Institut Technique de la Betterave

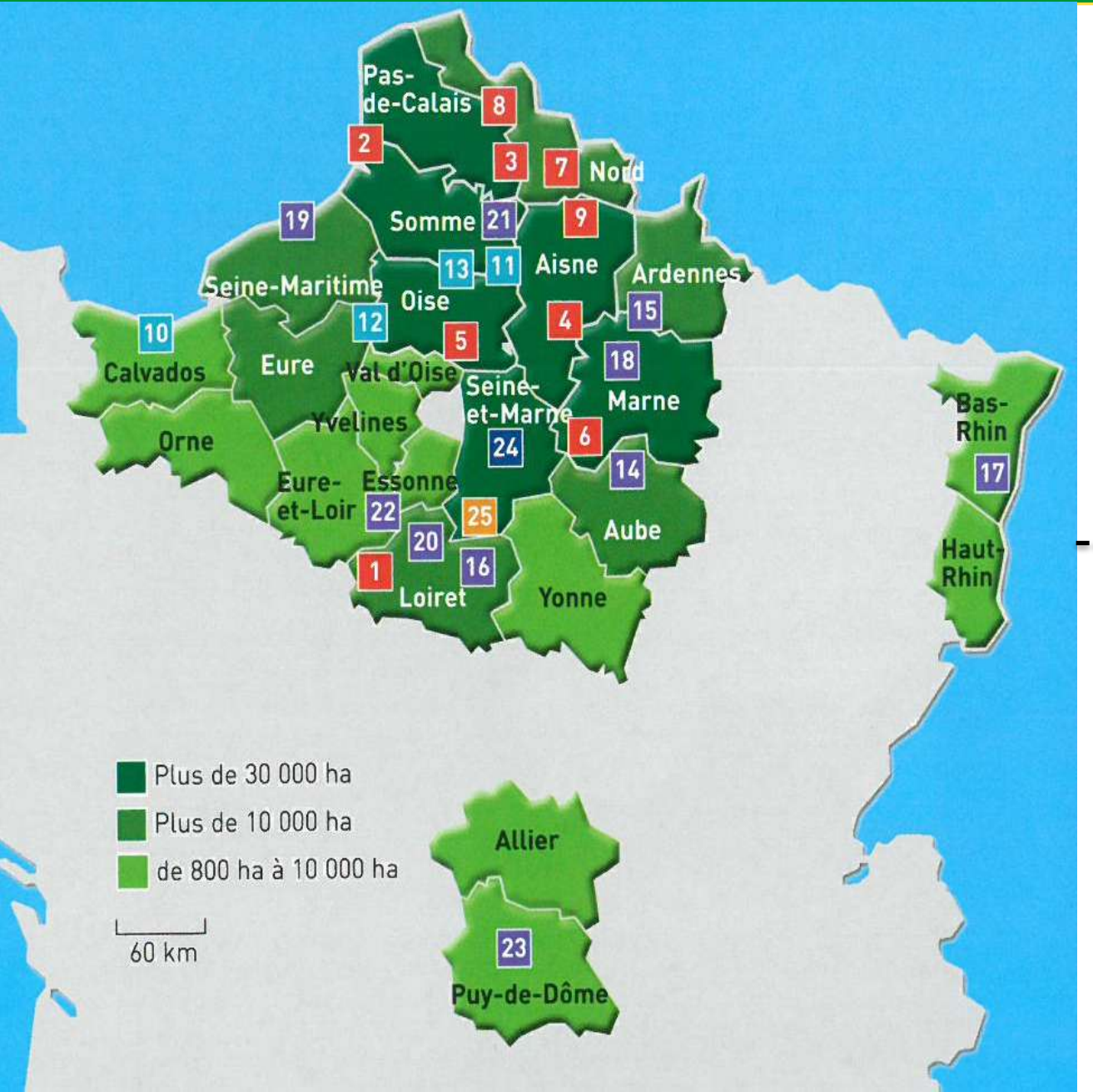
CERCOSPORA LEAF SPOT IN SUGAR BEET

Date 20 / 10 / 2015

Summary

- Sugar beet areas and productions in France
- Cercospora Leaf spot :
  - Spread, critical periods
  - Productive and economical losses
- Crop protection strategies
- Resistances to fungicides :
  - monitoring and prevention strategies
  - management of the efficacies of the fungicides.

