

Développement de la résistance, mécanismes de fonctionnement

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Ph.D.

Laboratoire de Biocontrôle (Prof. R. Bélanger)



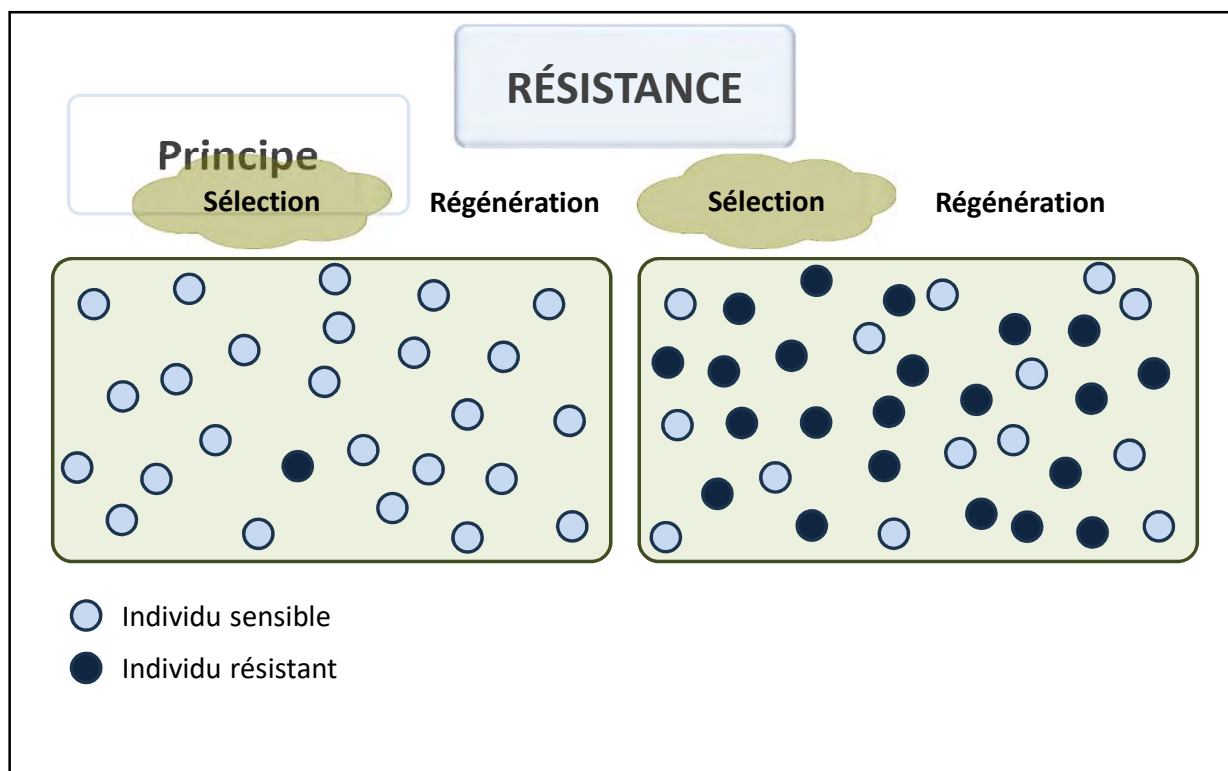
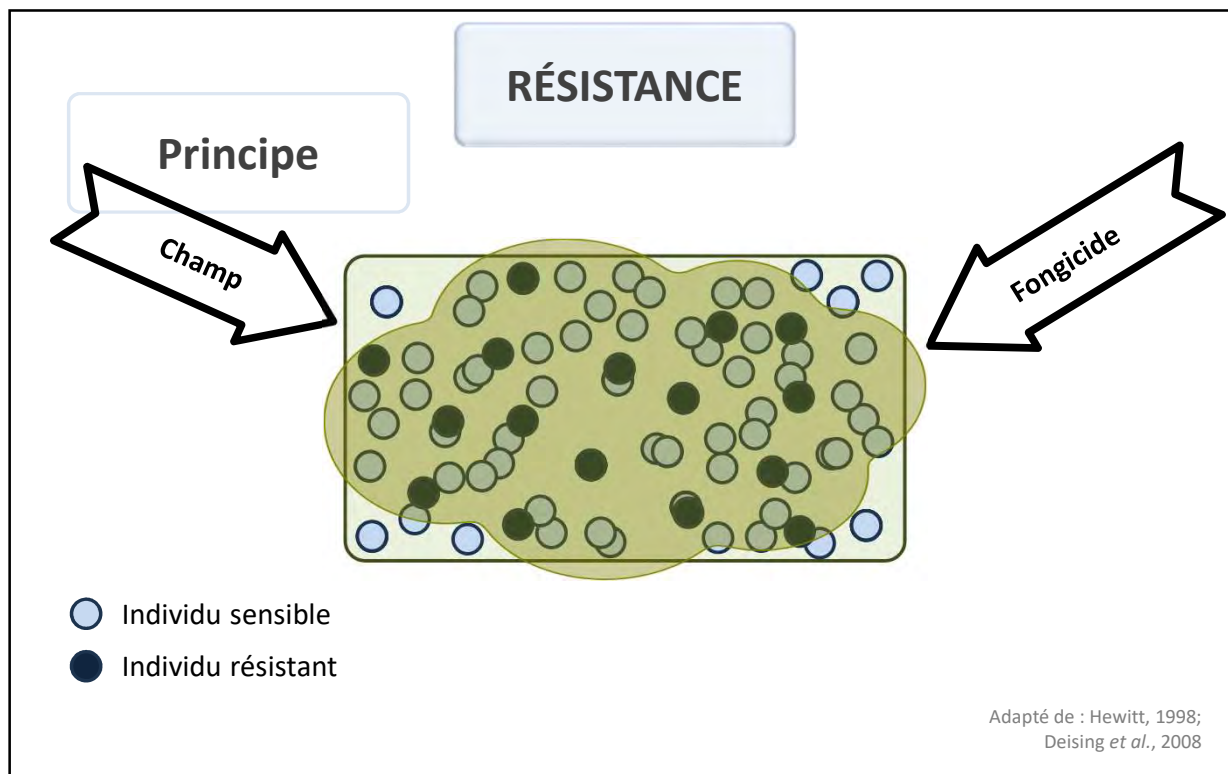
UNIVERSITÉ
LAVAL

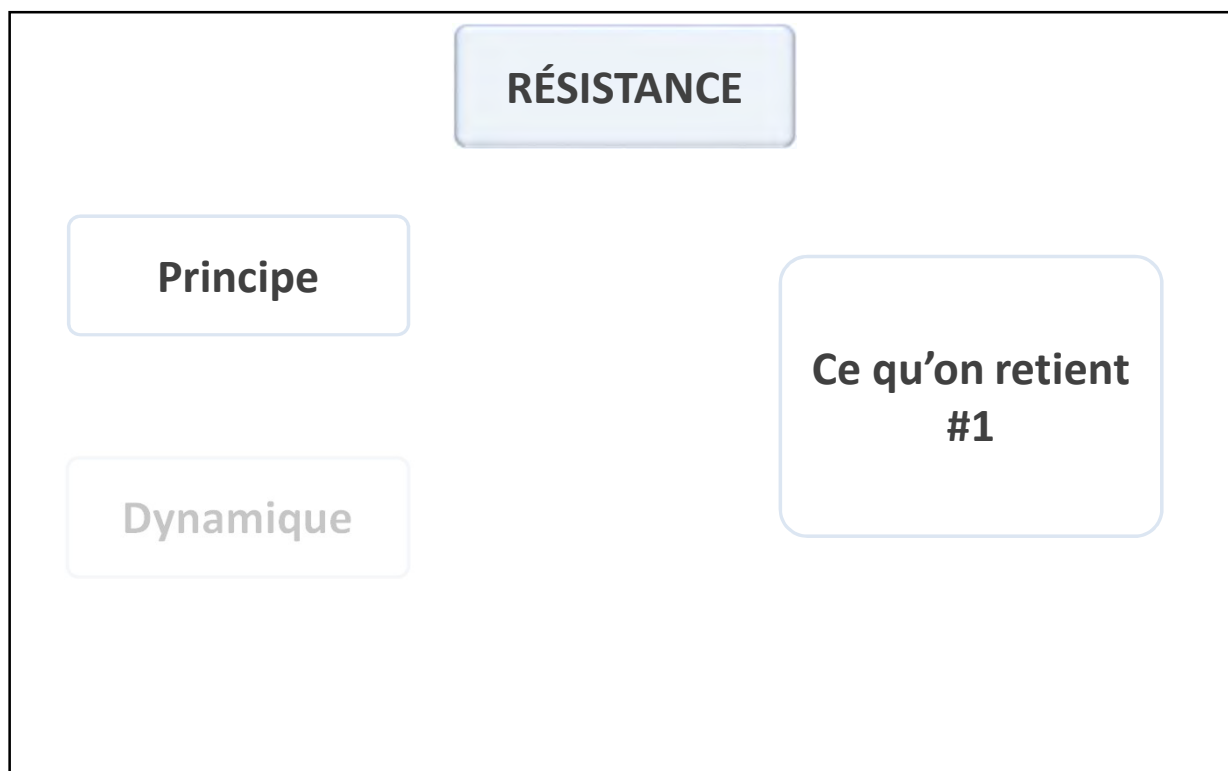
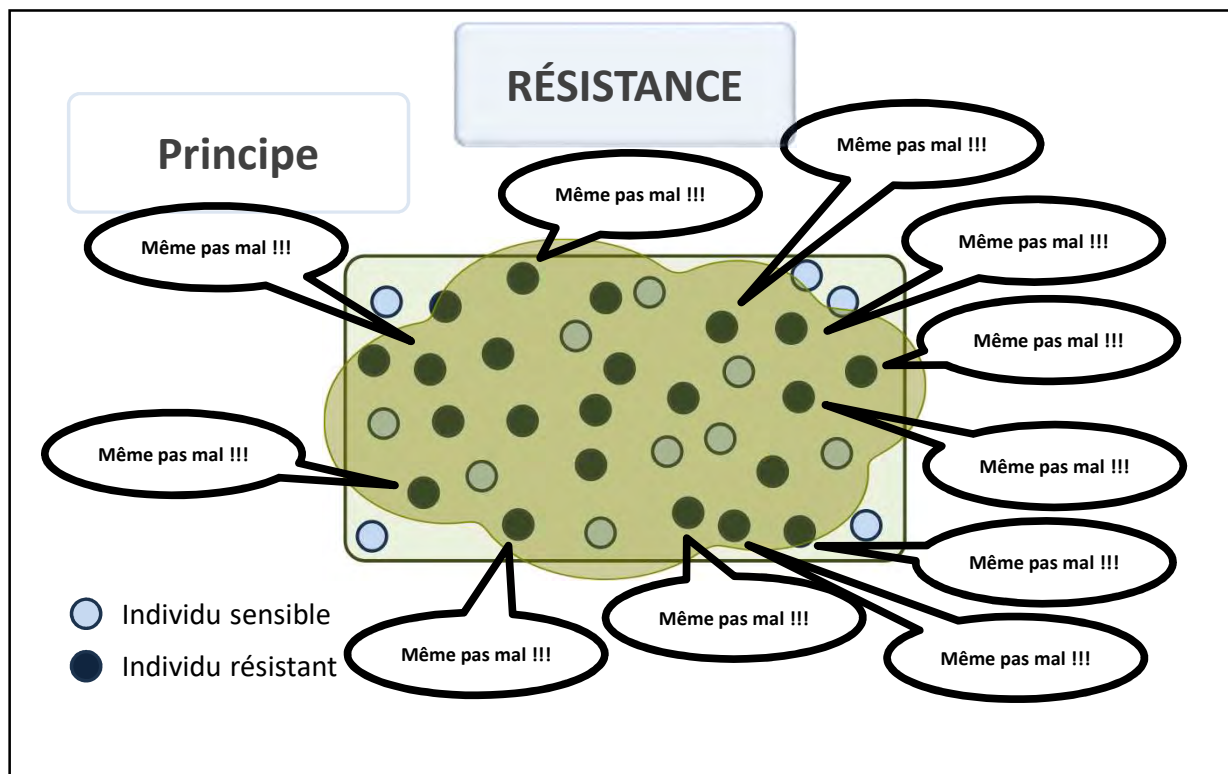
RÉSISTANCE

