



# Southern MN Beet Sugar Cooperative Presentation

# Healthy Beets October 12 2018





# PROTECT YOUR FUNGICIDE INVESTMENT

- Protects the pesticide against loss due to wash-off from overhead irrigation and rain, heavy dew, leaf abrasion, wind erosion and UV degradation.
- Application lasts for 7-10 days.
- REGUARD® can be used with pesticides and foliar fertilizers.
- Natural Product

ADJUVANTS  
NPE Free Surfactant  
**REGUARD®**

A natural sticker/spreader, derived from pine tree resin, aids in increasing the amount of pesticide deposits on the leaf and plant tissue, and keeps it on the surface longer by protecting it from the environment.



Pictures taken Oct. 17 in heavy pressure, 3 weeks after last application. Cercospora was held off perfectly using 6 sprays with REGUARD.\*



# Reguard Sticker, Spreader, Extender

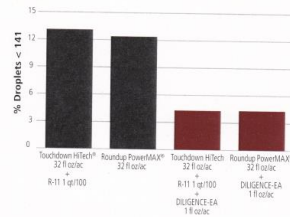
**BETTER  
PERFORMANCE.  
LESS RISK.**

**Use Rate: 1 oz/ac\***  
\*up to 15 gal/ac

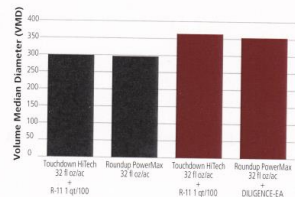
- Premium Drift Control
- Increased Deposition
- Uniform Droplet Size
- Non-Oil Water-Based Formulation for Improved Compatibility

ADJUVANTS  
DILIGENCE-EA  
WITH ACCUSTRIKE® TECHNOLOGY

Wind Tunnel Study - Low Speed  
Percent Volume Less Than 141 Microns in Size



Volume Median Diameter (VMD) Measurements



Nozzle: XR8008 10 GPA Wind Speed: 15 mph PSI: 40  
PDF179006NE13 Wind Tunnel Study



CONTACT YOUR LOCAL WILBUR-ELLIS REPRESENTATIVE TODAY  
[SprayWithDILIGENCE.com](http://SprayWithDILIGENCE.com)



WILBUR-ELLIS  
Ideas to Grow With®

# Diligence EA Deposition Aid

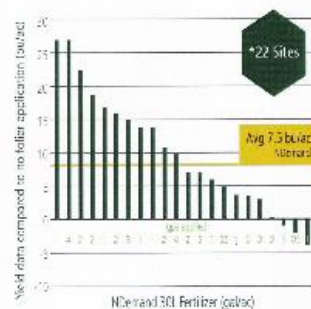


**7.5 bu/ac**  
average yield increase\*

- Foliar Safe N Source
- Industry Leading Compatibility
- Increased Stress Tolerance
- Efficiency of Nutrient Utilization



Georgia Pacific | All treatments timed at taste.  
Numbers below individual bars represent cpa applied.



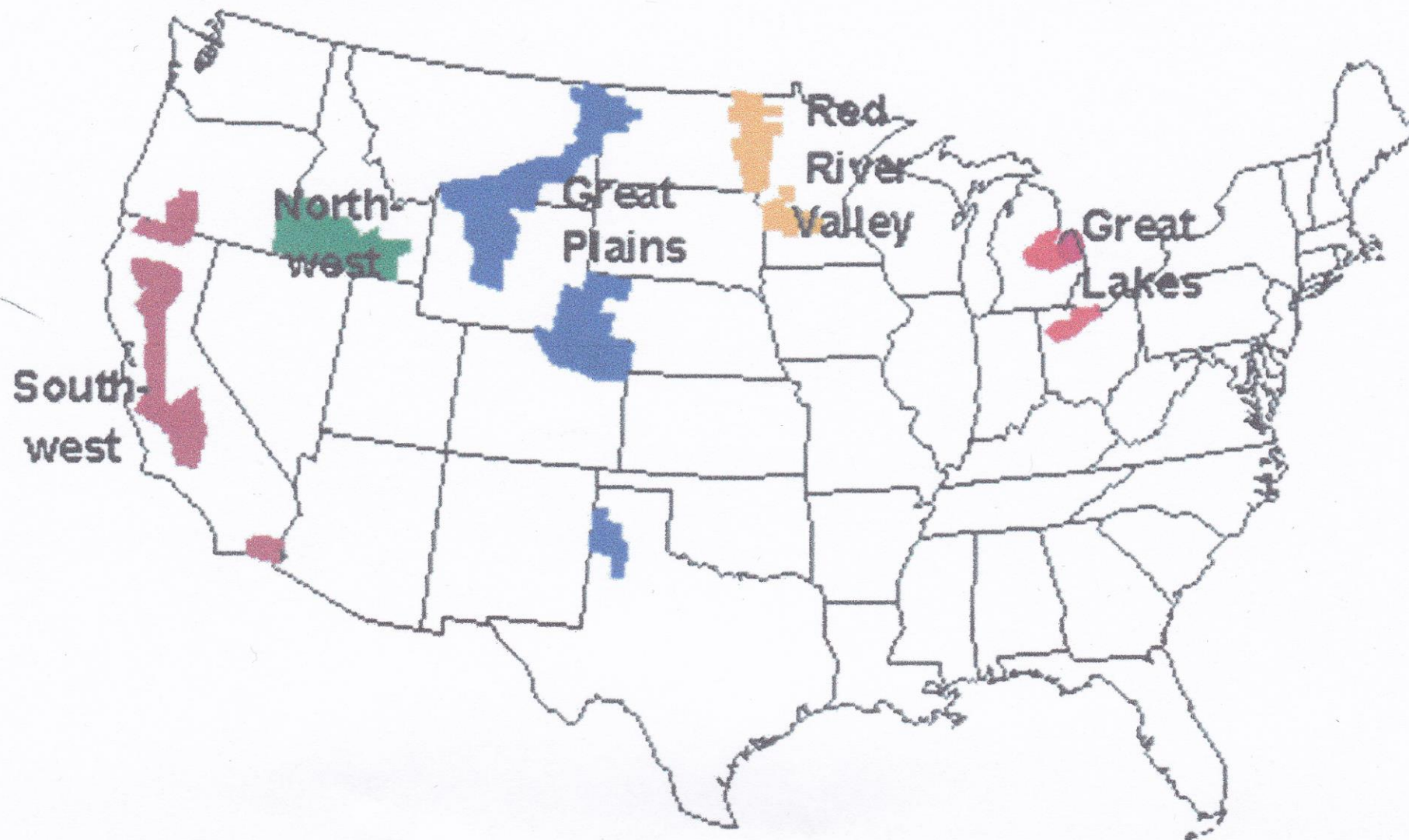
30 minutes  
after  
spraying  
NDemand  
30L.



