#### SOUTHWEST ND

Soil moisture in the southwest was looking very bleak until mid-April. The past couple of weeks has brought much needed moisture in the forms of snow and slow soaking rains. According to NDAWN, rainfall in the region from April 15<sup>th</sup> to May 4<sup>th</sup> ranges from 1.99 inches in Beach to 2.78 inches in Dickinson to 3.65 inches in Hettinger. Just as rainfall has been variable so has planting this spring. In Hettinger County growers are virtually done with wheat and starting in on peas and canola. Further west towards Golden Valley County some are 1/3 done with planting small grains, pulse crops, and canola, with others just starting. Many have their wheat in and are finishing up with any other small grains before moving on to pulse crops or canola. Most in the region are planning on waiting a couple of weeks to start on row crops. There is some activity with herbicide application across the region as well. There are many that had their fertilizer applied before the rainfall came, but for those still looking to apply be sure to soil test and use the NDSU Nitrogen Calculators and Fertilizer Recommendation Tables and Equations.

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### SOUTHWEST ND

Rain over the past week has been variable. According to NDAWN, rainfall in the region from May 4<sup>th</sup> to May 11<sup>th</sup> ranges from 0.14 inches in Mott to 0.50 inches in Dunn County. In the past week there has been plenty of activity in the field. Planting progress, like rainfall in the area has been variable. Some growers are just getting started, while some are close to completed with small grains. In Stark County some growers are finishing up small grains, canola, and peas and moving on to corn and flax. In Hettinger County some of the growers that were in the field early this season are 90% done with planting. With temperatures forecasted to drop into the 30's be sure to keep an eye out for potential frost damage or issues with imbibitional chilling.

# SOUTHWEST ND

Temperatures in the region dropped below freezing towards the end of last week. According to NDAWN Hettinger reached down to 24 °F on May 14<sup>th</sup> and further north it ranged from 25-31 °F as a low. With these low temperatures it is important to scout fields for potential frost damage. The extent of frost damage depends on factors such as the growth stage of the crop, soil moisture content, and the length of time the temperature is below freezing. Where the old vegetation may look frost damaged, it is important to consider where the nodes and growing point of the plant are located. After a frost be sure to wait 4 days to a week to make a decision. If the growing point is not damaged and the new growth looks healthy there is a good chance the crop will survive.

Many growers in the region have small grains, pulses, and canola in the ground. In Hettinger County growers are close to finishing corn and flax with sunflowers next in line to be planted. In Stark County corn is about 50% planted with most not having started on sunflower yet. Alfalfa in the region is looking good, however some fields may have suffered from frost.

### SOUTHWEST ND

Spotty rains across the region over the past week. Most fields in the southwest could use a good shot of rain. Saline spots in fields are showing through with the dry weather over the past week. While there hasn't been much for rain the weather has allowed local producers to near wrapping up corn planting and get a good start on sunflower planting. Early planted corn is beginning to emerge. Stripe rust was found in Hettinger on a susceptible variety of winter wheat this week. Be sure to scout fields to identify any potential issues whether it is diseases, insects, nutrient deficiencies, or weeds

# SOUTHWEST ND

Much needed precipitation over the last week. Rainfall amounts were spotty with some getting close to 2 inches and others barely receiving any moisture. NDAWN observed 1.16 inch in Dickinson, 1.74 inch in Dunn County, and 0.68 inch in Mott. Most growers are either finished planting or finishing up corn and sunflowers. Spraying is in full swing with most working on weed control. There are some reports of frost damage becoming visible from the frost earlier in the growing season on winter wheat and alfalfa.

There have been some reports of wheat streak mosaic virus in the region. Importance of crop rotation and killing the green bridge is evident in situations like this. Rotating from cereals to broadleaf crops like alfalfa, peas, sunflowers, or canola could help avoid disease outbreaks and help with weed control. As winter wheat heads are beginning to peak out keep in mind to kill off the green bridge post-harvest later this season.

# SOUTHWEST ND

A majority of the southwest hasn't received any precipitation since May 31st. Most growers are finished planting with a few still wrapping up acres of corn and sunflowers. Alfalfa is getting close to the first spring cut. For growers that had alfalfa weevil issues the alfalfa may be cut early. When considering cutting alfalfa be sure to know what your objectives are. Harvest schedule will depend on goals for harvested yield, nutritive quality, or vigor of the perennial stand.

Spraying equipment has been active lately. Some main weed concerns are with absinthe wormwood, leafy spurge, and Canada thistle. Reports of more stripe rust have been found in winter wheat, be sure to be scouting for any disease issues that may arise. One of the main factors of a good IPM program is to properly identify your pest, be sure to scout fields to know what issues may be arising so they can be controlled at the most cost effective timing.

