

Control of leaf diseases in grain maize

Different product and timing

- Spraying



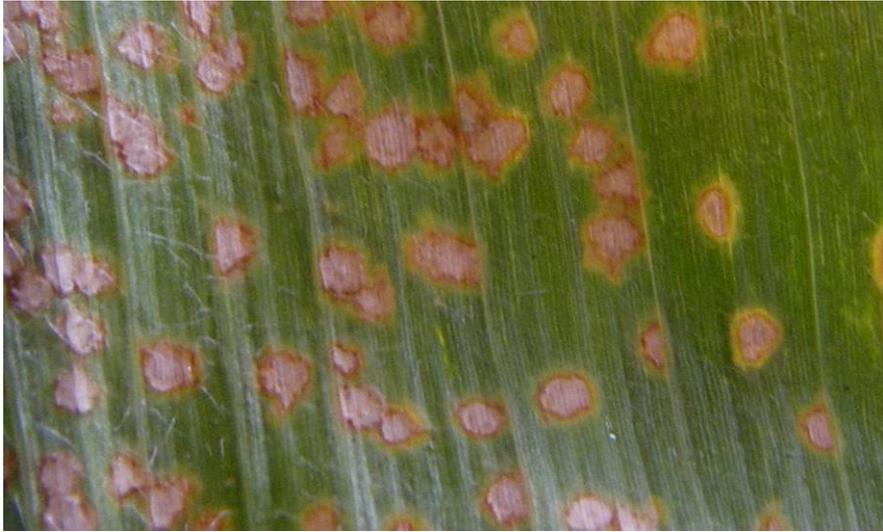
Late harvest



Nothern Corn leaf blight *Helminthosporium tucicum*



- Makes cigar shaped spots
- After flowering disease development can be fast
- Severe attack looks like frost damage
- Spread by debris
- Spores spread by wind across long distances
- Stimulated by moist conditions
- Moderate temp. 18-27C
- Loss from early attack can be as big as 50%

