

# Production Practice Survey for Wheat and Canola

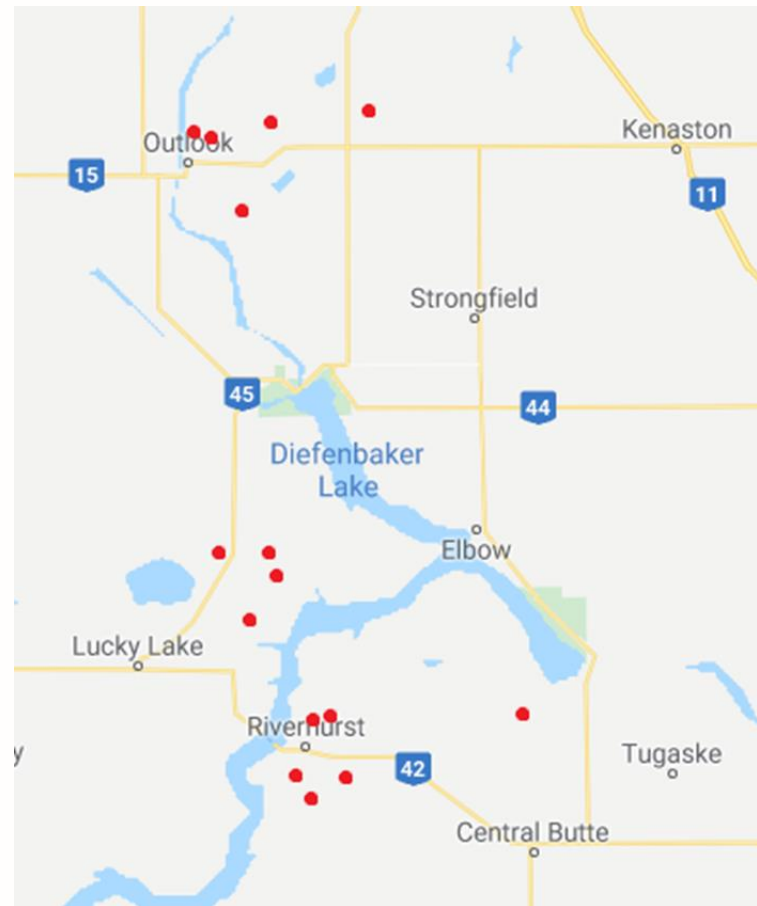
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Saskatchewan Ministry of Agriculture

# Concept

- Work directly with producers
- Monitor and record all production practices
- Compare practices and economics
- Extend findings



# Why Survey?

- Producer feedback
- Accurate comparisons for research
- Identify issues to further study
- Provide recommendations



FOUR YEAR SUMMARY  
MAXIMUM ECONOMIC YIELDS DEMONSTRATION  
IBED AGREEMENT NO. SP-88CA-22  
JUNE, 1992

prepared by:  
Alice Wilson, P.Ag.  
and  
Bill King, P.Ag.

OUTLOOK IRRIGATION PRODUCTION CLUB

Irrigated wheat  
average:  
1992-48 bu/acre  
2018: 80 bu/acre

Irrigated Durum  
average:  
1992- 63 bu/acre  
2018- 90 bu/acre

## Lake Diefenbaker Development Area (LDDA) 2018 Irrigation Crop Survey

	RID	LLID	SSRID	TOTAL	CROP %	CLASS%
<b>Cereals:</b>						
Wheat/Durum	5458.9	3295.0	7738.4	16492.3	24.4%	28.1%
Barley/Oats			1264.0	1264.0	1.9%	
Grain/Silage Corn	408.1	131.9	684.5	1224.5	1.8%	
<b>Oil Seeds:</b>						
Canola	5018.8	3454.4	11763.4	20236.6	30.0%	36.3%
Flax	1125.7	130.9	738.6	1995.2	3.0%	
Soybean	243.2	443.9	1656.5	2343.6	3.4%	
<b>Pulses:</b>						
Dry Bean	4029.8	1521.1	1788.4	7339.3	11.2%	15.8%
Field Peas	131.0	1063.7	821.7	2016.4	3.0%	
Lentil	516.9		558.7	1075.6	1.6%	
<b>Forage:</b>						
Alfalfa/Grass	88.3	1408.9	6732	8228.7	12.2%	12.2%
<b>Specialty Crops:</b>						
Potato	289.0		3665.2	3954.2	5.9%	7.8%
Hemp			167.6	167.6	0.2%	
Sunflower				0.0	0.0%	
CSIDC			293.5	293.5	0.4%	
Fruit			103.0	103.0	0.2%	
Vegetables		16.0	357.6	373.6	0.6%	
Cover Crop			372	372.2	0.6%	

