



# Rhizoctonia Forum

## Michigan Growing Region

ASSBT 2011 *growth*

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# Rhizoctonia in Michigan

- ✦ Approx 30% of acres need resistant varieties
- ✦ Another 40% of acres (approx) have a substantial problem
- ✦ About 30% of acres have very manageable Rhizoc problems



# Rhizoctonia in Michigan

✿ *R. solani* AG 2-2 IIIB

✿ *R. solani* AG 2-2 IV

✿ Approx 50/50 mix in Michigan



# Rhizoctonia in Michigan

- ✿ More tip rot than crown rot
- ✿ Crown rot used to be more prevalent



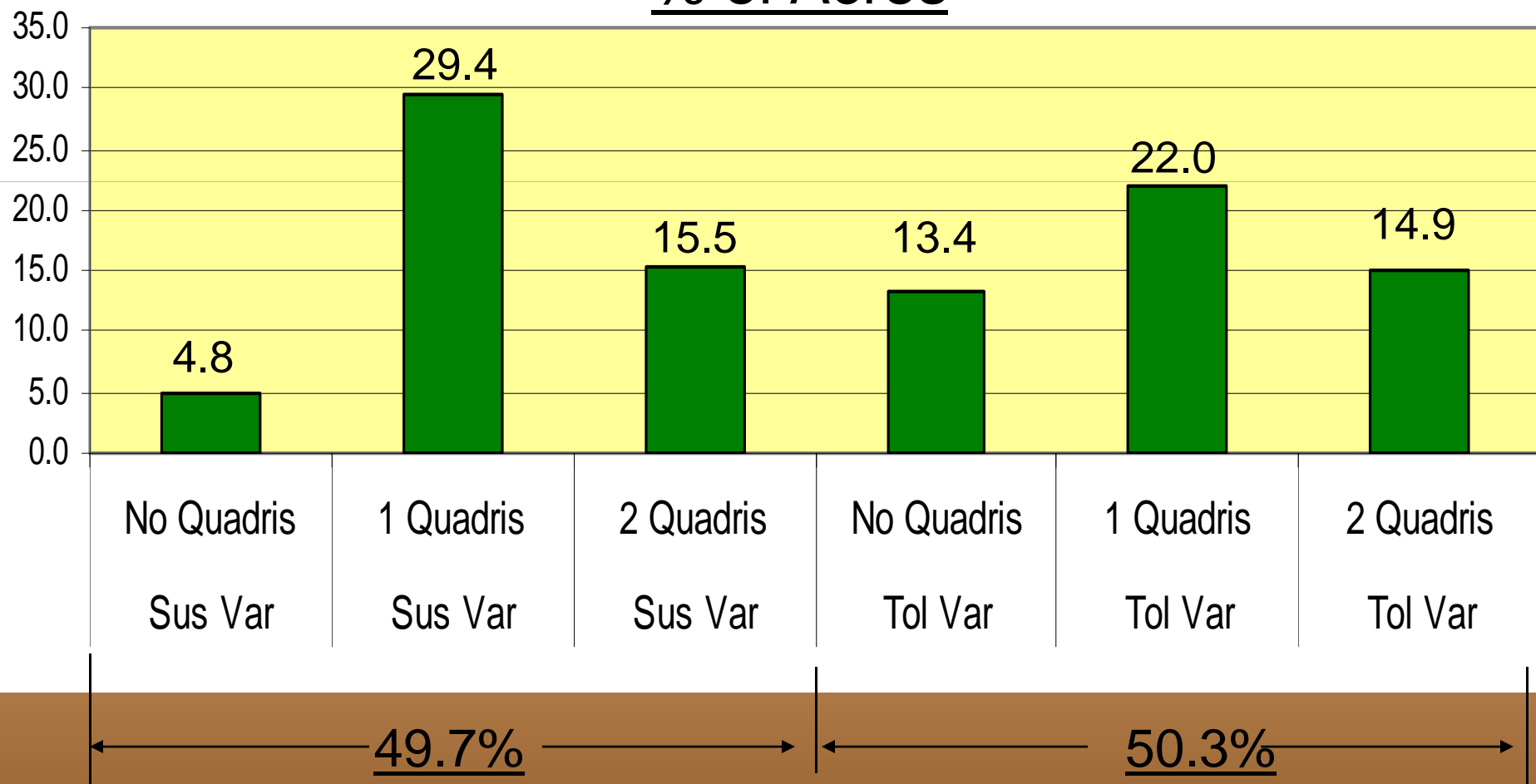
# Crops Grown in Rotations with Sugarbeets in Michigan

