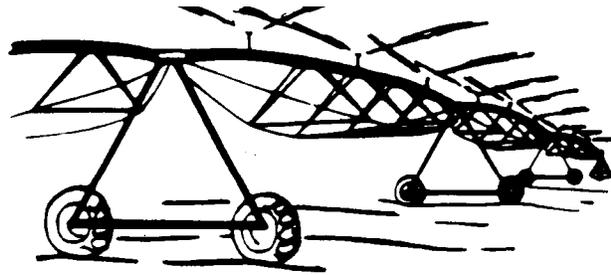


# MICHIANA IRRIGATION ASSOCIATION



## MICHIGAN-INDIANA IRRIGATION NEWSLETTER

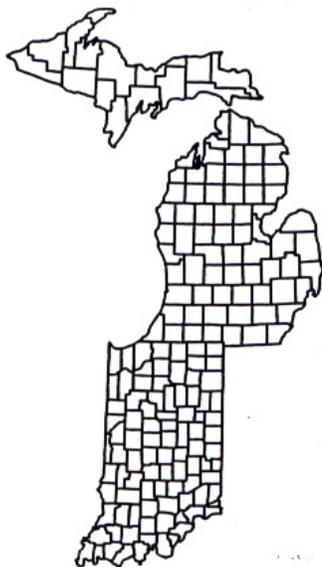
*Michiana Irrigation*

*August 2010*

612 East Main Street

Centreville, MI 49032

269/467-5511



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Greetings Fellow Irrigators:

As the irrigation season wraps up the meeting season begins. Take advantage of the several field days and other educational opportunities listed within this newsletter. Improving our knowledge leads to more productive and profitable farming.

Fall is also a time for politics and elections. As you consider candidates, take a moment to find out their views on irrigation and water use policy, you may be surprised how foreign the irrigation related issues are to some candidates. As an irrigation industry we need to make them aware of the value of water to agriculture and the local economy. Choose well and be prepared to assist them in the future as irrigation works through the legislative future for both Michigan and Indiana. State agencies only enforce the laws that the legislators make....

The upcoming MIA Annual meeting is in the planning stages. Currently we are looking at some of the following agenda items: Irrigation Safety, Variable Rate Frequency Drives, Trends in Irrigation, Chemigation and Indiana's Status in the Great Lakes Compact. If you have an agenda item to suggest, please let us know.

Sincerely,

Phil Donahoe  
MIA President

### **End of Irrigation Season: Great Time to Repair and Improve**

- ◆ End gun adjustments – are you covering every foot of planted ground possible without watering unplanted areas?
- ◆ Cornering arm hydro valves – is the arm watering when it is suppose to and off when it is not?
- ◆ Brush Control – Late summer/early fall is an excellent time to use herbicides for brush control.
- ◆ Leaks and bad sprinklers - Create a list of leaks and bad sprinklers that need attention. This winter as you are making repairs you will appreciate the list to work from.
- ◆ Chemigation check valve and other system improvements - adding the equipment now makes it a more viable option then fertilizer next season.
- ◆ Inspect bridge crossings and wheel paths through rough and low areas – build-up, fill, level and permanently seed problem areas.

**Mark your calendar: Michiana Irrigation Association  
Annual Meeting, December 10, 2010 at Blue Gate  
Restaurant in Shipshewana**

## Indiana's Compact Compliance Effort

**Mark Basch, Head Water Rights & Use Section  
IDNR, Division of Water**

The following questions were submitted to IDNR concerning Indiana's effort in meeting the Great Lakes Compact:

### **1) Will the water policy requirement be different for the portion of Indiana within the Great Lakes Basin than the rest of the State?**

Yes. All Significant Water Withdrawal Facilities (SWWF) in Indiana are required to be registered under the provisions of the Water Resources Management Act (IC 14-25-7). A SWWF is defined in the law as having the capability of withdrawing at least 100,000 gallons of groundwater or surface water in one day. In addition to the provisions of IC 14-25-7, Indiana's implementation of the Great Lakes Compact under IC 14-25-15-7 requires that a permit be obtained prior to the installation of a well or intake in the Great Lakes Basin with a daily withdrawal in excess of any of the following, calculated on average over any 90 day period:

- 1) Five million (5,000,000) gallons from Lake Michigan surface water.
- 2) One hundred thousand (100,000) gallons from a salmonid stream.
- 3) For any surface water or groundwater source, one million (1,000,000) gallons.

