

How to Use the Web-based Irrigation Scheduling Program on NDAWN

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For optimum performance the **Mozilla Firefox** web browser is recommended for use with the Irrigation Scheduler. It may be downloaded for free at <http://www.mozilla.com>.

The Web-based irrigation scheduler is part of the NDAWN web site that can be found by entering this address <http://ndawn.ndsu.nodak.edu/> into your web browser.

1. On the left side of the NDAWN homepage, at the bottom, click the link labeled “**Log In**”.
2. A login page will appear. If this is the first time using the Irrigation Scheduler click on “New User? **Sign Up!**” in the middle of the page.
3. Enter a user name and password on the account sign up form then click on the **Sign Up** button.
4. This should bring you back to the NDAWN home page. Move your pointer over **Applications** and then click on **Irrigation Scheduler** as shown below.

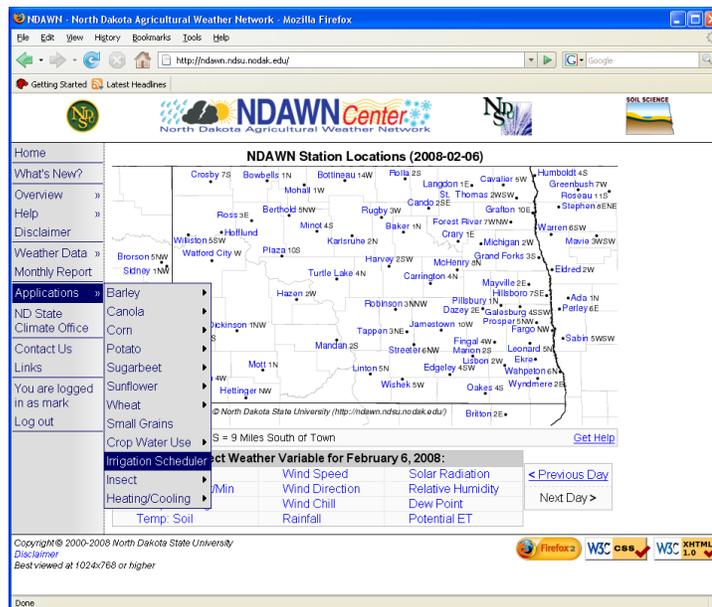


Figure 1. NDAWN home page.

5. You may select your **County** and **Township** to go directly to the area of the desired field. However, you can click and drag over the field's estimated location on the map of North Dakota. You may need to use the “**zoom selector**” along with the “**pan**” on the left side of the map to bring your desired field into sight as shown in Figure 2. Also, by clicking on the blue tab with the “+” on the right side of the map you can select/deselect view of counties, state & federal roads, townships and soil map units.

- Once the desired field's perimeter is selected by the red box as shown in Figure 2, name the field as desired and then click on **Save this field**.

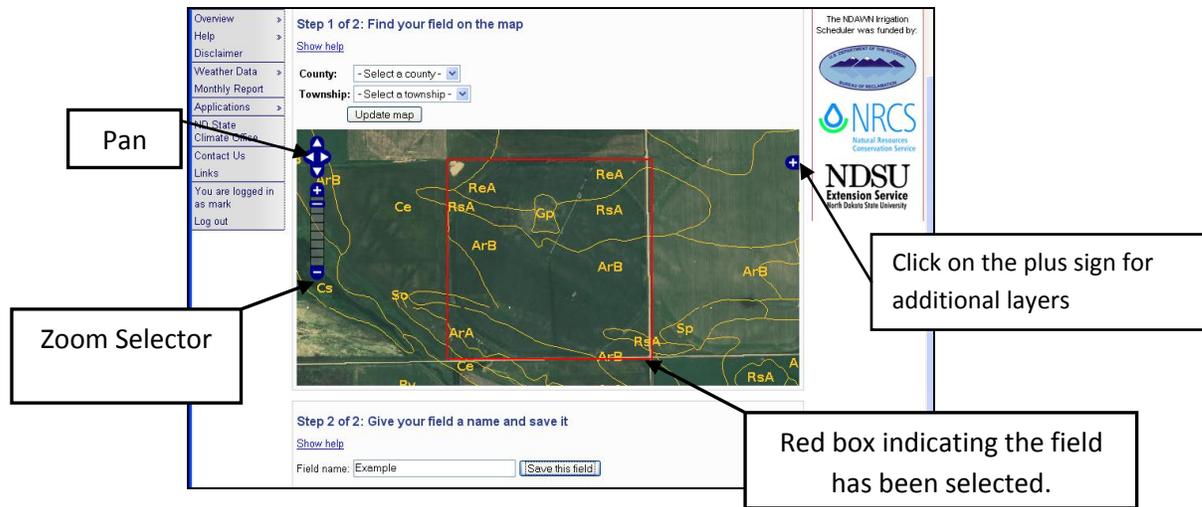


Figure 2. Selecting your desired field.

