

## 2009 Lewis Twin Row Study

*One field at a time!*<sup>™</sup>

**Goal** – To evaluate twin row corn yield vs. 30 inch row corn yield on grower farms in the Lewis Hybrids market area of Illinois, Iowa, and Missouri under the grower cooperators management practices.

We initially had 48 cooperators ready to plant a twin row population study and with the wet spring, we were able to plant 22 plots. Of these 22 plots we were able to take 15 plots to yield. In this study we looked at two Lewis hybrids, 910VT3 and 915VT3. This allowed us to look at early vs. late maturity, as well as different ear types. The plots were planted using RTK guidance and a Great Plains planter. The Great Plains planter planted both the twin rows as well as the 30 inch rows. There were a minimum of 8 rows of each populations in both row configurations. The plots were managed under management regimes that the growers currently had in place. Of the 15 plots harvested – 4 were corn on corn, 10 were corn following soybeans, and 1 was corn following hay. All plots were conventionally tilled except for 1 no-till and 3 minimum-till. In terms of early vs. late plantings: 8 plots were planted prior to May 15<sup>th</sup> and 7 plots were planted from May 15<sup>th</sup> – June 6<sup>th</sup>. Amount of nitrogen applied was left at the discretion of the cooperator, the results are compiled into two groupings (<200 units and >200 units). All plots were harvested with the cooperator's combine.

**Conclusions** - As we look back at the year, 2009 will go down as one of the coolest and wettest years on record. In terms of evaluating plots, it becomes very difficult to evaluate due to the variability of the year. Many plots were abandoned due to the amount of rainfall and ponding which occurred. There are a few things that should be mentioned. First, the highest overall yield came from the medium plant population (37,700) in 30 inch rows. This is consistent with what we have said in terms of populations for the past couple of years. As you can see as we push the population higher in the 30 inch rows yield begins to drop. Secondly, we had positive responses overall at the lower population (33,350) and at the higher population (42,380) on the twin rows. With that said, I think that this year's variability makes it very tough to create a lot of firm opinions on twin rows. We will continue to look at research done in the area of twin rows and narrow rows to help us increase yields.

I would like to thank all the cooperators for taking the time to do this with us. I would also like to sincerely thank Dale Erke, Rick Schaffer, and Fred Shaneyfelt for their assistance last Spring. It was a challenging year and without them we never would have gotten 22 plots planted.

Larry Robinson, Sales Agronomist, Lewis Hybrids

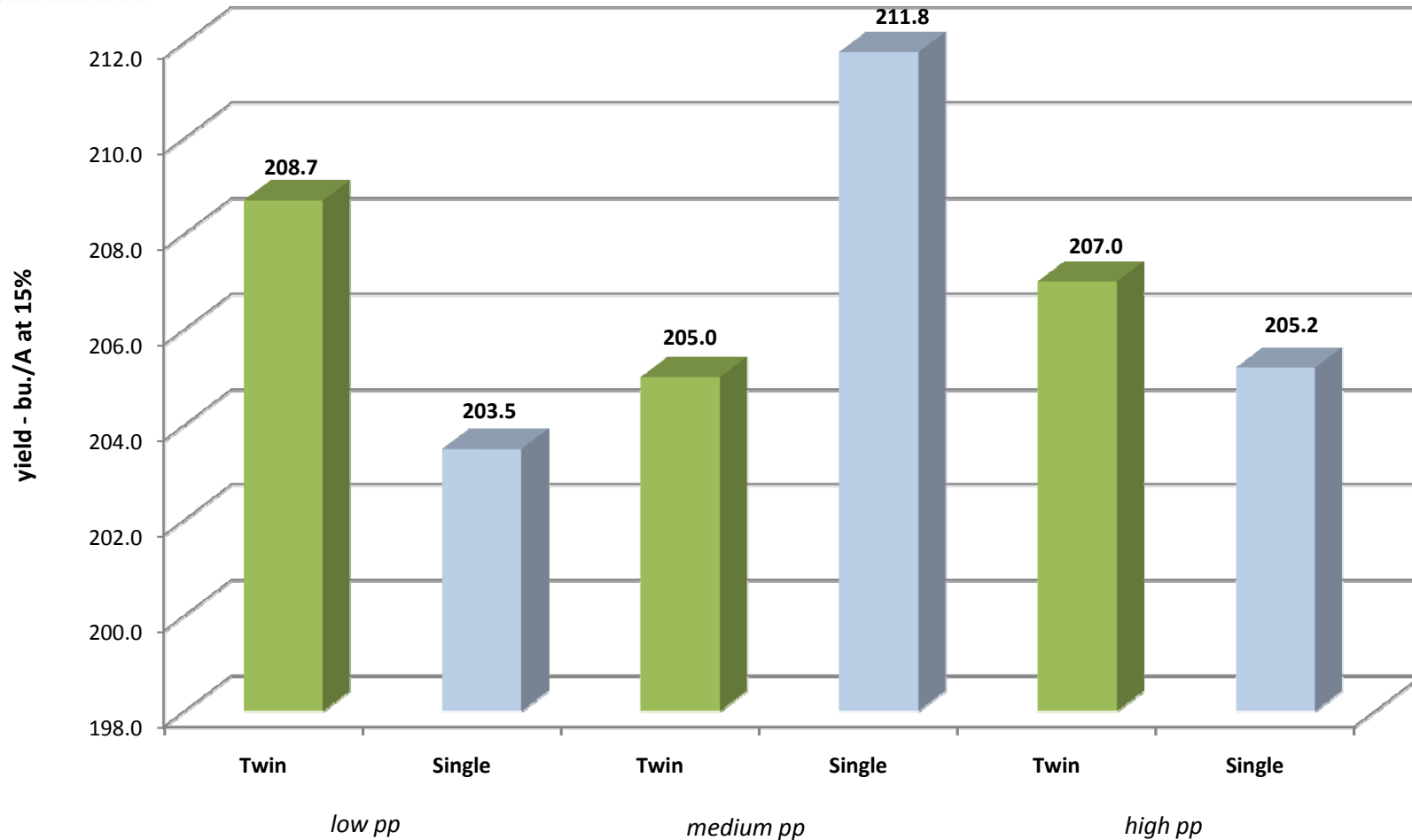
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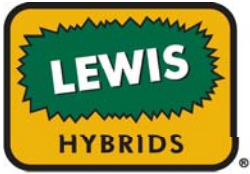
# Lewis 910VT3 & 915VT3 - Twin vs. Single Row

