



Topics covered...

- Change
- Weather
- Credits
- Reservoirs
- Pests & Pesticides
- Results

Change ...

- late 2016 - now

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- Cavendish Farms announces frozen potato processing plant for Lethbridge (Dec 16)
- Planet Labs launches additional 88 shoe box size satellites, totaling now over 175. Every square inch / every day / 0.8 m (Feb 17)

Change ...

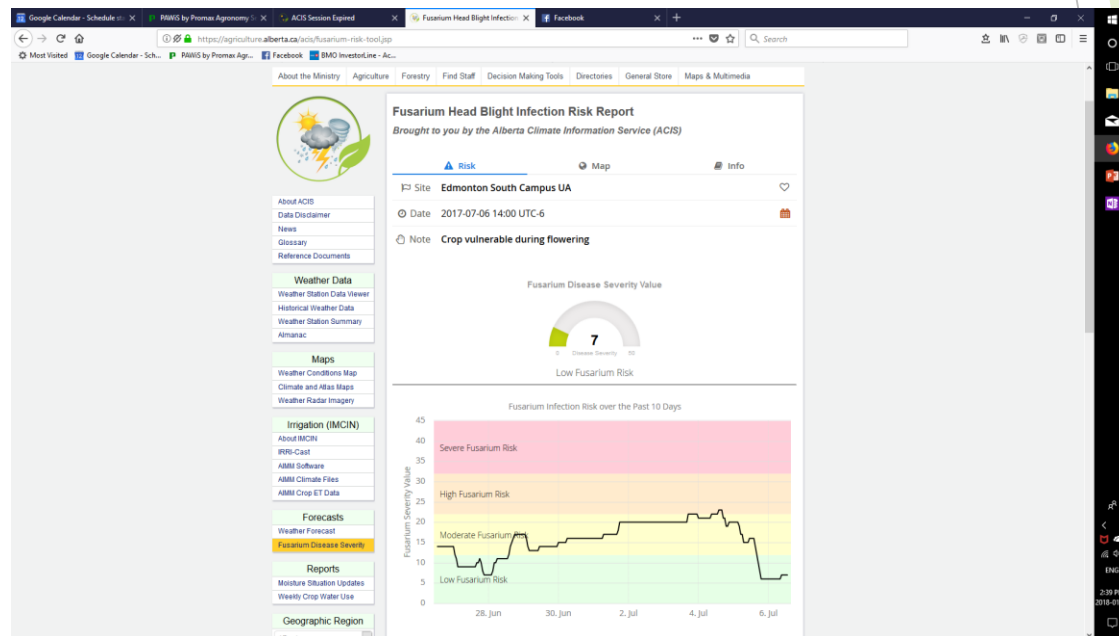
- FMC & DowDupont Inc announces intention to sell
 - Health and Nutrition from FMC to DowDupont Inc
 - Dupont Crop Protection from DowDupont Inc to FMC (March 17)

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 - Health and Nutrition from FMC to DowDupont Inc
 - Dupont Crop Protection from DowDupont Inc to FMC (March 17)
- Following announcements of autonomous tractors by multiple manufacturers in 2016, the “Hands Free Hectare” commences seeding on April 25, 2017 at Adams University in Newport, UK

Change ...

- Alberta Wheat announces collaborative project that sees the launch of a provincial FHB Risk Tool run by ACIS (AB Climate Information Services) (June 17)



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- AB Environment continues with scaled up inspections for aquatic invasive species

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- ChemChina completes acquisition of Syngenta (June 17)
- Independent Crop Inputs holds grand opening at Taber (July 17)

Change ...

- DowDupont Inc close merger (August 17)

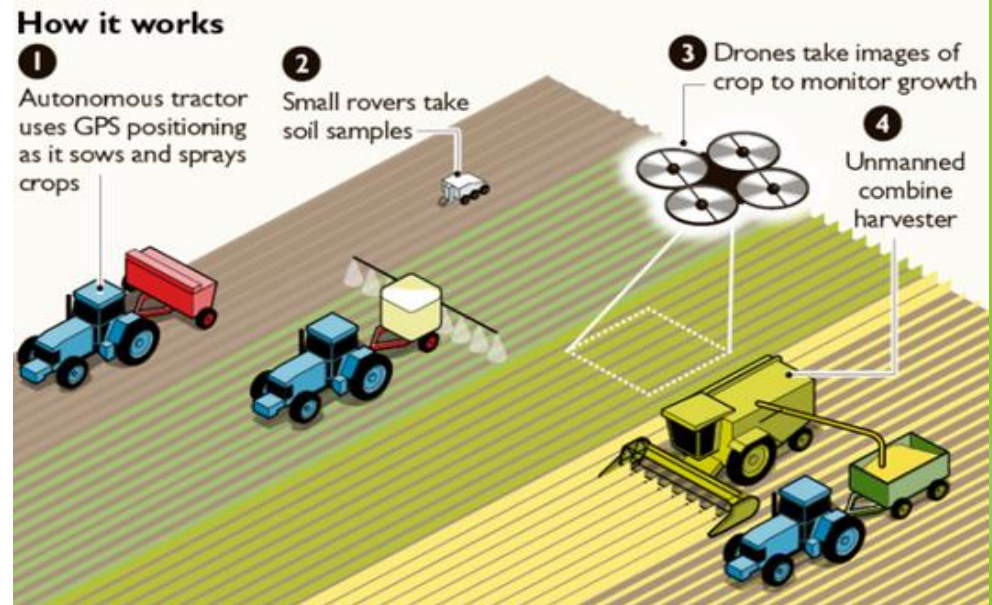
Change ...

