



2022 Michigan Dry Bean Performance Trials

Genetic Gain Across Michigan

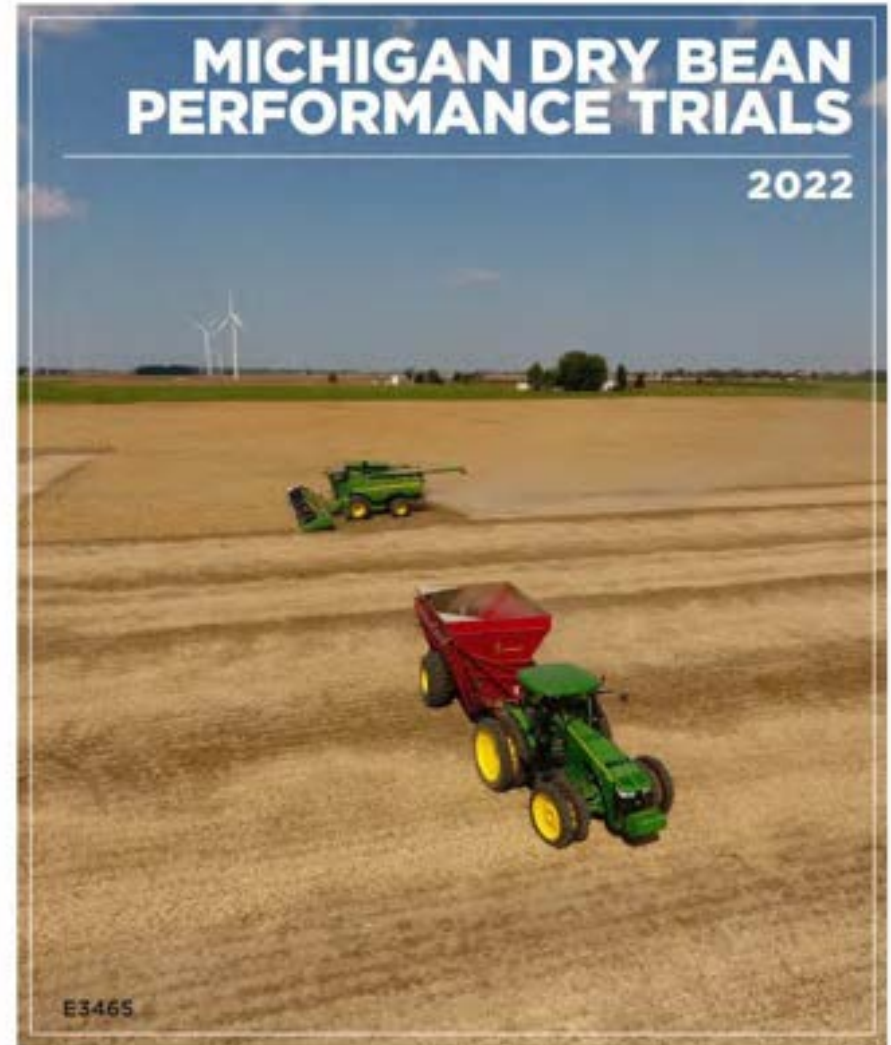
Scott Bales

MSU Dry Bean Specialist

2022 Dry Bean Performance Trials

Michiganbean.com

- 160 entries across 12 market classes
- Average Yield:
 - Sanilac: 3,222
 - Montcalm: 3,046
 - Bay: 3,016
 - Tuscola: 2,862
 - Huron: 2,825
 - Tuscola: 1,823



Dry Bean Performance Trials

County	Cooperator	Planting Date
Bay	Shindler Farms	6/15
Huron	Richmond Brothers	6/8
Sanilac	Stoutenburg Farms	6/3
Tuscola	Rayl Farms	6/4
Tuscola	SVREC	5/31
Montcalm	Rader Farms	6/10

Table 4. Black bean agronomic and yield results.

ENTRY	Maturity (DAP)	Flowering (DAP)	Plant Height (Inches)	Lodging (1-5)	White Mold Infection (%)	Bay (Lb.s./A)	Huron (Lb.s./A)	Santitas (Lb.s./A)	Tuscola (Lb.s./A)	1-year avg. (Lb.s./A)	2-year avg. (Lb.s./A)	3-year avg. (Lb.s./A)
15619	102	47	19.6	2.5	53	3,444	3,318*	4,379*	2,325	3,367	3,314	3,367
16590	102	46	20.0	2.0	33*	3,467	2,801	3,881	3,273*	3,356	3,515*	3,390
16598	100	45	18.3	3.3	80	3,496	3,123	4,134*	3,194*	3,487	NA*	NA
16648	101	47	20.0	2.3	76	3,631*	2,765	4,044*	3,077*	3,380	3,469	3,363
17715	100	47	21.3	2.5	76	3,200	2,625	3,860	3,182*	3,217	3,416	3,315
B5058320	97	44	16.6	2.0	64	3,216	2,987	3,235	2,090	2,882	NA	NA
B7071259	94	45	18.6	1.3	52	3,862*	3,402*	4,016*	2,802	3,520*	NA	NA
B7072269	95	45	19.0	1.8	63	3,664*	2,967	4,082*	3,047*	3,440	NA	NA
BL1726-2	97	47	17.0	2.0	43	3,301	2,767	3,225	1,874	2,792	3,222	NA
Black Bear	102	46	18.0	2.0	41*	3,814*	3,331*	3,940	3,705*	3,697*	3,425	3,358
Black Tails	102	44	19.0	1.3	69	3,072	2,857	3,287	3,508*	3,181	3,177	3,160
BlackBeard (14506)	101	46	22.0	2.0	67	3,107	3,329*	4,186*	2,237	3,215	3,395	3,449
ND Twilight	95	46	17.0	2.7	99	2,359	1,842	2,171	1,826	2,049	2,592	2,529
Nimbus (14500)	101	47	19.5	1.7	61	4,071**	3,655**	4,401*	3,468*	3,899**	3,693*	3,738**
OAC Vortex	99	46	20.0	1.7	66	3,317	3,009	3,803	2,779	3,227	NA	NA
Spectre (14497)	102	48	19.0	2.3	24*	3,345	3,225*	3,976	3,000*	3,387	3,394	3,460
Zenith	100	46	17.0	1.0	25*	3,374	3,243*	4,106*	3,068*	3,448	3,557*	3,414
Zorro	99	47	19.0	1.0	51	2,969	2,892	3,378	3,071*	3,078	3,246	3,182
MEAN:	99	46	18.9	1.9	57	3,418	2974	3,739	2,948	3,270	3,400	3,346
LSD_(0.05):	NA	NA	NA	NA	20	561	467	571	721	372	243	187
CV:	NA	NA	NA	NA	34%	13.9%	13.3%	13.0%	20.8%	19.5%	17.3%	16.6%

**Highest yielding variety within column *Yield not statistically different than the highest yielding variety within column

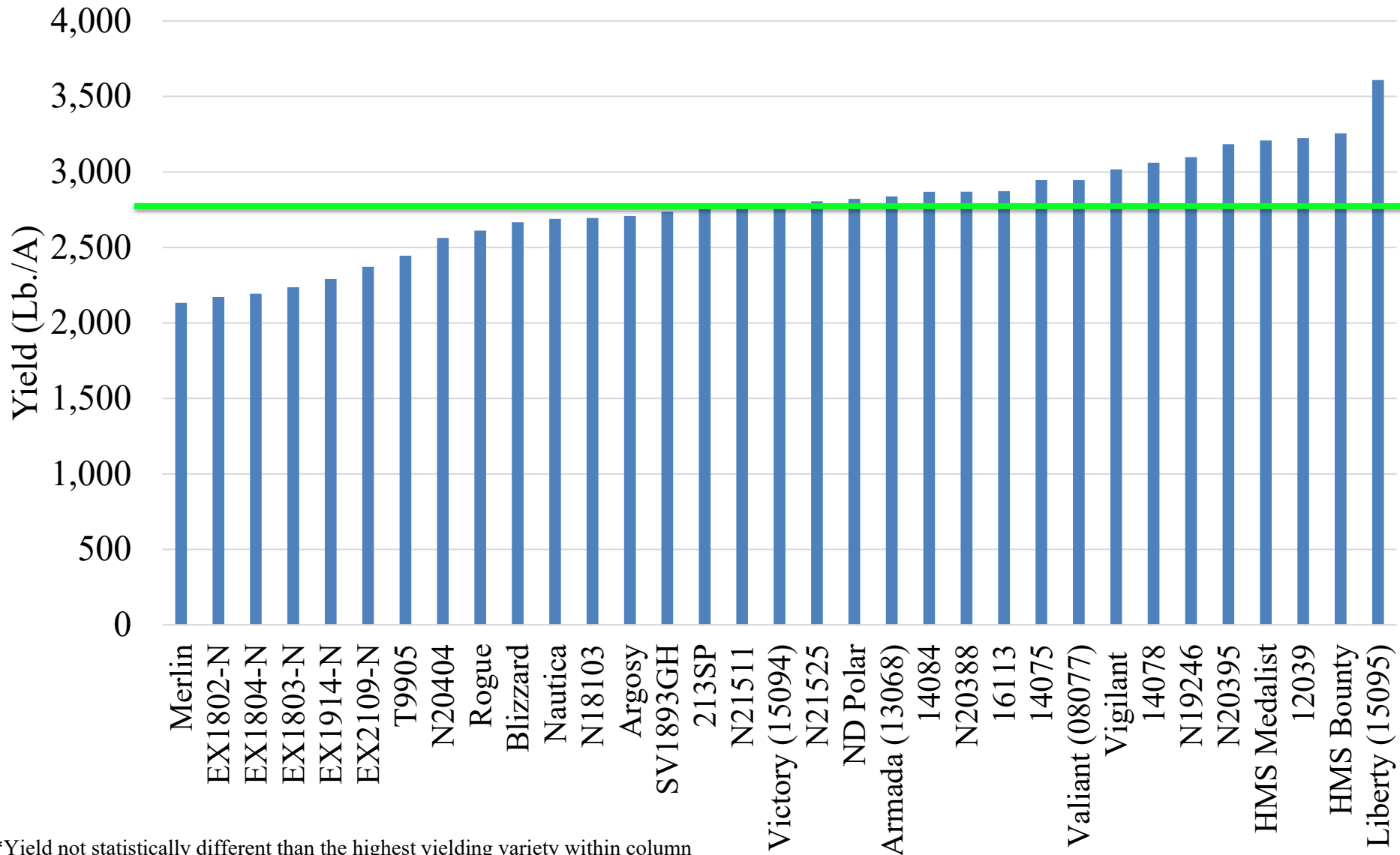
Navy Beans

Michiganbean.com

- 33 Entries
 - Commercial: 16
 - Experimental: 17
- Average Yield:
 - Bay: 29.9
 - Sanilac: 28.5
 - Tuscola: 26.8
 - Huron: 25.7