- The next screen will be used to enter the field's information such as **year**, selection of **crop**, **planting date** and **emergence date**. If the crop selected is alfalfa, only the emergence or "greenup" date will be shown. Average planting and emergence dates will be input automatically, but they can be changed manually on this page. The closest NDAWN weather station will be selected automatically. However, this can be changed if the user chooses to do so in the case that the selected weather station is malfunctioning.

NOTE: For demonstration purposes it is necessary to select a previous growing season if the current growing season has not already begun.

- After the desired crop information is entered, select **Save changes and update table**.
- Other field information may be accessed in the **Field details** tab and **Soil Properties** tab as shown in Figure 3.
- In the **Crops** tab, if the date has passed in the growing season, the date should be shown in blue. Click on **any date** that is in **blue**. This page will allow you to enter the **Rainfall** amount, the **Irrigation** amount and the **soil moisture deficit** correction (for each individual soil type) that may have happened on that date. Click on **Save Changes** when desired information is entered for the selected date.
- In the **Crops** tab, several columns of information are available for the selected field. The irrigation scheduler assumes that the soil is fully saturated on the emergence date even though that is unlikely. A correction in the soil moisture deficit will need to be made to accurately schedule irrigation for the season. It is recommended to check and update the soil moisture deficit every other week for optimal soil water management.
- Soil moisture deficits in both inch equivalent and percent moisture is calculated separately for each **Soil Series** (soil type) in the irrigation scheduler.

The screenshot shows the NDAWN Irrigation Scheduler interface. At the top, there are logos for NDSU, NDAWN Center, and NRCRS. The main content area is titled 'Irrigation Scheduler' and includes a navigation menu on the left. The 'Crops' tab is active, displaying a form for field details and a map of soil map units. A table below the map shows irrigation data for various dates from May 17 to May 20. Callout boxes highlight the 'Add new field to list' button, the 'Crops, Field details and Soil Properties tabs', the 'Soil map units for selected field', and an 'Individual Map unit'.

| Date | Historical Crop Water Use (inches) | Crop Water Use (inches) | Irrigation Amount (inches) | Rain (inches) | Map Unit: Arvilla... (47%) Major Component: Arvilla (85%) | | Map Unit: Renshaw... (17%) Major Component: Renshaw (90%) | | Map Unit: Renshaw... (17%) Major Component: Renshaw (70%) | | | | |
|--------|------------------------------------|-------------------------|----------------------------|---------------|--|----------------------|--|---------------------------|--|-------------------------------|---------------------------|----------------------|-------------------------------|
| | | | | | Moisture Deficit (inches) | Moisture Deficit (%) | Measured Moisture Deficit (%) | Moisture Deficit (inches) | Moisture Deficit (%) | Measured Moisture Deficit (%) | Moisture Deficit (inches) | Moisture Deficit (%) | Measured Moisture Deficit (%) |
| May 17 | 0.03 | 0.04 | | | 0.04 | 5% | | 0.04 | 3% | | 0.04 | 3% | |
| May 18 | 0.03 | 0.05 | | | 0.09 | 10% | | 0.09 | 7% | | 0.09 | 7% | |
| May 19 | 0.03 | 0.01 | | | 0.10 | 10% | | 0.10 | 7% | | 0.10 | 7% | |
| May 20 | 0.03 | 0.02 | | | 0.12 | 12% | | 0.12 | 8% | | 0.12 | 8% | |

Figure 3. Image of the selected field is shown on the checkbook page of the irrigation scheduler.

13. After a field is set up the user will not need to relocate or reenter the field's season data in future visits to the irrigation scheduler.
14. To monitor another field select **Add new field to list** (circled in Figure 3 above the **Crops, Field details and Map units** tab).
15. Repeat the procedure for locating the next field of interest.

Please Note: If you use Internet Explorer 6.0, the checkbook pages will not print properly. We have not been able to resolve this problem and recommend you use the either the **Firefox** or **Opera** web browsers. Both are free. You can download them by clicking on the buttons at the bottom of the NDAWN webpage.