IC 14-25-15-8 specifies that a permit is not required for a withdrawal that does not exceed the amount of "baseline determination" established by the DNR for each Significant Water Withdrawal Facility (SWWF) in the Great Lakes Basin. These facilities will be considered "grandfathered" under the provisions of the Compact. Also, the director of the DNR may limit a water withdrawal that would reduce flow in a watercourse below the established minimum stream flow.

### **2) How will Indiana meet the "Adverse Resource Impact Statement" of the Compact?**

A rule to address this issue is currently being developed by the DNR. Guidance for rule development is found in IC 14-25-15-10 that requires the water withdrawal or consumptive use to result in no significant individual or cumulative adverse impacts to the quantity or quality of the waters and water dependent natural resources of the Great Lakes Basin as a whole, or the Lake Michigan or Lake Erie Watersheds as a whole. When determining whether there will be significant adverse impacts, consideration shall be given to the impacts incurred in a particular stream reach where those impacts are important to the

Great Lakes Basin, and judgment shall be made of the nature, degree, scope, and materiality of the impacts and the regional importance of those impacts to the Basin.

### **3) Will Permits be required for new withdrawals?**

As previously stated, IC 14-25-15-7 requires that a permit be obtained from the department prior to the installation of a well or intake in the basin having a withdrawal exceeding the volumes specified in 1, 2 and 3 (question #1 response) calculated on average over any 90 day period.

### **4) How will permits for new withdrawals be determined?**

Permits will be issued by the IDNR, Division of Water. A rule is currently being developed by the DNR and will likely consider the following (as required by the Compact):

- 1) Whether the water withdrawn is returned, either naturally or after use, to the source watershed less an allowance for consumptive use.
- 2) Whether the withdrawal or consumptive use will be implemented so as to ensure that it will result in no significant individual or cumulative adverse impacts to the quantity or quality of the water and water dependent natural resources and the applicable source watershed.
- 3) Whether the withdrawal or consumptive use will be implemented so as to incorporate environmentally sound and economically feasible water conservation measures.
- 4) Whether the withdrawal or consumptive use will be implemented so as to ensure that it is in compliance with all applicable municipal, state, and federal laws as well as regional interstate and international agreements, including the Boundary Waters Treaty of 1909.
- 5) Whether the proposed withdrawal is reasonable, based upon a consideration of the following factors:
  - a) The proposed withdrawal or consumptive use is planned in a fashion that provides for efficient use of the water, and will avoid or minimize waste of water.
  - b) If the proposal is for an increased withdrawal or consumptive use, whether efficient use is made of existing water supplies.
  - c) The balance between economic development, social development, and environmental protection of the proposed withdrawal and use and other existing or planned withdrawals and water uses sharing the water source.
  - d) The supply potential of the water source, considering quantity, quality, and reliability and safe yield of hydrologically interconnected water sources.
  - e) The probable degree and duration of any adverse impacts caused or expected to be caused by the proposed withdrawal and use under foreseeable conditions to other lawful consumptive or nonconsumptive use of water or to the quantity or quality of the waters and water dependent natural resources of the basin, and the proposed plans and arrangements for avoidance of mitigation of such impacts.

## When to Stop Irrigating

The question often comes when we have those drier than normal late summer weeks, "when can I stop irrigating?" The factors that enter into this decision are fuel costs which are at record high levels and grain and forages which are still at price levels that top our last decade. Turning off the irrigation water too soon could lower yields or reduce test weight. Irrigation beyond the crops need wastes resources: time, energy, and money.

