To All Ag Reporter Email Recipients:

Here is your weekly update for ag information. Click on the topic and it will take you directly to that article. In order of appearance:

County Offices are Closed on Monday in Observance of Labor Day

Notes from the Agronomy Field Day at Arlington on August 28

"Fertilization on a Budget" from Andrew Stammer

1. Soil Test every four years. Know what you have. Know what you need>
2. Use on farm sources of nutrients (manure). Incorporate as soon as possible to capture all available nitrogen.
3. Sidedress corn with liquid manure prior to V6
4. Take legume credits when possible. 40# N after soybeans.
5. Consider wastewater treatment plant sludge or biosolids and use appropriately.
6. Wood ash sources can raise pH and provide potassium.
7. Use ammonium and urea forms of nitrogen when applying pre-plant. The nitrogen will be available to the plant for a longer period of time.

"Tillage on Corn" – Francisco Arriaga

Experiments compared Strip till, No till, No till with residue removal in fall, and fall chisel with spring tillage operations. Quick and dirty take-aways were:

1. Soil temperature differences on all treatments were minor.
2. Some yield differences were noted.
3. Depending on tillage costs, No-till can be the most profitable

"Corn Plant Population" – Joe Lauer

Plant population (plants per acre) is the second most important decision a grower makes. Cost of seed and yield potential are factors in this decision. Quick and dirty take-aways:

1. Maximum grain yield occurs at 40,000
2. Maximum economic yield occurs at 35,000
3. 90% of economic yield occurs at 32,000 (a good target to shoot for)

4. Forage (silage) maximum yield occurs at 48,000
5. Forage (silage) maximum milk yield occurs at 45,000

In case you were wondering, what is the most important decision a grower makes..... why of course, it is hybrid selection.

The "Normal" Pattern of Corn Forage and Grain Development

The Kernels

- Corn exhibits a "double peak" for corn silage quality during its life cycle with the first NDFD peak at R1 and the second starch content peak at R5.5.
- Corn as a forage crop reaches maximum yield and quality values at nearly the same time (R5.5).
- At harvest (R5.5), the wettest plant part is the lower stalk, while the driest plant part is the grain. Adjusting the cutter bar can change forage moisture 3 to 4% points to better target the recommended moisture for the storage structure.

Corn is a high yielding, high energy, low protein forage commonly used for growing and finishing beef cattle, in cow-calf production systems, for growing dairy heifers, and for lactating dairy cows. Corn grown as a forage and fermented in a storage structure preserves the silage for subsequent feed-out. Understanding yield and quality changes during the life cycle of corn is critical for timing harvest of a field.

The "Double Peak" of Corn Silage Quality

Corn exhibits a "double peak" for corn silage quality during its life cycle (Figure 1). The first peak is related to energy derived from stover fiber (NDFD) and water-soluble carbohydrates, while the second peak is derived from NDFD and starch content of grain. Forage quality as measured by Milk per Ton is at the first quality peak just prior to silking (R1). Like all forages, Milk per Ton decreases following flowering (VT-R1). Unlike other forages, corn silage Milk per Ton after the kernel blister stage (R2), steadily increases to a maximum second quality peak around 50% kernel milkline development (R5.5) due to grain yield development.

Forage yield and Milk per Acre

One of the unique aspects of corn as a forage crop is that yield and quality reach maximum values at nearly the same time. Forage yield increases steadily through its life cycle. At R1 all the plant photosynthetic "machinery" is produced on the plant. For most hybrids grown commercially in Wisconsin the grain filling period (R1-R6) is about 55-60 d. Following pollination, grain develops in a sigmoidal fashion with a 7-10 d lag period, followed by a 40-44 d linear phase, and ending with a 7-10 d maturation phase. Starch content increases as grain develops and matures.

Multiplying corn forage yield by Milk per Ton results in Milk per Acre. Milk per acre peaks at R5.5. Then due to leaf senescence and loss, yield and quality tends to decrease slightly.

Using Forage and Grain Moisture for Harvesting

At some point forage yield is no longer as important as timing harvest at the correct moisture for the storage structure to ensure proper fermentation and preservation. The wettest plant part on corn is the lower stalk, which is also of poor quality (low NDFD) and is high in nitrates. The driest plant part is grain. By raising the chopper cutter bar 12 inches, forage moisture decreases 3-4% points. Also, the wettest, poorest quality plant part is left in the field. Forage yield is decreased about 10 to 15%, but forage quality increases 8 to 12%, so that overall Milk per acre is only reduced about 3 to 4%.