## Overall Yield Average

30" spacing, 2009 harvest data for 15 plots



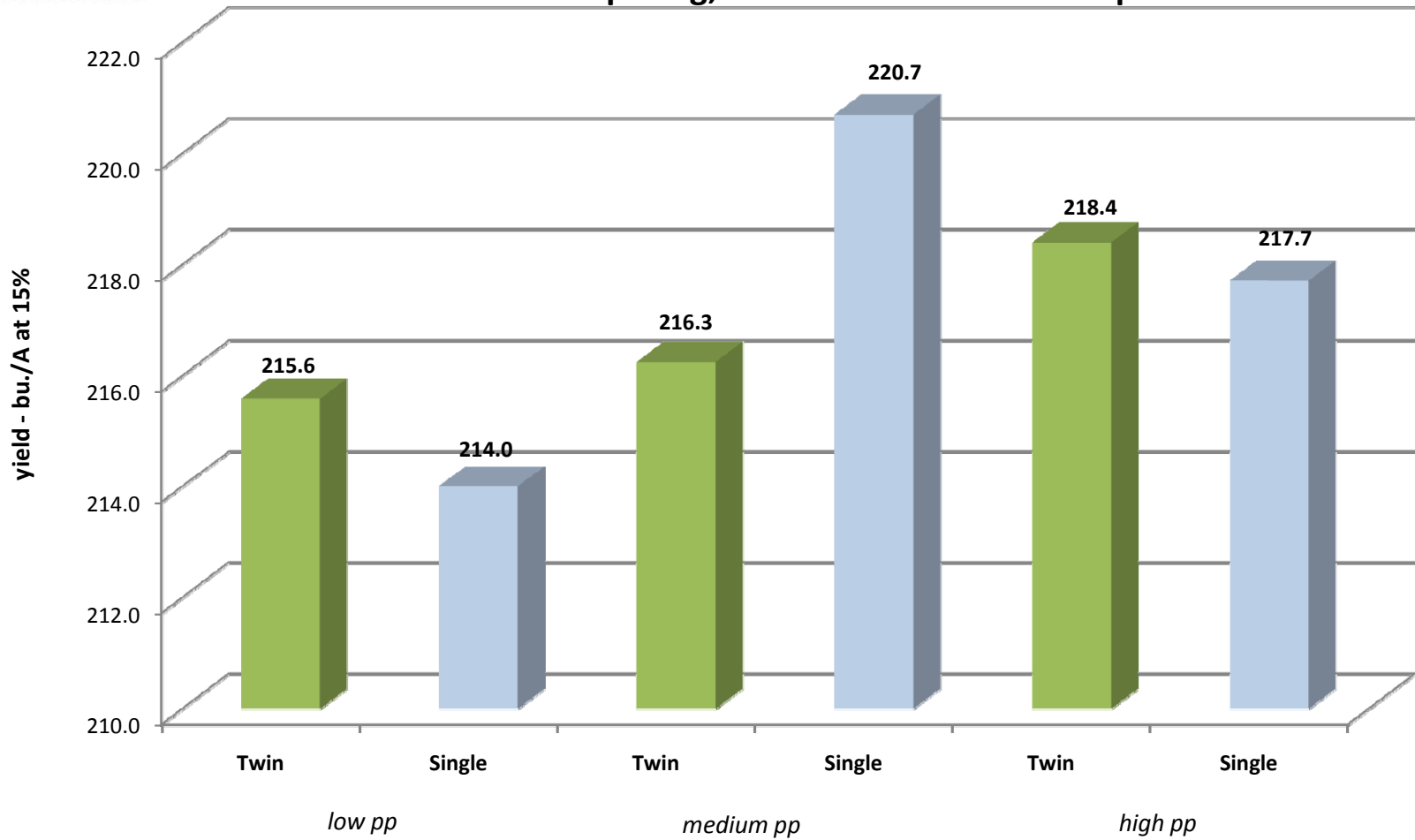
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp



# Lewis 910VT3 - Twin vs. Single Row

## Overall Yield Average

30" spacing, 2009 harvest data for 15 plots



low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp

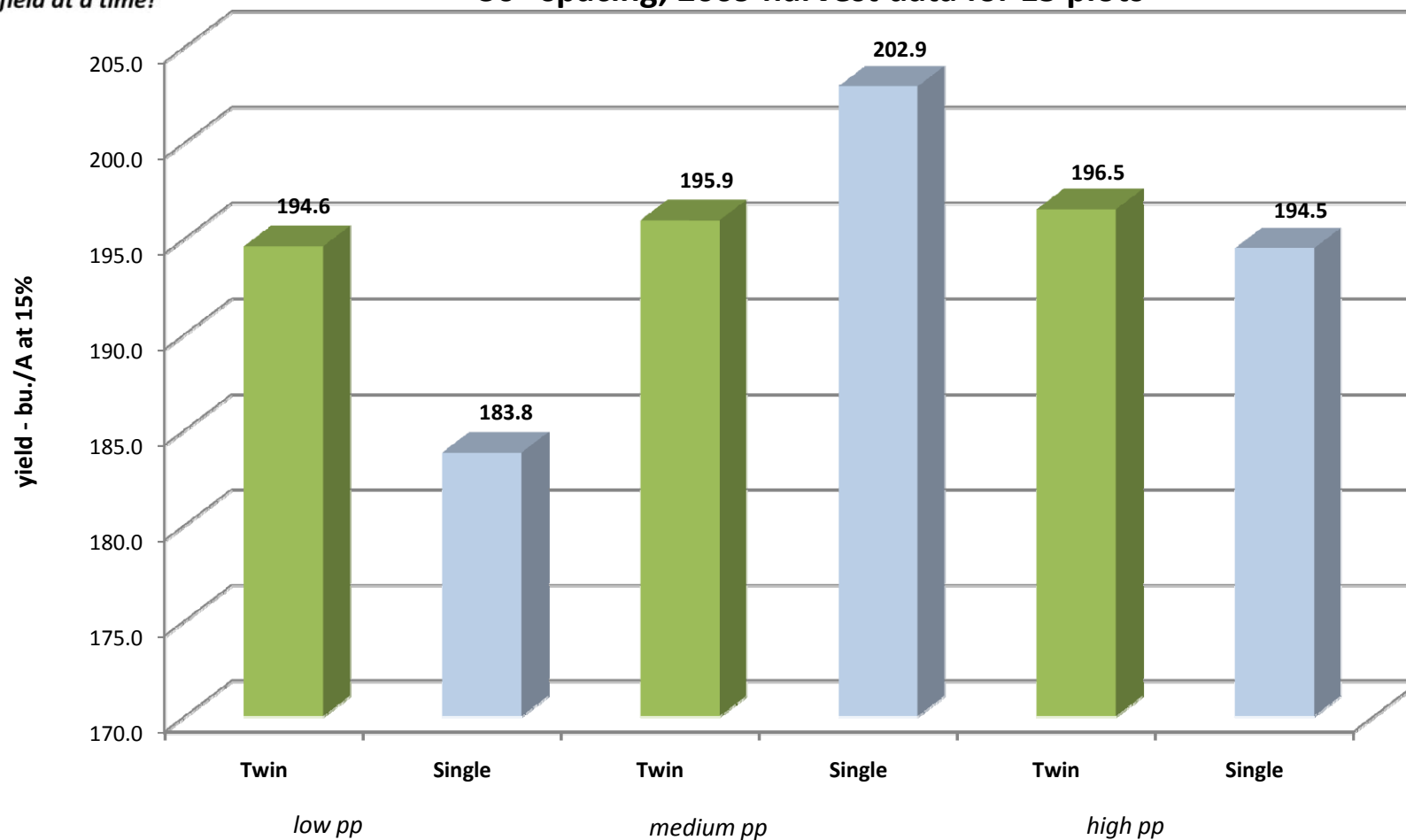


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# Lewis 915VT3 - Twin vs. Single Row

## Overall Yield Average

30" spacing, 2009 harvest data for 15 plots



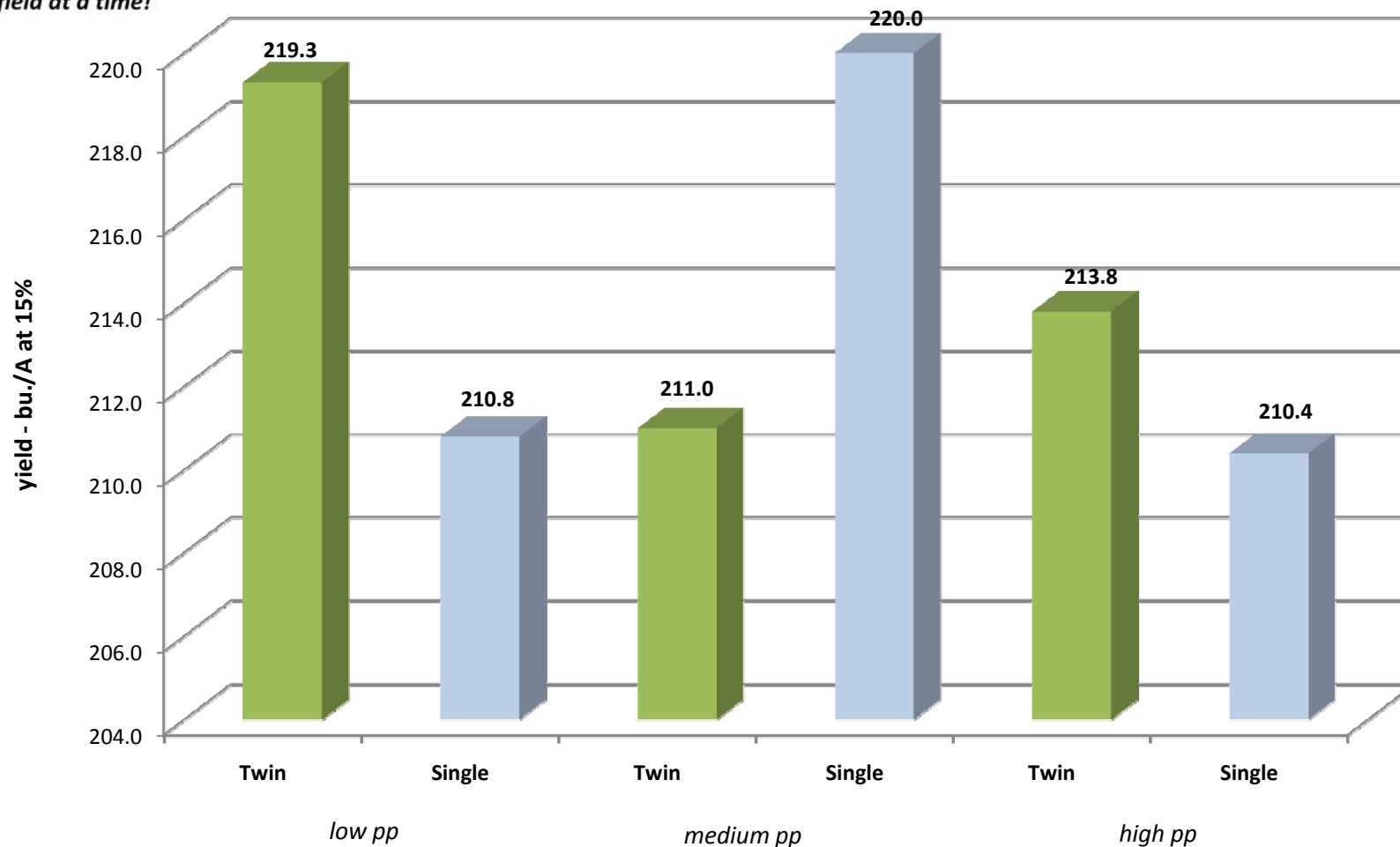
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp