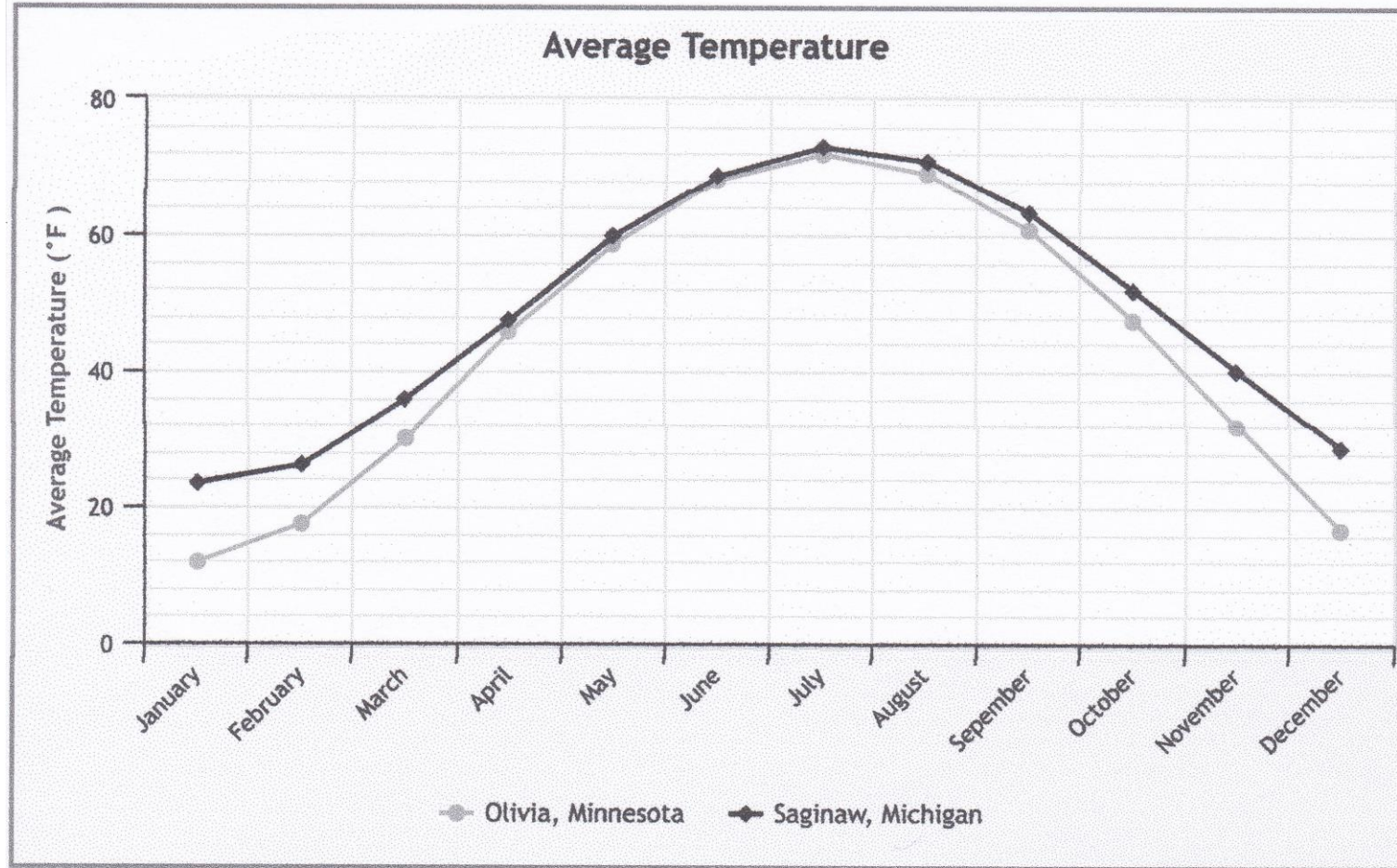
30 minutes  
after  
spraying  
urea  
solution  
20-0-0.

