

RINGSPOT DISEASE IN FRANCE A QUICK OVERVIEW

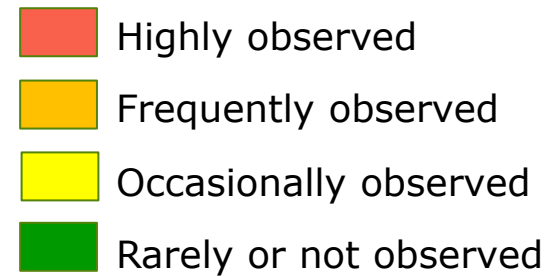
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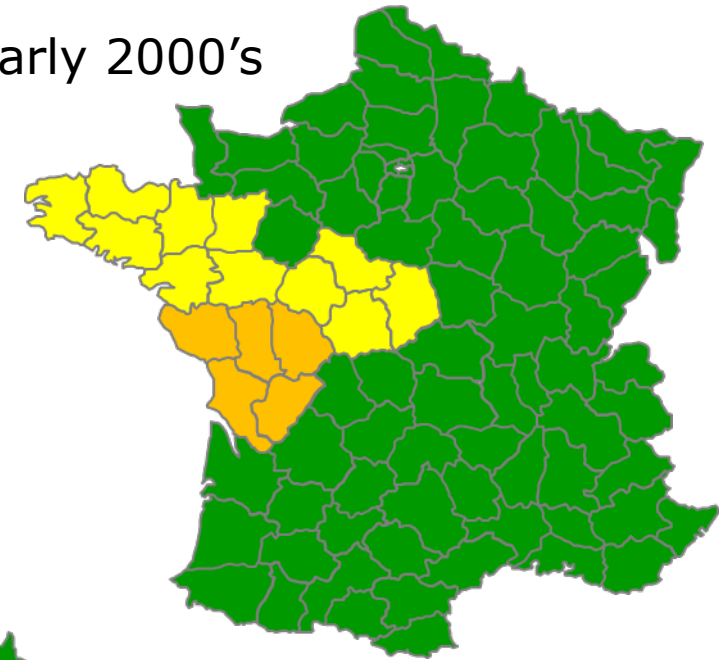
Ringspot disease in France – an old and known yet increasing problematic

- In France, sclerotinia stem rot is the main disease, managed with spraying at BBCH65. **In west Atlantic area, ringspot is more frequent and harmful than SSR, managed with SSR at BBCH65**
- Since the 2010's, expansion of the affected area with low to medium yield impact (0.2 t/ha to 0.5 t/ha, or more occasionally)
- Pathogen : ***Mycosphaerella brassicicola*** (*Asteromella brassicae*)

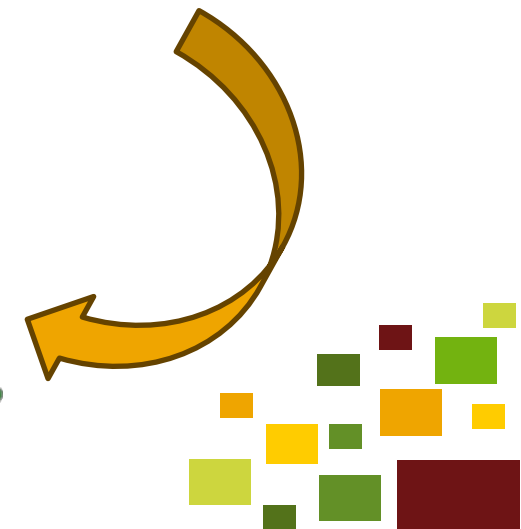
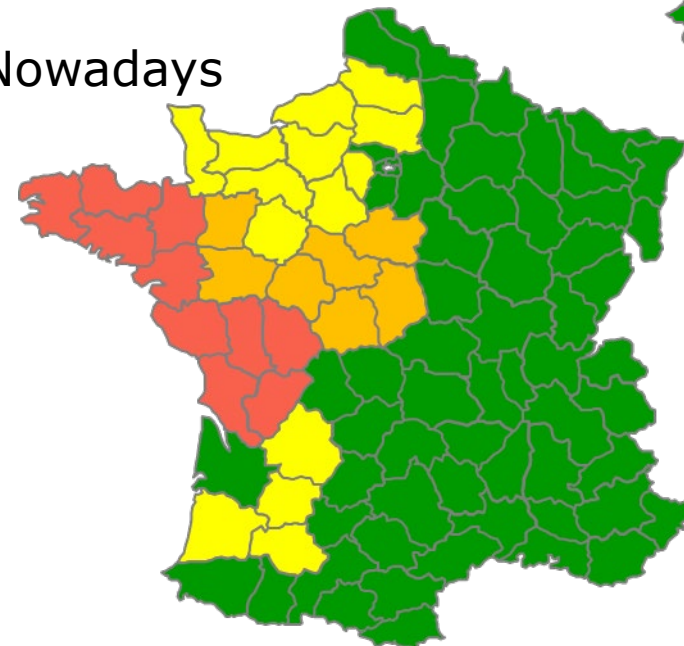
Legend :