The effect on forage moisture is significant when the field is scheduled to be harvested by a custom chopper. By adjusting cutting height, the operator can better achieve the optimum moisture for the storage structure. About a one week shift in harvest timing can be achieved (assuming 0.5% per day drydown rate).

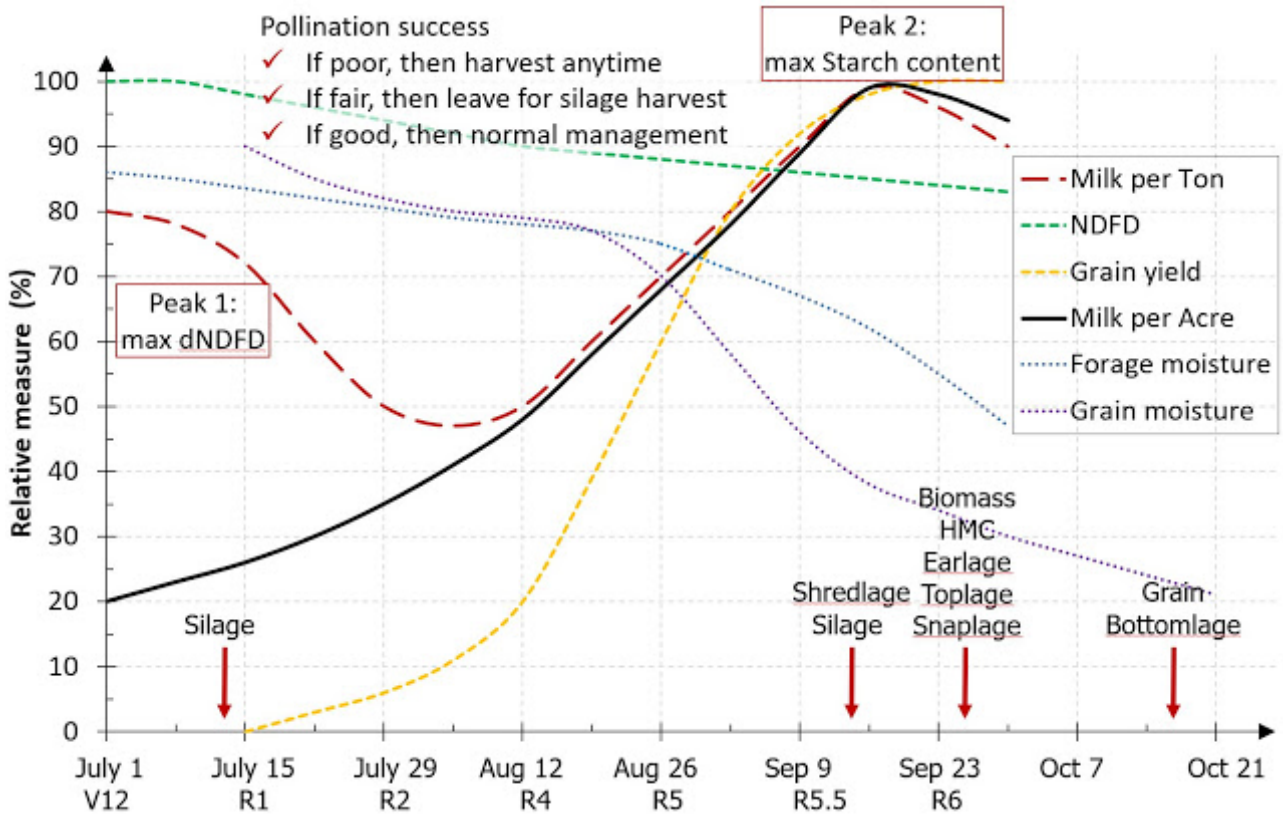

Figure 1. Normal Pattern of Corn Forage and Grain Development in Wisconsin.

Resilient Farms Conference

Save the Date for the Resilient Farms Conference, Thursday, December 12, 2019. Conference will be held in Wisconsin Dells from 9:00 am to 4:00 pm.