# Ndemand 30L

# 30% Foliar Nitrogen



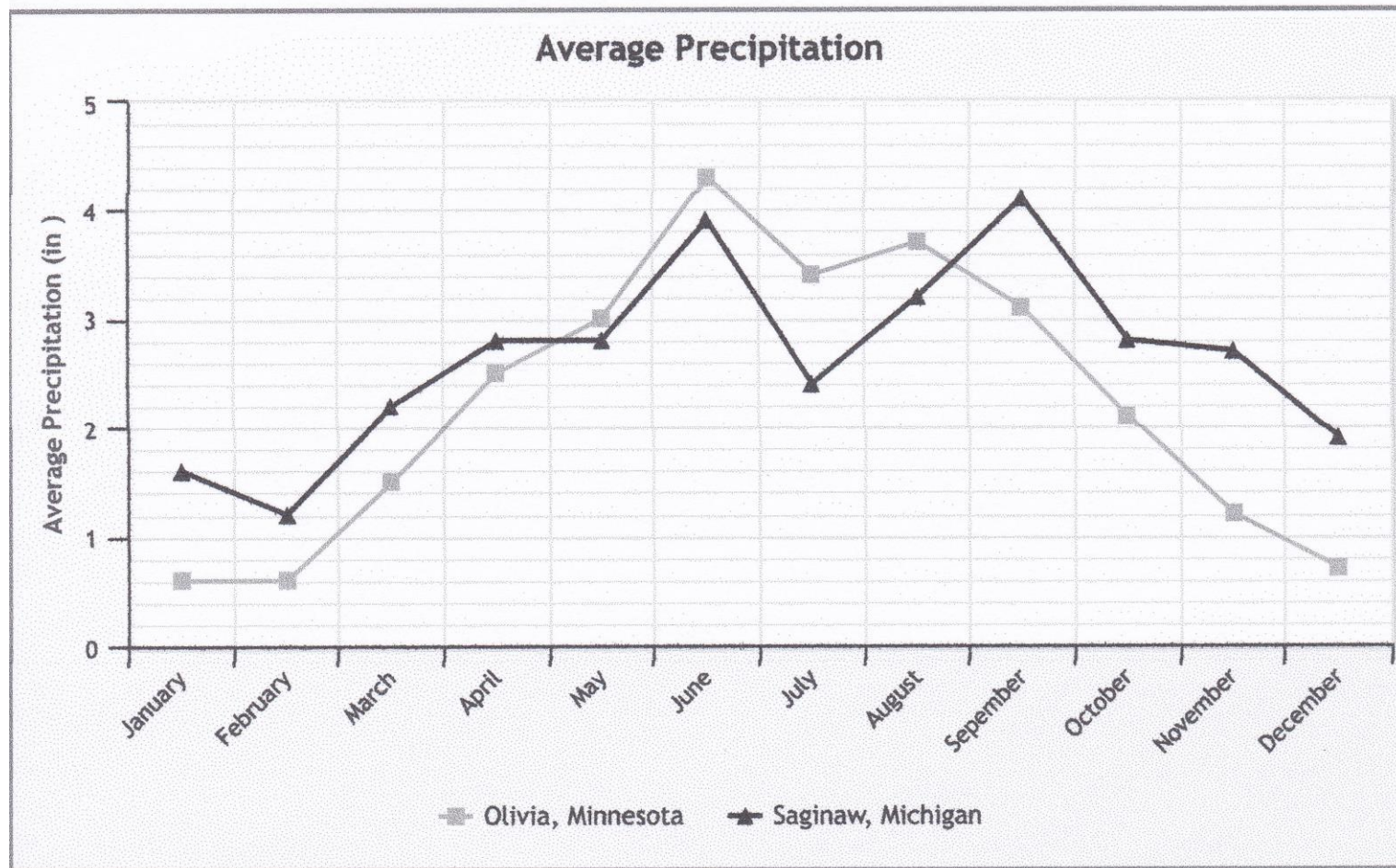




**AVERAGE TEMPERATURE ( °F )**

CITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Olivia	11.8	17.4	30.0	45.7	58.6	68.1	71.9	69.0	60.7	47.4	31.9	16.6	44.1
Saginaw	23.4	26.1	35.8	47.4	59.8	68.7	73.0	70.8	63.2	51.8	40.0	28.6	49.1

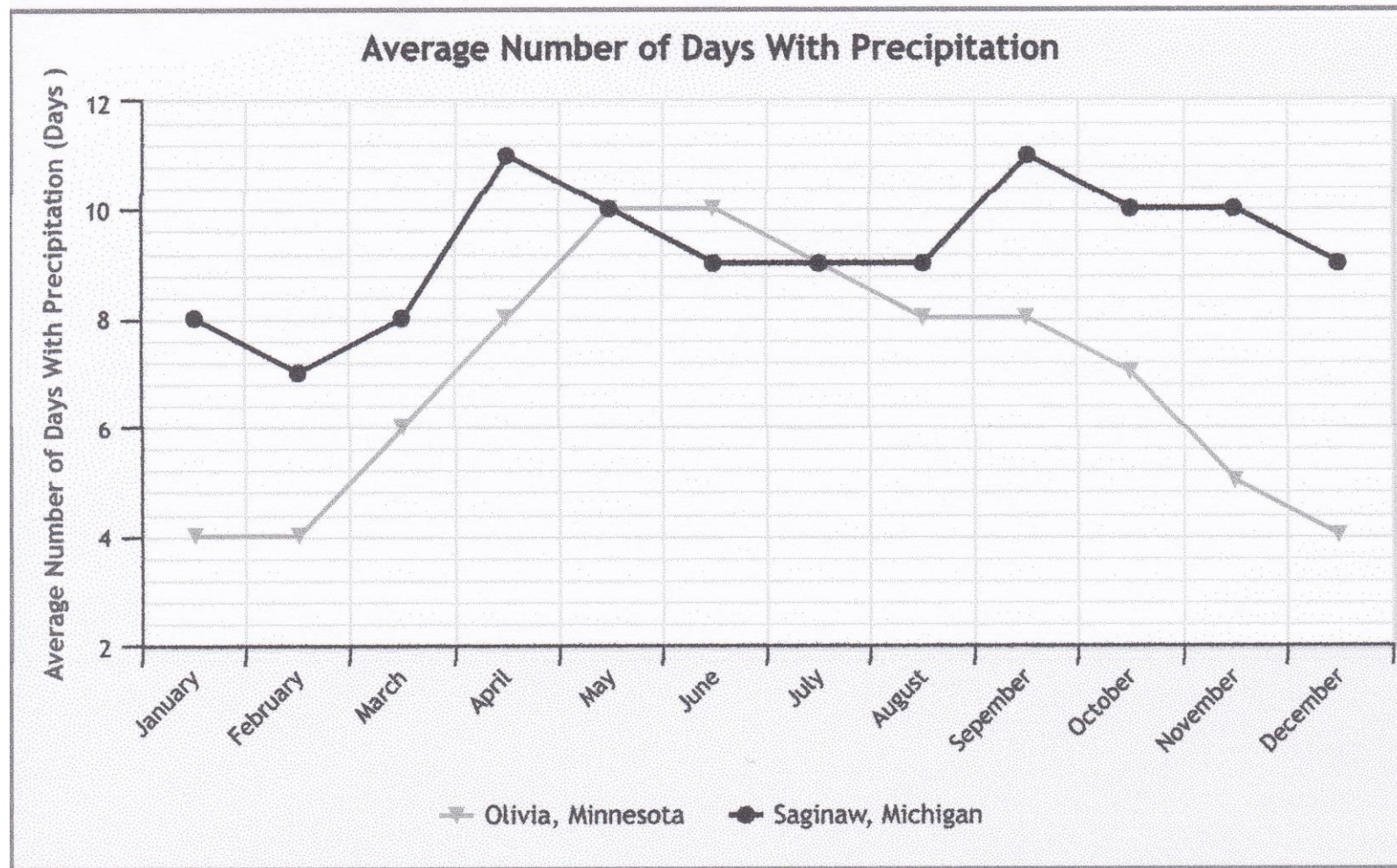




### AVERAGE PRECIPITATION ( IN )

CITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Olivia	0.6	0.6	1.5	2.5	3.0	4.3	3.4	3.7	3.1	2.1	1.2	0.7	26.7
Saginaw	1.6	1.2	2.2	2.8	2.8	3.9	2.4	3.2	4.1	2.8	2.7	1.9	31.6