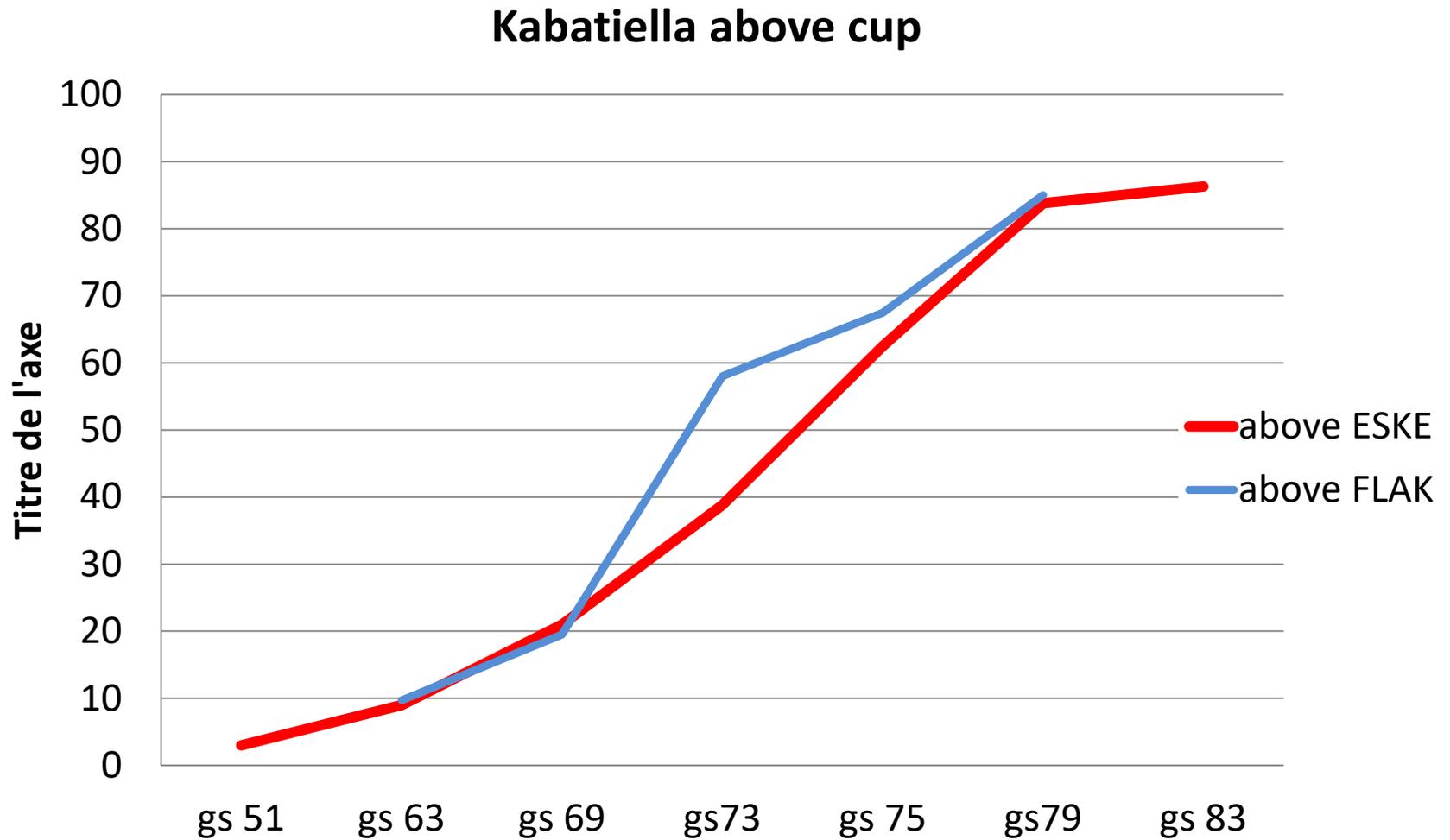


Eyespot

(Kabatiella Zea)

- Small circular spots
- Might develop fast following flowering
- Latens time: 4-10 days
- Spread from debris
- Some differences in susceptibility
- Wet conditions stimulates
- Spores spread by rain
- Optimal temp 10-12 C
- Losses from early attack around 10%

