

Variety Approval Forum Michigan Sugar

ASSBT – 2011

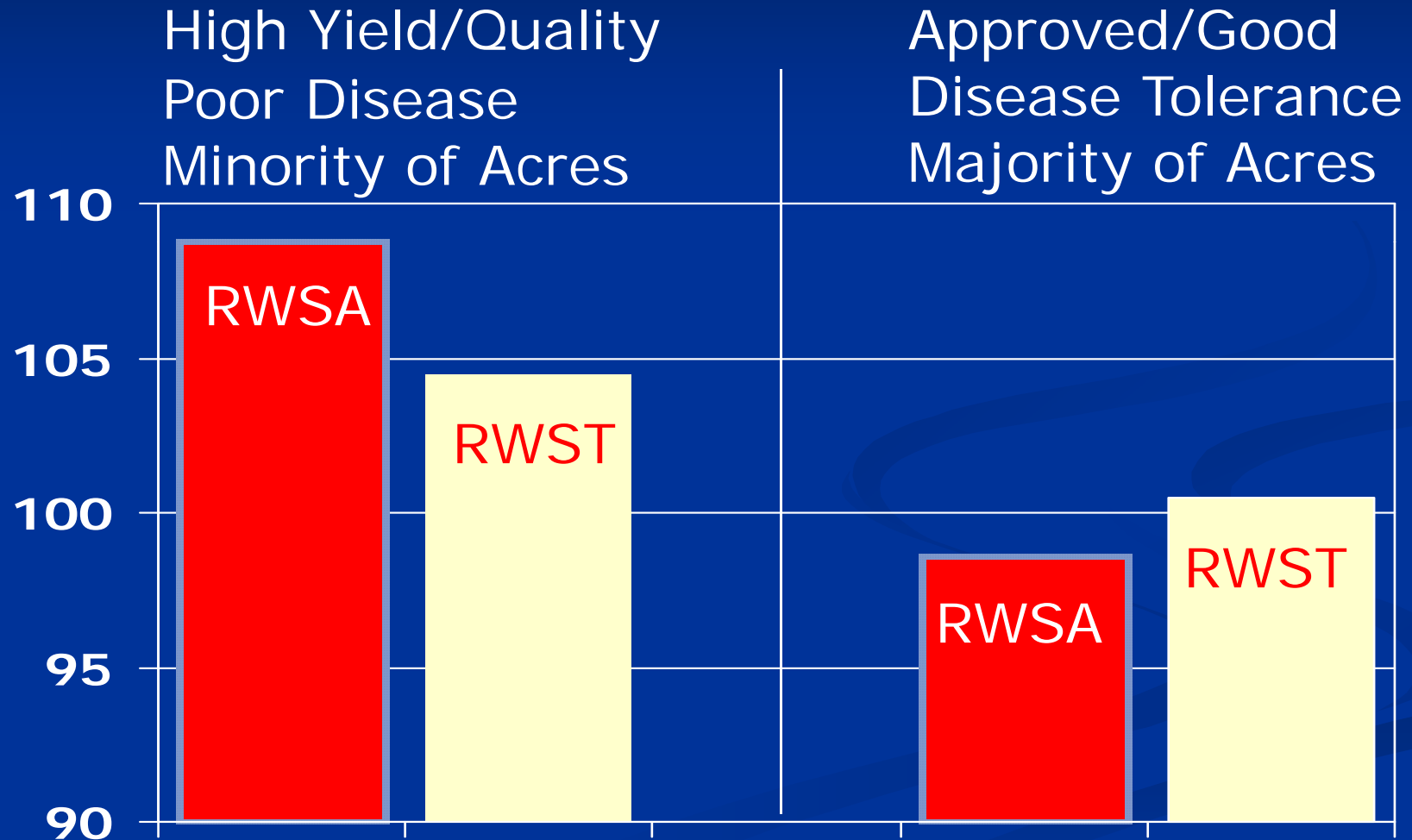
Jim Stewart
Director of Research
Michigan Sugar Company