### SOUTHWEST ND

Severe weather swept through the region on Tuesday, June 21<sup>st</sup>. Some areas received significant hail damage and high winds were fairly consistent across the southwest. Most of the region is still in need of rain, especially south of 194. Crops are showing some stress from the lack of moisture, especially on hilltops. Spring grains did not put on any tillers in some fields from the added stress. Spraying is still going on when the weather allows. Hay is being taken down across the region with producers hoping for some rain to take a second cutting later in the season. Fields of yellow are showing up across the countryside as canola continues to bloom.

### SOUTHWEST ND

Alfalfa and hay fields in the region are still being taken down.Most canola is either blooming or beginning to drop petals. Most peas are finished with flowering. Spring wheat and barley are heading. Winter wheat is in various stages of ripening. There are signs of drought stress, but most crops in the region are matured further along than normal. Producers are beginning to plan that they could be harvesting a week or two earlier than past years

Dickinson received some rain recently. On Friday June 24<sup>th</sup> NDAWN reported 0.39 inch of rain and on Sunday June 26<sup>th</sup> 0.04 inch was reported. On Friday evening the wind died down enough for spraying and many fields were sprayed over the weekend. Most fields in the region are dry. Sporadic storms and rainfall swept across the region in the past week. Some areas experienced high winds and hail. For grain fields affected by hail, some producers are planning to cut it for hay. If planning to cut a hail affected crop for forage be sure to contact your insurance agent before doing anything and check the hay for nitrates.

There have been multiple reports of stock ponds and other water sources with high total dissolved solids and sulfates. Consequences of livestock consuming the poor quality water include several health issues. Bowman County agent, Erin Gaugler, reports that treatment with thiamine has had very limited success. Sulfate recommendations are less than 500 ppm for calves and less than 1,000 ppm for adult cattle. Total dissolved solids above 3,000 ppm can begin to cause adverse effects. If there are any concerns get your water tested. More information can be found in the NDSU Extension Livestock Water Quality Publication <a href="https://www.ag.ndsu.edu/pubs/ansci/livestoc/as1764.pdf">https://www.ag.ndsu.edu/pubs/ansci/livestoc/as1764.pdf</a>

We have organized a seminar entitled "Barley: From Field to Glass" in cooperation with the North Dakota Barley Council on Thursday, July 7, 2016, at Greg Kessel's farm approximately 2.5 miles west and 1 mile south of Belfield, ND (13261 37th St., Belfield, ND) beginning at 1:00 PM MDT. More information on the field day can be found at <u>https://www.ag.ndsu.edu/DickinsonREC/barley-from-field-to-glass</u>

IPM scout Brandi Herauf snapped some pictures of a hail damaged corn field in the Mott region.



Ryan Buetow Area Extension Specialist/Croppings Systems NDSU Dickinson Research Extension Center

### SOUTHWEST ND

Canola and flax are finishing up blooming. Winter wheat fields in the region are turning color. There were scattered storms over the past week that dropped some hail. Most of the region is still dry. From Tuesday, 6/28 to Tuesday 7/5, NDAWN recorded 0.27 inch of rain in Bowman and up to 0.46 inch of rain in Dunn County. Some fields are showing some drought stress.

The Dickinson Research and Extension Center Field Day is scheduled for the morning of Wednesday, July 13, 2016 at the Center Headquarters (Big Red Barn Building) at 1041 State Ave, Dickinson ND 58601. Speakers begin at 8:50 covering topics such as weed identification, tile drainage, seeding rates in small grains, herbicide resistance, disease management, and marketing. The event will finish at noon with a lunch to follow. CEU credits will be available for certified crop advisers. More information on the field day can be found at the DREC website.

https://www.ag.ndsu.edu/DickinsonREC/events/dickinson-research-and-extension-center-field-day

A sunflower field north of Glen Ullin, most sunflowers in the region are in the R1-R3 stage.



Ryan Buetow Area Extension Specialist/Croppings Systems NDSU Dickinson Research Extension Center

### SOUTHWEST ND

Some much needed rain fell across the region in the past week. Between Wednesday July 6<sup>th</sup> and Tuesday July 12<sup>th</sup> NDAWN observed 2.06 inches of rain in Dickinson. While the rain was welcome there were some unwelcomed winds and hail that came with the storms. Killdeer received softball sized hail on Sunday July 10<sup>th</sup> along with a few other parts of the region. There are still parts of the SW that are showing drought stress.

Last week on July 7<sup>th</sup> we had a Barley Field Day in cooperation with the ND Barley Council in Belfield and this week on July 13<sup>th</sup> was our on station Agronomy Field Day. With all the decisions to make in agriculture be sure to take advantage of these events to make informed decisions.

Dr. Rich Horsley speaking to producers at the Barley Field Day in Belfield, ND on July 7<sup>th</sup>.



