June—August 2019 Edition

Management Solutions

Agronomic Solutions, LLC

Summer 2019 Issue

We are hiring!!

Brittney Miller has left us, and so once again we are looking for a new full-time office employee to fill her position. This job will involve working directly with clients.

Requirements for the job are:

- Ability to get along with fellow workers and clients & work in a group environment
- Good communication and interpersonal skills
- A general knowledge of agriculture
- A working knowledge of computers, especially Microsoft Excel, Word, and the internet
- A willingness to learn new computer programs and farming practices

Responsibilities will include:

- Ensuring client records are updated
- Working with IDEM client records

Office hours are 8 AM to 4 PM, 5 days per week

To apply: Call Melissa for an interview:
574-202-2608 or 260-593-2092

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

In Memoriam

Robert Tyson

1948—2019

Melissa's father, Bob Tyson, has recently passed away. Please keep her and her family in your thoughts and prayers as they grieve over their loss.

Inside this issue:

Value of Manure - Customer Averages

The charts below show the average manure value per acre.

Current Fertilizer Prices—July 17, 2019

28% Semi- prepay	560# N / ton	$270 / ton	$0.482 / # N
18-46-0	1040# P_2O_5 / ton	$521 / ton	$0.501 / # P_2O_5
0-0-60 Semi	1200# K_2O / ton	$383 / ton	$0.319 / # K_2O

Swine Grower Pit				Dairy Lagoon		
N	32.2	$15.53		N	7.4	$3.57
P	20.5	$10.27		P	6.2	$3.11
K	26.3	$8.39		K	12.2	$3.89
	Per 1000 gal	**$33.90**			Per 1000 gal	**$10.50**

4000 gal / A = $135.76 / acre — 12,000 gal / A = $126.81 / acre

Calf – Manure Pack				Duck—Liquid		
N	7.3	$3.52		N	26.9	$12.97
P	10.4	$5.21		P	25.0	$12.52
K	13.3	$4.24		K	24.5	$7.82
	Per ton	**$12.91**			Per 1000 gal	**$34.83**

15 ton / A = $194.62 / acre — 5,000 gal / A = $166.57 / acre

Broilers (Layers) - Litter		
N	34.1 (34.1)	$16.44 ($16.44)
P	60.8 (85.6)	$30.46 ($42.88)
K	60.3 (60.3)	$19.25 ($19.25)
	Per ton	**$65.84 ($78.26)**

3.0 ton / A = $198.44 ($235.71) / acre

...now worth an average of $176.48 / acre

Good Neighbor Relations

Communicate BEFORE spreading

Getting to know your neighbors, can be one of the most important activities you do to help your farm survive in this changing environment. Residential developments and non-farmers moving into agricultural areas can have problems. At times new residents have little previous exposure to farming. They may have misconceptions about what activities occur on farms and in rural areas, and it's up to us to help them understand that *farming is a good thing!*

If you expect your neighbors to be good neighbors, you must also be a good neighbor. Being neighborly means being friendly, helping them when needed, and being willing to accommodate them. At times you don't have much choice about when you plow, spray, or harvest; however, you often do have some control over when you do farm tasks. Try to appreciate if they are having a picnic or event. Don't spray or plow near them. Some things can be put off for a day.

When you know your neighbors, it is easier to talk to them if problems occur and to keep problems from escalating into blame, misunderstandings, hard feelings, or intense community conflict. Knowing your neighbors makes it more likely that when they have a concern about your farm operation (such as noise or odor), they will call you directly to work it out instead of reporting you to a government agency.

Make sure that you, and/or your custom applicators follow good neighbor practices. Be mindful of wind, temperature and other weather conditions when applying manure. Be aware of your application setbacks. *And,* ***let your neighbor know when you plan to apply manure.***

Communication **and a** ***Friendly Attitude*** **cannot be over-stressed.**

Accounting for Manure Nutrients

How can you make sure you have enough Nitrogen and still be compliant with state rules? Sometimes this really feels like a balancing act. However, having a "management plan" and doing what it says will help to insure no over-application.