Early 2000's



Nowadays



Ringspot disease – High polymorphism



On leaves



On stem



On pods



Ringspot disease management strategies

❖ Genetics

- Resistant cabbages varieties available on the market
- **Great tolerance variability observed in winter rapeseed but not studied yet**

❖ Agronomy

- Crop residue burial
- Rotation and previous susceptible crop distance from current field

❖ Fungicides

- Management *via* SSR management at BBCH65 with occasionally a second spraying at BBCH65 + 15 days when needed
- Active substance choice and spraying strategy

How to manage ringspot disease with fungicides ?

- Topic studied since the 2000's with new field experimentations since 2021
- **Two topics studied since 2021 with specific trials :**
 - What **strategy** to manage ringspot disease : spraying timing, how many spraying for a good control, only with market products
 - **Screening** of new products : only one spraying at BBCH65
- **3 sites each year** (Brittany and Poitou-Charentes), still on-going



2022 Strategy protocol

BBCH 31-53	BBCH65 (SSR management stage)	BBCH65 + 15days (+/- 2 days)
UNTREATED		
-	PROPULSE 0.8 l/ha	-
-	JOAO 0.6 l/ha	-
SUNORG PRO 0.6 l/ha	PICTOR ACTIVE 0.8 l/ha	-
SUNORG PRO 0.6 l/ha	PROPULSE 0.8 l/ha	-
-	PROPULSE 0.8 l/ha	SUNORG PRO 0.6 l/ha
-	PROPULSE 0.8 l/ha	SKEA 0.4 l/ha
-	PROPULSE 0.8 l/ha	PASSERELLE 0.4 l/ha
SUNORG PRO 0.6 l/ha	PROPULSE 0.5 l/ha	SKEA 0.4 l/ha

- PROPULSE : fluopyram 125 g/l + prothioconazole 125 g/l
- SUNORG PRO : mectonazole 90 g/l
- JOAO = SKEA : prothioconazole 250 g/l
- PASSERELLE : difenoconazole 250 g/l
- PICTOR ACTIVE : pyraclostrobin 250 g/l + boscalid 150 g/l



Double spraying programs seem to be slightly more efficient than one spraying program at BBCH65 + 15 days