Major Goal of Michigan Sugar is to Improve Sugarbeet Quality

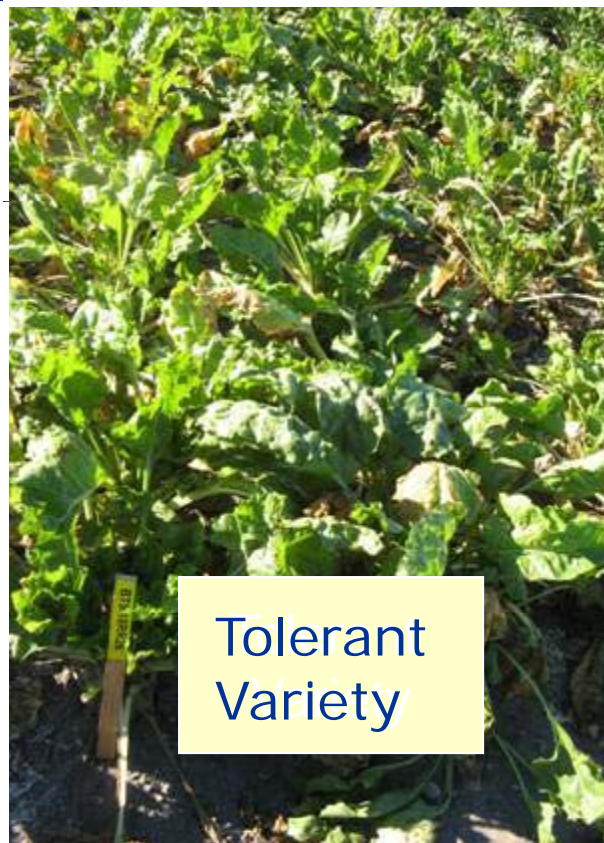
- ◆ Increase sugar from 18 to 19 percent by 2015
- ◆ “The Road to 19”

Variety Mix in Michigan

% of Check



Cercospora Varietal Differences



Tolerant
Variety



Moderately
Susceptible



Highly
Susceptible

Rhizoctonia Varietal Differences



Tolerant



Moderately
Susceptible



Highly
Susceptible

Nematode Tolerant Varieties

- ◆ 25% of acres with nematode problems
- ◆ Varieties don't pass approval



New Approval System

- ◆ Quality (3X premium)
- ◆ Cercospora level relaxed

Compare Approval Systems

Old System

- ◆ RWSA
- ◆ RWST
- ◆ Cercospora

New System

- ◆ RWSA
- ◆ RWST
- ◆ Cercospora
- ◆ Rhizoctonia
- ◆ Root Aphid
- ◆ Rhizomania
- ◆ Emergence

Comparing Approval Levels Old vs New "Points" System

<u>Year</u>	<u>RWSA</u>	<u>RWST</u>	<u>Cerc</u>	<u>Points</u>
2009	99.4	99.7	113.7	na
2010	105.0	101.0	140.0	105
2015	110.0	104.0	125.0	105

All Values % of Check

How "Points" System Works

Starting Point is RWSA

- ◆ RWSA for variety (X) is 113.9 % of check
- ◆ Points = 113.9

How "Points" System Works

RWST level for variety (X) is
109.7 % of check

- ◆ Variance from 100 = 9.7×3
- ◆ Points = 29.1

How "Points" System Works

Variety (X) Cercospora level is
124.1 % of check (-18 to 10
points range)

- ◆ From conversion table
124.1 = -18 points

How "Points" System Works

Variety (X) Rhizoctonia level is
109.3% of check (0 to 10 points
range)

- ◆ From conversion table
109.3 = 2 points

How "Points" System Works

Variety (X) Rhizomania level is
5.0 (0 to 3 points range)

- ◆ From conversion table
5.0 = 2 points

How "Points" System Works

Variety (X) Root Aphid level is 2.1
(0 to 5 points range)

- ◆ From conversion table
2.1 = 3 points

How "Points" System Works

Variety (X) emergence level is
63.1 % of check (-5 to 5
points range)

- ◆ From conversion table
63.1 = 0 points

How "Points" System Works

RWSA:	109.7
RWST:	29.1
Cercospora:	-18
Rhizoctonia:	2
Rhizomania:	2
Root Aphid:	3
Emergence:	0