- ✿ Corn
- ✿ Soybeans
- ✿ Wheat
- ✿ Wheat/Clover
- ✿ Dry Beans
- ✿ Pickles



# Survey Results

% of Acres





# High Potential for Yield Losses In Michigan From Rhizoctonia



Grower shut off in-furrow Quadris for a check strip







# Yield Losses Due to Rhizoctonia 2009 and 2010 Research Trials

- ❖ Small Plot Trials (Michigan Sugar)
  - 4 Tons/A in Untreated Plots
  - 1-2 Tons/A with avg. Treatment
  - ½ to 1 point of sugar
  
- ❖ Moderate Disease Levels  
(30 dead beets/100 ft)





# Yield Losses Due to Rhizoctonia 2009 and 2010 Research Trials

- ✿ Sugarbeet Advancement Strip Trials
  - 4-5 Tons/A in Untreated
  - 2 Tons/A with avg Trt
  - 20 RWST
  
- ✿ Moderate Disease Levels

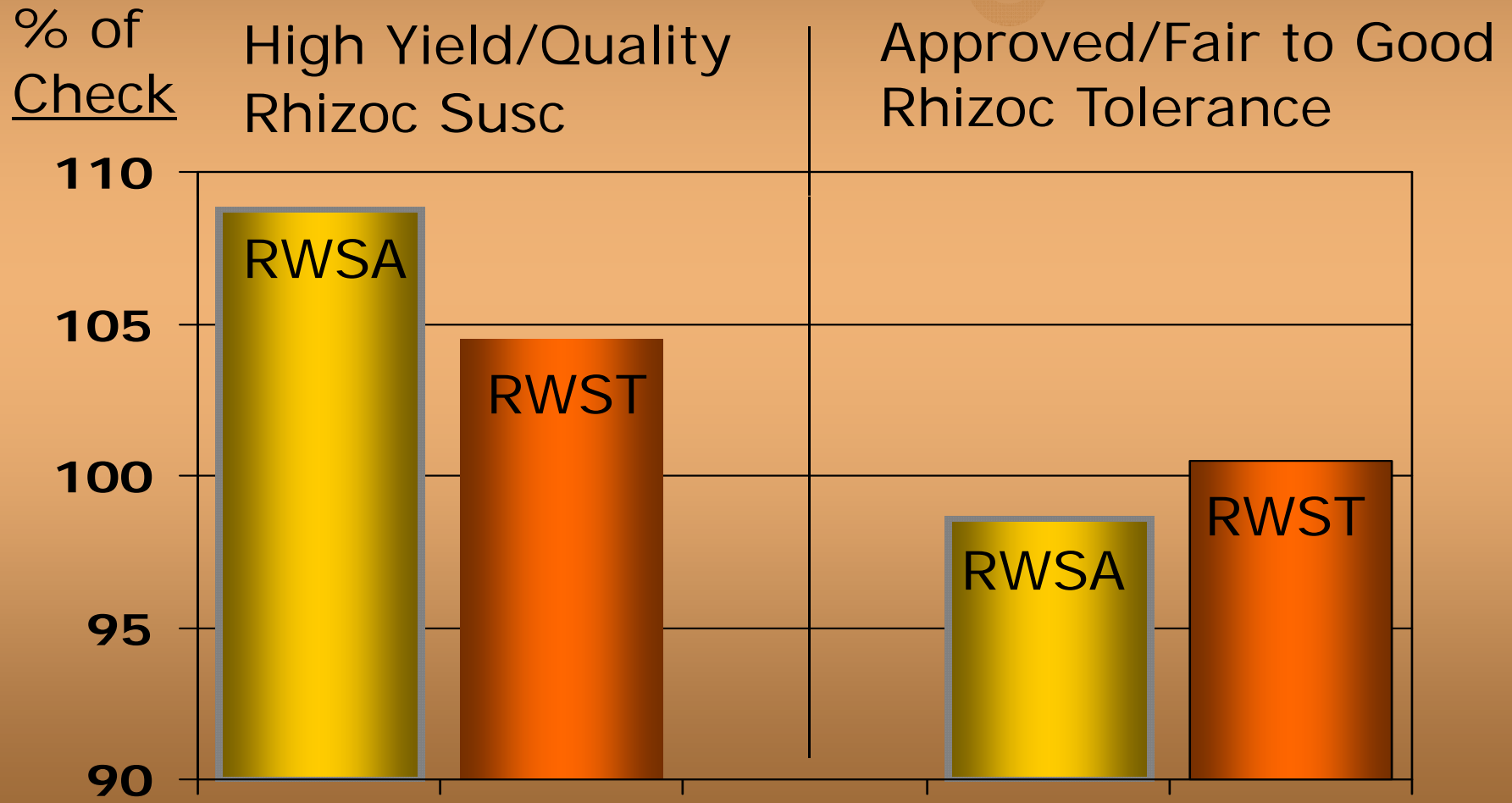


# Yield Losses Due to Rhizoctonia

- ❖ Sugarbeet Advancement Strip Trials
  - Up to 10 Tons/A in Untreated
- ❖ High Disease Levels



# Varieties Grown in Michigan About a 50/50 Mix





# Rhizoctonia Varietal Differences



Tolerant



Moderately Susceptible



Highly Susceptible



# Nematode Tolerant Varieties

- ❖ 25% of acres with nematode problems
- ❖ Nematode varieties have poor Rhizoctonia tolerance





# Fungicide Recommendations

- ✿ Quadris
  - Post emergence foliar application