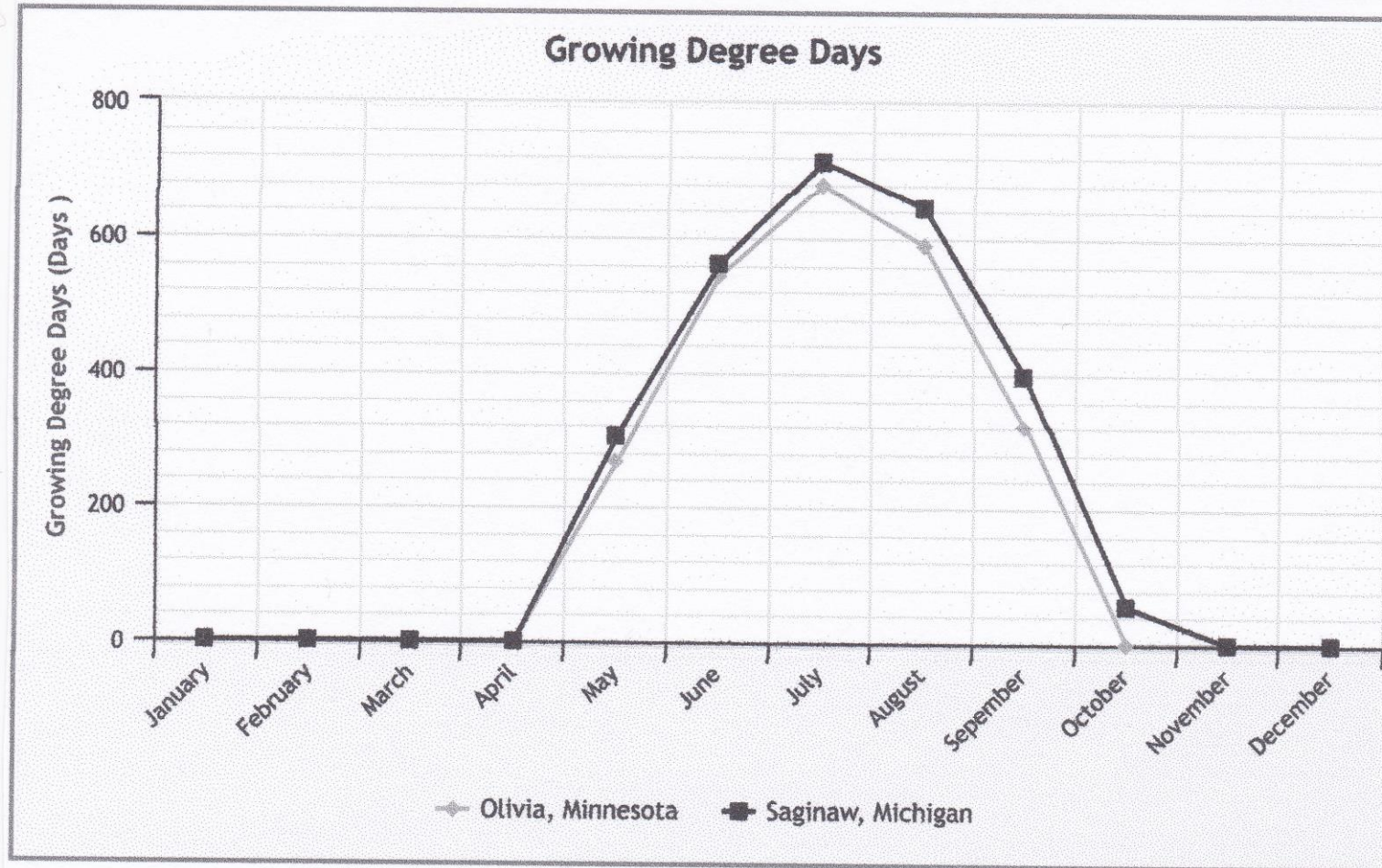




### AVERAGE NUMBER OF DAYS WITH PRECIPITATION ( DAYS )

CITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Olivia	4.0	4.0	6.0	8.0	10.0	10.0	9.0	8.0	8.0	7.0	5.0	4.0	83.0
Saginaw	8.0	7.0	8.0	11.0	10.0	9.0	9.0	9.0	11.0	10.0	10.0	9.0	111.0