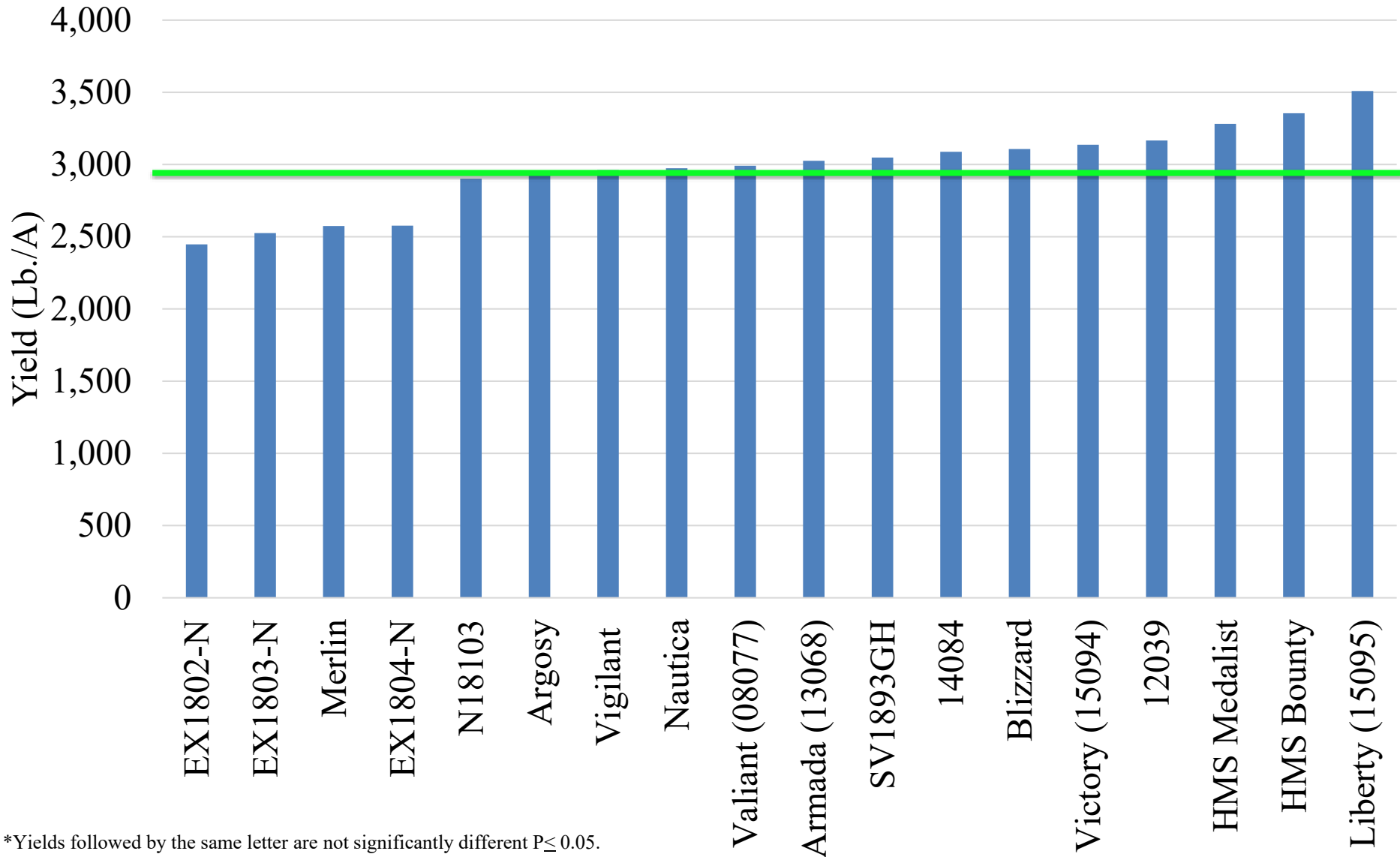


2022 Navy Bean Performance Trial All location Average



*Yield not statistically different than the highest yielding variety within column

2020-2022 Navy Bean Performance Trial All Location Average



*Yields followed by the same letter are not significantly different $P \leq 0.05$.

Liberty

Yield Rank: #1 (35.0 cwt)

Maturity: 101 d.

Height: 19.3"

Lodge (1-5): 2.5

Mold Infection: 48% (average: 62%)

Canning: 4.0 (average: 3.9)



HMS Bounty

Yield Rank: #2 (33.5 cwt)

Maturity: 100 d.

Height: 19.3"

Lodge (1-5): 1.5

Mold Infection: 43% (average: 62%)

Canning: 4.0 (average: 3.9)



HMS Medalist

Yield Rank: #3 (32.8 cwt)

Maturity: 101 d.

Height: 20.3"

Lodge (1-5): 2.5

Mold Infection: 48% (average: 62%)

Canning: 4.2 (average: 3.9)



Name: HMS Medalist

Location: Huron

Can: 1012

Class: NA

Victory

Yield Rank: #5 (31.3 cwt)

Maturity: 99 d.

Height: 19.5"

Lodge (1-5): 1.7

Mold Infection: 71% (average: 62%)

Canning: 3.9 (average: 3.9)



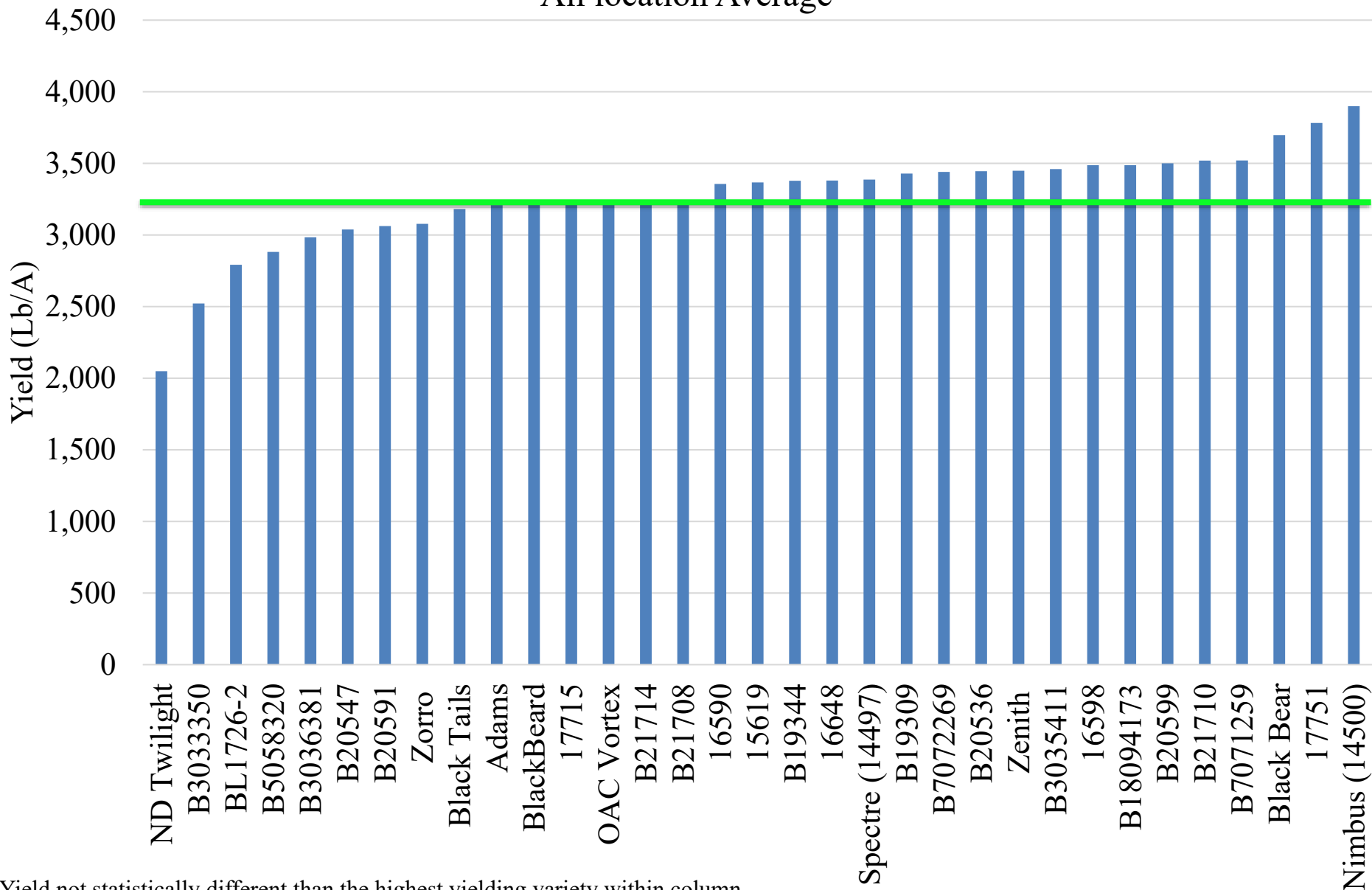
Black Beans

Michiganbean.com

- 33 Entries
 - Commercial: 10
 - Experimental: 23
- Average Yield:
 - Tuscola: 29.4
 - Huron: 29.7
 - Sanilac: 37.3
 - Bay: 34.1

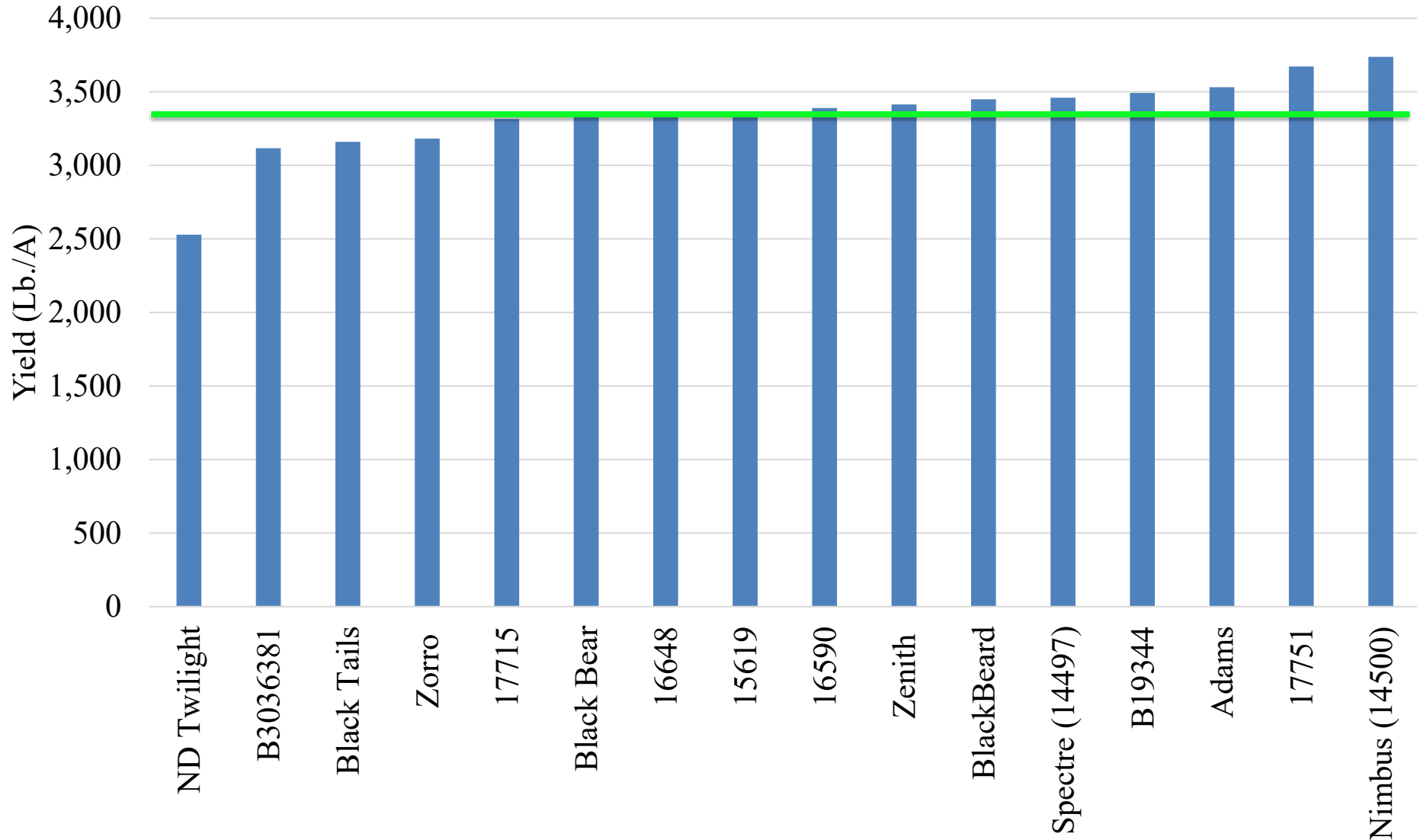


2022 Black Bean Performance Trial All location Average



*Yield not statistically different than the highest yielding variety within column

2020-2022 Black Bean Bean Performance Trial All Location Average



*Means followed by the same letter are not significantly different $P \leq 0.05$.

Scott Bales- MSU Dry Bean Specialist

Nimbus

Yield Rank: #1 (37.3 cwt)

Maturity: 101 d.

Height: 19.5"

Lodge (1-5): 1.7

Mold Infection: 61% (average: 57%)

Canning Color: 2.5 (average: 3.5)



Adams

Yield Rank: #3 (35.3 cwt)

Maturity: 101 d.

Height: 19.0"

Lodge (1-5): 2.8

Mold Infection: 46% (average: 57%)

Canning Color: 2.8 (average: 3.5)



Spectre
Yield Rank: #5 (34.6 cwt)
Maturity: 102 d.
Height: 19.0"
Lodge (1-5): 2.3
Mold Infection: 24% (average: 57%)
Canning Color: 2.8 (average: 3.5)



Black Beard

Yield Rank: #6 (34.4 cwt)

Maturity: 101 d.