SugarBeet areas and production in FR



26 000 growers

≈ 400 000 ha

Sugarbeet Yield (2015)
17,7°
93 t/ha
13.3 t/ha

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25 sugar factories

- **TEREOS (9)**
- **CRISTAL UNION (10)**
- **ST LOUIS SUCRE (4)**
- **LESAFFRE FRERES (1)**
- **OUVRE et FILS SA (1)**

Successful protection

- Foliage diseases may present a risk of loss of yield and quality varies according to climate factors, agronomic and varietal factors.

- ITB confirms the relevance of a reasoned approach to treatment thanks to tools developed in recent years.

Evaluate the risks

Choose a variety adapted to these risks

Optimize the use of an effective product

Resobet-Fongi

- This foliar diseases monitoring network consists of observing representative plots since 2007. It provides:
  - **Risk mapping**
  - Drafting of **Vegetal Health newsletter** in 2015
  - Accurate **information**
  - Advice for **sending information notes by region**
  - Optimal protection adapted to **annual needs**

Du 15 juin au 15 septembre : **www.itbfr.org**

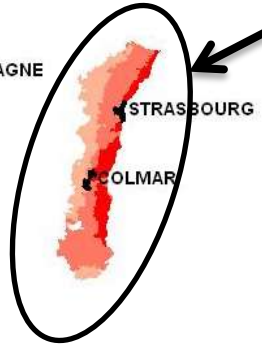
Cercospora Leaf spot in France (Spread)

Regional risk

Climatic risk (Regional climat)

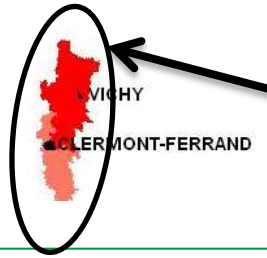
Disease risk (Quantites of inoculm)

Alsace (East France)



