

Forage Sorghum



Eastern Colorado
February 2025

Brent Bean
Sorghum Checkoff Agronomist

Sorghum vs Corn Silage



Corn Silage: Traditional Silage of Choice

- Belief: Corn silage is high in energy
 - Grain content AND stover digestibility affect energy level
 - If you do not have grain, overall forage quality decreases
- Belief: Corn always has a higher yield potential
 - New forage sorghums hybrids produce greater yields in stressed environments





Corn silage increases production risks in limited water environments....



Drought Damaged Corn Silage

- Poor ear development
- Decreased tonnage
- Increased shrinkage in the silage pit due to high DM

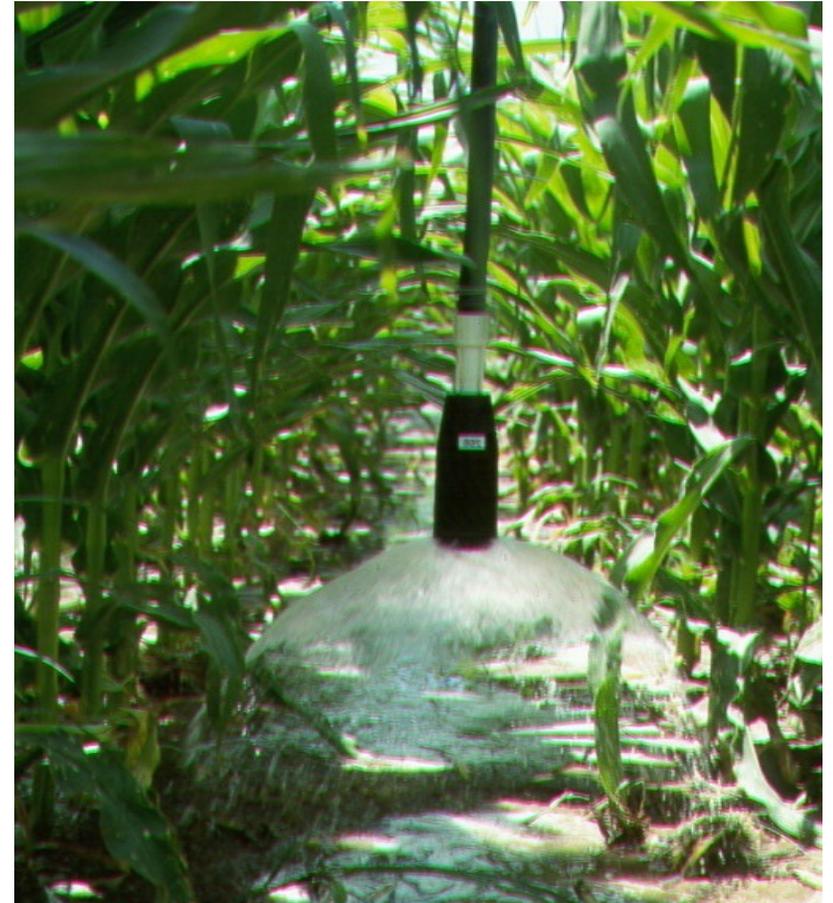
Hybrid	RFQ	TDN	Milk/ ton	Yield (tons/ac) 65% Moist.
Corn Check: P1151 w/ ear	92	53	2962	27.5
Corn Check: P1151 w/o ear	28	30	1588	20.7
Corn Check: 55VP77 w/ ear	133	62	3467	25.5
Corn Check: 55VP77 w/o ear	37	34	1759	18.9

Message to producers: If there is a risk for drought damaged corn, consider forage sorghums.



Silage Sorghum Water Requirement

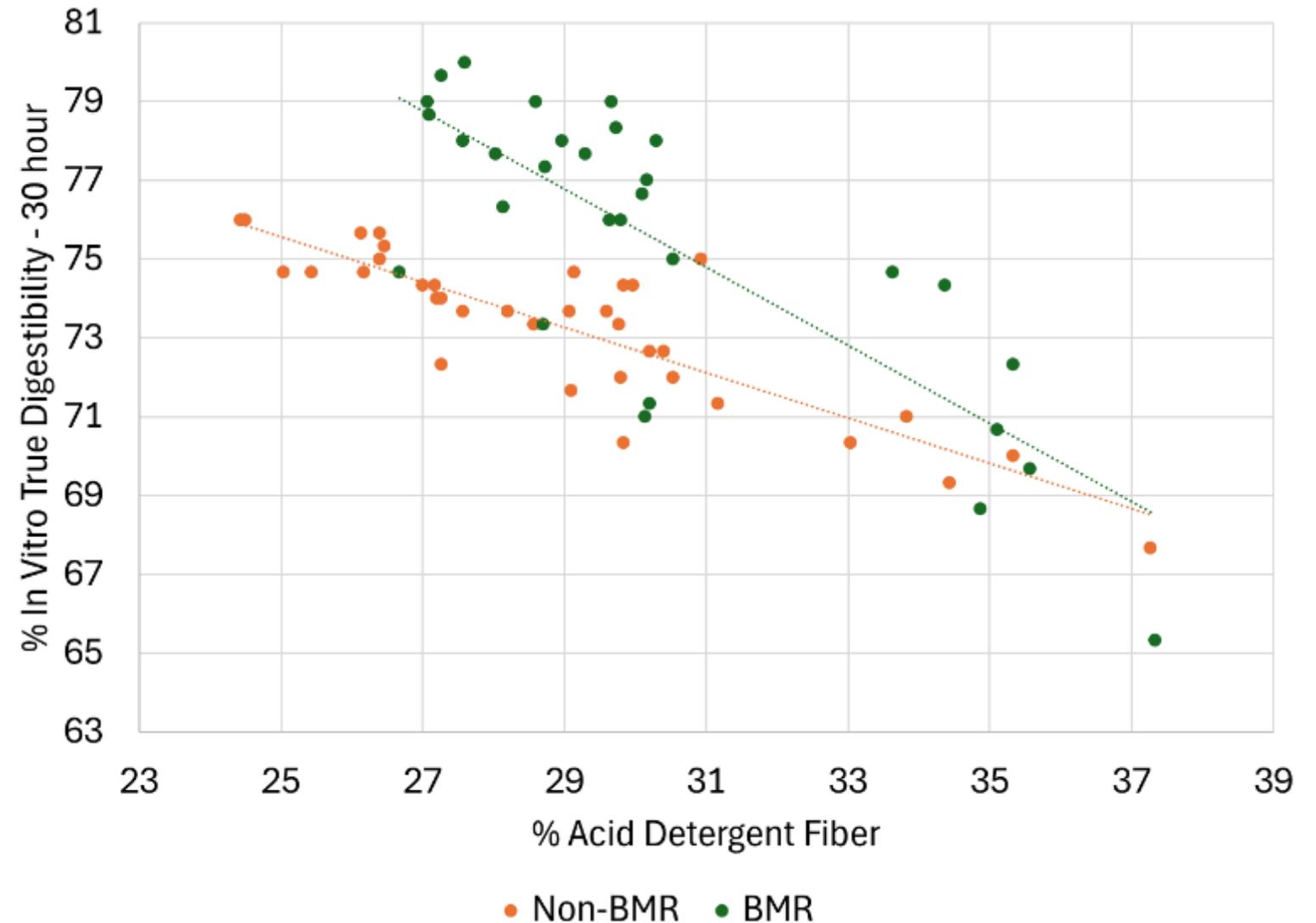
- Total water need depends on environment, but typically 30% less than corn for maximum production
- Sorghum can withstand short periods of drought during key growth stages better than corn (tasseling) without a reduction in quality or yield
- Later maturity class hybrids have greater yield potential, but do you have the water to meet the demand?
- Late season hybrids more prone to lodging under late season moisture and high fertility