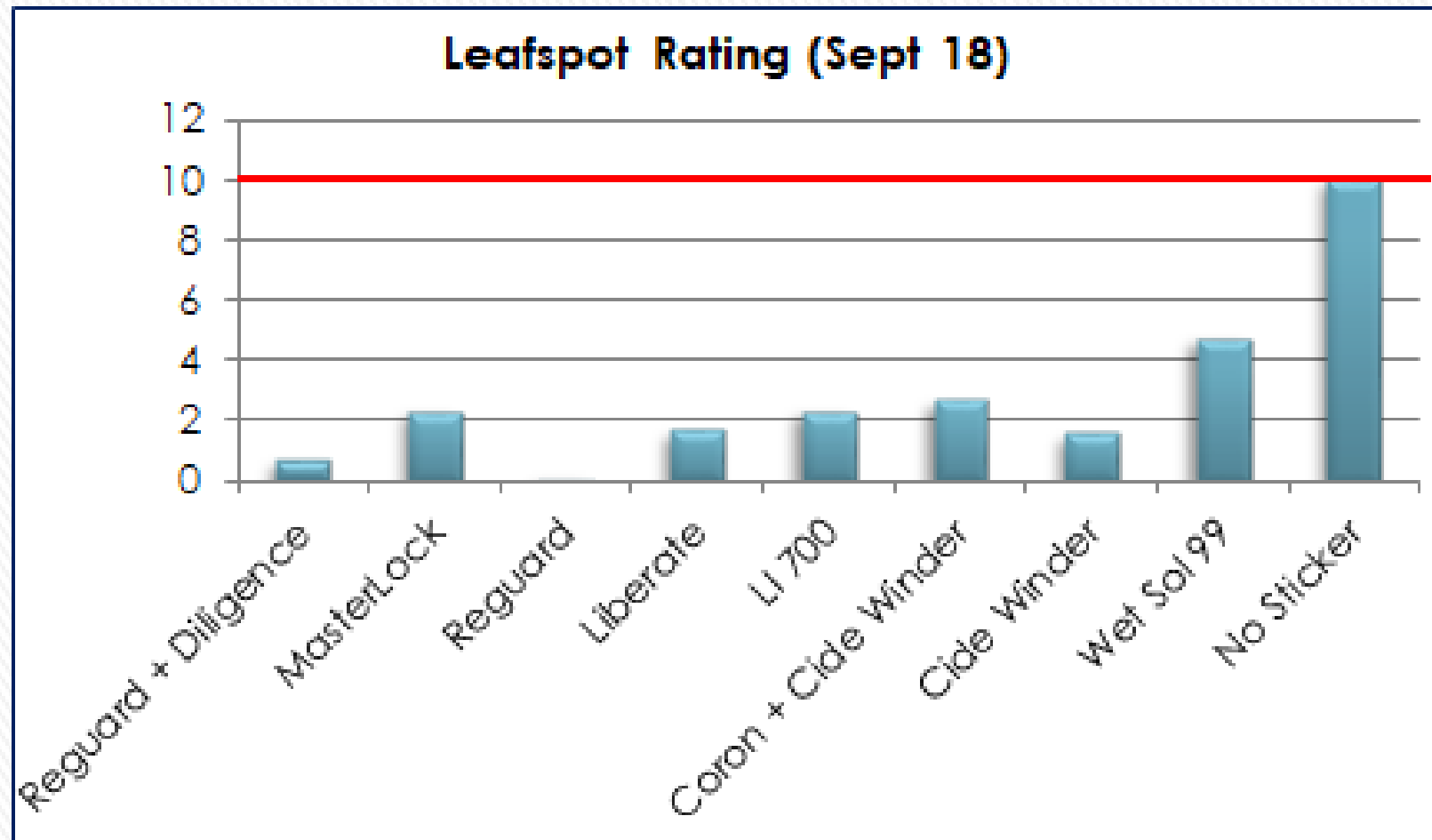


**GROWING DEGREE DAYS ( DAYS )**

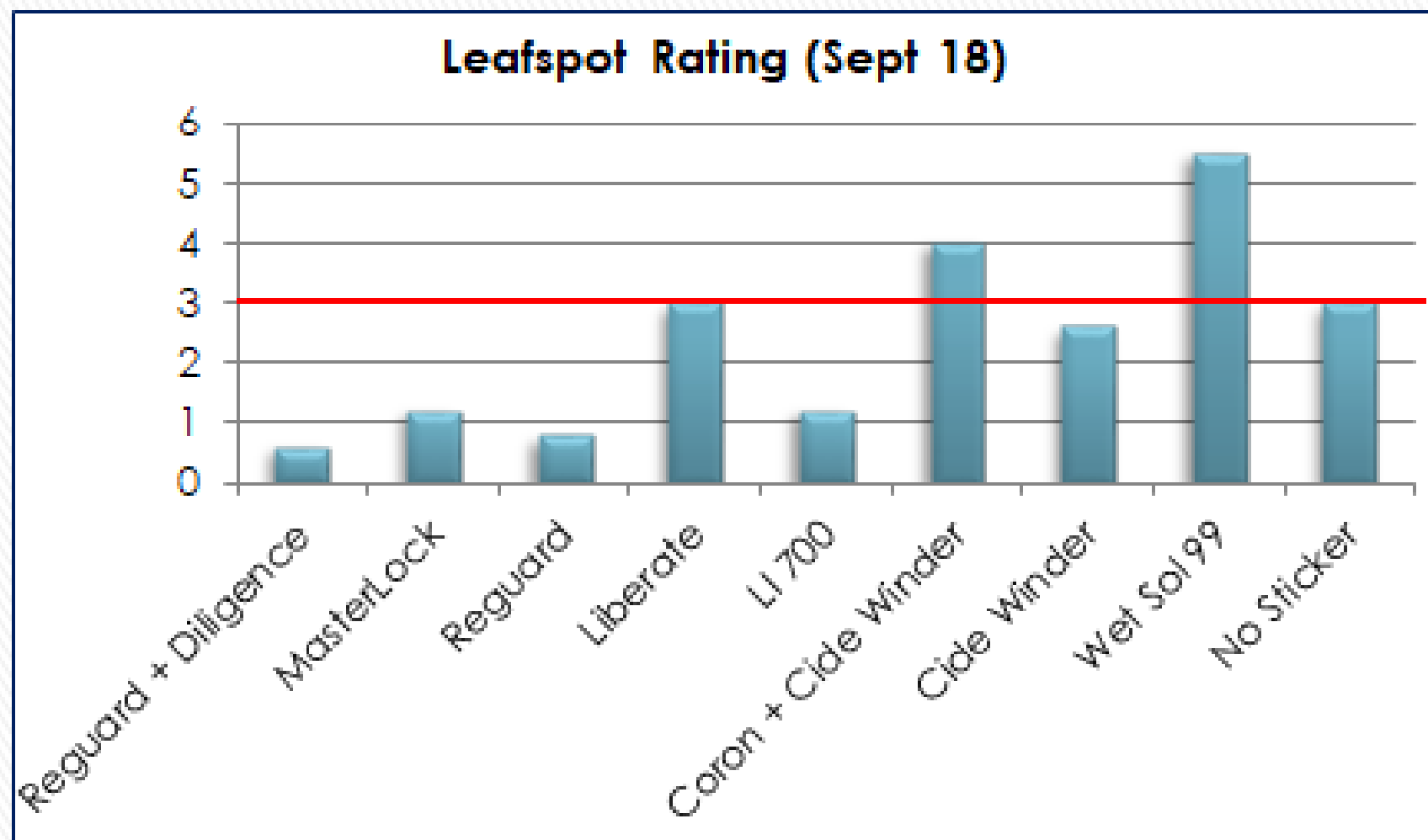
CITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Olivia					266.6	543.0	678.9	589.0	321.0				2398.5
Saginaw					303.8	561.0	713.0	644.8	396.0	55.8			2674.4