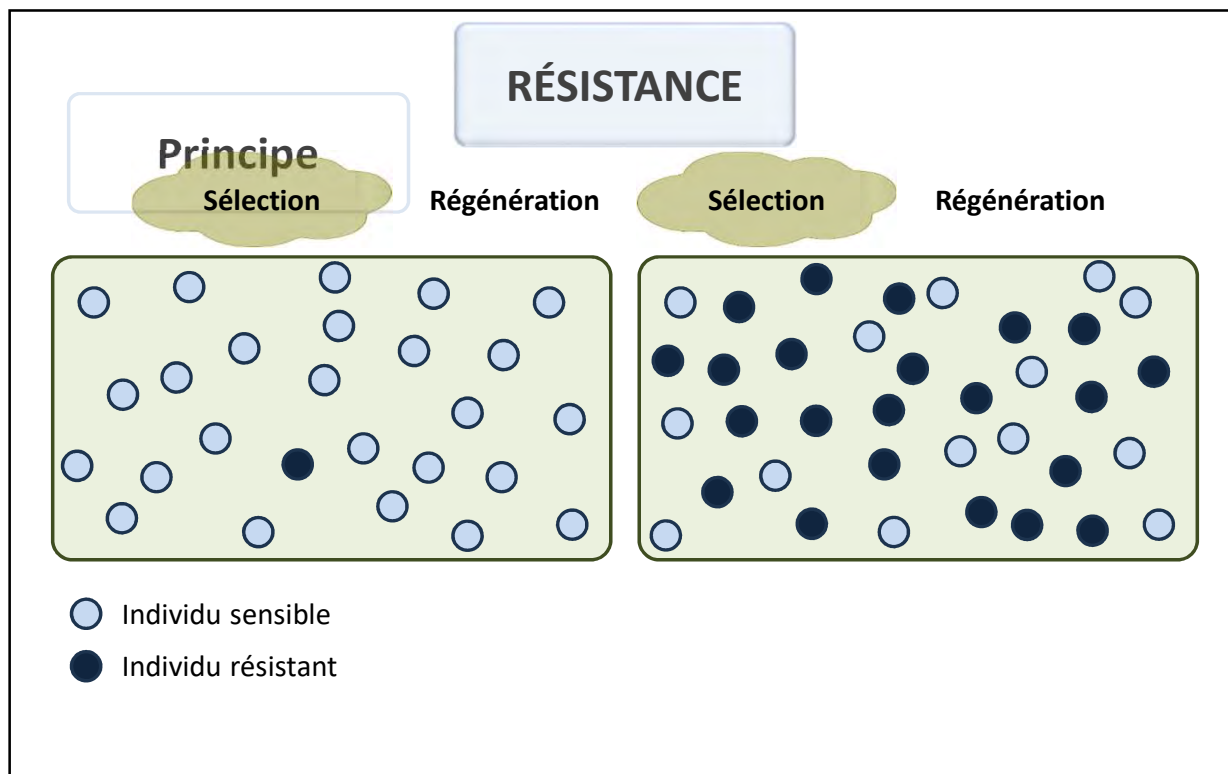
Principe

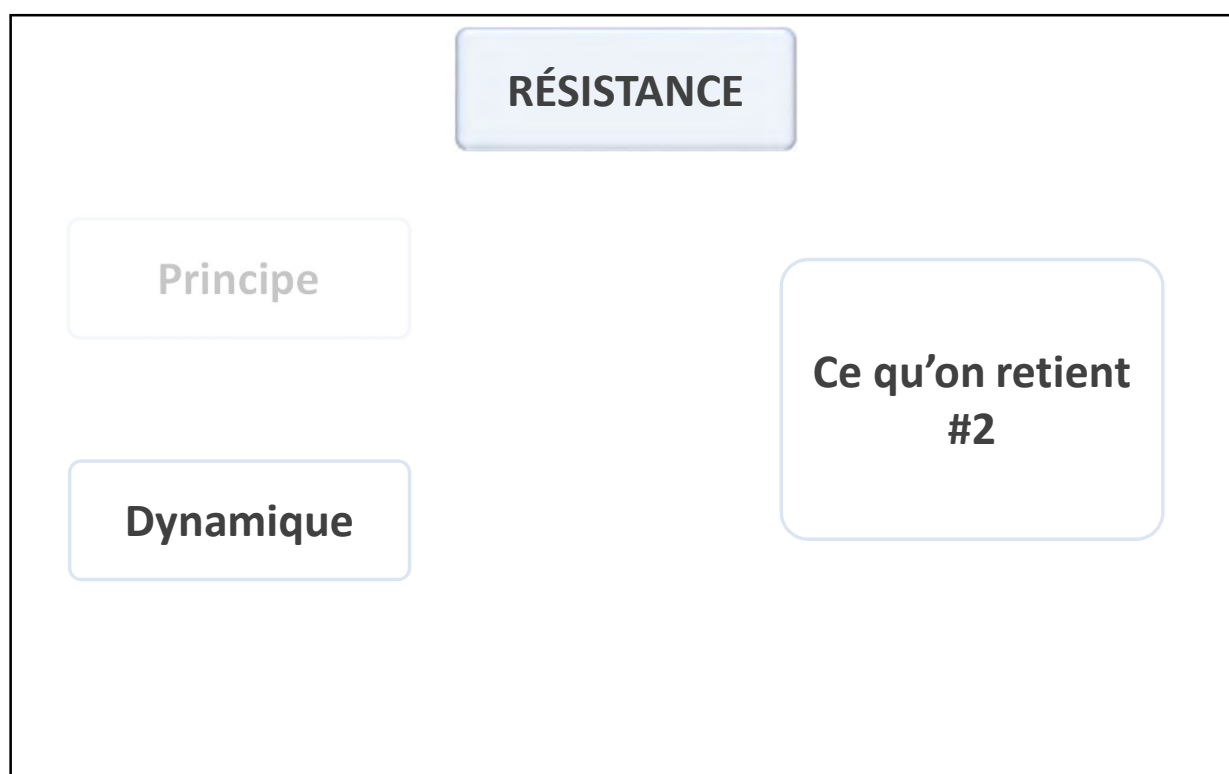
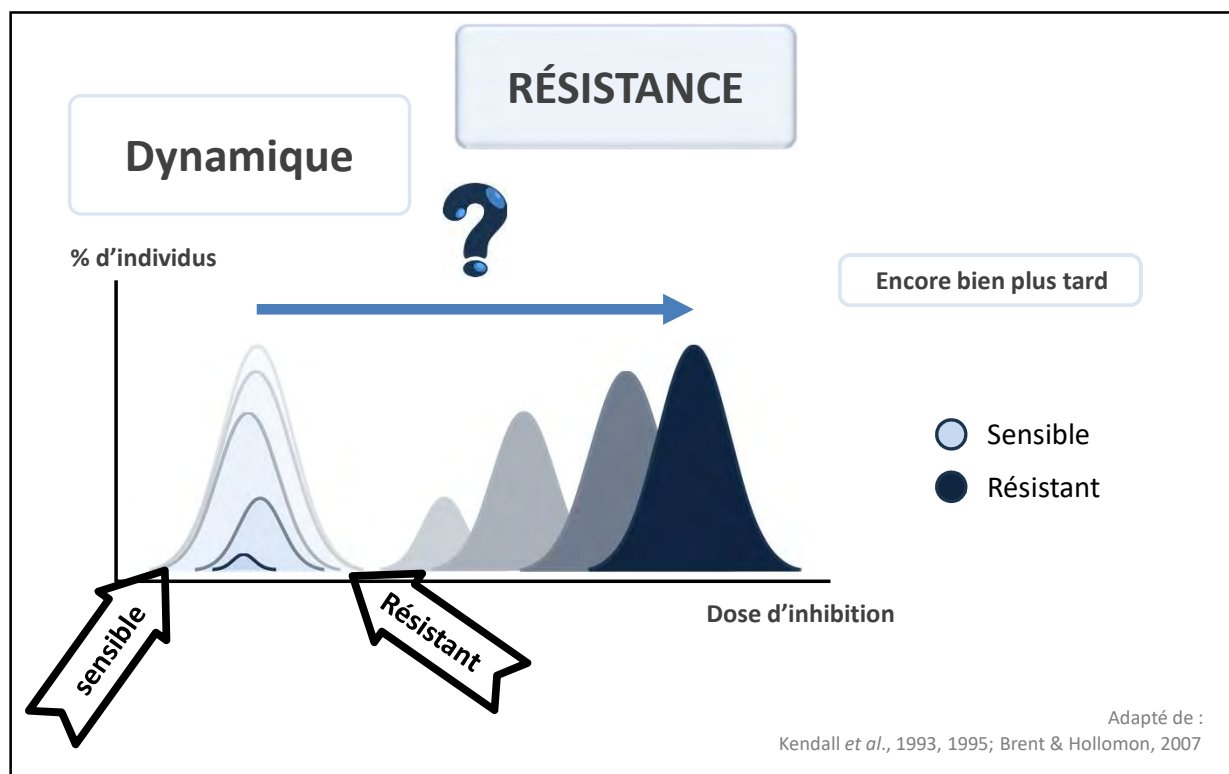
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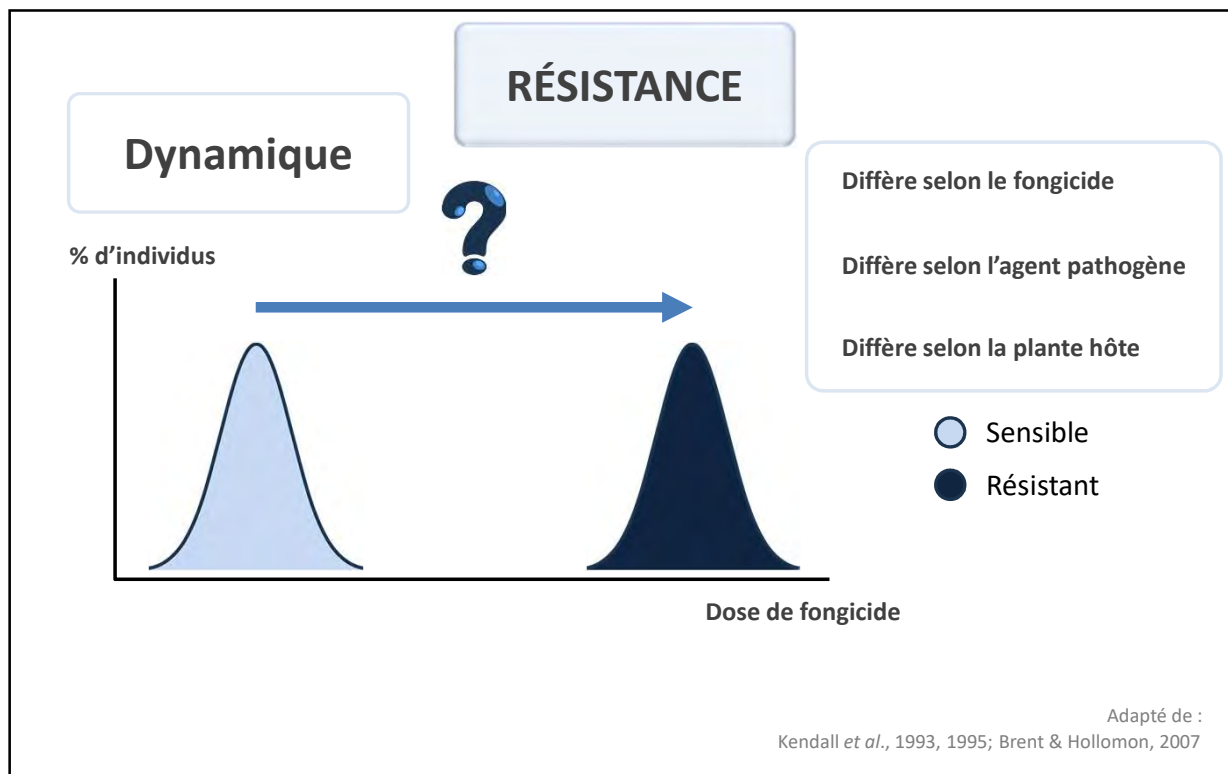












Mode d'action

FONGICIDE

✖

Groupe



?

Type

Mode d'action

FONGICIDE

✖

A: Nucleic Acids Metabolism


B: Cytochrome P-450 dependent Monooxygenase

C: Receptor mediated

D: Antimetabolite

E: Signal Transduction

F: Lipid Synthesis or Transport / Membrane Integrity or Function



FUNGICIDE

RESISTANCE

ACTION COMMITTEE

G: Sterol Biosynthesis in Membranes

H: Cell Wall

I: Mitochondrial

M: Cell Membrane

BM: Biotin Metabolism

P: Host Plant Defence Induction


UKN: Unknown Mode of Action

13

Modes d'actions

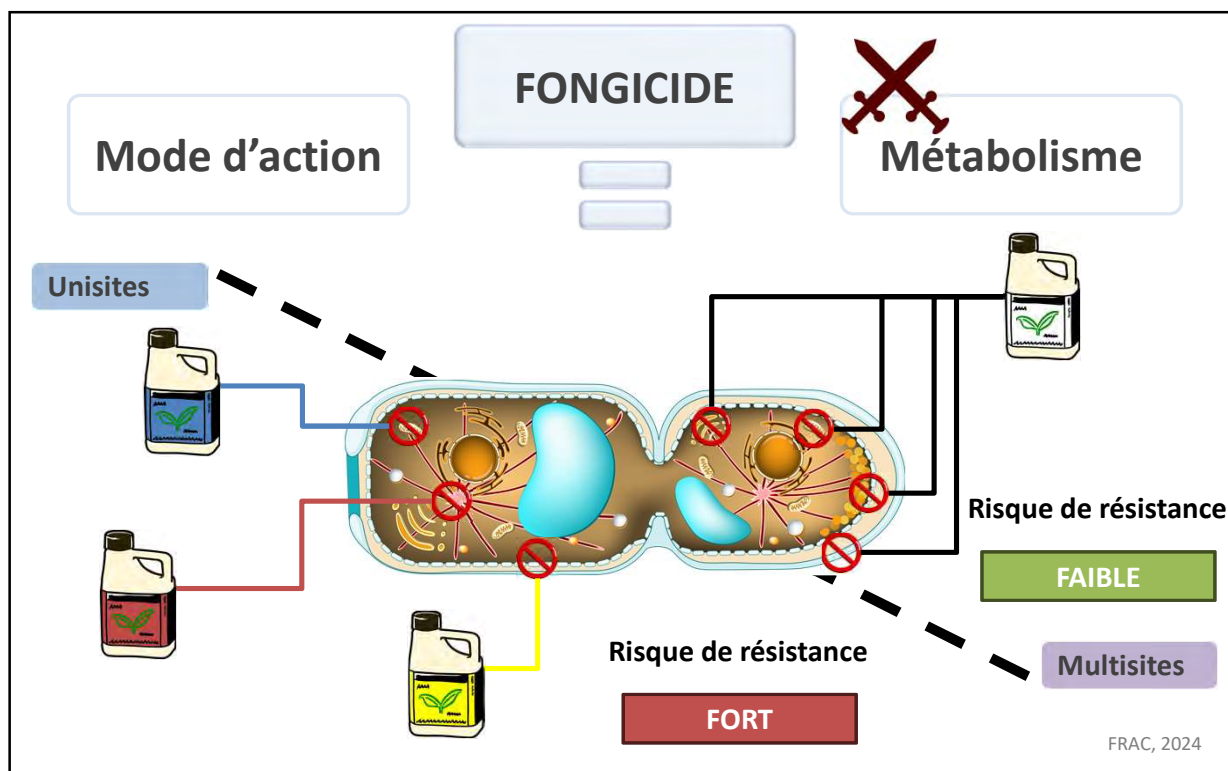
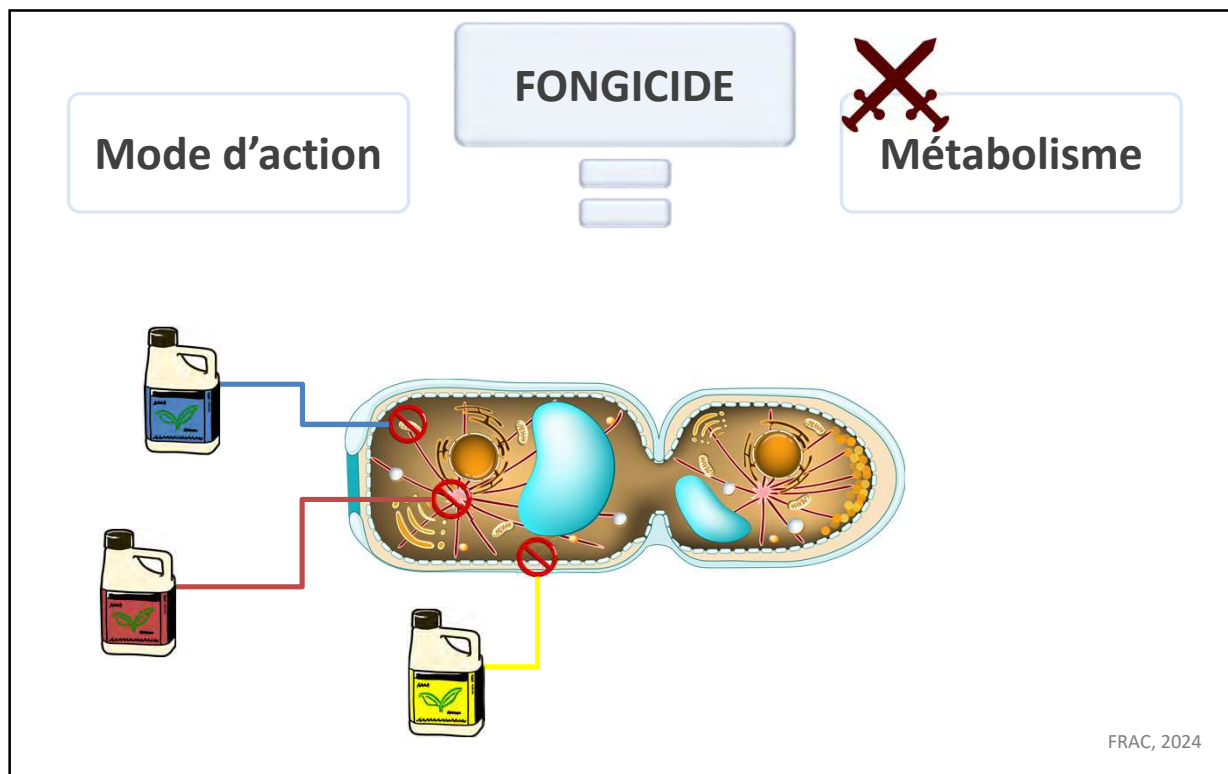
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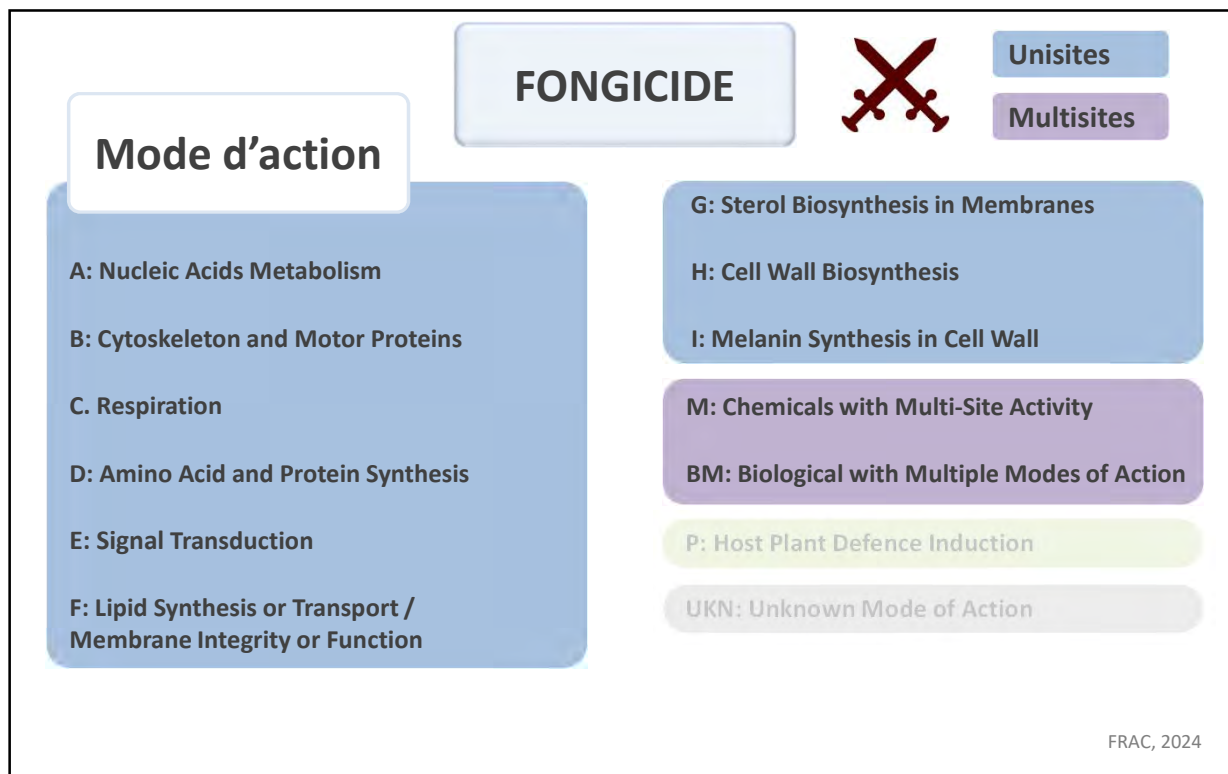
FRAC, 2024