<b>Total Acres</b>	<b>17309.6</b>	<b>11465.8</b>	<b>38704.8</b>	<b>67480.2</b>
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	2013	2014	2015	2016	2017	2018
Cereal	34	30	28	25	25	28
Oilseed	33	38	36	29	37	36
Pulse	12	13	17	27	22	16
Forage	11	10	10	11	9	12
Specialty Crop	10	10	9	8	7	8
Total Acres	60,581.0	62,444.0	63,973.0	65,050.0	65,853.0	67,480.0

\*values noted in above table are in %

## Lake Diefenbaker Development Area (LDDA) 2019 Irrigation Crop Survey

	RID	LLID	SSRID	TOTAL	CROP %	CLASS%
<b>Cereals:</b>						
Wheat/Durum	5133.3	5491.4	12485.4	23110.1	33.7%	<b>37.3%</b>
Barley/Oats			755.6	755.6	1.1%	
Grain/Silage Corn	951.0	137.7	648.7	1737.4	2.5%	
<b>Oil Seeds:</b>						
Canola	4532.7	2923.9	8926.0	16382.6	23.9%	<b>28.4%</b>
Flax	1850.7	131.9	1103.9	3086.5	4.5%	
<b>Pulses:</b>						
Dry Bean	4854.7	767.7	169.3	5791.7	8.4%	<b>13.1%</b>
Field Peas	189.2	924.1	1703.8	2817.1	4.1%	
Lentil	160.0		256.2	416.2	0.6%	
<b>Forage:</b>						
Alfalfa/Grass		1053.1	7703	8756.5	12.8%	<b>12.8%</b>
<b>Specialty Crops:</b>						
Potato	383.8		3954.8	4338.6	6.3%	<b>8.4%</b>
Hemp			388.1	388.1	0.6%	
CSIDC			293.5	293.5	0.4%	
Fruit			103.0	103.0	0.2%	
Vegetables		36.0	370.8	406.8	0.6%	
Cover Crop			263	263.4	0.4%	