# Lewis 910VT3 - Twin vs. Single Row

## Average yield - EARLY Planted Plots

30" spacing, 2009 harvest data for 15 plots (7 early)



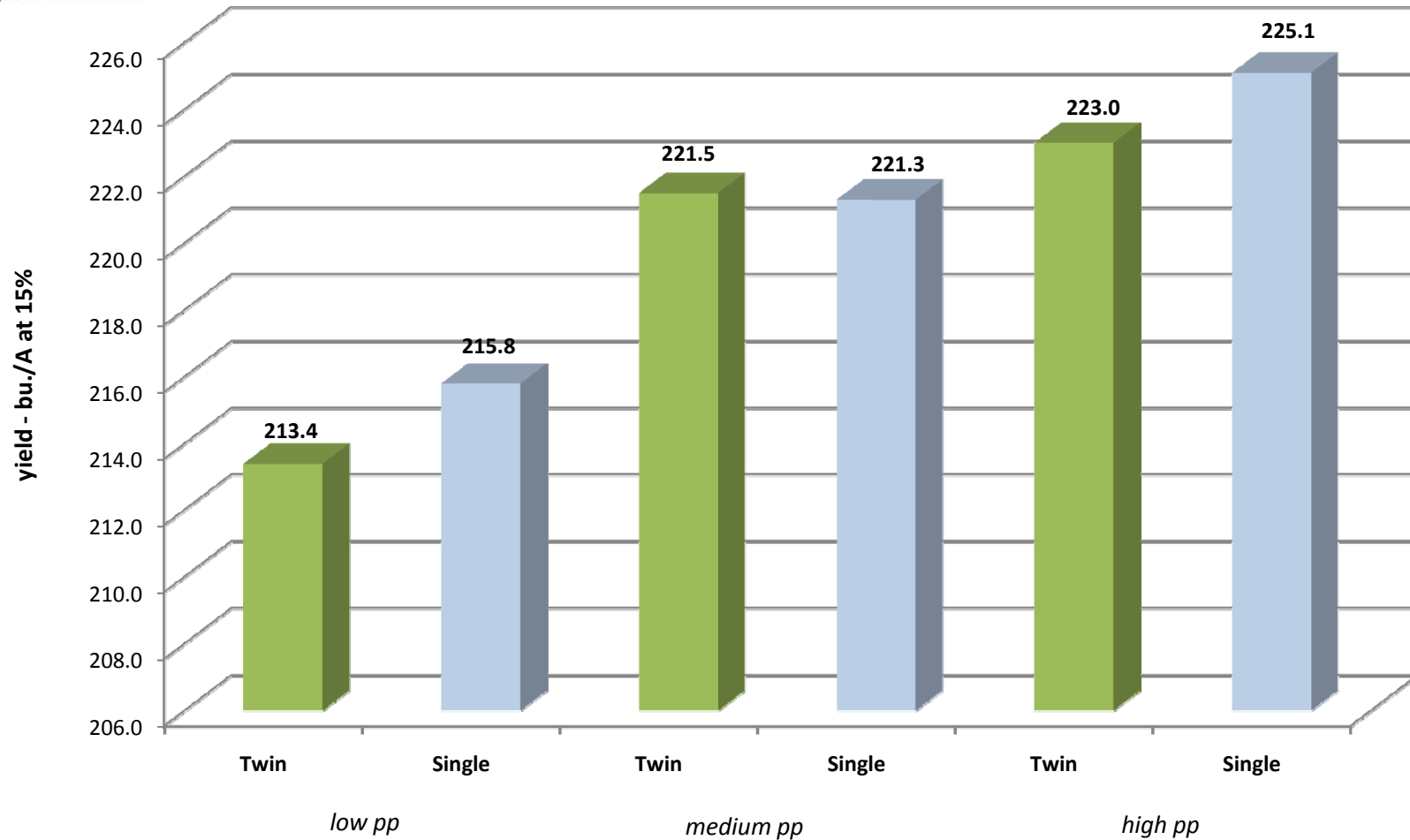
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
Early = April 23 - May 13; Late = May 14 - June 6



# Lewis 910VT3 - Twin vs. Single Row

## Average yield - LATE Planted Plots

30" spacing, 2009 harvest data for 15 plots (8 late)



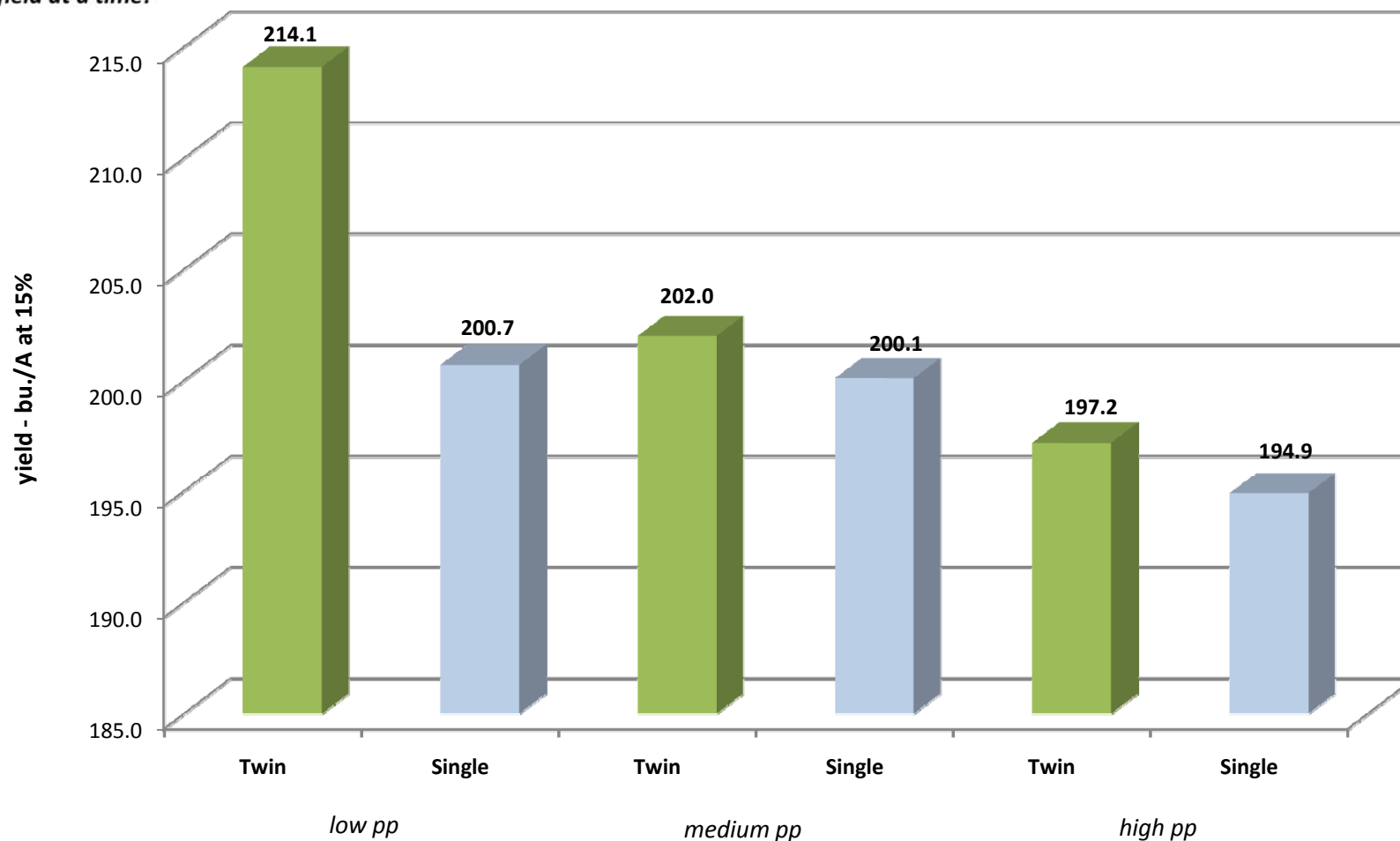
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
Early = April 23 - May 13; Late = May 14 - June 6