Confusion about Forage Sorghum Quality

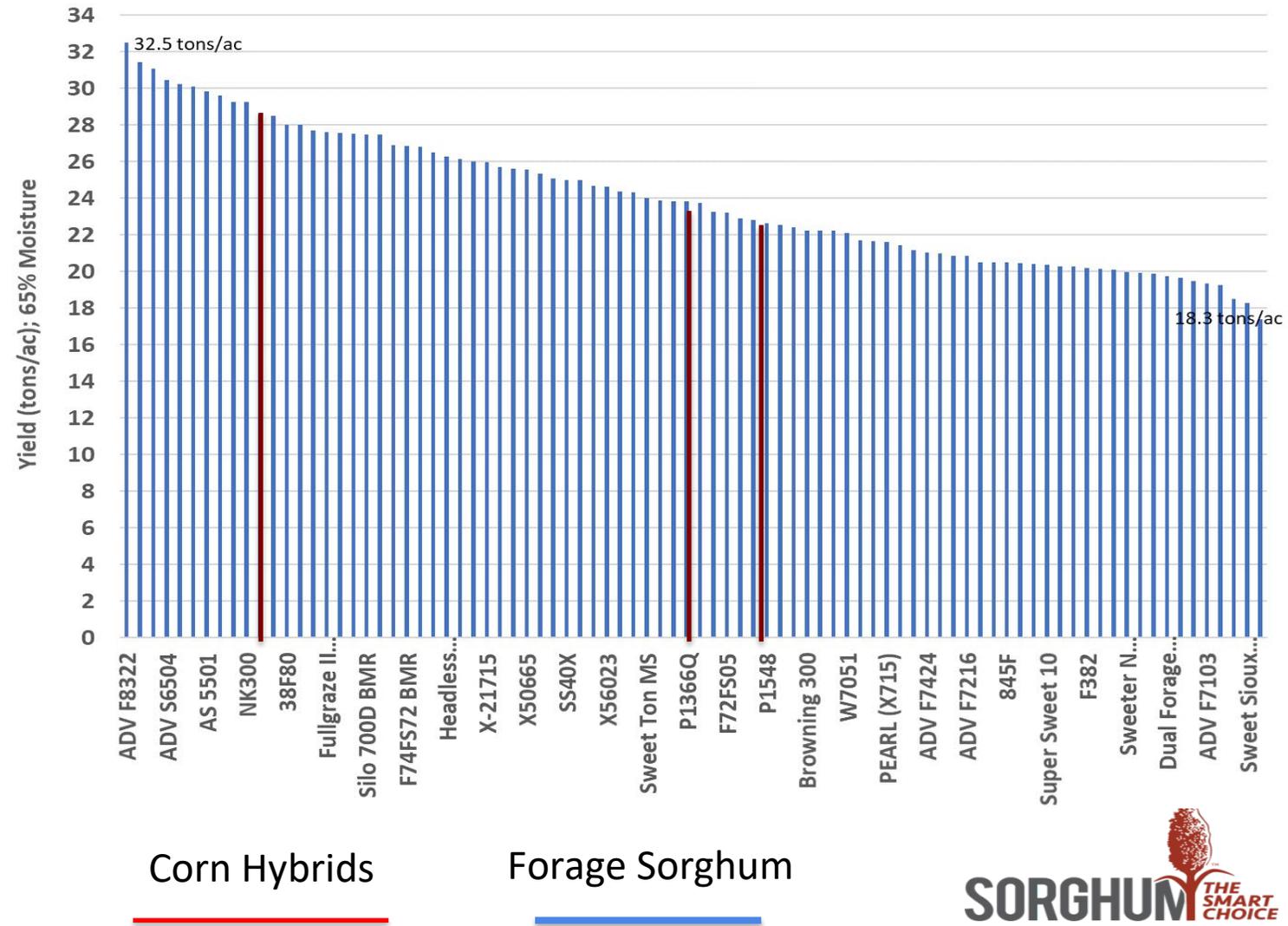
Variety trial data
demonstrates differences
in forage sorghum hybrids

