Brief update on *Dickeya* Efforts

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Cooperative Extension

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I can not duplicate this level of stand loss

Severe stand losses

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Do stripped whole seed have more *Dickeya* problems?

Vigor
Large 100
Small 78
p =0.005

Yield
Large 17.2
Small 14.8
p=0.16

Emergence
Large 20
Small 18
p=0.04

I think so.

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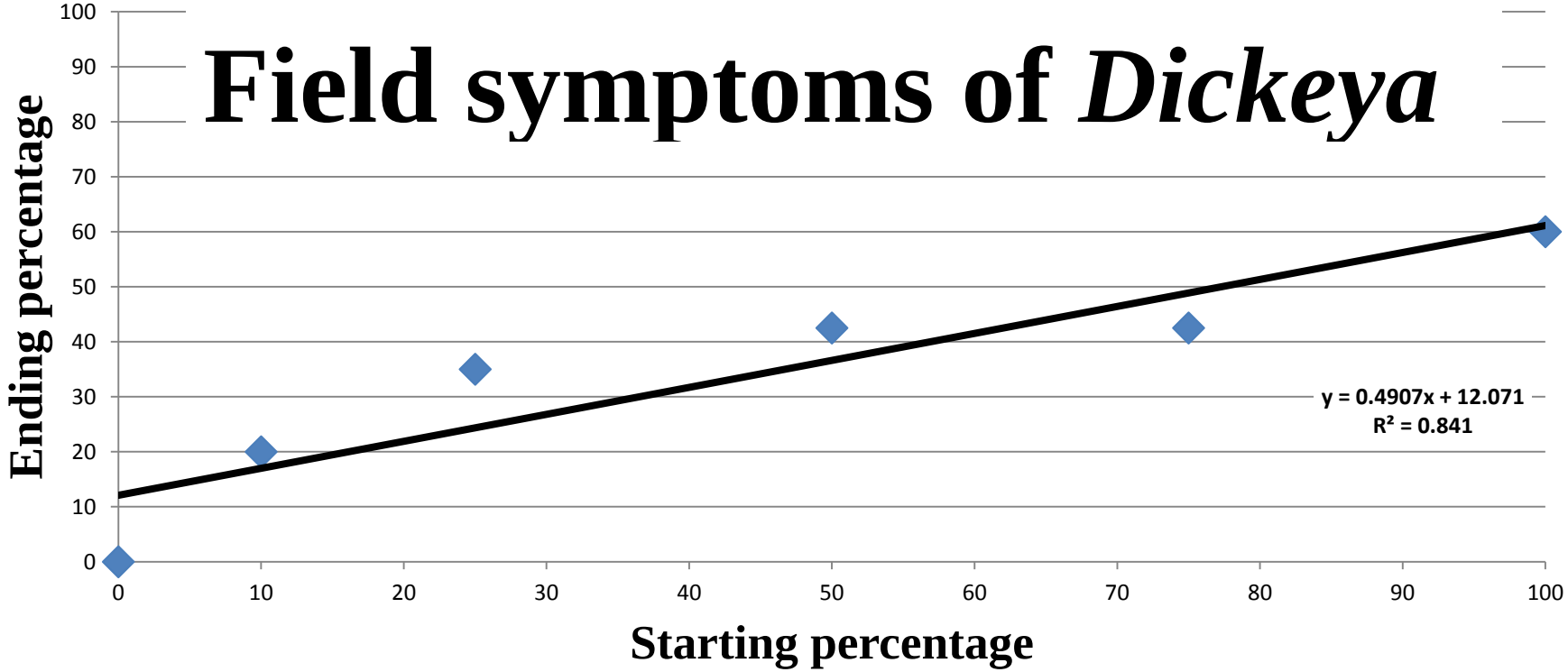
Field symptoms of *Dickeya*



Dickeya **(and Blackleg) development is related to seed inoculum level**

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Y0
Y10
Y25
Y50
Y75
Y100
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Does seed cutting transfer *Dickeya*?
No
Study performed
Study redone
Study redone again
Study performed by others
Study redone by others
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Does rough handling affect *Dickeya* symptoms?

Yes.