# Lewis 915VT3 - Twin vs. Single Row

## Average yield - EARLY Planted Plots

30" spacing, 2009 harvest data for 15 plots (7 early)



low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp

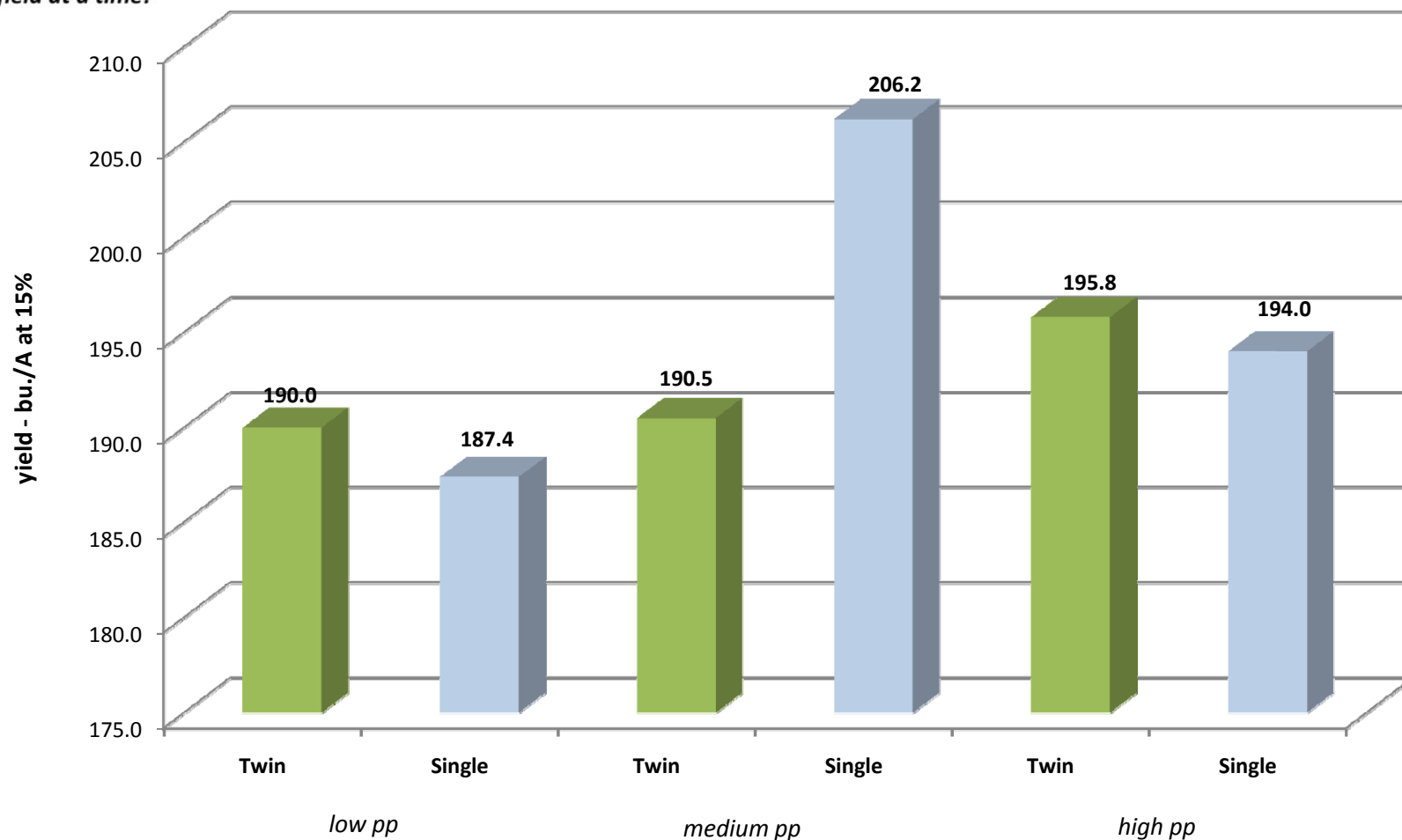
Early = April 23 - May 13; Late = May 14 - June 6



# Lewis 915VT3 - Twin vs. Single Row

## Average yield - LATE Planted Plots

30" spacing, 2009 harvest data for 15 plots (8 late)



low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
Early = April 23 - May 13; Late = May 14 - June 6