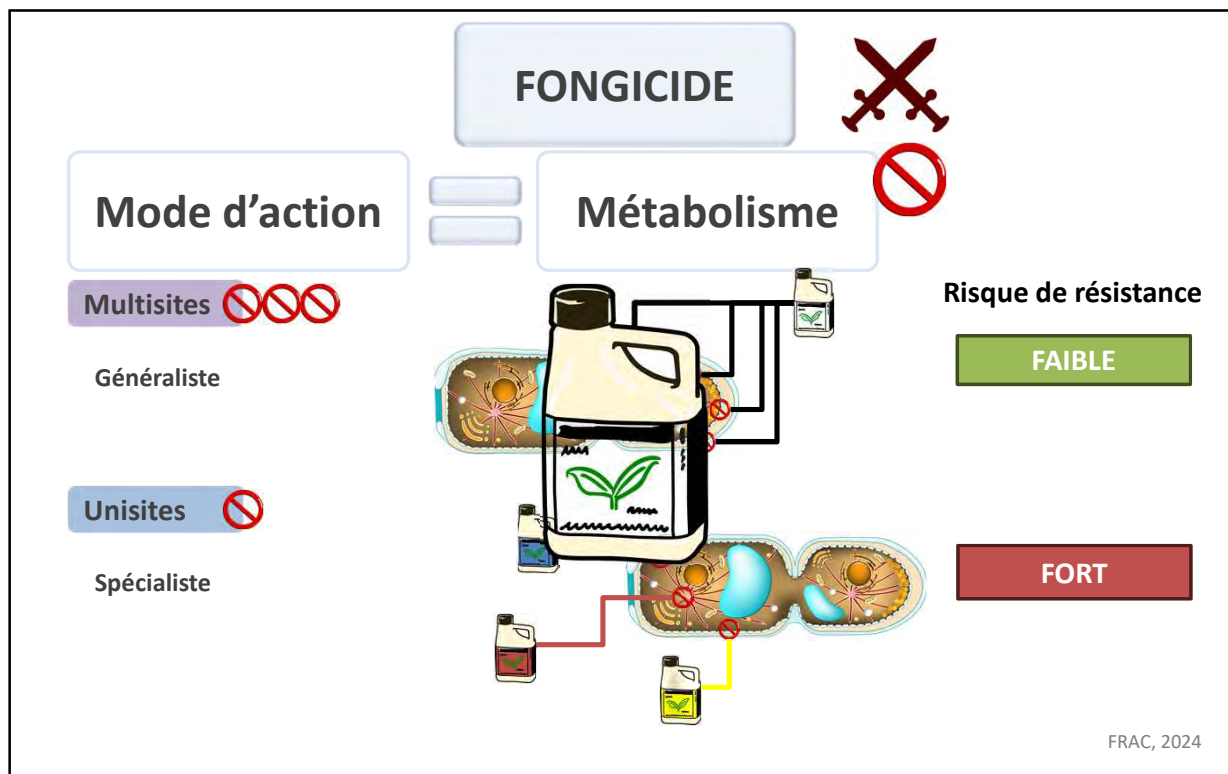
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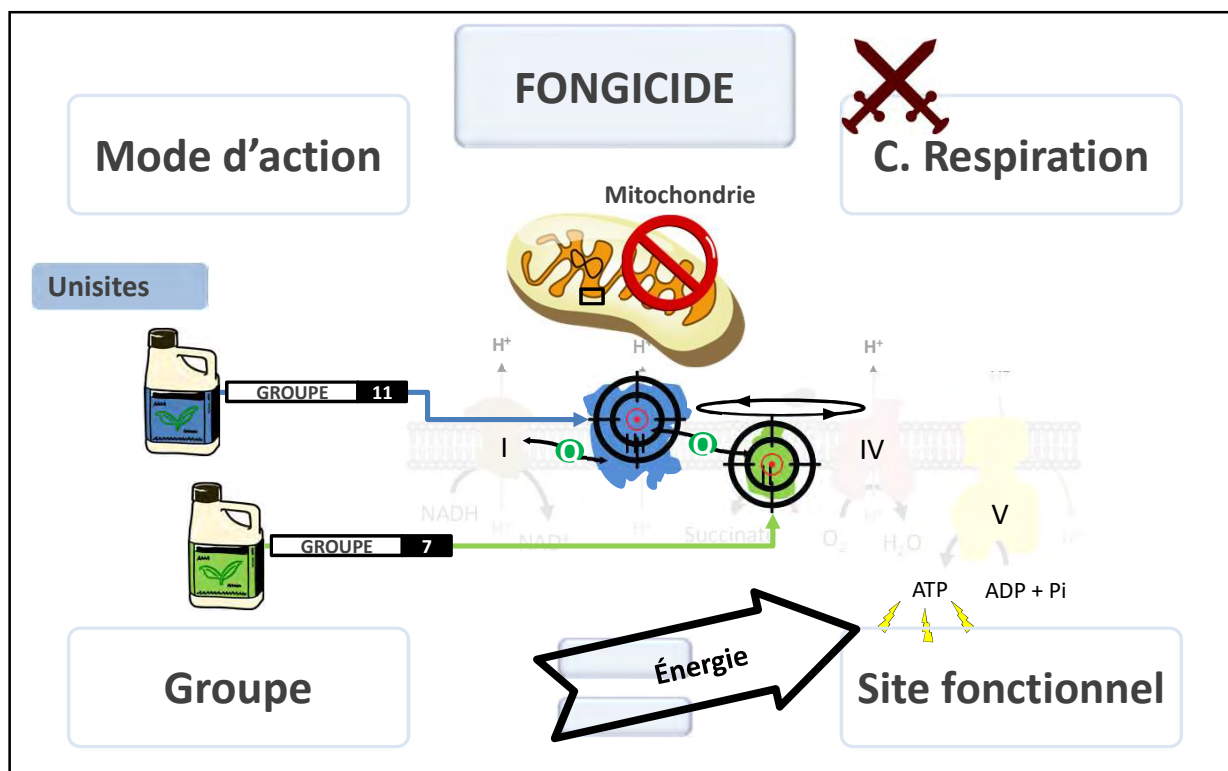
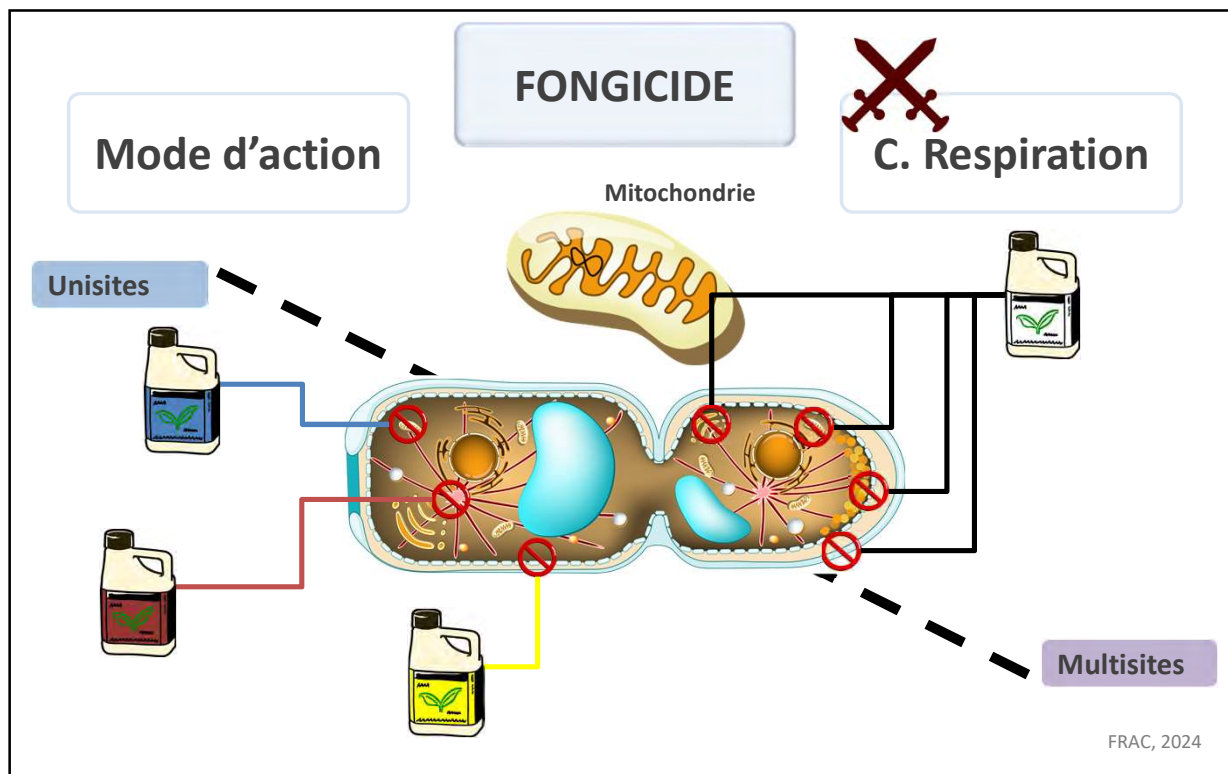
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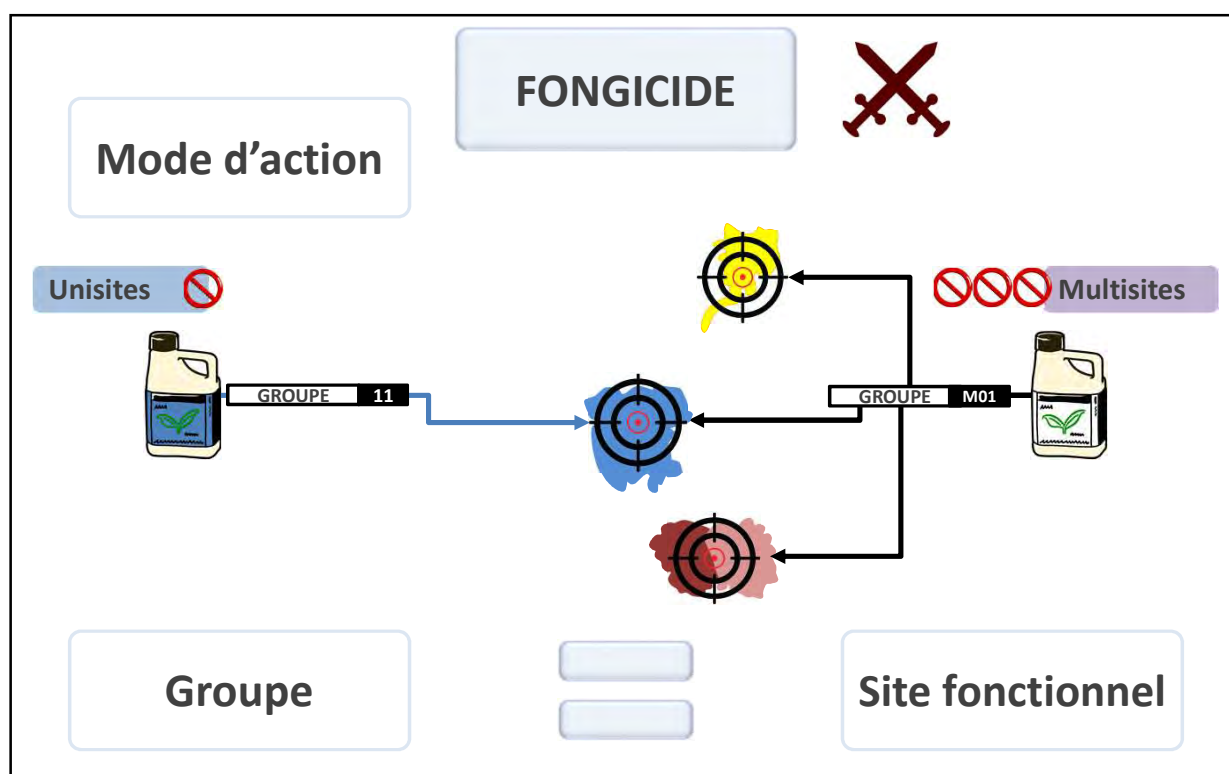
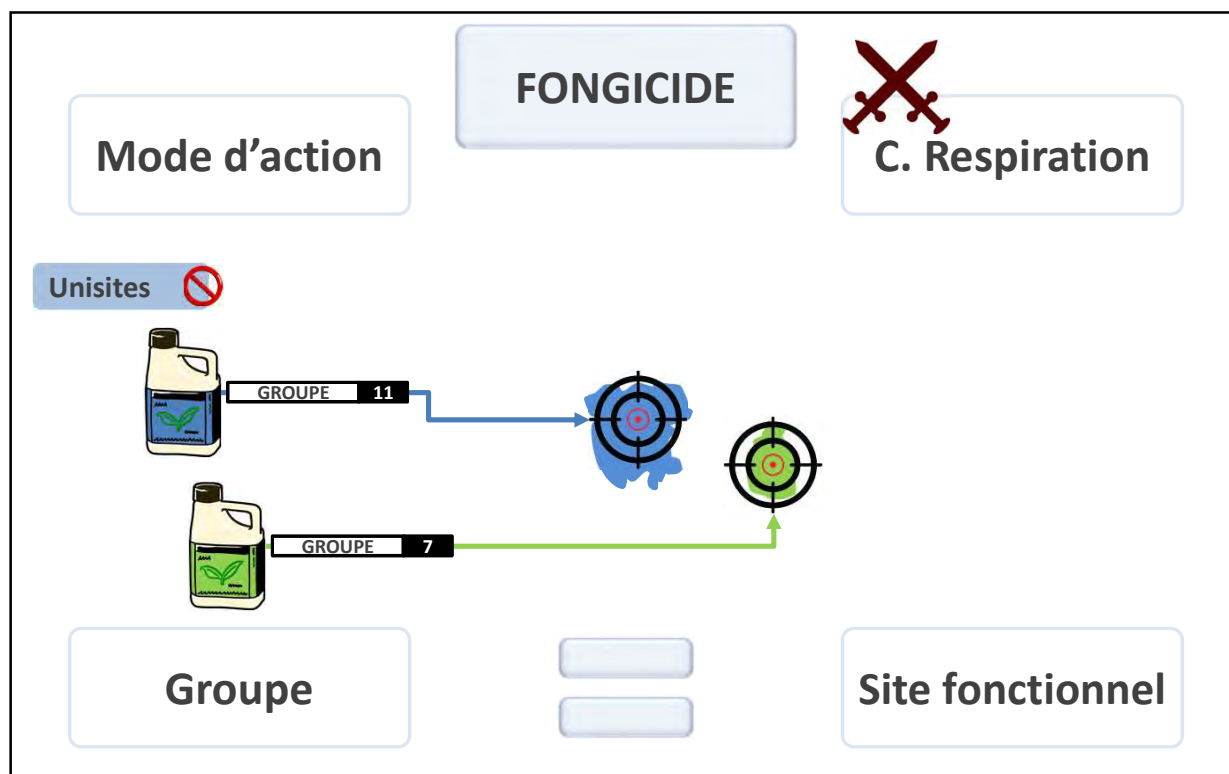
Webinaire sur la résistance aux fongicides
des champignons phytopathogènes
18 mars 2025