2023 AgriLife Trial

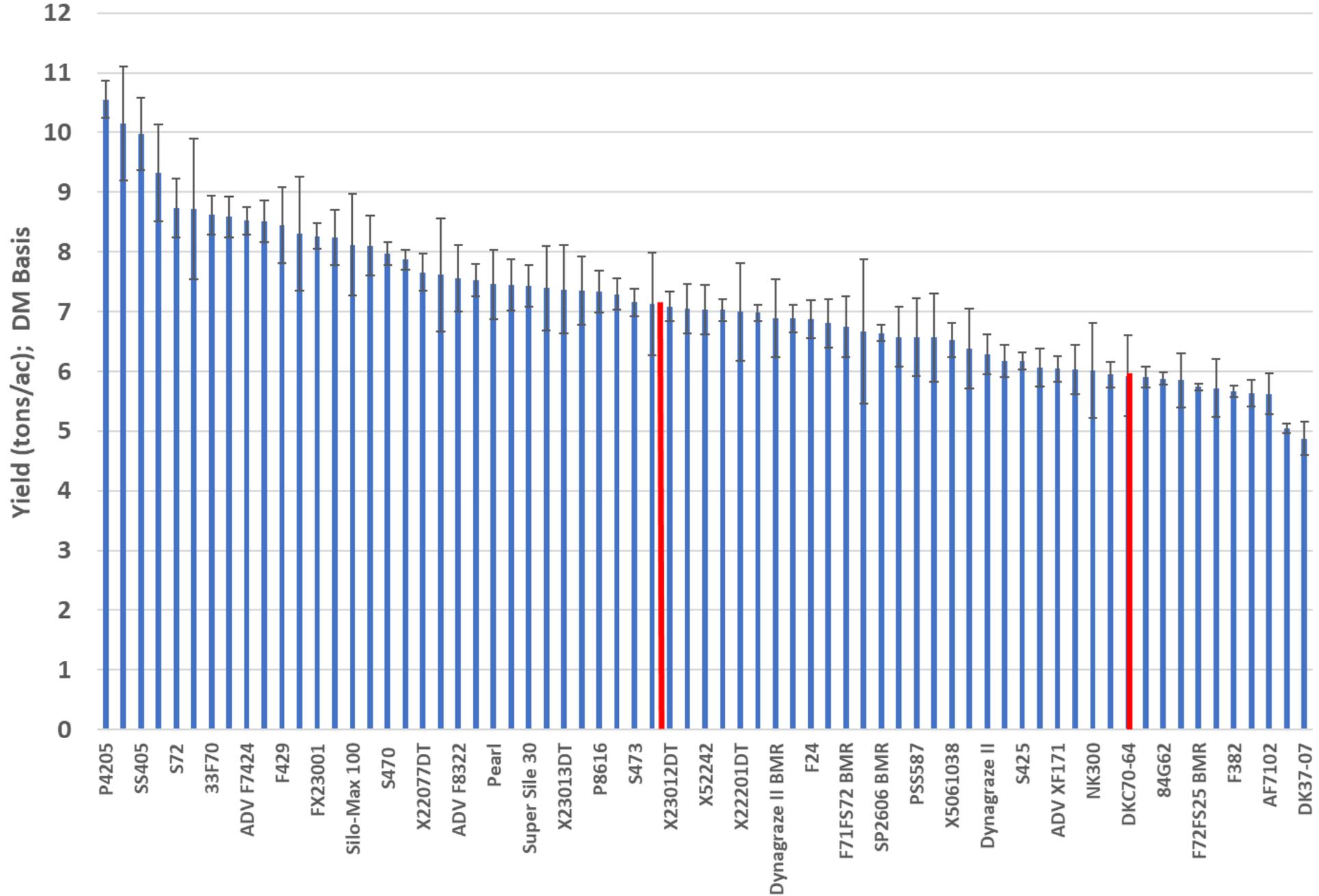


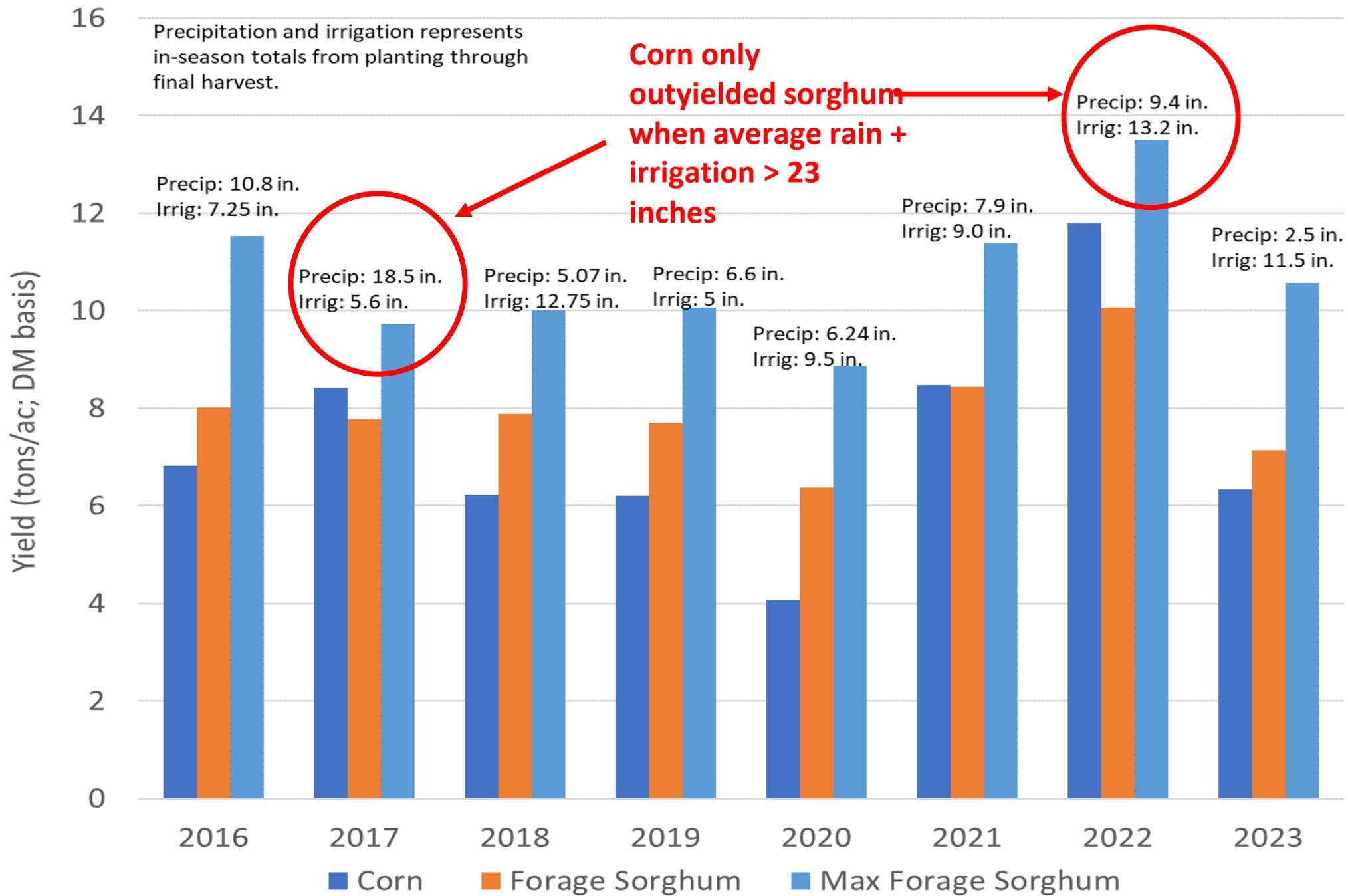
2021 Texas A&M AgriLife Forage Sorghum Variety Trial

- Planting Date: June 7, 2021
- Forage Sorghum Seeding Rate: 80,000 seeds/acre
- Corn Silage Seeding Rate: 32,000 seeds/acre
- In-season Irrigation: ~8.25 inches
- In-season Precipitation: ~8 inches



2023 AgriLife Forage Sorghum Trial at Bushland



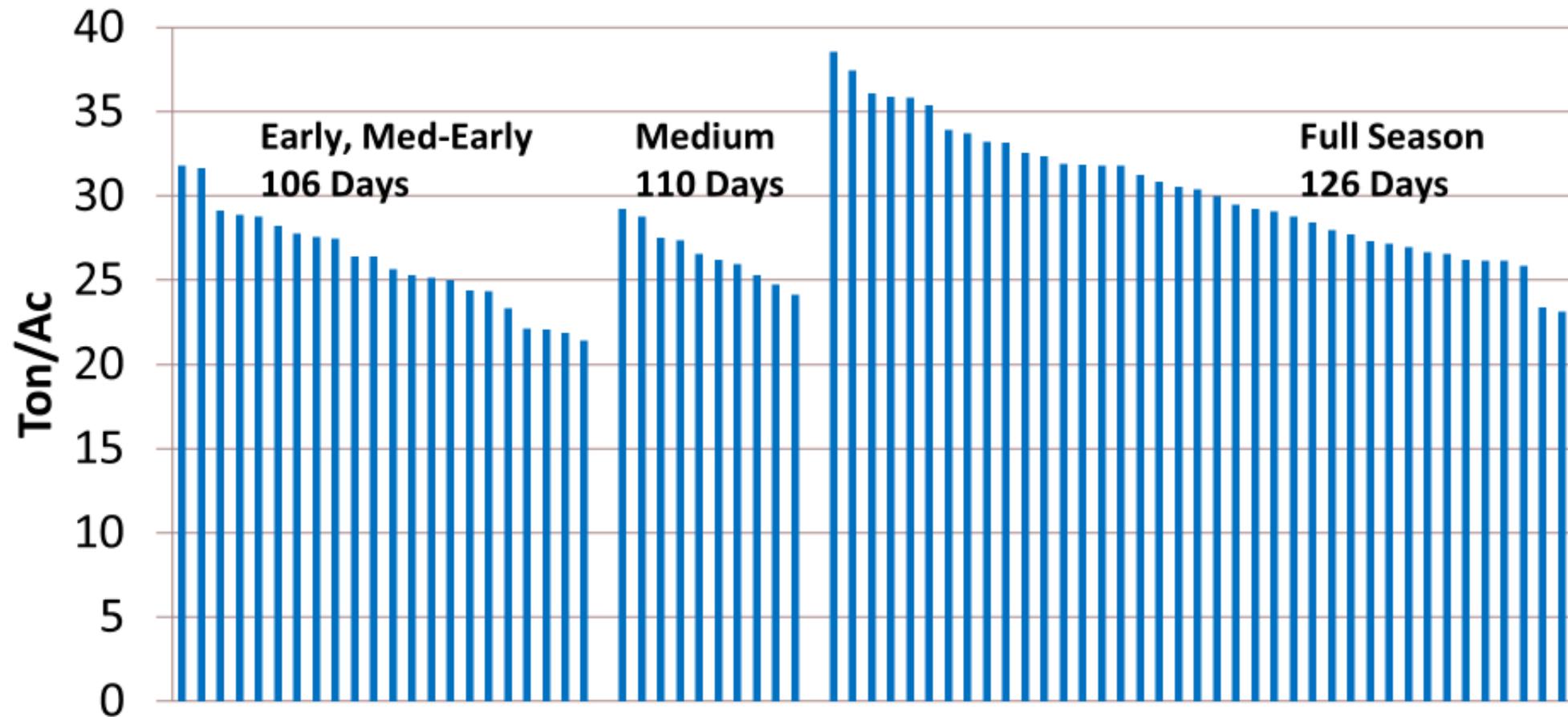


Maturity Class and Irrigation

2 inches more irrigation takes up to 20 days to apply with a 300 gallon well to 120 acres

