

Update on tuber blight in relation to *P. infestans* genotype

Ruairidh Bain & Claire Convery

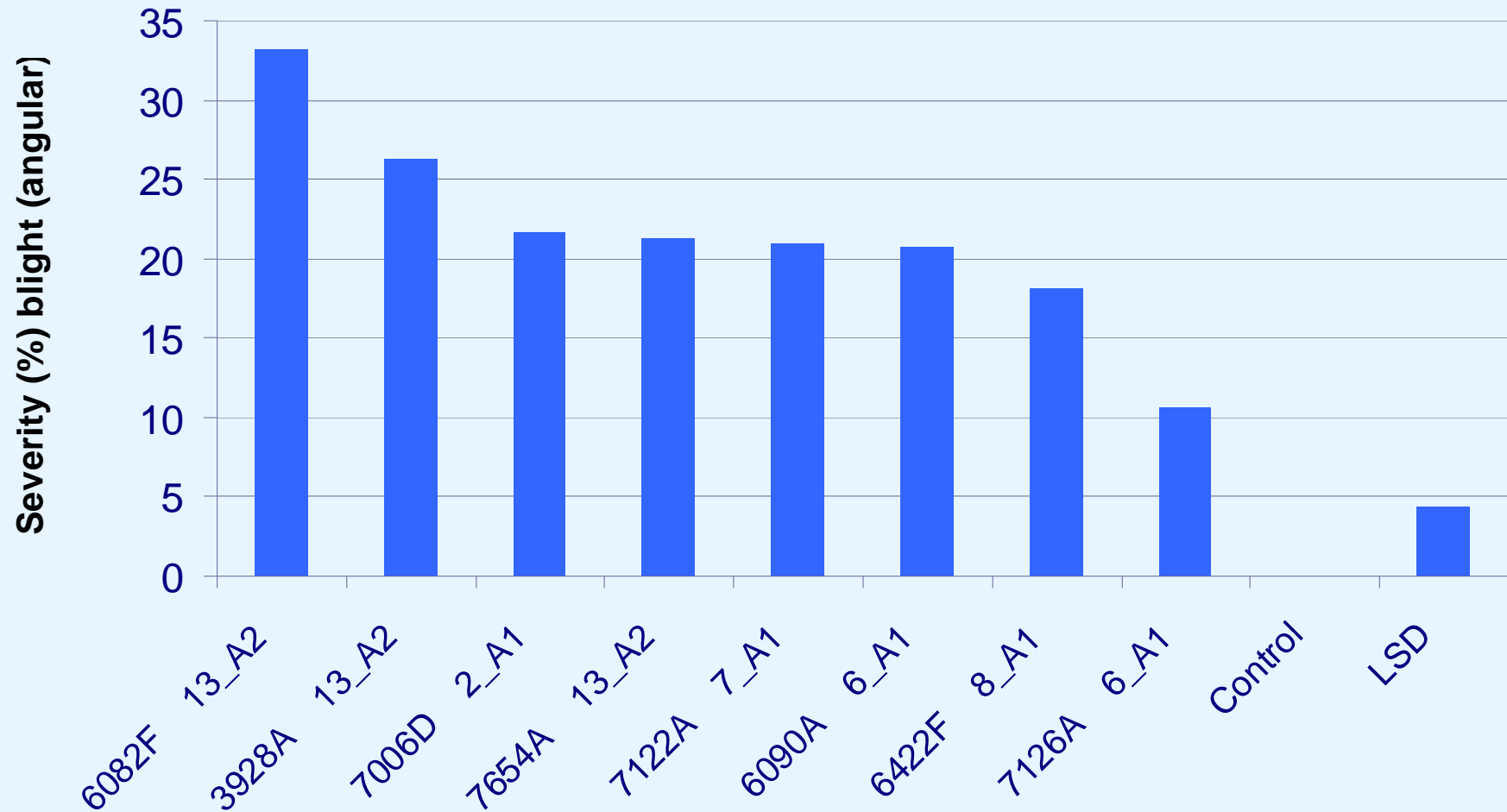
Introduction



- The national incidence of tuber blight has been low in recent years.
- This coincides with the domination of the GB population by the 13_A2 genotype.
- Is this a coincidence or is there a causal relationship?
- We investigated
 - if 13_A2 is less aggressive on tubers
 - if 13_A2 causes a higher incidence of tuber blight initially but due to faster tuber decay prior to harvest these blighted tubers are missed

