

Management of Bollworms in Bt Cotton in LA: Experiences to Date

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The Current Situation

Are Bt technologies providing the control we have come to expect?



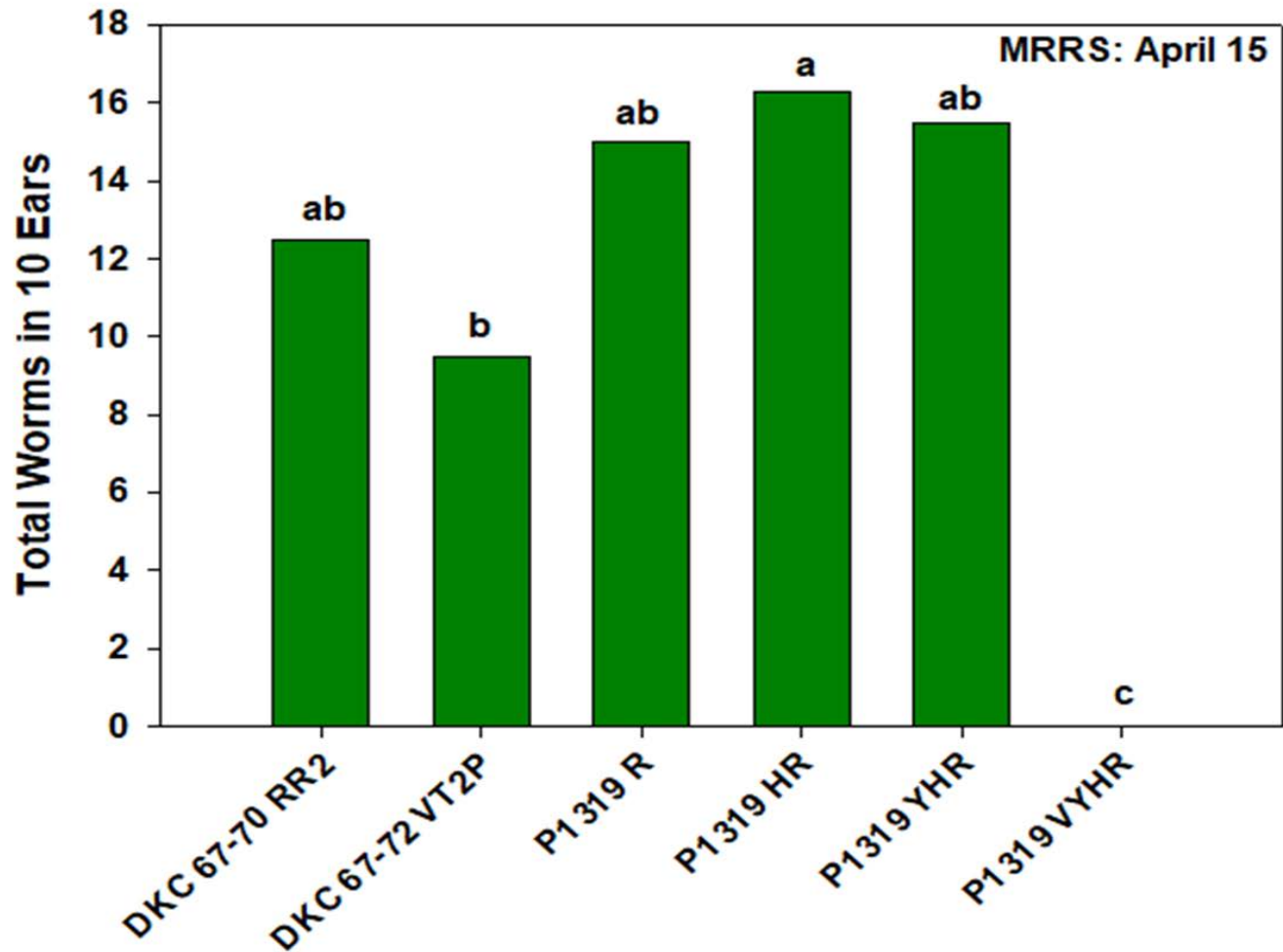


Past and Current Technology

Company	1 st generation (single gene)	2 nd generation (dual gene)	3 rd generation (multi-gene)	3 rd generation (2017)
Monsanto	Bollgard (CryIAc)	Bollgard 2 (CryIAc+Cry2Ab)		Bollgard 3 (CryIAc+Cry2Ab+Vip3A)
Dow		WideStrike (CryIAc+CryIF)	WideStrike 3 (CryIAc+CryIF+Vip3A)	
Bayer		TwinLink (CryIAb+Cry2Ae)		TwinLink Plus (CryIAb+Cry2Ae+Vip3A)
Homogeneity across crops				
Crop	CryIA	CryIF	Cry2	Vip3A
Cotton	CryIAc, CryIAb	CryIF	Cry2Ab, Cry2Ae	Vip3A
Corn	CryIAb	CryIF	Cry2Ab2	Vip3A
	CryIA.105 (CryIAb, CryIAc, CryIF)			

