RINGSPOT DISEASE IN FRANCE
A QUICK OVERVIEW

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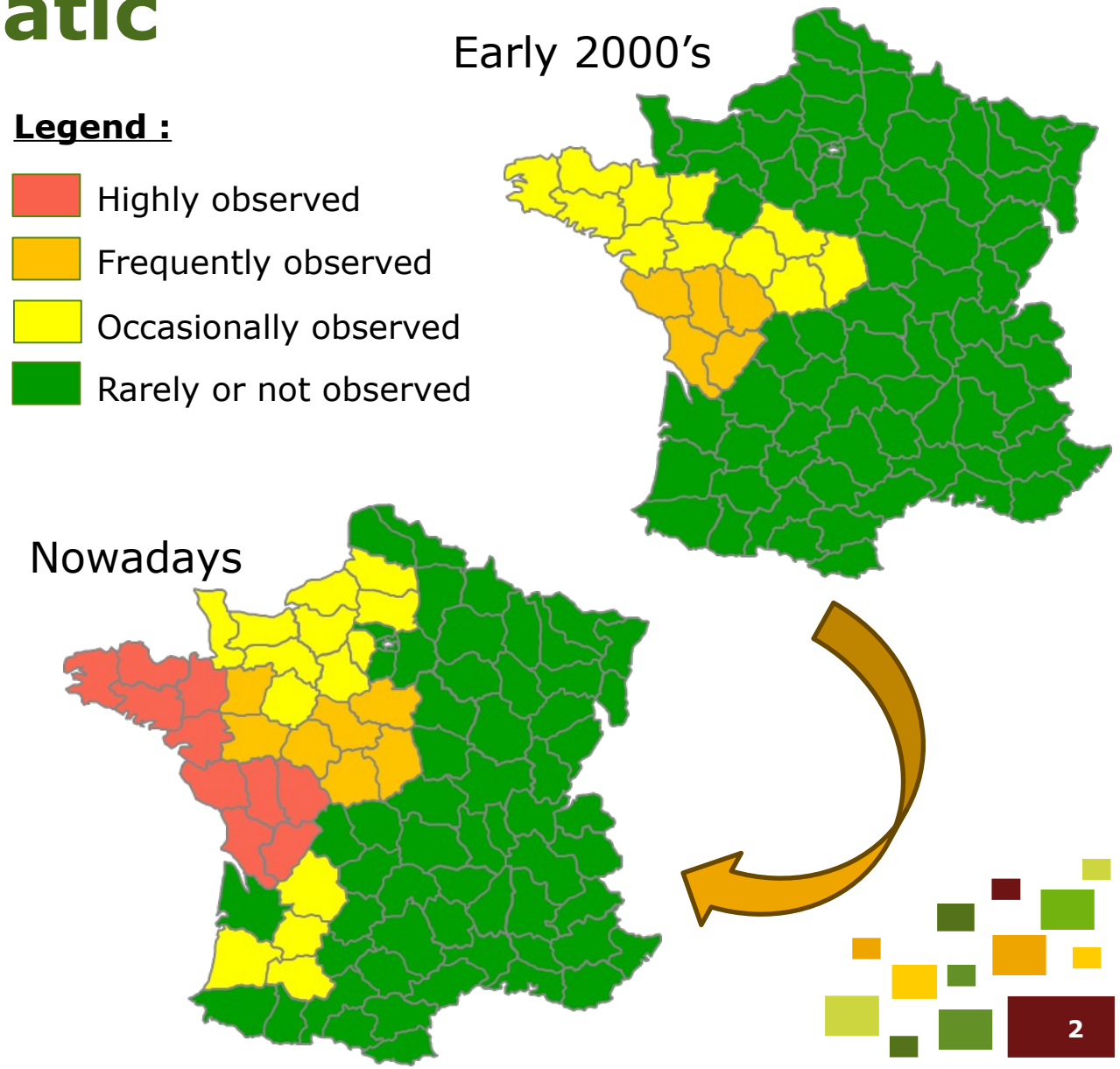
Ringspot disease in France – an old and known yet increasing problematic