# Adjuvants – *Super Tin*

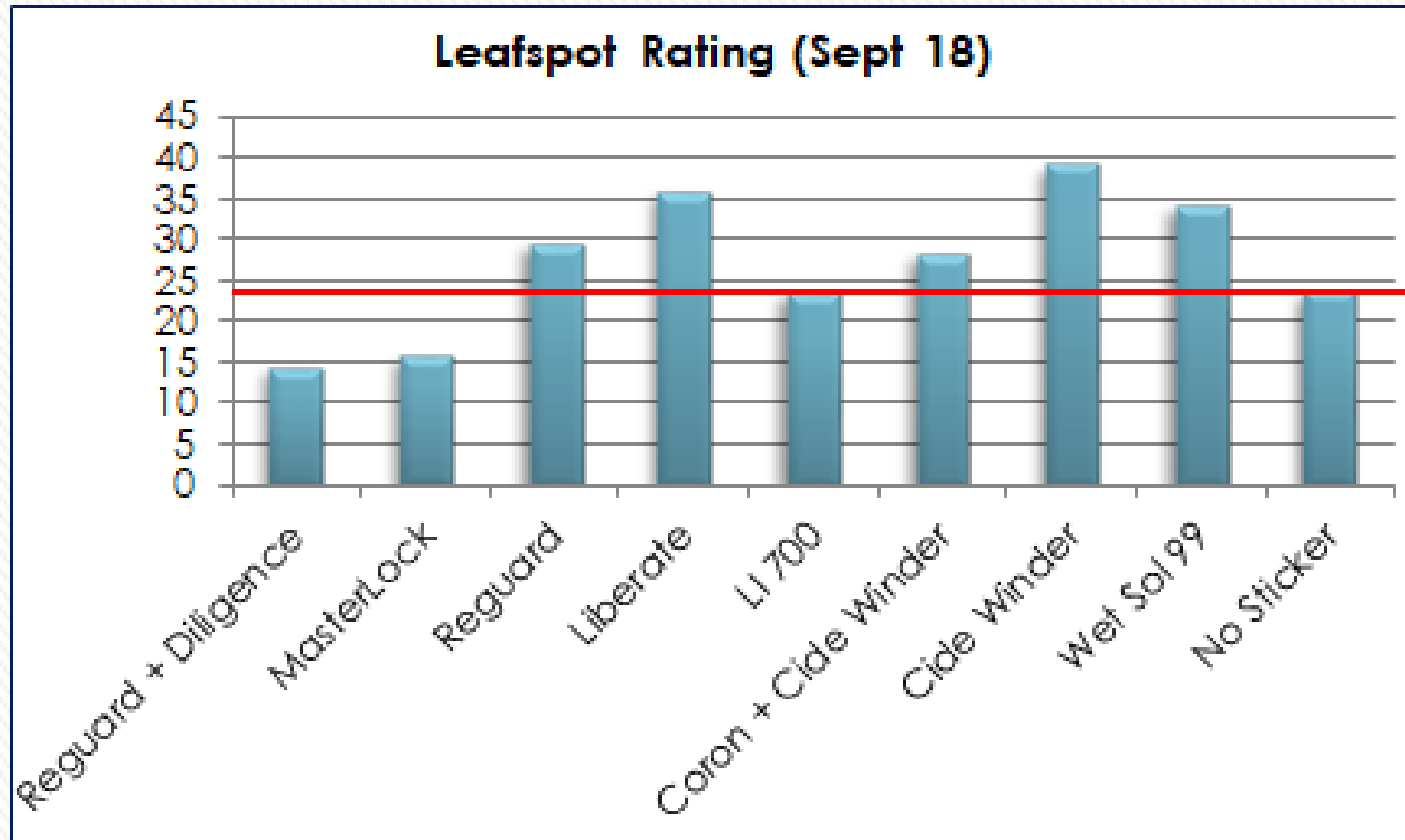


# Adjuvants - EBDC(7 Day Interval)

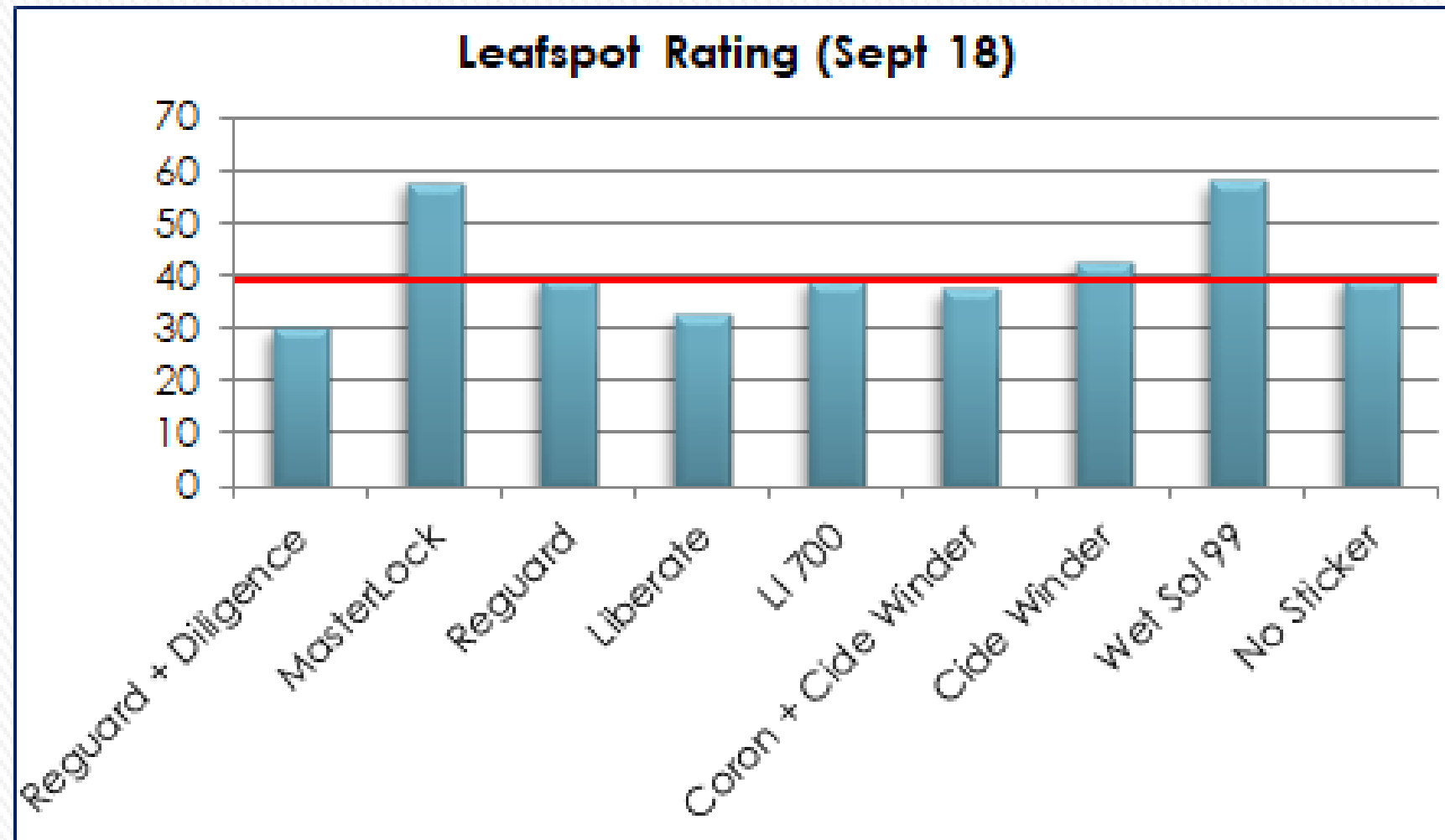




# Adjuvants – EBDC 10 Day Interval



# Adjuvants - EBDC (13 Day Interval)







# Approved Varieties for 2019

## Michigan Sugar Company

### 2017 & 2018 Data

Variety	Approval Status	\$/A	All Values are % of Check											
			RWSA	RWST	T/A	Emer gence	Cercos pora	Alter naria	Cerc/Alt Comb.	Rhizoc tonia	Root Aphid	Aphan omyces	Fusar ium	Rhizo mania
C-G675	Full Approval	\$1,516	107.5	99.9	107.7	107 G+	101 F+	89 G+	96 G	87 G	15 G+	92 F+	116 P	88 G
SX-RR1264	Full Approval	\$1,515	107.3	102.1	105.1	102 F+	105 F+	100 G	103 F	104 F	17 G	71 G+	94 F	98 G-
B-1703	Limited Approval	\$1,494	106.0	99.6	106.3	111 G+	90 G	79 G+	86 G+	95 F+	8 G+	138 P	112 P	92 G
SX-RR1278N	Limited Approval	\$1,492	105.8	101.3	104.2	108 G+	112 F-	115 F	113 F-	112 P	60 F	74 G+	95 F	95 G-
B-1606N	Special Approval	\$1,469	104.2	97.1	107.2	102 F+	109 F	102 G-	106 F	95 F+	23 G	77 G	78 G	92 G
C-G752NT	Limited Approval	\$1,462	103.7	99.0	104.6	105 G	109 F	111 F+	110 F	99 F+	14 G+	86 F+	83 G-	96 G-
B-149N	Full Approval	\$1,456	103.3	95.5	108.0	106 G	120 P	117 F	119 F-	98 F+	9 G+	101 F	72 G+	84 G+
HIL-9865	Full Approval	\$1,451	102.9	102.1	100.7	102 F+	105 F+	112 F	108 F	100 F	30 F+	122 P	115 P	99 G-
SX-RR1275N	Limited Approval	\$1,448	102.7	99.8	103.0	105 G	111 F-	125 F-	117 F-	108 F-	134 F-	74 G+	97 F	78 G+
