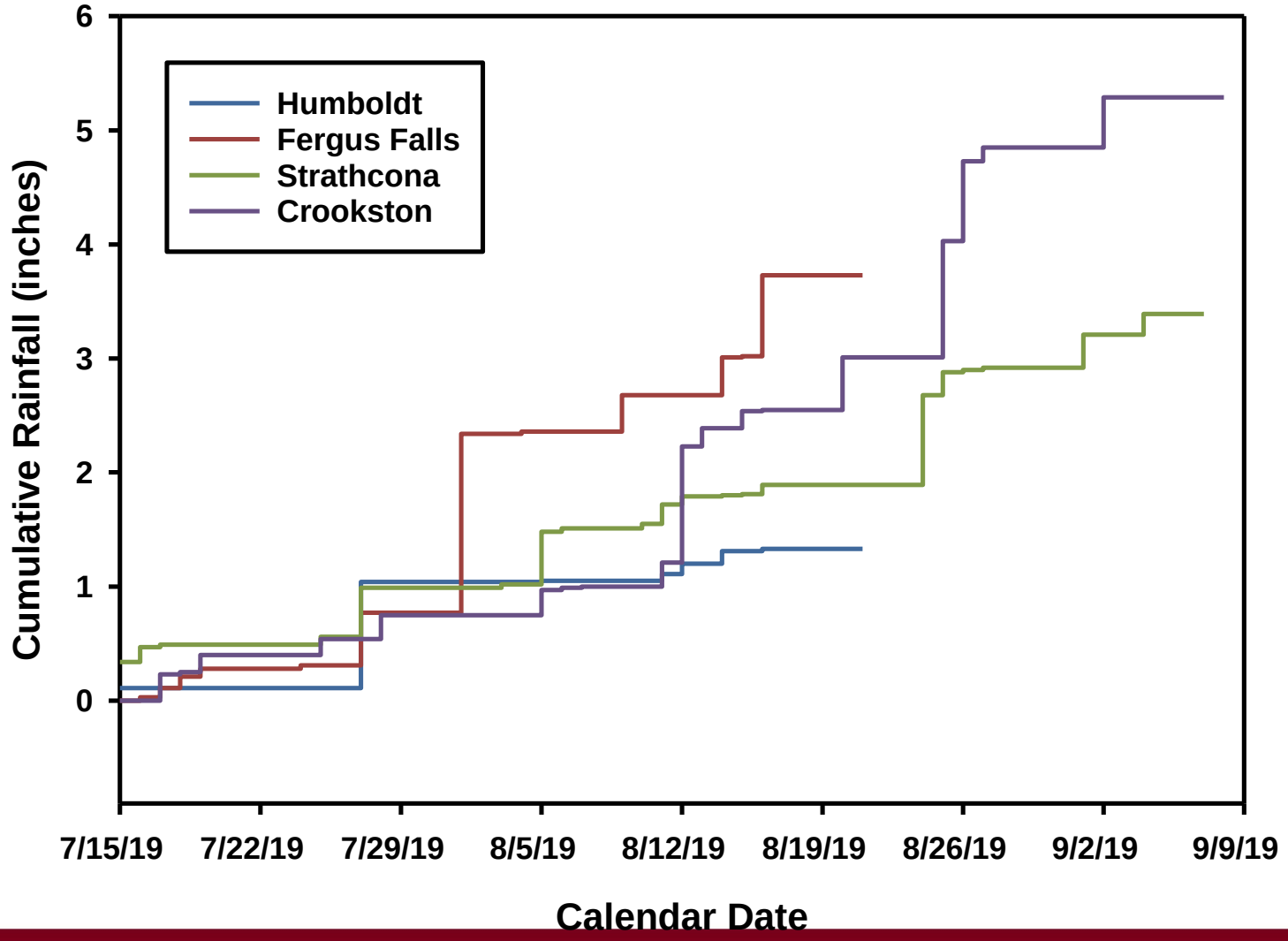
The Harvest That Never Ended

ADVANCED CROP ADVISORS WORKSHOP

AND THEN IT RAINED (AGAIN)