Variety X

very high yield

very high quality

poor disease

need 105%

Total: 127.8 = 120.2
% of check

How "Points" System Works

RWSA: 95.2

RWST: 9.8

Cercospora: 7

Rhizoctonia: 6

Rhizomania: 2

Root Aphid: 3

Emergence: 1

Variety Y

moderate

yield, medium

to high quality,

good disease

need 105 %

Total: 124.0 = 114.6

% of

Plans to Manage Cercospora and Rhizoctonia with Susceptible Varieties

- ◆ Research and grower experience has shown that diseases can be controlled



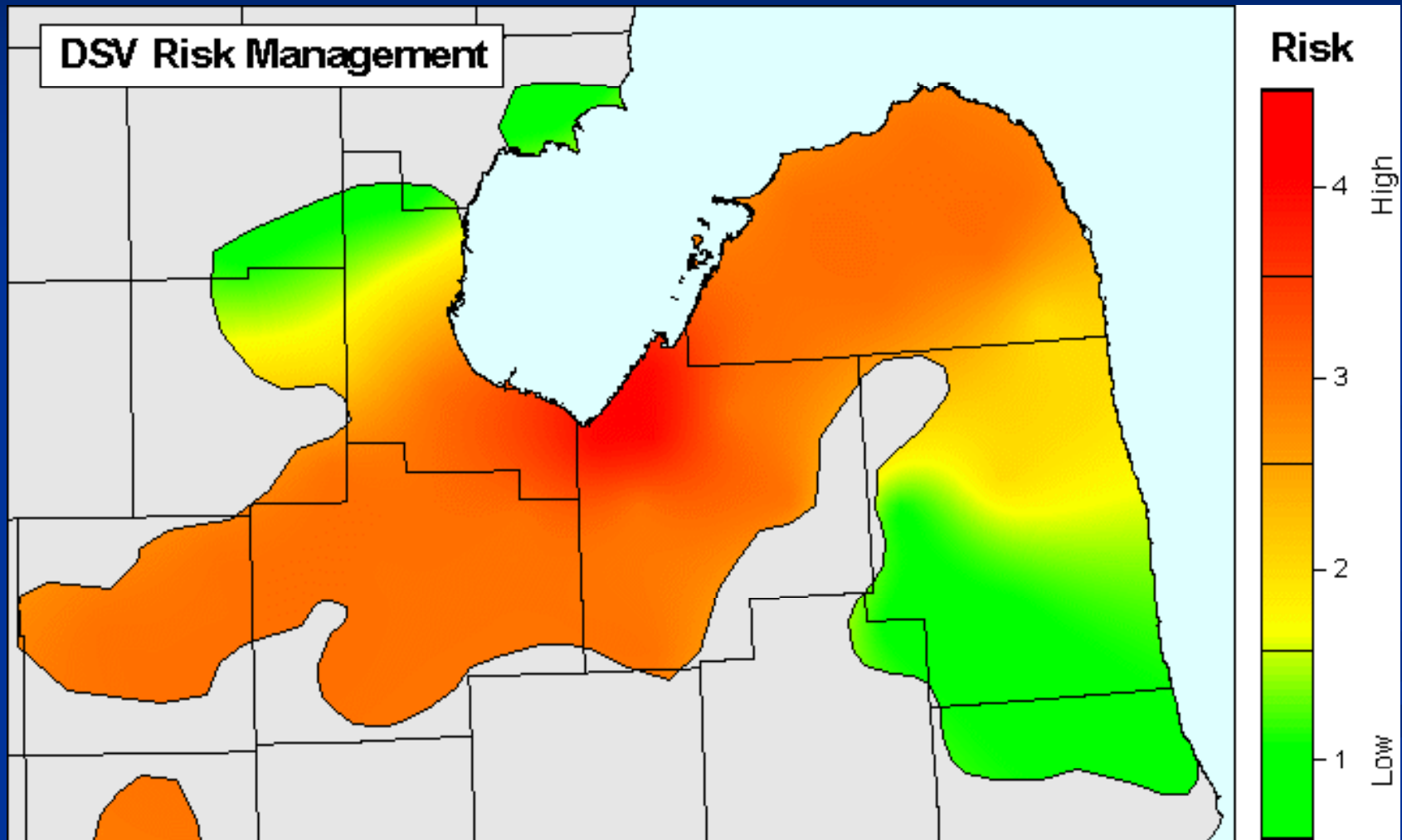
Plans to Manage Cercospora with Susceptible Varieties

Required Spray Dates

- ◆ Red Zone:
45/45/45
- ◆ Green Zone:
65 or 1st spot
/ 55



BeetCast Risk Management Zones



Plans to Manage Rhizoctonia with Susceptible Varieties

Field Selection is
Critical

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



Plans to Manage Rhizoctonia with Susceptible Varieties

Required to Apply
Quadris

- ◆ 1 or 2 applic depending upon situation



Summary

- ◆ Goal to increase sugar content by 1 percentage point by 2015

“The Road to 19”

Summary

- ◆ New Approval System will allow approval of higher quality varieties
- ◆ Will increase income to growers and the Coop

Summary

Must manage diseases

- ◆ Cercospora
- ◆ Rhizoctonia