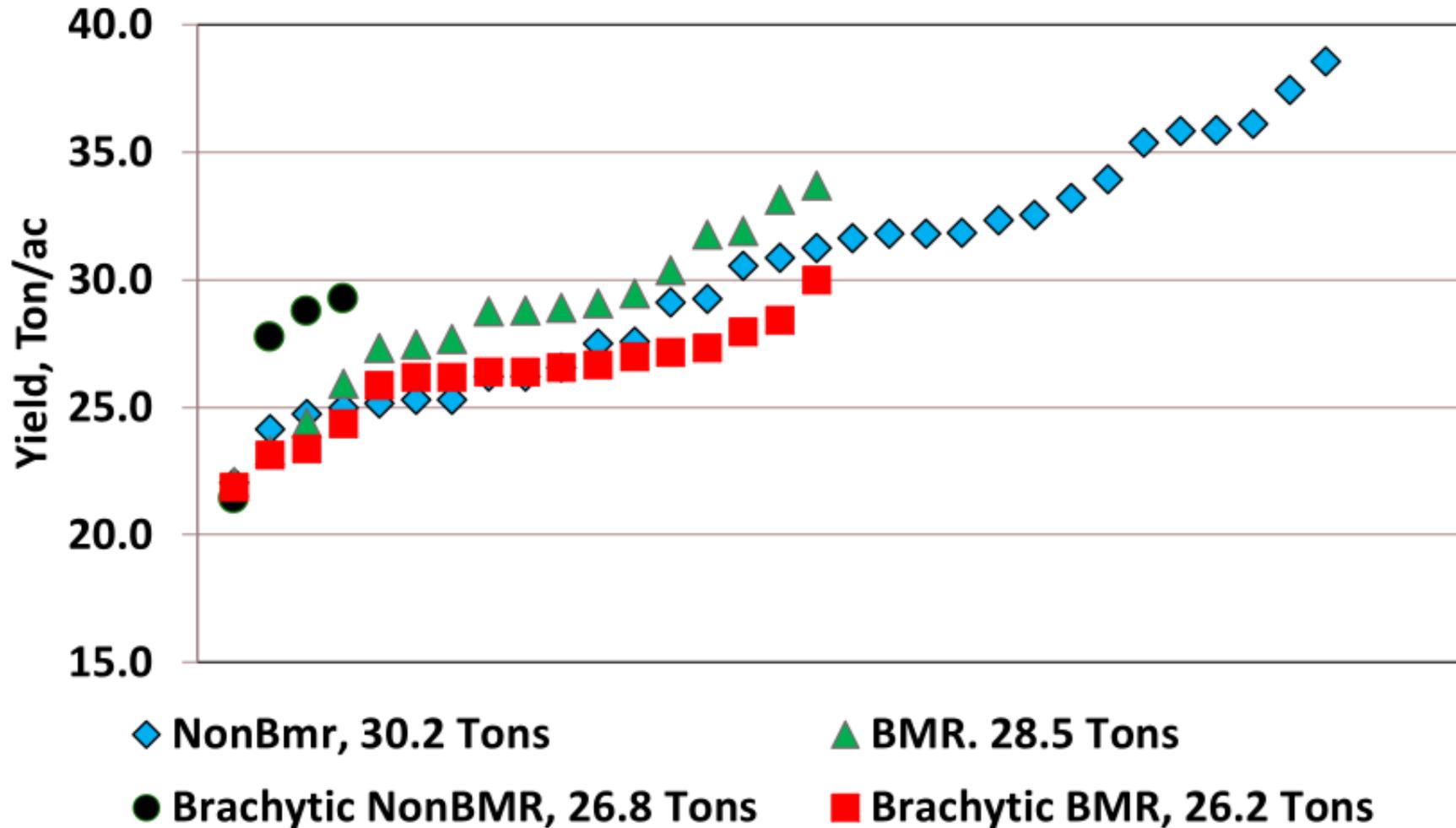
Maturity	Harvest Date	Planting to Harvest	
		Precip. (in)	Irrigation (in)
Early	9/14/2023	1.72	9
Medium-Early	9/27/2023	2.46	9
Medium	10/3/2023	2.52	10
Medium-Late	10/13/2023	2.52	10
Late	10/19/2023	2.52	11
Photoperiod	10/24/2023	2.52	11

Silage Sorghum Yield by Maturity -2022



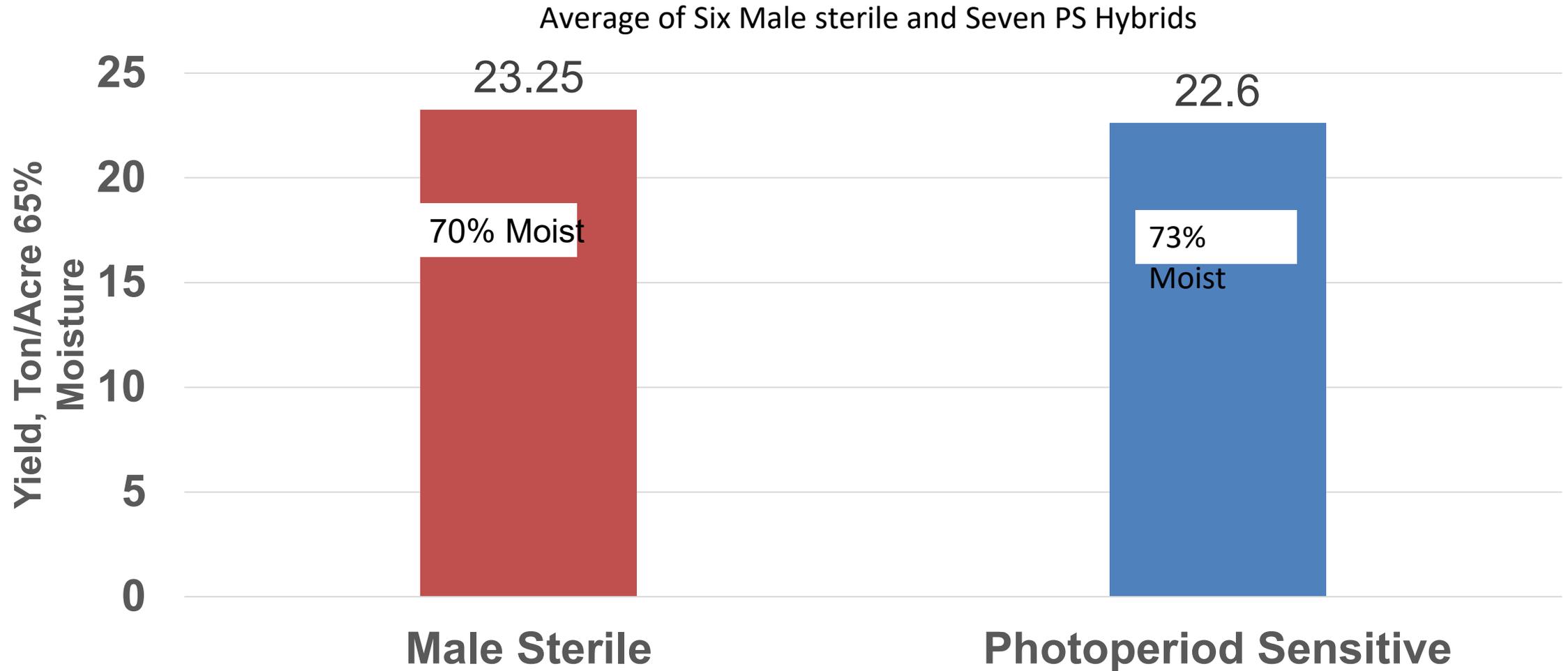
Water Savings = 20 days x 0.25 inches = 5 inches!