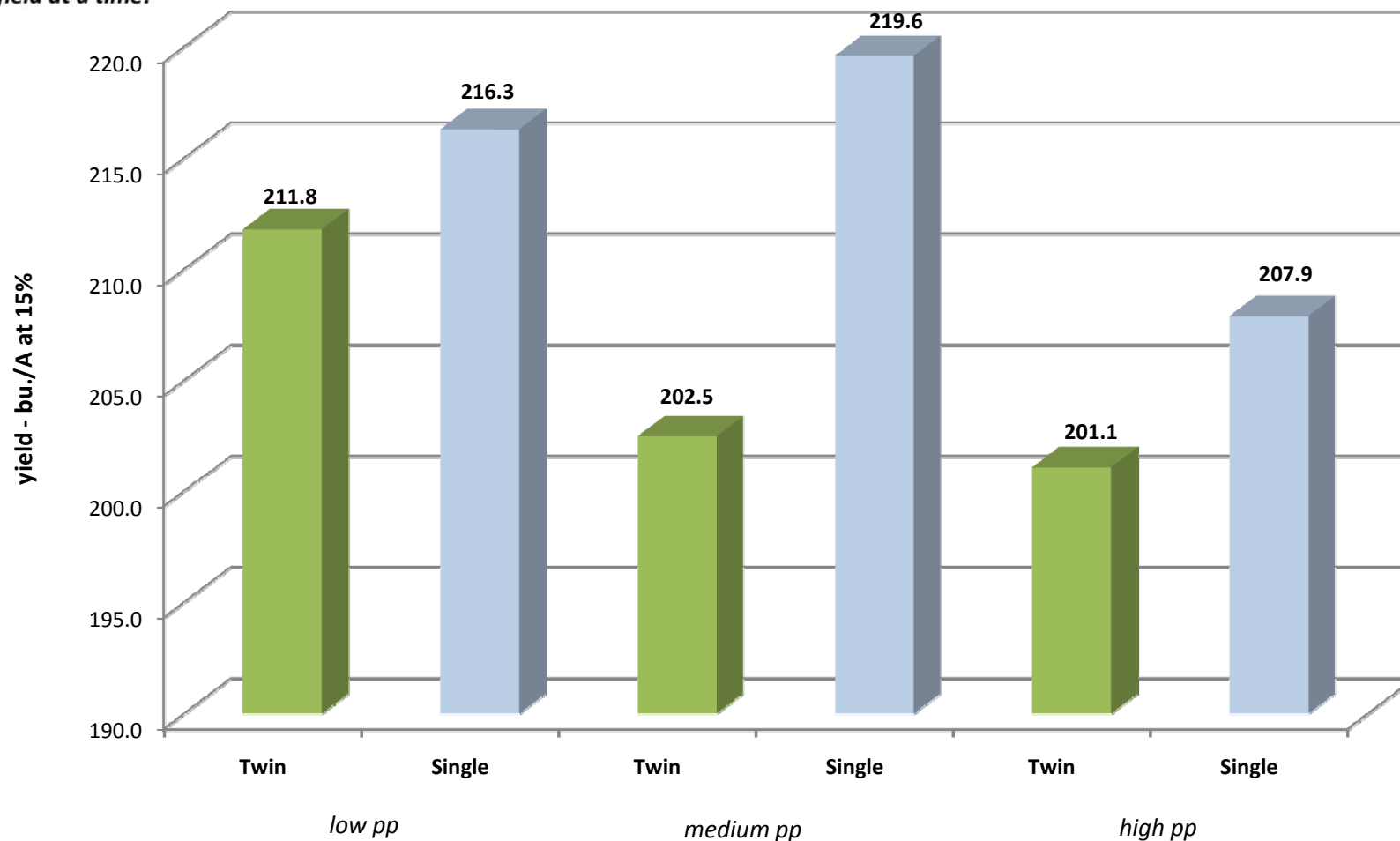


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# Lewis 910VT3 - Twin vs. Single Row

Average yield > C-on-C

30" spacing, 2009 harvest data for 4 plots



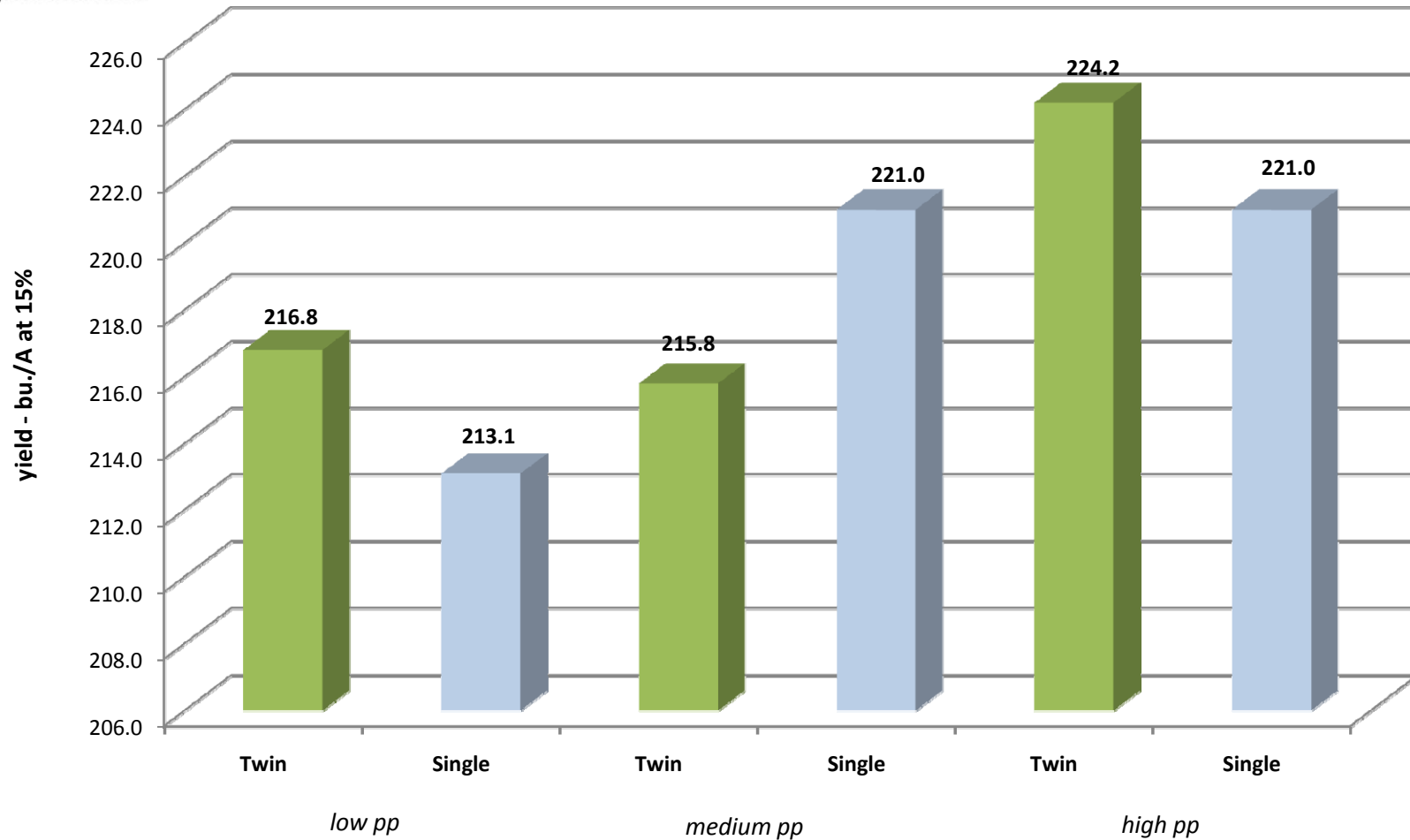
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
4 plots were Corn-on-Corn; 11 not = 10 were Corn after Beans, 1 was Corn after hay/alfalfa



# Lewis 910VT3 - Twin vs. Single Row

Average yield > C-on-Beans

30" spacing, 2009 harvest data for 11 plots



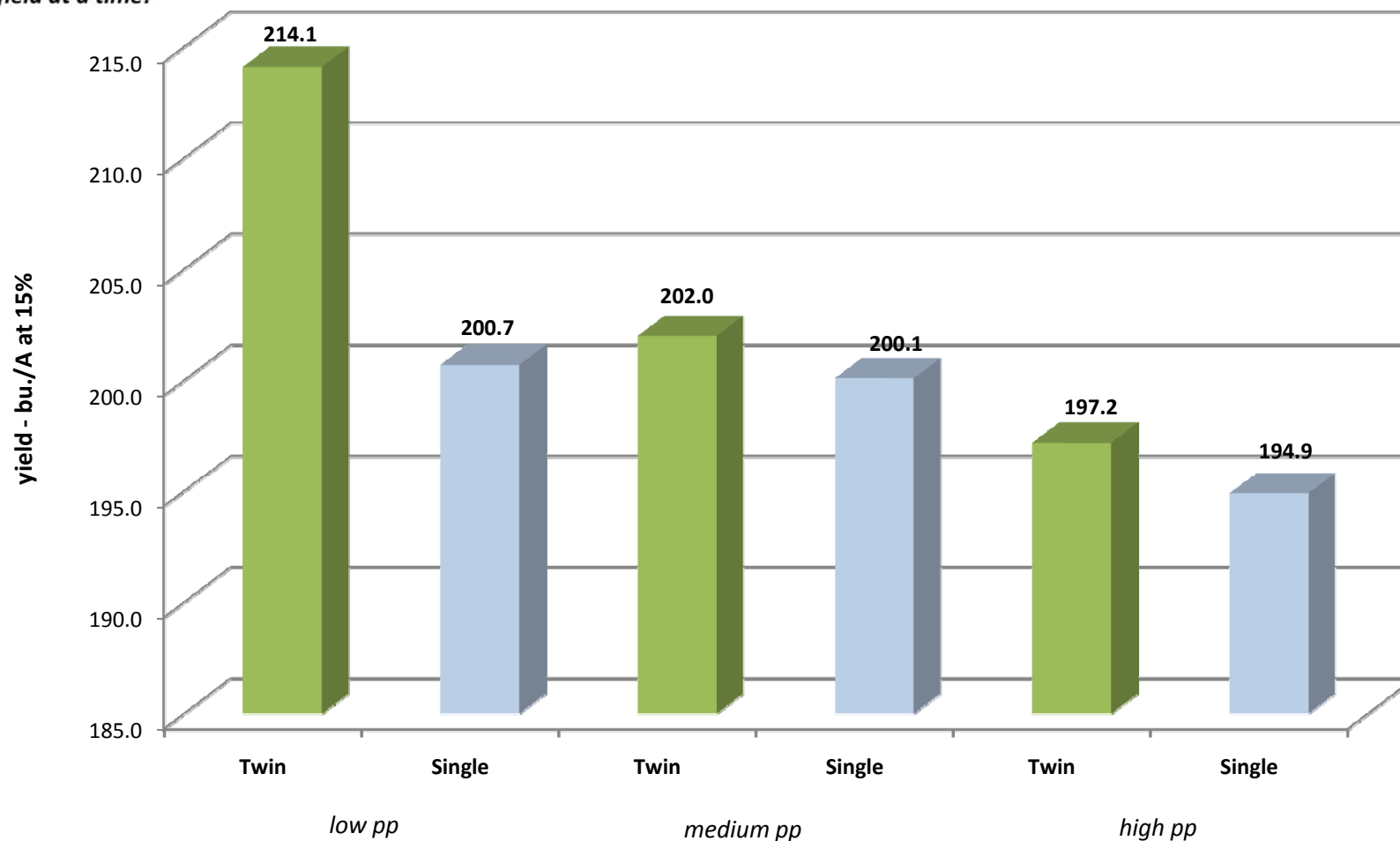
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4 plots were Corn-on-Corn; 11 not = 10 were Corn after Beans, 1 was Corn after hay/alfalfa