To stay in compliance with Indiana and Michigan rules you are not allowed to apply more nitrogen than what the crop can use in a single growing season. There is a way you can still legally apply more N to your field. It starts with a PSNT test. *You MUST have the PSNT test results in your records to justify the extra N application.*

It is very important for your state permitted farms that you account for your manure nutrients. A lot of farmers need help to understand the importance of knowing and recording just how much they are applying and when. *If you need help figuring out your credits from your fall and/or spring applications, please call our office.*

People are watching! People from the state may be out to inspect your records. Be sure to have your records (ie: *inspections, spread records, annual manure samples, soil tests every 3 years*) up to date. This is important in both Indiana and Michigan.

PSNT...

only approved test to allow extra N applications

A PSNT test is used in the corn field right before side-dress (6"-12") to get a "snapshot" of the nitrogen available to the plant. Considering the cost of nitrogen, if you haven't prepaid, you don't want to put on anymore than you have to for maximum yield. This test is targeted to be used in fields where manure has been applied in the past year or if it has a history of previous applications. The test is also be accurate on high organic matter fields. I would **not** recommend it on sandy fields with no history of organic sources of nitrogen being applied.

The procedure to have us PSNT sample for you:

(1) Call us with a planting date to pre-schedule sampling since the window for pulling samples is very limited.
(2) Call again 7 to 5 days before you side-dress to let us know you're ready for sampling.
(3) We will come out and pull the samples, refrigerate them and get them to the lab.
(4) The lab processes the samples the next day and we get results to you for side-dress amounts required.

The cost for this service is $3.00/acre. If you think you can save yourself about 10 lbs. of nitrogen per acre, it will pay for itself in increased management on your part. Sometimes the test shows that you lost more nitrogen than normal from your manure application and it requires more N to be applied; but because you had the PSNT sampling, you caught it early and saved yourself from possible yield loss. You're a winner either way.

Plan ahead! Call us today for an appointment

Manure in the news

Process takes liquid manure to drinkable water

For every gallon of milk shipped from the front door of a dairy farm, around 2 gal. of liquid manure is produced and must be managed out the back door.

The Holy Grail, of course, is a manure processing system that could fully separate all the constituents of manure—sand, fiber, nitrogen, phosphorus, potassium and water—and reuse them to their best value.

Some companies have already tried—and failed. But McLanahan Agricultural Systems has entered the arena with its four-step process that takes raw manure and separates its constituents down to those six components: sand, fiber, nitrogen, phosphorus, potassium and water.

Fully processed, up to 50% of the water in manure is drinkable, potable water that could be legally discharged back to public waters or reused on the dairy for everything including watering cattle. It's not a simple process. That's because it involves a pre-treatment vessel similar to a methane digester, ultrafiltration, low-pressure air stripper towers, and reverse osmosis technology. "Our corporate values are to make things safe, simple and smart, but complicated problems sometimes take complicated solutions," says Andrew Wedel, general manager of McLanahan Ag Systems.

"But what if you didn't have to haul half of your manure and still had all the nutrients? Would that have some cost benefit?" he adds.

The beauty of the system is that it is not a one-size-fits-all, take-it-or-leave-it technology. Instead, it can be adapted by individual farms to meet their individual needs, Wedel says. Some farms might only want to produce tea water, separating out the phosphorus. Others might go the full route, fully separating out all of the nutrient components.

This past summer, McLanahan hosted an open house on the Chad and Evelyn Minnis' Car-Min-Vu Farms near Webberville, Mich. to show the Nutrient Separation System technology. Car-Min-Vu Farms is the site of the McLanahan pilot project because it is located just 20 minutes southeast of Michigan's state capitol. The project is partially funded by a grant from the Michigan Department of Agriculture and Rural Development.

The Minnises milk 800 cows (950 total with dry cows). At any moment, the manure from about 100 cows is flowing through the pilot project, after sand and manure solids have been separated.