Silage Yield by Type - 2022



Source: Bell, TAMU

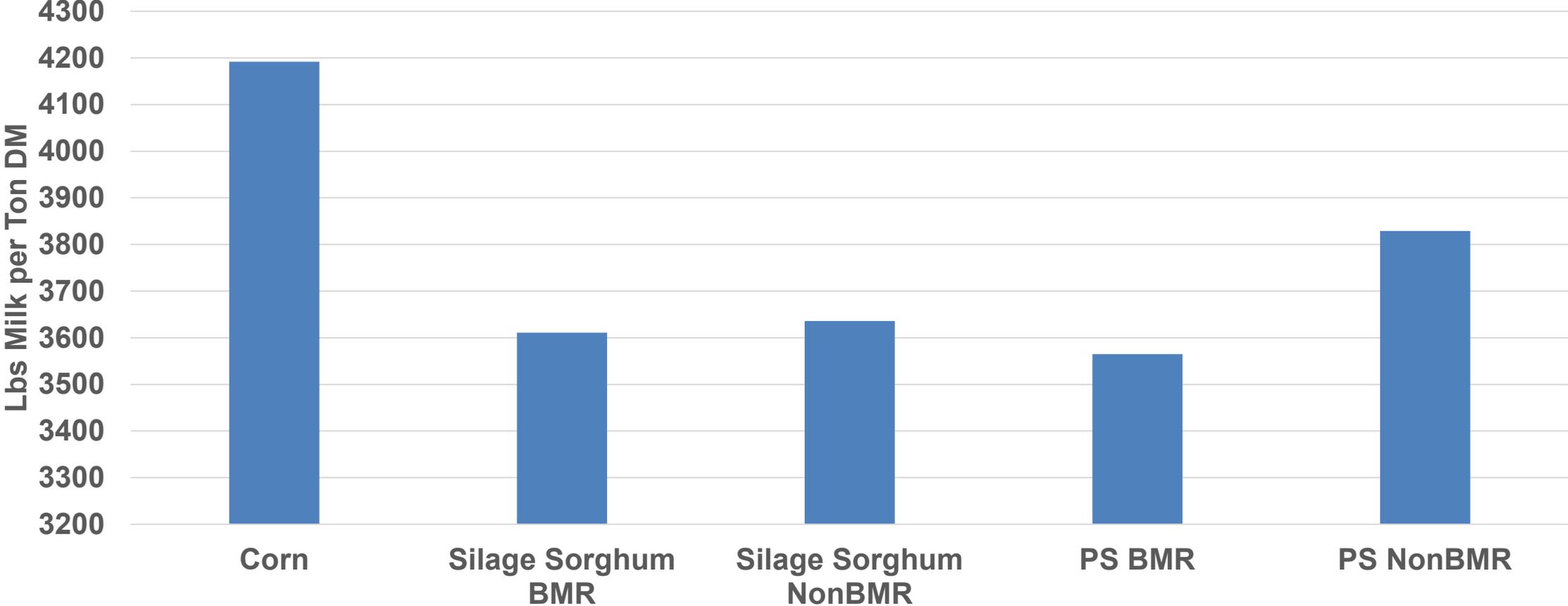
Male Sterile Compared to Photoperiod Sensitive Hybrids- 2023