Vigor

Dickeya cut	94
Dickeya cut and rough handled	83

p =0.008

Yield

Dickeya cut	19.5
Dickeya cut and rough handled	11.4

p =0.03

Emergence

Dickeya cut	16.8
Dickeya cut and rough handled	14.3

p =0.01

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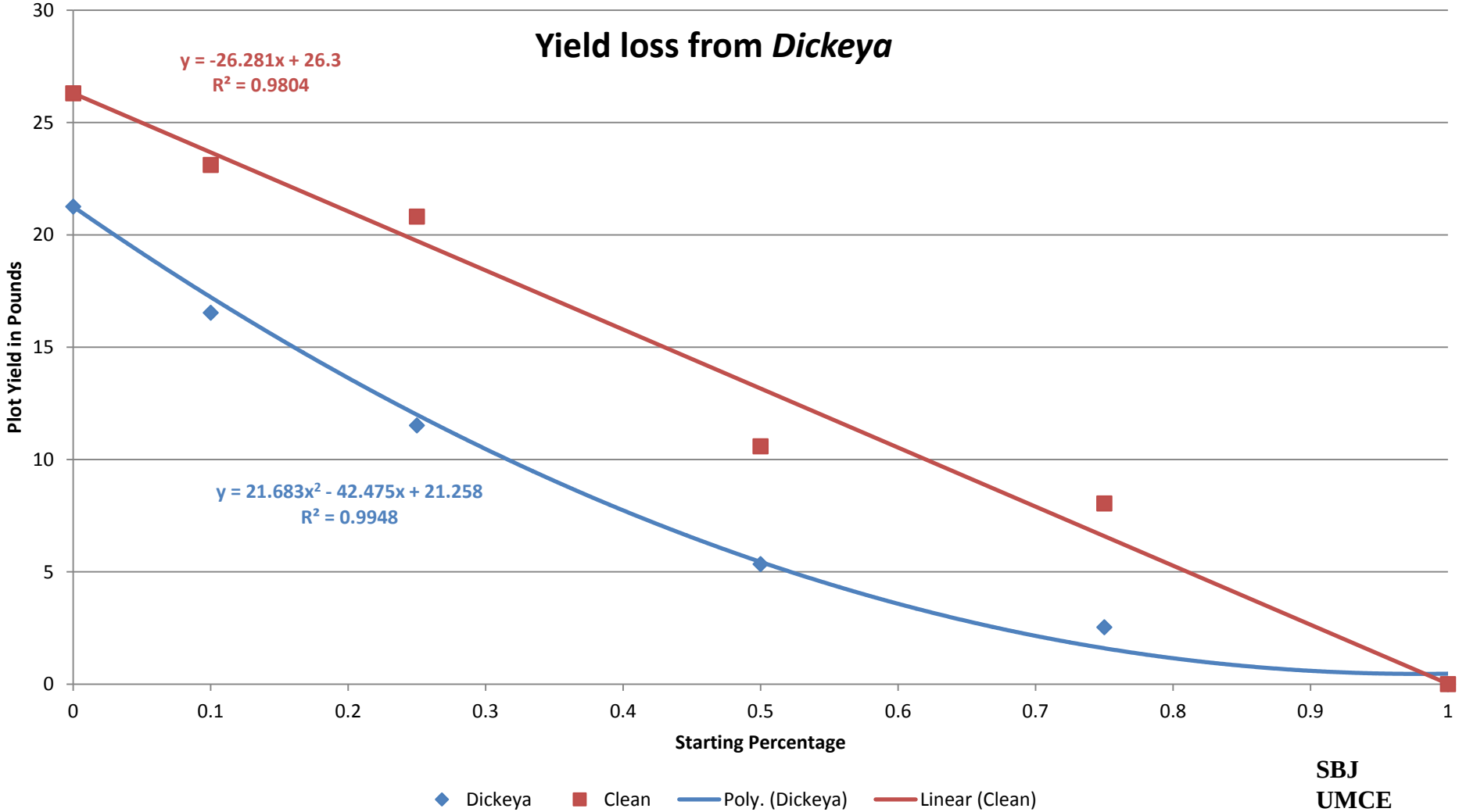
Yield loss from *Dickeya*
y = -26.281x + 26.3
R² = 0.9804
y = 21.683x² - 42.475x + 21.258
R² = 0.9948
Plot Yield in Pounds
Starting Percentage
0
5
10
15
20
25
30
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Dickeya
Clean
Poly. (Dickeya)
Linear (Clean)

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Only symptom I saw in my 2019 plots