Height: 22.0"

Lodge (1-5): 2.0

Mold Infection: 67% (average: 57%)

Canning Color: 4.5 (average: 3.5)



Zenith
Yield Rank: #7 (34.1 cwt)
Maturity: 100 d.
Height: 17.0"
Lodge (1-5): 1.0
Mold Infection: 25% (average: 57%)
Canning Color: 4.8 (average: 3.5)



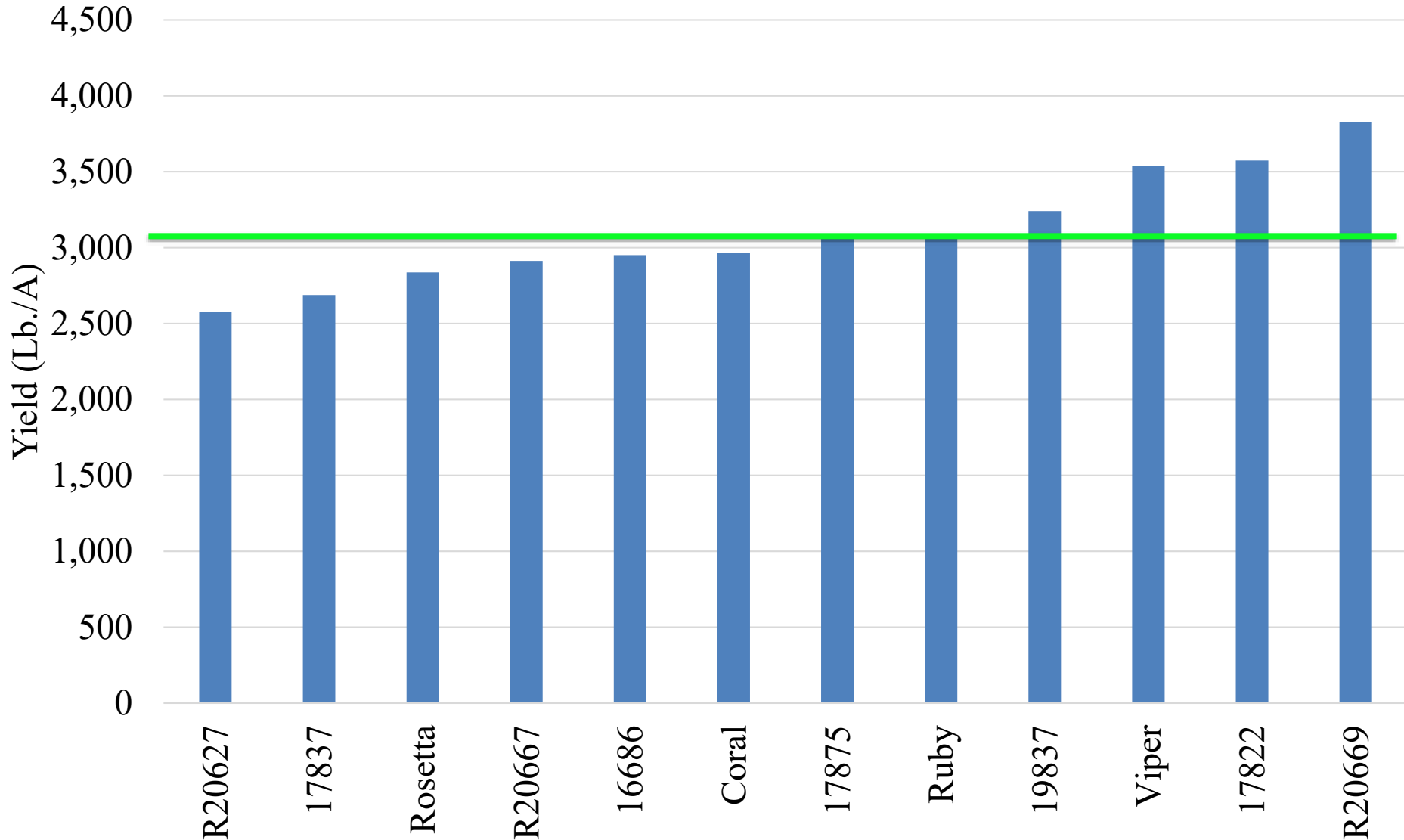
Small Red & Pink Beans

Michiganbean.com

- 12 Entries
 - Commercial: 4
 - Experimental: 8
- Average Yield:
 - Tuscola: 28.0
 - Huron: 30.2
 - Sanilac: 35.2
 - Bay: 31.0



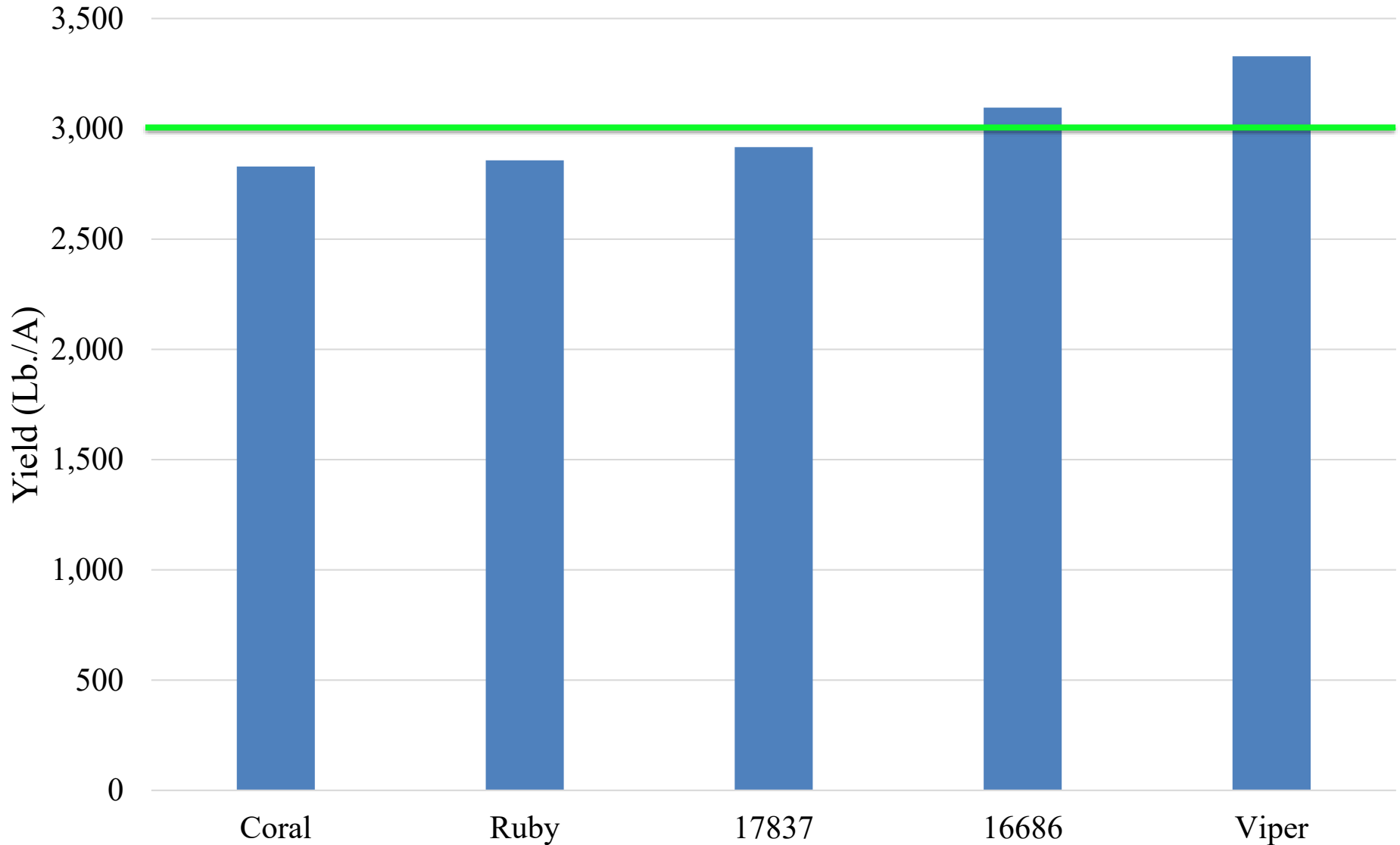
2022 Small Red Bean Performance Trial All location Average



*Yield not statistically different than the highest yielding variety within column

Scott Bales- MSU Dry Bean Specialist

2020-2022 Small Red and Pink Bean Performance Trial All Location Average



*Means followed by the same letter are not significantly different $P \leq 0.05$.

Scott Bales- MSU Dry Bean Specialist

Viper
Yield Rank: #1 (33.2 cwt)
Maturity: 100 d.
Height: 15.7"
Lodge (1-5): 2.8
Mold Infection: 85% (average: 76%)
Canning: 2.3 (average: 3.0)



16686
Yield Rank: #2 (30.9 cwt)
Maturity: 97 d.
Height: 16.0"
Lodge (1-5): 3.5
Mold Infection: 84% (average: 76%)
Canning: 3.4 (average: 3.0)



Name: 16686
Location: Huron
Can: 1068
Class: SR

*Means followed by the same letter are not significantly different $P \leq 0.05$.

17837
Yield Rank: #3 (29.1 cwt)
Maturity: 98 d.
Height: 12.7"
Lodge (1-5): 1.8
Mold Infection: 93% (average: 76%)
Canning: 2.6 (average: 3.0)



Ruby
Yield Rank: #4 (28.5 cwt.)
Maturity: 99 d.
Height: 13.0"
Lodge (1-5): 4.0
Mold Infection: 77% (average: 76%)
Canning: 3.2 (average: 3.0)



Name: Ruby
Location: Huron
Can: 1084
Class: SR

Great Northern & Pinto Beans

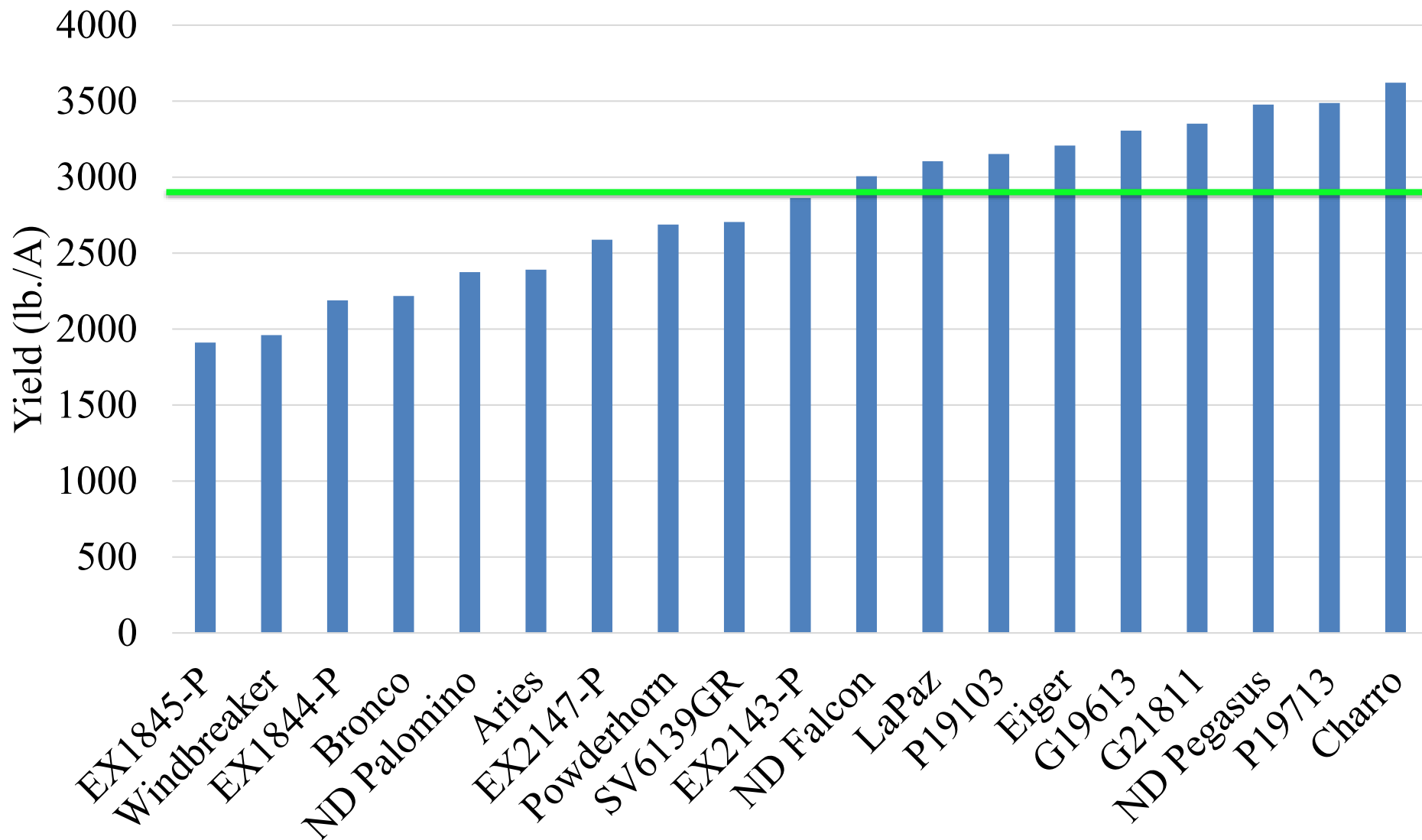
Michiganbean.com

- 19 Entries
 - Commercial: 10
 - Experimental: 9
- Average Yield:
 - Tuscola: 28.0
 - Huron: 30.2
 - Sanilac: 35.2
 - Bay: 31.0