In this packed one-day conference you'll hear from industry experts and peers, participate in workshops tailored to your operation and have access to one-on-one consulting sessions, all to guide you in thinking strategically about preparing your unique operation for success today and in the years to come. Conference topics will range from farm financials and transition planning, to examples of how peers have innovated farming practices to maximize economic and sustainable opportunities.

Location and Registration details will be made available soon. For now, just mark your calendar.

Hemp Webinar Recordings Now Available

Recordings from the August 7 webinar series are now available. This series was brought to you by Division of Extension, Michael Fields Agricultural Institute, Legacy Hemp, and DATCP. Speakers include Dr. Shelby Ellison, Dr. Leah Sandler, Dr. Rodrigo Werle, Melody Walker, and Bryan Parr. Special thanks to Tony Roman for video production!!

It can be found on the youtube channel and hemp website.

www.youtube.com/WisconsinHemp

https://fyi.extension.wisc.edu/hemp/august-7-2019-webinar-series/

A Q&A document will be coming so you can easily find and jump to a particular question found in the recordings.

Grant Programs and Financial Options for Farmers

Are you looking for ways to develop your innovative agricultural business? Can farmers improve profit by capturing more from the consumer? Is expanding the farm the only opportunity to increase farm income to bring in family members? Join us for a workshop designed to help farmers identify whether grants or other financial options might be right for them.

Small businesses and new startups create most of the new employment opportunity in the US. Trying something new involves learning and levels of risk. Grants are used to help defray risk, encourage learning and entrepreneurship. Wisconsin farmers have used grants to develop value-added enterprises, try out innovative production and marketing techniques, and educate other farmers and the public about sustainable agriculture. All focused upon improving net farm income which helps our rural economies. But figuring out whether a grant program is right for you and working through the application can be intimidating. This workshop will discuss when grants make sense and cover ways to plan your project and strengthen your application.

Specific grant programs to be covered include:

- USDA's Value Added Producer Grant (VAPG) program, which provides planning and working capital funds to farmers and farmer-based enterprises to develop and implement value-added ventures
- USDA's Sustainable Agriculture Research and Education (SARE) grant program, which funds research, and education projects that advance sustainable agriculture
- USDA's Specialty Crop Block Grant (SCBG) program, which funds endeavors that enhance the competitiveness of Wisconsin Specialty Crops
- Wisconsin's Buy Local, Buy Wisconsin (BLBW) grant program, which funds projects that increase the demand for and supply of locally produced foods in Wisconsin
- Other programs, including Wisconsin's Farmer-led Watershed grants

In addition, the workshop will briefly cover USDA cost-share and loan programs for farmers.

Dates and Locations:

Tuesday, September 17th– Central WI – Marshfield, WI
To register, call (715) 261-1230 x 2 or email heather.schlesser@wisc.edu
Early-bird registration closes on Sept 10th.

Thursday, September 26th– Southern WI – Dodgeville, WI
To register, call 608-930-9850 or email barry.hottmann@wisc.edu or gene.schriefer@wisc.edu.
Early-bird registration closes on Sept 19th.

The $15 registration fee includes lunch and materials. A limited number of scholarships are available if the cost of registration is a barrier. The workshops are sponsored by Extension, USDA, DATCP, and Michael Fields Agricultural Institute.

Wisconsin Pest Bulletin Is Now Available

https://datcpservices.wisconsin.gov/pb/pdf/08-29-19.pdf

INSIDE THIS ISSUE:

Wisconsin Crop Manager

2019 PEST MANAGEMENT UPDATE MEETING SERIES ANNOUNCED FOR NOVEMBER

The schedule for the 2019 Wisconsin Pest Management Update meeting series has been set. Presentations will include agronomic pest management information for Wisconsin field and forage crops. Speakers include Mark Renz and Rodrigo Werle, weed ...

A "POST-MORTEM" OF THE 2019 CORN PLANTING SEASON AND WHAT WE CAN DO ABOUT IT

Dr. Joe Lauer, UW-Madison Agronomy and Extension State Corn Specialist The Kernels: The 2019 planting season was "unprecedented." Harvest season will be extended this year. Corn maturity is all over the board due to late ...

Weekly Emails Online!

http://columbia.uwex.edu/ag-calendar-and-deadlines/

The Ag Reporter "Snapshot" is presented to you each week by George Koepp, Columbia County UW-Extension Agriculture Agent. If you have any questions about these articles or need other ag-related information, please contact George at 608-742-9682 or by email george.koepp@ces.uwex.edu.