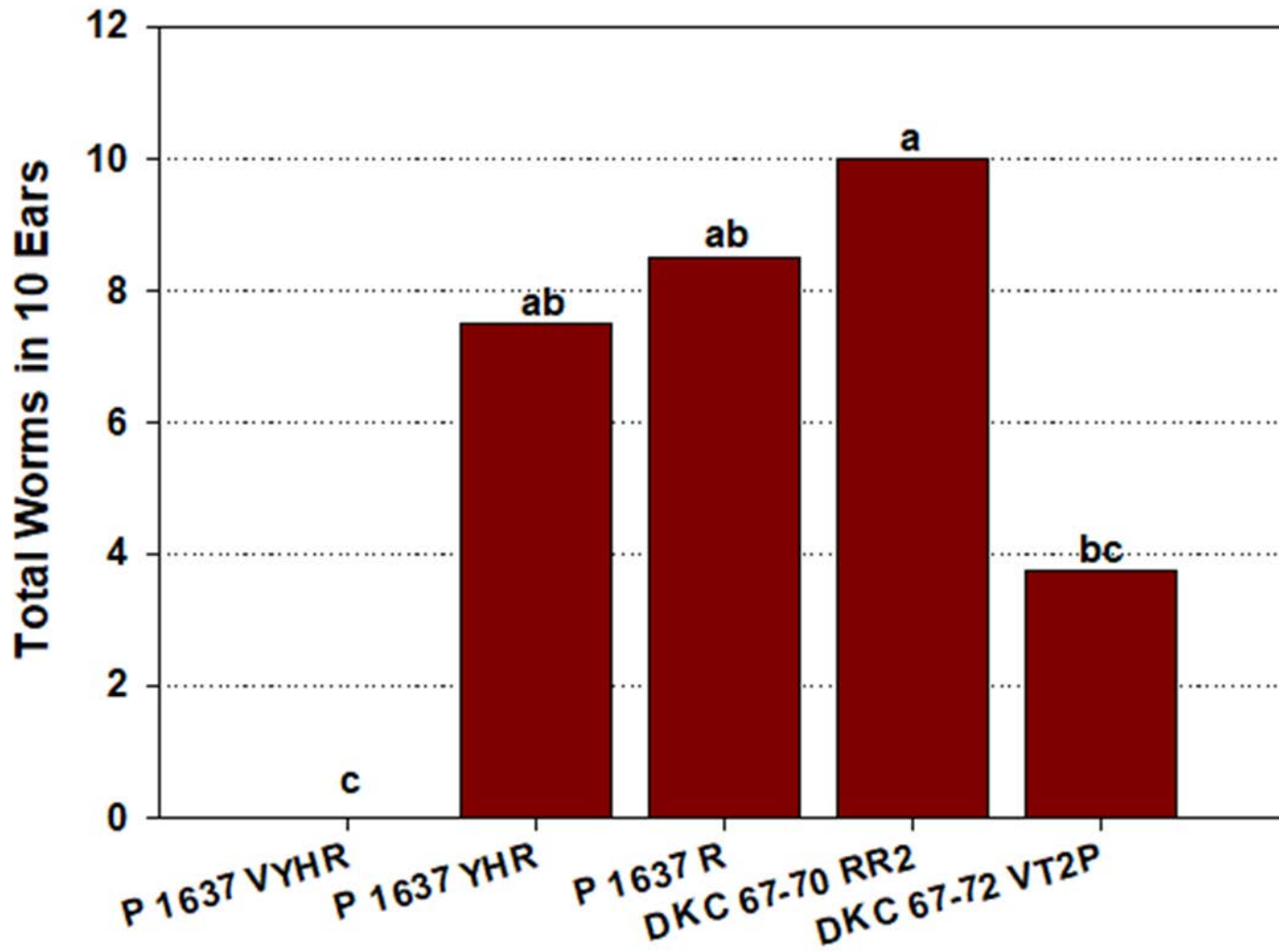


What is Driving Resistance?