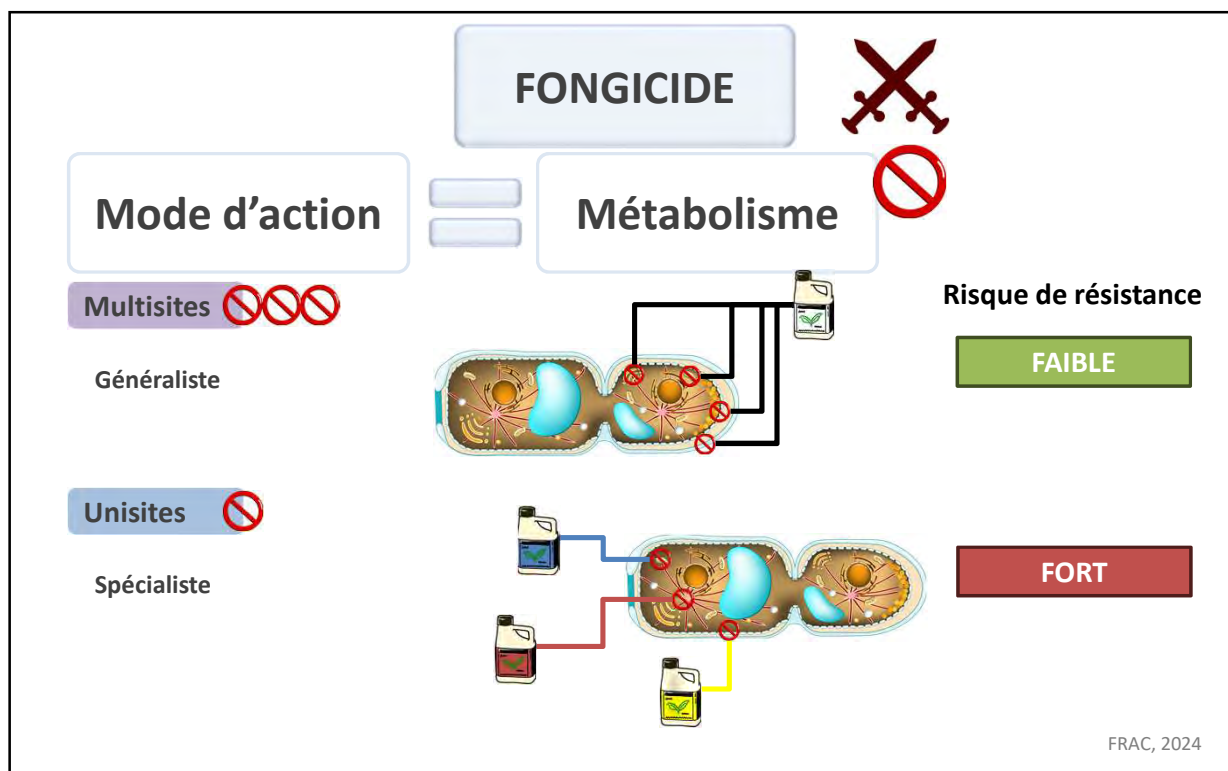


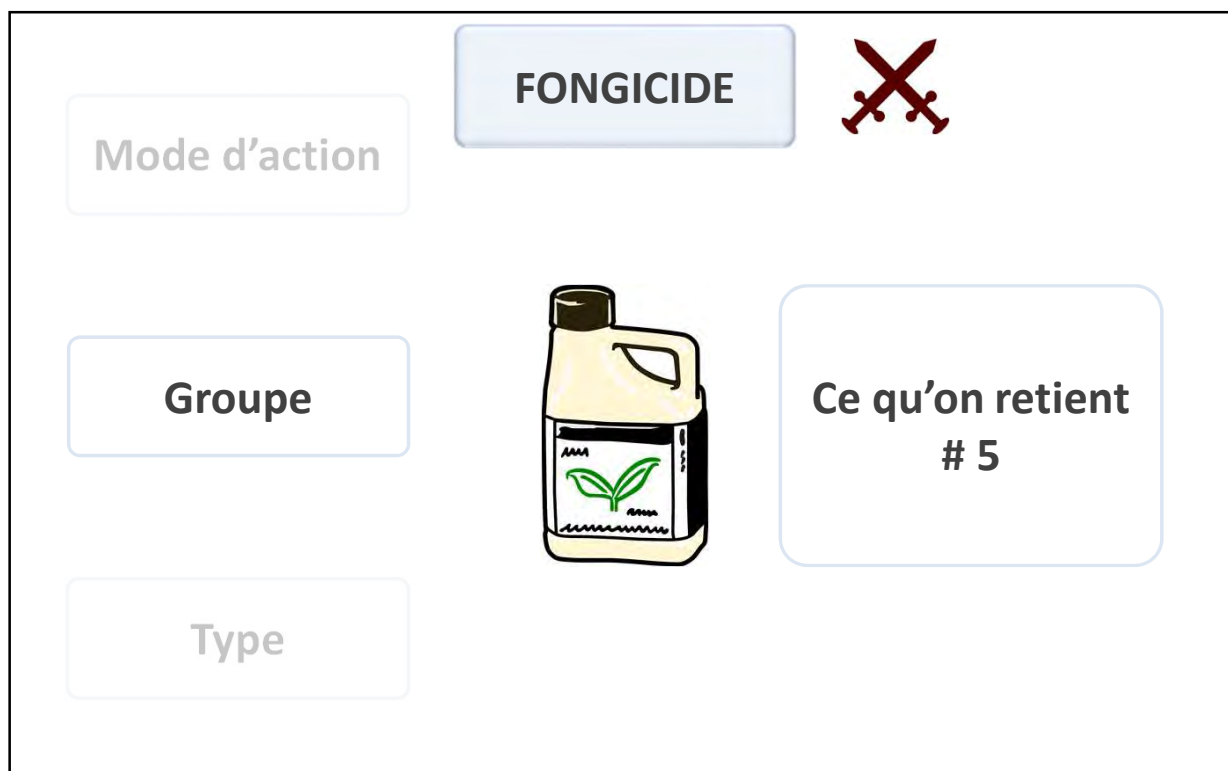
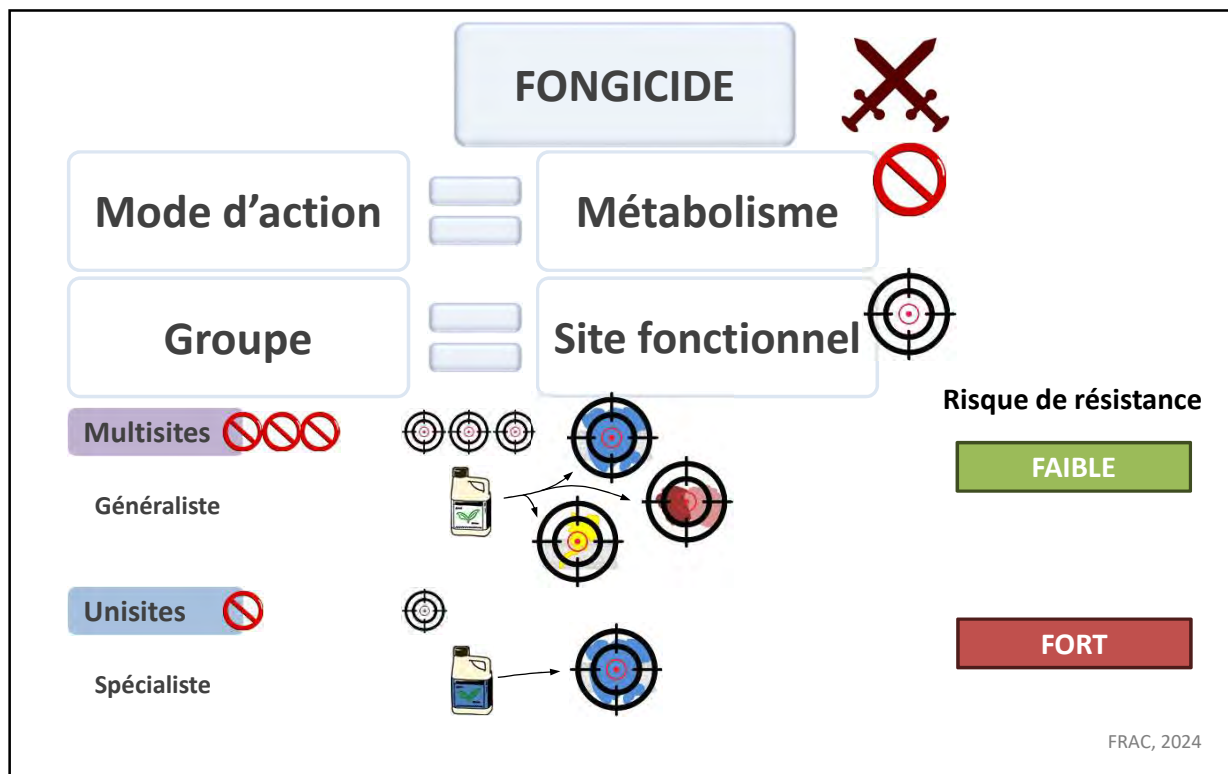


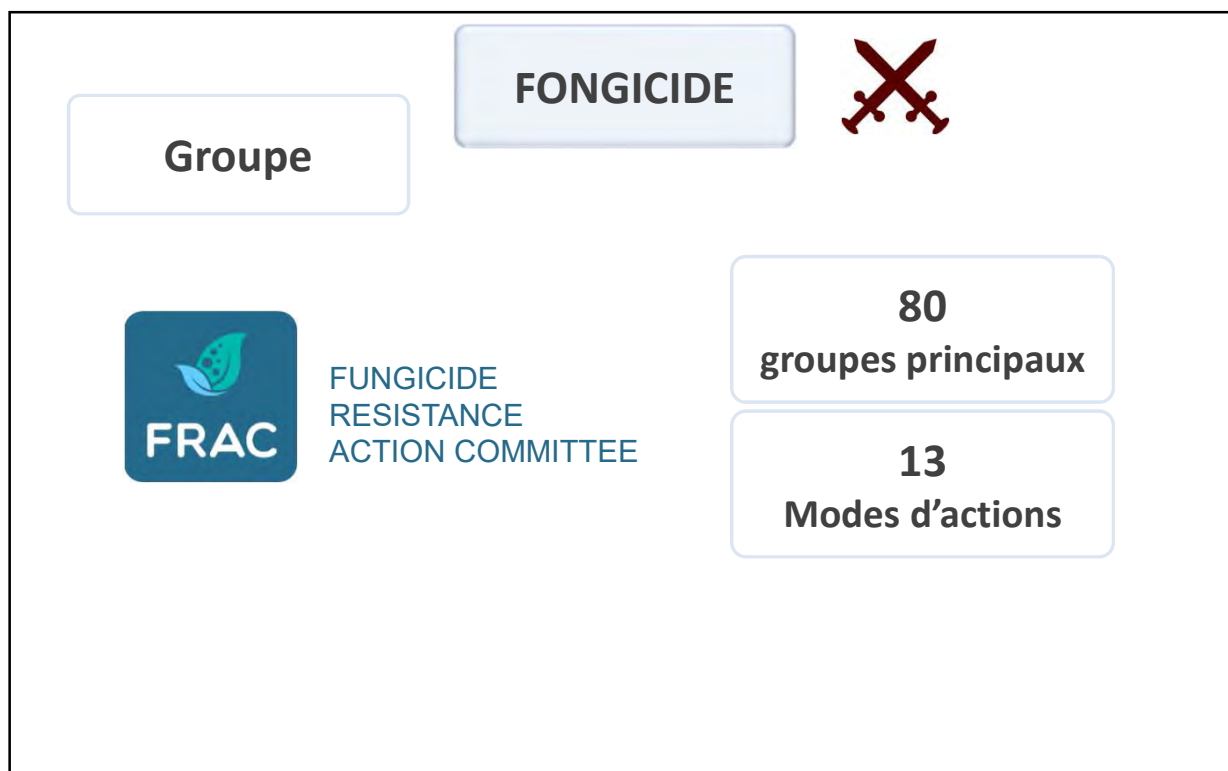
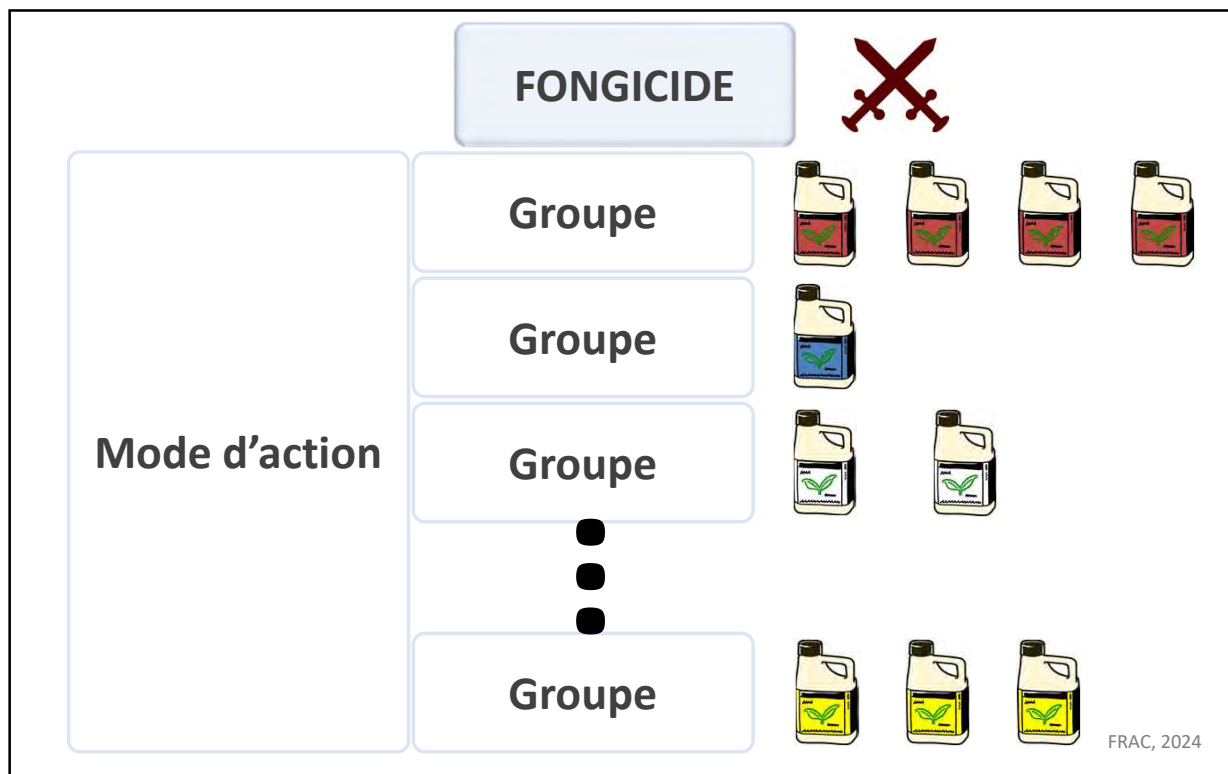






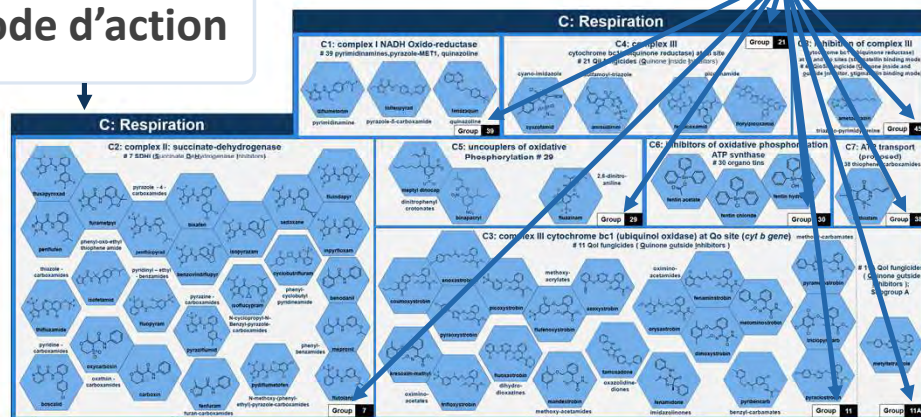






Groupe

Mode d'action



FONGICIDE

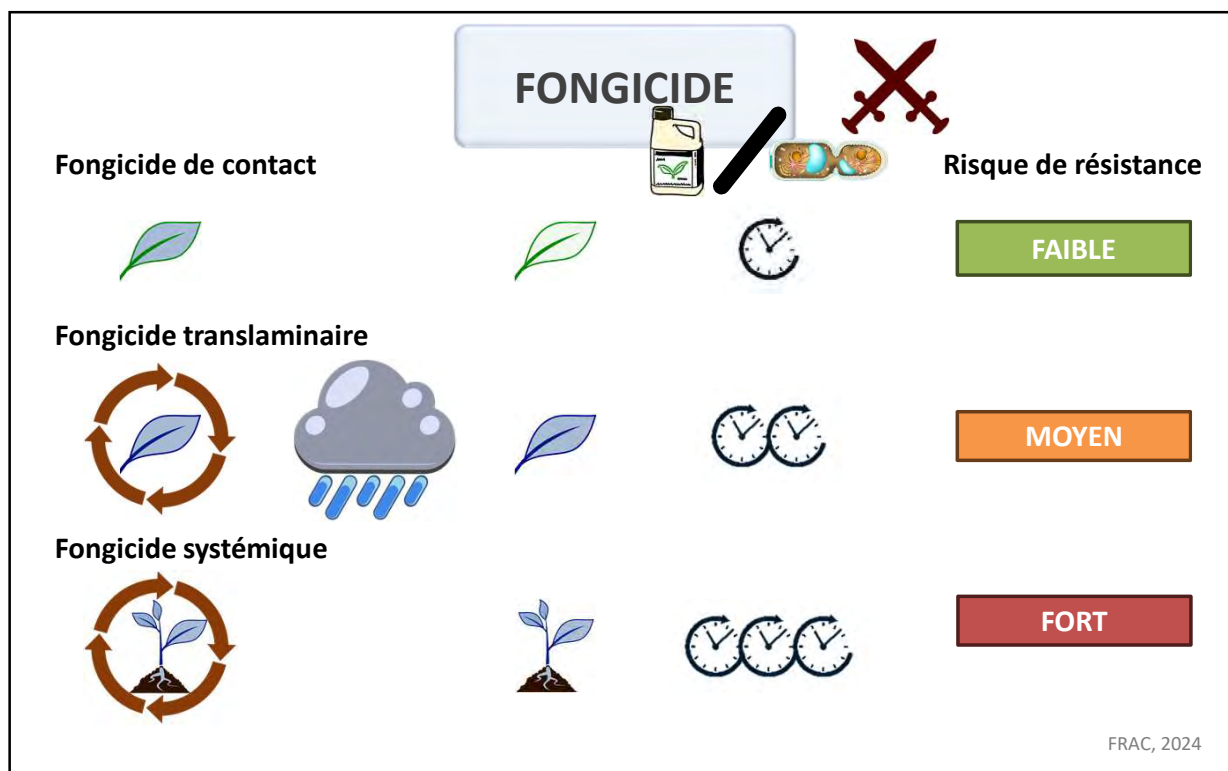
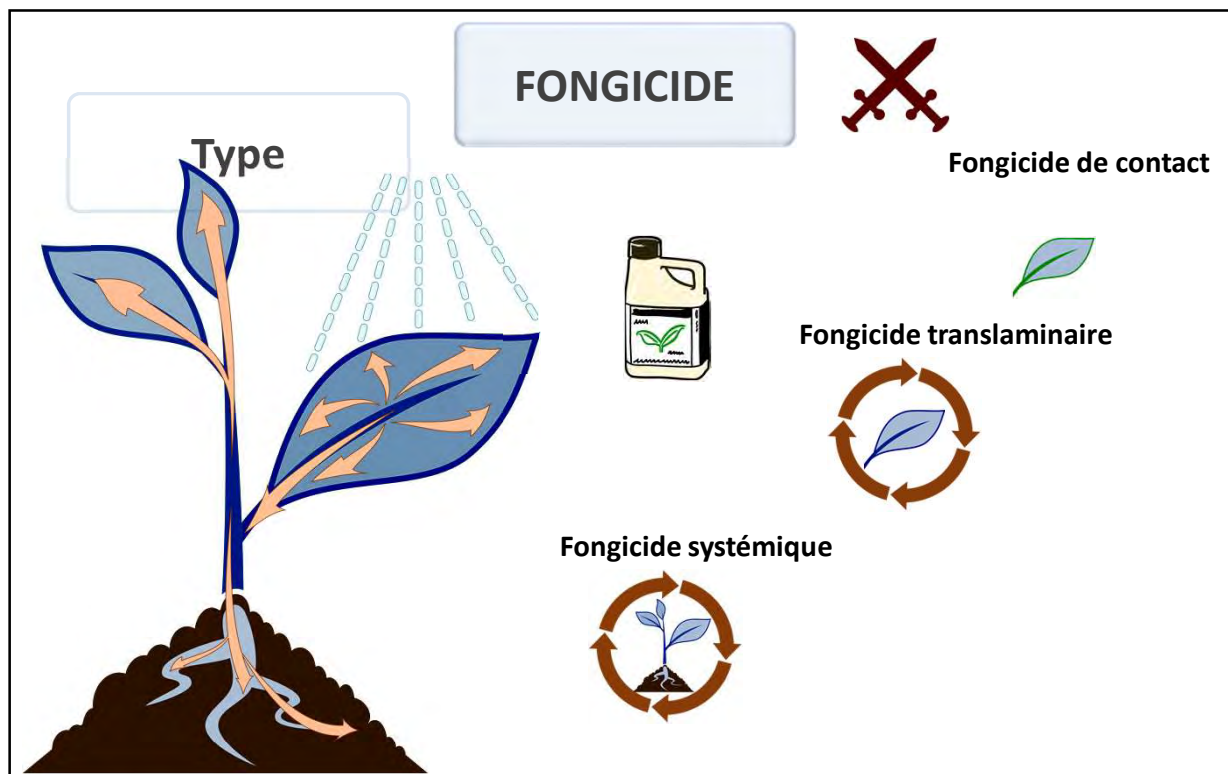