- DowDupont Inc close merger (August 17)
- Cavendish Ground Breaking (September 17)



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- Hands Free Hectare completes harvest (September 17)



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- CHS announces plan to sell retail sites to Richardson. Includes retail businesses at Bow Island, Craddock, Rolling Hills & Vauxhall (October 17)
- DowDupont Inc & FMC complete previously announced deals (November 17). Non traditional pesticide manufacturers such as FMC continue to expand their footprint

Change ...



- Lantic holds series of beet banquets in S AB. Rebecca Tokariuk announces that average yields have increased for 3rd consecutive year and have set a new production record ... again (December 17)

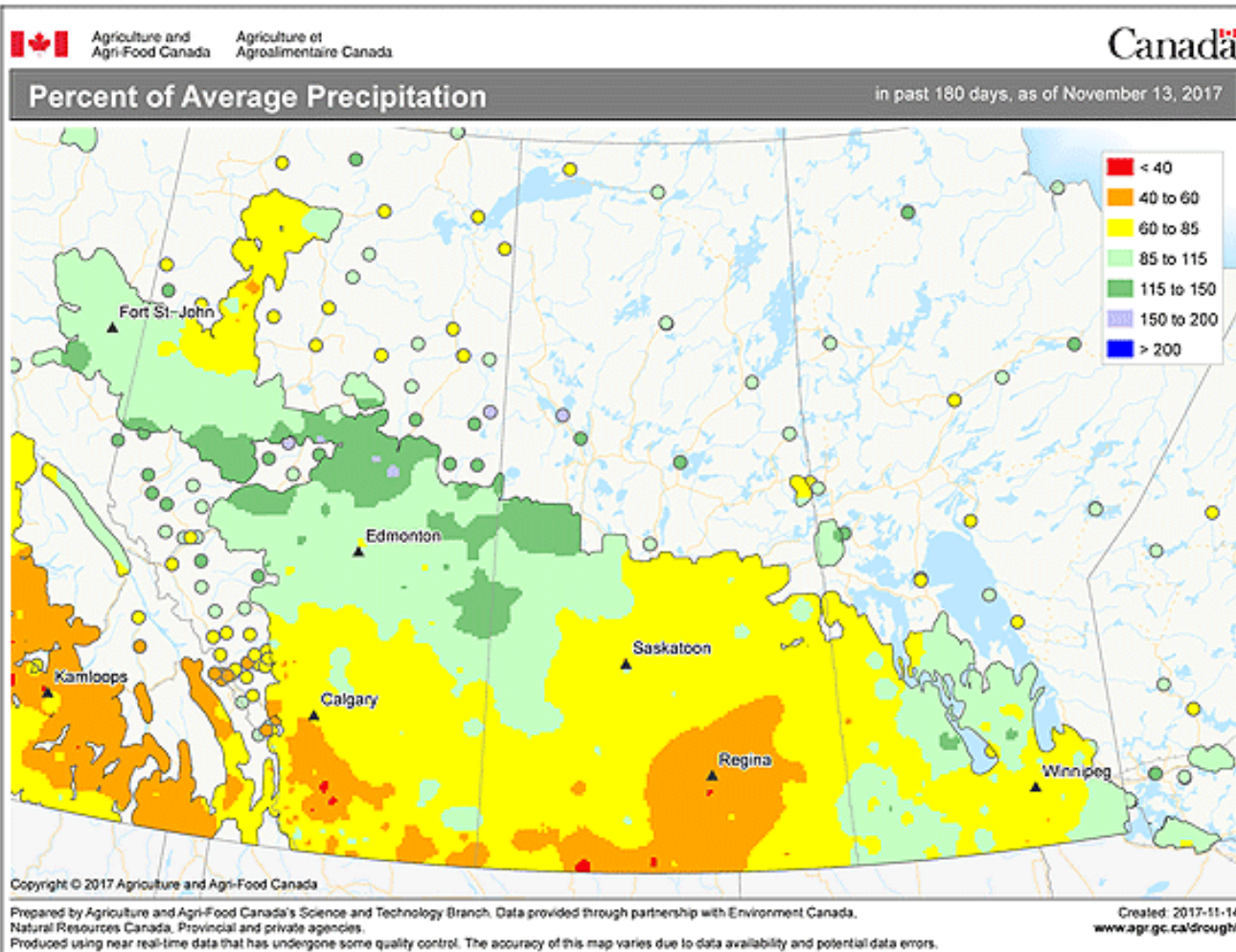


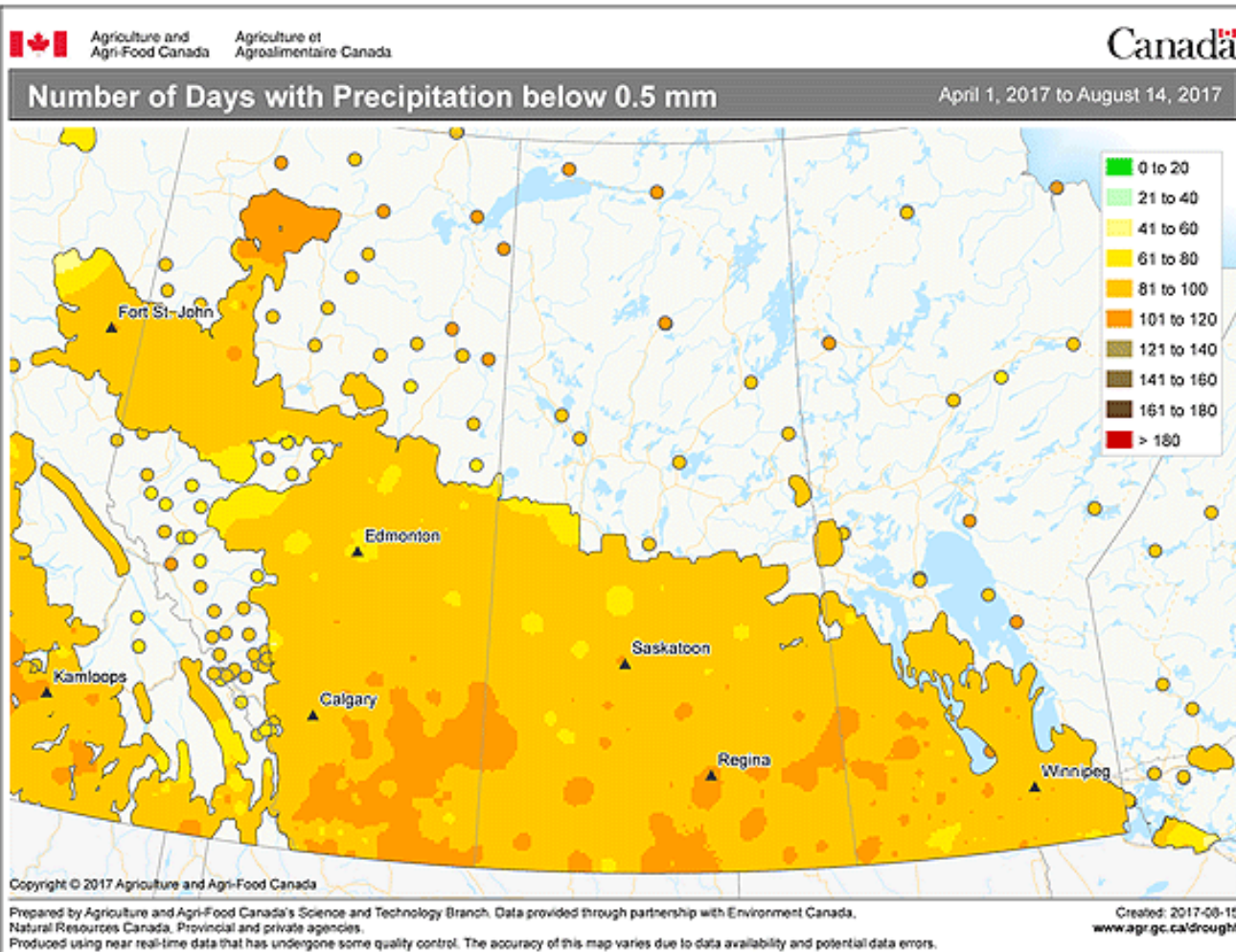
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-  Noise /  Critical Thinking