<b>Total Acres</b>	<b>18055.4</b>	<b>11465.8</b>	<b>39125.9</b>	<b>68647.1</b>
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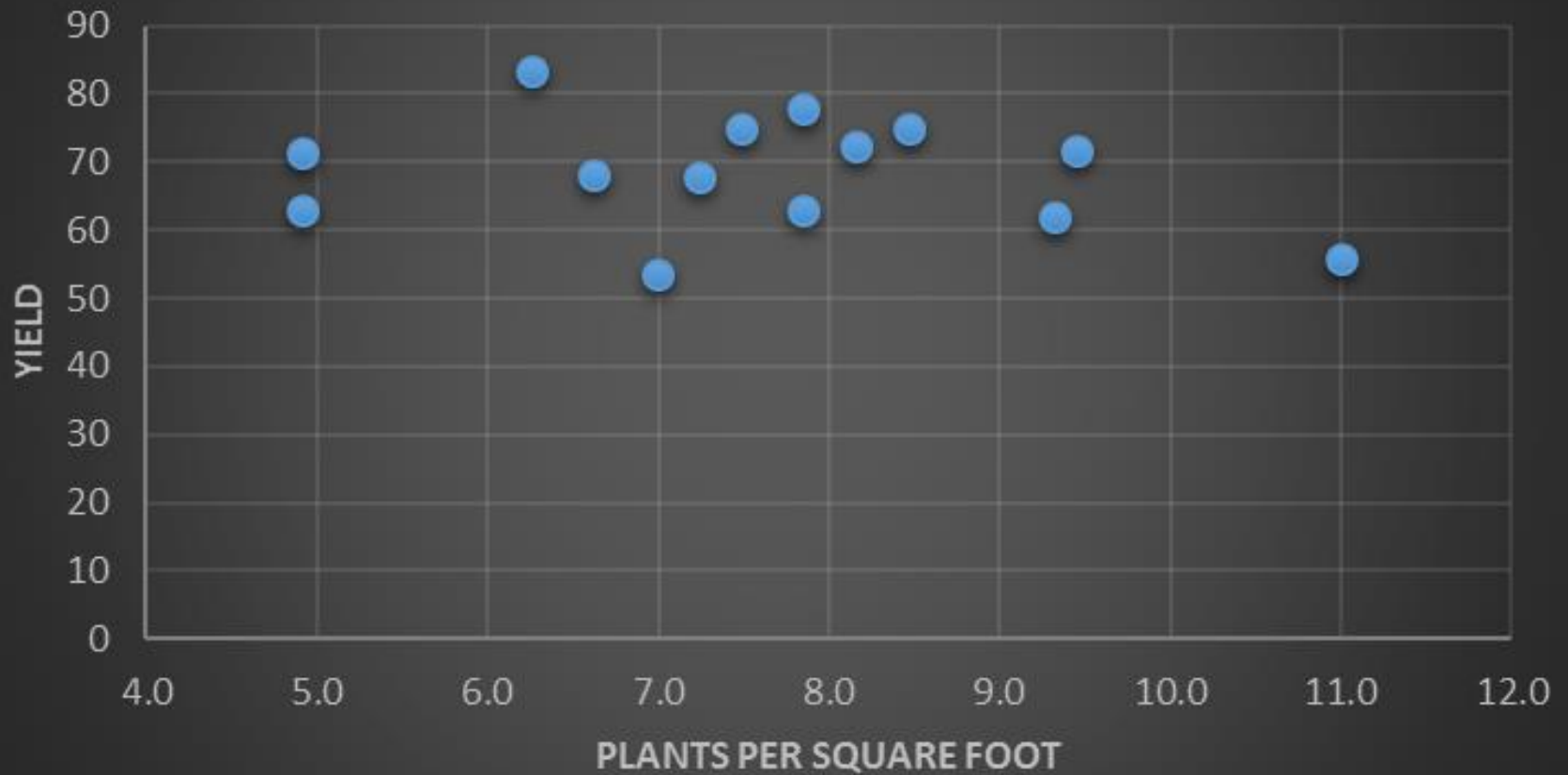
	2013	2014	2015	2016	2017	2018	2019
Cereal	34	30	28	25	25	28	37
Oilseed	33	38	36	29	37	36	28
Pulse	12	13	17	27	22	16	13
Forage	11	10	10	11	9	12	13
Specialty Crop	10	10	9	8	7	8	8
Total Acres	60,581	62,444	63,973	65,050	65,853	67,480	68,647

\*values noted in above table are in %

# The Survey

- Production practices
- Weekly moisture check/AIMM graph
- Provincial disease survey
- Economics
- Feedback from producers

