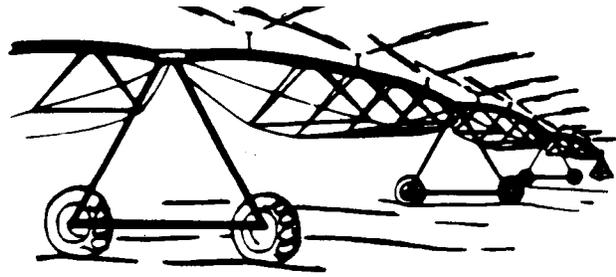


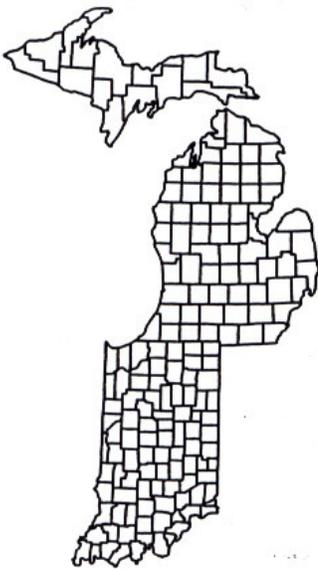
MICHIANA IRRIGATION ASSOCIATION



MICHIGAN-INDIANA IRRIGATION NEWSLETTER

November 2011

612 East Main Street
Centreville, MI 49032
269/467-5511



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Greetings,

It is hard to believe that we are a month away from our annual meeting when noticing all the crops still out and the nice temperatures.

I hope everyone can clear their calendar and bring a friend or neighbor to Shipshewana on December 16th for lunch, information, socializing and perhaps some Christmas shopping. We have a well rounded agenda and are anxious to share information on legislative/regulation developments on both sides of the border. We will be going over proper irrigation grounding for safety, irrigation energy audits and potential grants available. Irrigation scheduling tools available and learn about the regional groundwater modeling and high-capacity wells. Purdue Specialist, Jim Camberato will be speaking on fertility management for irrigated corn and an update will be given on the newly formed Southwest Michigan Water Resource Council.

I hope everyone can finish up harvest and attend this year's event. I would urge you to bring along anyone who hasn't attended before. I cannot think of a wiser investment of \$30.

Sincerely,

Mike Morehouse
MIA President

MM:dm

See attached registration for the MIA Annual Meeting on December 16, 2011 at the Blue Gate Restaurant in Shipshewana. Please register early so we can get an accurate lunch count. See you in December!

New Irrigation Planning Checklist

Irrigation water requirements - Is water available in the quantities needed to irrigate? In Michigan and Indiana evaporation and plant water use from the soil are between 0.25" and 0.30" for several days each summer, systems that can provide 5 gal/acre irrigated will meet the 0.25"/day. Seven gal/acre irrigated is needed to provide 0.30" water requirements. This capacity will be require 24 hours per day 7 days per week continued pumping in time of drought.

Ground water availability – Irrigation is not profitable without a reliable and adequate source of water. Nearby large volume irrigation, municipal or industrial wells are an excellent source of water availability. Well drillers familiar with large volume wells in your area are also excellent resources. Michigan has available groundwater mapping tools that can help evaluate potential water withdrawal sites: <http://gwwmap.rsgis.msu.edu/> Indiana information on groundwater availability can be found at: <http://www.in.gov/dnr/water/2451.htm>

Surface water availability – Is surface water available in dependable large volumes? Surface water quantities need to be available at the time of maximum irrigation, often late July early August. This is the season the surface waters are near their lowest. Make sure to evaluate available flow the summer before you start irrigating. In most areas you may not delete stream flow to the extent that it negatively impacts neighbors or the environment. If not, consider part of the water of the States, drainage ditches flow, may be depleted. Remember there can be major contamination challenges impacting food safety in using surface water for vegetable irrigation and cooling.

Water rights and regulation – Make sure you understand your rights and obligation to use water in your State. Example: Michigan operates as a riparian state for surface water use allowing only the property with legal description adjacent to the surface water to receive the water, but well water may be transfer between properties.