Summer Temps measured in CHU's

$$CHU_x = \begin{cases} 1.8(T_{\min} - 4.4) & \text{if } CHU_x > 0 \\ 0 & \text{if } CHU_x \leq 0 \end{cases}$$

$$CHU_y = \begin{cases} 3.33(T_{\max} - 10) - 0.084(T_{\max} - 10)^2 & \text{if } CHU_y > 0 \\ 0 & \text{if } CHU_y \leq 0 \end{cases}$$

$$CHU = (CHU_x + CHU_y) / 2$$

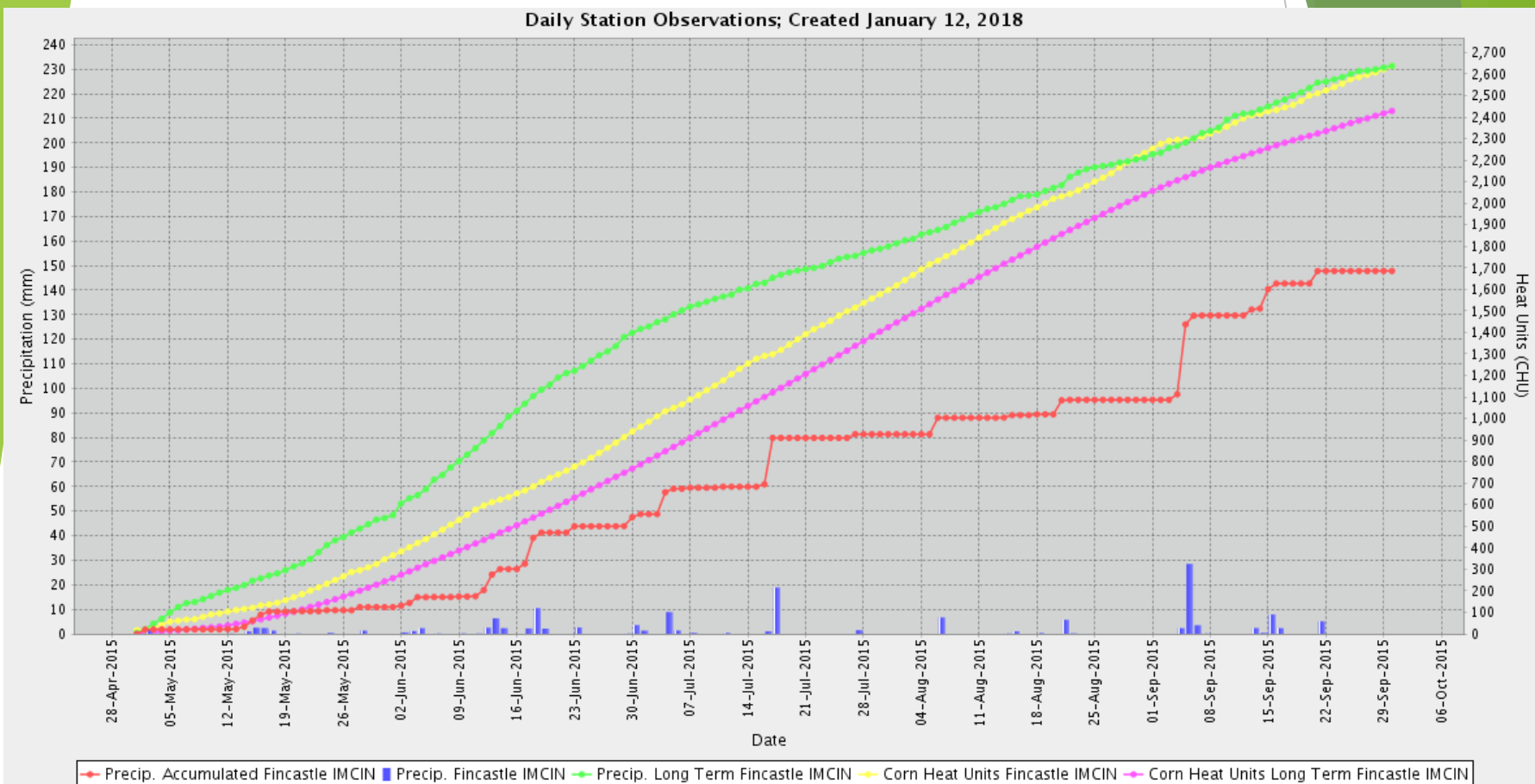
where

- CHU = Corn heat units
- CHU_x = Nighttime corn heat units
- CHU_y = Daytime corn heat units
- T_{max} = Daily maximum temperature (°C)
- T_{min} = Daily minimum temperature (°C)

May 1 - Sept 30, 2015

~ 2,425 CHU

~ 150 mm precipitation (Jul/Aug ~ 50 mm)