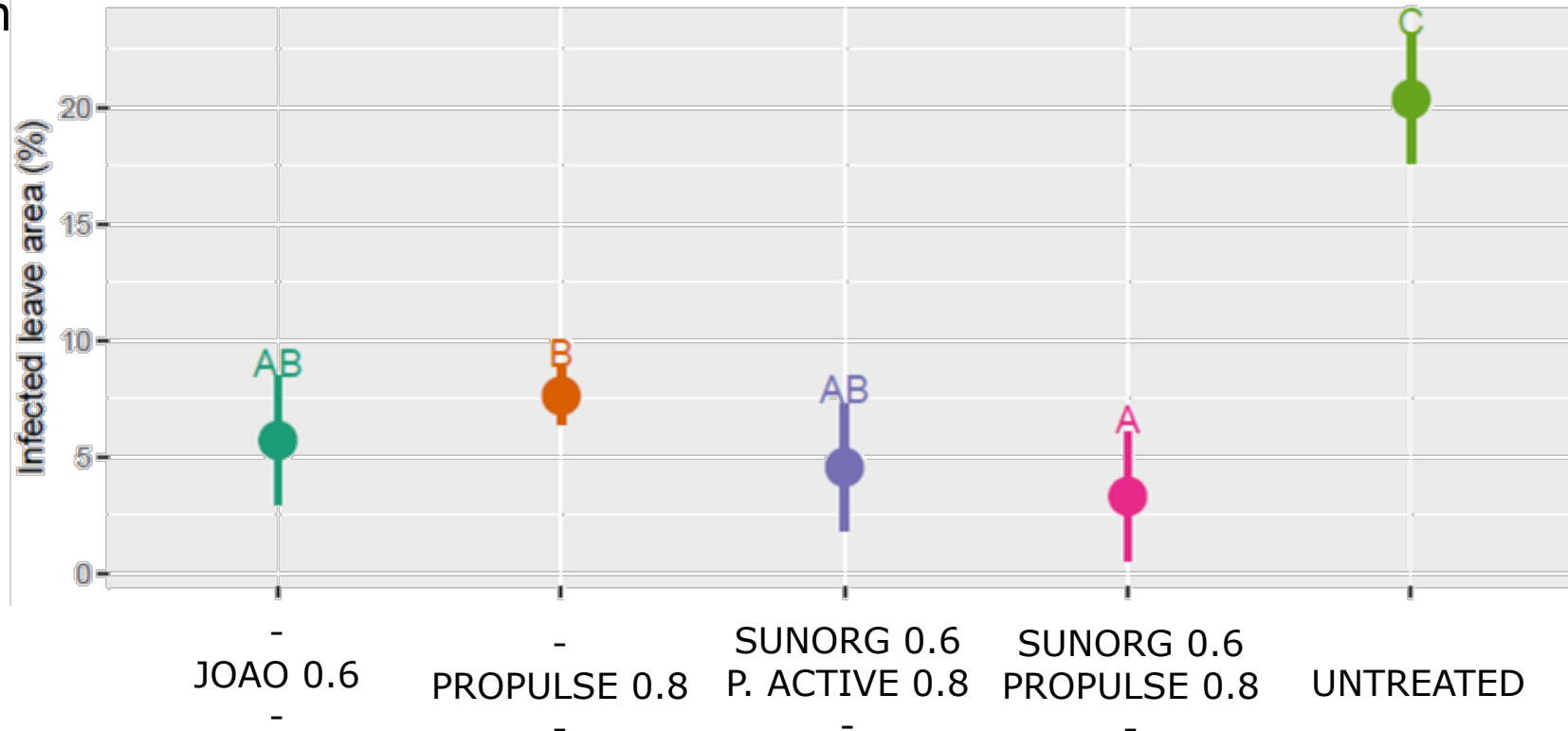
- **In Brittany** : highly infected trial (100% of leave infected in untreated)
→ **No significant difference between untreated and treated plots for frequency (not shown)**

- Infected leave area
→ **significant differences between untreated and treated plots**

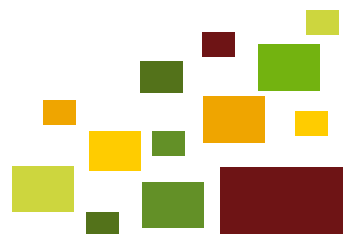
- **Mostly visual differences between one and two spraying programs**

- **One spraying with only prothioconazole (JOAO 0.6) is equivalent to two spraying programs**