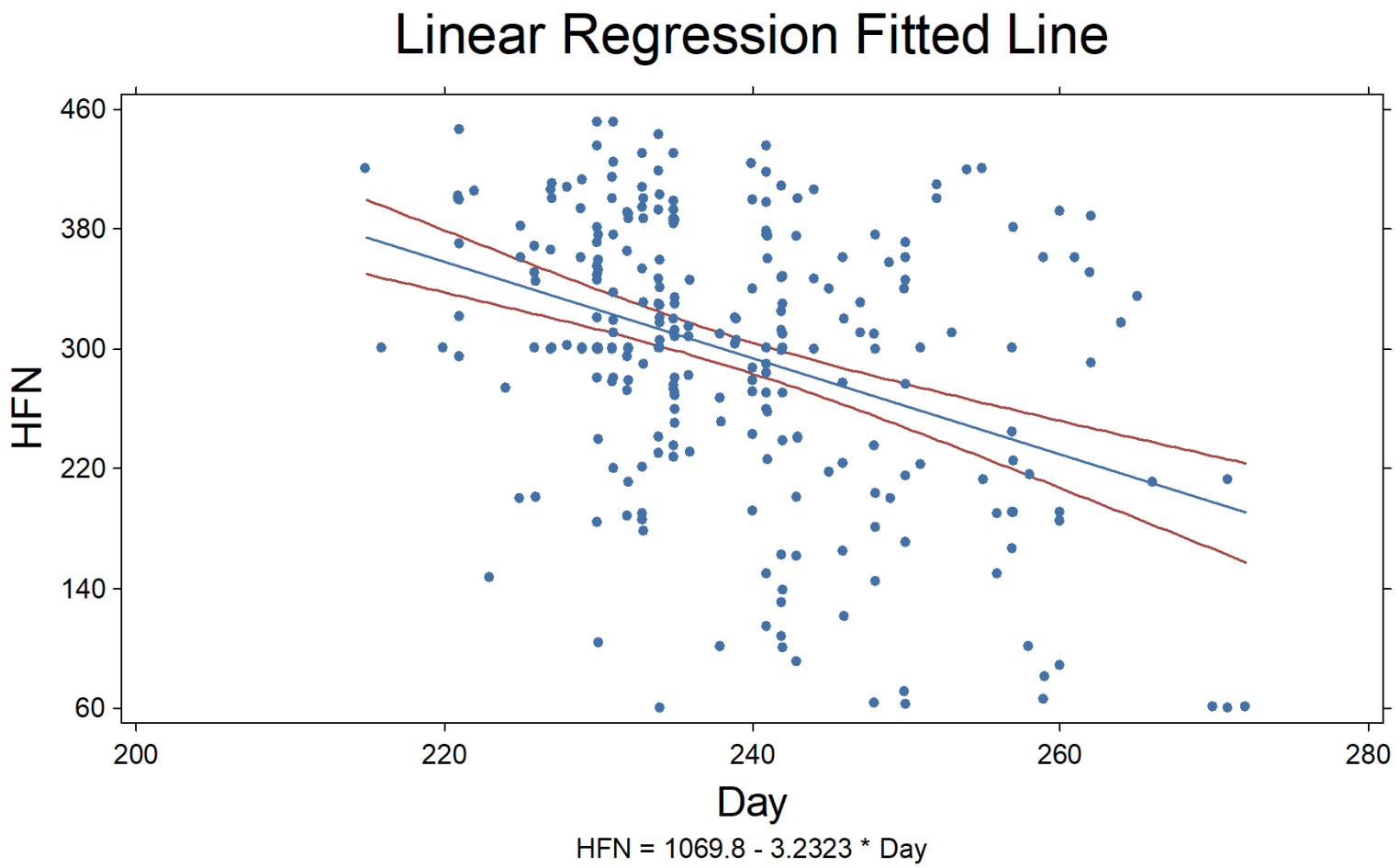
Bolles	1		**CP3939**	2*
CP3915	1		**SY 611 CL2**	2*
Dyna-Gro Commander	1		**SY Longmire**	2*
Lang-MN	1		**SY McCloud**	2*
Linkert	1		**CP3910**	3
MN-Washburn	1		**LCS Cannon**	3
ND-VitPro	1		**MS Barracuda**	3
Prosper	1		**TCG-Climax**	3
Shelly	1		WB-Mayville	3
Surpass	1		Dyna-Gro Ambush	3*
CP3530	2		**Dyna-Gro Ballistic**	3*
CP3888	2		**Dyna-Gro Caliber**	3*
Dyna-Gro Velocity	2		TCG-Spitfire	3*
LCS Breakaway	2		MS Chevelle	4
LCS Trigger	2		Boost	5
MS Camaro	2		**LCS Rebel**	5
Rollag	2			
SY Ingmar	2			
SY Valda	2			
TCG-Heartland	2			