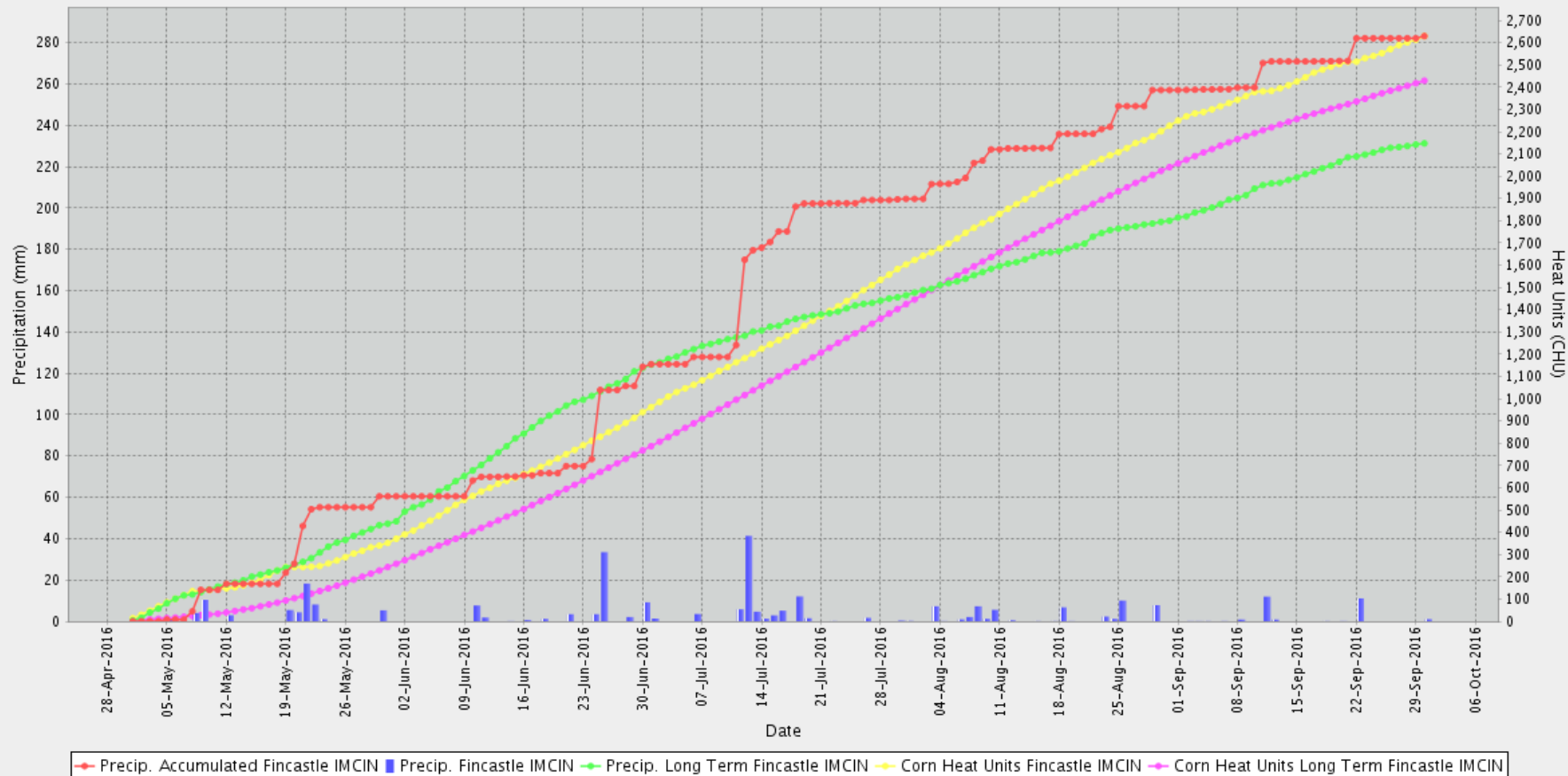


May 1 - Sept 30, 2016

~ 2,600 CHU

~ 280 mm precipitation (Jul/Aug ~ 140 mm)