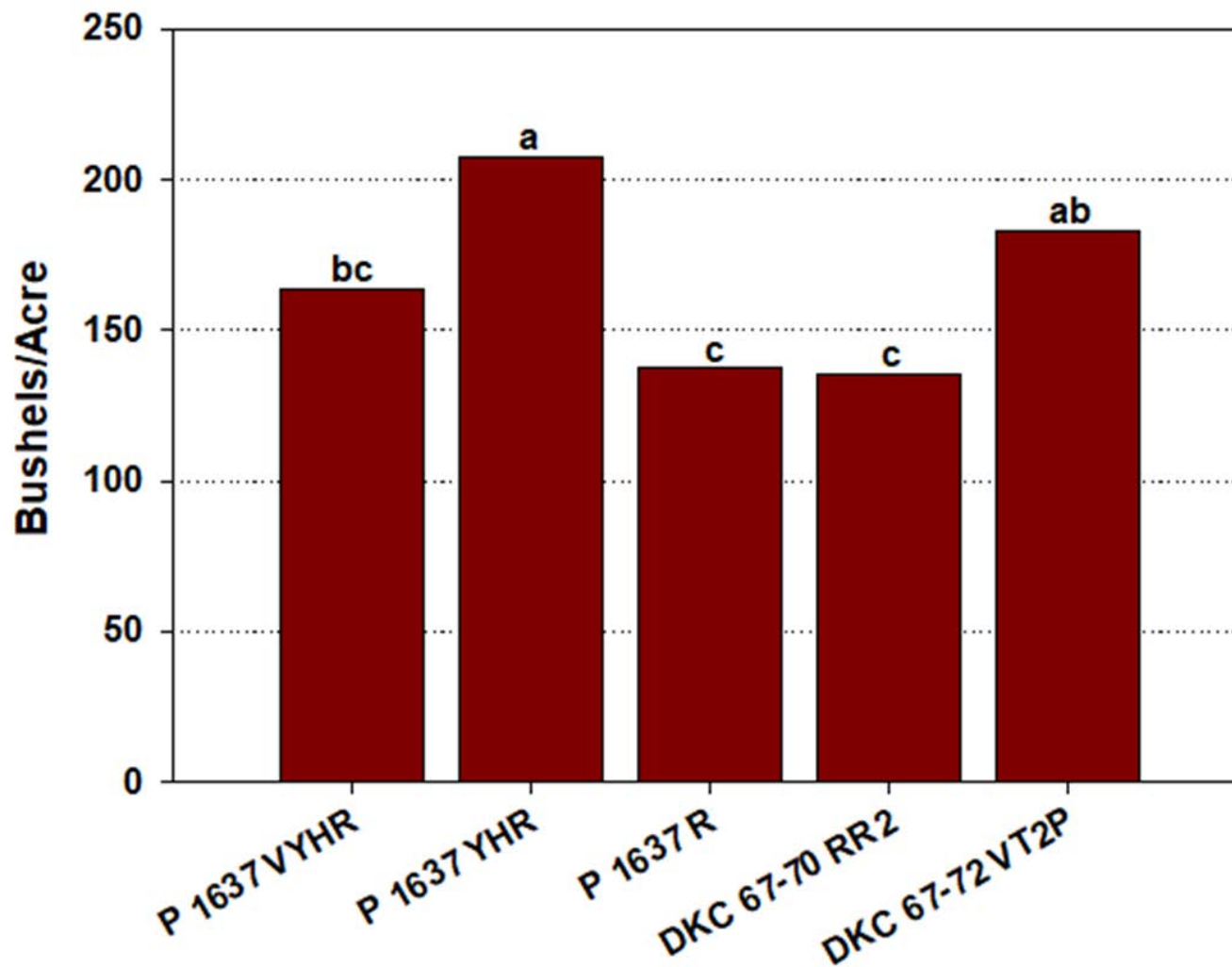


Bt Corn Efficacy



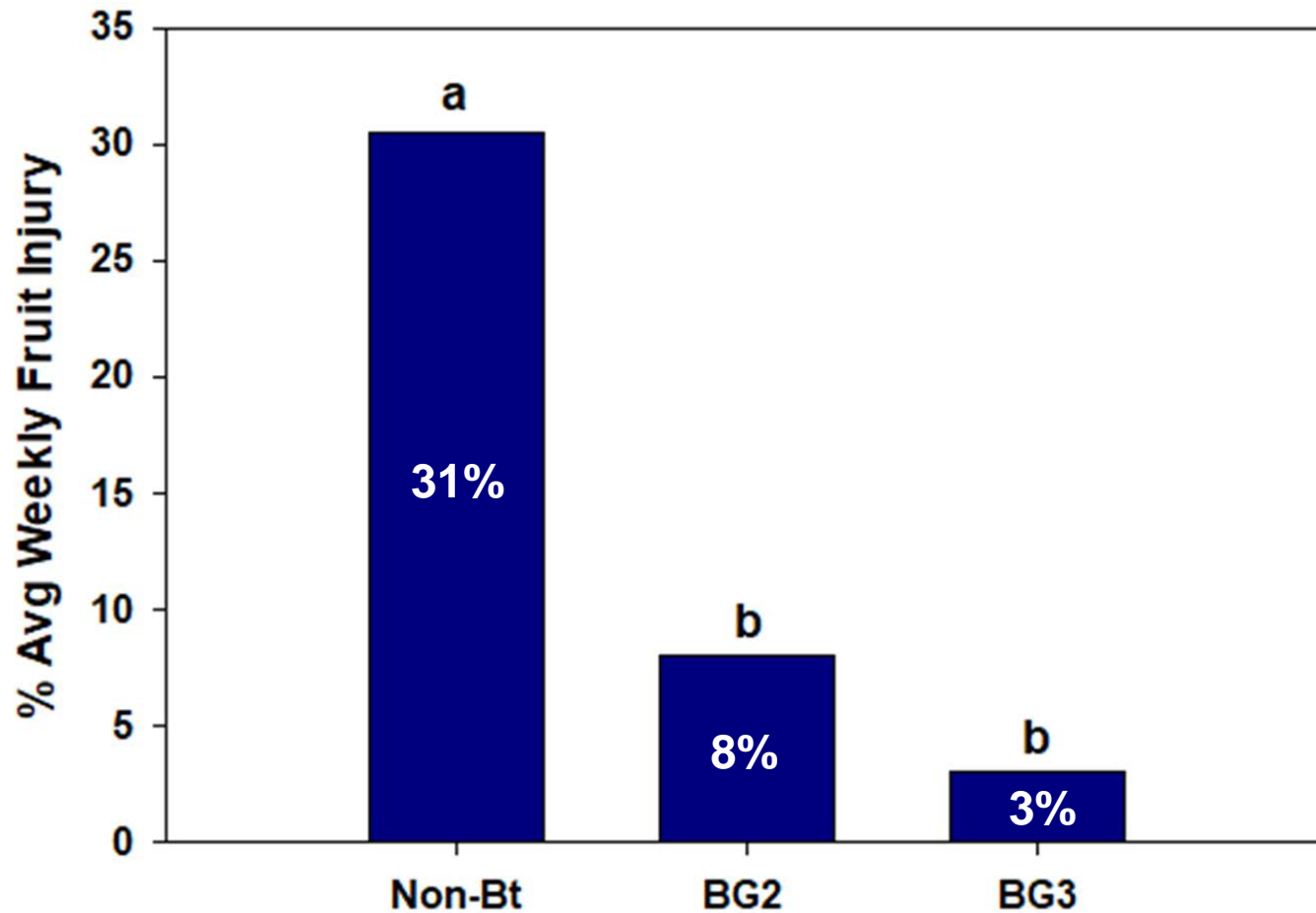


Yield



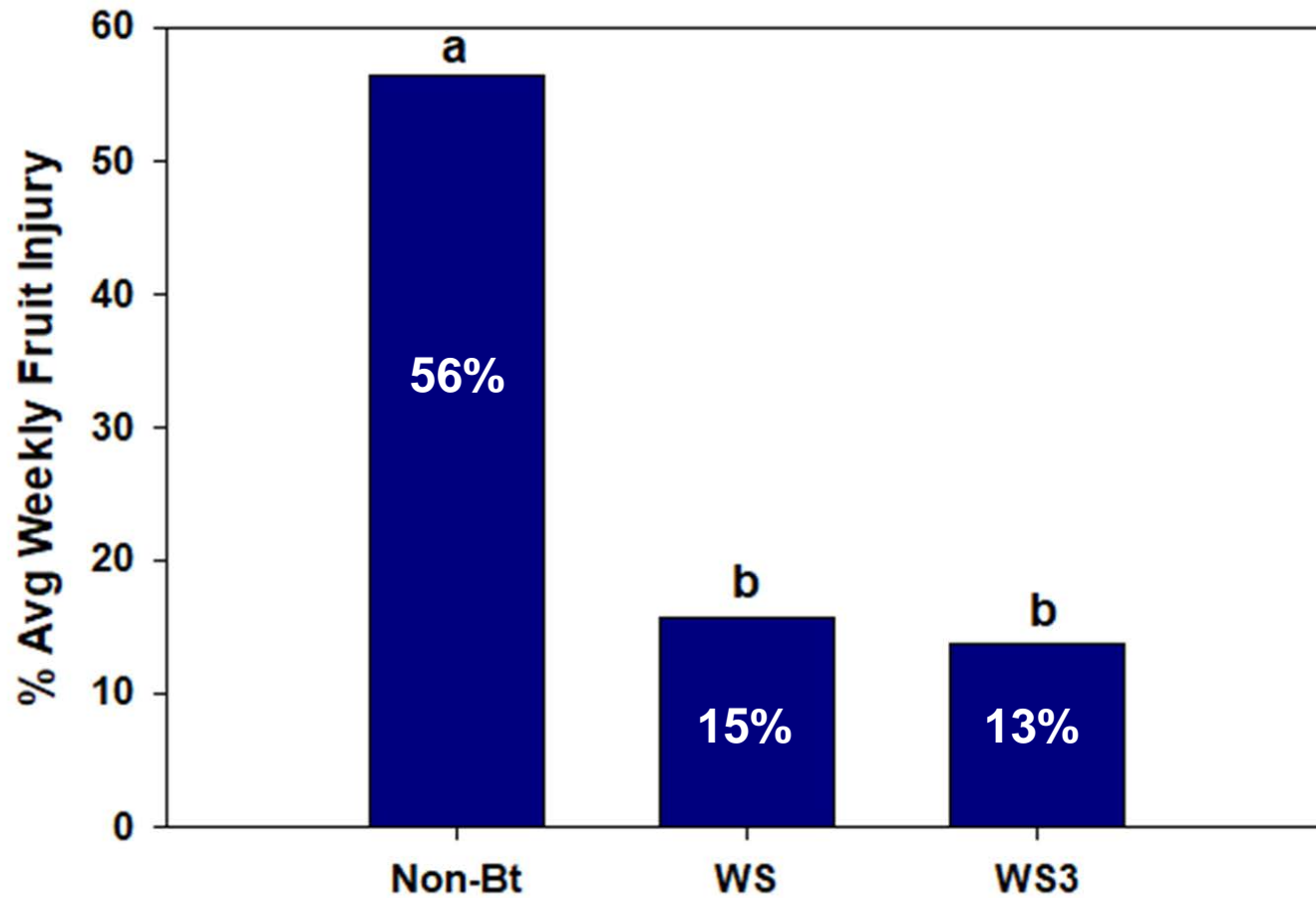


