

NORBARAG – Fungicide sub-group 8-9th March 2018 Norway

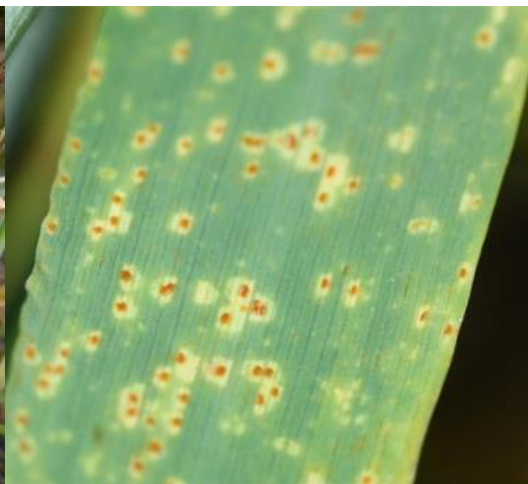
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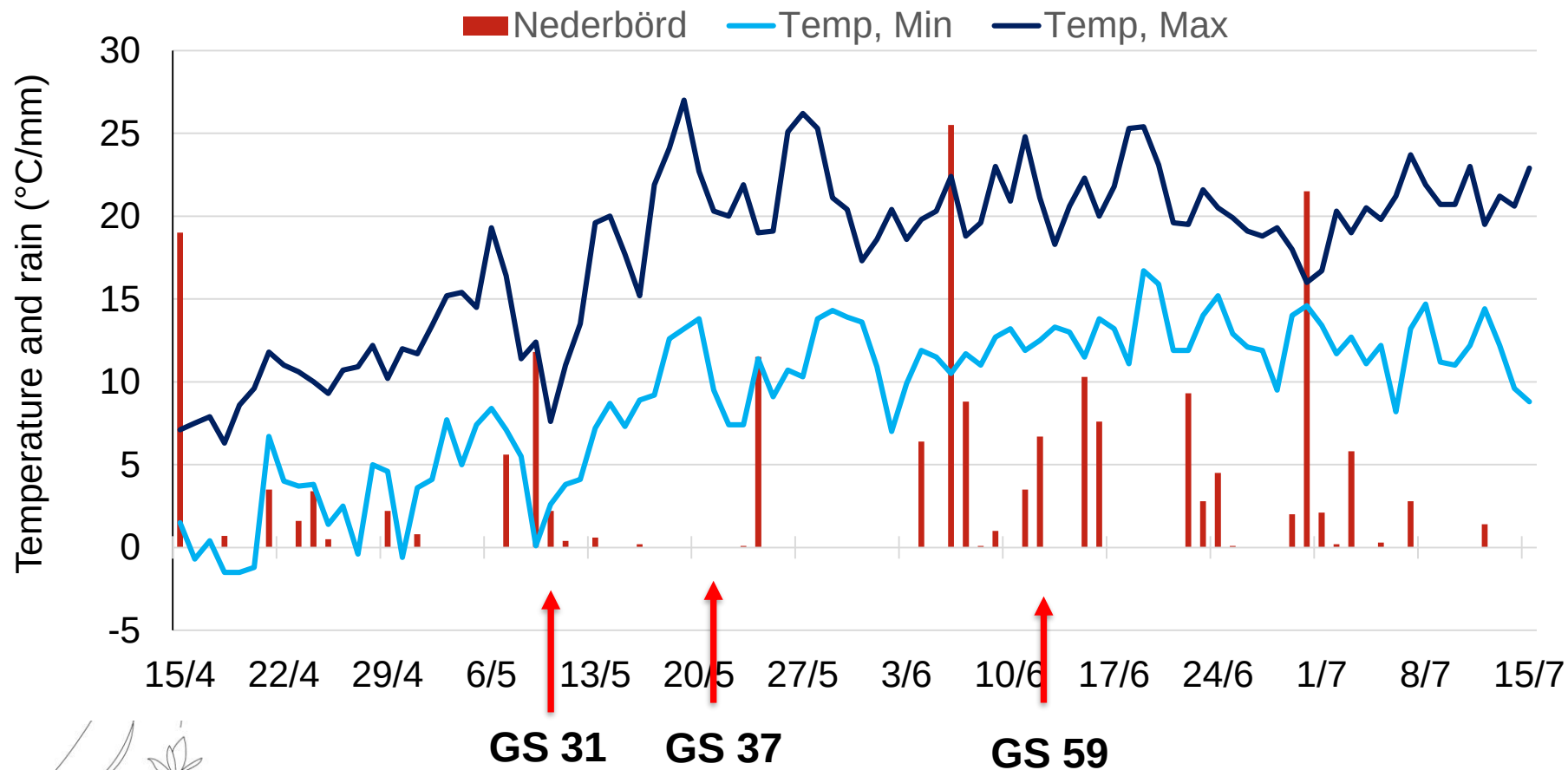