The separated slurry flows first to a pre-treatment tank similar to a vertical methane digester. Here, the material is homogenized to produce a consistent liquid. Microbes in the tank also produce biogas.

Because the volume of gas is limited, it is simply flared off. In a full-scale version, biogas production would be sufficient to produce enough electricity to power the entire system, says Jim Wallace, the McLanahan engineer in charge of the pilot project.

From the pre-treatment tank, the slurry is forced through a series of ultrafiltration tubes—resembling long straws—that allow water and dissolved ammonia and potassium to filter through the membranes. Particulate matter, which contains phosphorus, is captured for further processing into fertilizer. That concentrates the phosphorus 3X, with up to 95% of the phosphorus in 30% of the volume. From there, it can be produced in either liquid or solid form for use as fertilizer.

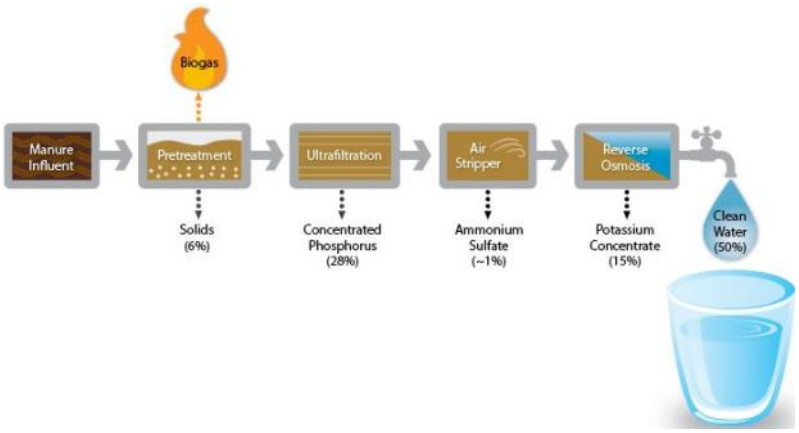
The remaining tea water, containing the dissolved ammonia and potassium, is then blown at high speed through two, 16' tall air stripper stacks filled with baseball-sized, whiffle-like balls that provide surface area to capture and concentrate the ammonia. The system uses sulfuric acid to capture the ammonia. The stripper stacks take out just 1% of the volume, but create very concentrated ammonium sulfate fertilizer.

The remaining feedstock is then pumped at high pressure through a reverse osmosis (RO) system that removes the remaining potassium in a concentrated stream. The RO process removes about 15% of the volume as concentrated potassium.

What is left is pure water—clean enough to discharge into public waters or to reuse on the dairy. After it has made its way through the entire process, this clean, dischargeable water represents about half the original volume. "Fifty percent of the manure going into the system is converted to clean, dischargeable water—that is 50% of your manure volume that can 'go away,'" Wedel says.

McLanahan says the system might be most applicable to large, commercial dairies with at least 3,500 cows. At that scale, Wedel adds, the capital cost would range from $350 to $500 per cow, not including sand and solid separation. The cost also depends on how much processing is needed by the dairy. Operating costs of implementing the system, including labor, maintenance, chemicals and power, will be about 1¢ per gallon of manure.

From: agweb.com



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Dates to Remember …

Parp Point Meetings

7/23/2019 - Central Indiana Field Day

9:00 AM EDT - 2:00 PM EDT Roseburg Event Center

8/21/2019 - Pinney Purdue Ag Field Day

9:15 AM EDT - 1:00 PM EDT Pinney Purdue Ag Center

8/21/2019 - Pinney Purdue Field Day Twilight Program

6:30 PM EDT - 9:00 PM EDT Pinney Purdue Ag Center

JULY 31—AUGUST 1, 2019

at Fair Oaks, IN

To learn more and to register for
FREE EXPO PASS
and/or purchase tour tickets
go to this website:

https://www.eventbrite.ca/e/2019-north-american-manure-expo-tickets-56706327151