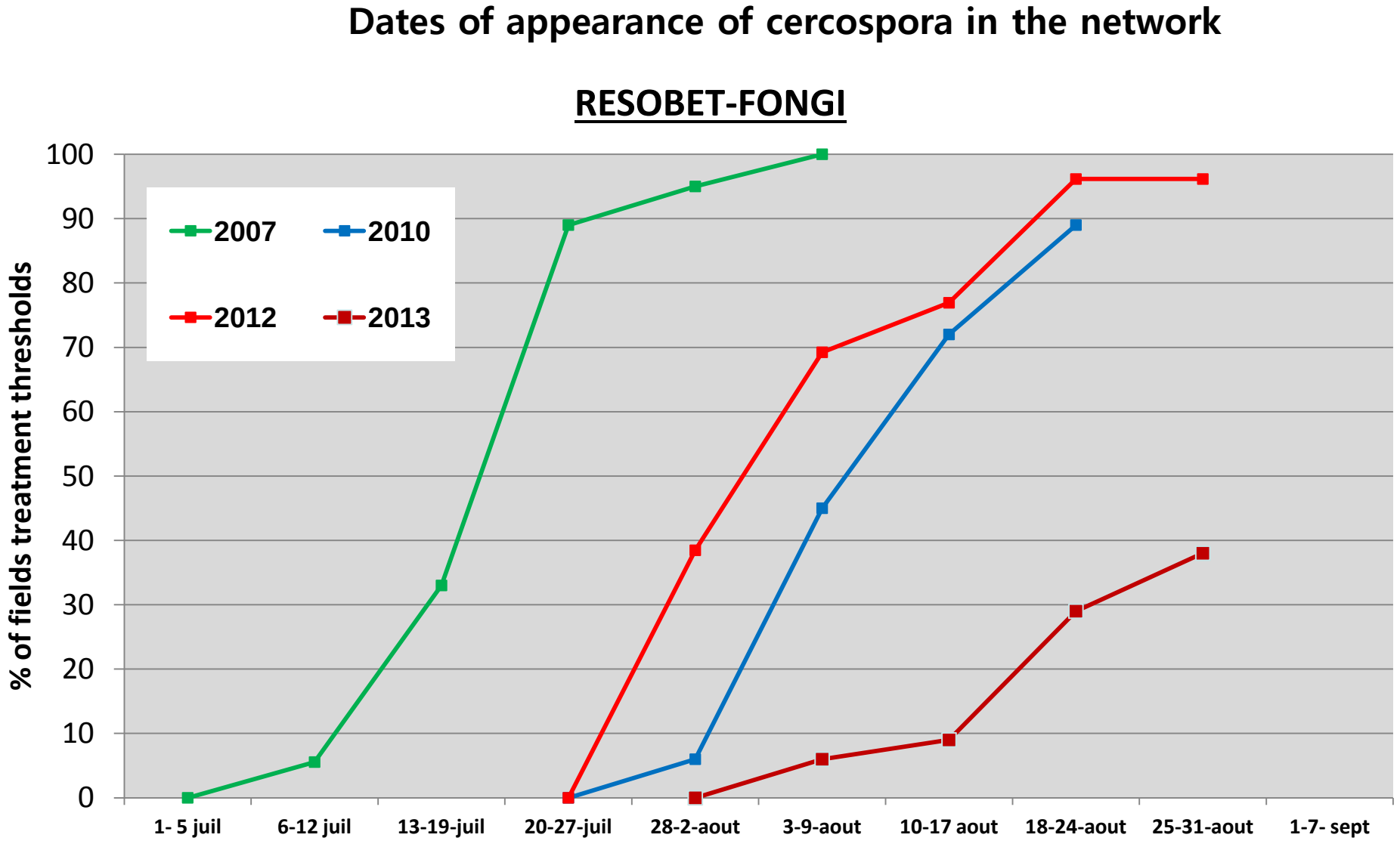
Southern Champagne and Paris

Limagne (Centre France)



5% of the French Sugar beet area is classified high risk

The risk is different according to the year



Respect of treatment thresholds




	oïdium	cerco	ramu	rouille
T1	15 %	5 %	5 %	15 %
T2	30 %	20 %	20 %	40 %
T3	30 %	25 %	25 %	40 %