- 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

- Pathogen : ***Mycosphaerella brassicicola*** (*Asteromella brassicae*)

- 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)



Ringspot disease – High polymorphism

On leaves

On stem

On pods

Pictures source : Terres Inovia and INRAe (IGEPP)

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, 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 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

Visual efficacities on infected leave area following early spraying compared to untreated

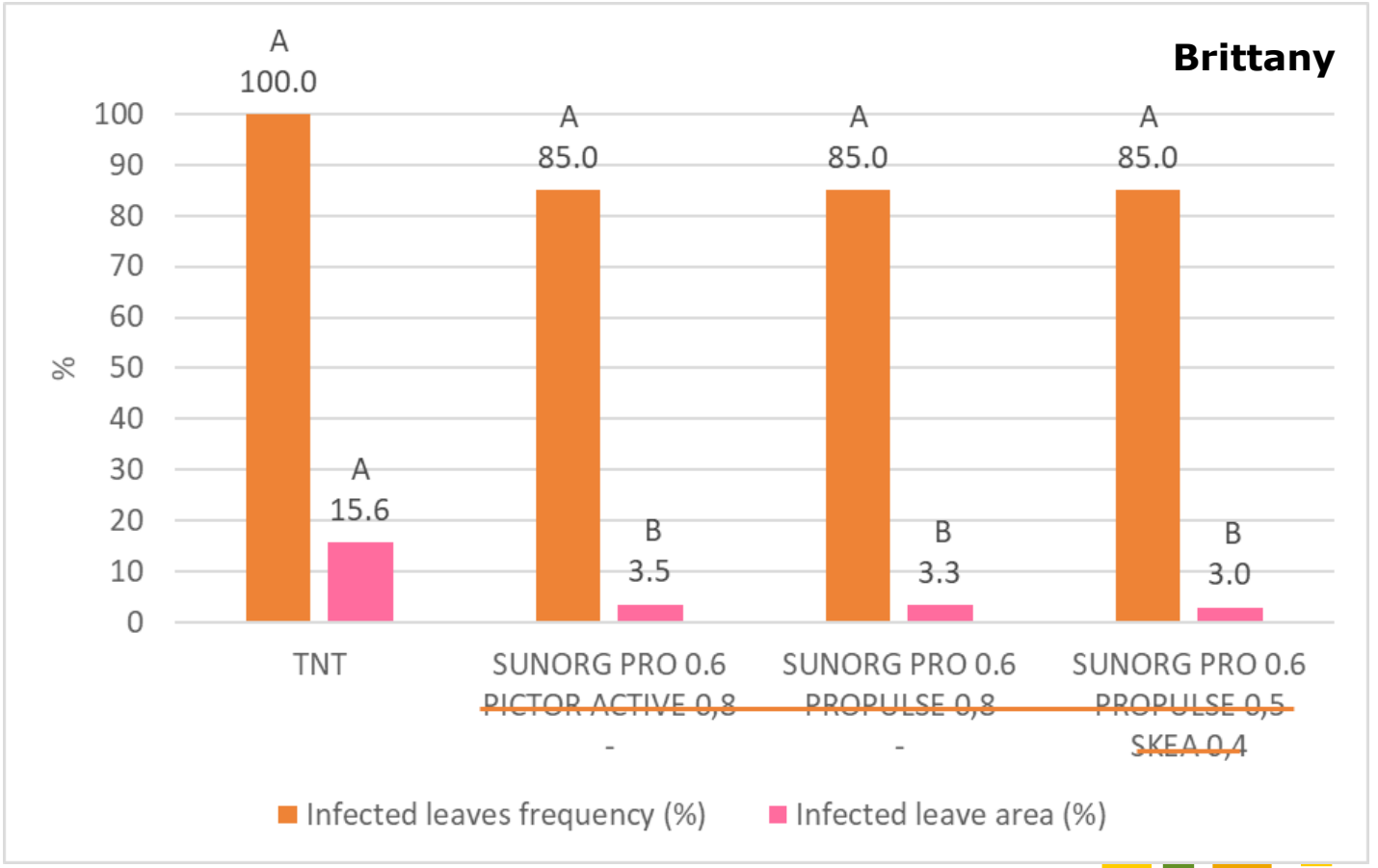
Observation done **just before applying at BBCH65**