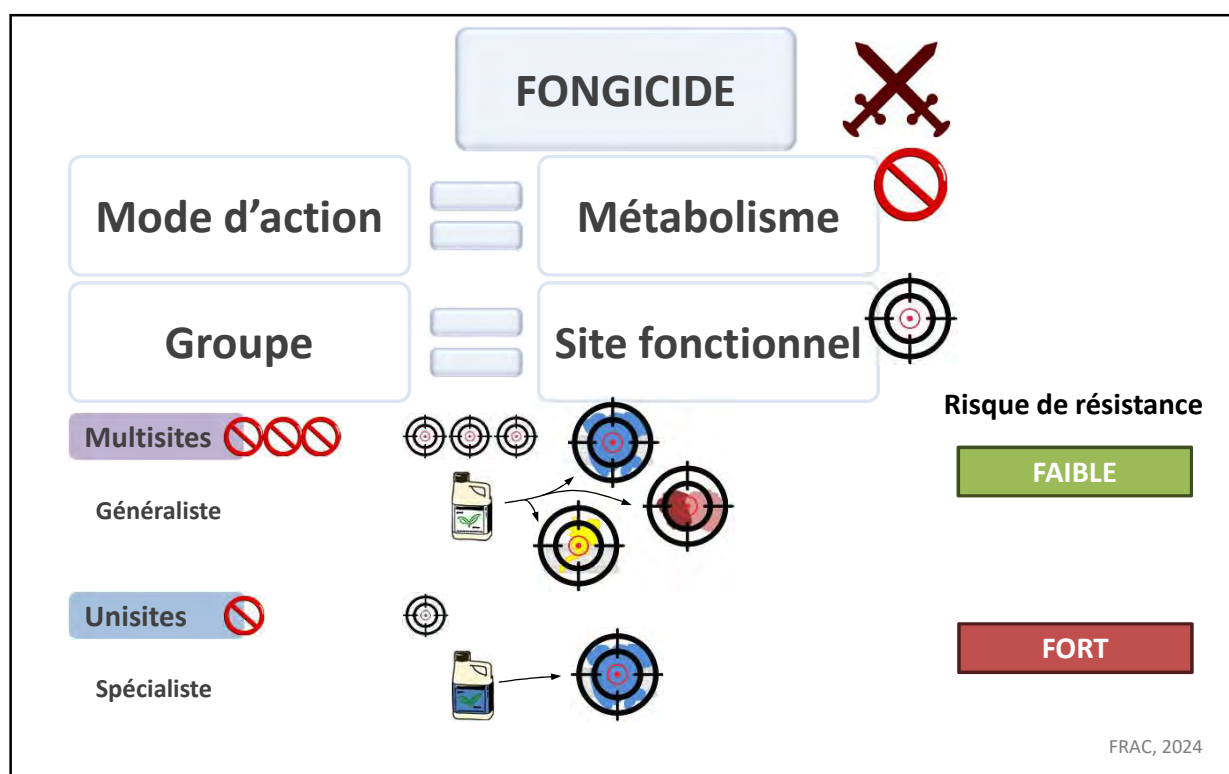
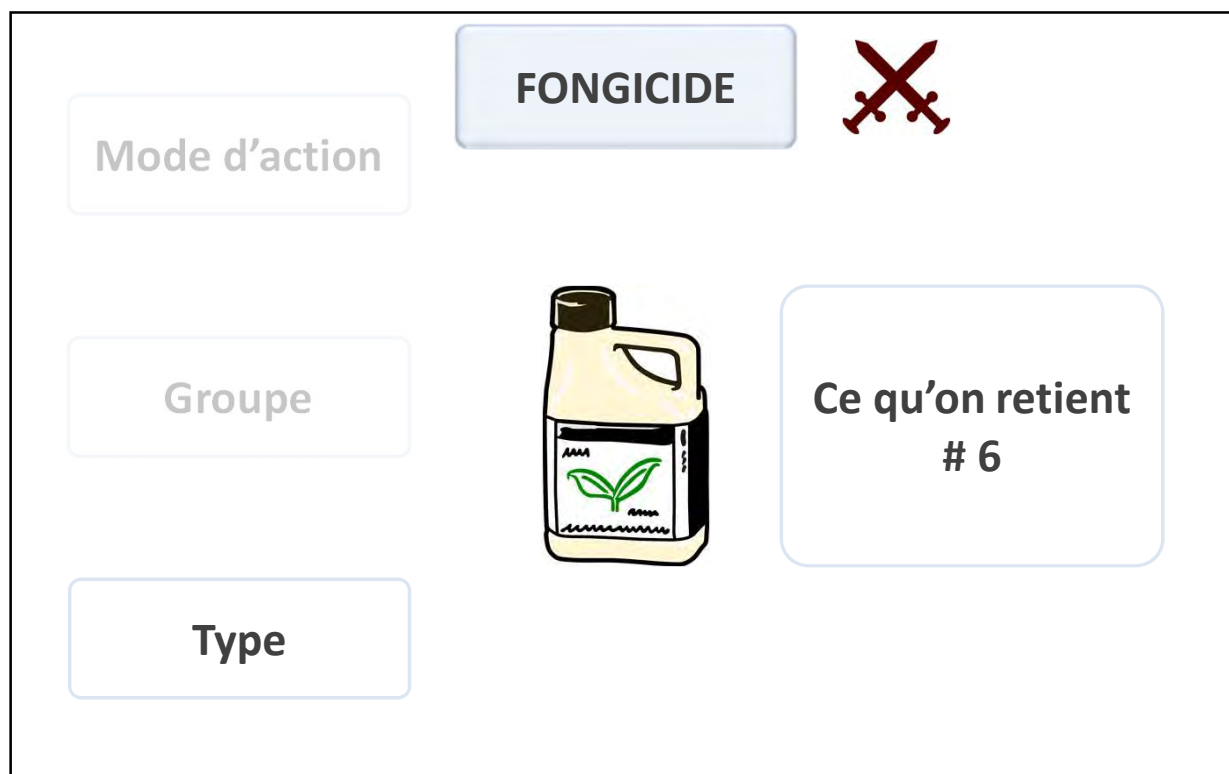
Mode d'action

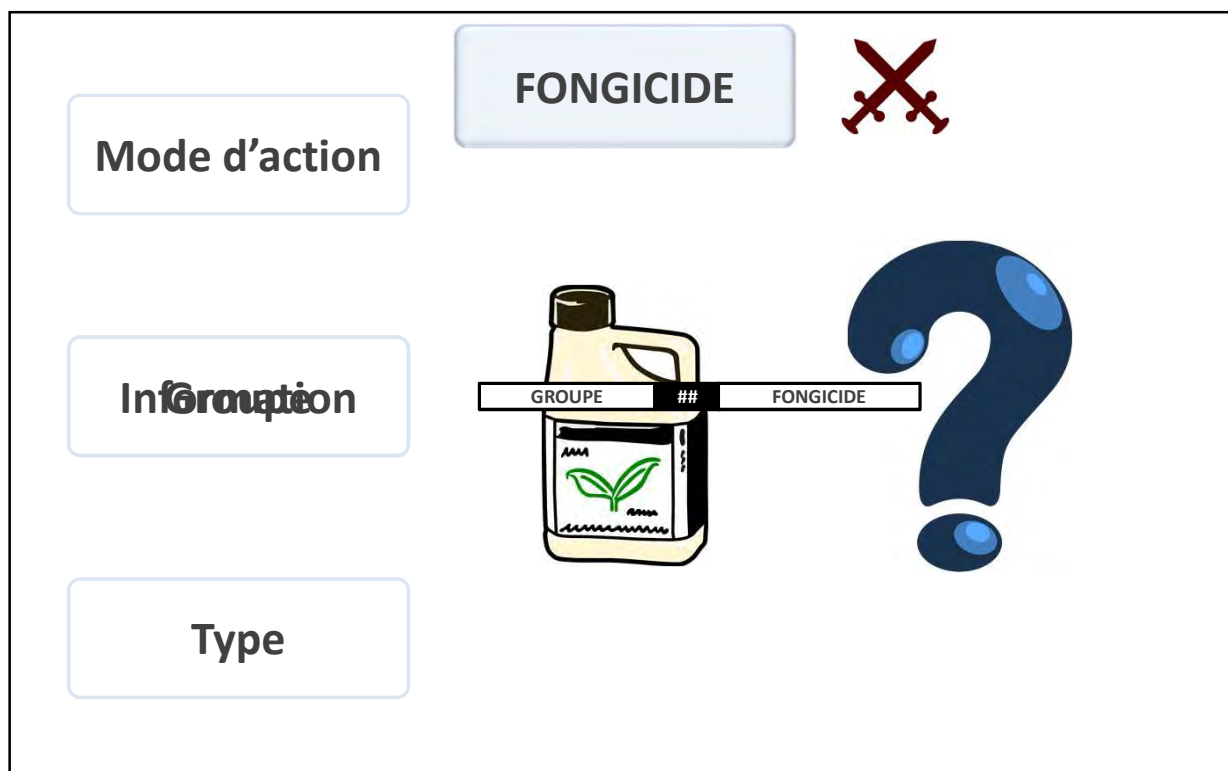
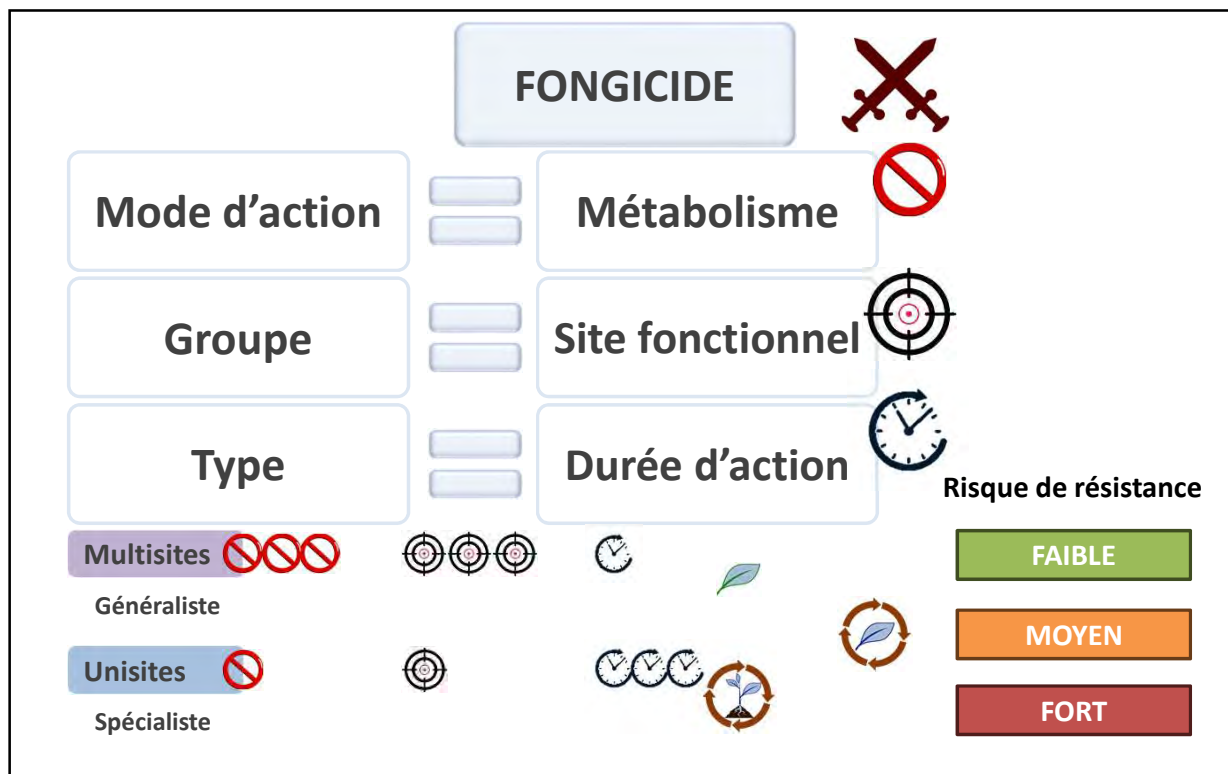
Groupe