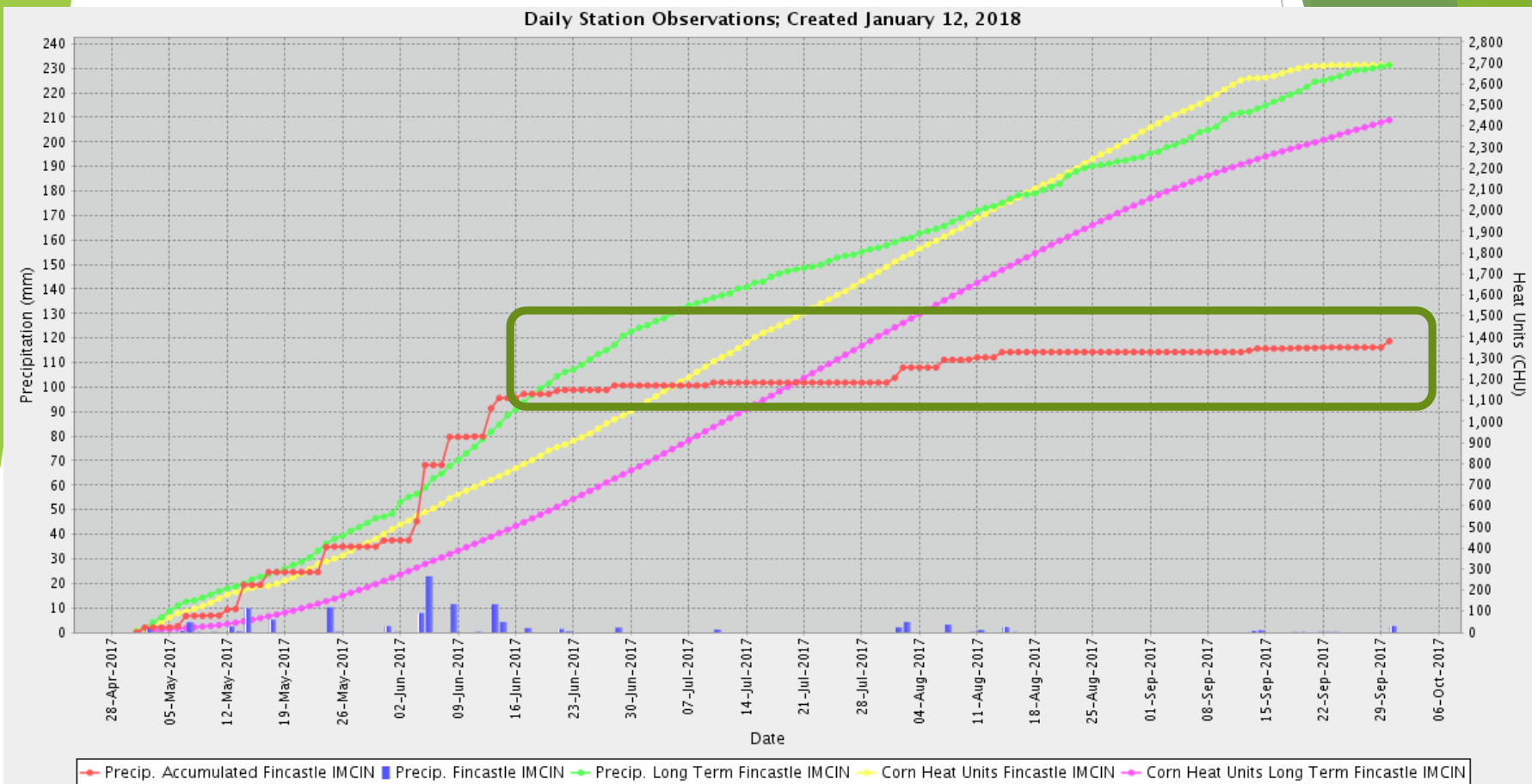
Daily Station Observations; Created January 12, 2018



May 1 - Sept 30, 2017

~ 2,700 CHU

~ 120 mm precipitation (Jul/Aug ~ 12 mm)



May 1 - Sept 30

	CHU	Summer Precip	Growing Season Precip
2015	2,425	50	150

May 1 - Sept 30

	CHU	Summer Precip	Growing Season Precip
2015	2,425	50	150
2016	2,600	140	280

May 1 - Sept 30

	CHU	Summer Precip	Growing Season Precip
2015	2,425	50	150
2016	2,600	140	280
2017	2,700	12	120

Crop Development expressed in GDD

- Average daily temperature
 - Base can be anything you like
 - 5 C used for the next table and comparison
 - Max 27 C, Min 11 C, Avg temp 19 C
 - $GDD = 19 - 5 = 14$

Crop Development expressed in GDD

	2015
May 1 - June 1	185
June 1 - July 1	388
July 1 - Aug 1	436
Aug 1 - Sep 1	434
Sep 1 - Oct 1	242
Totals	1,685

Crop Development expressed in GDD

	2015	2016
May 1 - June 1	185	213
June 1 - July 1	388	368
July 1 - Aug 1	436	414
Aug 1 - Sep 1	434	400
Sep 1 - Oct 1	242	240
Totals	1,685	1,635