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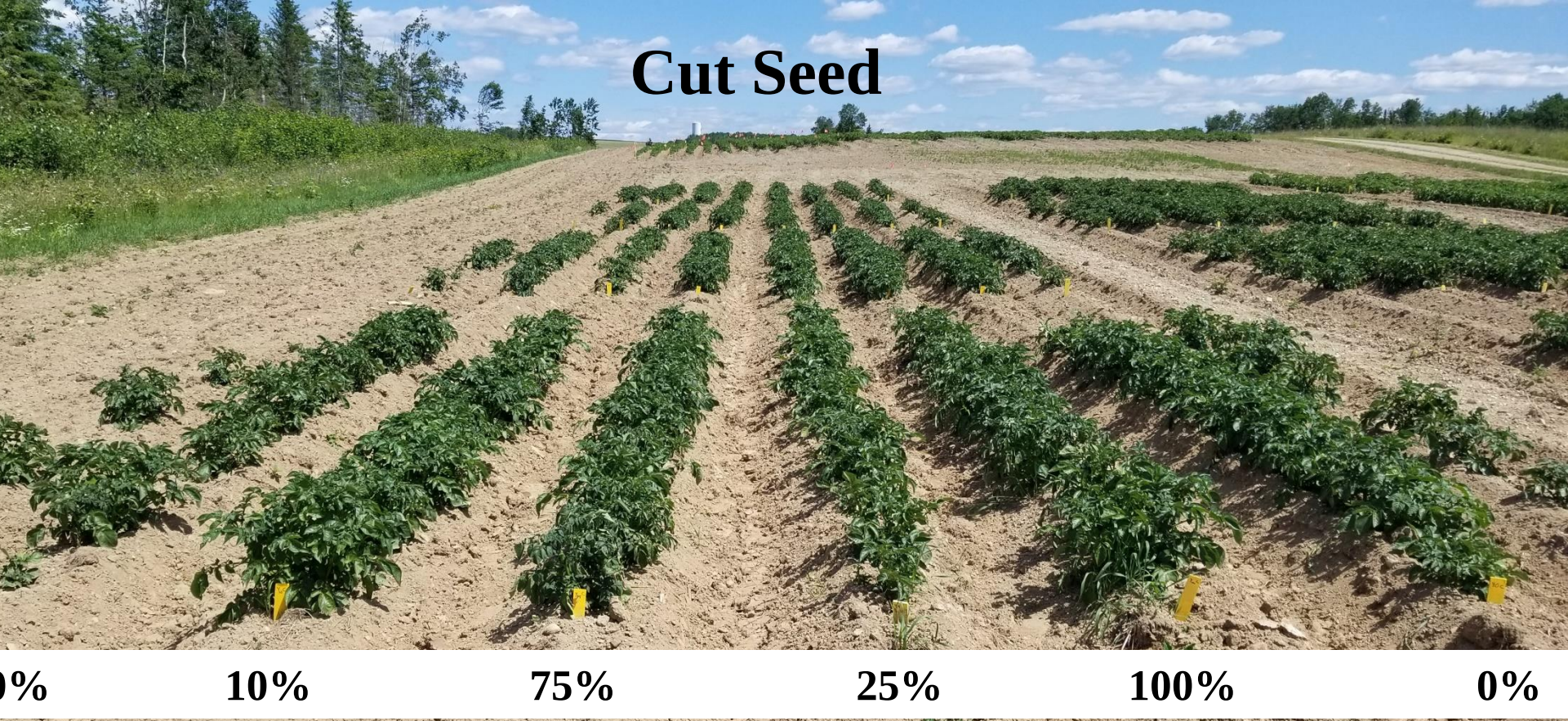
Cut Seed