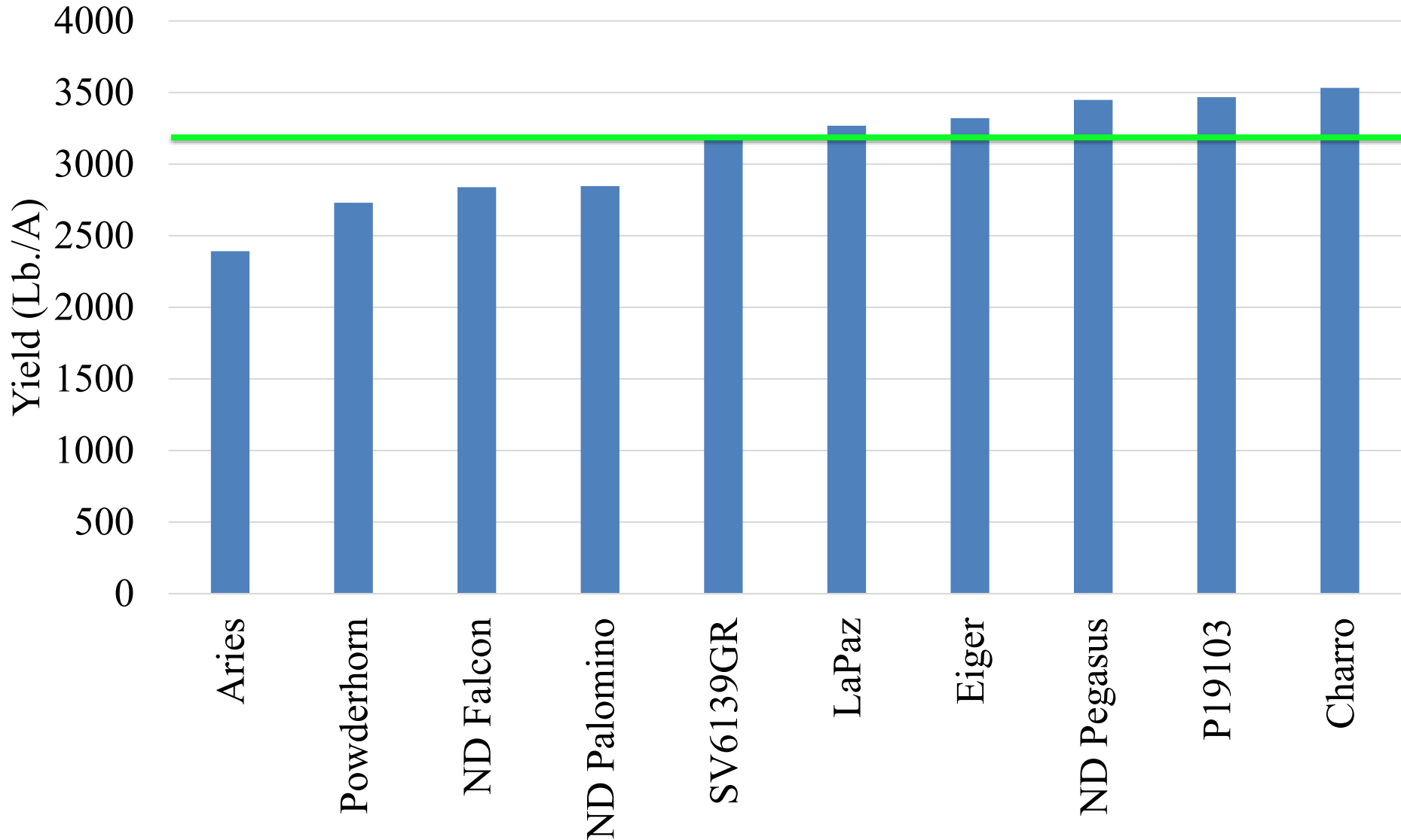
2022 Great Northern & Pinto Bean Performance Trial

All location Average



*Yield not statistically different than the highest yielding variety within column

2020-2022 Great Northern & Pinto Bean Performance Trial All location Average



*Yield not statistically different than the highest yielding variety within column

Charro

Yield Rank: #1 (35.3 cwt.)

Maturity: 101 d.

Height: 22.0"

Lodge (1-5): 2.3

Mold Infection: 74% (average: 79%)

Canning: 3.0 (average: 2.8)



Name: CHARRO

Location: BAY

Can: 1047

Class: P

ND Pegasus

Yield Rank: #1 (34.4 cwt.)

Maturity: 100 d.

Height: 22.0"

Lodge (1-5): 2.3

Mold Infection: 69% (average: 67%)

Canning: 3.1 (average: 3.2)



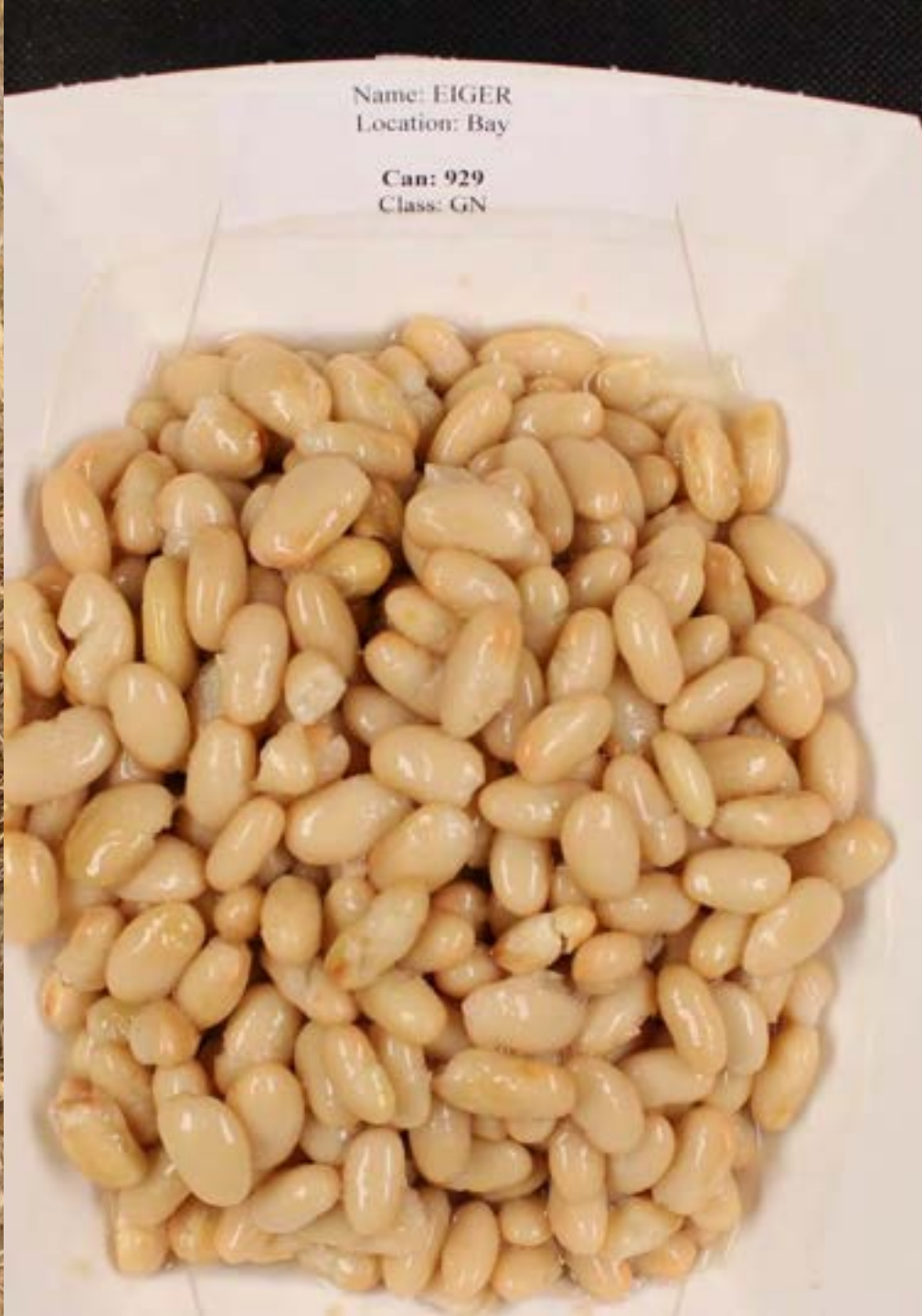
Name: ND Pegasus

Location: Bay

Can: 935

Class: GN

Eiger
Yield Rank: #2 (33.2 cwt.)
Maturity: 99 d.
Height: 20.0"
Lodge (1-5): 2.0
Mold Infection: 59% (average: 67%)
Canning: 3.3 (average: 3.2)

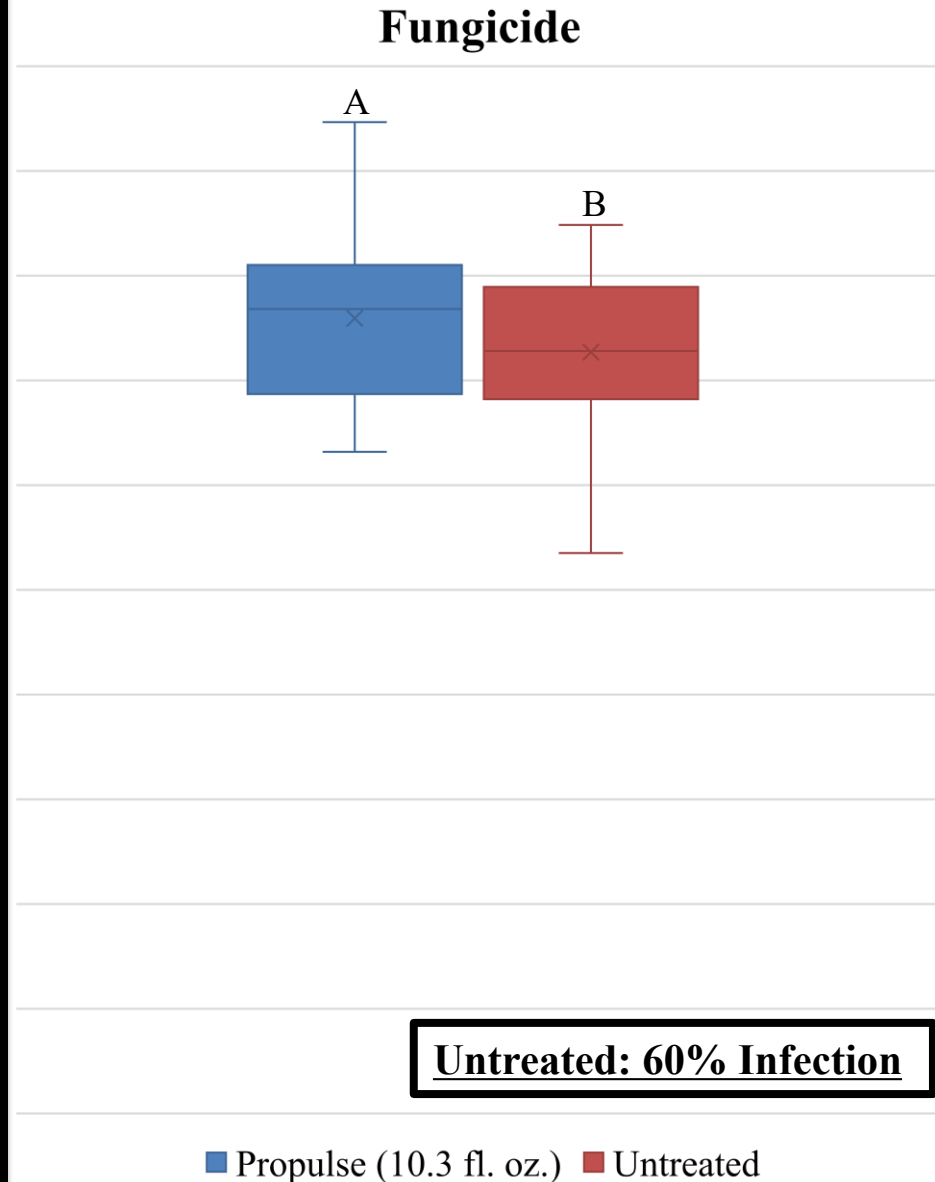
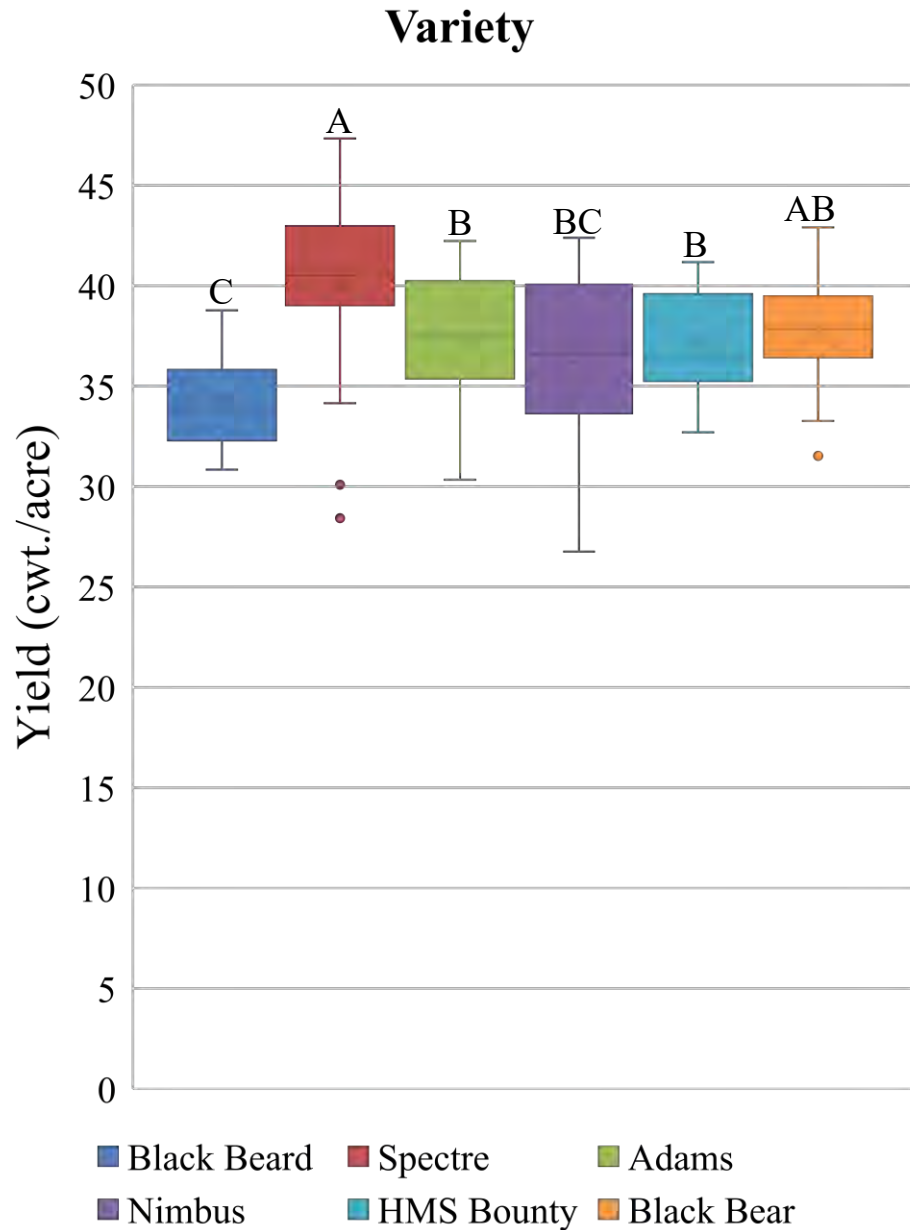