Ensure the proper timing of application

If too early

↓

Loss of product efficiency

↓

- Risk of further treatment
- Unnecessary treatment because no disease

If too late

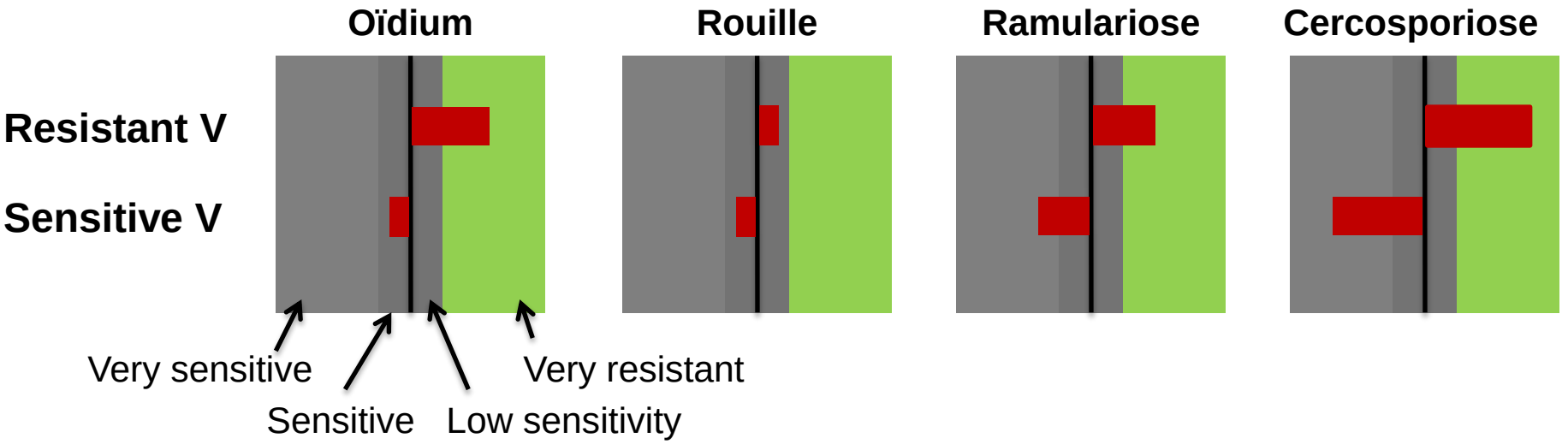
↓

Loss of product efficiency

↓

- Lost productivity
- Faster spread of fungus

Varietal choice



Varietal choice

-T1 LE 23/07 PRIORI XTRA 1 L

-T1 LE 17/07 PRIORI XTRA 1 L

Resistant variety

Sensitive variety

Varietal choice

-*T1 LE 23/07 PRIORI XTRA 1 L*

-*T1 LE 17/07 PRIORI XTRA 1 L*

-*T2 LE 31/07 SPYRALE 1L*

Resistant variety

Sensitive variety

Varietal choice

-*T1 LE 23/07 PRIORI XTRA 1 L*

-*T1 LE 17/07 PRIORI XTRA 1 L*