  - In-furrow at planting





# Quadris Foliar Application Rates

## 7 inch band

### Quadris Rates (fl oz/A) at Row Spacings

30"	28"	24"	22"	20"
Rows	Rows	Rows	Rows	Rows
<u>10.5</u>	<u>11.2</u>	<u>13.1</u>	<u>14.3</u>	<u>15.8</u>

Do Not Cut Rates





# Quadris Foliar Recommendations

- ✦ 7 inch band
- ✦ Do not broadcast
- ✦ 4-8 leaf size
- ✦ EC's and oils can cause injury



# Quadris In-Furrow Recommendations

## ✿ Quadris

### – In-furrow T-band

- Has provided best yield increases
- Minor stand reductions can occur (5% avg)



# In-Furrow, T-band, Rates of Quadris, fl oz/acre

Band Width	Row Spacing				
	30 Inch	28 inch	24 inch	22 inch	20 inch
7 inch	10.5	11.2	13.1	14.3	15.8
6 inch	9.0	9.6	11.3	12.3	13.5
5 inch	7.5	8.0	9.4	10.2	11.3
4 inch	6.0	6.4	7.5	8.1	9.0
3 1/2 inch or less	5.3	5.6	6.6	7.2	7.9



# T-band Quadris







# In-Furrow Recommendations

- ❖ T-band only, between seed drop and row closing
- ❖ Do not mix with fertilizer
- ❖ Do not dribble in-furrow



# In-Furrow Recommendations

- ✿ Not less than 20 psi
- ✿ 5–10 gallons/acre
- ✿ Tip not less than “015” for volume
- ✿ 50 mesh screen



# Quadris In-Furrow Narrowing Band Width

- ❖ Narrow T-band
  - 3.5 inches
- ❖ Lower proportionate rate
  - Down to  $\frac{1}{2}$  rate