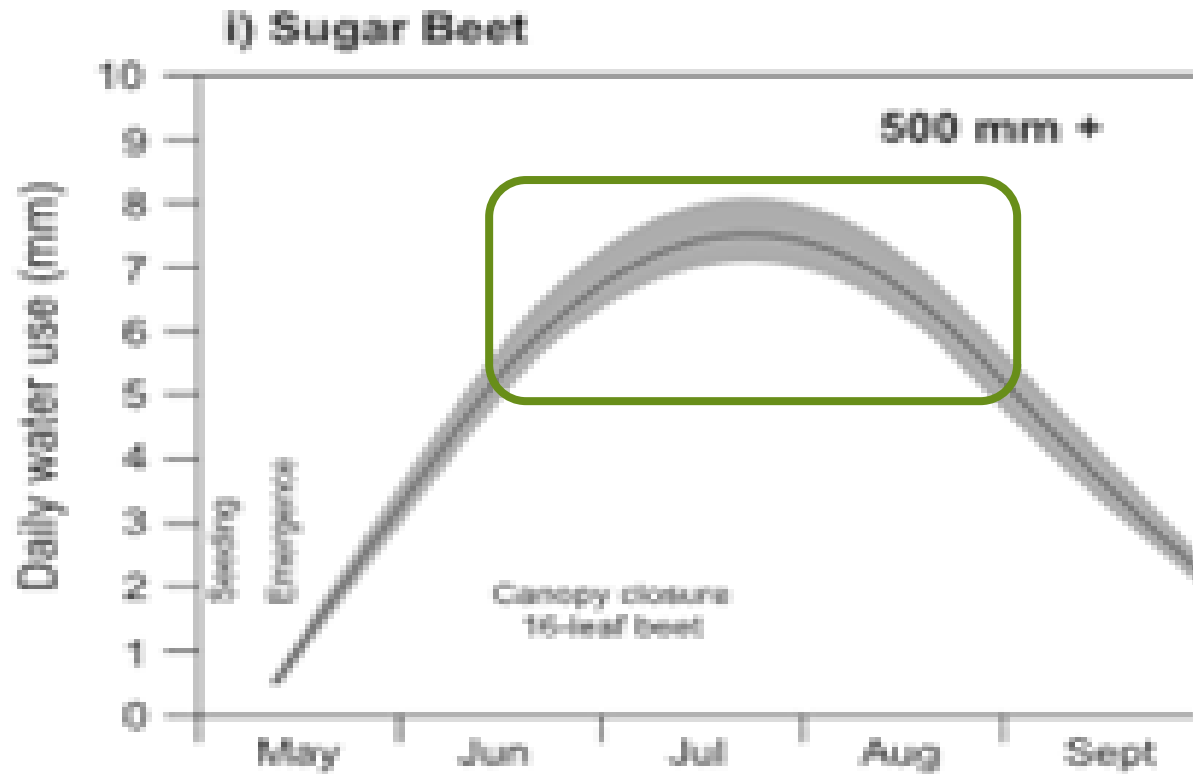
Crop Development expressed in GDD

	2015	2016	2017
May 1 - June 1	185	213	286
June 1 - July 1	388	368	359
July 1 - Aug 1	436	414	500
Aug 1 - Sep 1	434	400	436
Sep 1 - Oct 1	242	240	269
Totals	1,685	1,635	1,850

- Crop Water Use & Requirements
Agdex 100/561-1

Crop	Water Usage (mm)	2017 def/surp
Beans	300-375	~210 def
Beets	500+	~360 def
Canola	400-480	~310 def
Corn	580-650	~460 def
Potato	400-550	~360 def
Wheat	420-480	~310 def
Average	470 mm (18.5")	281 mm (11.1")