Late season water use, termed evapotranspiration (E.T.) lowers significantly near the end of maturity. Soybean plants showing their first yellow pod will have E.T. of one tenth of an inch per day for a day that reaches into the mid 80 degree temperatures. Corn at dent stage will have an E.T. of 14/100"/day for a day that reaches into the mid 80 degree temperatures. Daily temperatures that are ten degrees higher or lower than the mid 80's will have E.T. that is .02 higher or lower than the norm, respectively.

The goal of the soybean irrigator should be to maintain at least 40% of his available soil water holding capacity for soybeans till most pods yellow. Corn producers trying to maintain test weight in dry late summer conditions should maintain at least 40% of the available soil water holding capacity until the crop reaches black layer. In most situations minimal amounts of water are needed to achieve these goals. In the last few weeks of the season soybeans will use less than .04" per day and corn less than .06" per day allowing a half inch of rain or irrigation to last a week or more.

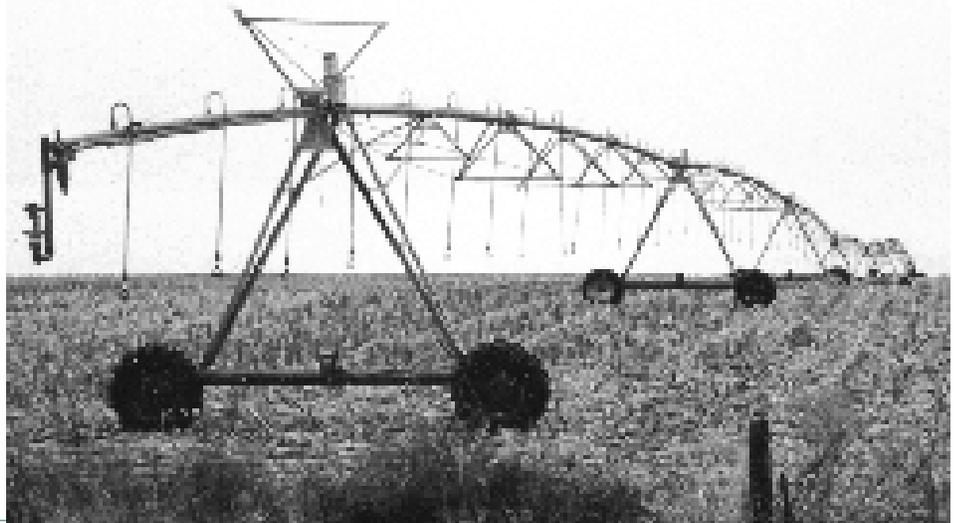
One simple irrigation scheduling method used to aid in late season decisions is to monitor soil moisture. A soil auger probe from 12 inches below the surface in the root zone should still have moisture present as indicated by a loose ball formed from the sandy loam soil. Soils that form a tight ball show an even higher soil moisture level that could carry a crop for a few more days. Factsheets and bulletins on estimating soil moisture by feel and irrigation scheduling are available from the following website: [msue.msu.edu/stjoseph](http://msue.msu.edu/stjoseph) follow the irrigation link in the left column. If more information is needed contact Lyndon Kelley at 269/467-5511.

## On Farm Educational Event

The Michigan Water Stewardship Program, in partnership with the St. Joseph County Michigan State University Extension office in Centreville, will be hosting an on-farm educational day Wednesday, September 8 from 5:00 PM to 9:00 PM with a free meal from 6:15 PM to 7:30 PM. The evening event will be held at Villa-Miller farms located at 17316 Fairchild Road in Constantine. Operated by Henry Miller, Villa-Miller Farms is currently working towards verification with the Michigan Agriculture Environmental Assurance Program (MAEAP) in both the Cropping and Farmstead Systems, and has completed many necessary state and federal requirements to date that move this operation towards an environmentally verified farm.