0% 10% 75% 25% 100% 0%

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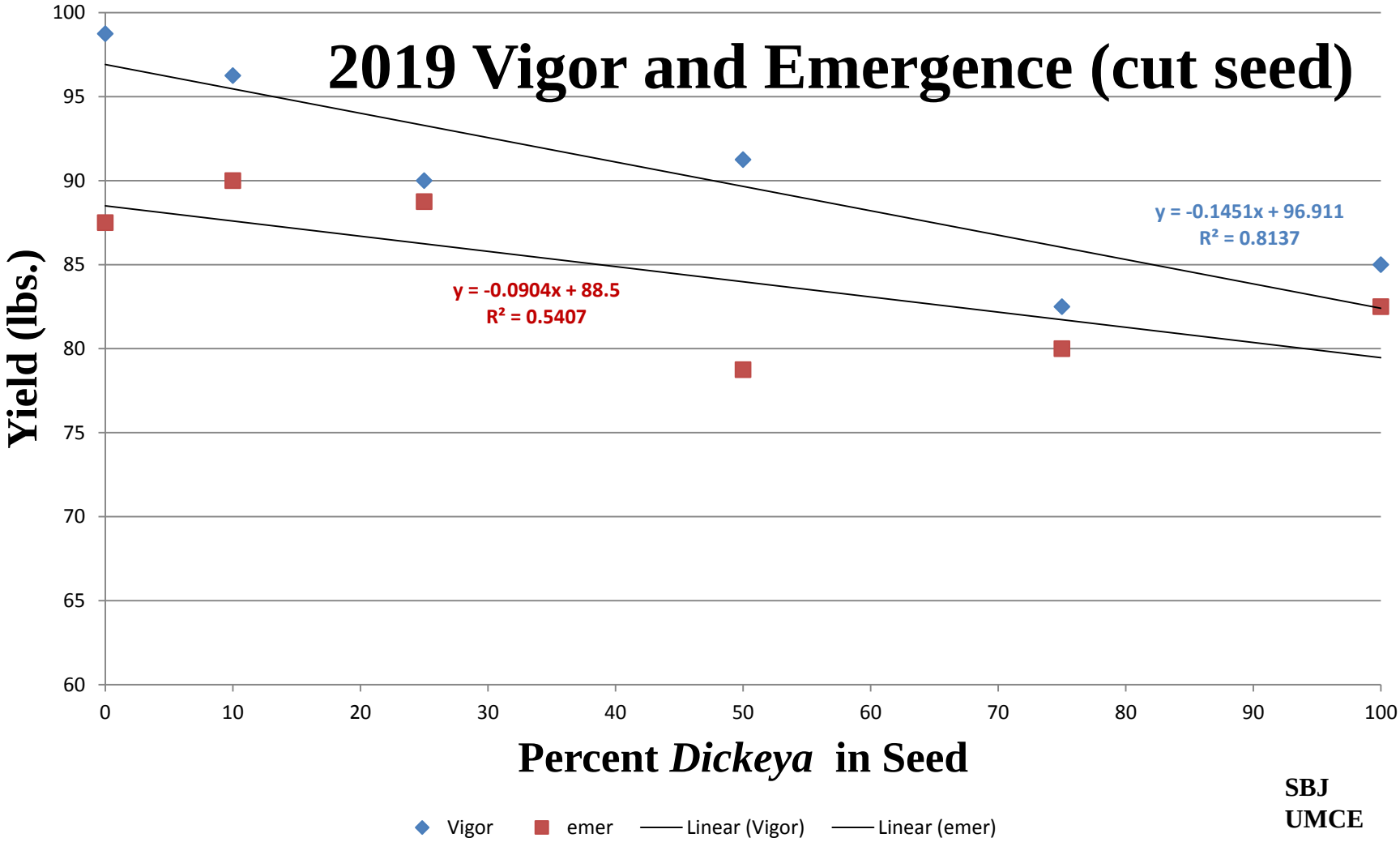
2019 Vigor and Emergence (cut seed)
Yield (lbs.)
100
95
90
85
80
75
70
65
60
0
10
20
30
40
50
60
70
80
90
100
y = -0.1451x + 96.911
R² = 0.8137
y = -0.0904x + 88.5
R² = 0.5407
Percent Dickeya in Seed
Vigor
emer
Linear (Vigor)
Linear (emer)

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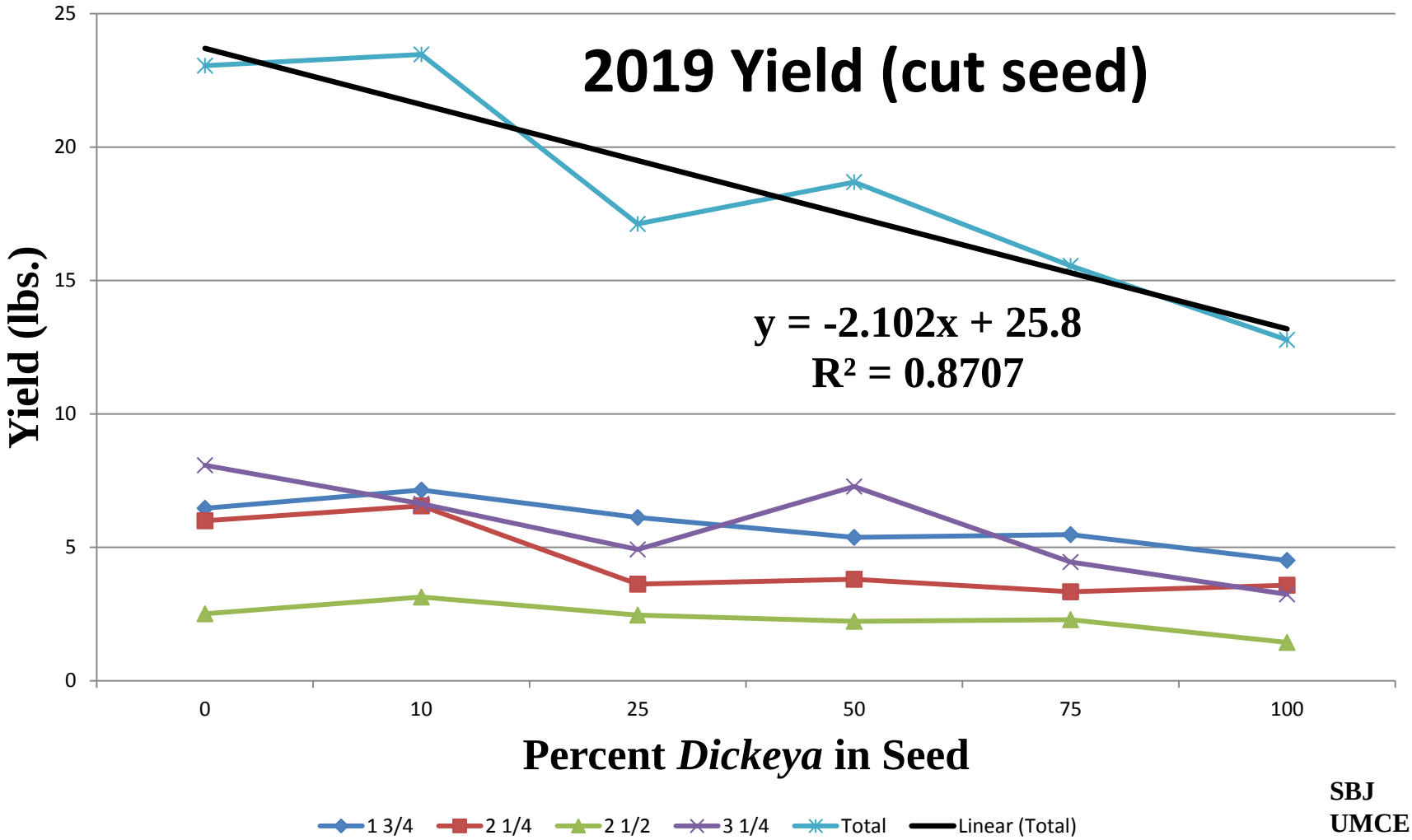
2019 Yield (cut seed)
y = -2.102x + 25.8
R² = 0.8707
Yield (lbs.)
25
20
15
10
5
0
0
10
25
50
75
100
Percent Dickeya in Seed
1 3/4
2 1/4
2 1/2
3 1/4
Total
Linear (Total)