C-G515	Full Approval	\$1,440	102.0	99.4	102.7	103 F+	115 F-	154 P	131 P	93 G-	13 G+	102 F	75 G	91 G
SX-RR1243	Full Approval	\$1,440	102.2	99.3	102.9	104 G	108 F	107 F+	108 F	103 F	212 P	97 F	88 F+	94 G
SX-RR1276	Limited Approval	\$1,432	101.7	100.6	100.9	98 F	105 F+	111 F	107 F	111 P	188 P	77 G	98 F	78 G+
C-RR059	Full Approval	\$1,430	101.4	100.5	100.9	105 G	110 F	152 P	127 P	93 G-	23 G	109 F-	76 G	90 G
SX-RR1245N	Full Approval	\$1,427	101.2	99.8	101.3	110 G+	113 F-	121 F-	116 F-	108 F-	195 P	89 F+	105 P	87 G+
C-G333NT	Special Approval	\$1,427	101.3	96.2	105.1	101 F+	119 P	109 F+	115 F-	98 F+	19 G	111 F-	78 G	93 G
B-1690	Full Approval	\$1,423	101.0	102.0	99.1	102 F+	104 F+	133 F-	116 F-	97 F+	7 G+	100 F	74 G	91 G
MA-709	Limited Approval	\$1,421	100.6	100.3	100.7	107 G+	91 G	94 G	92 G	109 P	28 F+	98 F	113 P	103 F+
B-1399	Full Approval	\$1,409	99.8	96.6	103.4	102 F+	91 G	95 G	93 G	97 F+	14 G+	87 F+	67 G+	98 G-
B-12RR2N	Full Approval	\$1,378	98.0	99.6	97.9	93 F	106 F	103 G-	105 F	106 F-	139 F-	78 G	83 G-	99 G-
HIL-9908	Limited Approval	\$1,350	95.6	103.9	92.1	98 F	79 G+	91 G+	84 G+	100 F	33 F+	106 F-	114 P	112 F
HIL-9879NT	Full Approval	\$1,306	92.4	101.3	91.5	96 F	85 G	101 G	91 G	104 F	34 F+	133 P	113 P	119 F

A lower value is better for Cercospora, Alternaria, Rhizoctonia, Root Aphid, Aphanomyces, Fusarium and Rhizomania

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.