Topics will include variable rate technologies used on Villa-Miller Farms, tips for designing weed control programs in Strip Till Systems, Corn Diseases and Crop Residues, Western Bean Cutworm Update, Growing Degree Day Accumulations and Crop Harvest as well as current Farm Bill programs through the Natural Resources Conservation Service. A farm tour will also highlight both dry and liquid bulk fertilizer and pesticide storage, cover cropping strategies, and a brief overview of the MAEAP verification process. At this time, RUP credits are pending, but anticipated. The evening event will also offer those producers interested in the Michigan Agriculture Environmental Assurance Program a MAEAP Phase I credit.

More information will be made available in the coming weeks, and can be found at [www.stjoecountycd.com](http://www.stjoecountycd.com). Please contact Melanie Stoughton, Water Stewardship Technician at 269-467-6336 with any questions.



## CRP Sign-Up May Offer Dry Corner Opportunities

Over 85% of Indiana and Michigan irrigated land uses center pivots for water distribution. Square fields and round irrigation coverage patterns leave triangular shaped dry corners. It is estimated that over 20,000 of this one to six acre un-irrigated triangles exist amongst Indiana and Michigan's 800,000 irrigated acres. These triangular shaped dry corners especially in seed corn production areas end up all too often in soybeans struggling from soybean cyst nematode or other problems associated with lack of rotation or go unplanted. Producers enrolled in CRP plant long-term, resource-conserving covers to control soil erosion, improve water and air quality, and develop wildlife habitat.

The General Conservation Reserve Program sign-up runs from August 2 through August 27, 2010 and it is an opportunity for producers to offer dry corners up for reserve and receive an annual payment. To qualify for General Conservation Reserve Program the land must have a cropping history four out of six years from 2002 – 2007. No minimum acreage requirement is stated but the acceptance by USDA is made on a point system comparing environmental benefit to USDA cost. Most irrigated soil types with moderate or less slope would receive a rental rate or could receive a \$95 - \$105 per acre annual payment.

See the attached overview of the General CRP program or contact your local Farm Service Agency for more information.

## MSUE Soybean Research in S.W. Michigan

MSUE has several research trials established in southwest Michigan this summer looking at factors that affect soybean production, white mold, sudden death syndrome and soybean cyst nematodes. There are three main research sites located near Sturgis, Decatur and Edwardsburg. The Sturgis site is investigating the potential for Determinate Soybeans to reduce the impact of white mold infection under two different irrigation moisture regimes. The site also included soybeans utilizing RR1 & RR2 technology, conventional low linoleic & conventional low sat beans

which will be carried to yield where we will look at profitability of each production system. One irrigation regime will follow traditional Crop water use irrigation schedule. A second regime will reduce irrigation in the vegetative growth stages and focus on providing ample water in the reproductive stages. You can visit the St. Joseph County plots at your leisure using the self-guided materials located at the site. The plots are 3 miles north of Sturgis, Michigan on Featherstone Rd, ¼ mile west of the intersection of N. Centerville Road. and Featherstone Road.

The research project located near Decatur is a site that had high infection rates of Sudden Death Syndrome and White Mold during the 2009 growing season. This site has an MSU variety trial that is screening MSU and Commercial Germplasm for SDS and White Mold resistance. A second research trial on the site is investigating the link between soybean cyst nematode source of resistance and an experimental seed treatment, votive, impacting the susceptibility of the plants to SDS. We also have areas treated with Contans, a biological control soil applied fungicide that attacks white mold sclerotia, in protecting plants in a highly infected field from white mold.



The research project located on Tom Kendell's farm near Edwardsburg is a long term management site for the management of soybean Cyst Nematodes.

These projects are funded by the Michigan Soybean Promotion Committee. MSUE and the MSPC are jointly hosting field day sites at the Decatur and Edwardsburg sites at 10:30 AM and 4:30 PM on Tuesday August 31, 2010. For more information contact the Van Buren County MSU Extension office at (269) 657-8213 or the Cass County MSU Extension Office at (269) 445-4438.