BG: Avg Weekly Fruit Injury





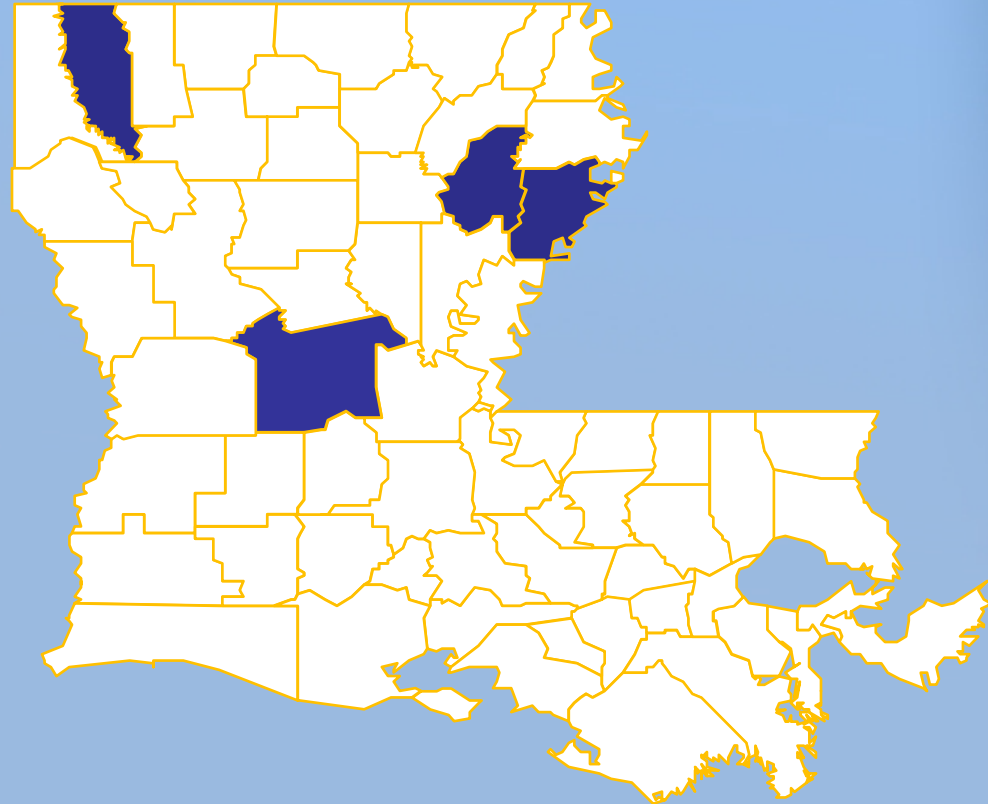
WS: Avg Weekly Fruit Injury





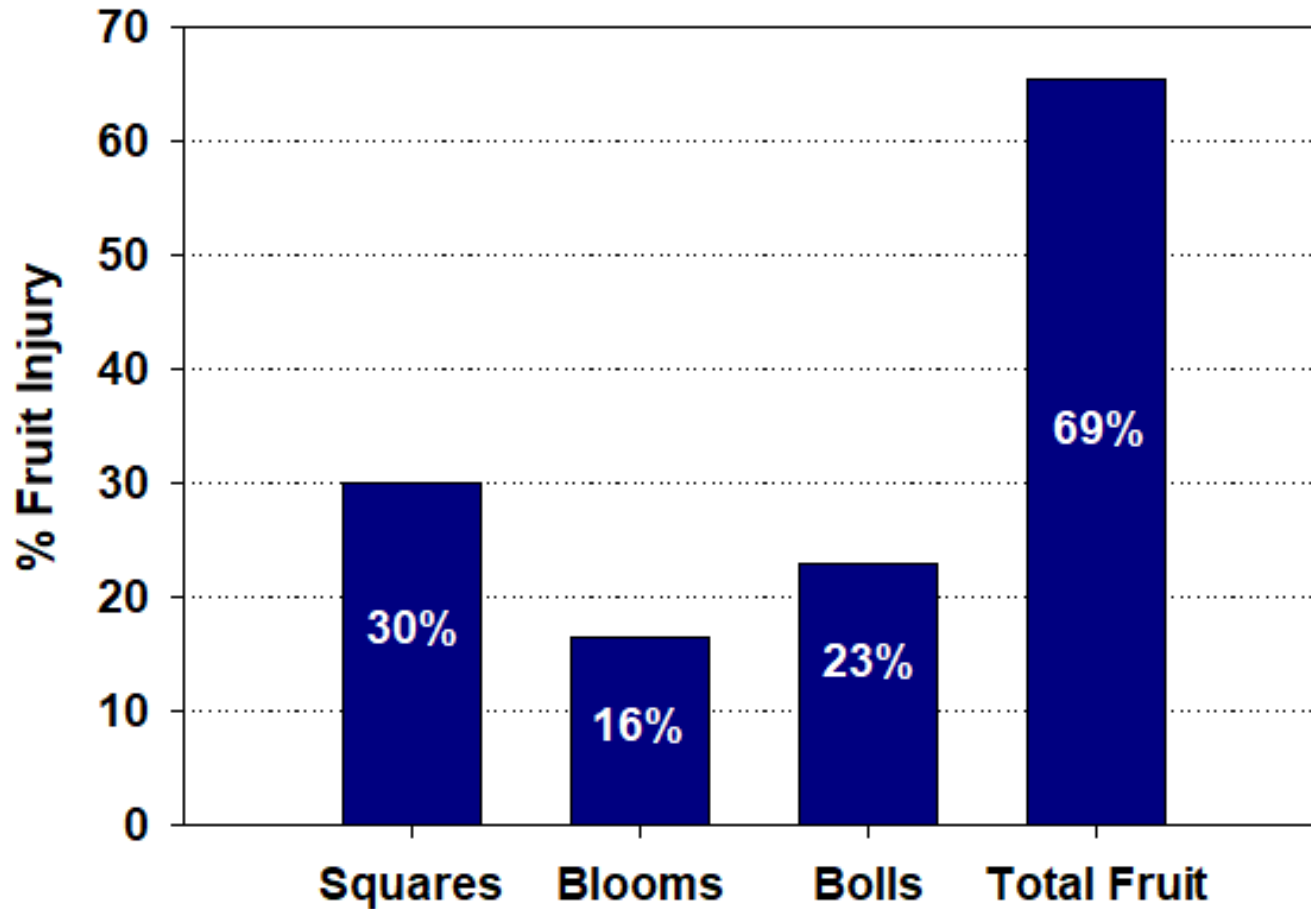
Bt Sentinel Plot Locations

- Red River Station
- Macon Ridge Station
- Northeast Station
- Rapides Parish: Pete DeKeyzer Farm