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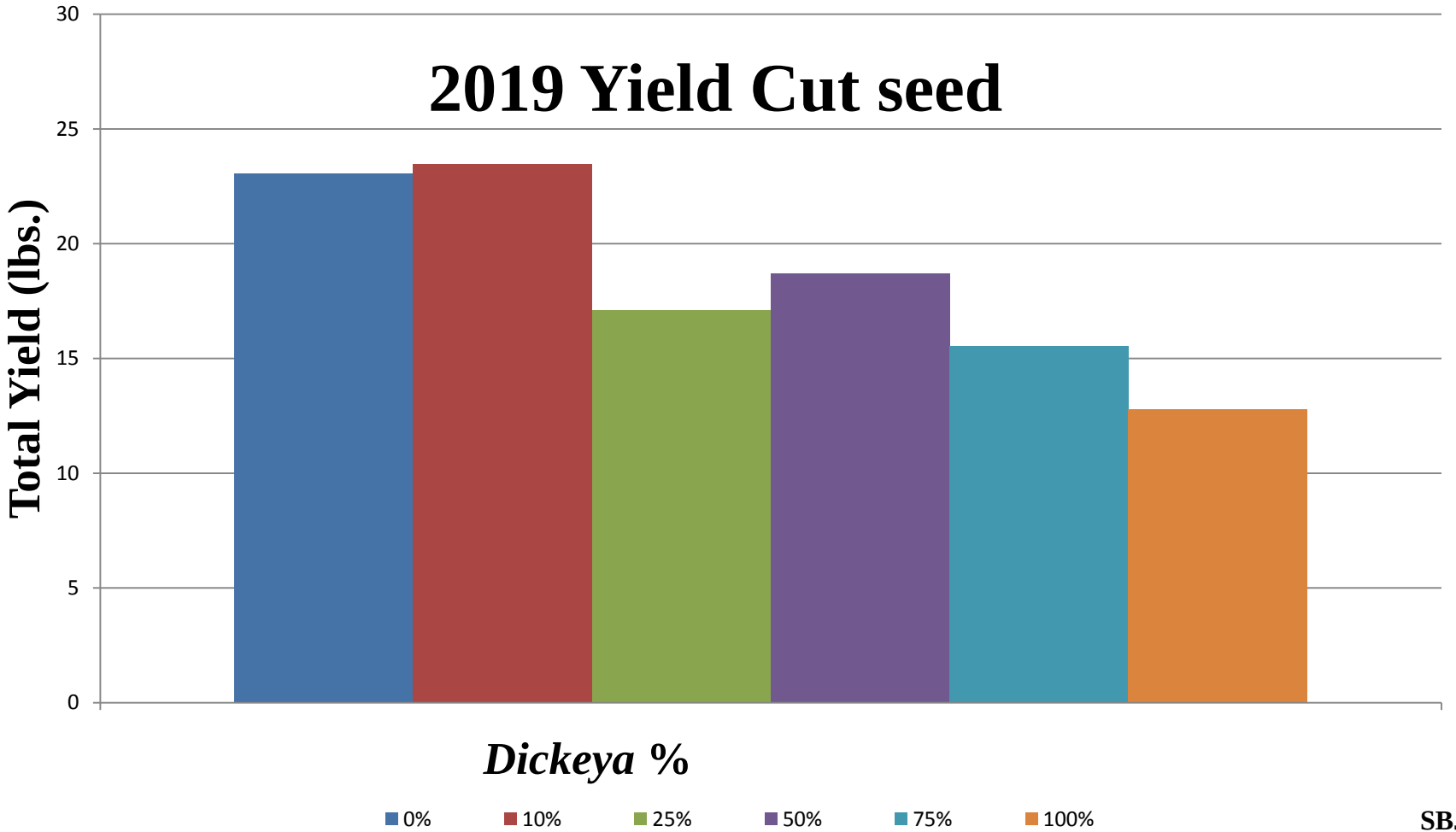
2019 Yield Cut seed
Total Yield (lbs.)
30
25
20
15
10
5
0
Dickeya %
0%
10%
25%
50%
75%
100%