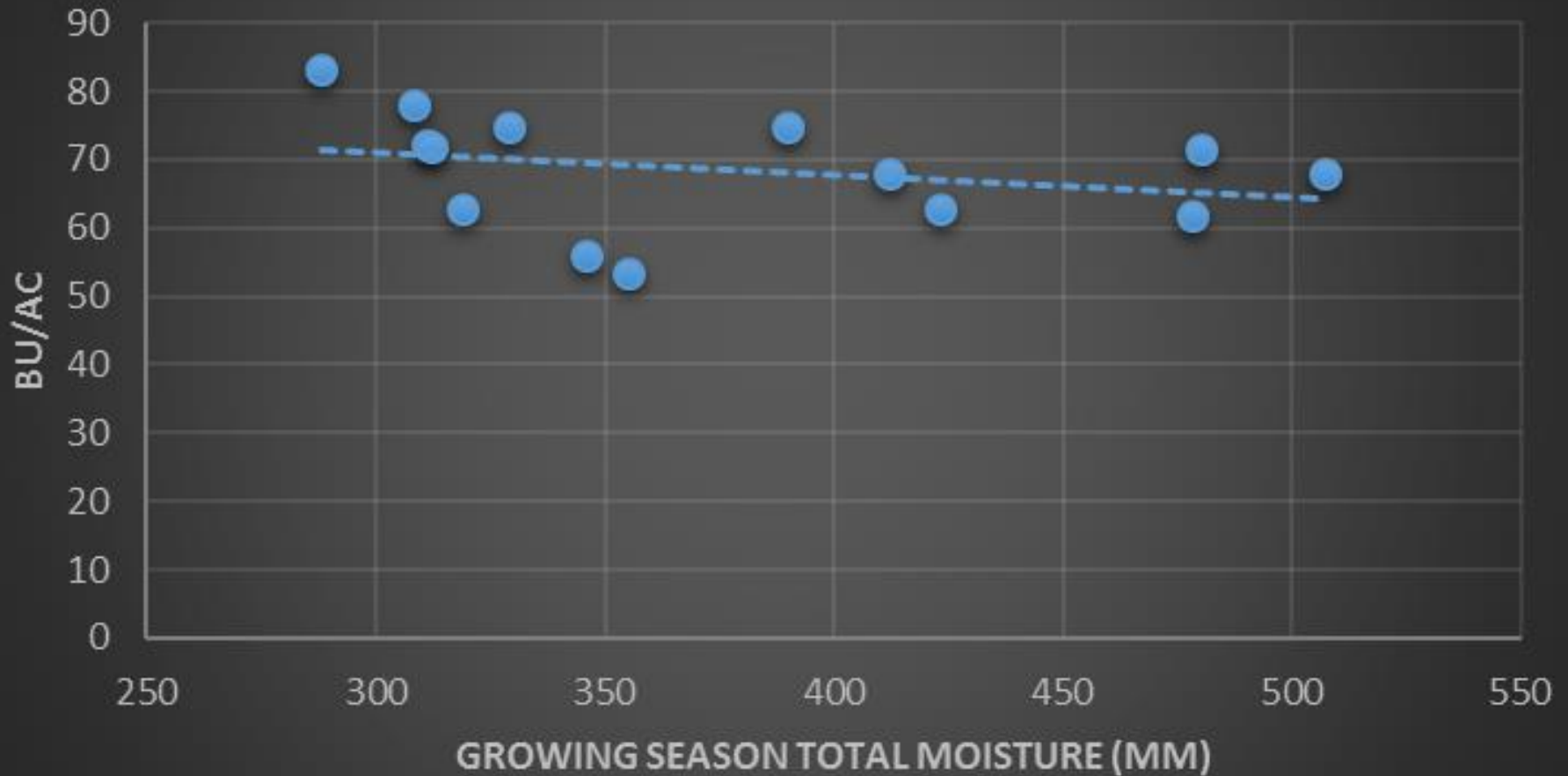
# Establishment



From 2019 Canola Survey



# Total Moisture and Yield



From 2019 Canola Survey

# Excess Moisture

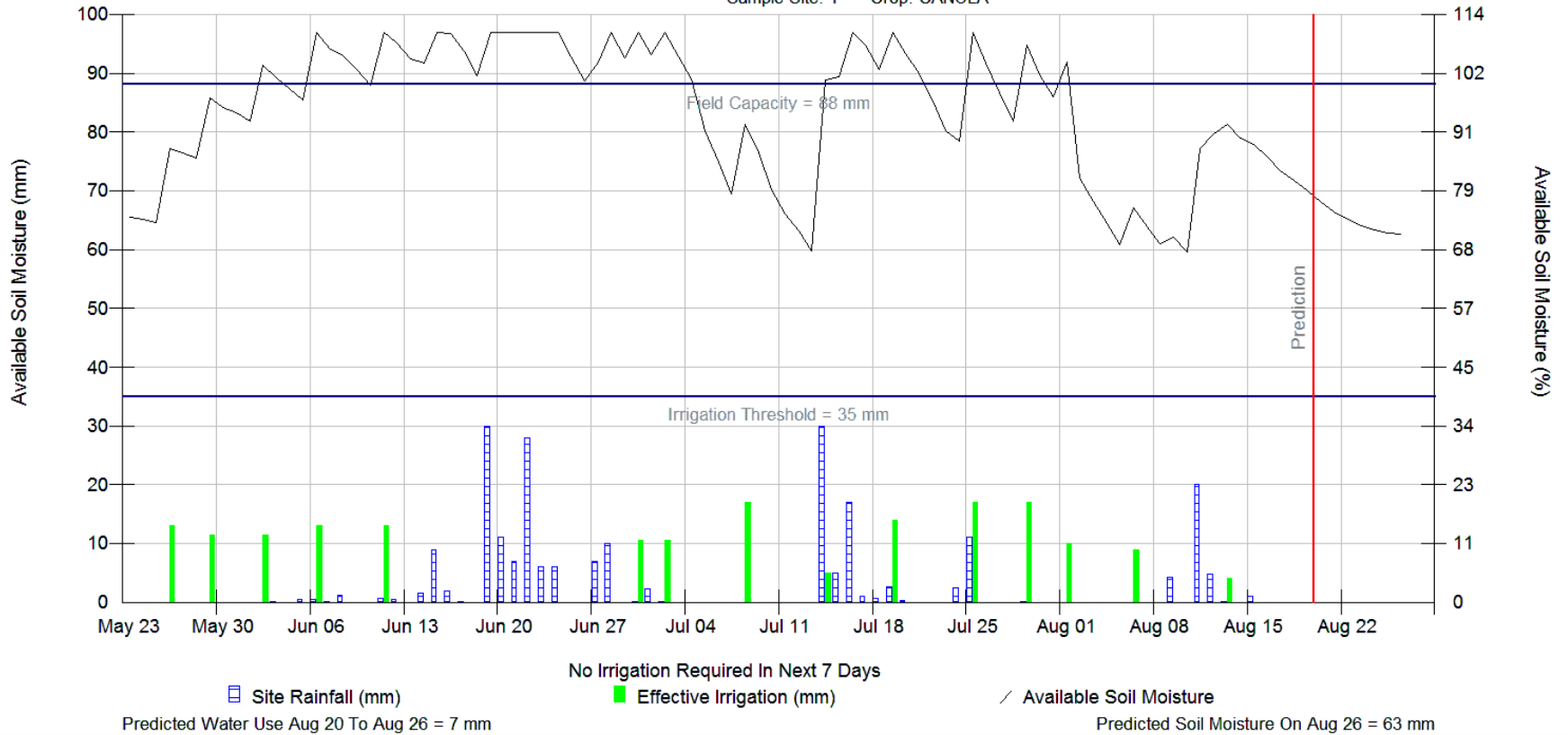
- Restricted root growth (insufficient soil air)
- Promotion of crop disease (moist conditions)
- Lodging (excess biomass production)

## **Environmental/Economic issues**

- Wasted water (runoff, evaporation, drainage)
- Nutrient loss
- Unnecessary cost (water, energy)
- Public perception