- **In Brittany :** highly infected trial (100% of leaves infected in untreated plots)

→ **NS differencies on frequency**

- Moderate intensity infection

→ **significative differences on infected leave area**



At BBCH65 + 15 days, double spraying programs seem to be sightly more efficient than one spraying program

- **In Brittany :** highly infected trial (100% of leave infected in untreated)

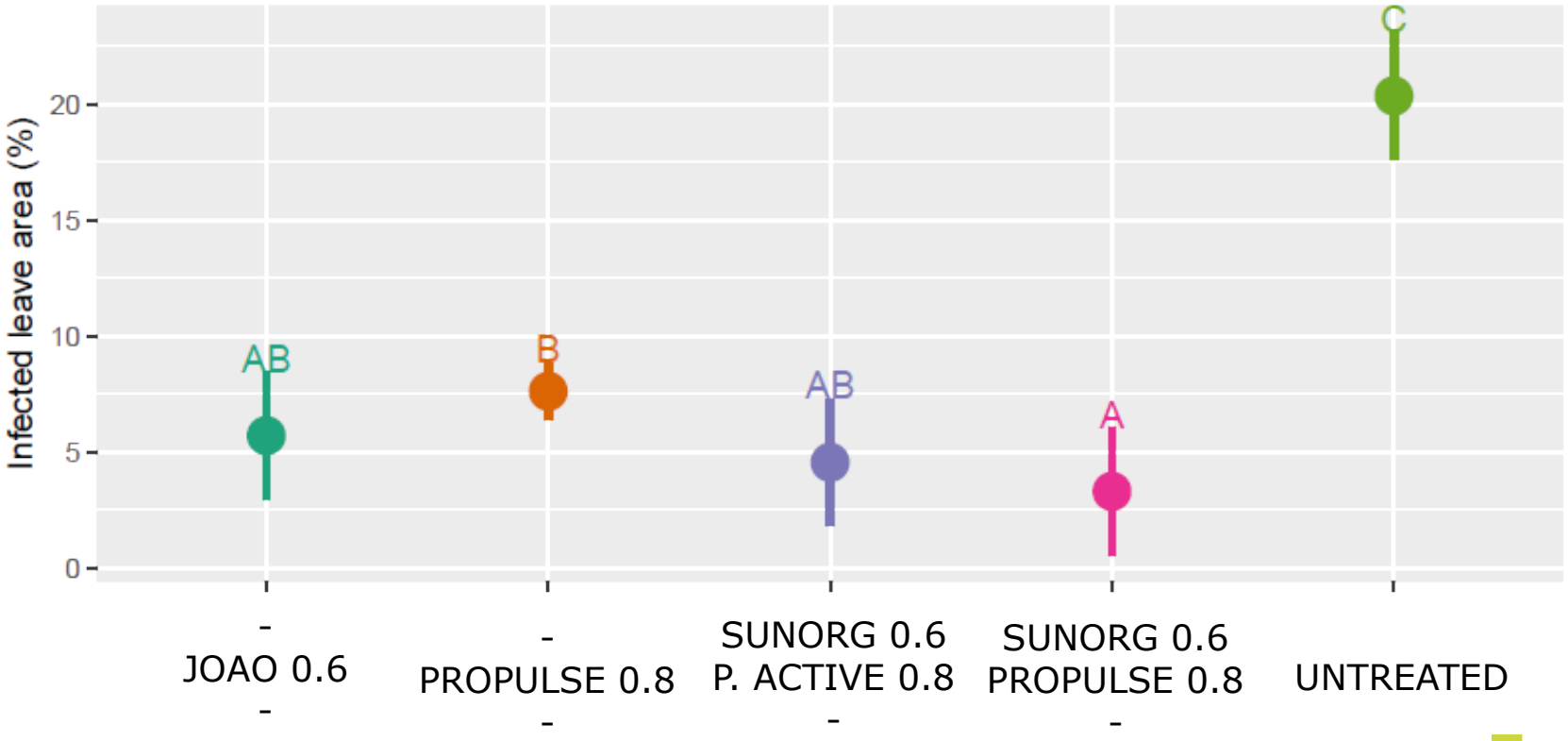
→ **No significative difference between untreated and treated plots <u>for frequency</u>** *(not shown)*