Type









Google Scholar
<https://scholar.google.com/>

FONGICIDE



<https://www.frac.info/>

Information

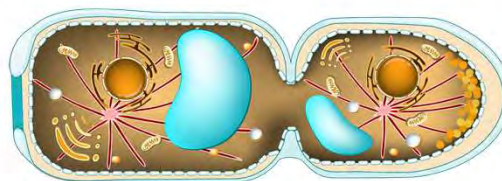
GROUPE ## FONGICIDE



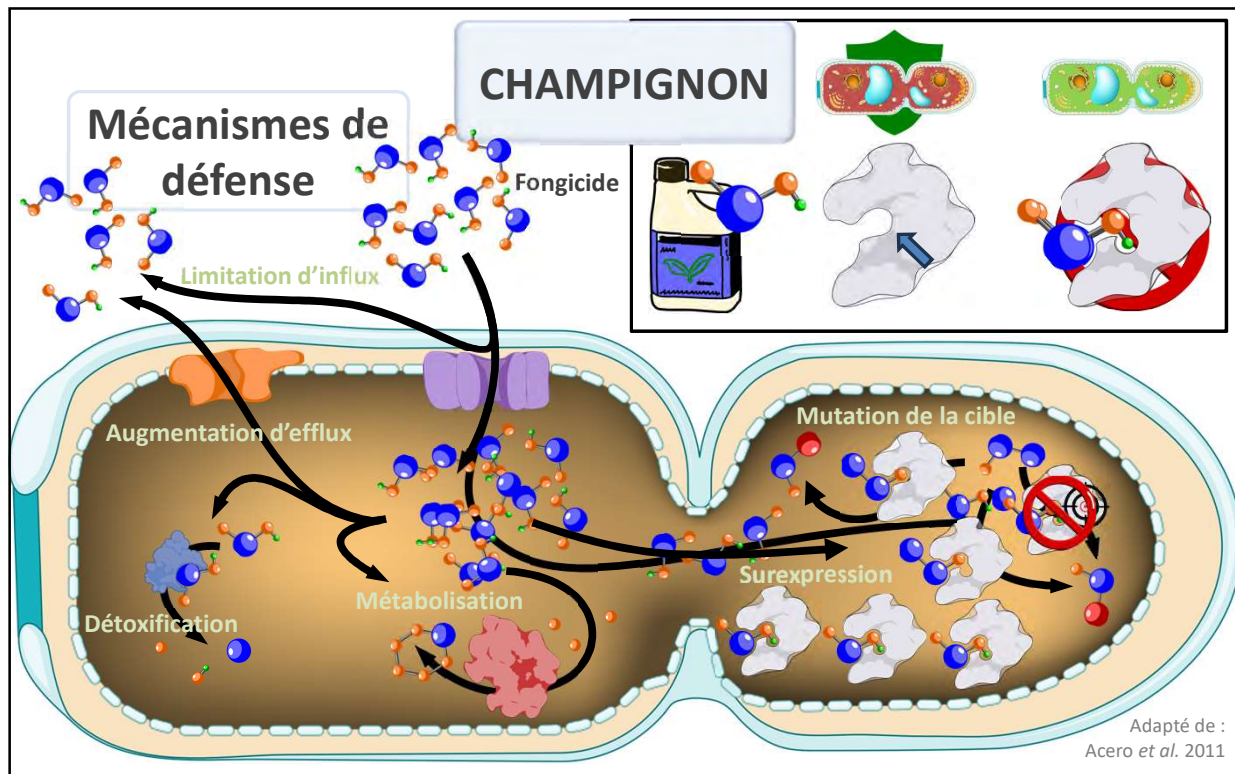
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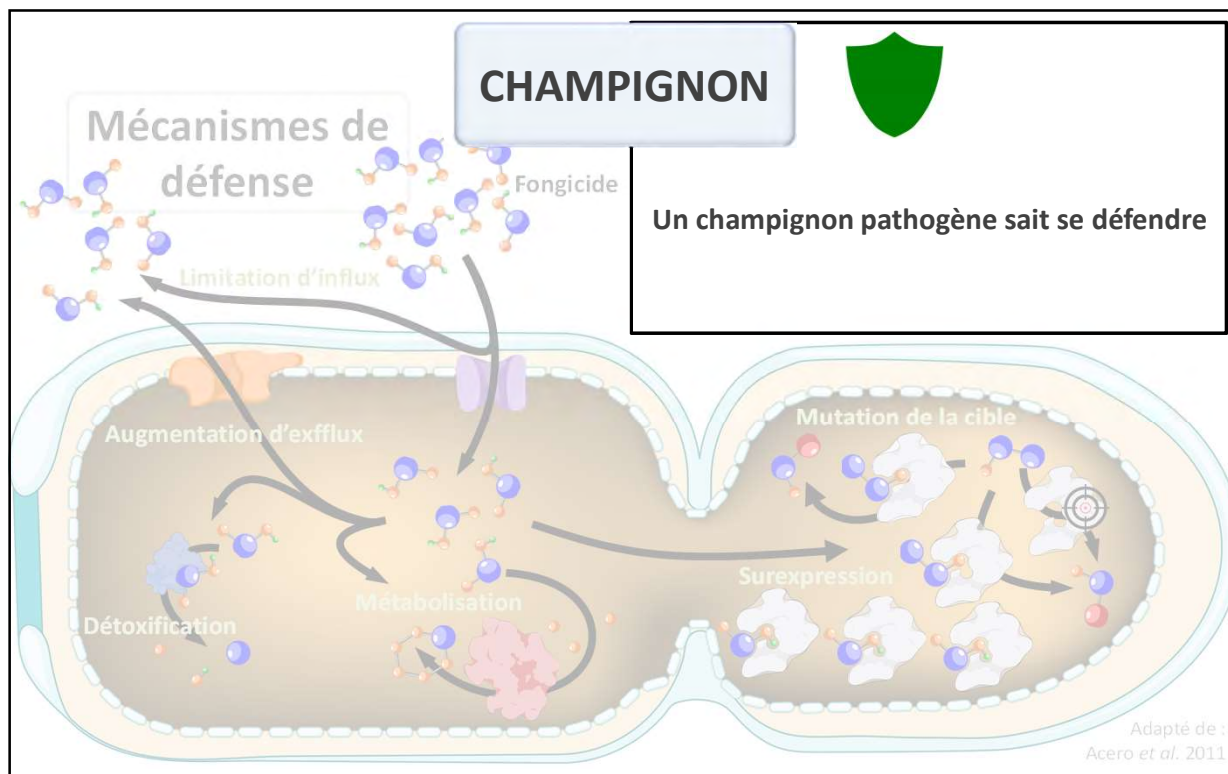
RÉSISTANCE

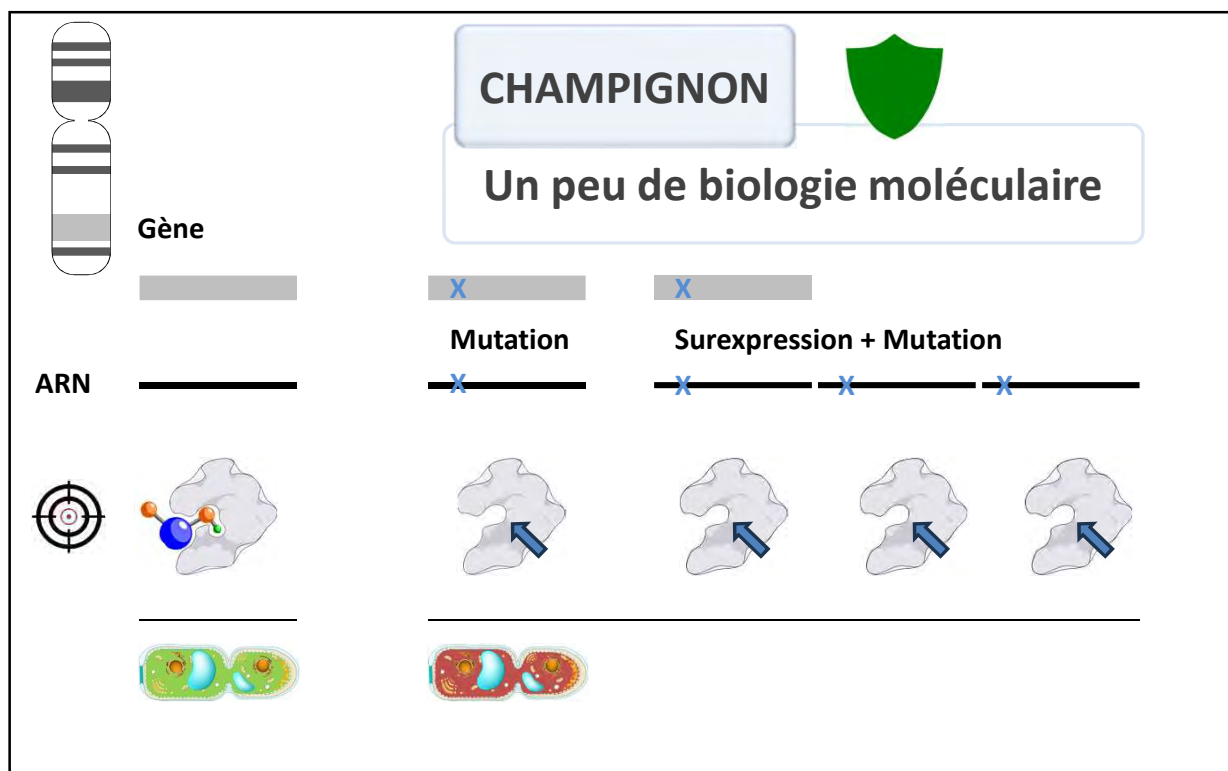
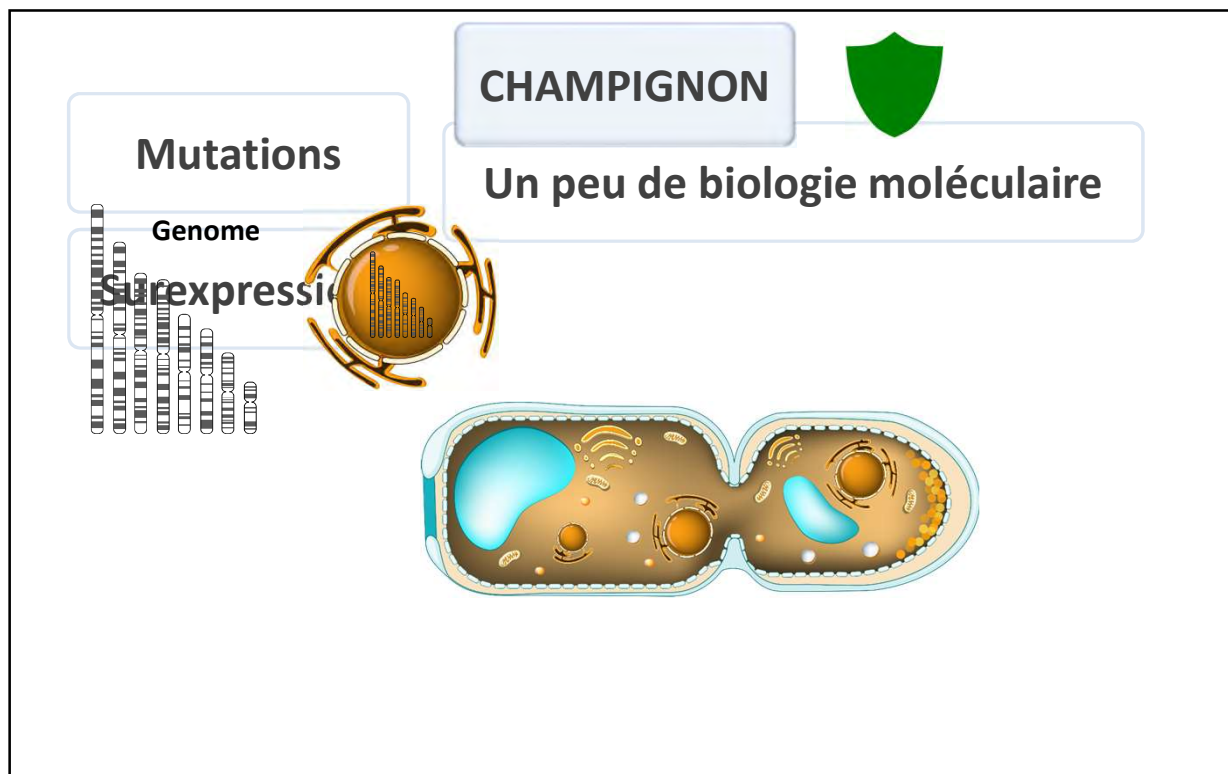
CHAMPIGNON

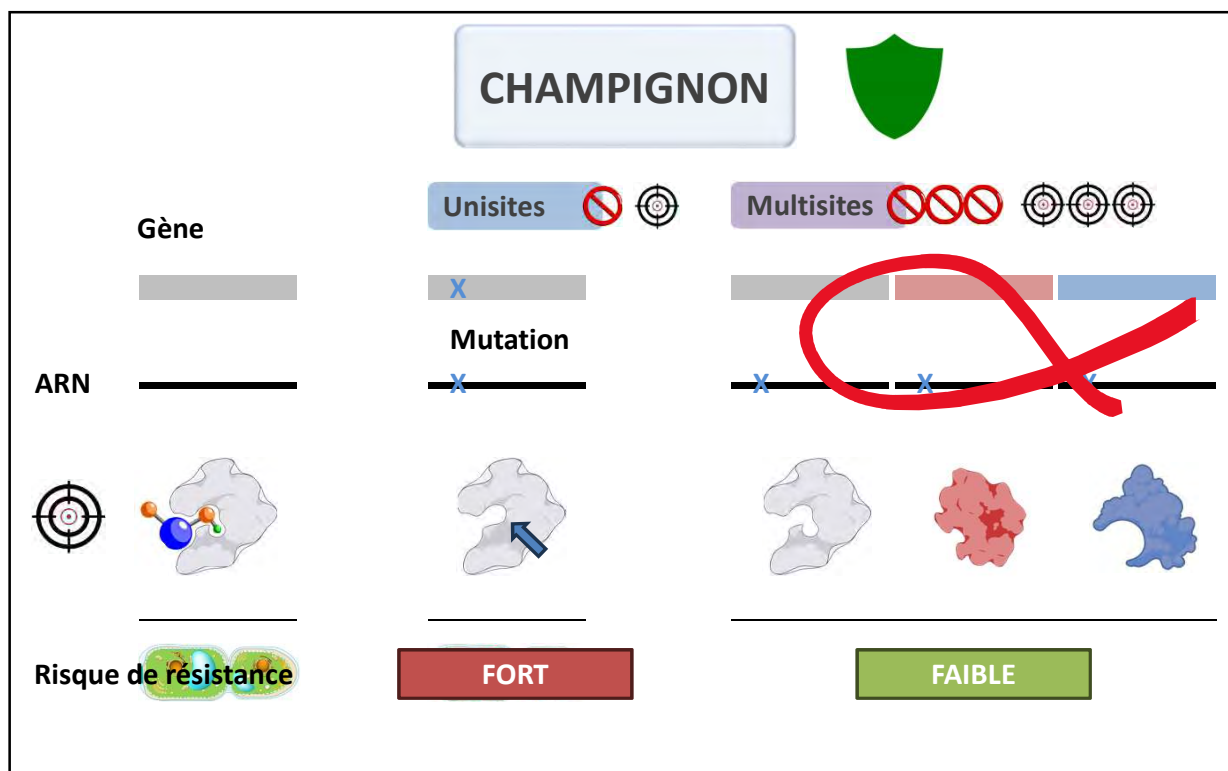
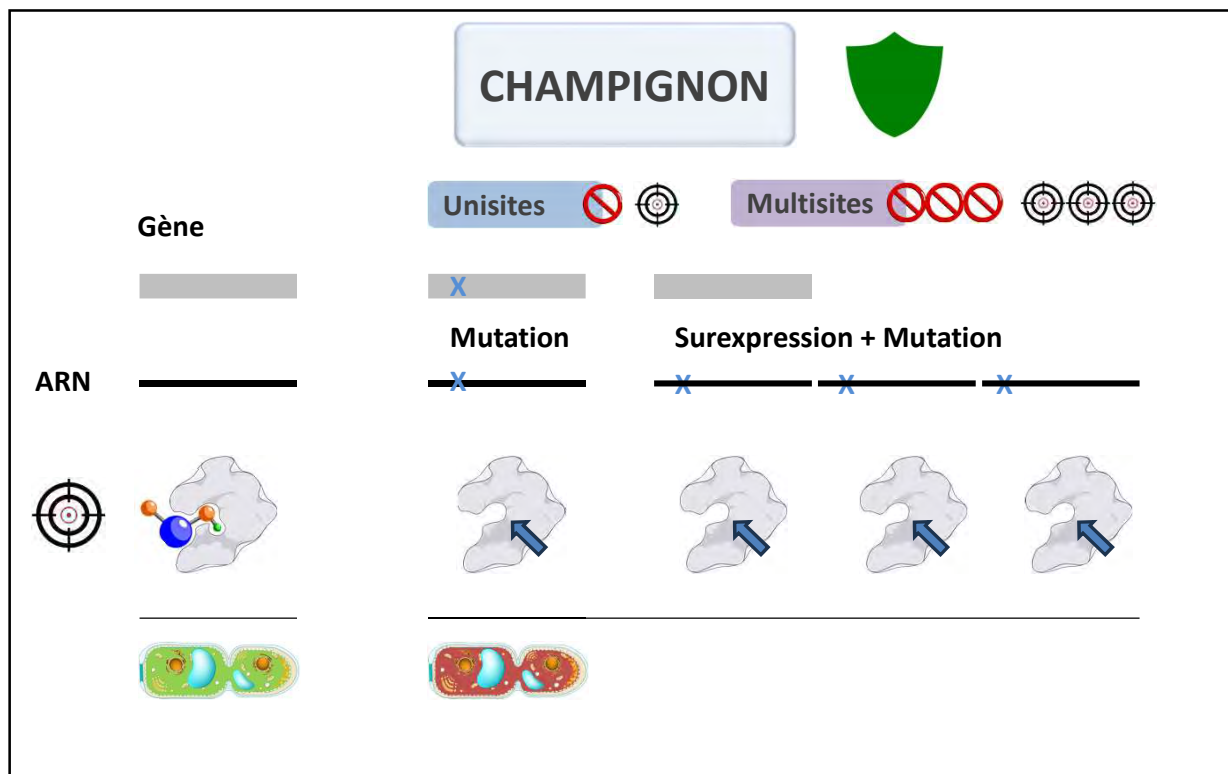