Europeiska jordbruksfonden för
landsbygdsutveckling: Europa
investerar i landsbygdsområden



Lund

Daily rain and temperature 15th April – 15th July 2017
source: SMHI



Late development of diseases 2017

Septoria



Tan spot



Brown rust



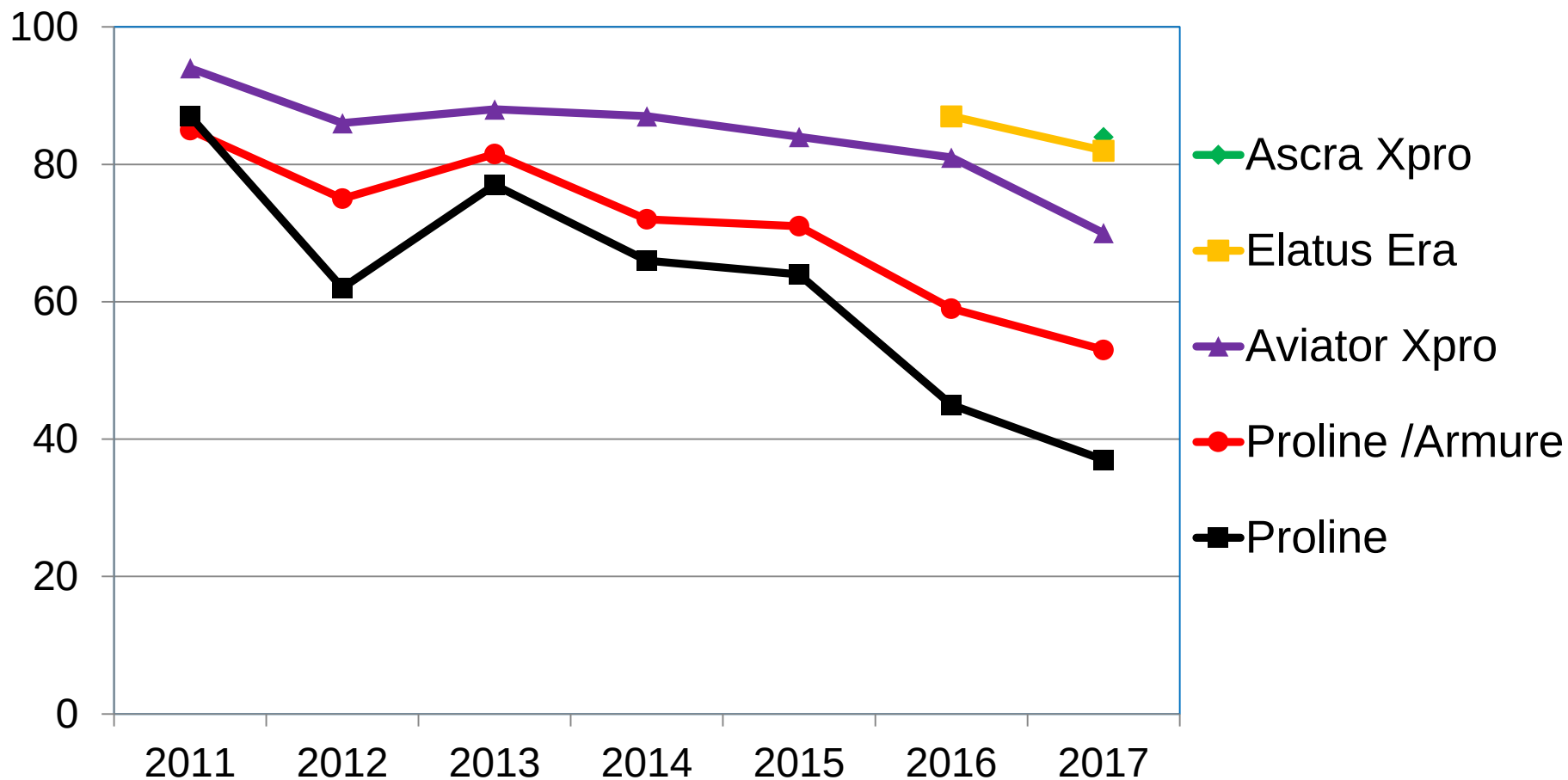
Approved Fungicides cereals, Sweden 2018-03-01 red =mixtures