Point inoculation

Saxon



Point inoculation

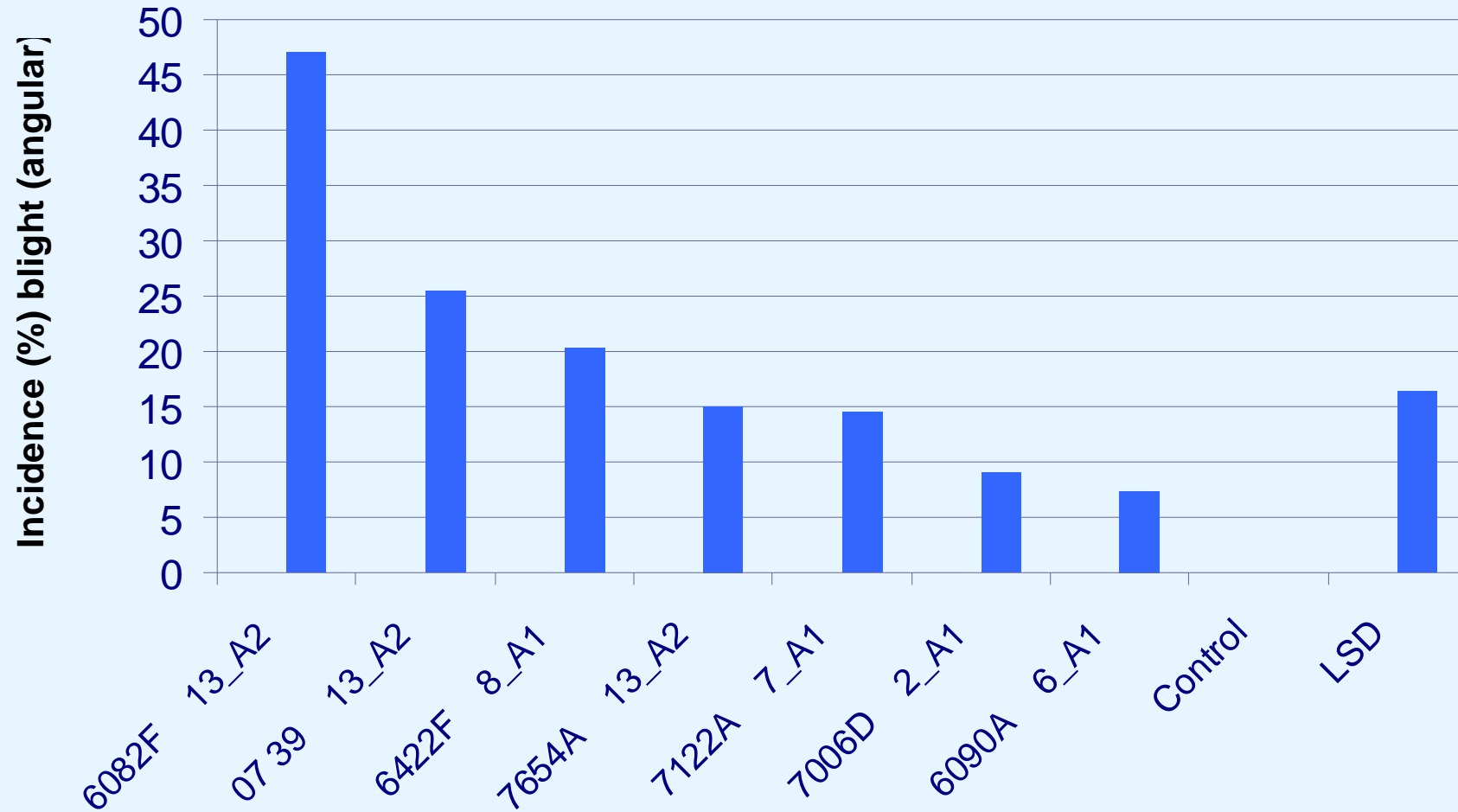
Saxon



	13_A2	6_A1	Old
	6082F	6090A	7006D (2_A1)
	3928A	7126A	7122A (7_A1)
	7654A		6422F (8_A1)
Mean severity (%)	26.9	15.7	20.3
	F pr.		
New vs Old	0.067 (NS)		
13_A2 vs Old	<0.001		
13_A2 vs 6_A1	<0.001		
6_A1 vs Old	0.002		

