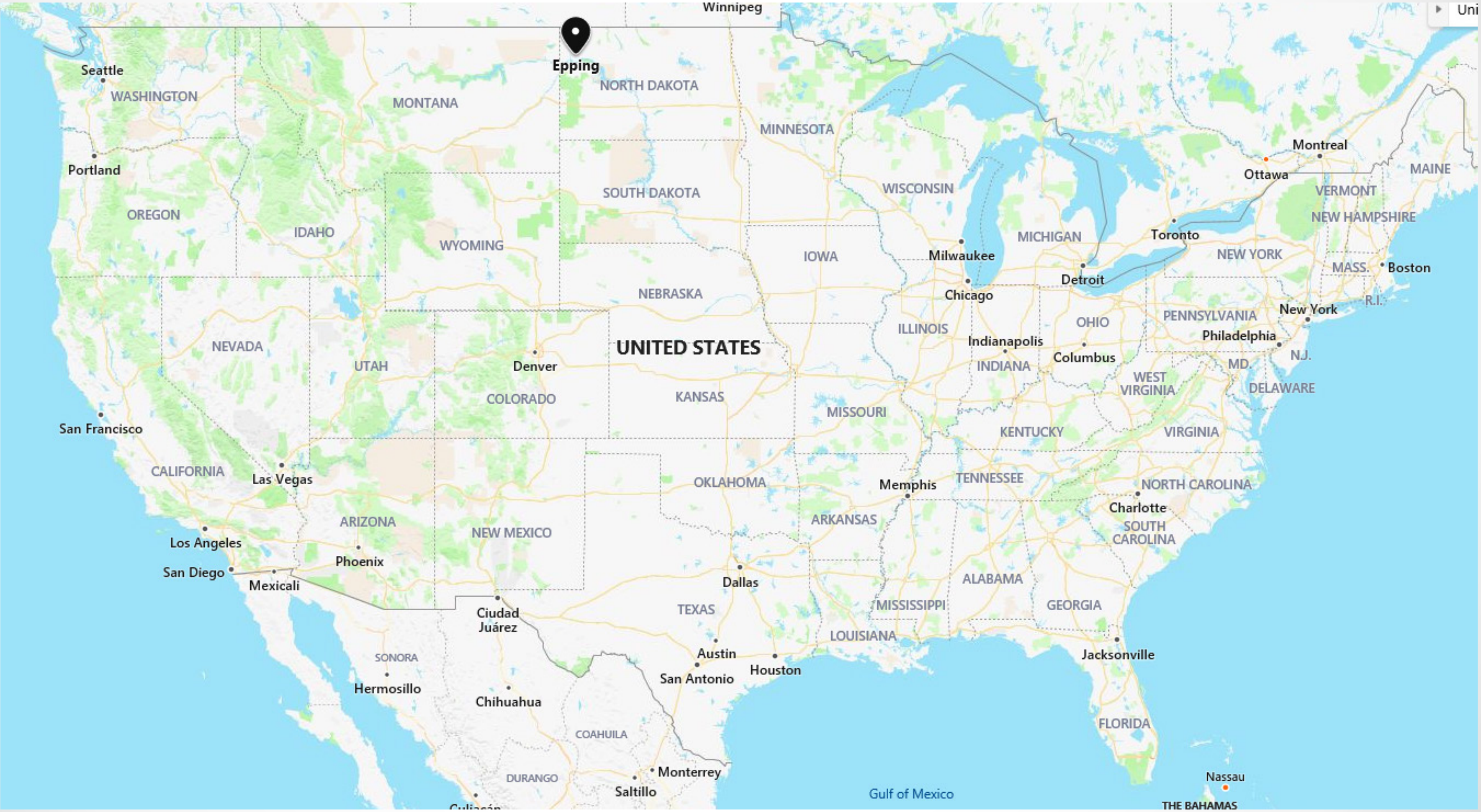
A Grower's Perspective on Scab from Northwest North Dakota

Dustin Johnsrud,

Private Producer, Epping, ND, USA

ND Wheat Commission
dustinjohnsrud@hotmail.com
701-570-8168

Epping ND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Monterrey
DURANGO
Saltillo
Gulf of Mexico
Nassau
THE BAHAMAS