# Lewis 915VT3 - Twin vs. Single Row

Average yield > C-on-C

30" spacing, 2009 harvest data for 4 plots



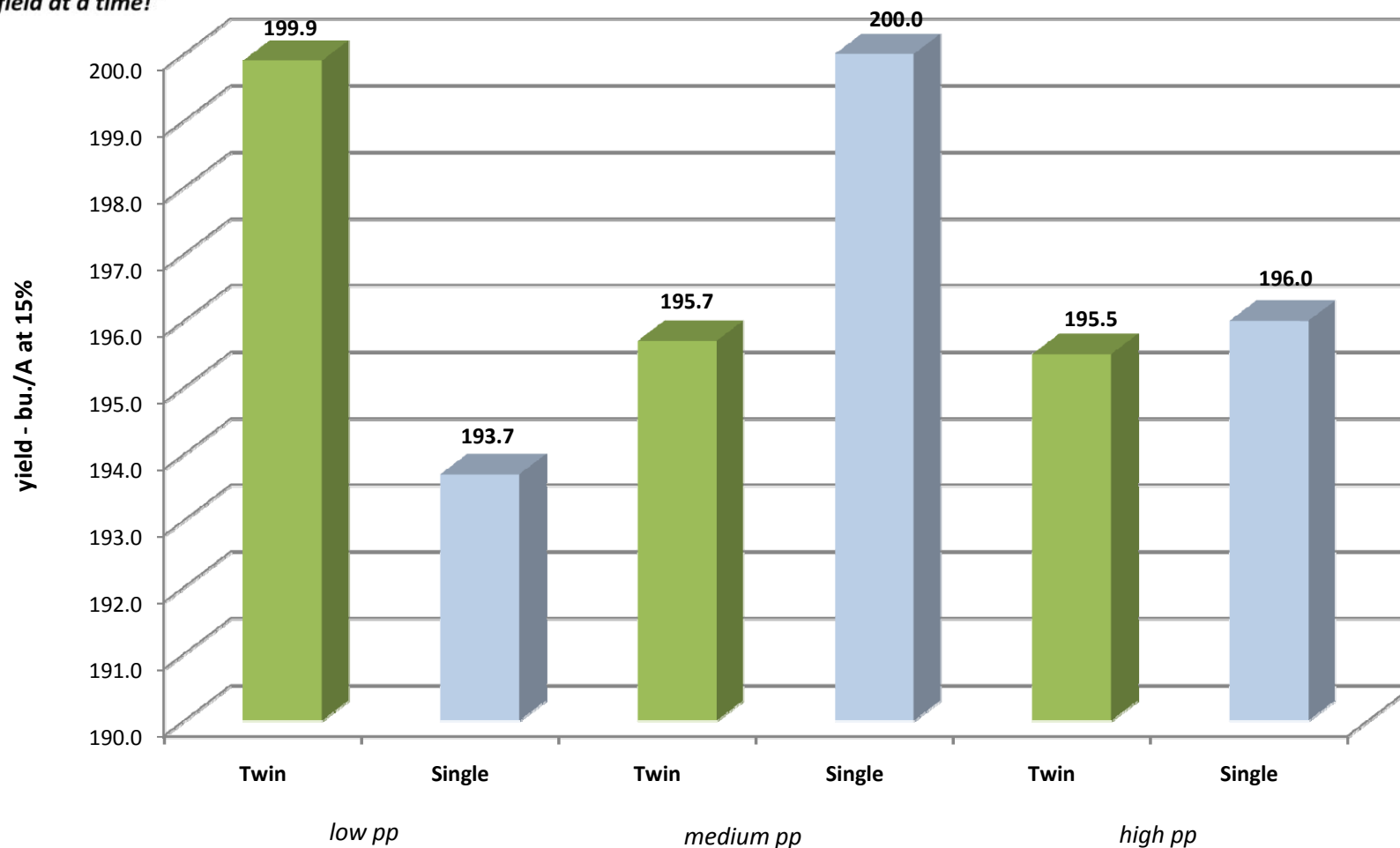
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
4 plots were Corn-on-Corn; 11 not = 10 were Corn after Beans, 1 was Corn after hay/alfalfa



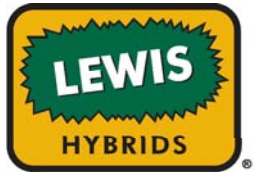
# Lewis 910VT3 - Twin vs. Single Row

Average yield > C-on-Beans

30" spacing, 2009 harvest data for 11 plots



low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
4 plots were Corn-on-Corn; 11 not = 10 were Corn after Beans, 1 was Corn after hay/alfalfa