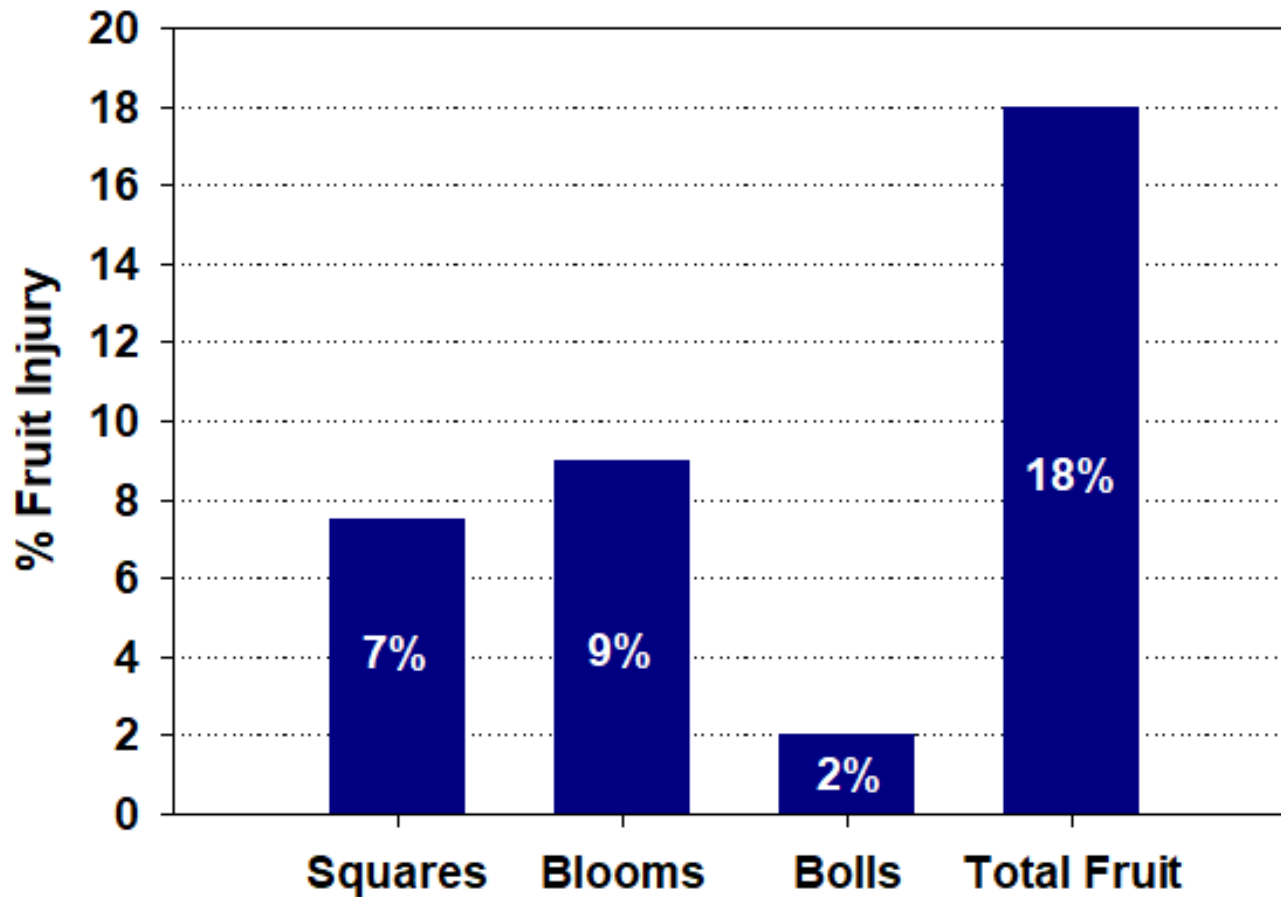


Rapides Parish BG2: July 24





Rapides Parish BG3: July 24



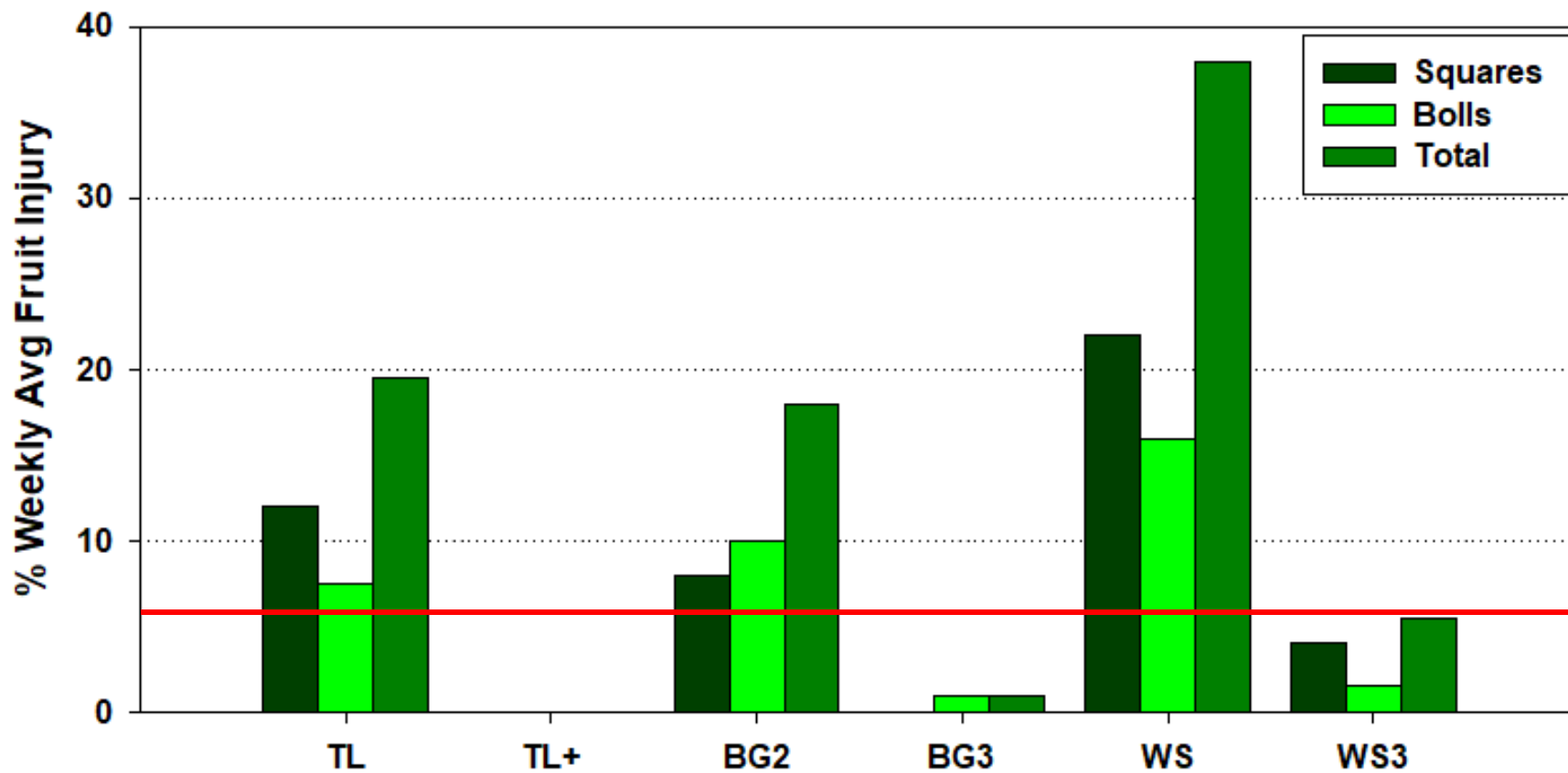


Rapides Parish WS3 Injury: July 23



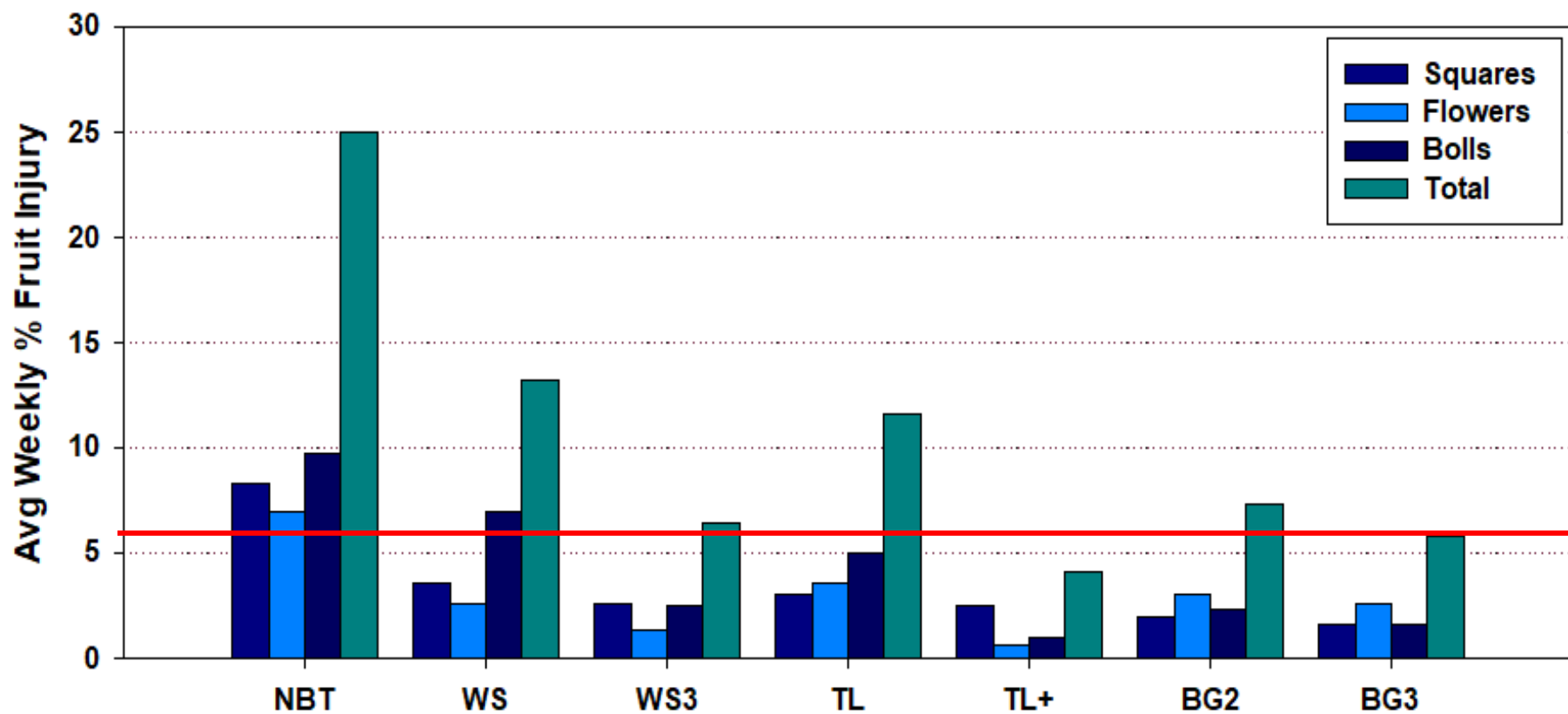


Red River



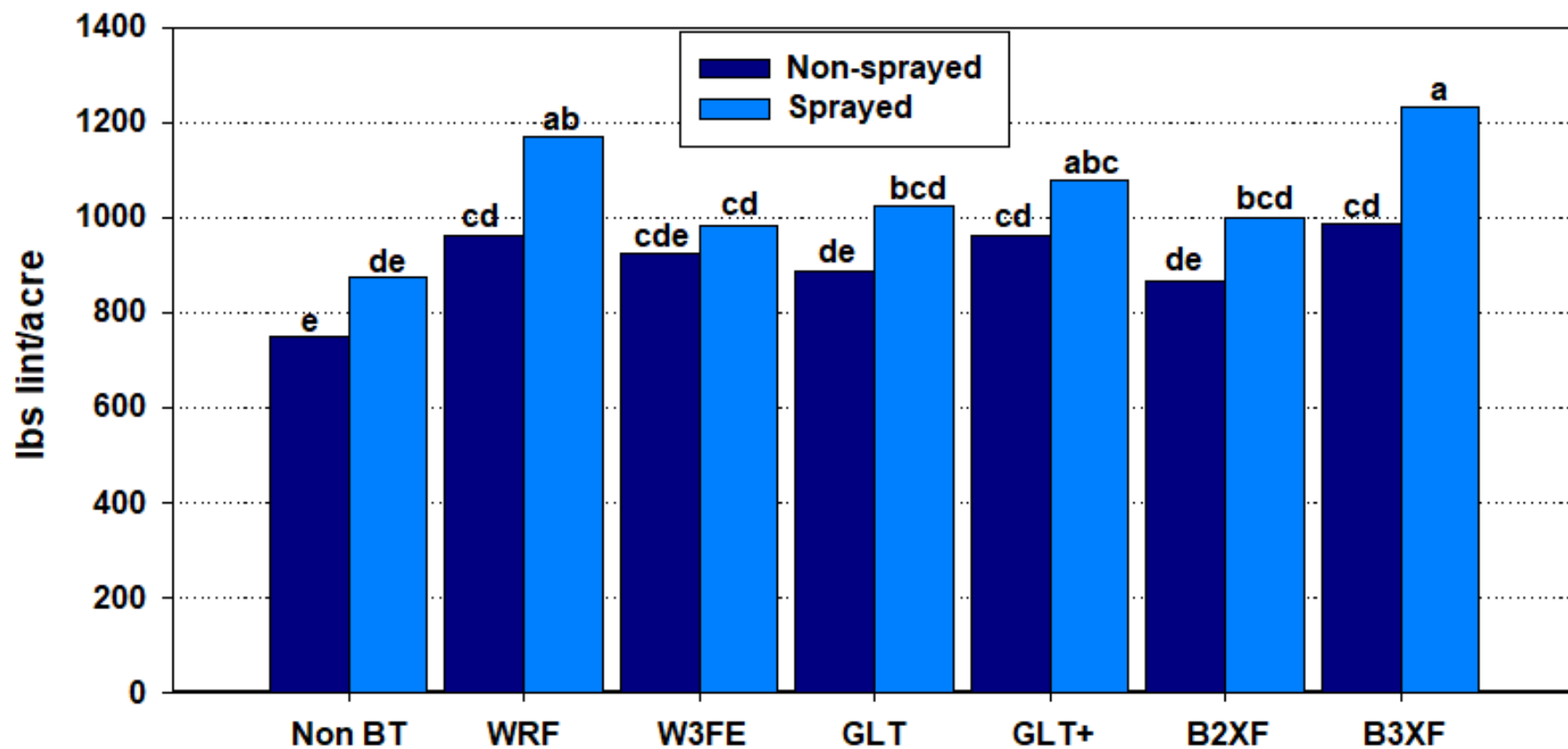


Macon Ridge





Bt Overspray: MRRS