FRAC group	Fungicide group	Active substance	Product
11	Strobilurines (Qol)	Azoxystrobin Picoxystrobin Pyraclostrobin Trifloxystrobin	Amistar/Mirador/, Mirador Forte Acanto Comet Pro, Priaxor Delaro
1	MBC-fungicides	Tiofanatmetyl	Topsin
7	SDHI	Bixafen Fluopyram Solatenol Fluxapyroxad	Siltra Xpro, Aviator Xpro, Ascra Xpro Ascra Xpro, Propulse Elatus Era , Elatus Plus Priaxor
3	DMI-fungicides (azoles)	Difenconazole Tebukonazole Propikonazol Prothioconazole	Armure/Tiro Mirador Forte Tilt/Bumper/Bolt XL, Stereo Proline, Delaro, Ascra Xpro, Aviator Xpro, Siltra Xpro, Propulse, Elatus Era
5	Morfolines	Fenpropimorph Fenpropidin	Forbel Tern
9	AP-fungicides (Anilinpyrimidines)	Cyprodinil	Kayak, Stereo
13	Aza-napthalenes	Proquinazid	Talius
U8	Benzophenone	Metrafenone Pyriofenone	Flexity Property
U6	Phenylacetamide	Cyflufenamid	Upstream
M4	Multi-site Phthalamide	Folpet	Folpan

Control of Septoria 2011-2017

2 x 1/2 dos, GS 37/39 & 55/59, Skåne

% control



Winter wheat , 25 July 2017 cultivar Brons (late)

2 x ½ dos, GS 37/39 & 55/59



- **Ramularia**
(*Ramularia collo-cygni*)

Severe problems in barley 2017



Ramularia – SDHI and prothioconazole

9 locations in Sweden 2017

source: Bayer

		sdhC		cyp51	
		H146R	H153R	I325T	I328L
Västerlösa, Vikingstad	SW	5	8	7	5
Sövestad, Ystad 1	SW	21			
Hammarlöv Trelleborg	SW	25	9	70	66
Löderup, Borrby, Simrishamn	SW	20	12	85	75
Yxstad, Vadstena	SW	13	9	14	11
Evertsholm, Söderköping	SW	5	7	14	11
Fortegården, Vinninga	SW	0	9	14	57
Logården, Grästorp	SW	0	8	24	28
Rutakvarn, Vara	SW	1	7	11	20

Drechslera teres Sweden

resistance strobilurins mutation F129L

Källa: BASF, Syngenta, DuPont

k	Total number of samples	Number of trials without resistance	Low resistance 1-20 %	Middle resistance 20-60%	High resistance > 60 %	% samples with resistance
2008	10	8	0	2	0	20
2009	40	31	0	9	0	22
2010	21	17	1	3	0	19
2011	25	23	0	2	0	8
2012	28	27	1	0	0	4
2013	16	15	1	0	0	6
2014	13	12	0	1	0	7
2015	24	17	5	0	2	30
2016	10	8	1	0	1	20
2017	14	8	3	2	1	43

Metrafenon monitoring 2009-2017

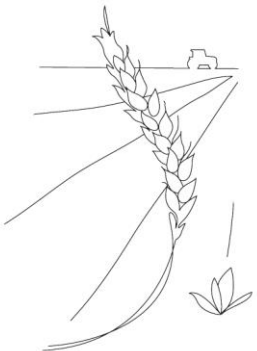
southern Sweden

Source BASF

Isolater (antal)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sensitive	30	40	40	19	20	17	18	22	14
"moderately adapted"	0	0	2	1	0	3	2	8	6
resistant	0	0	0	0	0	1	0	0	0
Total number	30	40	40	20	20	20	20	30	20



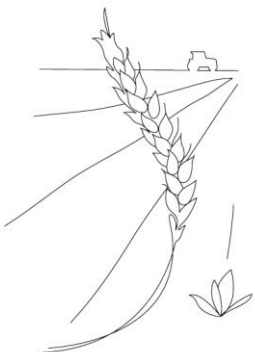
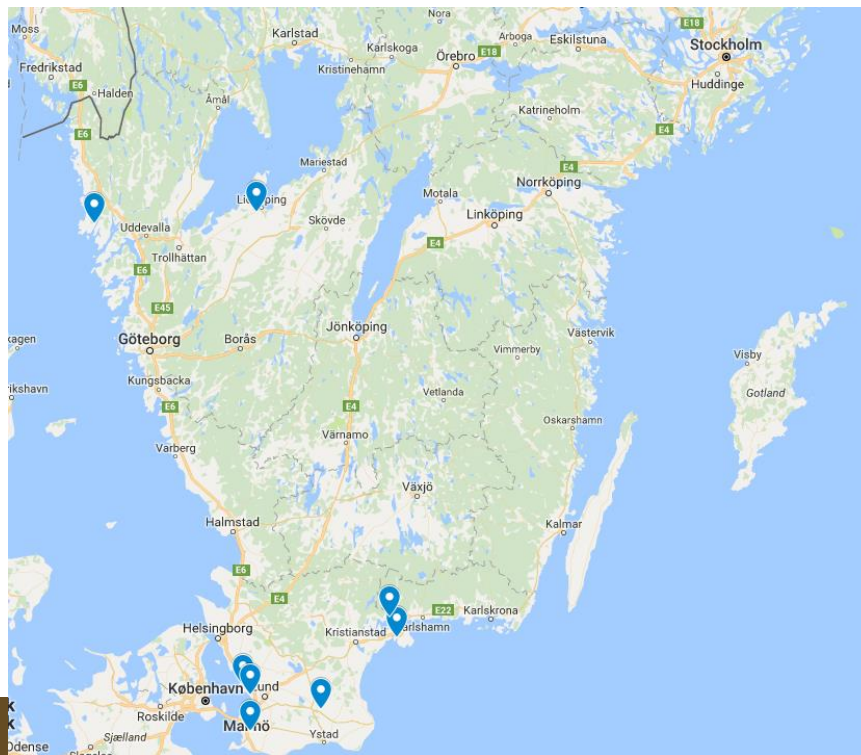
Botrytis - strawberry



