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# water spouts

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gave those states authority to conduct production research on industrial hemp.

The LREC began conducting research on hemp after receiving state approval in 2015. To further the possibilities of this new crop, the 2018 farm bill granted authority to those states that legalized hemp to allow commercial production of the crop.

During the field day, LREC scientists will share information about the hemp production research they have been conducting since 2015.

### Other topics include:

- Getting properly licensed for commercial hemp production
- Current and future outlook for hemp production
- Existing and potential markets for hemp

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## NDAWN Potato Blight App

In 2019, the Potato Blightline will be available only through the newly released NDSU North Dakota Agricultural Weather Network (NDAWN) Potato Blight app or on the NDAWN webpage (<https://ndawn.ndsu.nodak.edu/potato-late-blight.html>).

This app (**shown on Page 2**) was released last year to provide field-specific information of when environmental conditions are favorable for early blight and late blight by entering key individual field information such as planting date, emergence date and row closure. The NDAWN Potato Blight app is available for Apple and Android phones and tablets at [z.umn.edu/potatoapp](http://z.umn.edu/potatoapp).

Blightline messages and alerts will be sent through this app to potato growers in North Dakota and also will be available on the NDAWN webpage. Unfortunately, many of the Minnesota sites will not work for the blight model, but they do have current weather information and can be used for spraying decisions.

## Upcoming 2019 NDSU Field Days

Langdon Research Extension Center (8 a.m. to noon)	July 19	701-256-2582
Hemp Field Day, Langdon REC (9 a.m. to noon)	July 23	701-256-2582
Oakes Irrigation Research Site	Aug.15	701-742-2744

## Hemp Field Day July 23 at Langdon REC

NDSU's Langdon Research Extension Center (LREC) has scheduled its first hemp field day for Tuesday, July 23. The field day will run from 9 a.m. to noon followed by lunch.

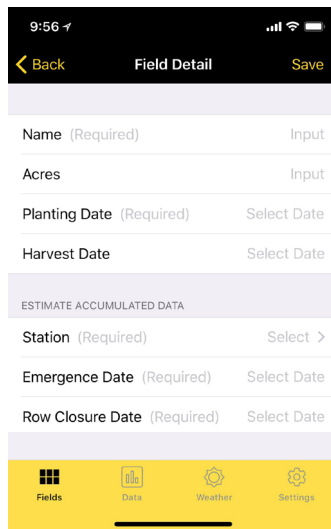
Attendance is free and includes a question-and-answer session. The LREC is one mile east of Langdon on North Dakota Highway 5.

The 2014 farm bill allowed certain states to authorize small acres of pilot hemp production. The bill also

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The NDAWN Potato Blight app is available for Apple and Android phones and tablets at [z.umn.edu/potatoapp](http://z.umn.edu/potatoapp).



A video tutorial on how to use the app can be found at [z.umn.edu/appvideo](http://z.umn.edu/appvideo).

Please remember to send late blight samples to us for confirmation so we can alert growers when late blight has been found.

Let us know if you have any questions on the app.

### Andy Robinson

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## Irrigation Tips for a Wet Growing Season

When (and if) more normal weather and rain patterns return, full-season crops most likely will need irrigation to reach maturity, especially on coarse-textured soils. Many parts of the state have received above-average precipitation since the start of the growing season, as shown in **Figure 1**, but some areas are quite a bit below normal.

At this time, having sufficient growing degree days accumulated for crops to reach maturity before frost is not a certainty. Depending on where your irrigation system is will affect how you manage water.