## 2018 ACH Seeds Strip Trials©



### Locations w Poor Leafspot Control

Casassa, Mossner, Gentner-Bischer

Variety and Trt.	RWSA	RWST	% Sugar	Tons
C G675 Silver	8638	252	17.0	35.4
C G333NT Silver	8524	240	16.3	36.9
C G351NT Silver	8481	256	17.2	34.2
→ C RR059 Silver	8029	249	16.8	33.3
→ C G515 Silver	7759	242	16.4	33.1
Average.	8286	248	16.7	34.6



## 2018 ACH Seeds Strip Trials©



### Locations w Good Leafspot Control

Banks, Hrabal, Richmond

Variety and Trt.	RWSA	RWST	% Sugar	Tons
→ C RR059 Silver	10808	263	17.6	41.2
→ C G515 Silver	10807	260	17.5	41.6
C G333NT Silver	10692	252	16.9	42.4
C G675 Silver	10653	260	17.4	41.1
C G351NT Silver	10257	273	18.2	37.5
Average	10643	262	17.5	40.8

# Pitfalls to Avoid

1. Use turbo T jets no air inducted
2. Use 90-100 lbs pressure nothing less
3. Boom height 12-18 inches above canopy
4. Don't piece meal a program together we have tried it all
5. Make sure you use deposition aid its crucial



# Variety Type Income Comparison

## Susceptible Varieties with good disease control Income C059

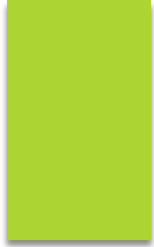
- ▶ \$28.00 per ton
- ▶ 1% sugar increase = 3.5 tons in payment (1% over factory avg)
- ▶  $41.2 \text{ tons} \times \$28.00 = \$1153.60$
- ▶ 1% sugar increase = \$98.00
- ▶ total income = \$1251.60

## Resistant Varieties With Poor Disease Control Income C675

- ▶ \$28.00 per ton
- ▶ 1% sugar increase = 3.5 tons in payment .5% over factory vag
- ▶  $35.4 \text{ tons} \times \$28.00 = \$991.20$
- ▶ 1% sugar increase = \$ 49.00
- ▶ total income = \$1040.20





















# So Whats the Program?

Here is the  
example  
on the right

## Renville County high Cercospora (CLS) pressure plan (as of 2/4/19)

(Adjuvant use, paired with the proper fungicide, is a significant consideration in this plan)

All use of this information is at producers own risk; CLS plans must be flexible based on many factors as the season progresses

App	date	Required Fungicide 1	Required Fungicide 2	Required Extender	Required Deposition	Recommended Humectancy	Recommended Sugar Accumulation
1	6/24/2019	Triazole chemistry #1	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	N-Demand, 1 gallon	Boron 20 oz
2	7/8/2019	Super Tin	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-
3	7/22/2019	Triazole chemistry #2	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	N-Demand, 1 gallon	Boron 20 oz
4	8/5/2019	Super Tin	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-
5	8/19/2019	Triazole chemistry #3	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	N-Demand, 1 gallon	Priaxor 4 oz
6	9/2/2019	Super Tin	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-
7	9/16/2019	Triazole chemistry #4	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-

*Dates are included above, only for the purpose of review of potential implications to full season product limitations*

### Before the season:

With normal planting, anticipate the time period needed for CLS protection, likely at least from late June to October 1st in Renville County  
Control all weeds before all fungicide applications (excellent sugar beet plant coverage is essential for EBDC application)

Consult all labels for proper use of Adjuvants with fungicides, and for all other application instructions and requirements

All fungicides must be at full label rates; (including the Manzate Prostic or equivalent dry EBDC product)

Manzate Prostic and Super Tin are presented at their label maximums of product application per season (consult these labels)

know the correct Mixing Order (This is necessary for CLS control); also know water ph and hardness for possible corrective actions

Jar test product compatibility, consult neighbors/retailers for concerns throughout the season (again you are applying at your own risk)

Make sure the applicator understands why each product is being used (do not follow these suggestions blindly)

### Application Requirements:

Maintain strict 10-14 day spray intervals with EBDC (label calls for 10 days maximum, extended here due to multiple products in mix)

In the event of forecasted rain, consider applications closer to the 10 day interval

Use correct Spray Tips: Turbo Teejects or Flat Fans (absolutely no Air Induction(AI), CLS control will fail with AI tips)

20 gallons of water per acre (minimum on Manzate Prostic label) with 100 PSI application pressure

Boom height is critical, as close to the plant as possible, yet high enough to ensure complete plant coverage (avoid high boom tips)

### Day of application:

Do not apply in a heavy dew (you do not want the fungicide to run off the plant)

You must finish Reguard with at least one hour of daylight remaining (Ideal application time likely between 9 am and 6pm)

Before starting flush booms with water; charge booms with product. When done flush tanks and booms with water each day

If dry or hot conditions, consider applications earlier in the day while beet leaves are standing upright


Renville County high Cercospora (CLS) pressure plan (as of 2/4/19)

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3	7/22/2019	Triazole chemistry #2	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	N-Demand, 1 gallon	Boron 20 oz
4	8/5/2019	Super Tin	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-
5	8/19/2019	Triazole chemistry #3	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	N-Demand, 1 gallon	Priaxor 4 oz
6	9/2/2019	Super Tin	Manzate Pro-stick 2#	Reguard 12 oz	Diligence 1.5 oz	-	-
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So Whats Your plan?



**Larry Camp 989-550-1967**  
**lcamp@wilburellis.com**