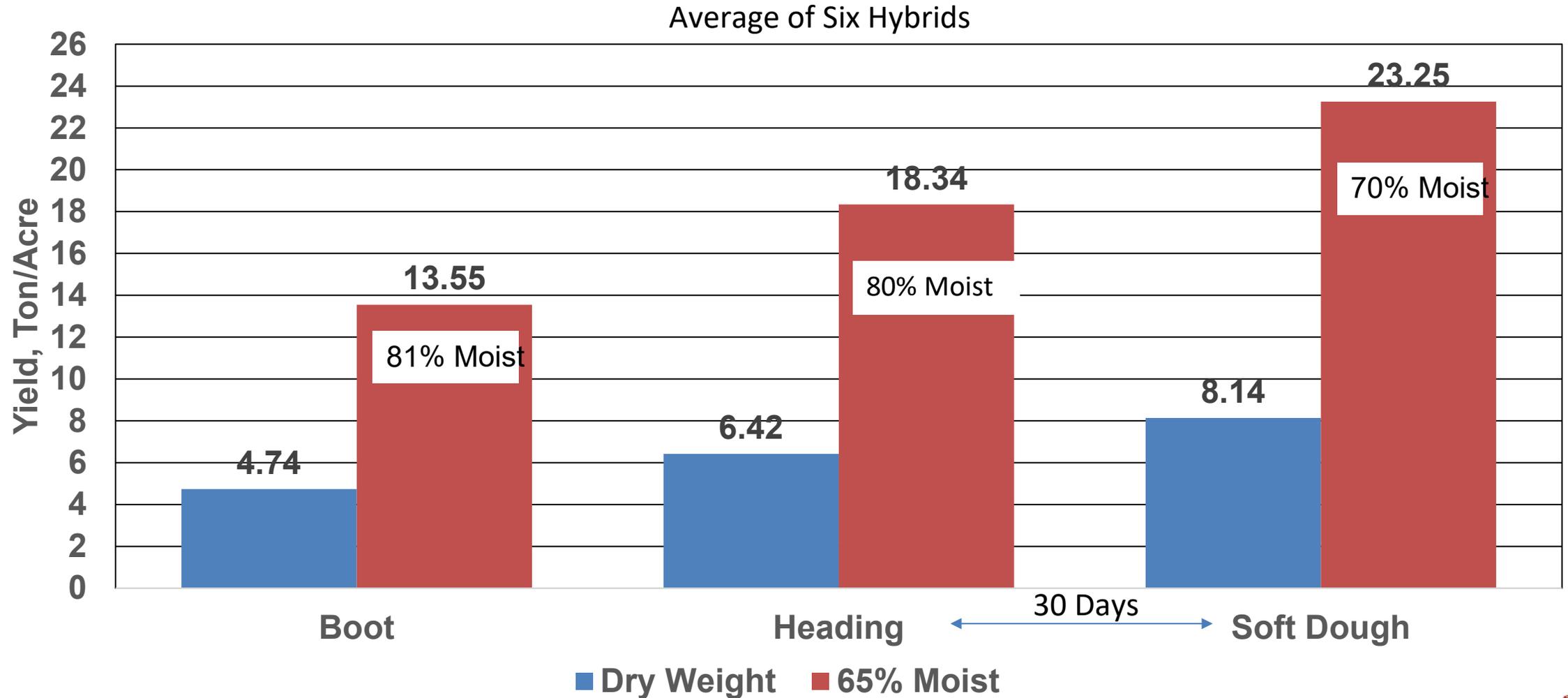
Source: J Bell,
TAMU

Planting Date: June 23

2021 Silage Milk/Ton by Type

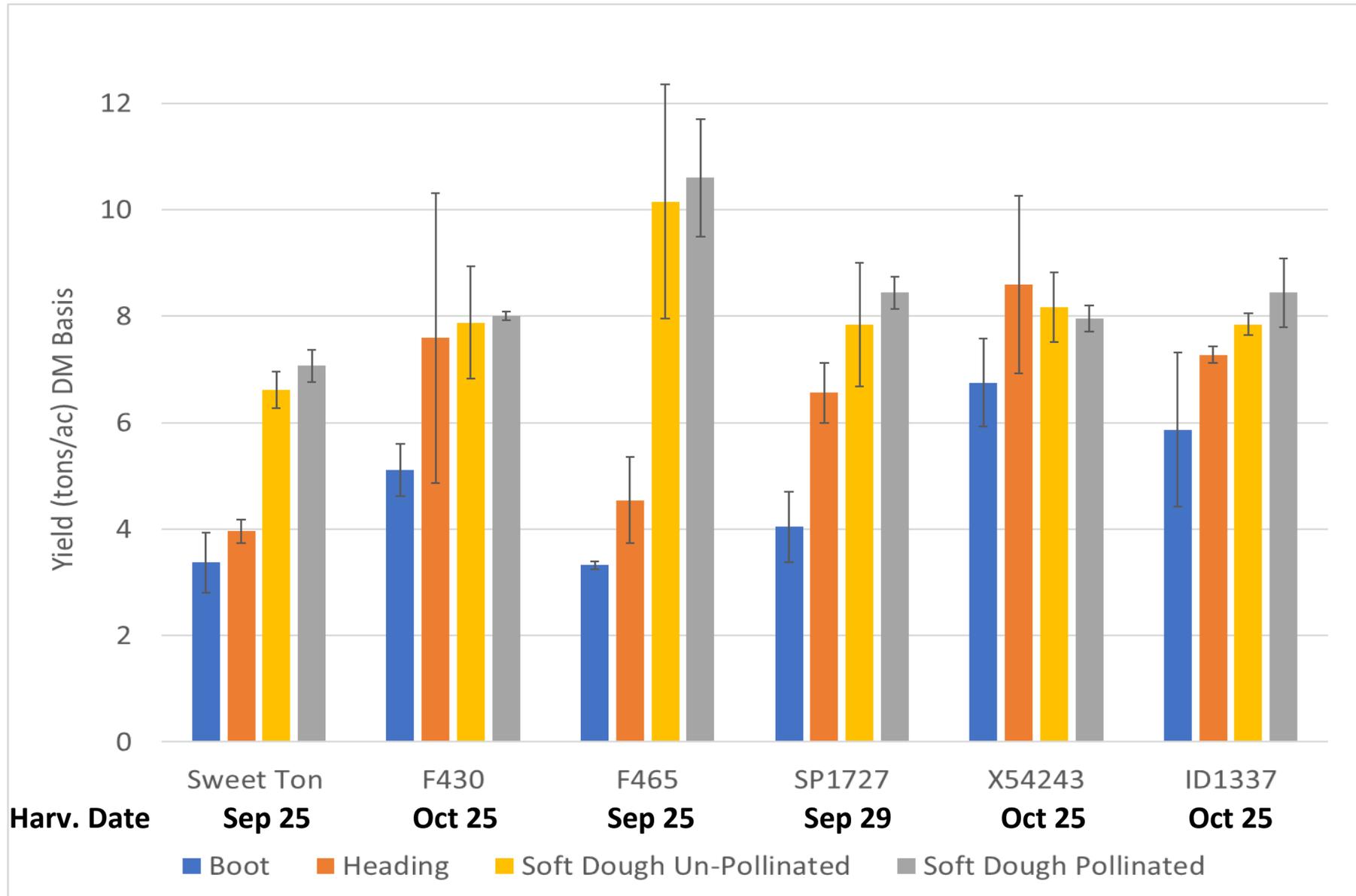


Male Sterile Silage Sorghum Harvest Timing - 2023

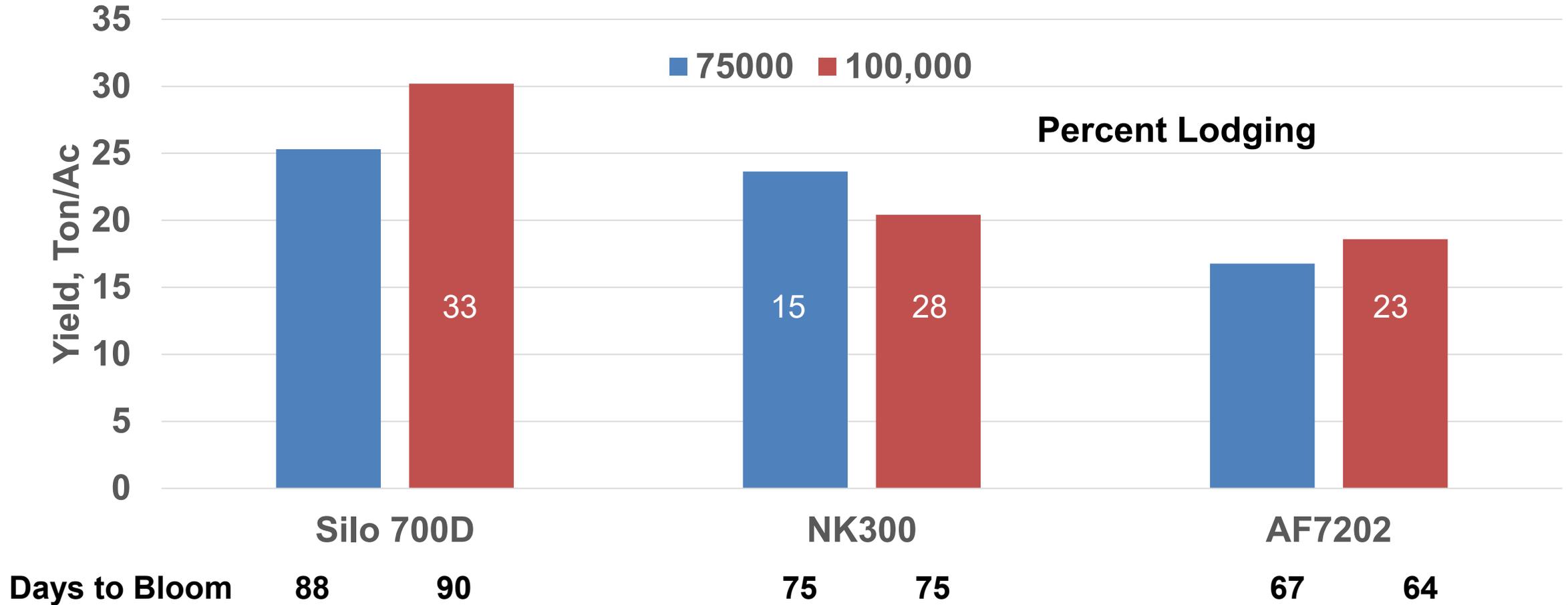


Source: J Bell,
TAMU

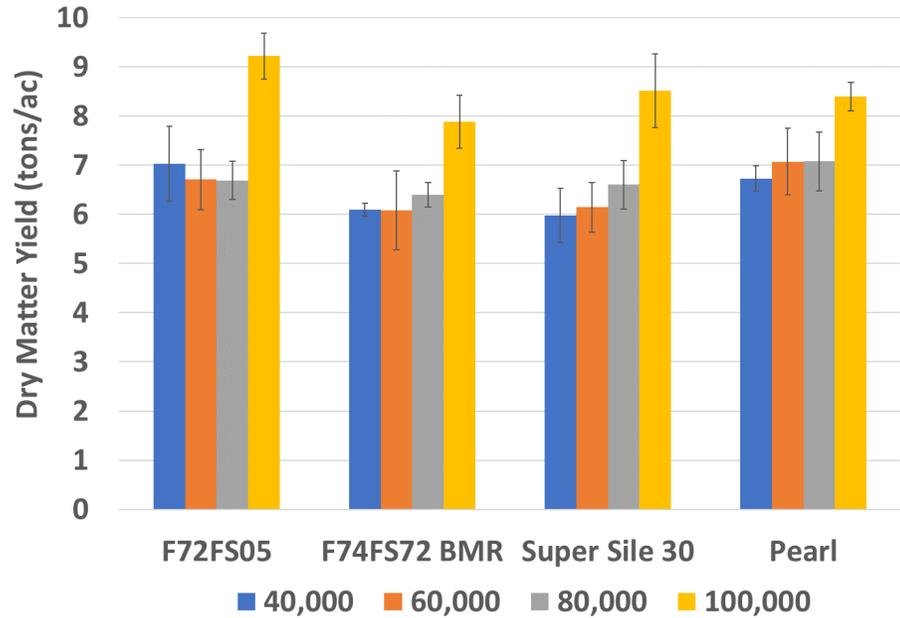
Male Sterile Silage Sorghum Yields and Harvest Dates - 2023