## 2 Quadris Applications

- ✿ Moderate Rhizoc – Susceptible Variety
- ✿ High Rhizoc – Tolerant Variety
- ✿ Combination of in-furrow and foliar



# Plans to Manage Rhizoctonia with Susceptible Varieties

Field Selection is Critical

- ✦ 25-30% of area not suitable for highly susceptible varieties





# Managing Rhizoctonia with Susceptible Varieties

Required to Apply  
Quadris

- ✿ 1 or 2 applications depending upon situation



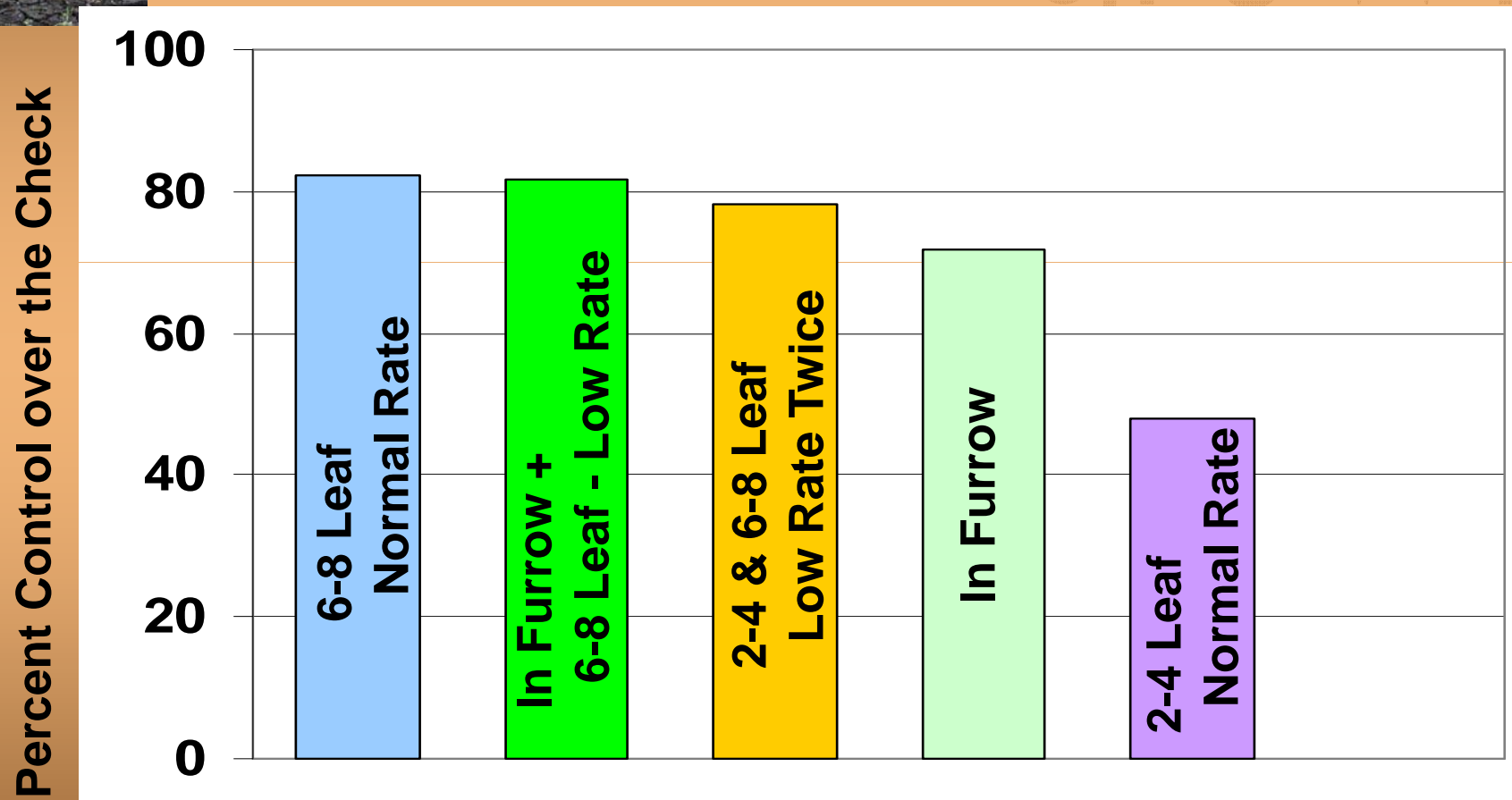




Questions?