Development of attack of Kabatiella in the crop



Control of Kabatiella in maize Flakkebjerg

2 x 0,5 Comet
19/7 + 16/8

1,5 Opera
19/7

Untreated



Control of Kabatiella in maize

23 sept. 2011 Flakkebjerg

1,2 BAY F111

4/7



1,5 Opera

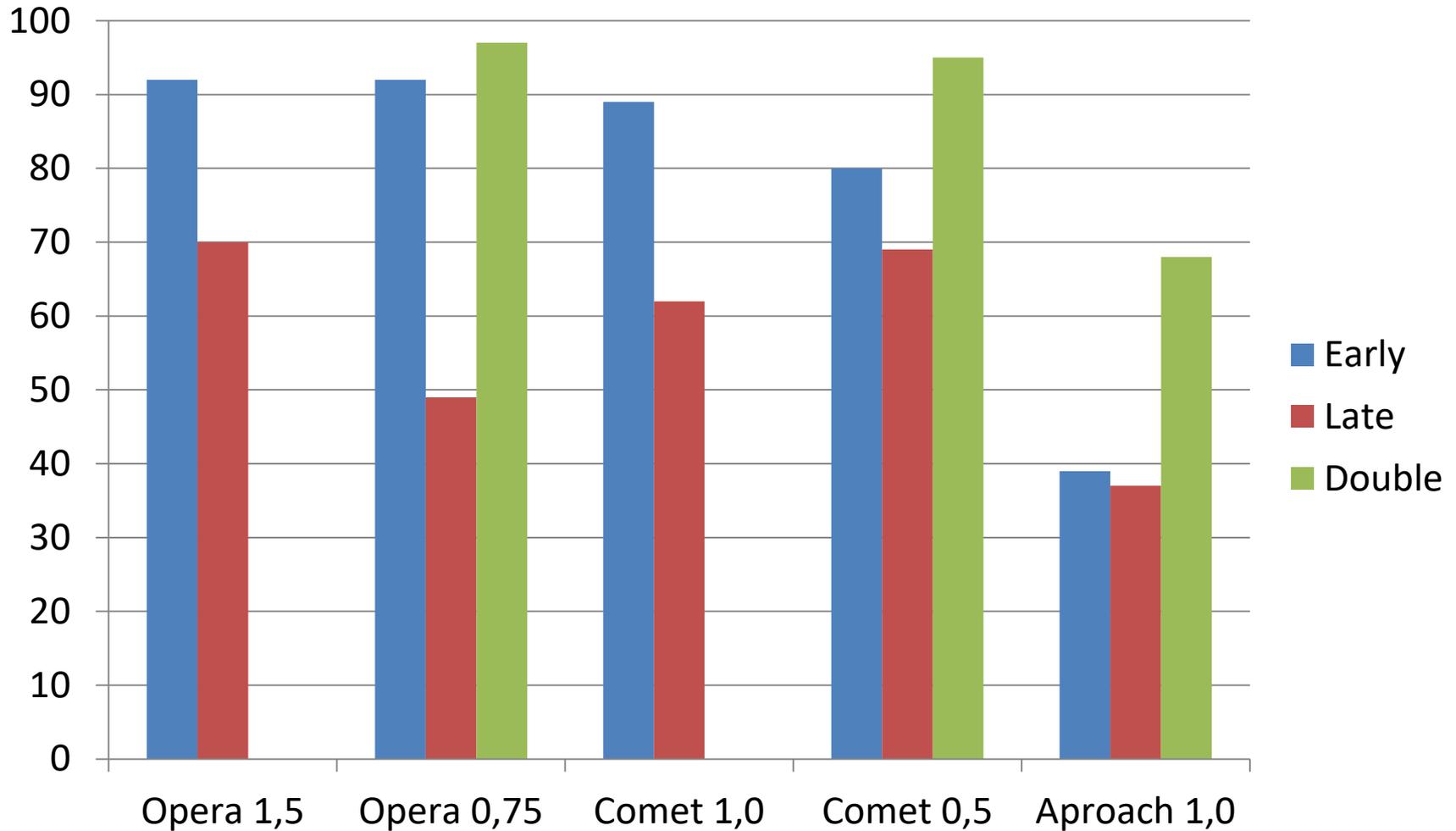
4/7



Untreated



%Control of Kabatiella – assesed 23/9
(37 days after last application)
(64 days after first application)
Leaves above cob - Flakkebjerg