-*T2 LE 31/07 SPYRALE 1L*

-*T3 LE 16/08 ARMURE 0.6 L*

Resistant variety

Sensitive variety

Varietal choice

-T1 LE 23/07 PRIORI XTRA 1 L

Final Yield 120.3 t/ha

One treatment

-T1 LE 17/07 PRIORI XTRA 1 L

-T2 LE 31/07 SPYRALE 1L

-T3 LE 16/08 ARMURE 0.6 L

-T4 LE 03/09 ARMURE 0.6 L

Final Yield 116.6 t/ha

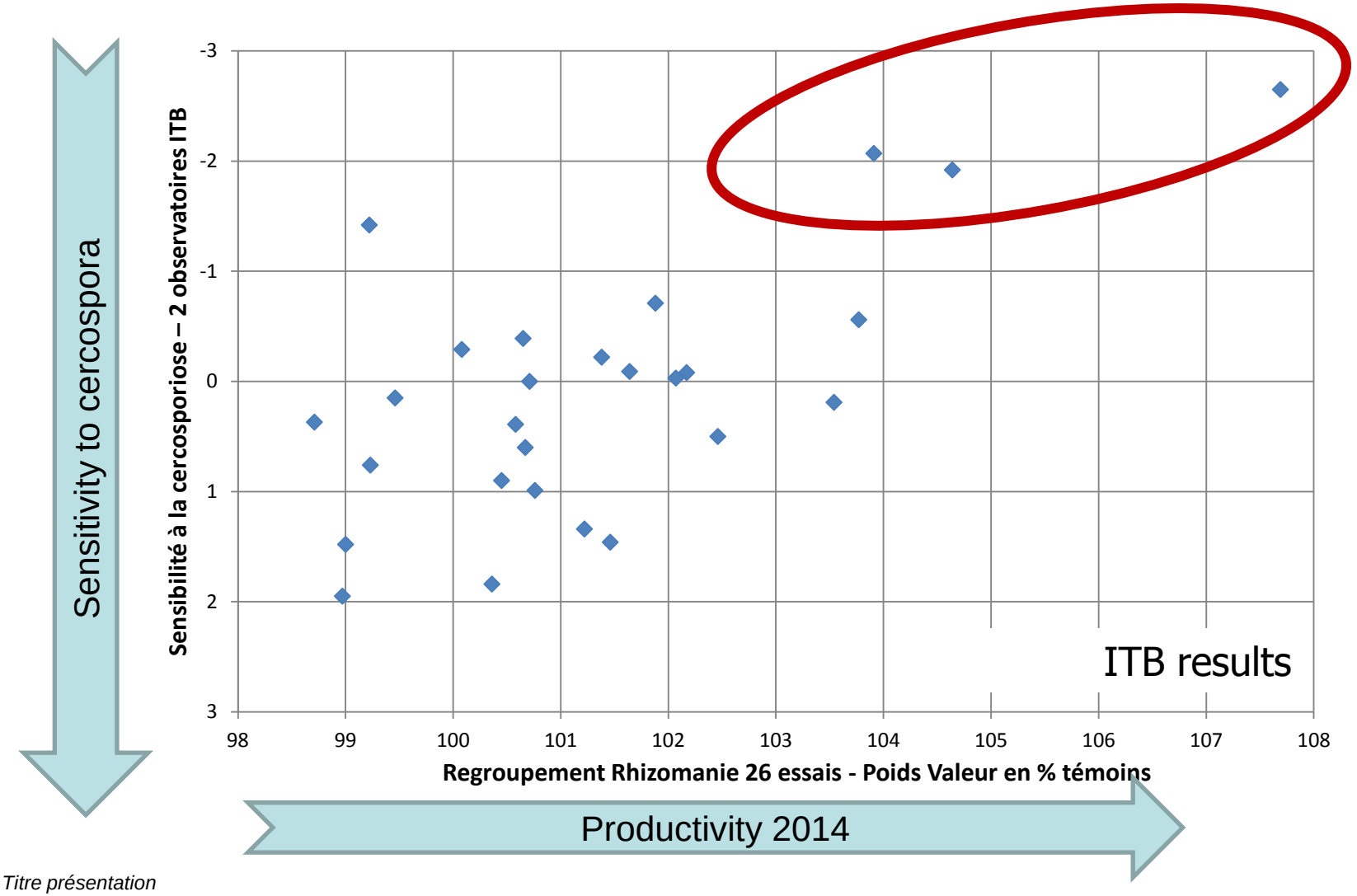
4 treatments

Another example of a variety choice

Without treatment

Choose a good variety

Good practice in the control of foliage diseases is not an obstacle to increased productivity



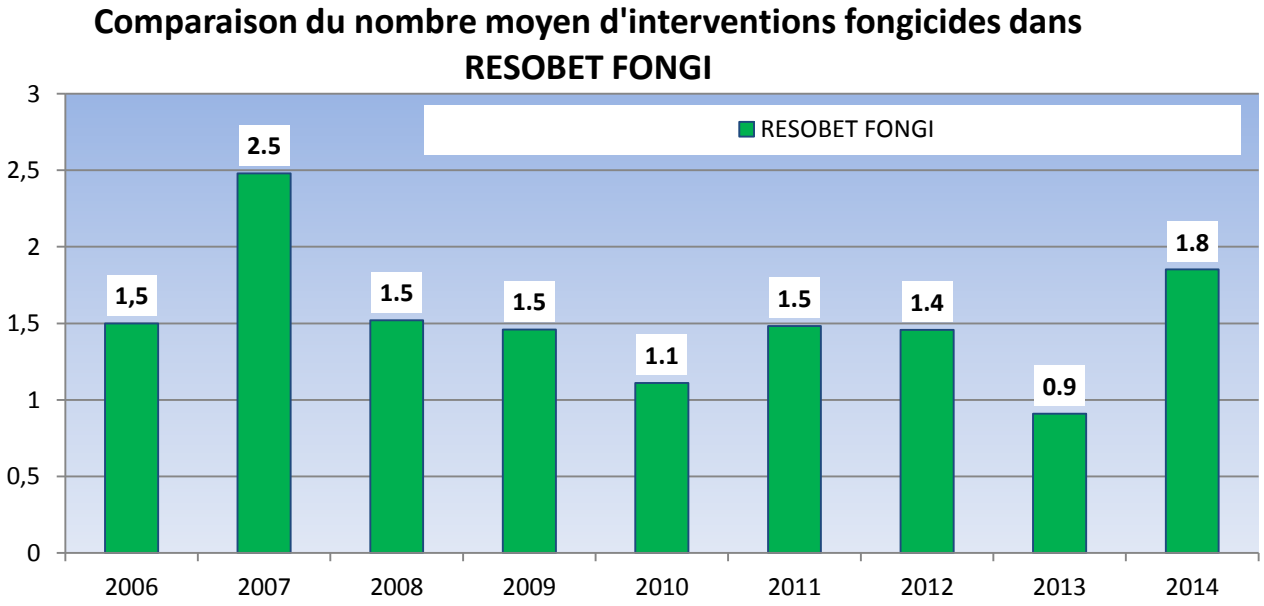
Adapt the right fungicide and the right dose

Fungicide Product use in France (2014) :