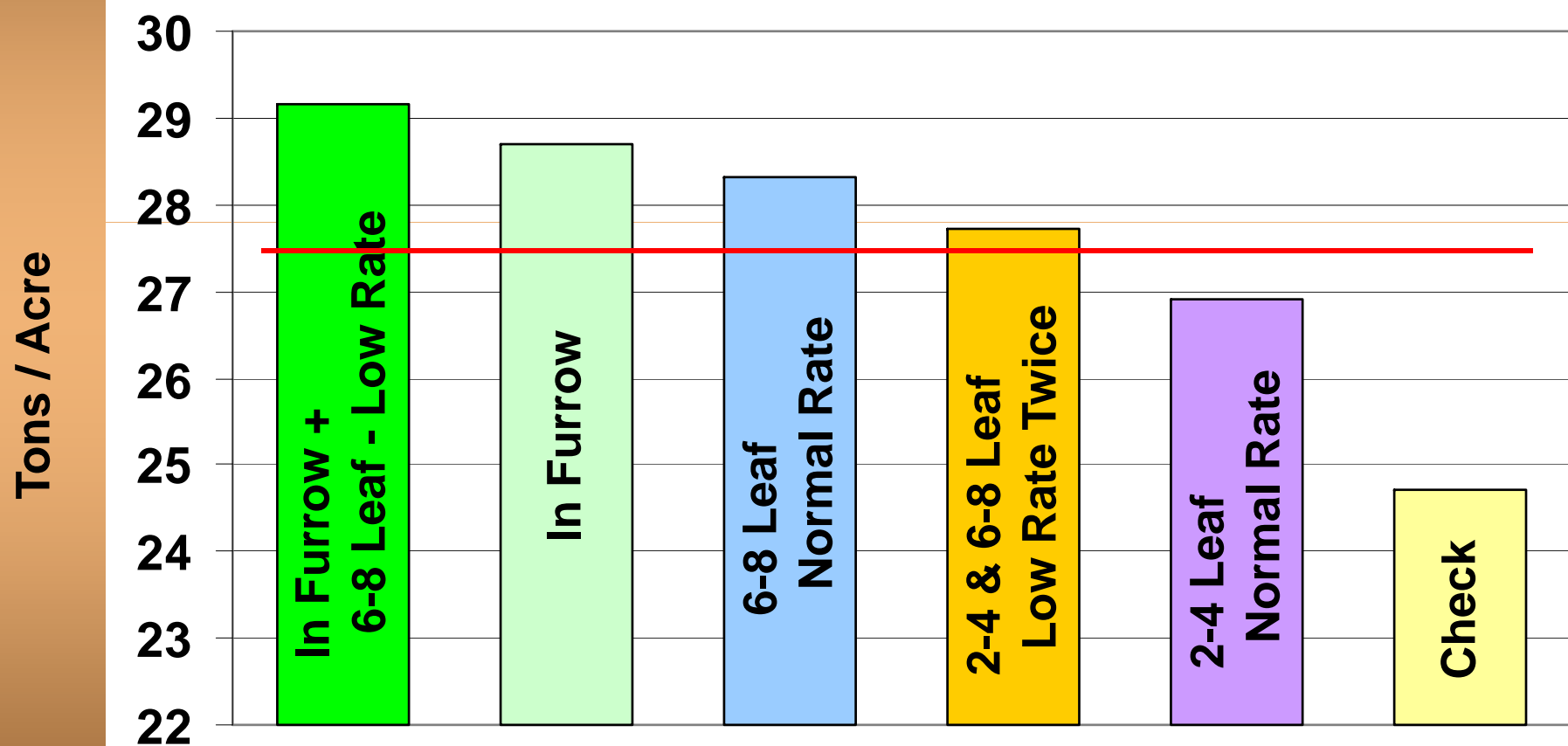
# AVERAGES OF 2009 & 2010 Percent Control (4 Trials)



This chart does not include the 2010 Meylan Trial due to a lower stand for the in furrow treatments.