Crops

Durum

Spring Wheat

Canola

Lentils

Peas

Chick Peas

Safflower

Oats

Alfalfa

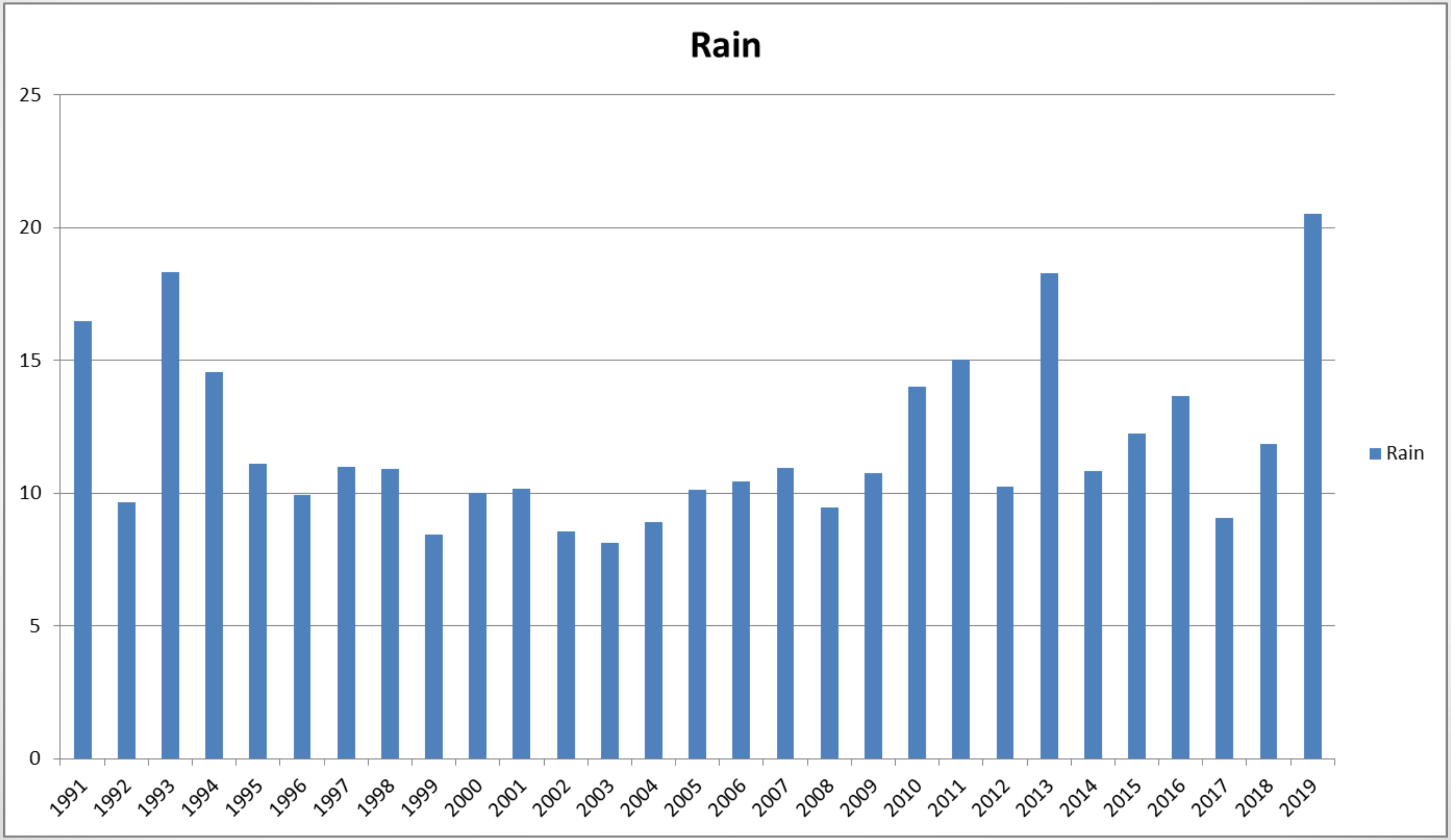
Flax

Very Little

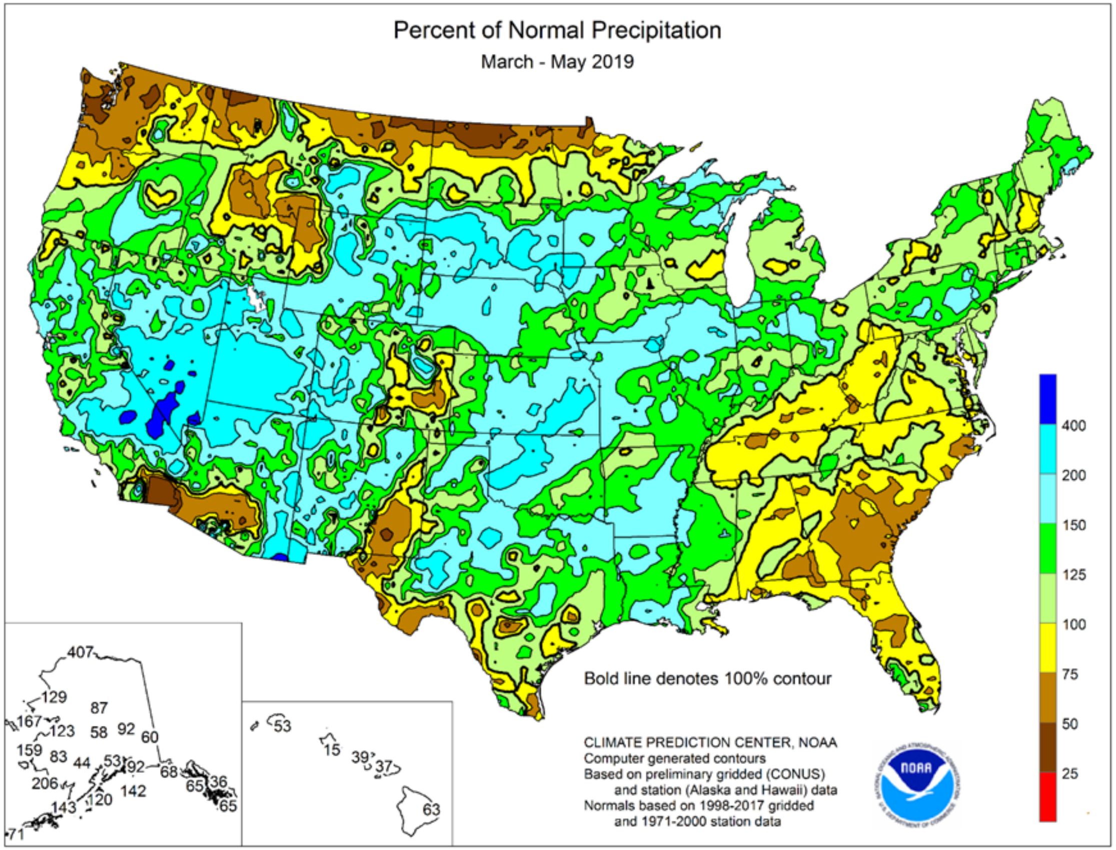
Corn

Soybeans

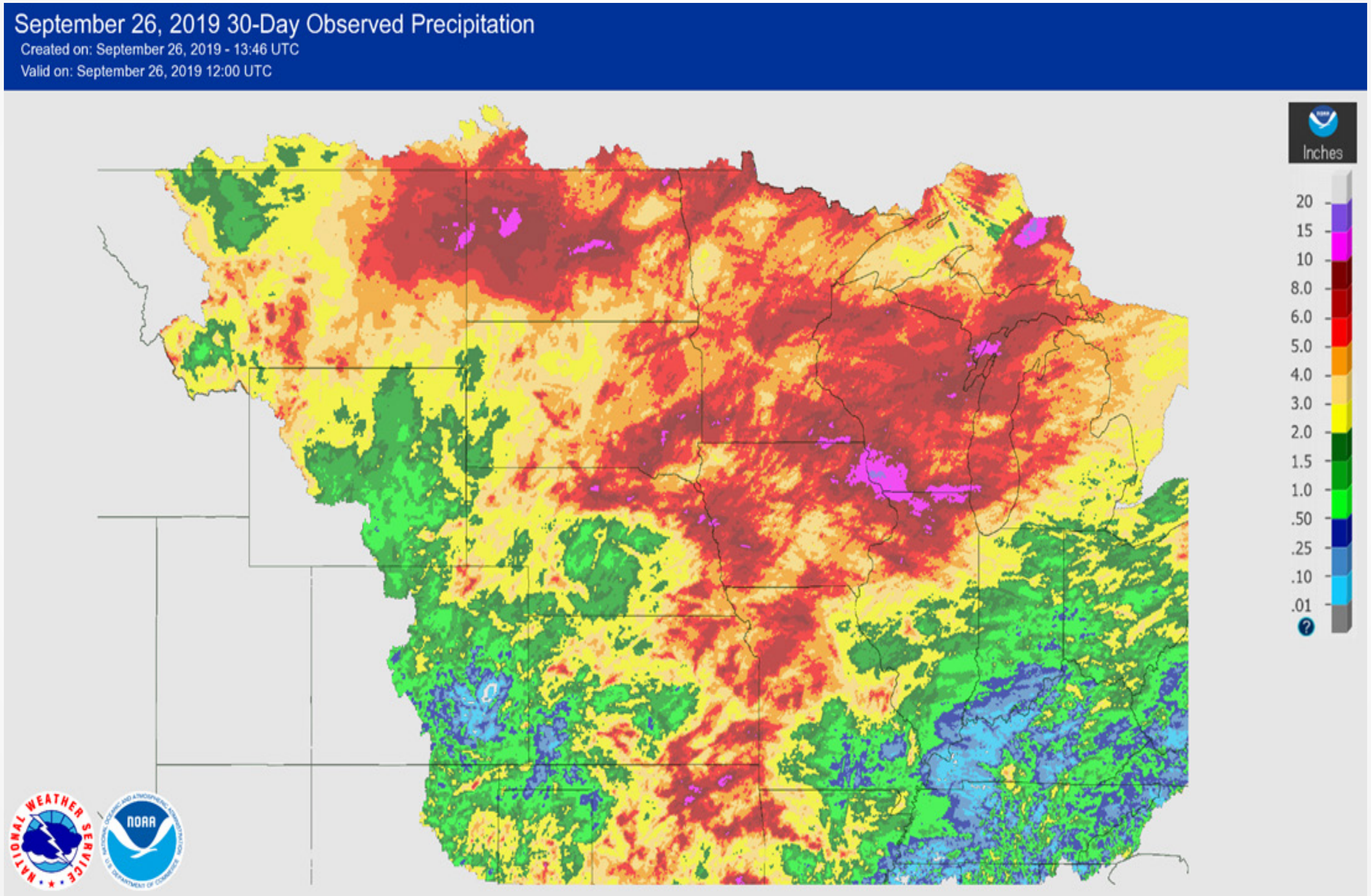
Williston ND
Average Rain fall
1991-2018



Spring of 2019



10-15 in September



Assets for scab predection

Crop Advisors

NDSU forcast models

Field Scouting

Tools for scab

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Accessibility

SMALL GRAIN DISEASE FORECASTING MODEL

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NDSU › Small Grain Disease Forecasting Model

Small Grain Disease Forecasting Model

Small Grain Diseases Explained

Other Crops and Weather Information

Department of Plant Pathology

Small Grain Disease Forecasting Model

Thanks to:

Bayer CropScience