Varietal Response To Management

Michiganbean.com

- Planting date May 31st
 - Dual PRE + Heavy rain
 - Mid June wind storm
- Replanted June 22
 - 6 Entries (18 replications total)
 - Black Beard
 - Spectre
 - Adams
 - Nimbus
 - HMS Bounty
 - Black Bear
 - Half of replications sprayed with: 10.3 fl. oz./A Propulse + 32 fl. oz. Max-in Mn + 32 fl. oz. Max-in Zn

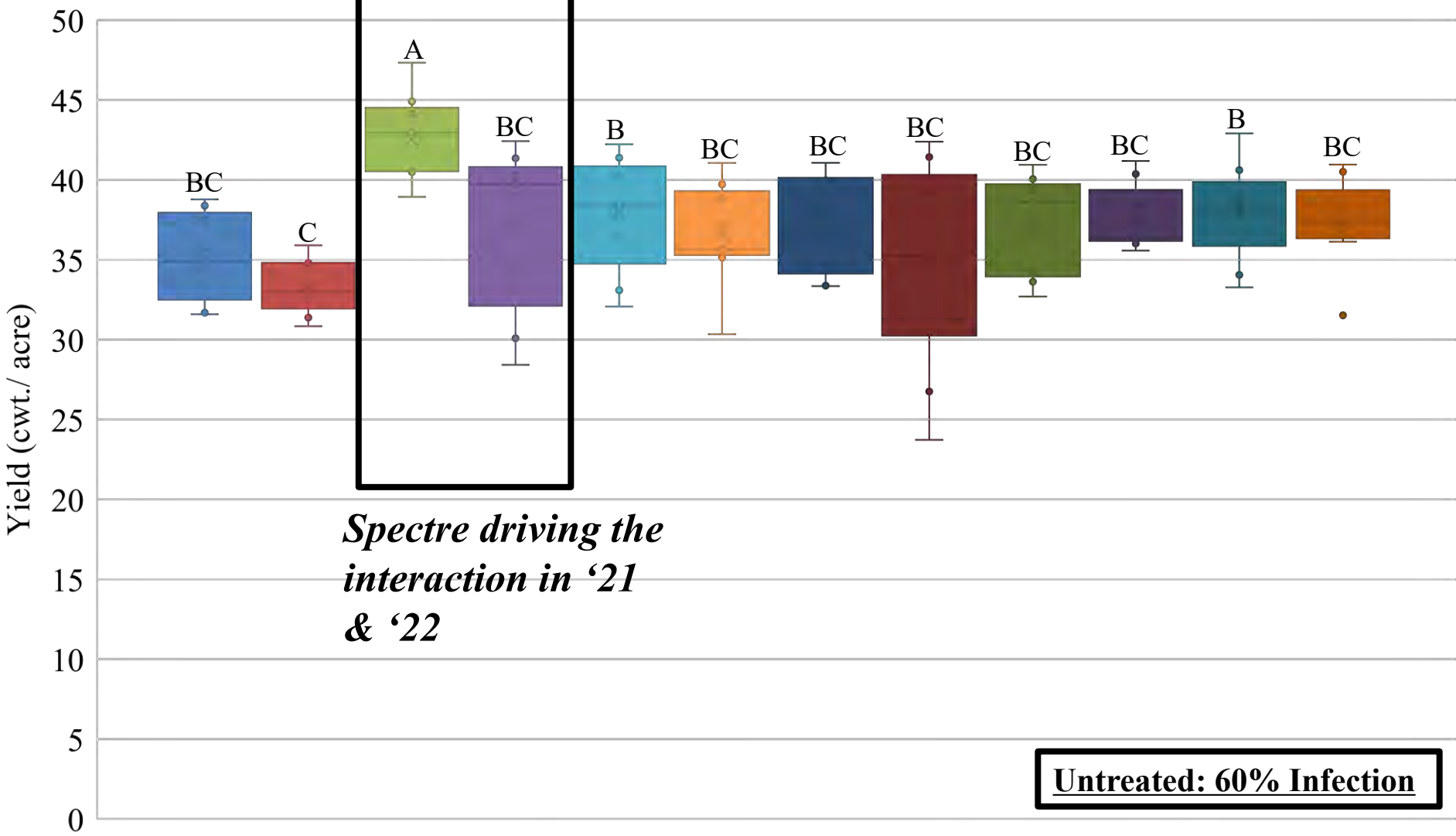




Untreated: 60% Infection

*Means followed by the same letter are not significantly different $P \leq 0.05$.

Variety * Fungicide



Spectre driving the interaction in '21 & '22

Untreated: 60% Infection

- Black Beard +
- Black Beard -
- Spectre +
- Spectre -
- Adams +
- Adams -
- Nimbus +
- Nimbus -
- HMS Bounty +
- HMS Bounty -
- Black Bear +
- Black Bear -

*Means followed by the same letter are not significantly different $P \leq 0.05$.