# AVERAGES OF 2009 & 2010 Tonnage (4 Trials)

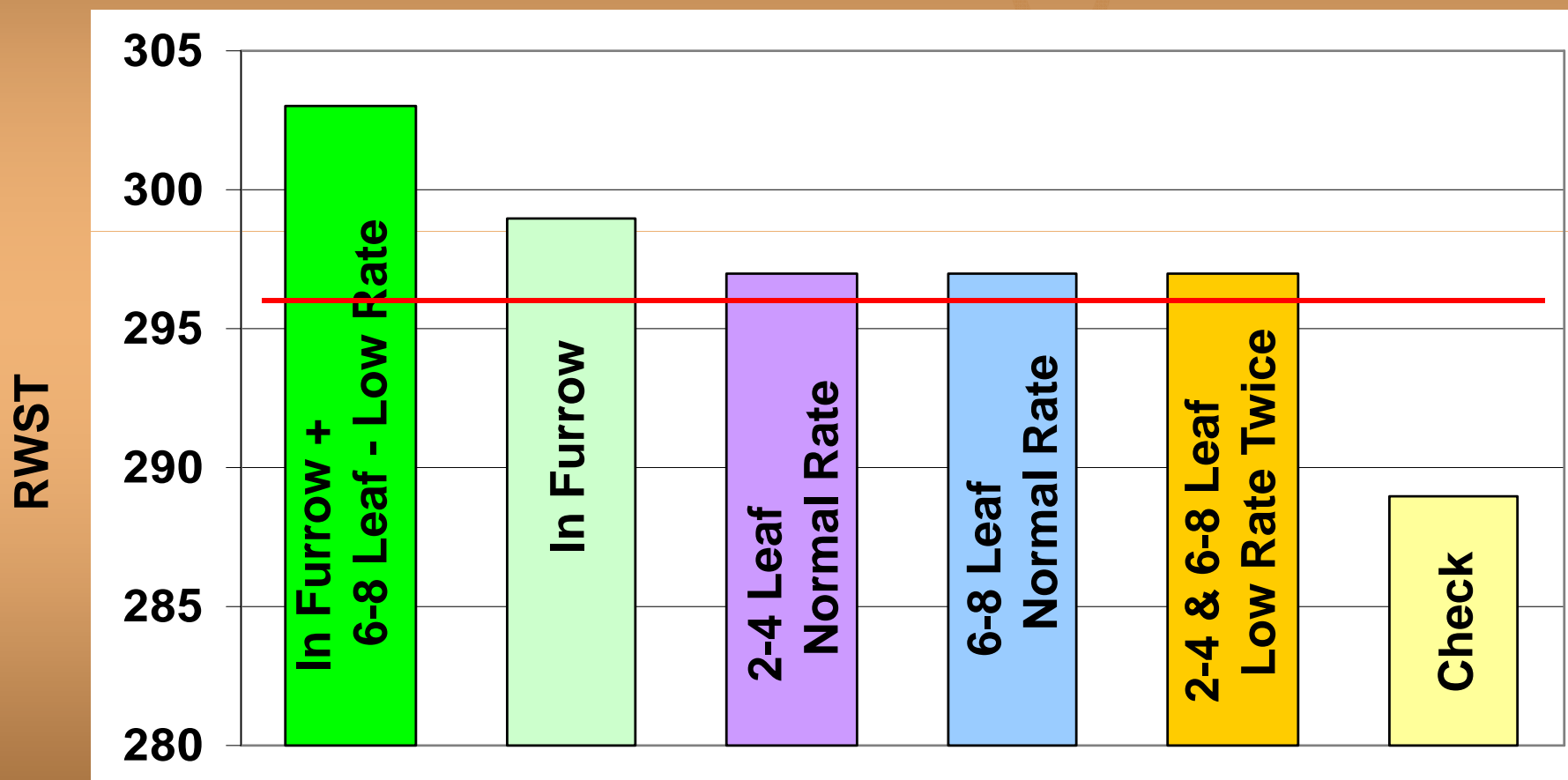


This chart does not include the 2010 Meylan Trial due to a lower stand for the in furrow treatments.





# AVERAGES OF 2009 & 2010 RWST (4 Trials)



This chart does not include the 2010 Meylan Trial