Control from strobilurins- Eskebjerg
-assessed 27 sept -3 month from spraying

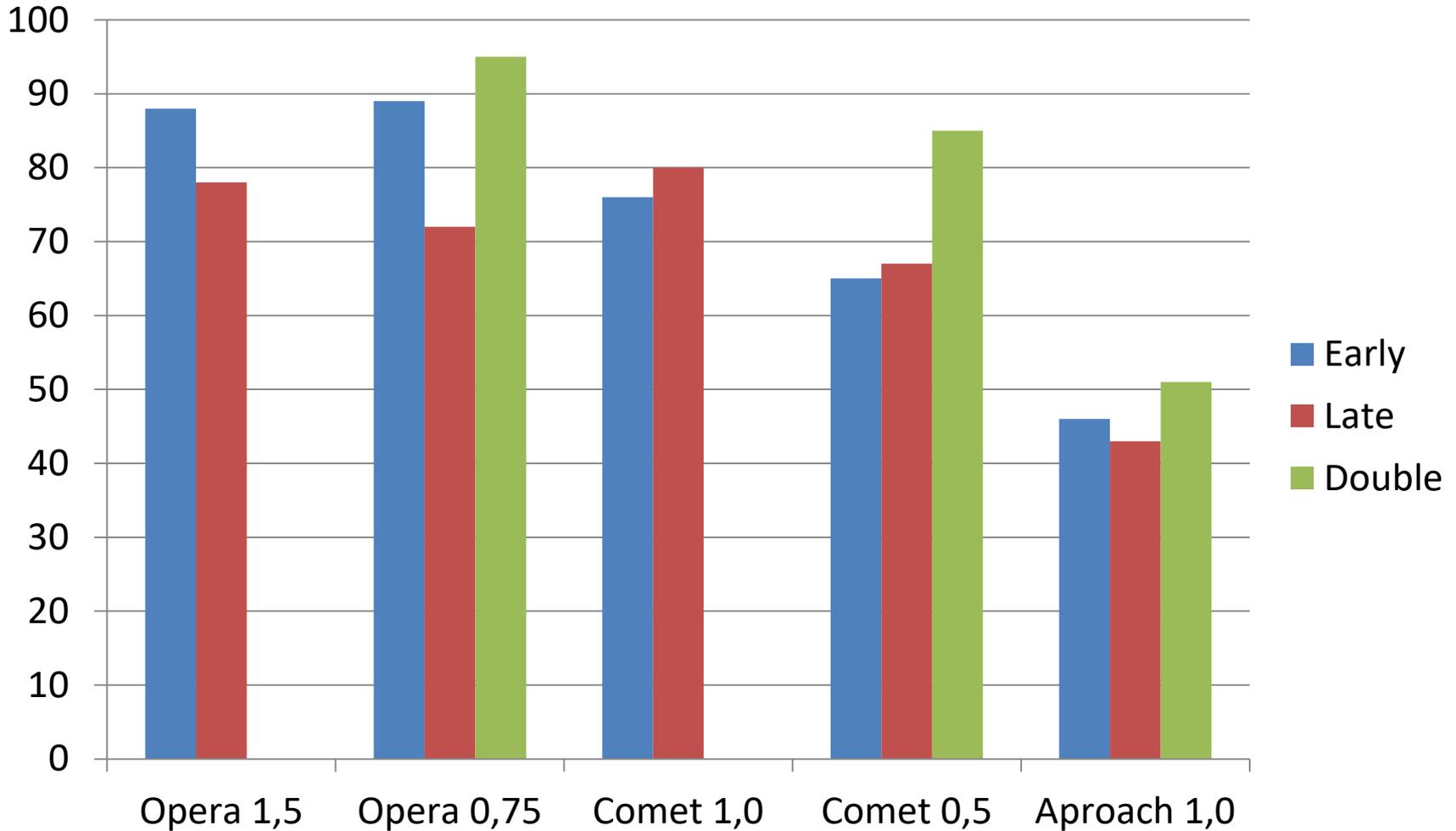
1,0 Comet (5/7)