Water registration – Irrigation water use almost always is considered a large volume water use (capacity to pump > 70 gal. /min). In both Indiana and Michigan new installations require a registration. In Indiana this is handled by Indiana DNR find them at: <http://www.in.gov/dnr/water/2451.htm> In Michigan you will need to work through the Michigan Water Withdrawal Assessment Tool at <http://www.miwwat.org/> to determine if your proposed water use is likely to cause a negative environmental impact. At the end of the process you will either be able to register online or may be required to request a site specific review by MDEQ.

Options for sharing irrigation equipment – Irrigation systems are very scale dependent. Sharing the irrigation expense by jointly investing with a neighbor often leads to a configuration which is better and is more cost effective. For more information on split irrigation cost between neighbors see Fact Sheet #10 at the St. Joseph County website.

Map your irrigation ideas – Acquire an aerial map of all the land in question for your irrigation projects. Excellent maps and tools are available from Google maps and others or your local USDA Farm Service Agency paper map and a pencil/compass will work. Identify large spances of land you have available that are adjacent to or may share water sources. Identify major excavation needs such as woodlot or fence line removal. Identify drainage ditch and wet areas that will require modifications for the system to cross.

Power sources - Identify available power sources – a 3 phase power line in close proximity (1/2 mile or less) to potential water source(s) is the cheapest. Liquid fuel storages located near wells and surface water pose potential environmental risks, along with higher equipment, maintenance and fuel cost, leaving engine power as a second choice for most situations.

Get multiple bids - Use irrigation professionals to your advantage. Take your best ideas to at least two irrigation sales/design people. Many will have access to excellent mapping and planning software tools, plus they will have far more experience than most producers in irrigation system design. Compare potential designs on a cost per irrigated acre basis (for an average years irrigation). This process will help equalize investment in equipment with energy cost and labor. Example work sheets are available under the irrigation cost section of the St. Joseph County irrigation website.

Irrigation economics – Make sure irrigation will pay. Think in terms of increasing your average net income per acre after you have covered the additional irrigation related bills. To receive good outcomes, expect to provide good estimates of increased fixed and variable costs. Figuring this out in advance of the investment is detailed, but is well worth the time. An excellent tool to assist in evaluating the economic feasibility of a proposed project is the "Capital Investment Model" developed by MSU Educator Roger Betz on the St. Joseph County irrigation website.

Specialty/vegetable crop options – Indiana and Michigan's irrigated land is dominated by contracted specialty crops like vegetable and hybrid seed corn production. The reduced risks offered by sandy soils for early planting, less delays after rain for field work, low to no flooding injury potential coupled with the removal of drought stress entice the high dollar invested seed and vegetable crops to the area. These options and conditions are not available everywhere in Michigan and Indiana. Avoid the idea that "if you build it they will come". Do your homework and identify what options are realistically available and feasible for your operation.

Match your farming/family goals to your irrigation ideas - If you think you have a difficult time getting away for a summer vacation now, adding irrigation will greatly increase the required summer labor and cut free time. Capable irrigation labor is hard to find. Misjudging your available labor and management time needs towards completing irrigation can lead to a disaster.

Good irrigation planning can set your direction for a profitable and efficient irrigation future - For more irrigation design and management information visit the St. Joseph County irrigation website: www.msue.msu.edu/stjoseph navigate to irrigation on the left hand column or contact Lyndon Kelley at 269/467-5511 or kellyl@anr.msu.edu.

Proper Winterization Gets Irrigation off to a Good Start for Next Year

It is the time of the year to winterize. Often next year's irrigation start up problem are winter damage that can be prevented. Time spent now will prevent damage and lead to a better start on next year's irrigation season. Inspection of the system now allows you to make improvements and repairs in the less costly off season and get irrigation problems out of the way for spring planting season when everyone is busy.

Park pivots in safe location

When choosing a location to park the system for the winter considers the three most common potential source of damage: Wire theft is less likely in a visible but inaccessible area of the field; wind damage is less likely if pivot points into or away from the wind direction rather than perpendicular to wind direction; and squirrels and other rodent damage to span wire is rare when pivot are a few 100 feet from the tree line.

Drain pivots

Most of the currently designed pivots have automatic frost drains that drain the main overhead pipe. Plugged automatic frost drains can lead to major repairs if not caught in a fall inspection. Rock traps need to be cleaned and drained. Pivot supply lines, end gun supply and hydro control hoses are often installed to allow drainage but the hose may sag and hold water which can lead to damage. Remember to cap all large openings into the system to prevent bird nesting.