PHS

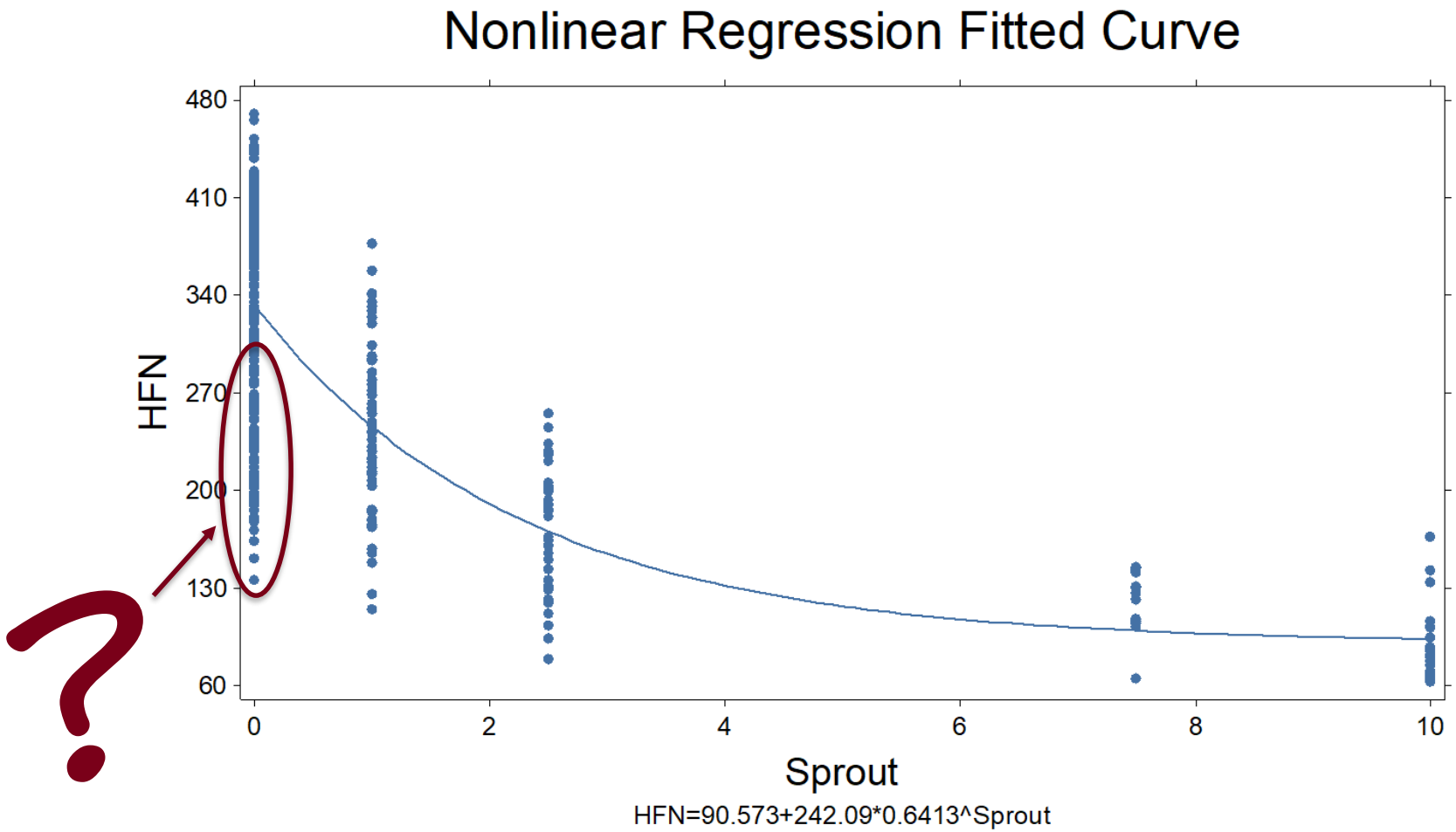
- Many locations suffered damage due to PHS
- Ratings of 1-2 considered most resistant, 3 and higher more susceptible
- Susceptibility to PHS correlates with Low Falling Number

* These varieties had lower than expected falling numbers based on their rating.