### Here are some tips to help maximize your irrigation investment:

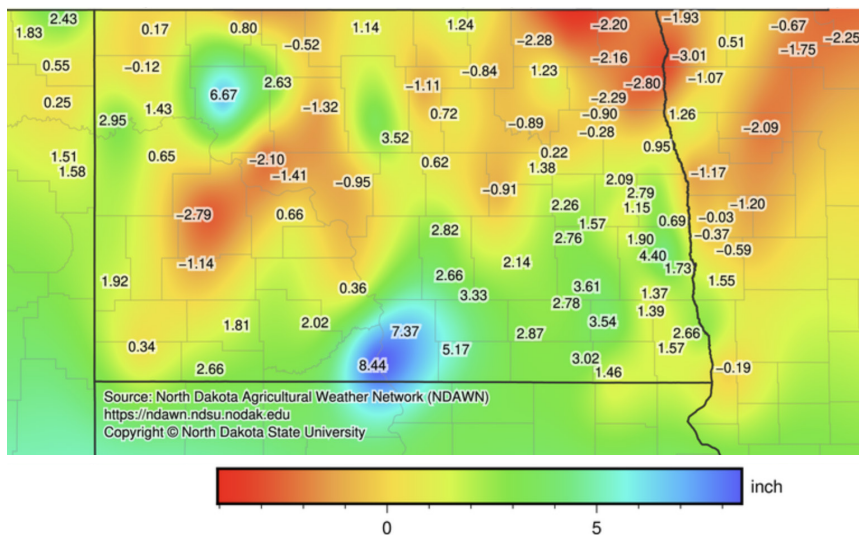
- Learn how to estimate the maturity date of your crop and determine when the soil has sufficient moisture to mature the crop. In relatively “wet” areas, as shown in **Figure 1**, determining if turning on the irrigation pumps is worth the effort or whether you should just get by with moisture from rain can be very difficult,

but be prepared. Have your irrigation system ready to go if needed. Don’t wait until the crop gets dry and you find out you have some problems with the well or sprinkler system. As one irrigator told me, “On my sandy soils, with no rain, I am only seven days away from a drought.”

- Learn the effective root depth of your crop. A drawing and chart of the normal effective root depths of irrigated crops is shown in publication AE792, “Irrigation Scheduling by the Checkbook Method” (revised) and online at [www.ag.ndsu.edu/publications/crops/irrigation-scheduling-by-the-checkbook-method-1](http://www.ag.ndsu.edu/publications/crops/irrigation-scheduling-by-the-checkbook-method-1). Due to the excess rain in many areas, most crops may have relatively shallow root zones. If a dry spell occurs, the crop could go into moisture stress more quickly than normal.
- Late July and August is a very critical time because most crops will be flowering and setting seeds. Water stress due to lack of attention to the root zone depth and soil water availability can reduce yields. Research has shown that the greatest yield reductions due to moisture stress occur during the flowering and seed-setting phase of development.

The irrigators in the areas of the state that have received below-normal rain already are managing their irrigation systems; however, if your system is in a “wet” area, now would be a good time to set up an irrigation scheduling program. We have developed three irrigation-scheduling tools for your use. They can be found online at [www.ag.ndsu.edu/irrigation/irrigation-scheduling](http://www.ag.ndsu.edu/irrigation/irrigation-scheduling).

Departure from Normal Rainfall (inch) (2019-05-13 – 2019-07-11)



**Figure 1.** Departure of rain amounts in inches from normal. Positive numbers show excess rain and negative numbers show less than normal.

## Project Safe Send: Disposal of Pesticides

Project Safe Send is a safe, simple and nonregulatory program that helps people safely and legally get rid of unusable pesticides free of charge. The program accepts old, unusable or banned pesticides, including herbicides, insecticides, rodenticides and fungicides. For a list of accepted pesticides, go to [www.nd.gov/ndda/pesticide-program/project-safe-send/project-safe-send-accepted-pesticides](http://www.nd.gov/ndda/pesticide-program/project-safe-send/project-safe-send-accepted-pesticides).

The collected pesticides are shipped out of state for incineration. Project Safe Send is funded through product registration fees paid by pesticide manufacturers.

Check your storage areas for any unusable pesticides. If the containers are deteriorating or leaking, pack them in larger containers with absorbent materials. Free heavy-duty plastic bags are available from the North Dakota Department of Agriculture if needed. More information on safely transporting old pesticide containers can be found at [www.nd.gov/ndda/pesticide-program/project-safe-send](http://www.nd.gov/ndda/pesticide-program/project-safe-send).

People with more than 1,000 pounds of pesticides should preregister one week prior to delivery. No other preregistration is required. A maximum of 20,000 pounds of pesticides will be accepted per participant. Pesticide rinse water and empty containers no longer are accepted.