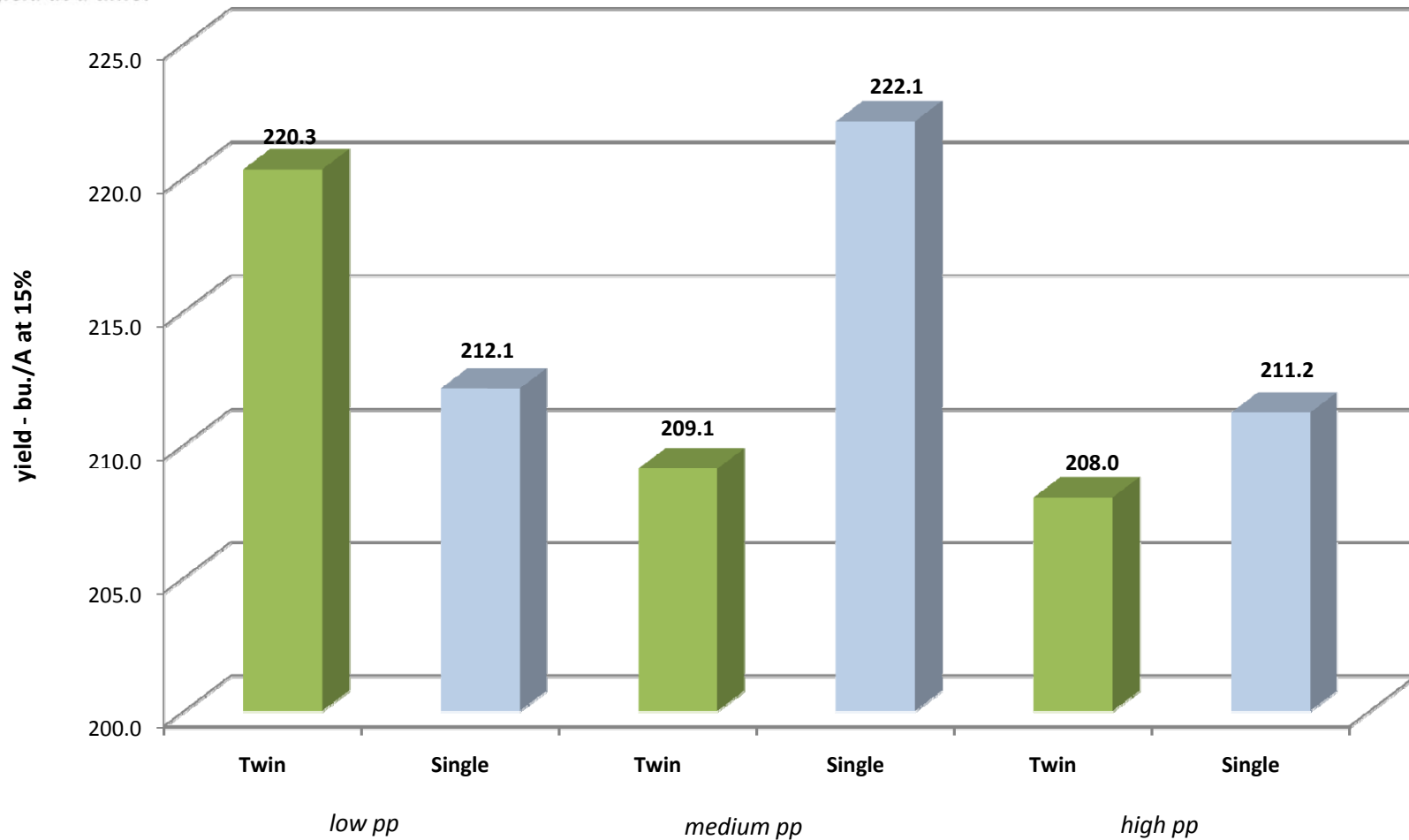


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# Lewis 910VT3 - Twin vs. Single Row

## Average yield at >200lb. N application

30" spacing, 2009 harvest data for 5 plots



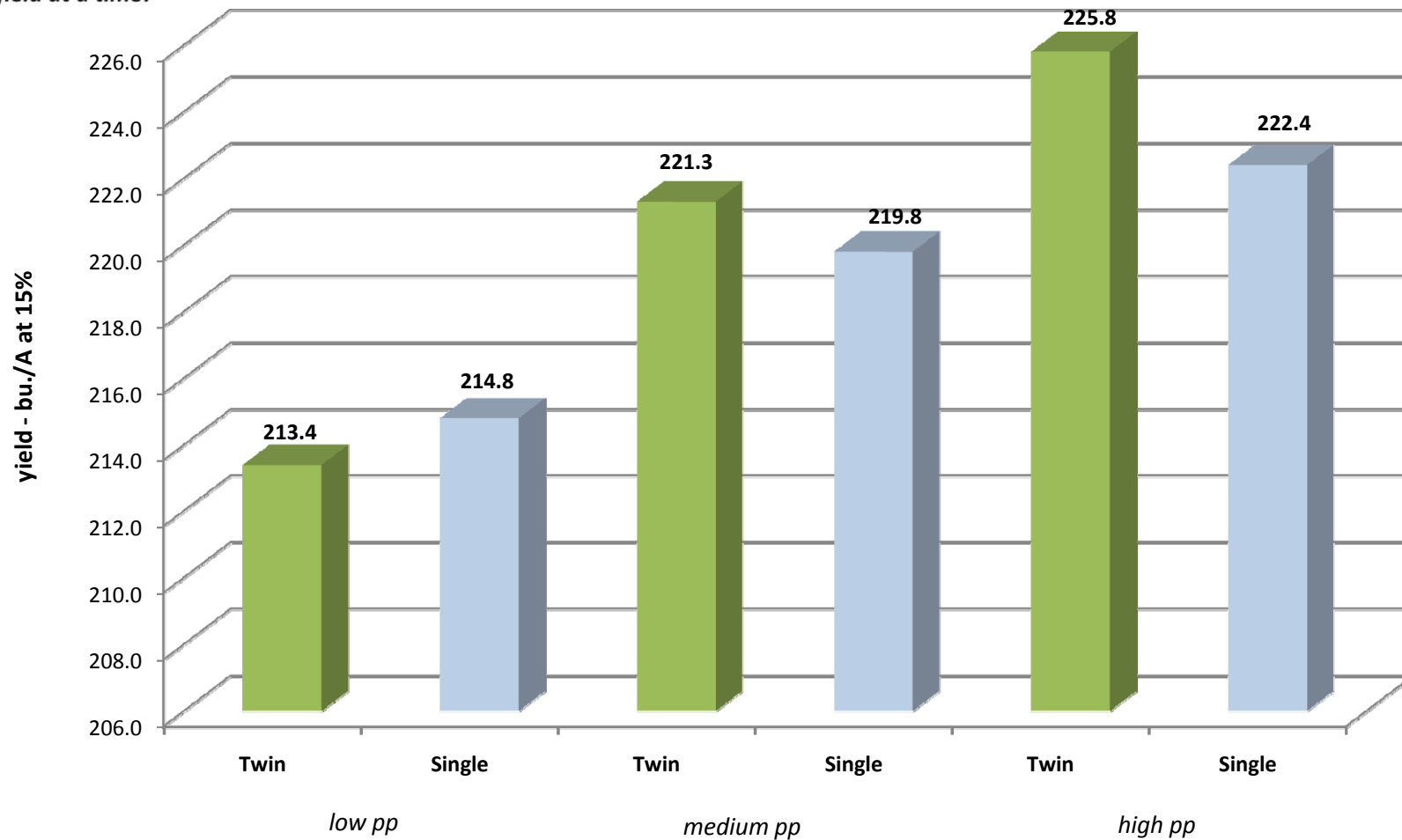
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
5 plots had 200+ lbs of N applied



# Lewis 910VT3 - Twin vs. Single Row

Average yield at <200 lb. N application

30" spacing, 2009 harvest data for 10 plots



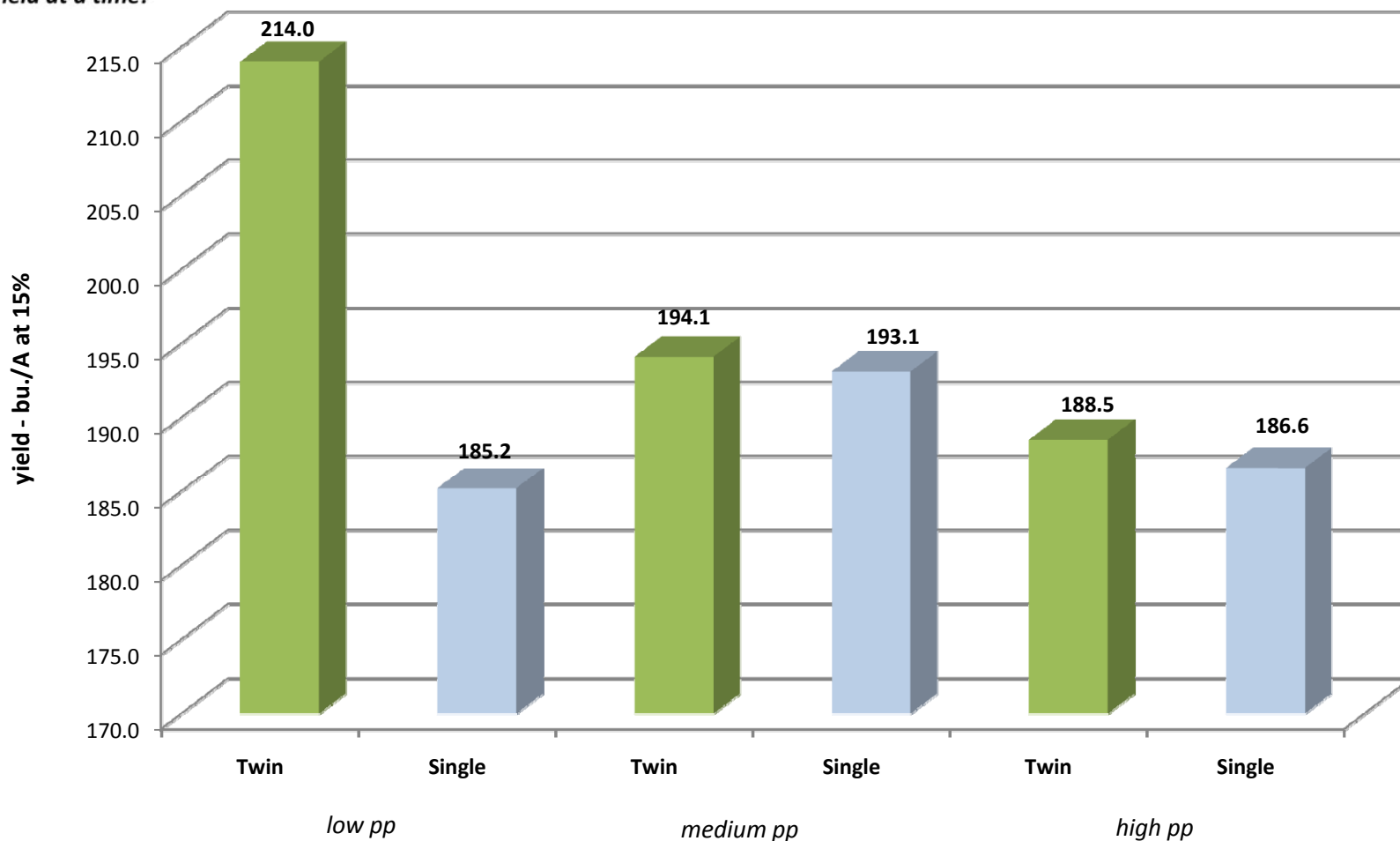
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
10 plots had less than 200 lbs of N applied