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Fargo - Flowering

December 1, 2019

Fusarium Head Blight (Scab)

Forecast model of head blight severity

Interpretation: Model estimates the percent risk of serious head blight. The red cells (with the letter 'H') indicate scab is more likely than not. Yellow cells (with the letter 'M') indicate a moderate risk of scab and the green cells (with a 'L') mean that scab is unlikely. First, select the date your field came into flower. Then assess the risk of scab.

Variety	11/30	11/29	11/28	11/27	11/26	11/25	11/24	11/23	11/22	11/21	11/20	11/19	11/18
Very Susceptible	H	M	M	M	M	H	H	H	H	H	H	M	M
Susceptible	M	M	M	M	M	M	M	M	M	M	M	M	M
Moderately Susceptible	M	L	L	L	L	M	M	M	M	M	M	L	L
Moderately Resistant	L	L	L	L	L	L	L	L	L	L	L	L	L

Today's Maps: Very Susceptible Susceptible Moderately Susceptible Moderately Resistant

Infection periods of tan spot, Stagonspora (Septoria) blotch and leaf rust

Interpretation: Yes = infection likely, No = infection unlikely. First, select the date when 50% of the flag-2 (or flag-1) leaves had disease symptoms. Then, consider a fungicide when 6-8 infection periods ("Yes" days) have accumulated. (More)

Model	11/30	11/29	11/28	11/27	11/26	11/25	11/24	11/23	11/22	11/21	11/20	11/19	11/18
Tan Spot	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blotch	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No	Yes	Yes
Leaf Rust	No	No	No	No	No	No	No	No	No	No	No	No	No

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t (Scab) Risk
der (07/11/19)

Fusarium Head Blight (Scab) Risk and Factors to Consider (07/11/19)

Share

There are several areas across the state in moderate to high risk for Fusarium head blight (FHB) on susceptible varieties that are flowering (Figures 1 and 2).