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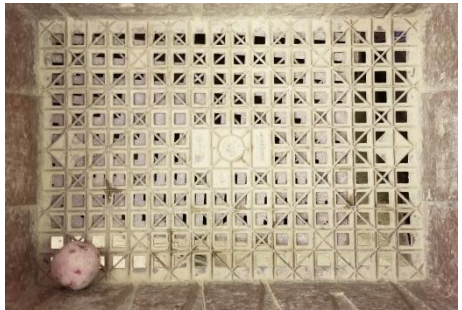
0 % *Dickeya*

1.75” 2.25” 2.5” 3.25”

100 % *Dickeya*



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Whole Seed

50% 10% 75% 25% 100% 0%

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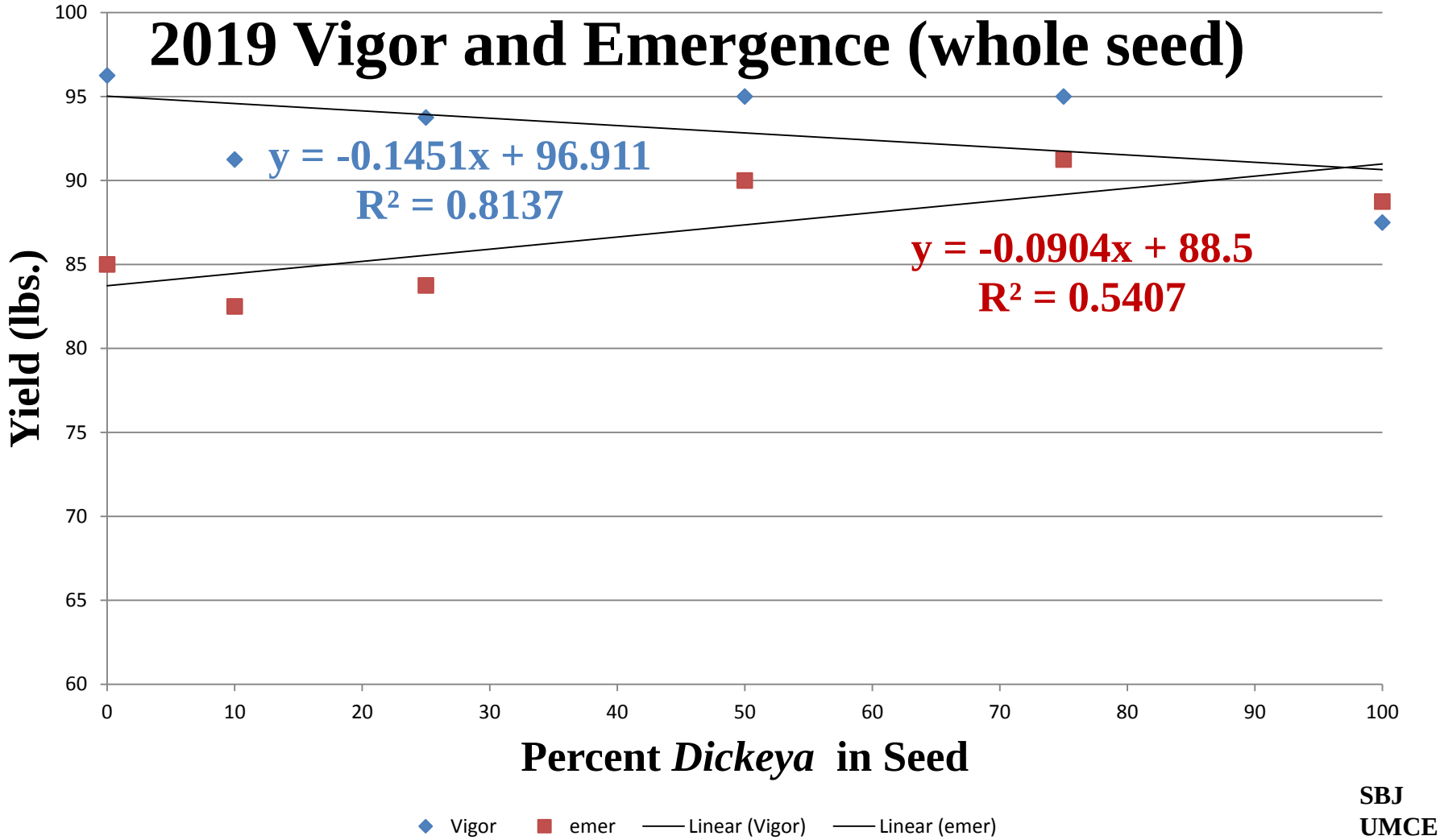
2019 Vigor and Emergence (whole seed)
y = -0.1451x + 96.911
R² = 0.8137
y = -0.0904x + 88.5
R² = 0.5407
Yield (lbs.)
Percent Dickeya in Seed
100
95
90
85
80
75
70
65
60
0
10
20
30
40
50
60
70
80
90
100
Vigor
emer
Linear (Vigor)
Linear (emer)