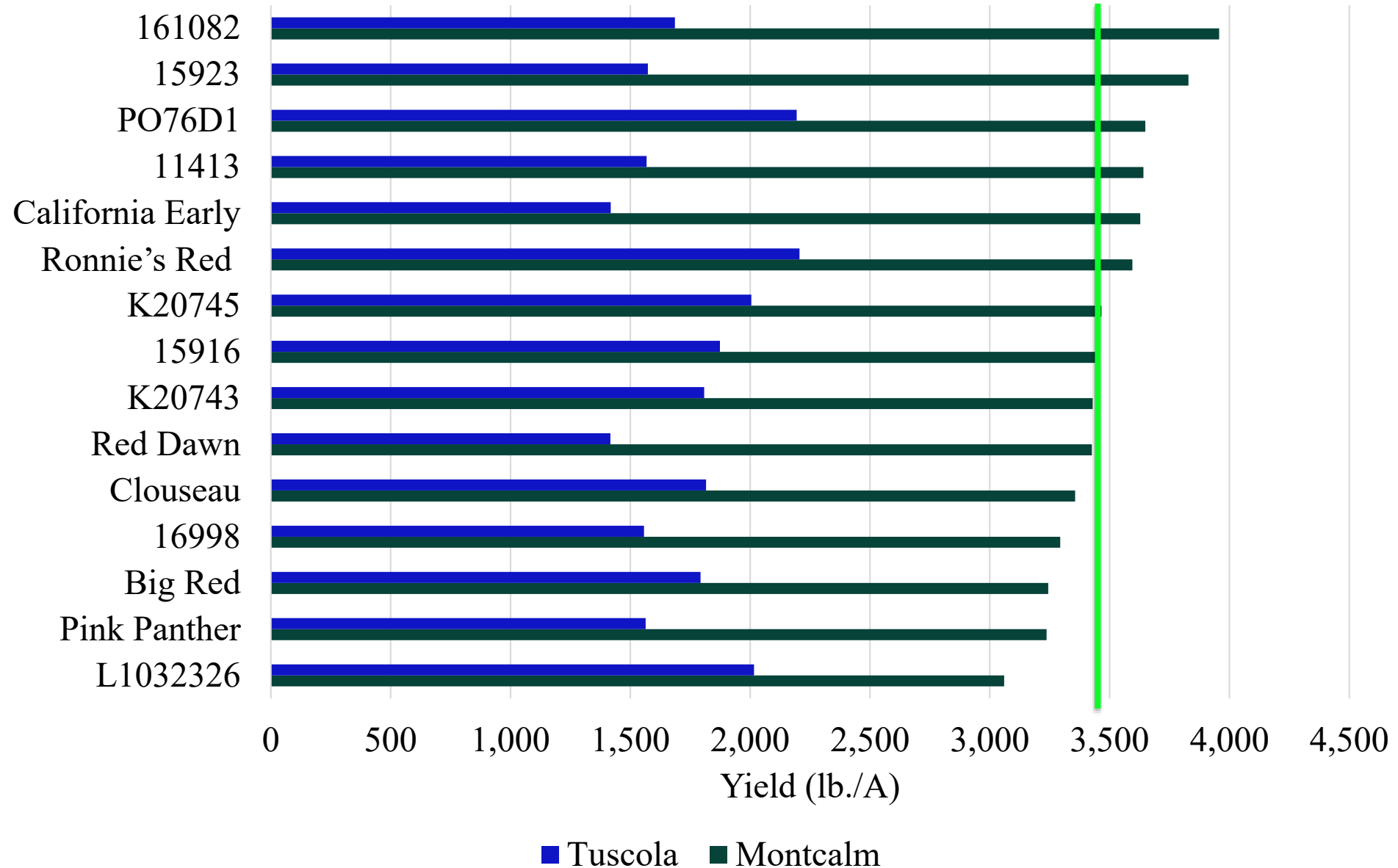
Light Red Kidney Beans

Michiganbean.com

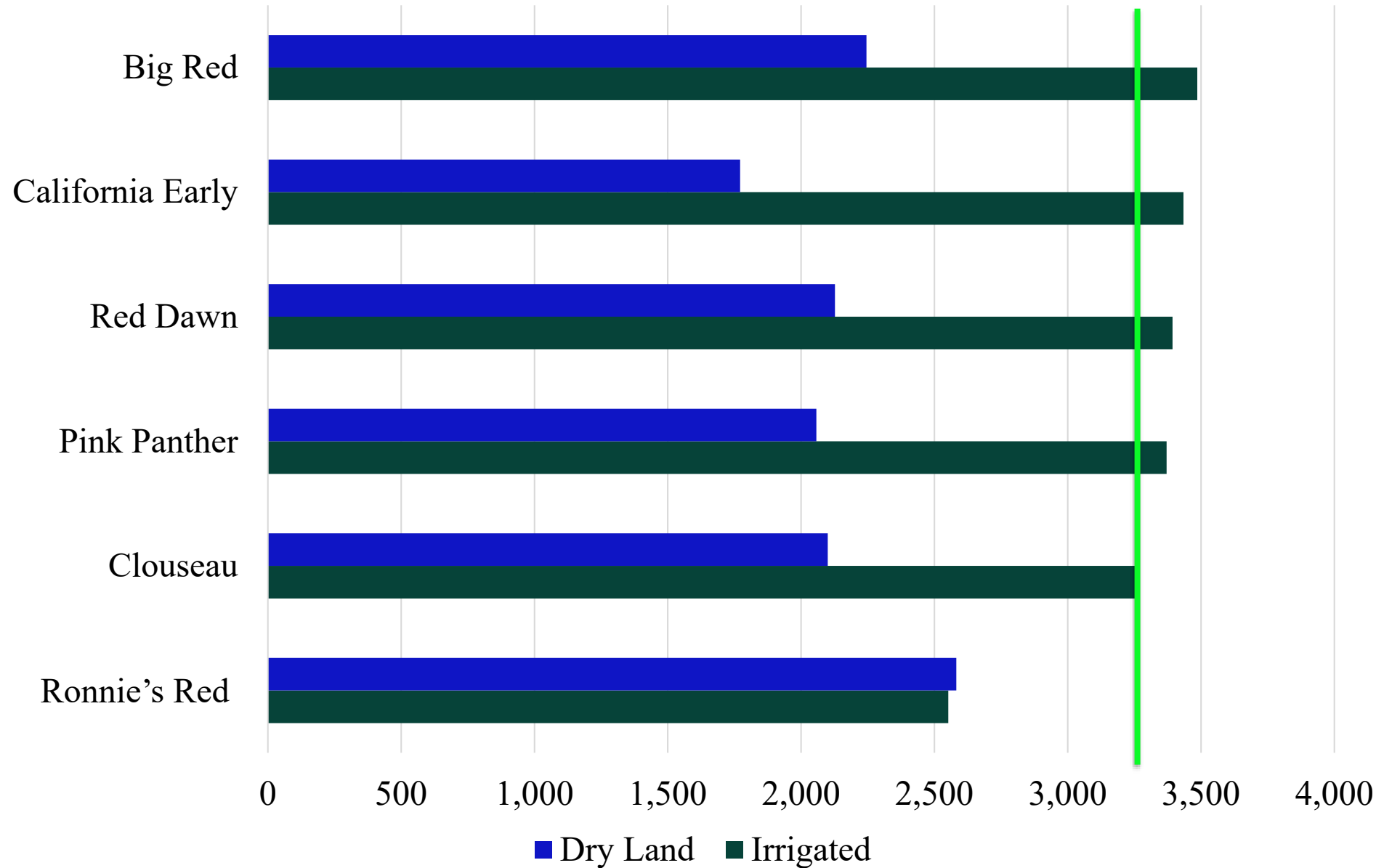
- 15 Entries
 - Commercial: 6
 - Experimental: 9
- Average Yield:
 - Montcalm: 34.2
 - Tuscola: 17.6



2022 LRK Bean Yields



2020-2022 LRK Bean Yields



Big Red
Yield Rank: #1 (34.8 cwt)
Maturity: 91 d.
Height: 18.0"
Lodge (1-5): 2.8
Mold Infection: 88% (average: 66%)
Canning : 2.0 (average: 2.2)



Cal. Early
Yield Rank: #2 (34.3 cwt)
Maturity: 87 d.
Height: 16.0"
Lodge (1-5): 1.8
Mold Infection: 86% (average: 66%)
Canning : 1.6 (average: 2.2)



Red Dawn
Yield Rank: #4 (33.9 cwt)
Maturity: 87 d.
Height: 14.0"
Lodge (1-5): 2.0
Mold Infection: 77% (average: 66%)
Canning : 2.2 (average: 2.2)



Pink Panther
Yield Rank: #5 (33.7 cwt)
Maturity: 98 d.
Height: 20.0"
Lodge (1-5): 2.0
Mold Infection: 63% (average: 66%)
Canning : 1.6 (average: 2.2)



PINK PANT
MATURITY: 98
SOURCE: SEA



Name: Pink Panther
Location: Montcalm
Can: 968
Class: LRK

Class:LRK
Can:968

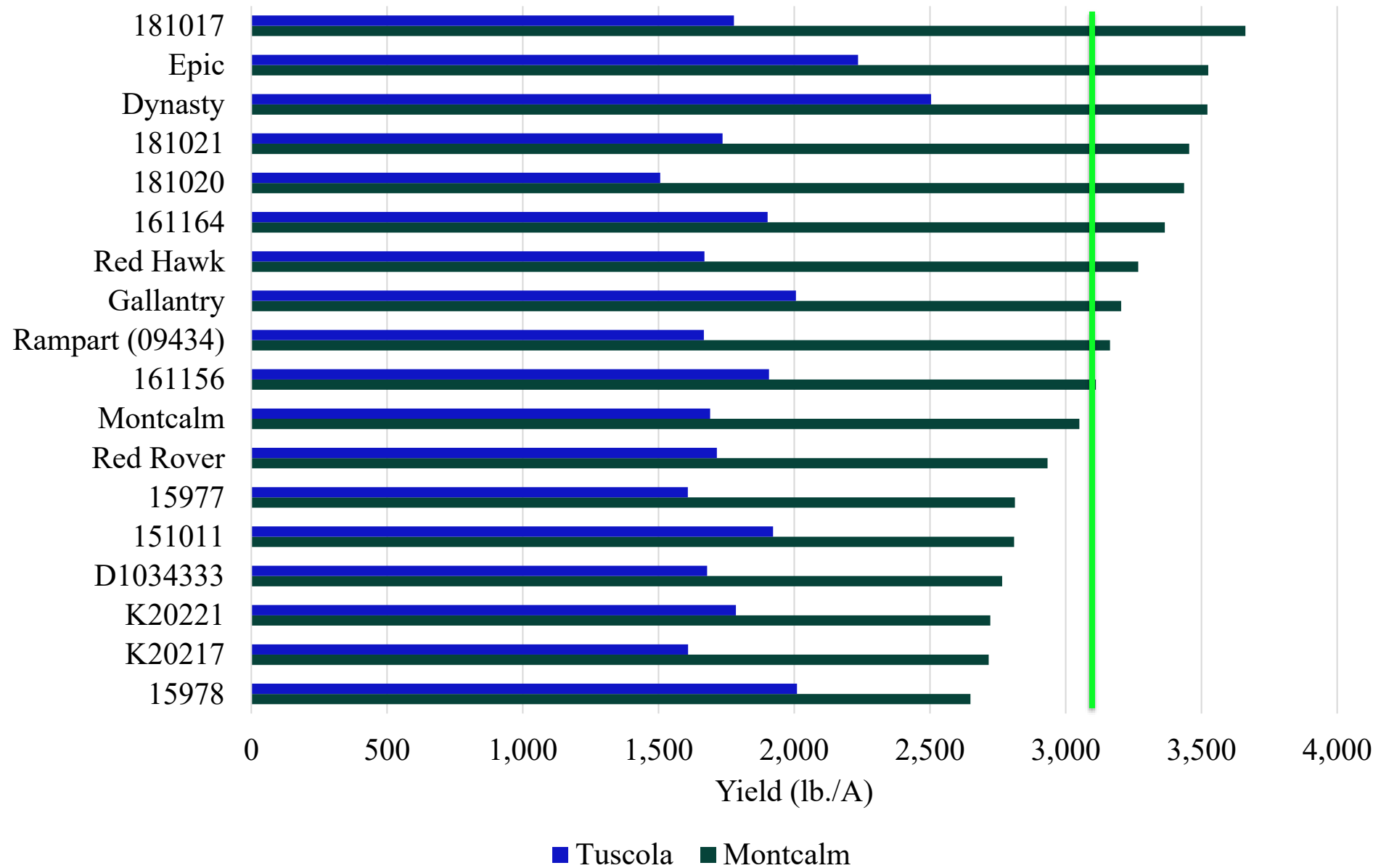
Dark Red Kidney Beans

Michiganbean.com

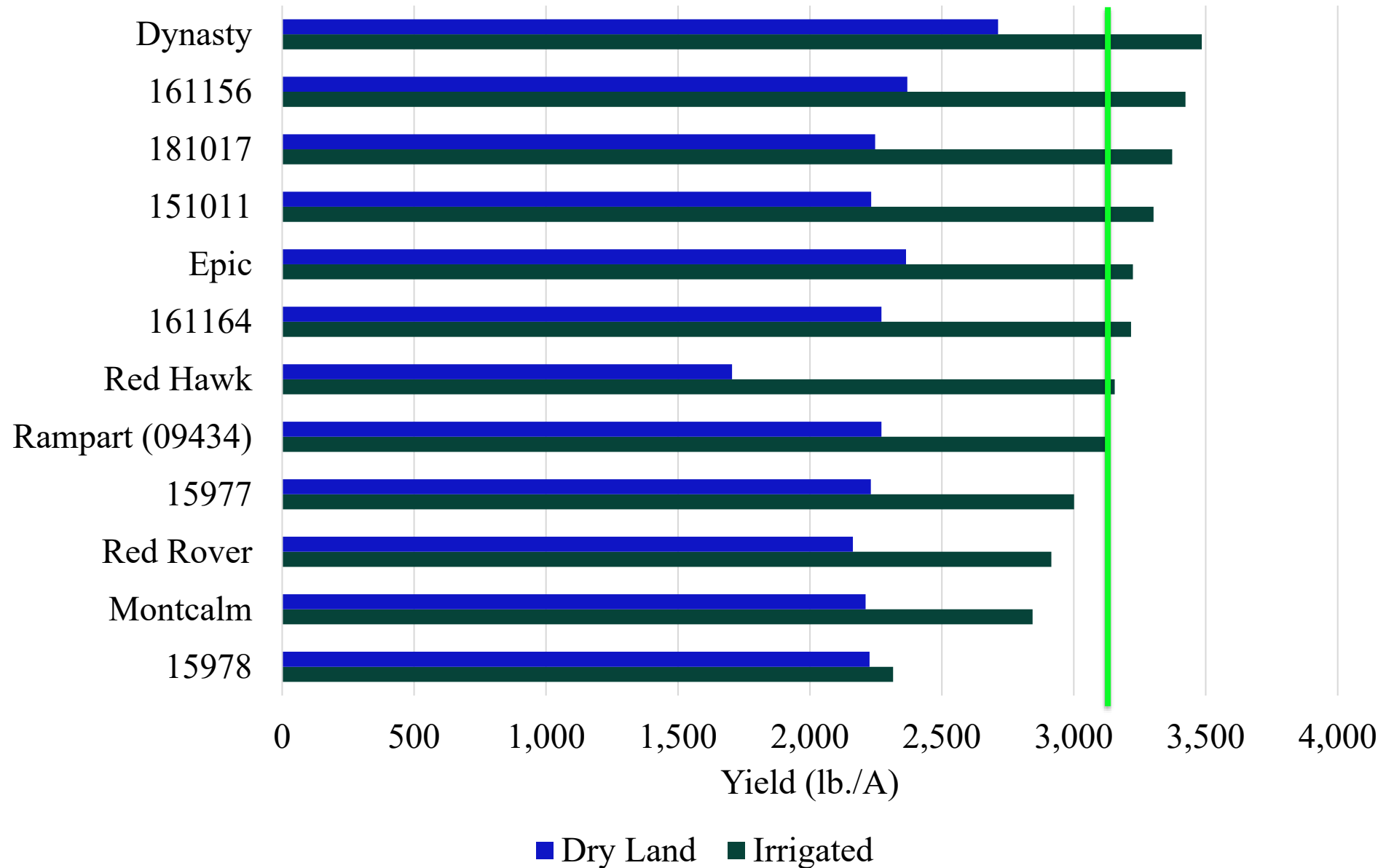
- 18 Entries
 - Commercial: 7
 - Experimental: 11
- Average Yield:
 - Montcalm: 31.2
 - Tuscola: 18.4



2022 DRK Bean Yields



2020-2022 DRK Bean Yields



Dynasty

Yield Rank: #1 (34.8 cwt)