### The collections will run from 8 a.m. to noon local time at the North Dakota Department of Transportation facilities in the following cities:

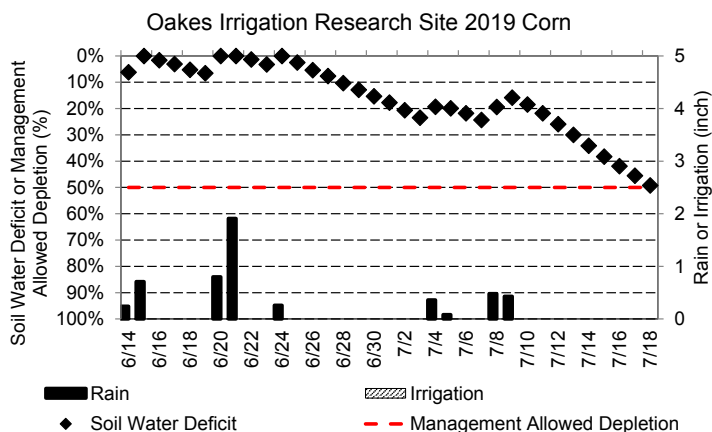
July 18	Harvey	501 Jackson Ave.
July 23	Larimore	1524 Towner Ave.
July 24	Langdon	10424 Highway 5
July 25	Devils Lake	1905 Schwan Ave. N.W.
July 26	Valley City	1524 8th Ave. S.W.

**Jeremiah Lien**, 800-242-7535 or 701-425-3016  
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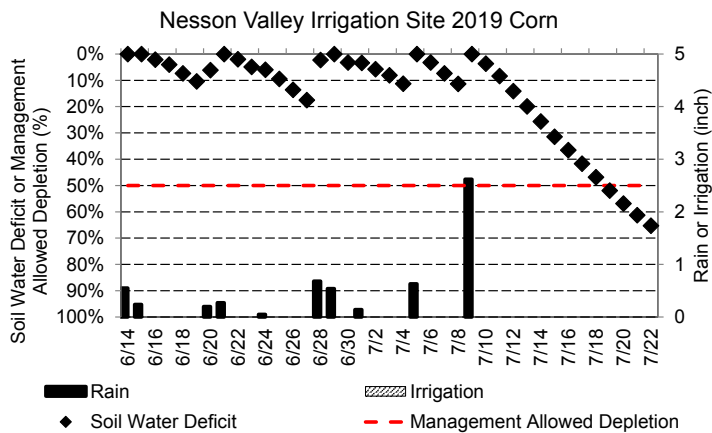
## Irrigation Scheduling: Update of Checkbooks for Oakes and Nesson Valley Corn

In the June issue of *Water Spouts*, I showed a graph of the output from our irrigation scheduling checkbook for corn at the Oakes Irrigation Research site. The emergence date was about May 28 and, as shown in **Figure 1**, the area has received more than 3 inches of rain above normal.

**Figure 2** is an update of the checkbook and **Figure 3** is an update of the checkbook for corn at the Nesson Valley Irrigation Research site. What is interesting to note is that both checkbooks predict that irrigation should commence on July 18, assuming no more rain is received.



**Figure 2.** Shows how the soil moisture deficit in the root zone at Oakes will change, assuming no more rain is received between July 11 (date of last spreadsheet update) and July 18.



**Figure 3.** Shows how the soil moisture deficit in the root zone at Nesson Valley will change, assuming no more rain is received between July 11 (date of last spreadsheet update) and July 18.

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## **North Dakota Water Education Foundation Summer Water Tours**

Access to substantial quantities of clean water is important for the development of North Dakota,  
and the best way to learn about water projects is to see them in person via a tour.

These tours provide a firsthand look at North Dakota's critical water issues. Registration is  
\$20 per person and includes tour transportation, meals, refreshments, informational materials  
and a one-year subscription to *North Dakota Water* magazine.

### **Tours offered are:**

- July 18 – Lower Red River Basin (tour begins and ends in Grand Forks)
- July 31 – F-M Area Diversion Project and Weather Modification (tour begins and ends in Fargo)
- Aug. 7 – Water and Oil (tour begins and ends in Williston)
- Aug. 15 – Missouri River and Industry (tour begins and ends in Bismarck)

For more information about each tour online, go to <https://ndwater.org/events/summer-water-tours/>  
or send a check made out to NDWEF and mail to P.O. Box 2254, Bismarck, ND 58502. Please  
indicate which tour or tours you want to attend and include the number of people who will attend.  
For more information, give us a call or send an email.

**North Dakota Water Education Foundation, 701-223-8332**

Fax: 701-223-4645

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