farming for the Future
A Tri-County Producers Conference | 10 AM-2 PM |
| location: Christos Banquet Center, Plymouth | 574-936-2024 Ext 4 |