In situ inoculation

Rocket



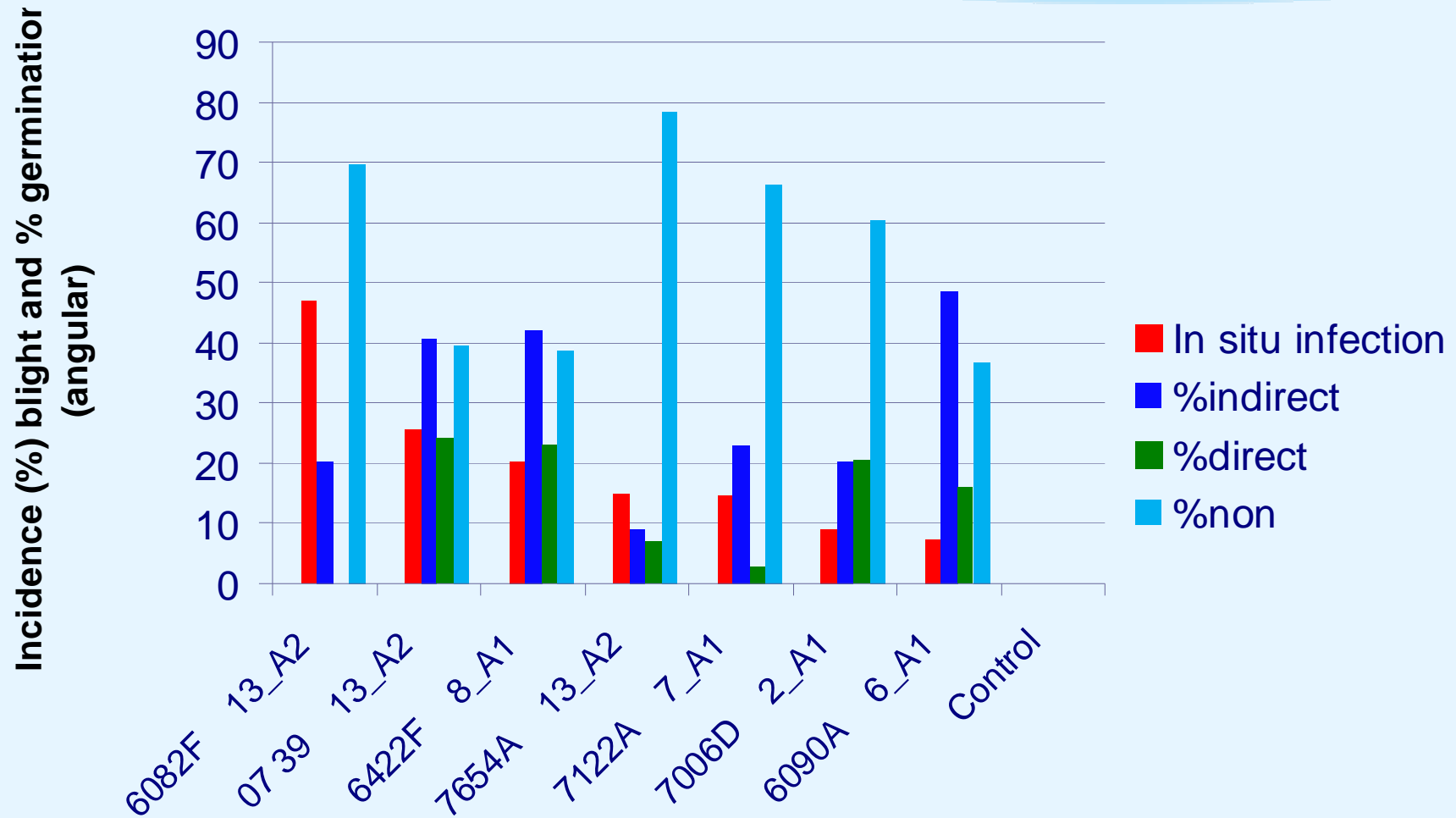
In situ inoculation

Rocket



	13_A2	6_A1	Old
	6082F	6090A	7006D (2_A1)
	07/39		7122A (7_A1)
	7654A		6422F (8_A1)
		New	
Mean infection (%)	29.2	23.8	14.7
	F pr.		
New vs Old	0.046		
13_A2 vs Old	0.008		

Tuber infection *in situ* in relation to sporangial germination for isolates



Sporangial germination at 10 °C



13_A2	6_A1	Old	
6082F	6090A	7006D (2_A1)	
07/39		7122A (7_A1)	
7654A		6422F (8_A1)	
	Indirect	Direct	Non-germinated
13_A2 vs Old	0.003	0.003	<0.001
New vs Old	0.304 (NS)	0.011	0.417 (NS)

Compared with the Old isolates the 13_A2 isolates tested resulted in significantly higher *in situ* infection (14.7% and 29.2% respectively) and yet the 13_A2 isolates had significantly lower indirect germination percentages (28.6% and 23.4% respectively) and direct germination percentages (15.5% and 10.4% respectively).

Severity of blight and % tuber decay after burial