There are several areas across the state in moderate to high risk for Fusarium head blight (FHB) on susceptible varieties that are flowering (Figures 1 and 2). If a moderately resistant variety is being used, moderate to high FHB risk still exists for southeast and southwest North Dakota (Figure 3). All of these statements are based off maps generated by the Fusarium Head Blight Prediction Center (national model) and the NDSU Small Grains Disease Forecasting Website (state model). Risk will increase in the coming days for most areas of the state. Currently, the state and national model have similar trends, but also have noticeable differences prompting several questions on how to gauge FHB risk and what model should I use? This article will review both models and provide some insight on commonly asked questions.

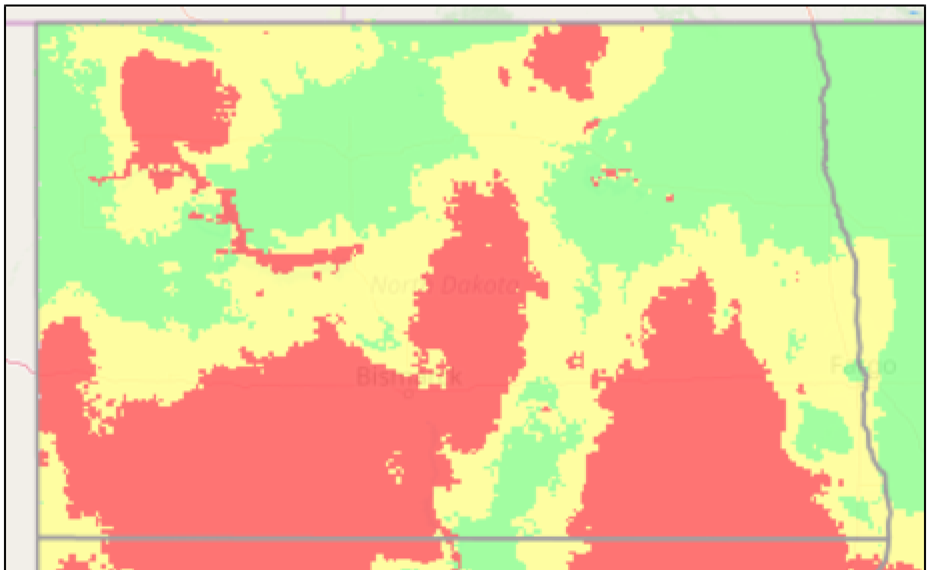

Figure 1. National model Fusarium head blight risk for susceptible varieties July 10. Red = high risk, yellow = moderate risk, and green =

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Crop Disease Fo

May 1st

Burn Down (Round-Up + Diacamba + 2,4-d)

Seed + Treatment

June

Herbicides + Tilt (propiconazole)

Flowering

Miravis Ace

Dealing with scab

- Elevator discounts are severe
  - $1.00 per point above 2ppm
  - No bid over 5ppm

- On farm cleaning can be done – a lot of time and expense
  - $1.00 per bushel ($30 per acre)
  - 5000 bushels per day
  - From 10+ppm to 2ppm or below


SAKUNDIAK
SIOUX
SIOUX
SBT-2
CAMAS INTERNATIONAL
LIBERATOR II
INTERNATIONAL
FBN 328


WESTEEL
WESTEEL
WESTEEL
WESTEEL

150,000 bu @ 5000 bu/hr

30 days of cleaning

Vs.

One application during flowering

Cost of $20

Profit or loss potential

- Cost of production
  - Rent
  - Insurance
  - Seed
  - Fertilizer
  - Chemical
  - Fuel
  - Machinery
  - =~$120 per acre