HFN SURVEY RESULTS



SPROUT DAMAGE & HFN



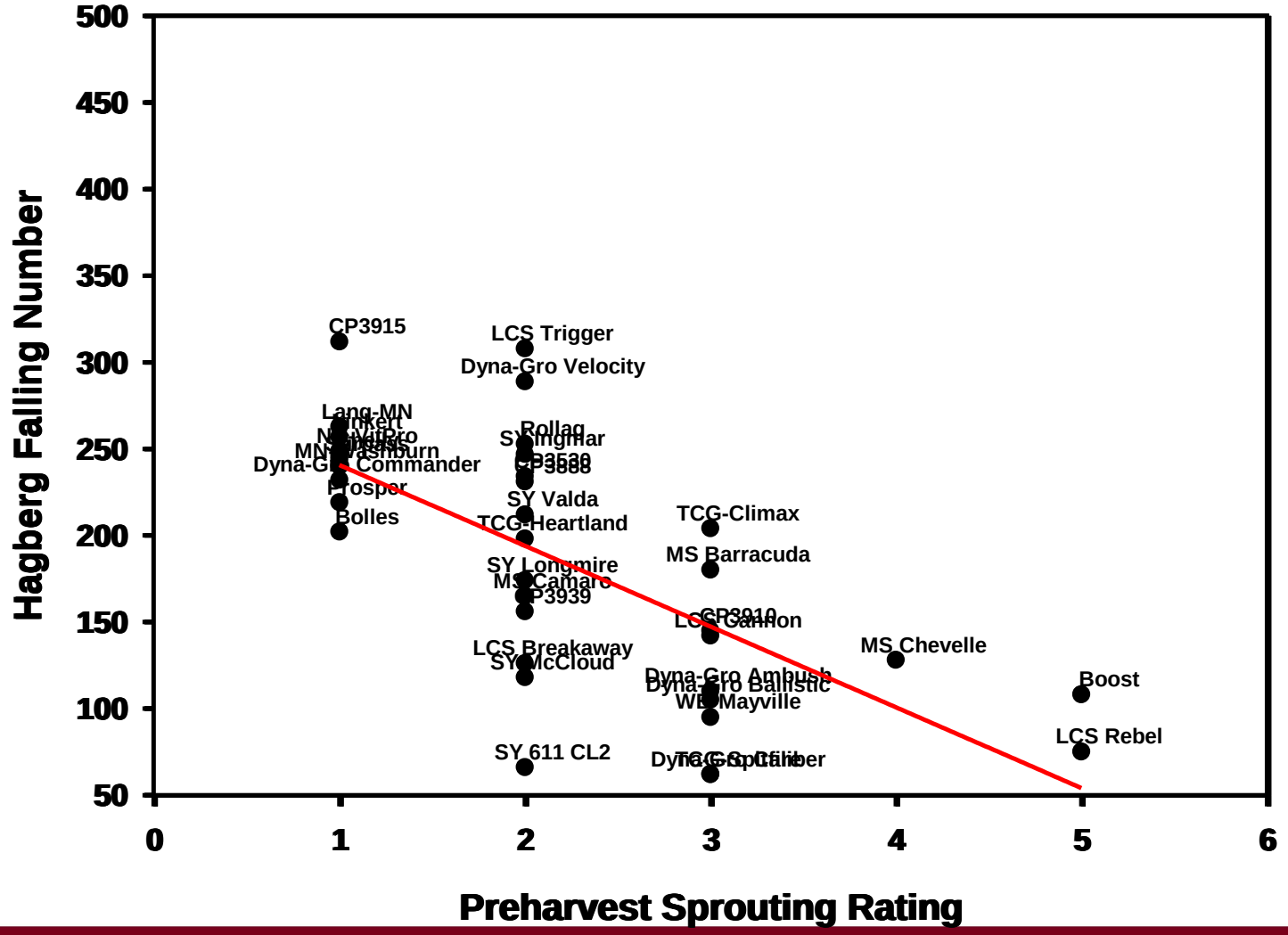
MORE HFN DATA

Environment	Average HFN		Environment	Average HFN
2017-10	**421**		2019-06	**185**
2017-12	**440**		2019-10	**291**
2018-12	**423**		2019-14	**378**
2018-14	**447**		2019-15	**400**
LSD(0.1)	8		LSD(0.1)	10

YET MORE HFN DATA

Entry	HFN (seconds)	Entry	HFN (seconds)
Linkert	450	TCG-Spitfire	438
Rollag	450	SY Rowyn	436
SY Ingmar	450	Prevail	433
SY Soren	450	Faller	431
WB9590	450	Boost	430
WB-Mayville	450	WB9653	430
Bolles	450	CP3530	429
CP3504	449	Dyna-Gro Ambush	426
CP3616	449	Dyna-Gro Caliber	425
Shelly	449	Prosper	423
ND-VitPro	448	Chevelle	418
Lang-MN	446	SY Valda	414
LCS Breakaway	446	LCS Rebel	409
WB9479	444	Surpass	406
CP3419	443	TCG-Climax	320
Forefront	441		
LSD(0.1)	**24**	**LSD(0.1)**	**24**

PHS AND HFN



LATE MATURITY α-AMYLASE

- Synthesis of free α-amylase in aleurone layer during second half of grainfill period in specific varieties that is triggered by a cold snap (T_{min}<50^{o}F):
  - Grain with sound appearance
  - No starch damage
  - High α-amylase activity
  - Results in low to very low HFN

TAKE HOME

- PHS rating of 1 and 2 are best defense against sprout damage.
  - PHS >3 mean you need to harvest first time grain gets below 18% grain moisture rather than risking another shower

- Late maturity α-amylase likely not a contributing factor to low HFN.