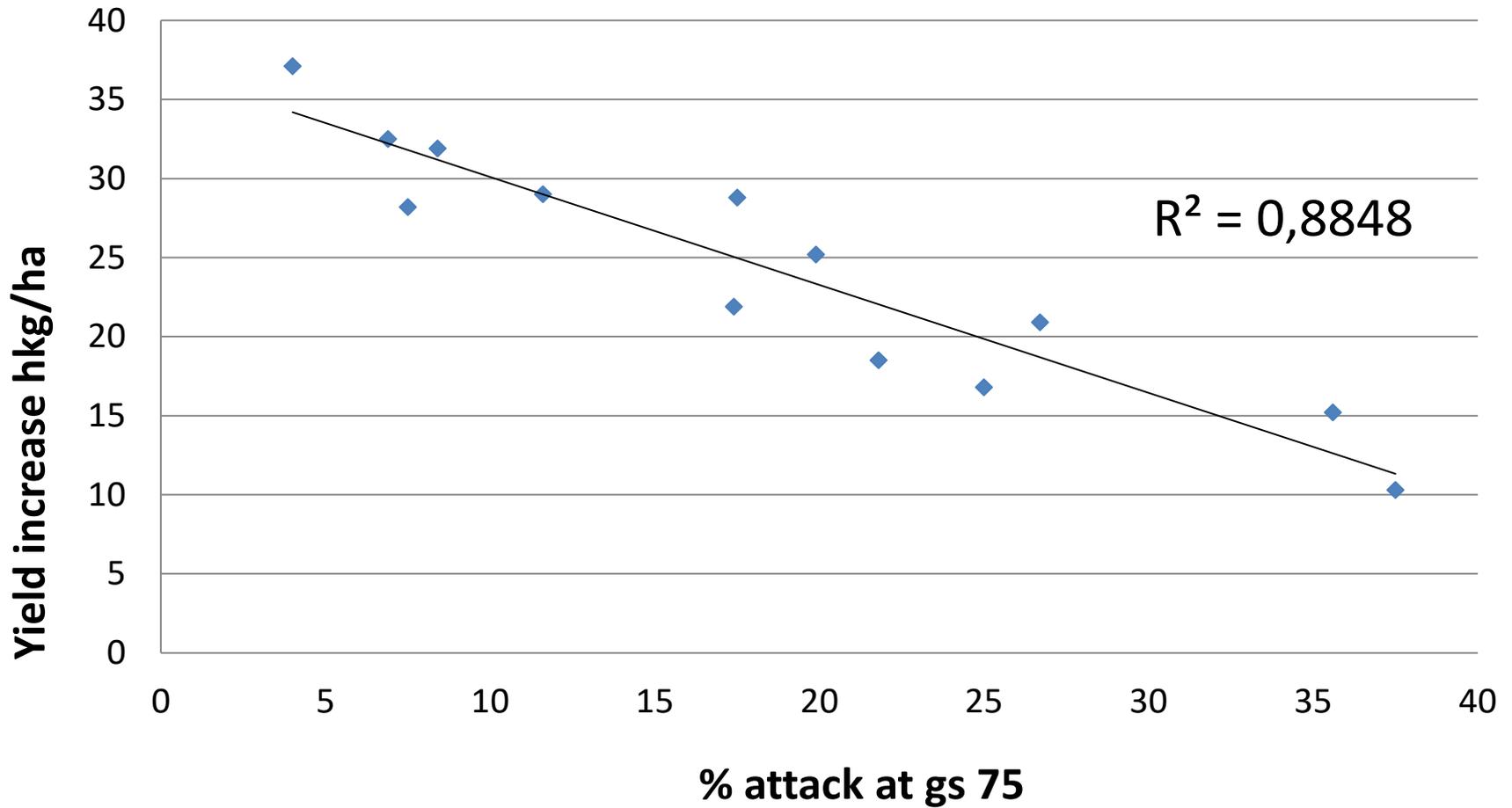
1,0 Approach (5/7)



Control of Kabatiella – 15/9
(2 month after application)
Leaves above - Eskebjerg



Correlation between attack of eyespot and yield increases



Maize cobs – effect of eyespot on cob size

Cob size
Untreated

Opera early

Cob size
Untreated

2 x Opera



Impact on grain and cob size – average of 15 cobs

	Grain size TGW g	Cob weight g	Cob length cm	Cob filling %	Cob diameter, cm
Untreated	274 A	135 A	15,0 A	94,0 A	4,1 A
Opera vs 39	328 B	182 BC	15,8 B	96,3 BC	4,4 B
Opera vs 51-60	319 B	177 B	15,2 A	95,1 AB	4,5 BC
2 x Opera	339 B	194 C	16,0 B	97,3 C	4,6 C