Drain travelers and big guns

Travelers and stationary big guns often have portions of their system that may hold water. Drain and roll-up hoses, unhook and drain ends couplers and drain water drive piston and motors that may be damaged by freezing.

Pump down or drain underground pipe lines

Most underground pipe lines are buried deep enough to prevent freeze damage but often require pumping or draining enough water from them to empty the upper portion of Z-pipe risers and pump manifolds. This is typically done by purging the system with air or modifying a fertilizer transfer pump to pump system at its lowest outlet or inlet points. Remember to cap all pipe inlets and outlets to prevent rodents from entering.

Drain the pumping plant

Drain pumps and manifold to the lowest point they can hold water. Replace brass drain plugs if damaged. Good designed pumping installations will be easy to drain without stripping drain plug threads or the need of air purging. Inspect gauges, supply and control wire for need of repair. Service engine with attention to engine oil, bearing and seal lubrication. Check cooling system for adequate anti-freeze level and concentration. Drain fuel tank to reduce water accumulation in fuel tank and potential theft.

Inspect and lock down electrical power supplies

Locking down electrical power supplies help prevent vandals from turning wells and pivots on midwinter and minimize potential electrical system damage. Inspect each electrical box in the system from power supply to the last pivot or disconnect on system line for damage and holes that may be access for rodents. Now is an excellent time to inspect grounding system and test resistance.

Create a winter work list for each system

While it is fresh in your memory list the improvement and repairs needed for each system. As you are inspecting and winterizing your system, add any other areas needing attention to the list of repairs needed. Assign the repair to someone whether it is your people or the local irrigation dealer repair crew, the sooner it gets into the plan the better and more efficient it can be.

Contact Lyndon Kelley for more information at 269/467-5511 or kelleyl@anr.msu.edu

Calendar of Upcoming Meetings

- December 8 An Innovative Dairy Farm Model - Who Wants to be a Millionaire? Kellogg Biological Station, Hickory Corners. 8:30 AM - 4:00 PM. Cost \$35. Call Matt Haan to register at 269/671-2360.
- December 14 RUP Testing and Training, St. Joseph County MSU Extension. 9:00 - Noon training cost \$25. Testing begins at 12:30 PM. Check or money order made out to MDA. Register for testing at www.michigan.gov/mdard for training call the St. Joseph County at 269/467-5511.
- December 16 Winter Irrigation Workshop, Blue Gate Restaurant, Shipshewana, IN. 9:00 AM - 4:00 PM. See attached brochure for details.
- January 17 Field Crop IPM Meeting, Fillmore Administration Building, West Olive, MI. 9:00 AM - 4:00 PM. Call Van Buren MSU Extension for more information or to register. 269/657-8213.
- January 18 Soybean Disease Research Update, Van Buren ISD, Lawrence. Contact Van Buren MSU Extension for more information at 269/657-8213.
- January 27 Ag Action, Kalamazoo Valley Community College. 8:30 AM - 3:00 PM. Cost \$20 at the door. RUP Credits available.
- February 2 Michigan Corn and Soybean Research Meeting, Van Buren ISD, Lawrence. Call 269/657-8213 to register. No cost. RUP and MAEAP Phase 1 credits available.
- February 17 RUP Testing and Training, St. Joseph County MSU Extension. 9:00 - Noon training cost \$25. Testing begins at 12:30 PM. Check or money order made out to MDA. Register for testing at www.michigan.gov/mdard for training call the St. Joseph County at 269/467-5511.
- February 20 Farmers Day, Branch Area Career Center, Coldwater. RUP Credits.
- March 19 RUP Testing, St. Joseph County MSU Extension at 12:30 PM. Check or money order made out to MDA. Register for testing at www.michigan.gov/mdard

Daily updates for ag producers from MSU Extension:

If you haven't added www.news.msue.msu.edu to your favorites, you should. We have taken our seasonal pest update system and expanded it from crops, vegetables and fruit to livestock, poultry, dairy, bioenergy, farm management and home horticulture, year round. This web site is updated DAILY by MSU Extension field staff and campus faculty, with current and relevant items that can impact all areas of your ag business.