Resistance of gray mold (*Botrytis cinerea*) to fungicides on strawberry in Sweden

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- A preliminary investigation was made 2016 in 4 fields in Scania.
- 2017 - 10 fields (8 locations) tested in 2017.

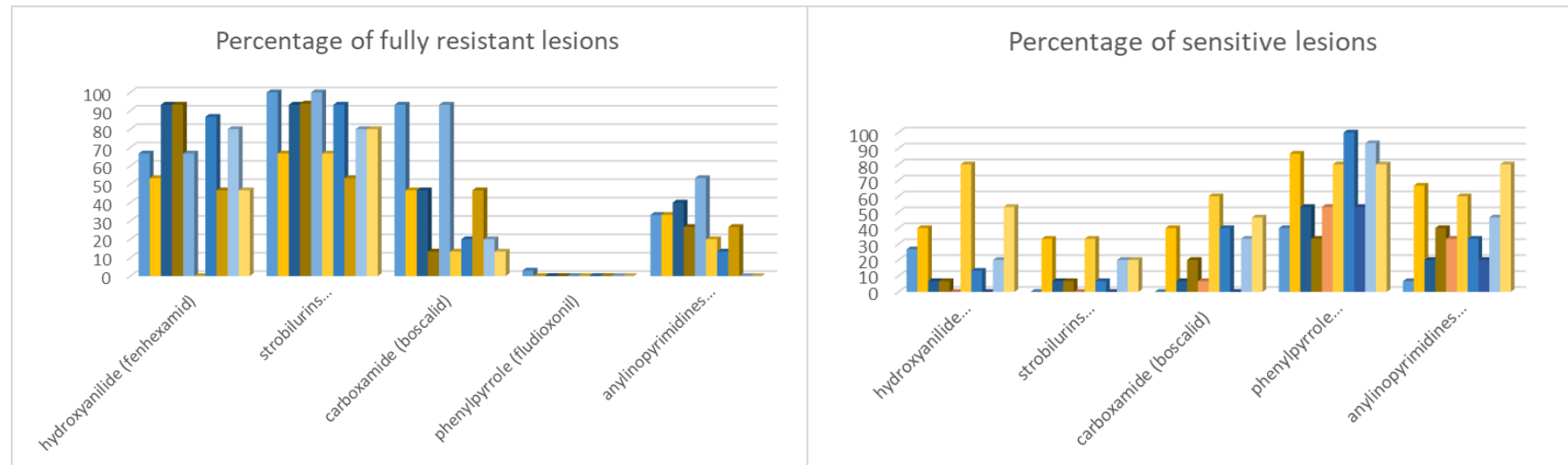


Approved Fungicides grey mould in strawberries, Sweden

FRAC group	Fungicide group	Active substance	Product	Max number of treatments
7	SDHI (carboxamider m.fl.)	Boscalid	Signum	2
9	AP-fungicides (AnilinPyrimidines)	Cyprodinil Mepanypirim	Switch Frupica	1 2
11	Strobilurines (Qol)	Azoxystrobin Kresoxim-methyl Pyraclostrobin	Amistar/Mirador Candit Signum	3 2 2
12	PP-fungicides (PhenylPyrroles)	Fludioxonil	Switch	1
17	Hydroxyanilider	Fenhexamid	Teldor	3

Tests 2017 performed by dr Roland Weber at the Esteburg Centre in Jork, Germany.

30 fruits or fruit mummies with gray mold symptoms per sample, 15 examined.



Percentage of partially resistant lesions

