Crop weather
Rainfall, air and soil temperatures, degree-days, soil moistures, frost depths and other current and historical weather data for a little spot about two miles west of Lamberton, MN can be found at the University of Minnesota Southwest Research and Outreach Center (SWROC) website: http://swroc.cfans.umn.edu/WeatherInformation/index.htm.

SW Minnesota has missed much of the heavier rains this spring. North of the Minnesota River and east of Mankato, weather has been much less cooperative and corn planting greatly delayed. Planting progress is highly variable by geography.

Corn is up in SW MN
Some have been worried about emergence of corn planted early with cold, wet conditions. We saw the spiking of early planted corn in a planting date study at the SWROC on 5/13. A couple of reports from United Ag Tech consultants about emerging
Martin County corn also came in yesterday. Travis Vollmer, SWROC plot technician took this 5/14 photo of the dates planted in a MN Corn Research and Promotion Council funded trial, of which Lamberton is one of the sites.

We have a soybean date of planting in the ground and volunteer soybeans have started to emerge. Wishes for warmer drier weather so all can get the 2014 crop in.

**Black cutworms**

Over the past couple weeks, cooperator-run pheromone traps indicate the potential for localized damaging populations of black cutworm in corn and other crops. Faribault, Lac Qui Parle, Swift and Waseca county have had significant captures. Cutting from the earliest of these flights is projected to occur after May 28.

Areas with delayed spring tillage and early season weeds are most attractive for migrant cutworms to lay eggs.

*This does not mean insurance insecticide applications are warranted and rescue treatments work well.*

2014 University of Minnesota Cooperative Black Cutworm Trapping Network Newsletters with further information on cutworm biology, scouting, thresholds and control as well as maps of trap captures and cutting predictions can be found at:

http://swroc.cfans.umn.edu/ResearchandOutreach/PestManagement/CutwormNetwork/index.htm

**Wasps**

I have had questions about large numbers of wasps on SW MN farmsteads last week. I don't have a good photo or description of these so don't have an positive ID. A cell phone photo of a few bedraggled wasps, drenched in some sort of wasp-lethal liquid, did show up tho. I have not seen anything unusual, only a few overwintered female paper wasps and suspect that paper wasps are what others are reporting. Although highly variable in color, paper wasps are easy to identify. Whatever the species, there are two possible reasons for the apparent wasp abundance this spring: 1) An unusually large number of females produced last fall and overwintering well or 2) A sudden bout of warm weather causing all the wasps to emerge from hibernation at the same time.

Because some people are highly allergic to stings, there is a reason to control wasp nests in areas frequented by humans. While there are exceptions, paper wasps and most wasp species are not overly aggressive unless aggravated. Disturbing wasp nests or arguing with yellow jackets over your late summer picnic treats are a couple ways to aggravate a wasp. There is a reason that yellow jackets are so annoying in fall but that is a story for another time.

**Alfalfa insects**
I suspected I would be finding Potato leafhoppers and Aster leafhoppers in sweeps of alfalfa yesterday but did not. A few adult alfalfa weevils have already made it back to alfalfa from their wintering areas. There were a few small adult Clover root curculio beetles present as well. The alfalfa looks good in spite of the winter and cold spring.

Scouting early-season corn.
Since corn is starting to emerge, it is time for the oft reposted corn stand evaluation article. Don’t forget a rotary hoe or drag to help struggling emergence.

from: Corn stand evaluations 2010
Dr. Jeff Coulter,  Extension Corn Agronomist
Bruce Potter,  SW Minnesota Extension IPM Specialist

Corn scouting should begin in earnest as soon as fields can be rowed. Initial efforts should focus on evaluating stand. Determining the cause in areas with poor emergence might require some detective work because there are many potential causes of poor stand. My suggestion is to start with the obvious. Was seed planted? Most of us can make a mistake once in a while and any mechanical devise is predestined for failure.

Before blaming insects (wireworms, seed corn maggot, cutworm) or a disease, eliminate abiotic factors such as seed depth, compaction, drowning. Remember that dead seedlings, regardless of the cause, will rot under high moisture conditions. They also seem very attractive to wireworm. Cold, slow growing conditions do, however, favor seedling-attacking insects and disease.

Look for corn seed. How about planting depth? Shallow planted corn might emerge later and less evenly than corn planted a bit deeper. Shallow planted corn (< 1 ½ inches) is exposed to greater temperature fluctuations and less consistent moisture. Shallow seeded corn is also at risk for poor root development and root feeding insect damage when it does emerge.

Did the seed germinate? Lack of moisture or cold conditions are the primary cause of poor germination. Has the seed rotted? Fungicide seed treatments do a good job of protecting seed and seedlings from some fungal pathogens but can be overwhelmed under prolonged very wet, cold conditions.

In the case of corn plants that had emerged and were frozen, check the below ground tissue. If firm, the plant is likely to survive. Splitting the stems to look at tissue color will point out future problems. Brown, gray and water soaked tissue; particularly crowns, indicate a short life expectancy for the plant.

If plants are frost injured it is best to leave them recover on their own (particularly the small corn this season). Removing the dead tissue by mechanical means or spraying plant health inducing compounds will not improve the survivability of the crop and could make things worse.
Is there evidence of insect feeding? Seed corn maggot and wireworms are the two insects most often associated with corn emergence failures in southwest Minnesota. Seed corn beetles can also occasionally reduce stand. Slow emerging corn is at greater risk from these below ground pests. Unfortunately, there is no effective treatment, other than replanting, for these insects after corn is planted. The insecticide treated seed provided with most Bt-hybrids (and others) should minimize problems from seed corn maggot but occasionally allow attack from heavy wireworm infestations.

**Is replanting necessary? How bad is too bad?**

Sometimes, things work out poorly. Decisions on replanting are seldom enjoyable when a significant stand loss occurs. These decisions are part science and part art. Common sense is at a premium. Yield potential from reduced stands must be weighed against potential yield reductions from later planting dates. Are missing plants still coming? Check for decay and below ground insect damage.

Injured and greatly delayed plants should be viewed with skepticism. Scattered, late-emerging plants will be out-competed by more vigorous neighbors and contribute little to yield. They may have a better chance in areas where most of the plants are in similar straits.

For example, from Tables 1 and 2, on May 20th 24,000 healthy plants/acre and replanting to a full stand are a wash. If replanting, growers should consider the length of the growing season that remains and select hybrids of appropriate maturity, as shown in Table 3.

When replanting very thin to non-existent stands, seeding directly into the existing seed bed is a better option than working up mud. Existing plants should be removed by appropriate herbicide or tillage when replanting low but variable stands. Tillage may also be needed with fields hardened by heavy rain or previous tillage problems.

Evaluate fields carefully. While entire fields may require replanting, you may only need to spend the time, money and effort to replant a portion of the field, if any.

**Table 1. Relationship between corn plant population and yield potential. Data are from research at Lamberton and Waseca, MN from 2005-2008.**

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<th>Population (plants/acre)</th>
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</tr>
</tbody>
</table>

*Table 2. Relationship between corn planting date and yield potential. Data are from planting date studies conducted at Lamberton, MN from 1988-2003 by Bruce Potter and Steve Quiring.*

Happy trails,

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