Silage Seeding Rate – 2015 Trial



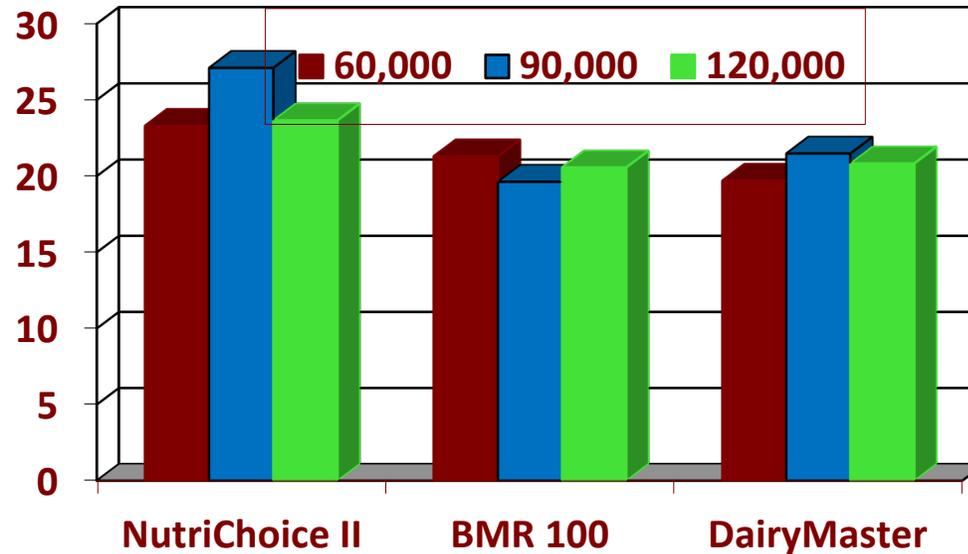
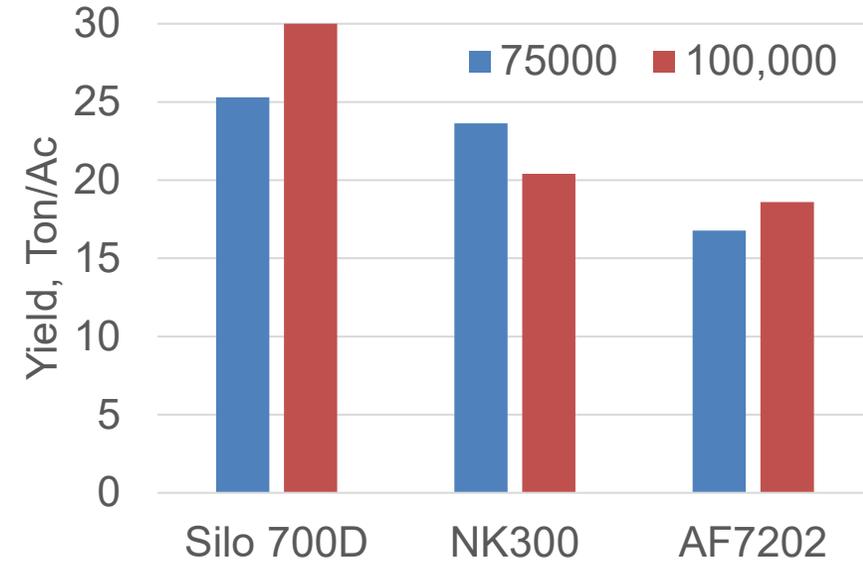
Seeding Rate Trials



2023

2015

2010?



Seeding Rate Recommendation

- 60,000 to 80,000 with BMR
- 70,000 to 100,000 with nonBMR or hybrids with good standability
- Consider irrigation limits
- Consider harvest timing