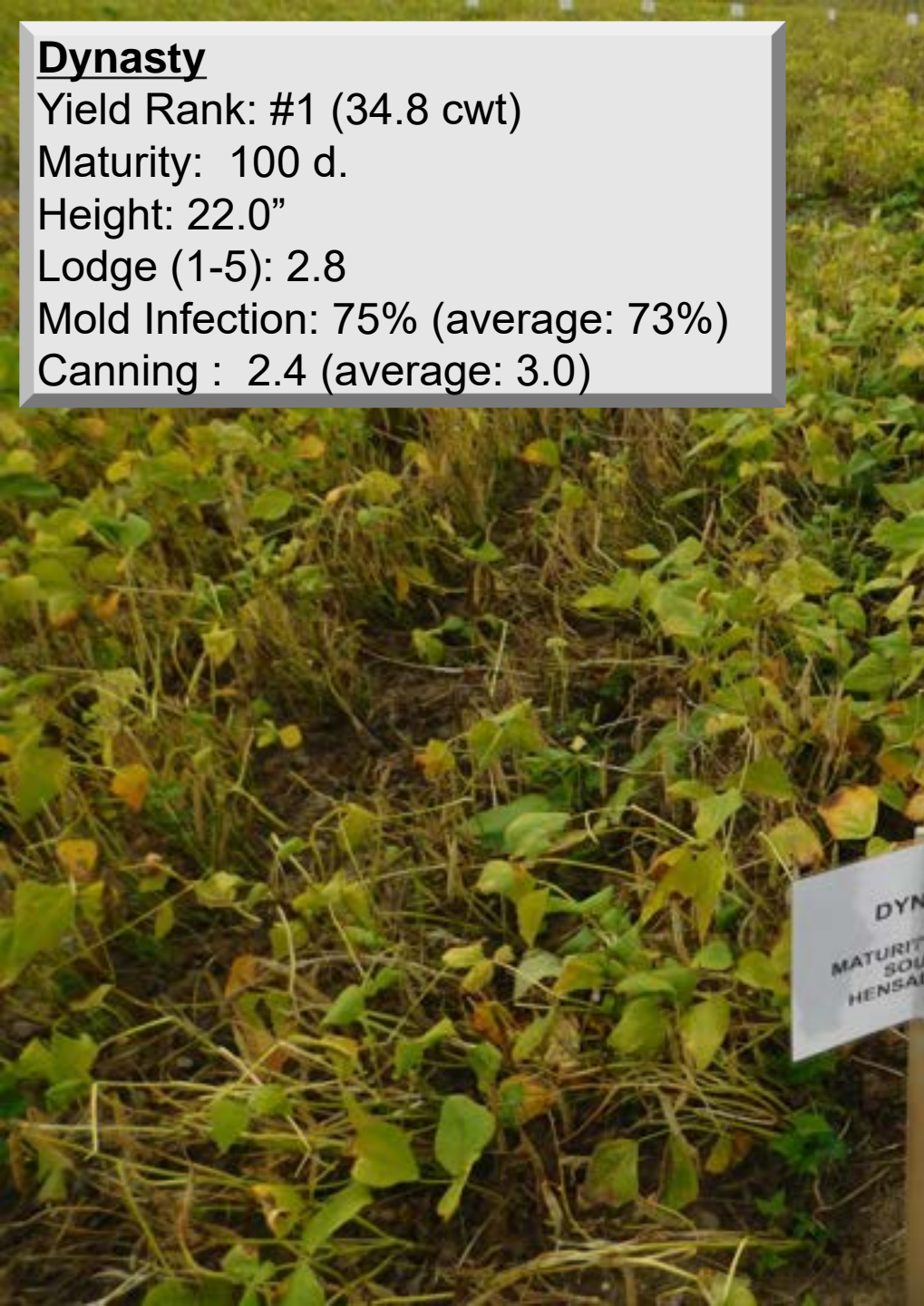
Maturity: 100 d.

Height: 22.0"

Lodge (1-5): 2.8

Mold Infection: 75% (average: 73%)

Canning : 2.4 (average: 3.0)



Epic

Yield Rank: #5 (32.2 cwt)

Maturity: 104 d.

Height: 20.0"

Lodge (1-5): 2.8

Mold Infection: 68% (average: 73%)

Canning : 2.4 (average: 3.0)



Red Hawk

Yield Rank: #7 (31.5 cwt)

Maturity: 101 d.

Height: 22.0"

Lodge (1-5): 2.3

Mold Infection: 65% (average: 73%)

Canning : 2.9 (average: 3.0)



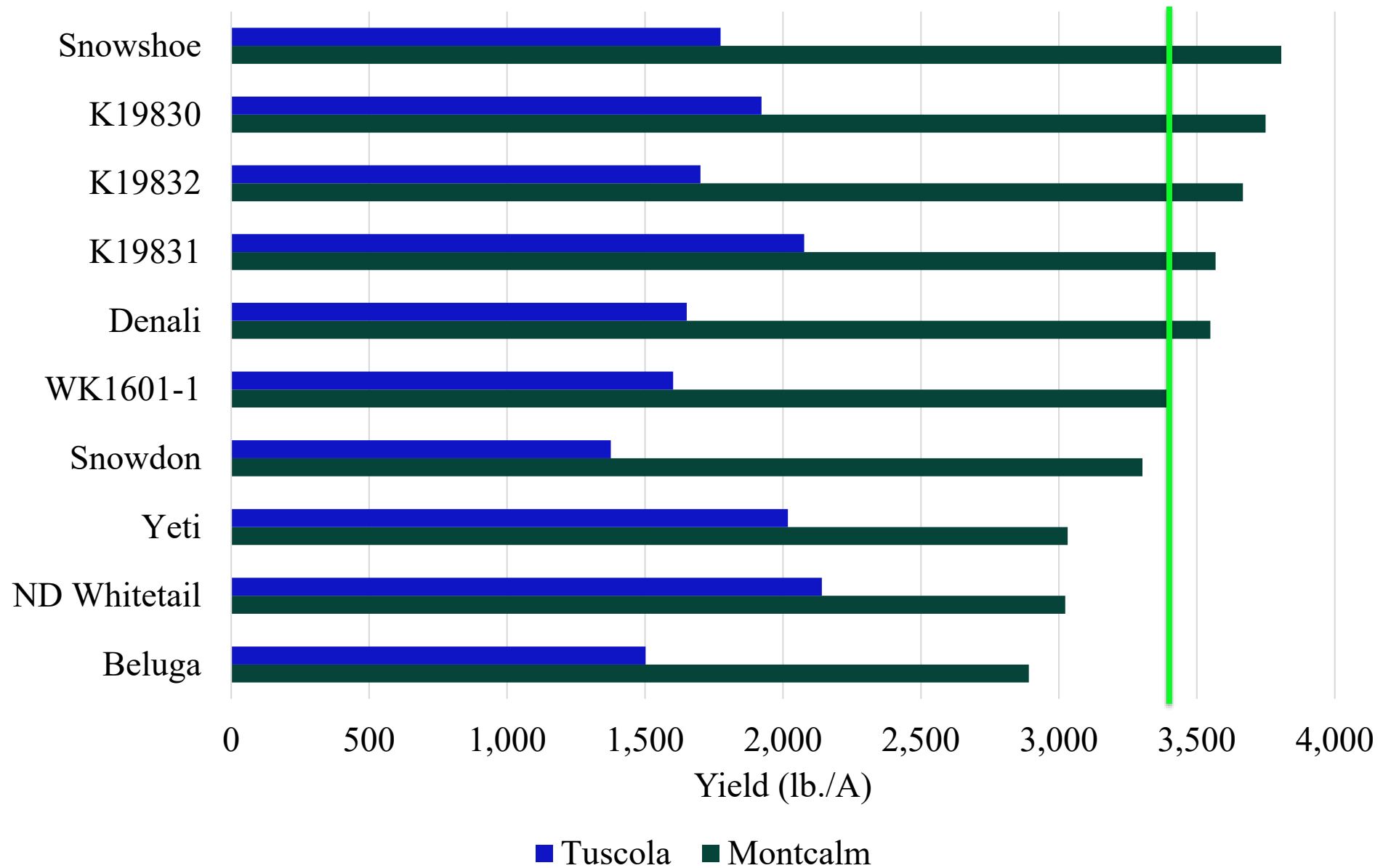
White Kidney Beans

Michiganbean.com

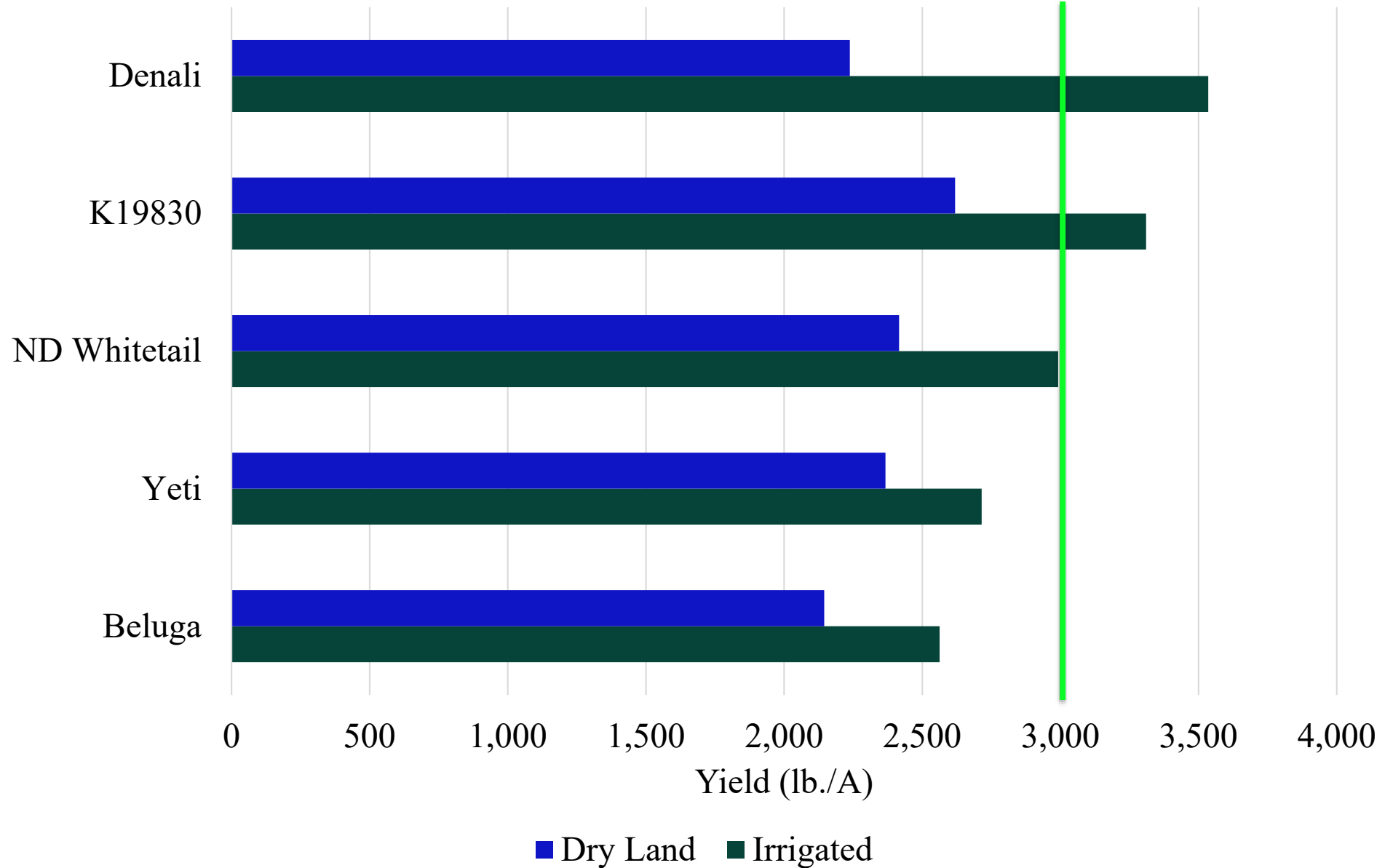
- 10 Entries
 - Commercial: 6
 - Experimental: 4
- Average Yield:
 - Montcalm: 33.9
 - Tuscola: 17.6



2022 White Kidney Bean Yields



2020-2022 White Kidney Bean Yields



Denali

Yield Rank: #1 (35.3 cwt)

Maturity: 97 d.