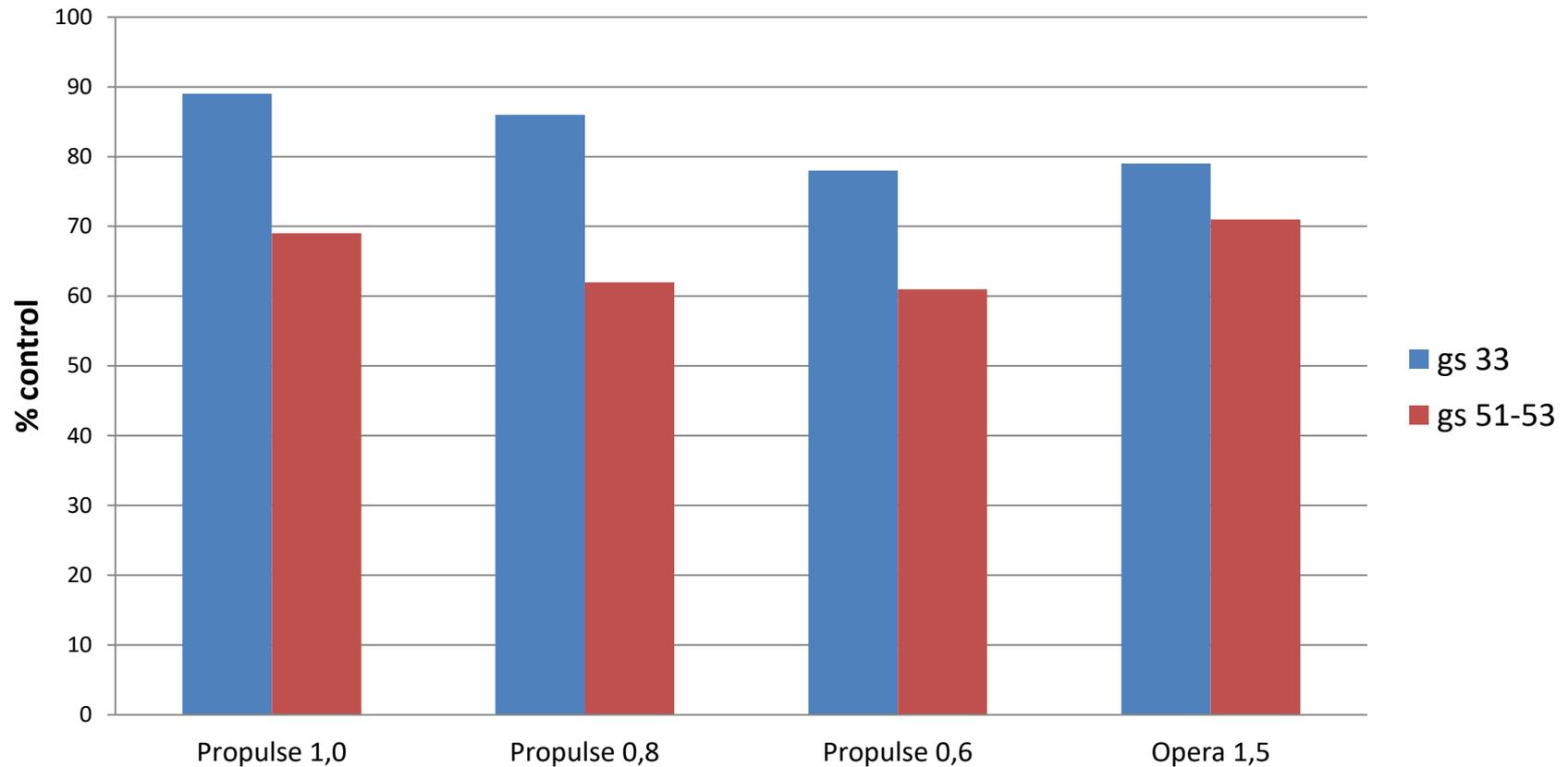
Example: 75% 90% 95% 95%



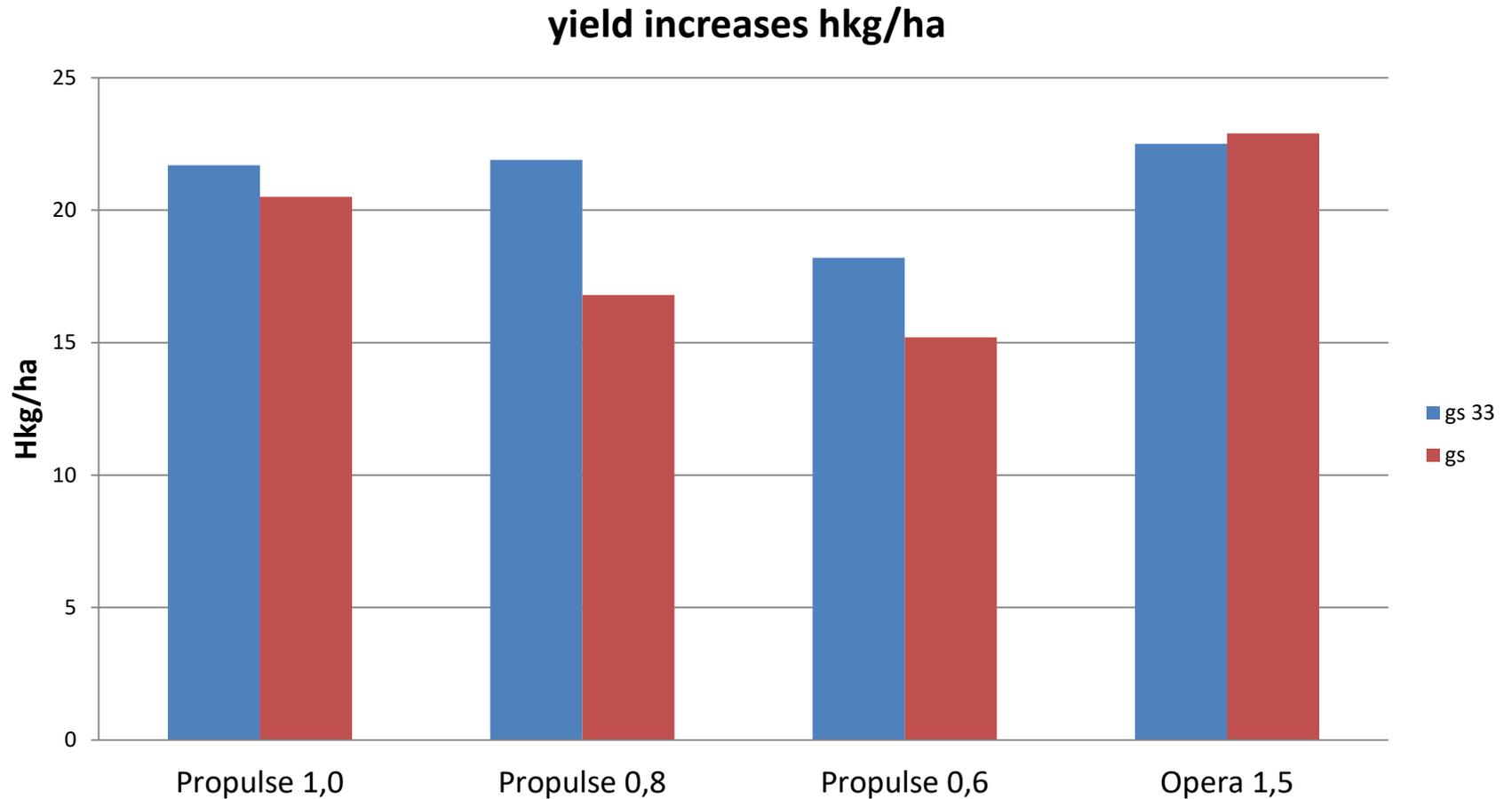
Control of Kabatiella

4 trials 2011/2012 – assessed on leaves above cob

Control of eyespot gs 75-79



Yield increase in grain maize 4 trials 2011/2012



Conclusion

- Disease attack can be minimized by ploughing
- Both eyespot and northern leaf blight are common in DK
- Timing is important for optimal control – Late application gives weak control
- Split application give best control