- What is the crop worth?
  - #1 Choice
  - 30bu/acre x $4.70bu
  - =$141 acre

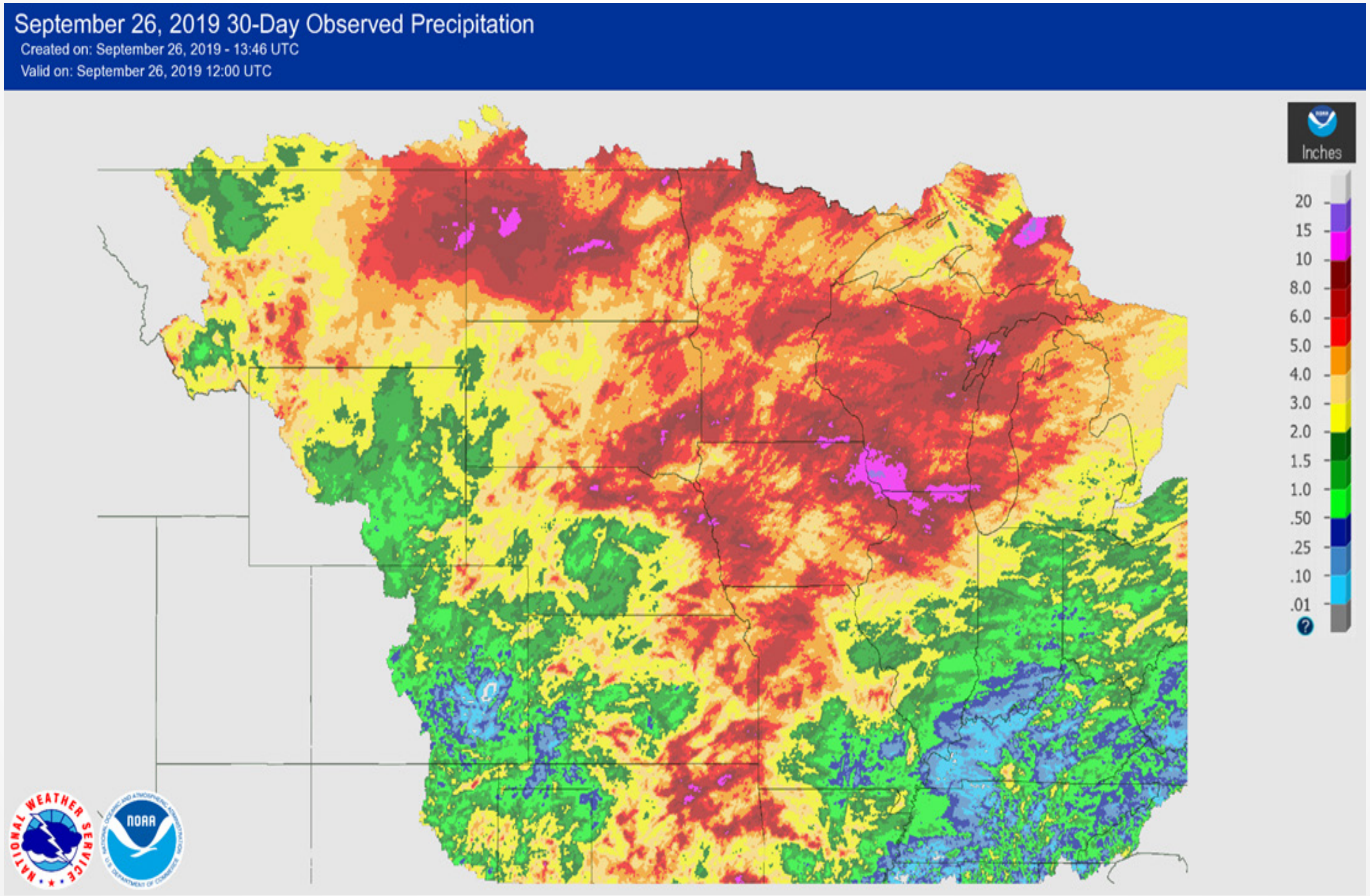
Farming is Changing

Old Way

- Untreated Seed
- Poor Fertilizer management
- Spray only a Herbicide
- Harvest
- Early to mid August

New Way

- Forecast maps
- Precision Farming
- Variable rate
- Fertilizer
- Herbicides
- **Multiple Fungicide Applications**
- **Harvest Late August early September**


September 26, 2019 30-Day Observed Precipitation
Created on: September 26, 2019 - 13:46 UTC
Valid on: September 26, 2019 12:00 UTC
Inches
20
15
10
8.0
6.0
5.0
4.0
3.0
2.0
1.5
1.0
.50
.25
.10
.01

2019 crop

2019 crop

Sprout damage dropped Falling numbers below 200

30bu x $3

=$90

Thank You!