due to a lower stand for the in furrow treatments.

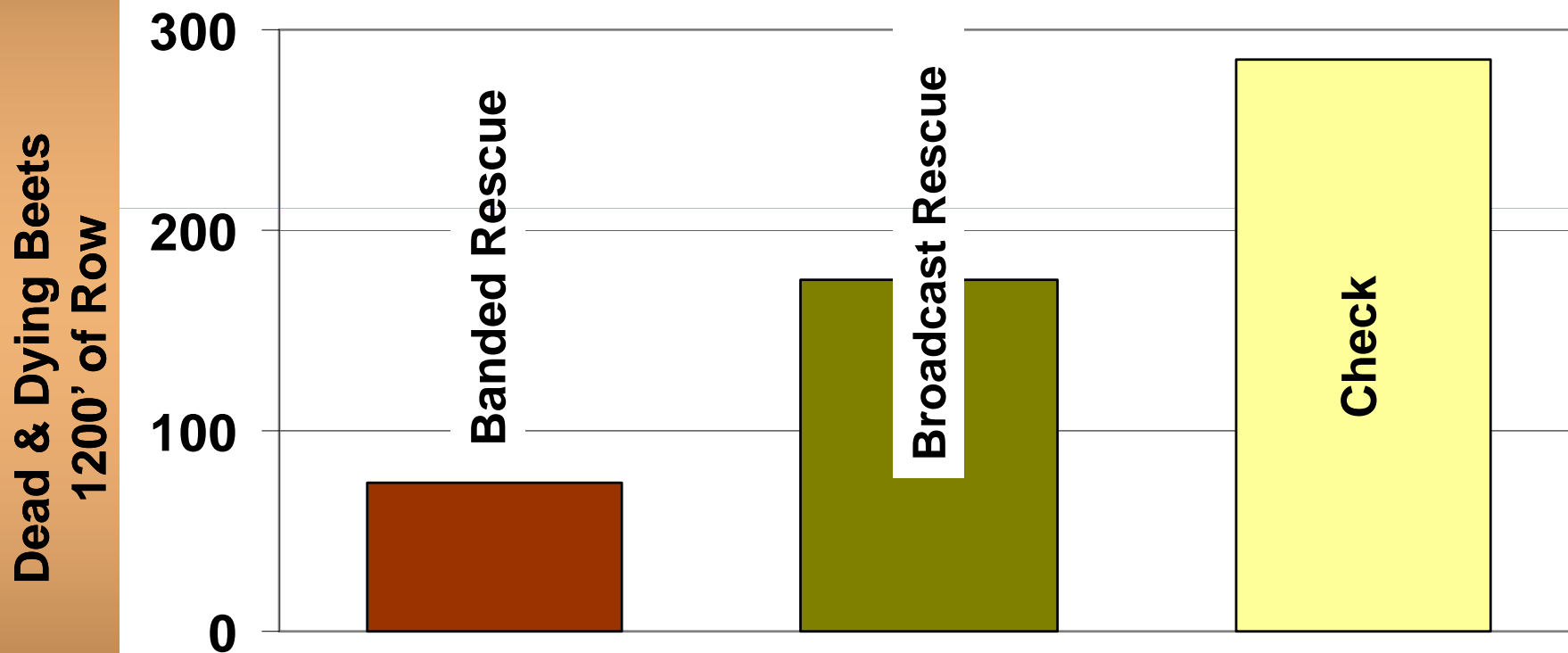




# RESCUE TREATMENTS

## Average of 2 Trials

### Schindler & Helmreich Farms



Both Quadris Treatments were on 6/8/10 (10-14 Leaf).  
Dead beets were starting to be found in these fields.