- Crop Water Use & Requirements
Agdex 100/561-1



Reservoirs

- Credit where credit is due

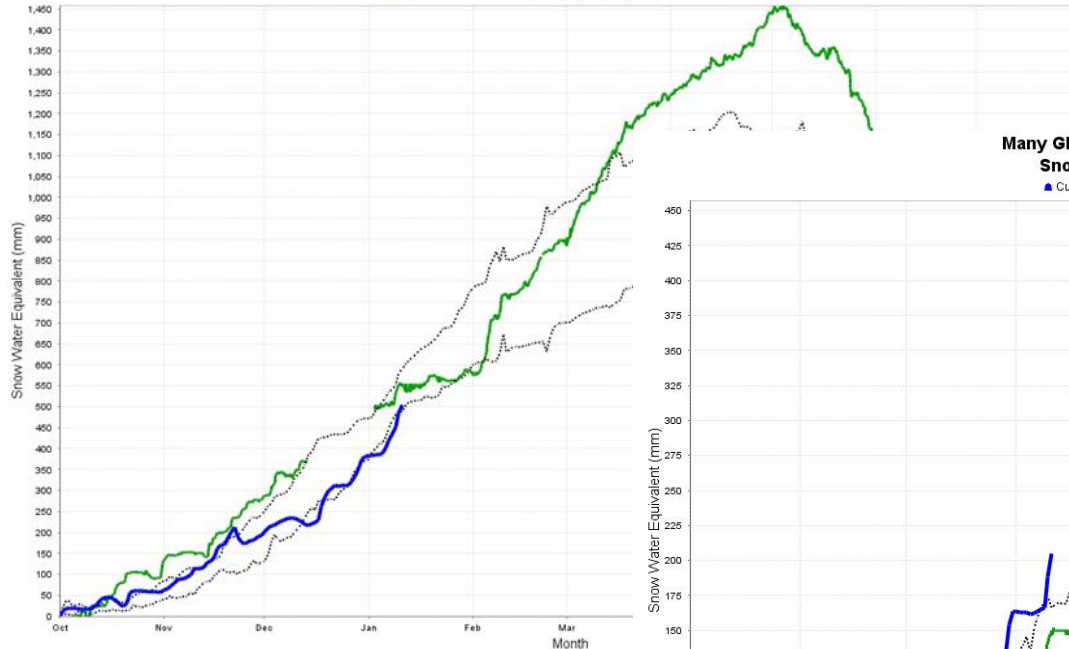


Chin Reservoir
July 25, 2017

Reservoirs

Flattop Mountain - Snotel (13A19S Elevation:1920.0m)
Snow Data* - Oct. 01, 2017 - Aug. 01, 2018

■ Current Year ■ Normal Range (Quartiles) ■ Snow Past Year

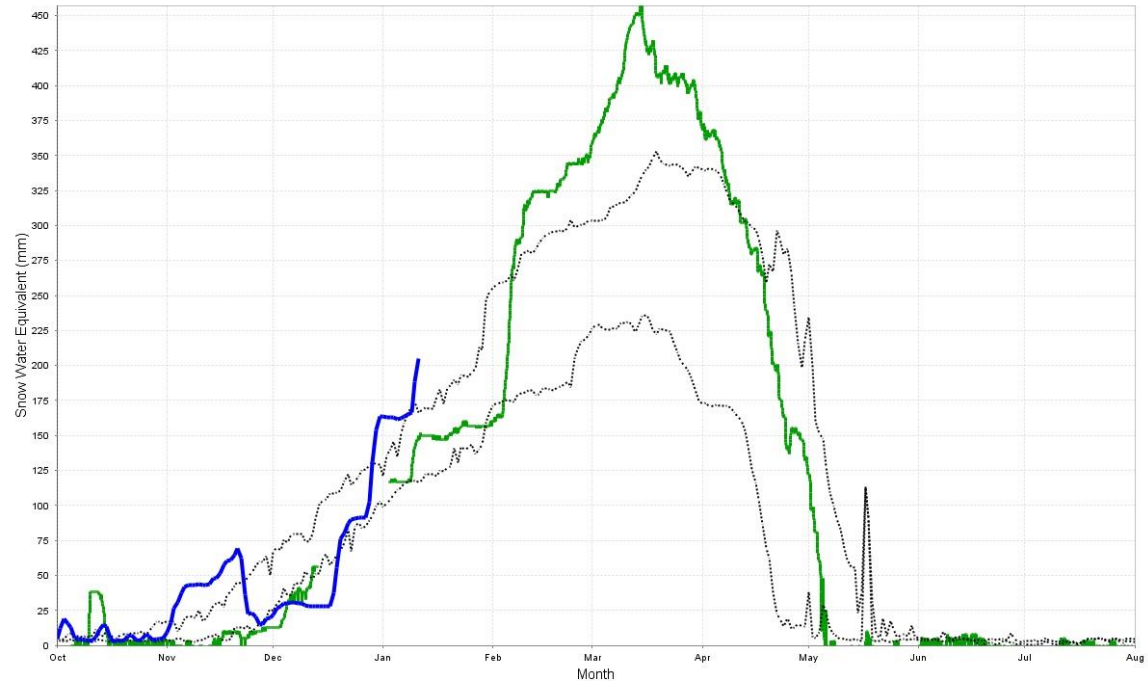


Government of Alberta

Longitude:-113.85667 Latitude:48.80183 Created:

Many Glacier - Snotel (13A27S Elevation:2103.0m)
Snow Data* - Oct. 01, 2017 - Aug. 01, 2018

■ Current Year ■ Normal Range (Quartiles) ■ Snow Past Year



Government of Alberta

Longitude:-113.67 Latitude:48.797 Created: 2018-01-12 07:16:50 MST

*Preliminary Data subject to Revision

Diseases

- ↑ Temperatures
- ↓ Moisture
- ↓ Disease Pressure
- Mike Harding / Kelly Turkington

Insects

- Scouting
- Thresholds
- Beneficials
- Scott Meers



Tetrastichus julis

Weeds

- Herbicide Resistant Weeds
 - # unique cases increasing
 - stacking groups
- New products in 17
- Crop Rotations
- 15 X
- nozzle selection



Results

- Rainfall / Sunshine
- Big swings
- 2018 is here ... onward and upward!