- Infected leave area

→ **significative differencies between untreated and treated plots**

→ **Mostly visual differencies between one and two spraying programs**

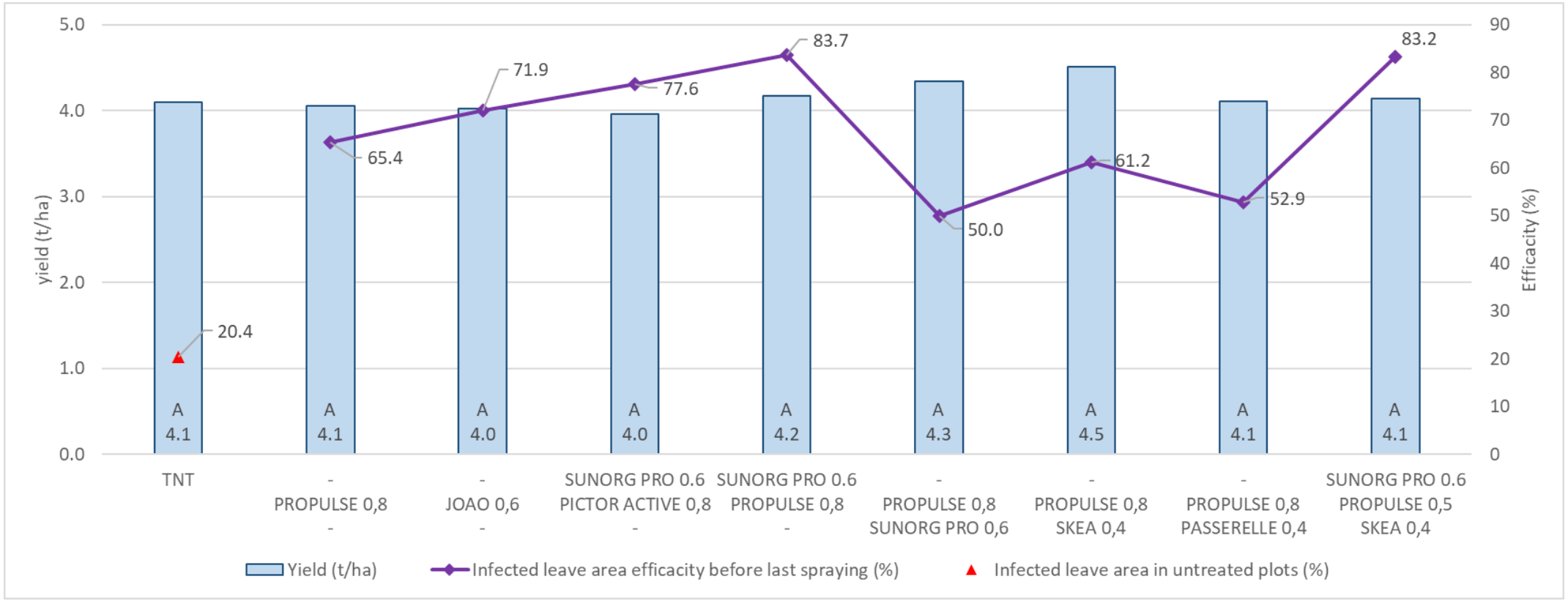
Observation done **<u>at BBCH65 + 15 days, before last spraying</u>**



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

Tukey at 10%
C.V : 32.3 %
R^2 : 0.80

There’s no correlation between infected leave area efficacity and yield (r^2=0.011)



Moreover, **no efficacity 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 efficacity** (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 (harmfulness, etc.)**