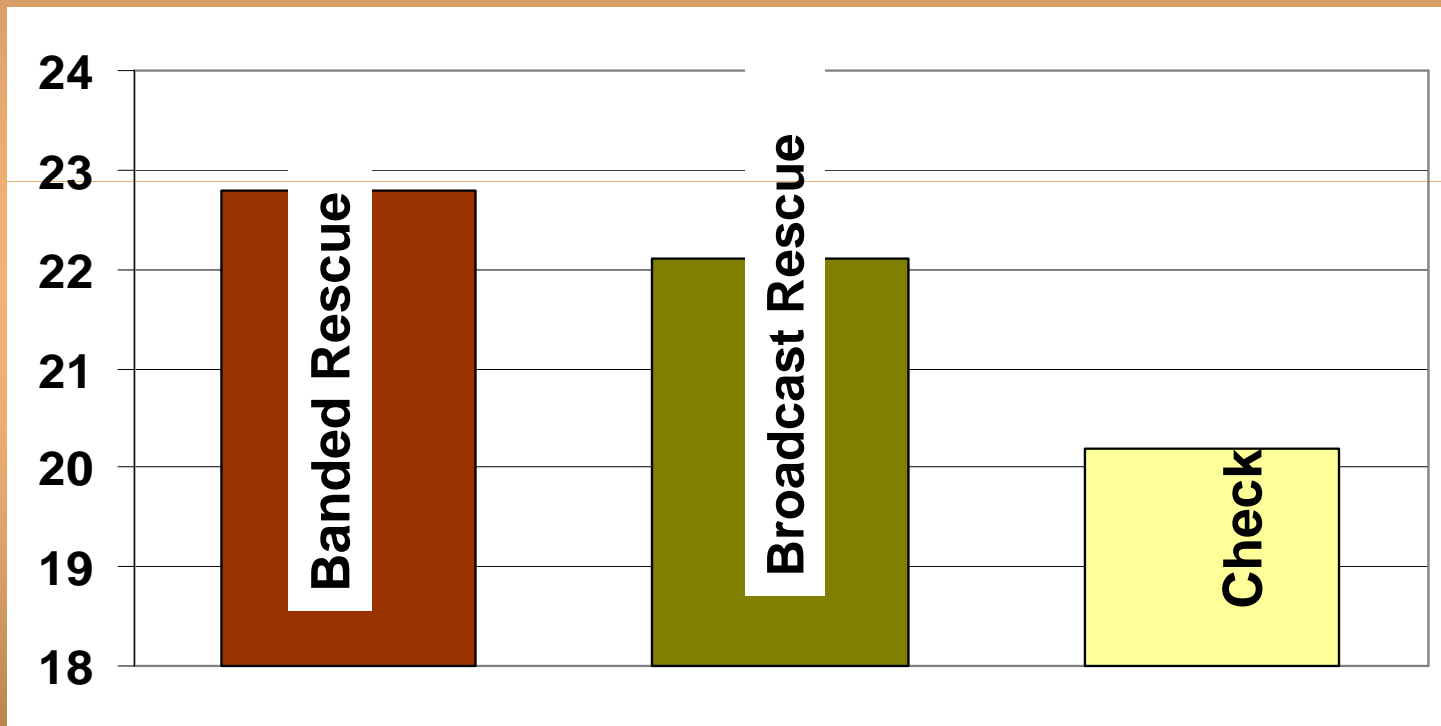


# RESCUE TREATMENTS

## Average of 2 Trials

### Schindler & Helmreich Farms

Tons / Acre



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