Height: 19.0"

Lodge (1-5): 1.7

Mold Infection: 34% (average: 35%)

Canning : 2.3 (average: 2.6)



ND Whitetail

Yield Rank: #3 (29.9 cwt)

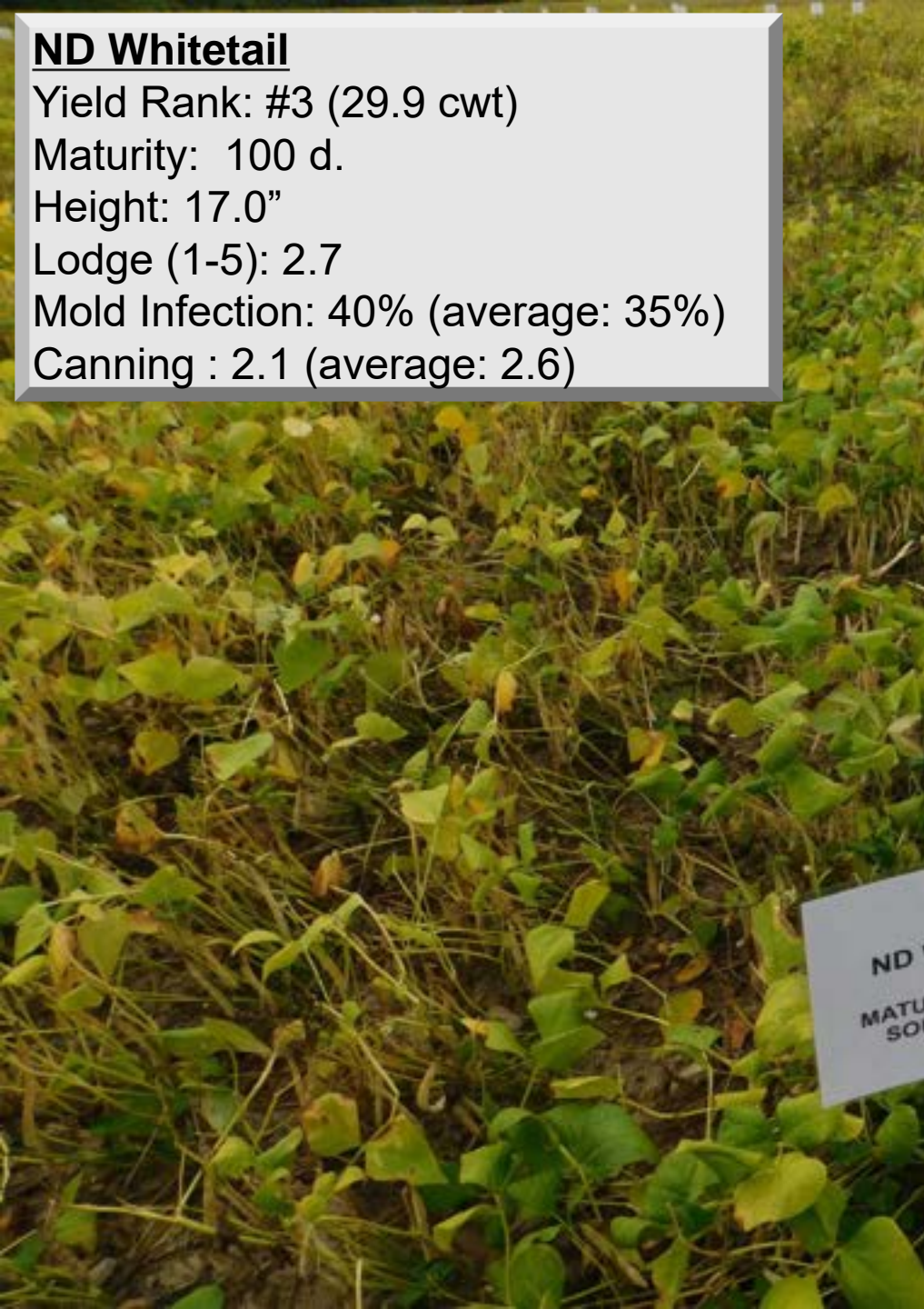
Maturity: 100 d.

Height: 17.0"

Lodge (1-5): 2.7

Mold Infection: 40% (average: 35%)

Canning : 2.1 (average: 2.6)



ND V
MATUR
SOU



Name: ND Whitetail
Location: Montcalm

Can: 1096
Class: WK

CLASS: WK
Can: 1096

Beluga

Yield Rank: #5 (25.6 cwt)

Maturity: 102 d.

Height: 20.0"

Lodge (1-5): 1.7

Mold Infection: 9% (average: 35%)

Canning : 3.6 (average: 2.6)



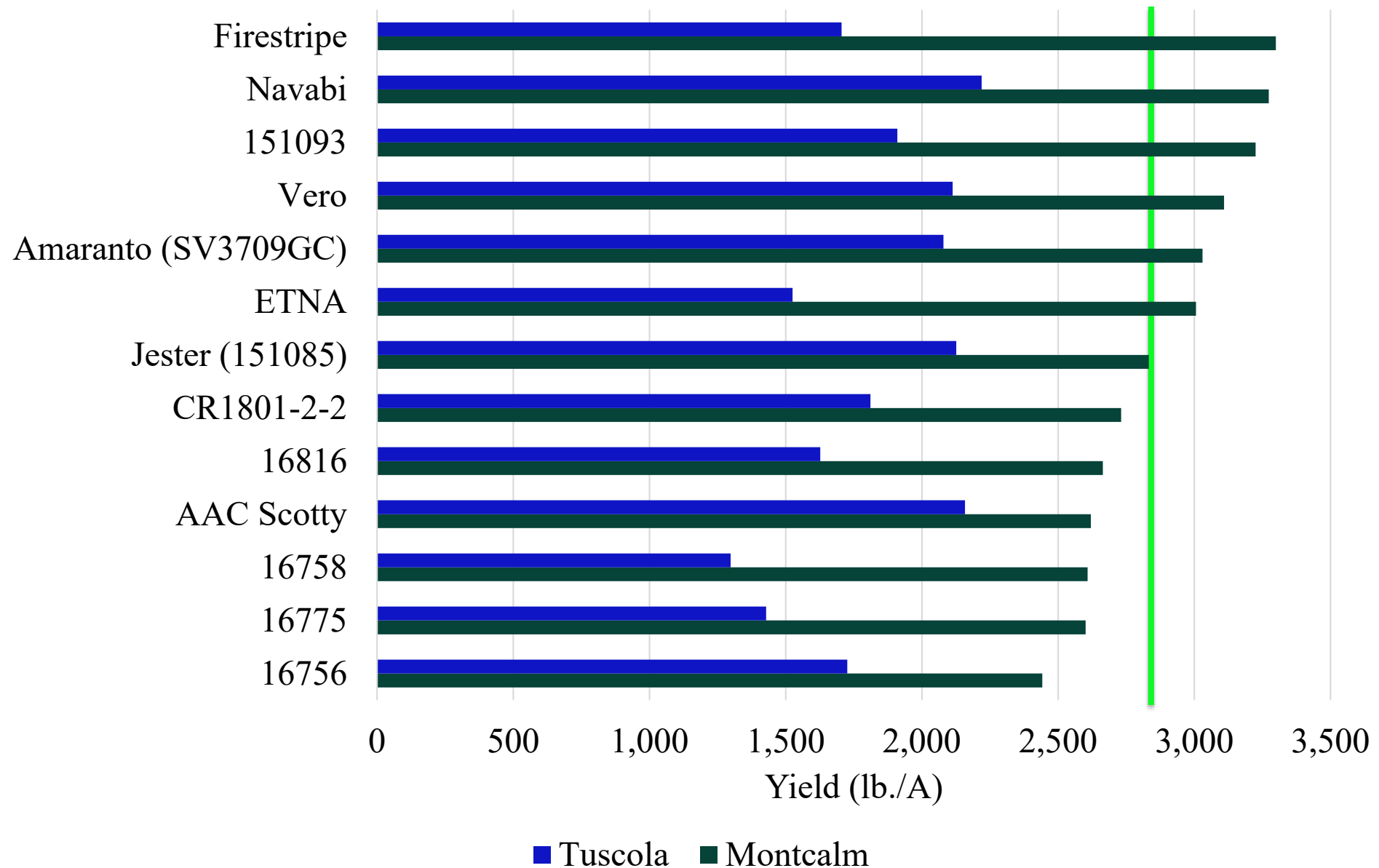
Cranberry Beans

Michiganbean.com

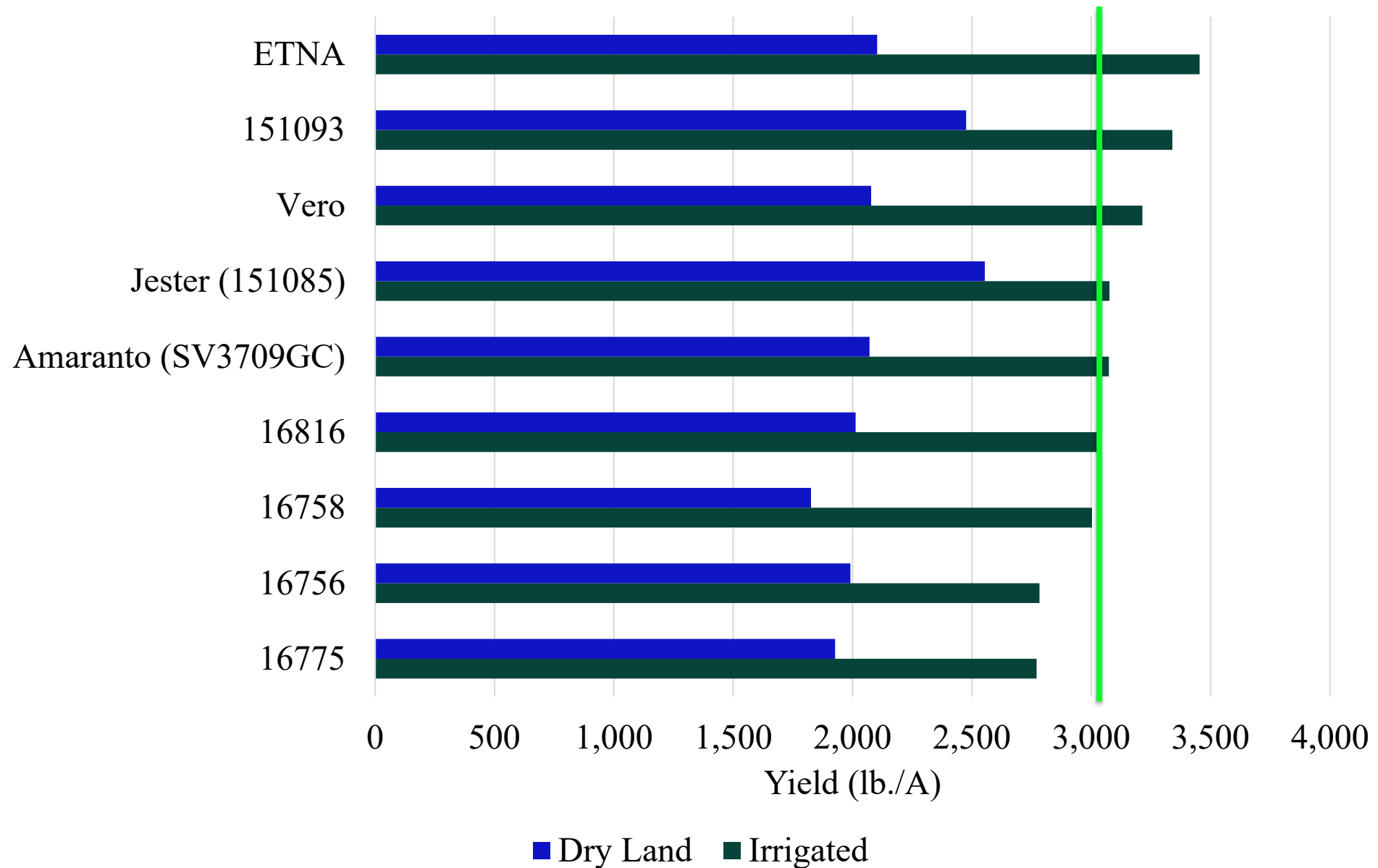
- 13 Entries
 - Commercial: 7
 - Experimental: 6
- Average Yield:
 - Montcalm: 33.9
 - Tuscola: 17.6



2022 Cranberry Bean Yields



2020-2022 Cranberry Bean Yields



Etna

Yield Rank: #1 (34.5 cwt)

Maturity: 91 d.

Height: 16.0"

Lodge (1-5): 2.5

Mold Infection: 83% (average: 67%)

Canning : 1.4 (average: 2.4)



Vero

Yield Rank: #3 (32.1 cwt)

Maturity: 88 d.

Height: 16.0"

Lodge (1-5): 3.0

Mold Infection: 85% (average: 67%)

Canning : 1.8 (average: 2.4)



Jester

Yield Rank: #4 (30.7 cwt)

Maturity: 100 d.

Height: 19.0"

Lodge (1-5): 3.3

Mold Infection: 78% (average: 67%)

Canning : 1.3 (average: 2.4)



Thank you!

Schindler Farms

Rayl Farms

Richmond Brothers
Farms

Stoutenburg Farms

Atwater Farms

Rader Farms

Sturm Farms

Volmering Farms



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