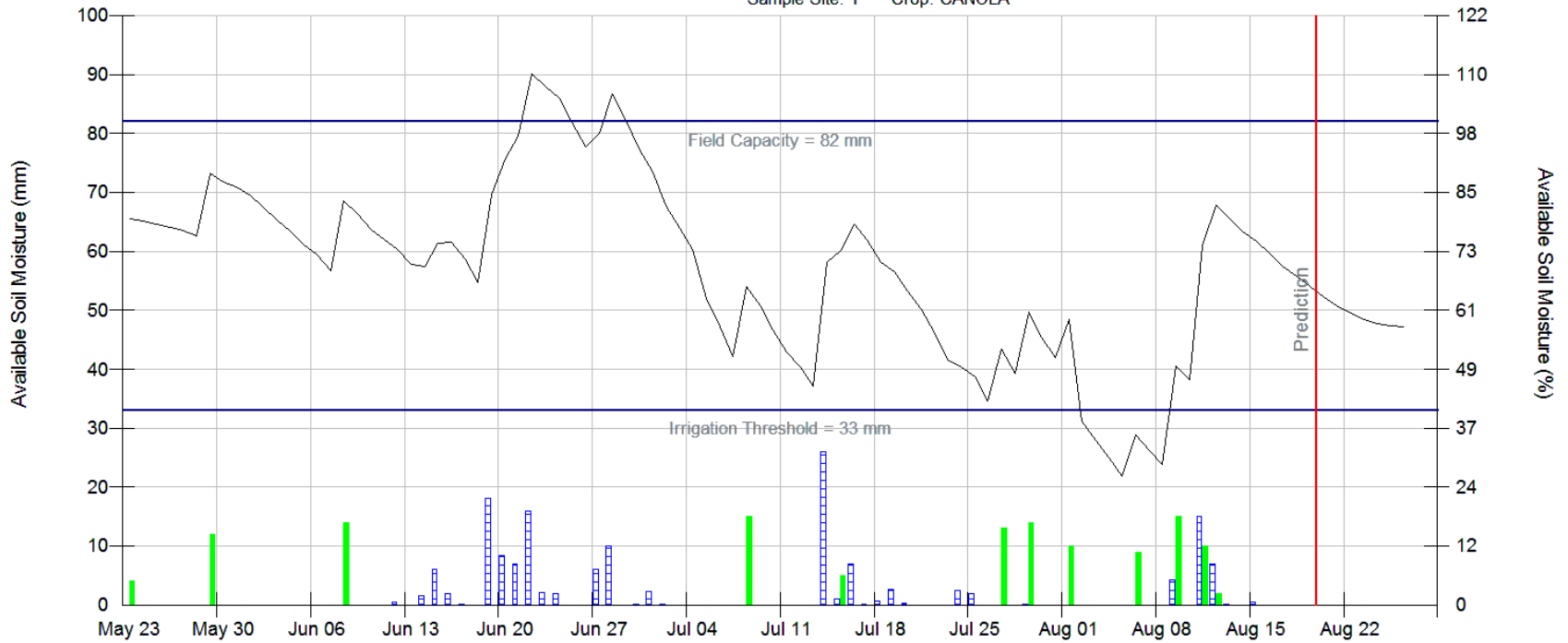
### Moisture Balance 0 to 50% Maximum Root Zone

Sample Site: 1 Crop: CANOLA



### Moisture Balance 0 to 50% Maximum Root Zone

Sample Site: 1 Crop: CANOLA



No Irrigation Required In Next 7 Days

Site Rainfall (mm)

Effective Irrigation (mm)

Available Soil Moisture

Predicted Water Use Aug 20 To Aug 26 = 7 mm

Predicted Soil Moisture On Aug 26 = 47 mm

# Scouting



# Producer Feedback

## 2019 Successes:

- Disc + rotary harrow for weed control
- More frequent, light irrigation in spring
- Switching harvest methods from straight cut to swath

# Producer Feedback

## 2019 Challenges:

- Challenges of heavy rain events
- Blackleg pressure + hail
- Risks of straight cutting canola
- Fungicide not always applied

# Yielding 75+ BU/AC

- 5 fields in 2019
- Average Total N 240 lbs/acre
- 4/5 where swathed
- P205 67 lbs/acre
- L233 most common variety



# Updating Publications

	Yield (BU/AC)	Net return (\$/acre)
Average	55	95
Target	65	211
2019 Observed Average	69	257

Update for 2020 Economics and Agronomics:  
Average: 60, Target: 70

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4 R Nitrogen series

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2019 Crop Walks

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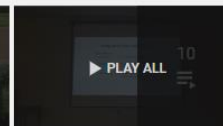
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2018 Crop Walks

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2019 Growing Corn: From Seeding To Feeding

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2019 Variable Rate Irrigation Workshop

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