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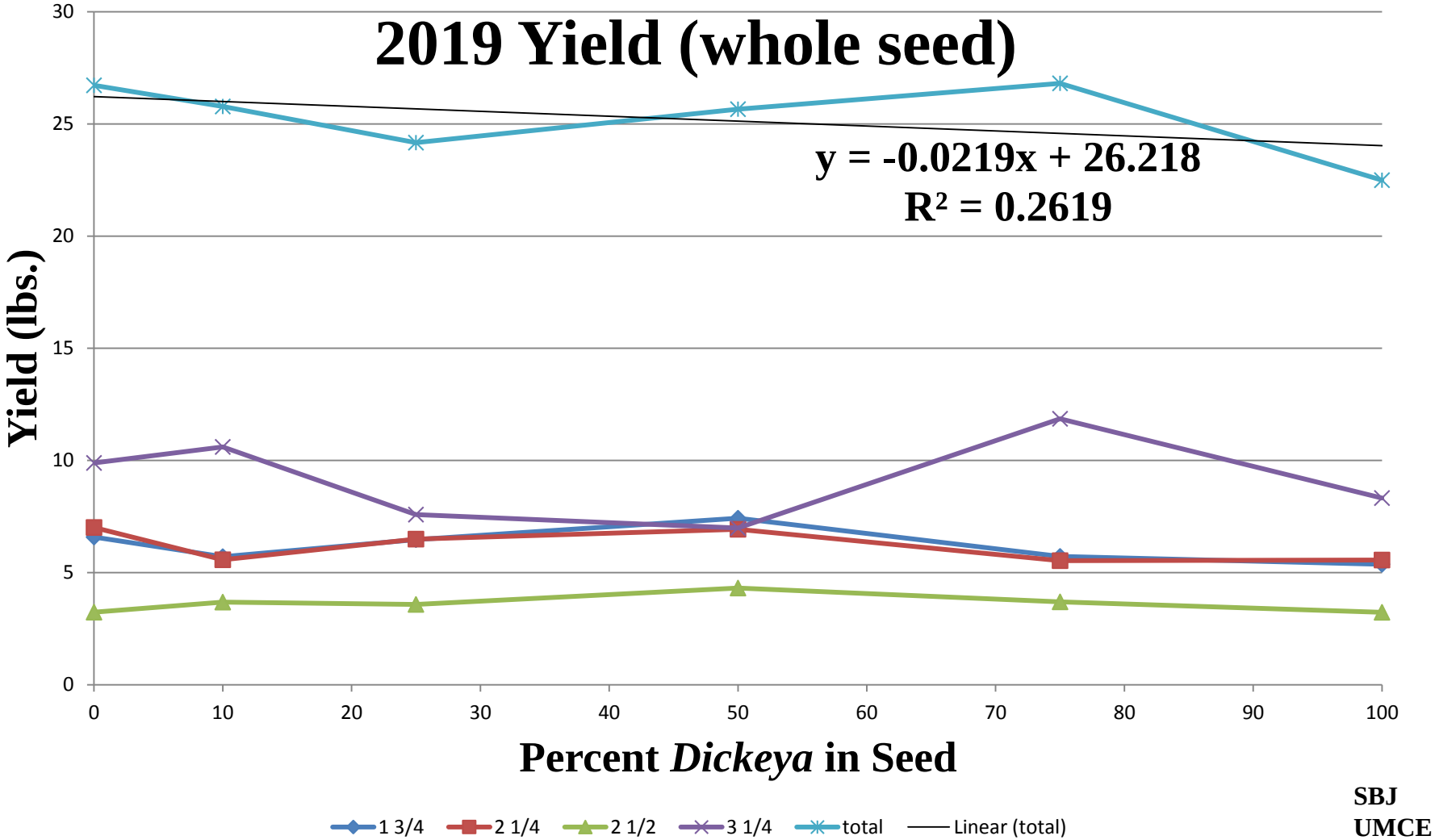
2019 Yield (whole seed)
y = -0.0219x + 26.218
R² = 0.2619
Yield (lbs.)
Percent *Dickeya* in Seed
0
5
10
15
20
25
30
0
10
20
30
40
50
60
70
80
90
100
1 3/4
2 1/4
2 1/2
3 1/4
total
Linear (total)