Forage Sorghum Lodging Potential

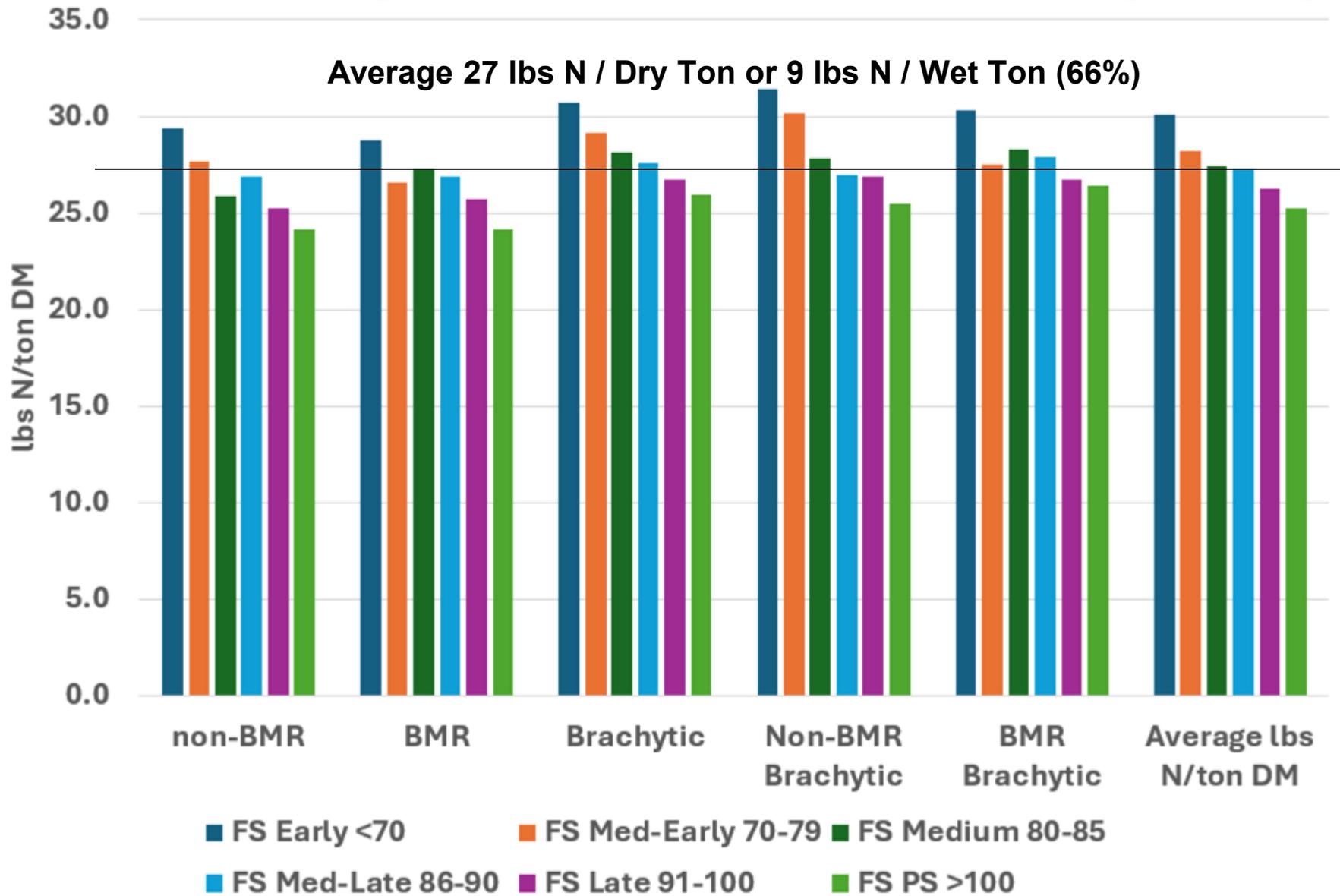


- High Populations
- High Fertility
- High Irrigation
- Hybrid Characteristics
- How are you going to pick it up?
- Rapid quality degradation once the forage falls

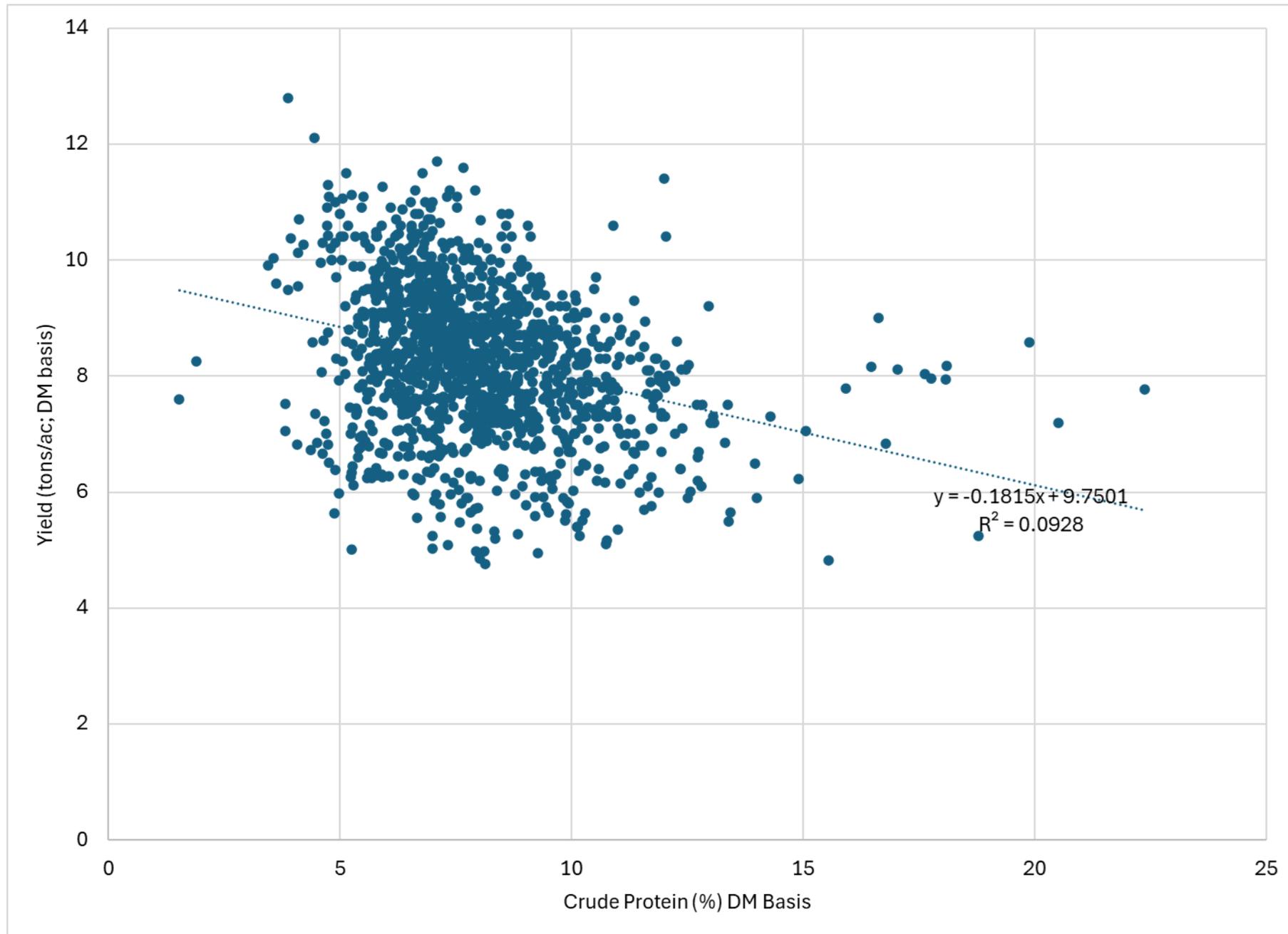
Sorghum Fertility

- Nitrogen
 - Requires 8 to 9 lbs of N for every wet ton of forage sorghum.
 - 20 ton/ac = 170 lbs N/ac

Nitrogen Needed per Ton of Forage Sorghum



- Six years of data examining crude protein of forage sorghum
- Later maturing hybrids required more N
- 24 to 30 lbs N, or an average of 27 lbs N needed per wet ton
- Equals 9 lbs of per wet ton



**No correlation
between crude
protein and
yield**

3 Herbicide Technologies

- ~~Intertol~~
(ALS - SU)
- ~~igrowth~~ (ALS
(ALS - IMI)
- Double Team
(ACCase - Fop)

All non-GMO



Forage Sorghum HT Hybrids 2025

Company	Hybrid	Maturity	Traits	Grain Ratio	SCA Tol
S&W	SP 2707 DT	M	Double Team	High	S
CROPLAN	3661 DT	M	Double Team	High	S
MOJO	OPAL+DT	M	Double Team/ SC Tolerant	High	T
ADV F8484IG	ADV F84G84 IG	M-L	igrowth/ Brachytic	High	S
CROPLAN	3851 IG	M-L	igrowth/ Brachytic	High	S



AMS Approved



HT Estimated Seed and Herbicide Cost 2025 over Conventional Silage Sorghum System*

	igrowth	Double Team
Seeding Rate/acre	Cost/acre	Cost/acre
50,000	\$ 21.00	\$ 18.00
70,000	\$ 24.00	\$ 22.00
90,000	\$ 27.00	\$ 25.00
110,000	\$ 30.00	\$ 28.00

*Assuming 10% discount over MSRP for seed and herbicide. Subtracted the cost of conventional seed (\$111/bag 700,000 seed). Does not include application cost or adjuvants. 6 oz ImiFlex, 10 oz FirstAct rate.

Questions

Brent Bean
Ph: 806 674 0006
brentb@sorghumcheckoff.com