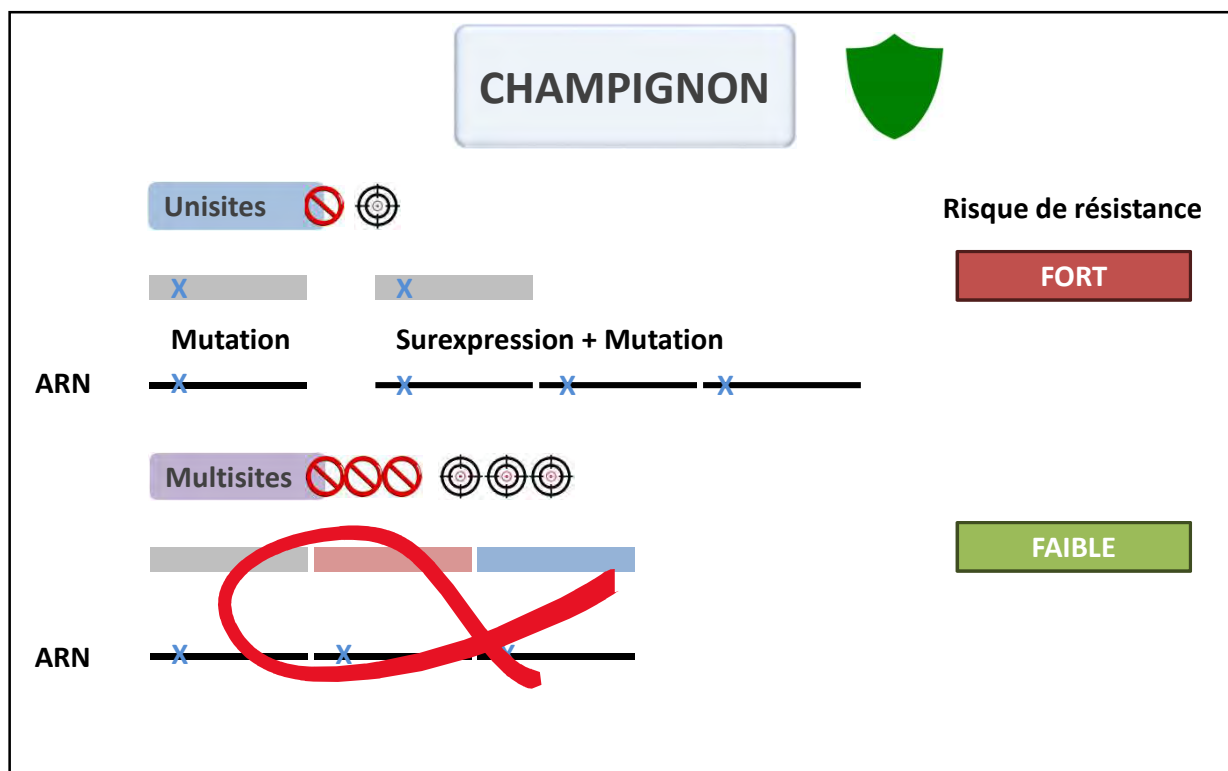




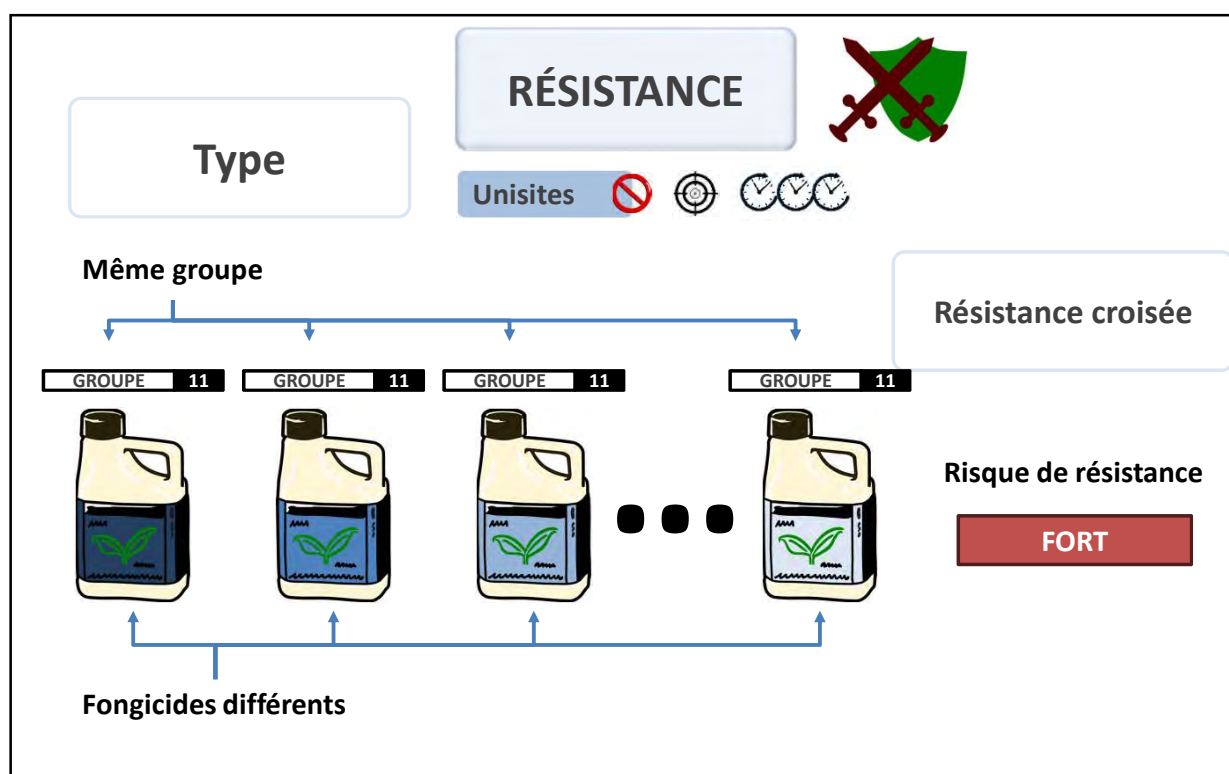
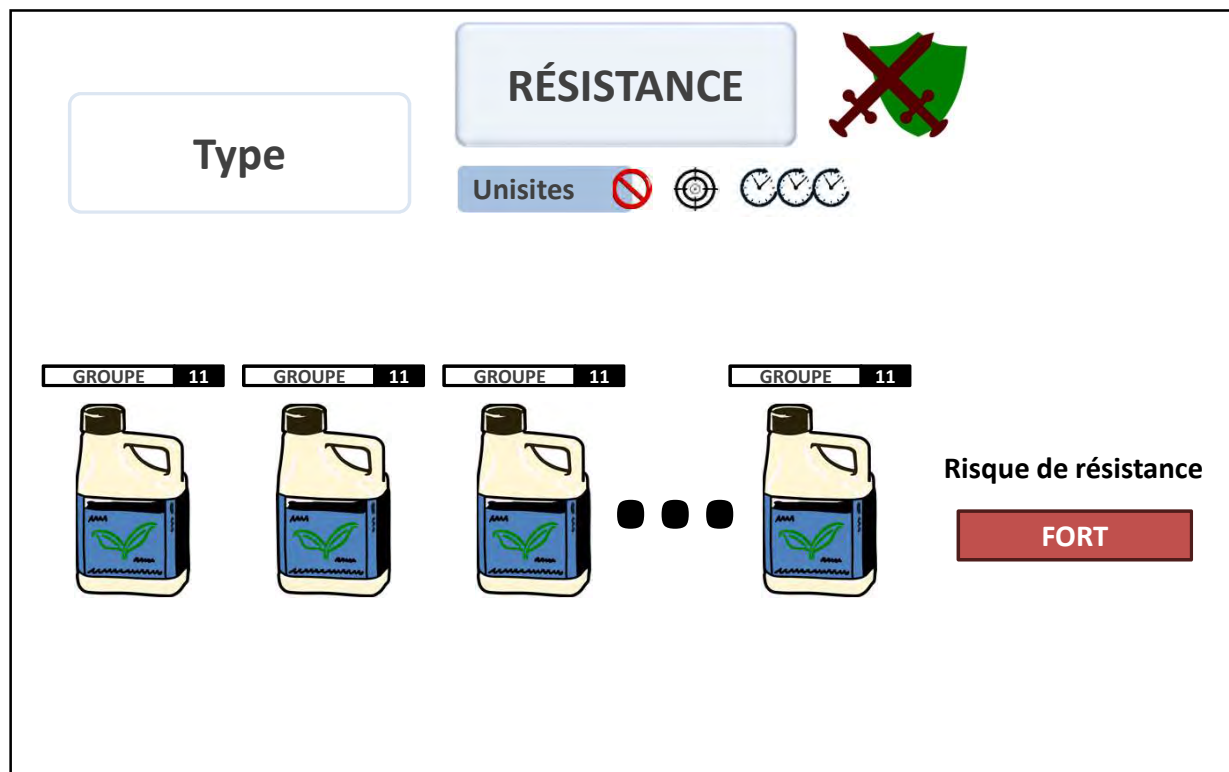


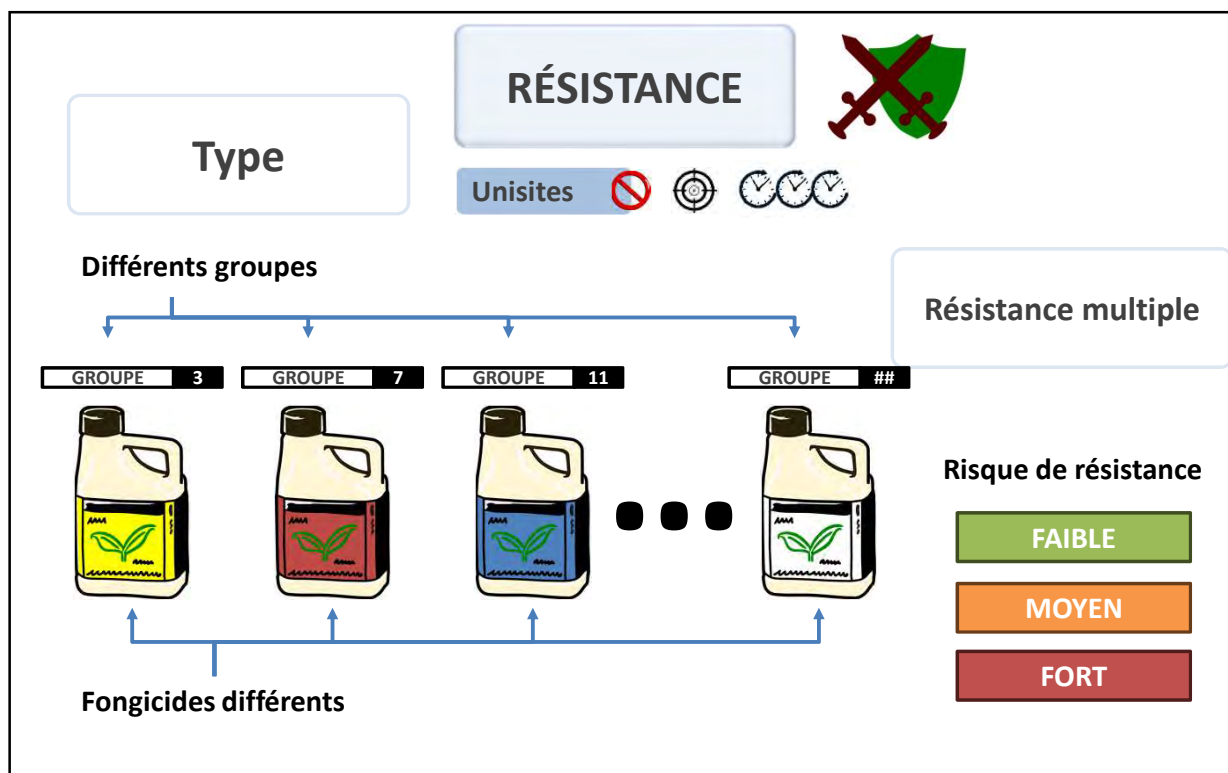
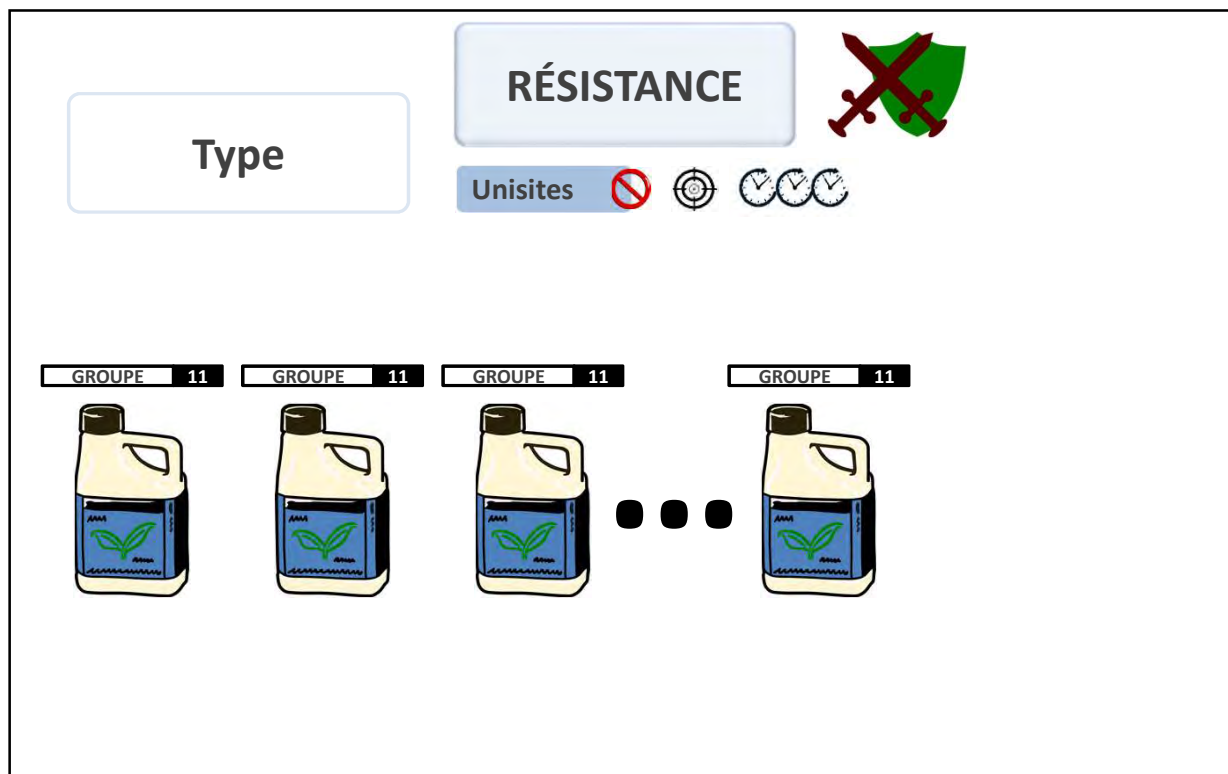


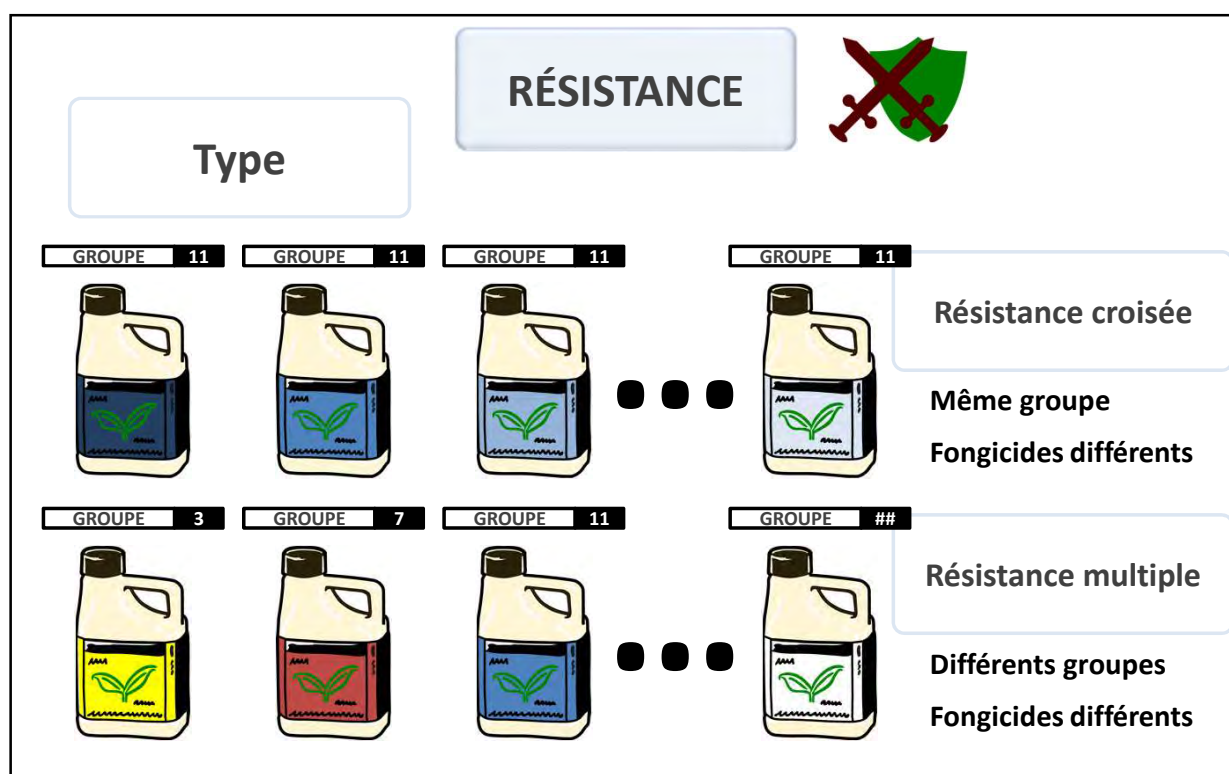
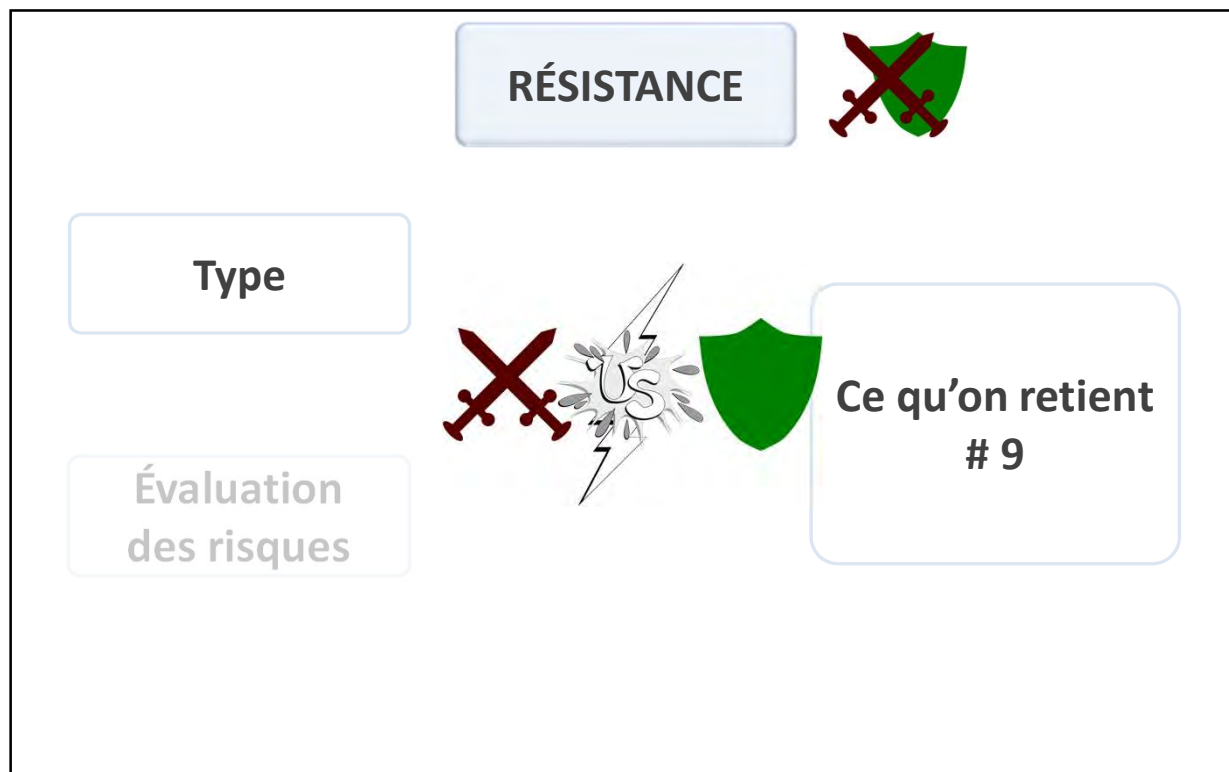