# Lewis 915VT3 - Twin vs. Single Row

Average yield at >200 lb. N application

30" spacing, 2009 harvest data for 5 plots



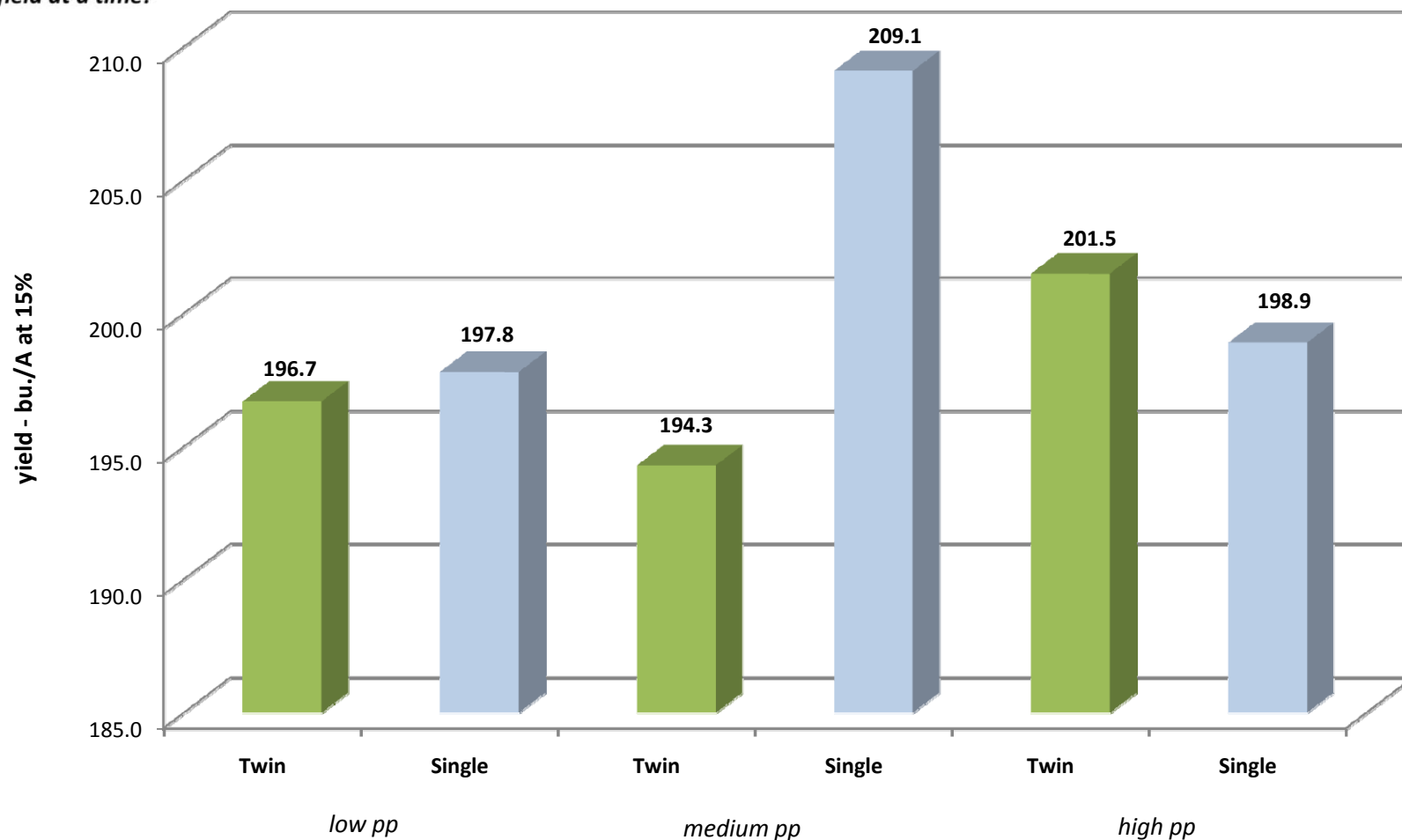
low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
5 plots had 200+ lbs of N applied



# Lewis 910VT3 - Twin vs. Single Row

Average yield at <200lb. N application

30" spacing, 2009 harvest data for 10 plots



low pp = 33,350 with the exception of one plot at 27,700; medium pp = 37,700; high pp = 42,380 pp  
10 plots had less than 200 lbs of N applied

## 2009 LEWIS HYBRIDS - TWIN ROW STUDY - PLOT AGRONOMIC INFORMATION

	City/ST	Planted	Harvested	Previous Crop	Plot Type	Soil Texture	Drainage	Tillage	Water	Soil Fertility	lbs./Acre	Organic Matter	Soil pH
<b>Plot 1</b>	Ursa, IL	5/21/2009	10/17/2009	Soybeans	Strip Plot	Medium (silts and loams)	Moderate	Conv	Dryland Wet	Medium		Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 2</b>	Quincy, IL	6/13/2009	9/30/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Wet	High		High (> 4.5%)	Medium (6.0 - 7.5)
<b>Plot 3</b>	Bowen, IL	4/24/2009	11/7/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Wet	High		High (> 4.5%)	Medium (6.0 - 7.5)
<b>Plot 4</b>	Pontiac, IL	5/25/2009	12/7/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Wet	High	N:200, P:200, K:200	High (> 4.5%)	Medium (6.0 - 7.5)
<b>Plot 5</b>	South English, IA	4/23/2009	11/12/2009	Hay/Alfalfa	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Wet	Medium	N:183, P:156, K:180	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 6</b>	Hammes, IA	4/24/2009	10/12/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Min-Till	Dryland Wet	High	N:183, P:130, K:225	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 7</b>	Crawfordsville, IA	4/23/2009	10/13/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Min-Till	Dryland Wet	High	N:220	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 8</b>	Keota, IA	4/23/2009	10/13/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Min-Till	Dryland Wet	High	N:160	High (> 4.5%)	Medium (6.0 - 7.5)
<b>Plot 9</b>	Girard, IL	5/21/2009	12/7/2009	Corn	Strip Plot	Medium (silts and loams)	Moderate	Conv	Dryland Arid	High		Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 10</b>	Rockbridge, IL	5/22/2009	11/30/2009	Corn	Strip Plot	Medium (silts and loams)	Moderate	Conv	Dryland Arid	High	N:160, P:150, K:150	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 11</b>	Waverly, IL	5/6/2009	10/20/2009	Corn	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Wet	High	N:200	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 12</b>	Franklin, IL	5/22/2009	12/11/2009	Corn	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Arid	High	N:200, P:69, K:190	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 13</b>	Mt. Sterling, IL	6/6/2009	12/12/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	No-Till	Dryland Arid	High	N:140, P:110, K:60	Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 14</b>	Mt. Sterling, IL	5/23/2009	12/12/2009	Soybeans	Strip Plot	Medium (silts and loams)	Good	Conv	Dryland Arid	High		Medium (2.0 - 4.5%)	Medium (6.0 - 7.5)
<b>Plot 15</b>	Rockville, MO	5/29/2009	11/10/2009	Soybeans	Strip Plot	Medium (silts and loams)	Moderate	Conv	Dryland Wet	Medium	N:170, P:92, K:60, S:10, Z:1	Medium	Medium