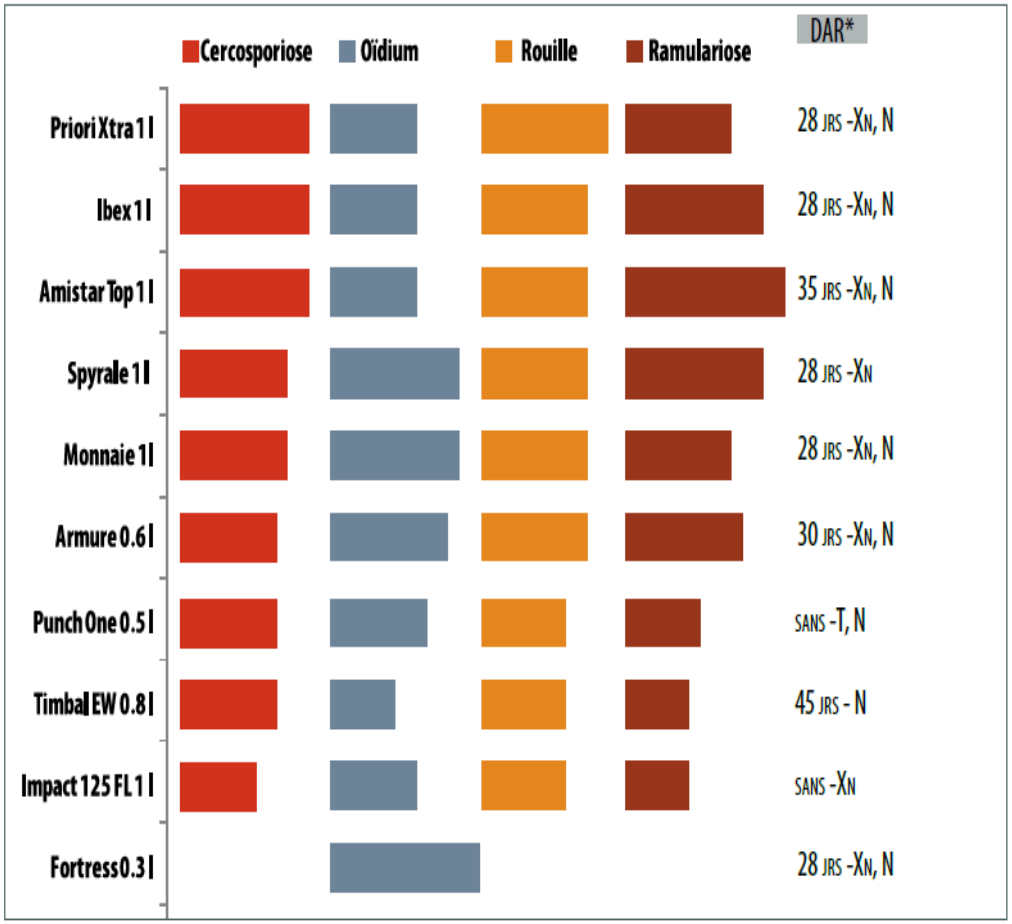
- 60% Triazoles associated (ex: morpholine)
- 38% Triazoles + Strobillurines
- 2% Sulphur

- Depending on the year 1 or 2 treatments are used

- In each application, the active substance used are alternated to prevent the development of resistance



Performance of fungicides



Priori xtra: Azoxystrobine 200. G/L Cyproconazole 80. G/L
Ibex : Epoxiconazole 50. G/L Pyraclostrobine 133. G/L
Amistar top Azoxystrobine 200. G/L Difénoconazole 125. G/L
Spyrale Difénoconazole 100. G/L Fenpropidine 375. G/L
Monnaie Fenpropimorphe 250. G/L Epoxiconazole 84. G/L
Armure Propiconazole 150. G/L Difénoconazole 150. G/L
Punch Flusilazole (non autorisée en france) 250. G/L
Timbal Tétraconazole 125. G/L
Impact Flutriafol 125. G/L
Fortress Quinoxyfène 500. G/L

Each year, ITB sets up an experiment in its monitoring network on the evaluation of fungicides.

This is to advise on the best product to apply to the disease

CONCLUSION

ITB has developed many tools to manage foliage diseases better and to give advice.

<u>Fungicide protection strategy is :</u>

- **The choice of variety is an essential tool in fungicide protection**
- **An effective monitoring network (RESOBET FONGI) recognized by the sugarbeet sector**
- **The respect of treatment thresholds and proper timing ensures successful fungicide protection**
- **Choosing the right product at the right dose is essential for successful interventions**