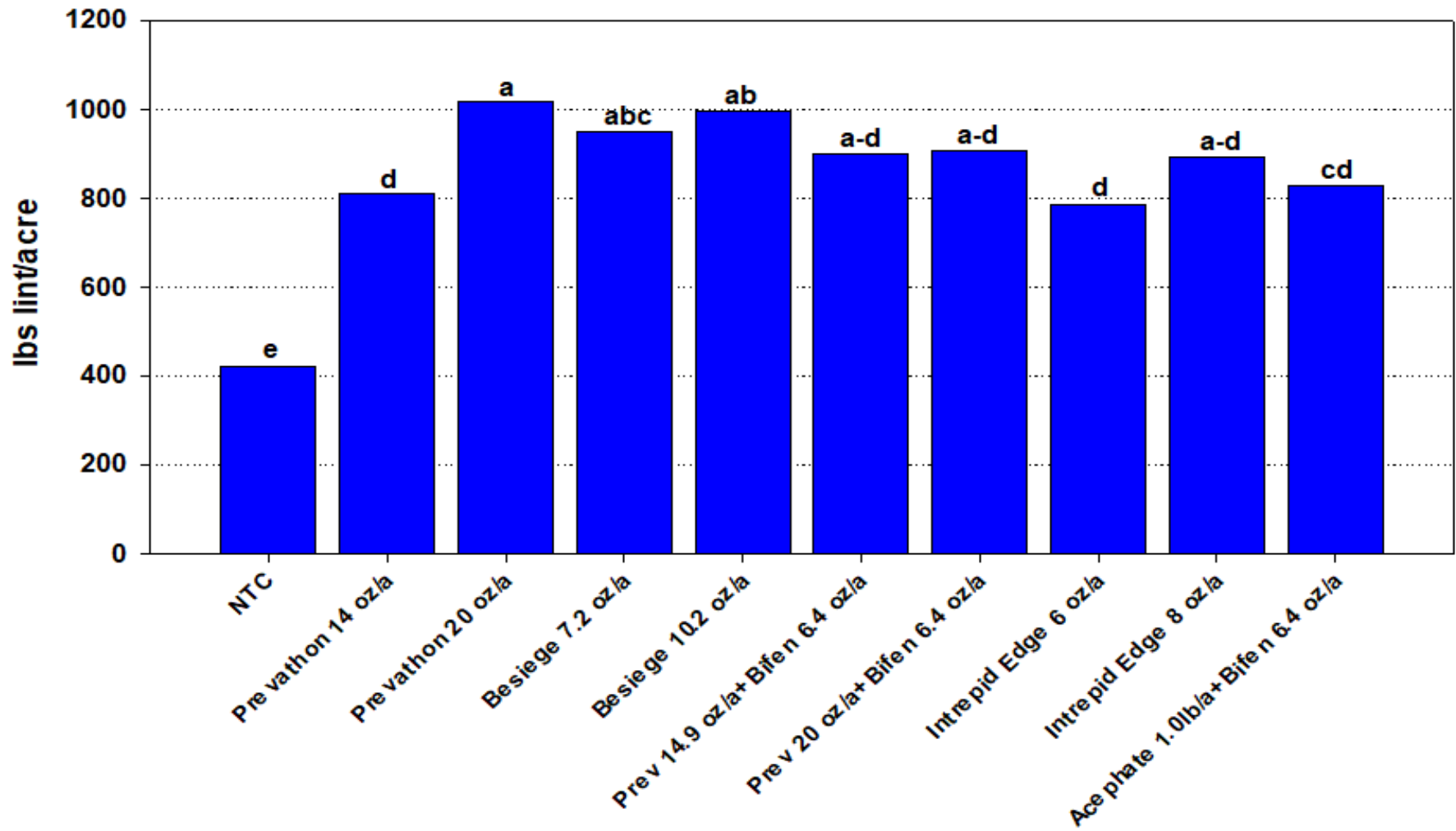


Thresholds Moving Forward

- Non-Bt, WS, TL & BG2
 - Before Bloom: 8 larvae/100 plants or 6% fruit injury
 - After Bloom: 20 eggs/100 plants or 6% fruit injury
 - Treat when damaged-boll counts exceed 2 percent and significant numbers of larvae are present and continuing to cause damage
- WS3, TL+, BG3
 - Before Bloom: 8 larvae/100 plants or 6% fruit injury
 - After Bloom: 4 larvae/100 plants or 6% fruit injury
 - Treat when damaged-boll counts exceed 2 percent and significant numbers of larvae are present and continuing to cause damage



Bollworm Overspray: MRRS





Contact Information

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