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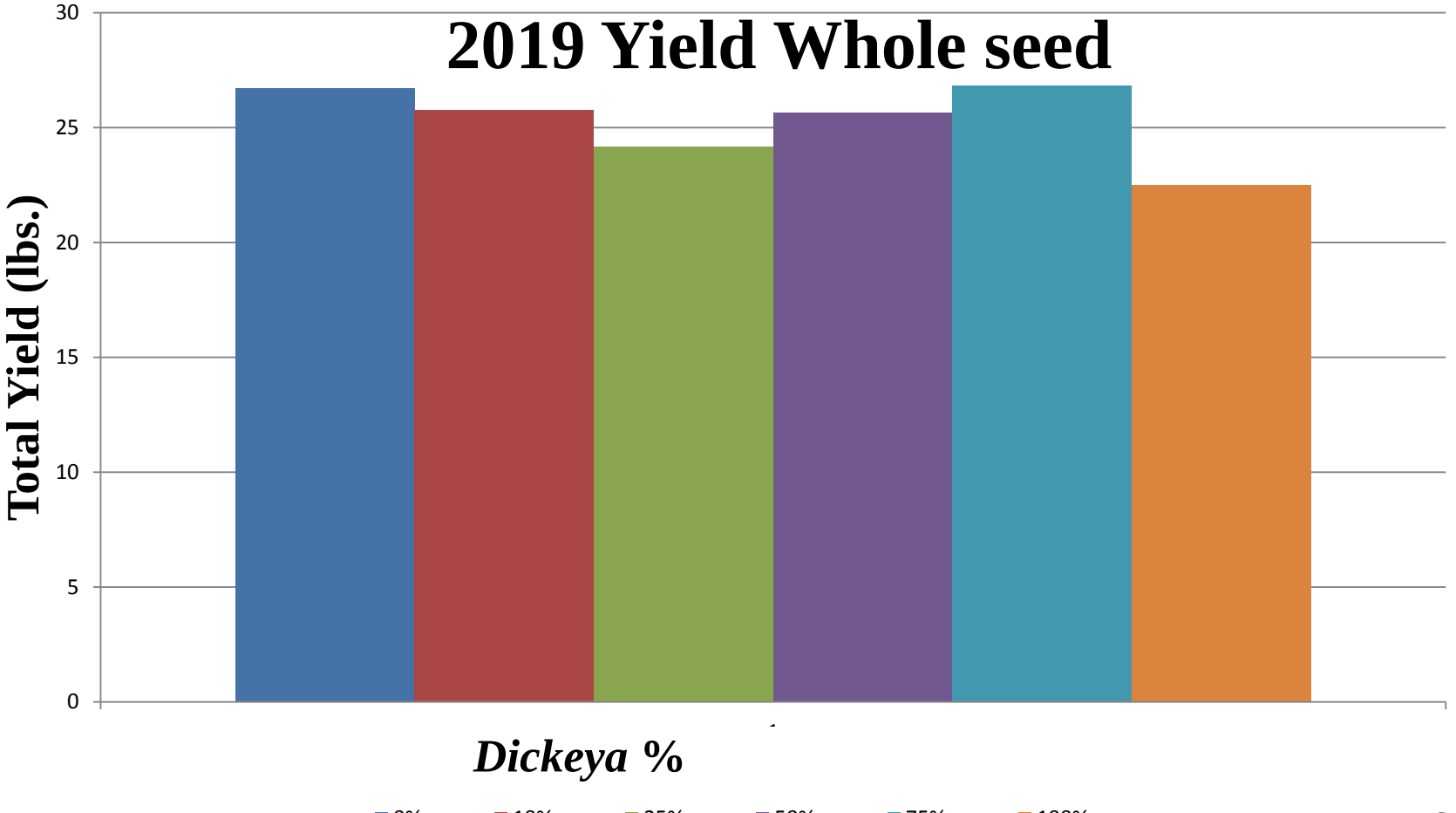
2019 Yield Whole seed
Total Yield (lbs.)
30
25
20
15
10
5
0
Dickeya %
0%
10%
25%
50%
75%
100%

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Thank you for
your attention
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Brief update on *Dickeya* Efforts

Acknowledgements:

- **Jay Hao and his lab crew, University of Maine**
- **And of course, SCRI Funding**

"To avoid criticism say nothing, do nothing, be nothing."
— Elbert Hubbard (Little Journeys to the Homes of the Great Vol. 3: American Statesmen)

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