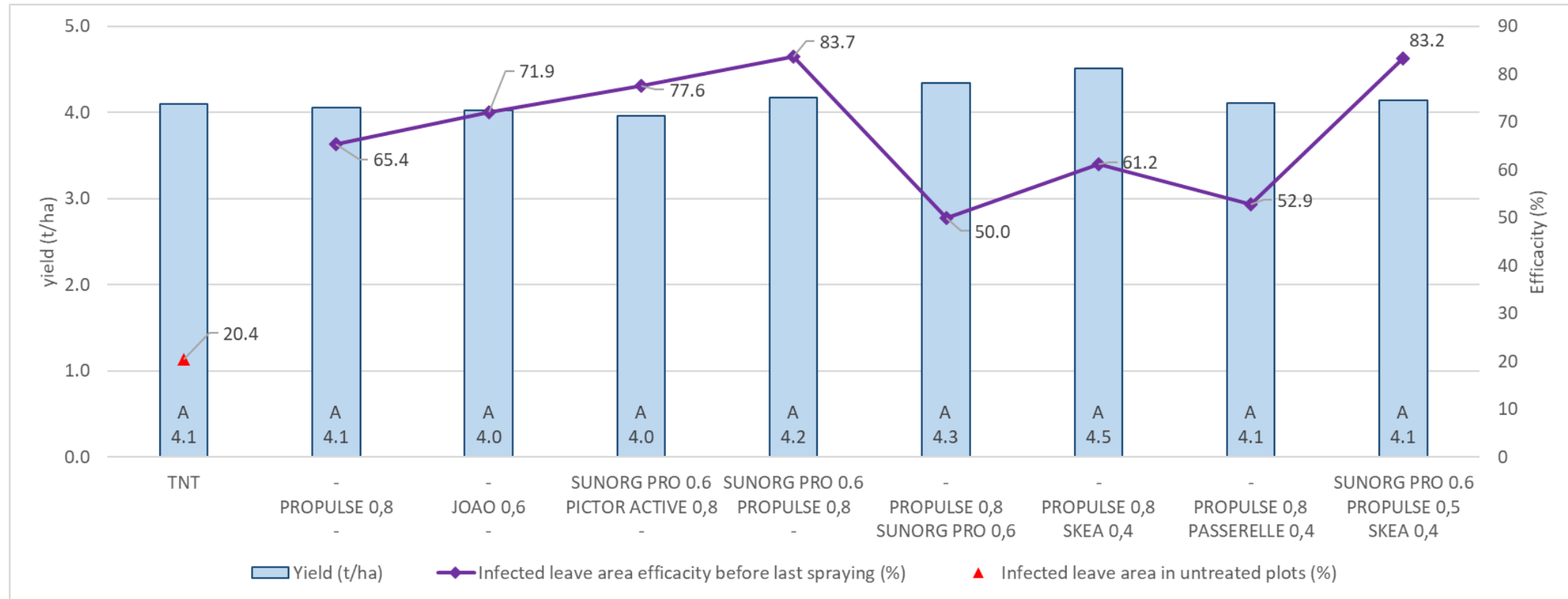
Observation done **at BBCH65 + 15 days, before last spraying**



Tukey at 10%
C.V : 32.3 %
R² : 0.80

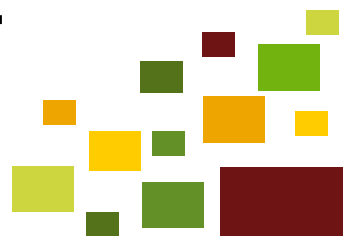


But there's no correlation between infected leaf area efficacy and yield ($r^2=0.011$)



Moreover, **no efficacy of last spraying observed on pods** :

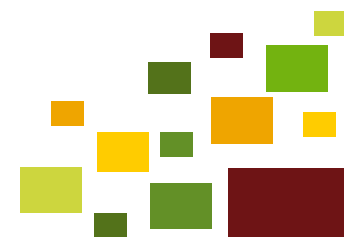
- No disease on pods until lately in June
- Disease arrival on pods occurs after fungicide persistence



Advice for growers : Managing ringspot disease

No new elements in the past two years' trials to overrule previous advice, due to low rainfall during spring :

- Do not spray fungicide at BBCH31 even if symptoms are observed : there's no evidence of yield gain for such practice
- In most cases : 1 spraying at BBCH65 is enough to manage the disease
 - ✓ Triazoles (and prothioconazole in particular) are the best option
 - ✓ Do not alter the dose applied as there's an incidence on efficacy (ex : advised dose for PROPULSE is 0.8 l/ha (→ 100 g/ha prothioconazole))
- In case of humid spring (rare) : spray a 2nd time, 10 to 20 days after the first spraying to slow down the ringspot disease progression towards pods
 - ✓ Use of triazole, preferably prothioconazole is recommended
- Studies still on-going (assessing harmfulness, etc.)



**Thank you for
listening**