Ryan Buetow Area Extension Specialist/Cropping Systems NDSU Dickinson Research Extension Center

### SOUTHWEST ND

Harvest has begun in pea and winter wheat fields. Some are still working on their first cutting of hay, it is not only hay ground that is being baled as some hail damaged and droughted grain fields are being baled. Some rain fell in the last week, NDAWN recorded 0.20 inch in Dickinson between July 12<sup>th</sup> and July 19<sup>th</sup>. High temperatures are forecasted and with the heat be sure to be well hydrated and stay safe.

Last week on July 13<sup>th</sup> we had our agronomy field day in Dickinson. Topics covered were tile drainage, seeding rates, weed control, disease management, and marketing.

Dr. Joel Ransom speaking to producers about seeding rate determination of new varieties at the DREC Field Day on July 13<sup>th</sup>.



# SOUTHWEST ND

In the past week between July 19<sup>th</sup> and July 26<sup>th</sup> there has been some rainfall. According to NDAWN Dickinson received 0.45 inch and Mott received 1.22 inch of rainfall. Hettinger continues to be dry with no rainfall recorded. The recent precipitation has slowed harvest, however most peas and winter wheat in the region have been harvested. Spring cereals and canola are reaching maturity and will be harvested soon. Some sunflower fields are just starting to flower.

### SOUTHWEST ND

In the past week between July 26<sup>th</sup> and August 2<sup>nd</sup> there has been some rainfall in the region. According to NDAWN Dickinson received 0.77 inch and Bowman received 0.97 inch of rainfall. Hettinger continues to be dryer than the rest of the region with 0.22 inch over the past week. Winter wheat harvest continues and some are starting on barley and oats. Some spring wheat has been harvested, especially in the dryer parts of the region, but most still need it to dry down a little further. Canola is continuing to mature, but is a bit too green to start harvest. Corn fields in the region have been tasseling over the past week. In areas that missed the rain the corn is showing signs of drought stress. Sunflower fields are flowering, a majority of fields have opened over the past couple of days. Insecticides are being applied to sunflower fields across the region.

### SOUTHWEST ND

Small grain harvest is wrapping up in the region. Wheat has been fairly clean in the region as it has been too dry in most fields for disease presence. There has been some yield loss across the region from drought and hail damage. Canola harvest has begun, with some fields still needing to mature. Corn and sunflower fields are looking good. Sunflower fields vary, if they received hail or had other issues effecting plant stand they may not look as well.

Many ranchers in the region are low on forage and continue to hay CRP ground. With the dry weather there are also issues with water quality.

On August 24<sup>th</sup> from 1:30 to 4pm (Mountain Time) there will be a Beef and Forage Field Day at the Dickinson Research Extension Center Ranch Headquarters. The field day will include information on integrating crops and livestock, building soil organic matter, cover crops, and new research. Any questions about the field day call the Dickinson Research Extension Center at 701-456-1100

# SOUTHWEST ND

There are still a few fields of spring wheat being harvested throughout the region. Small grain harvest should be wrapped up within the next week. Some corn fields in the region are at the dent stage. Fields that were strip-tilled are slightly further along than no-till corn. Corn and sunflower fields are looking good, but there is some drought stress. Most of the region is still relatively dry. According to NDAWN rainfall in Dickinson between August 17<sup>th</sup> and August 30<sup>th</sup> is 0.47 inch and Hettinger has recorded 1 inch.

### SOUTHWEST ND

A majority of corn in the region has dented and a large amount has reached black layer. Some are working on silage and a few are still cutting hay. We received some frost on Monday night into Tuesday morning with NDAWN showing a low of 34 September 13<sup>th</sup>. The frost shouldn't have caused any issues. A majority of crops were far enough along with the back of sunflower heads already yellow to brown in color. Winter wheat in the region should be going in soon. It can't be stressed enough to make sure to kill the green bridge to proactively avoid wheat streak mosaic virus issues next year.

Weather this growing season was warm and dryer than normal, however some would say that this season was more "normal" than the past couple of years. The lack of moisture allowed for minimal disease pressure, however there were areas that suffered from drought stress.

Table 1. Monthly minimum, maximum, and mean temperatures and mean rainfall for Dickinson, ND, in 2016.

Month	Minimum air temp.		Maximum air temp.		Mean air temp.		Total rainfall	
	2016	Normal <sup>†</sup>	2016	Normal	2016	Normal	2016	Normal
				°F			inches	
April	31	28	57	56	44	42	2.80	1.34
May	41	39	69	66	55	53	1.26	2.32
June	54	49	82	75	68	62	1.31	3.60
July	57	54	85	83	71	69	3.39	2.58
August	55	52	85	83	70	68	0.50	1.56

<sup>+</sup>Normal data represents a 30-yr average from 1981-2010 (NDAWN, 2016).