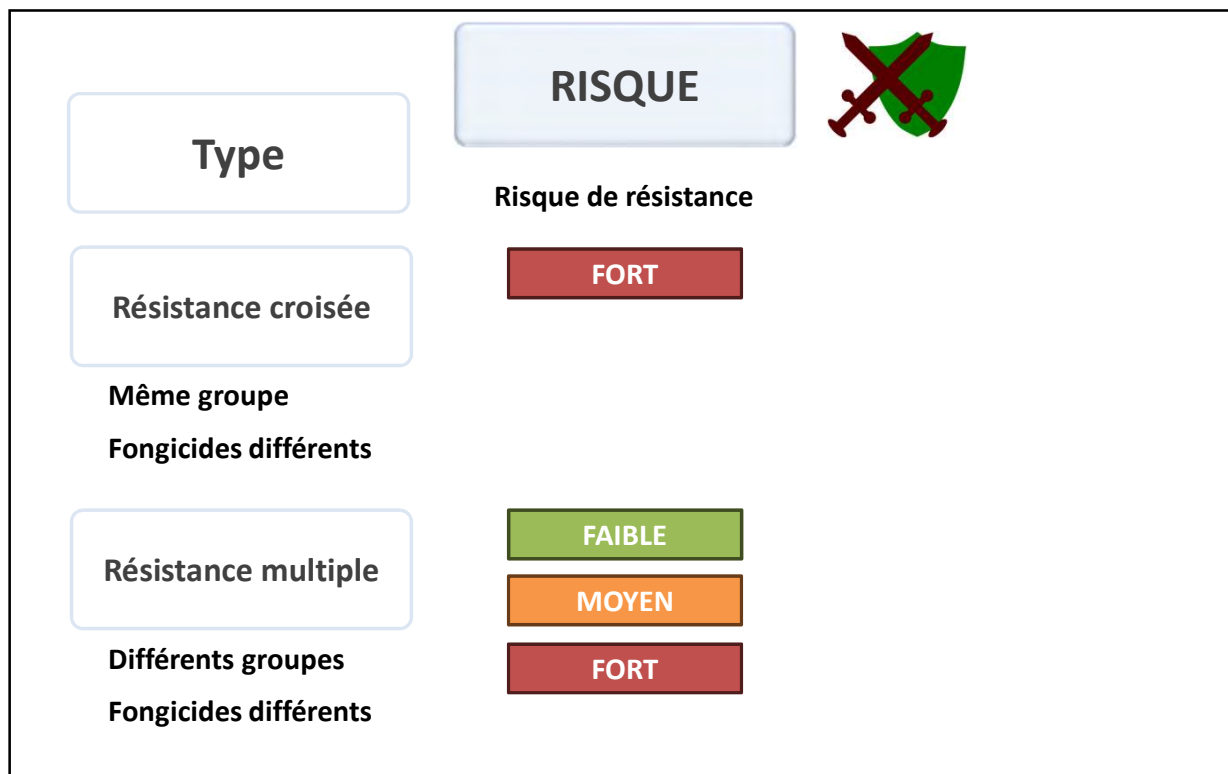


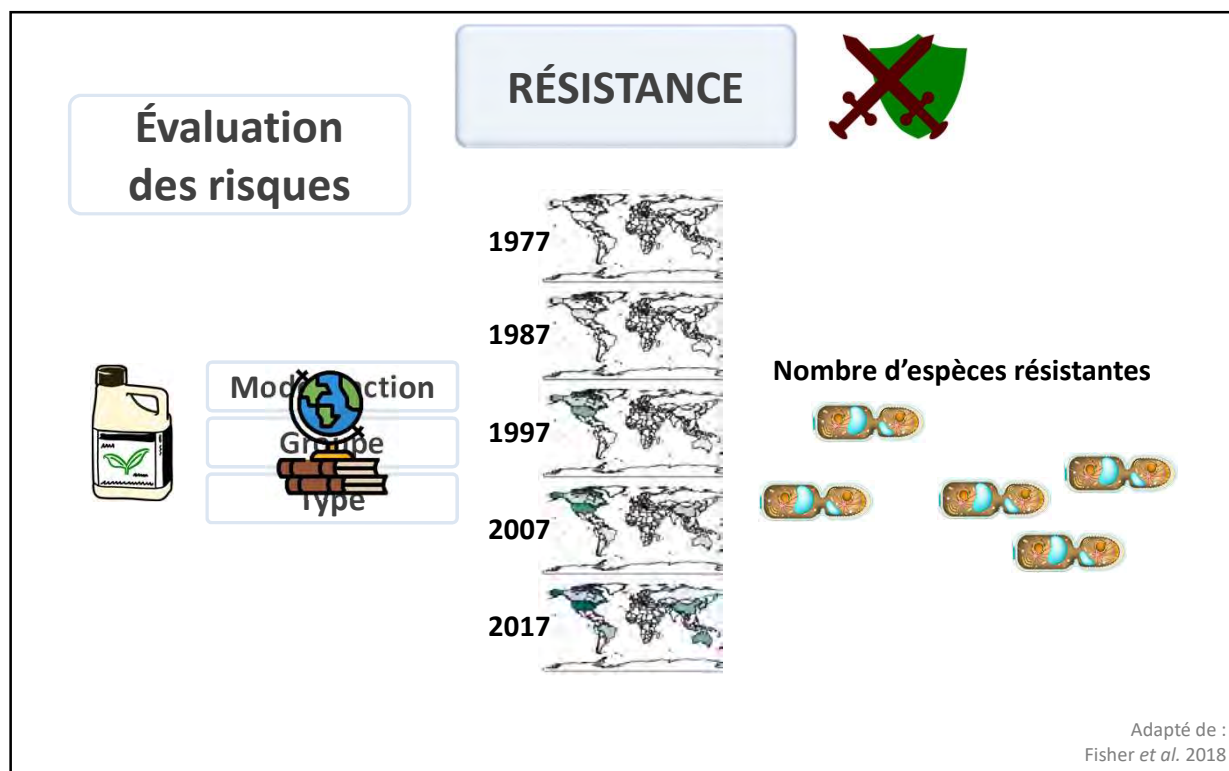
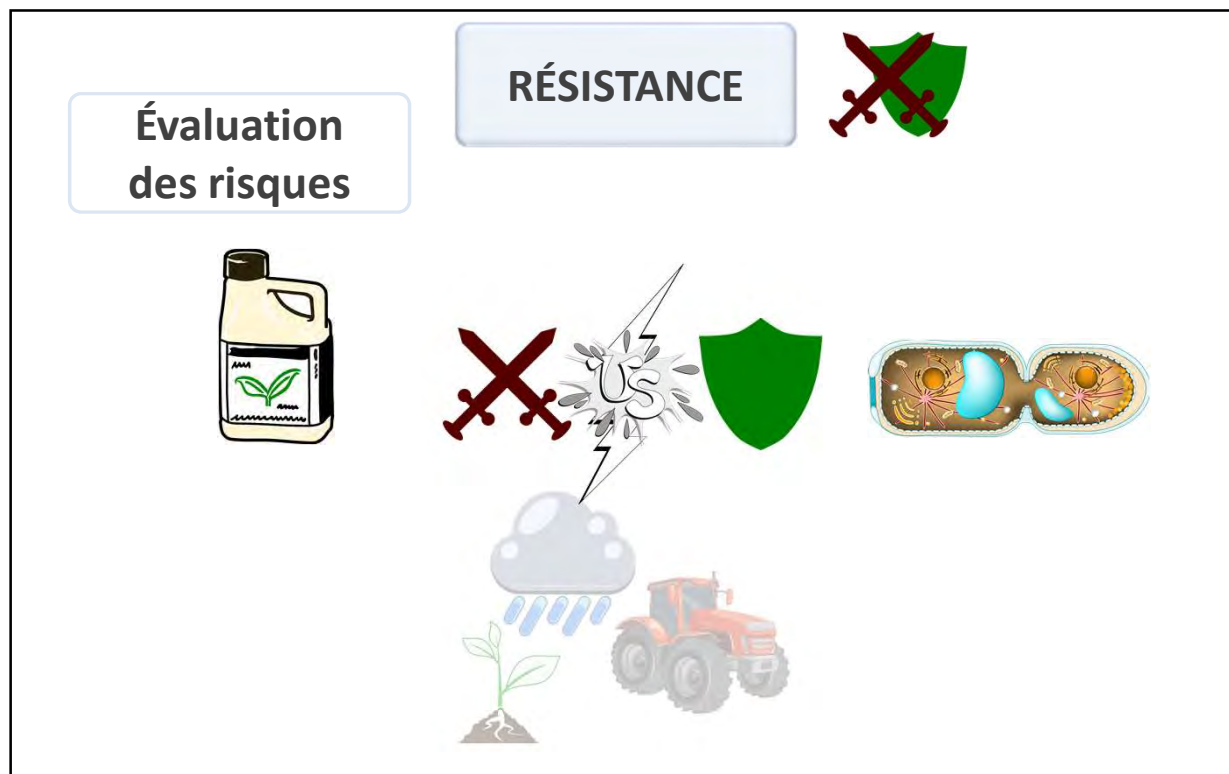


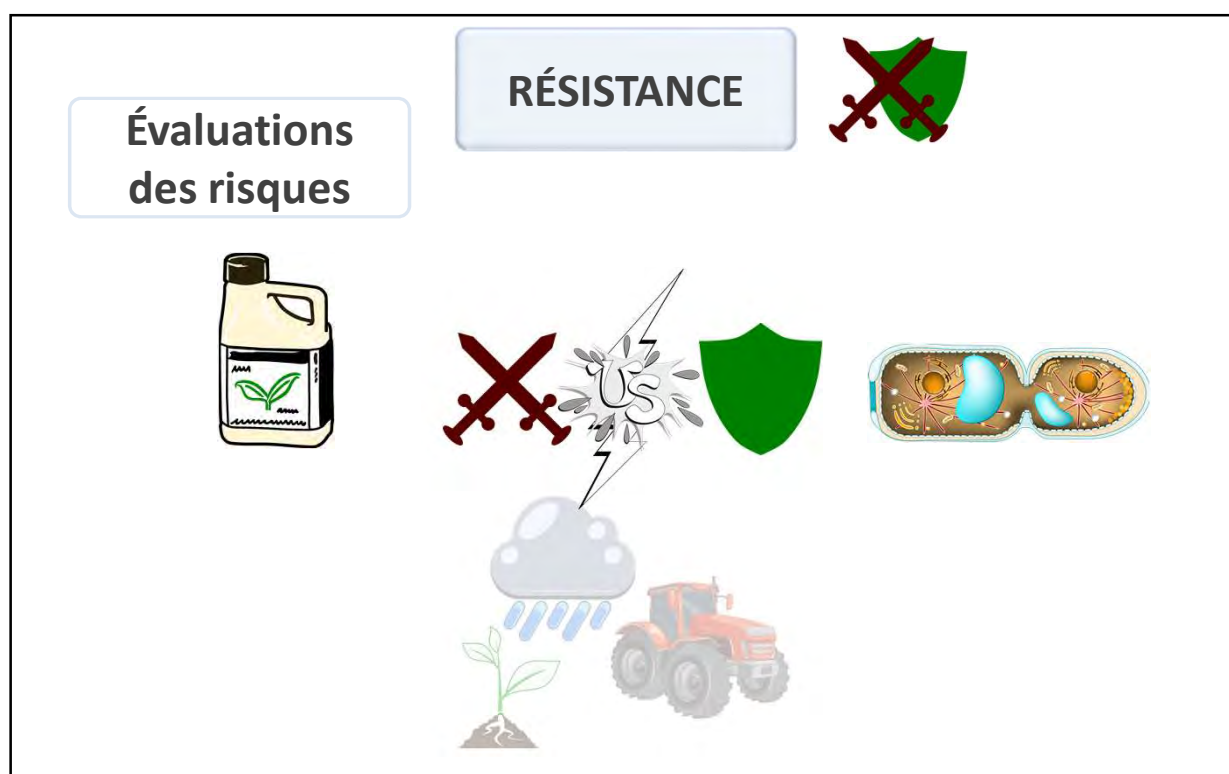
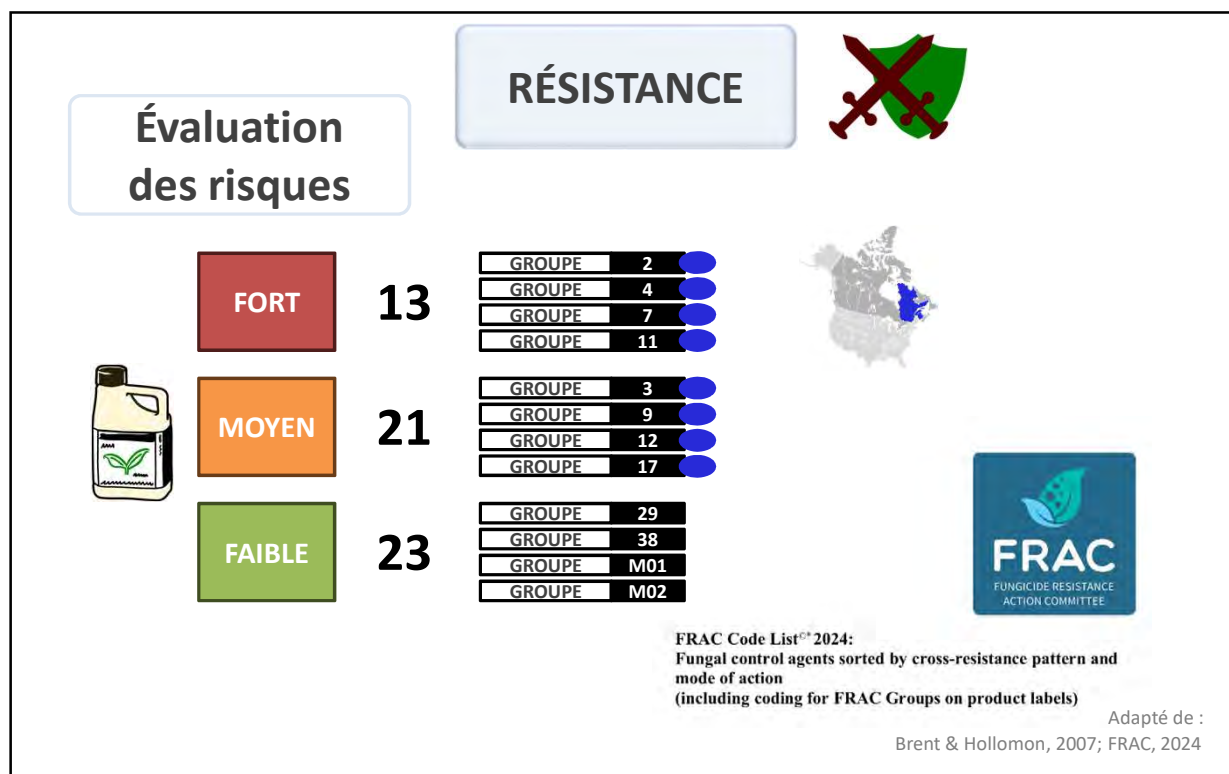










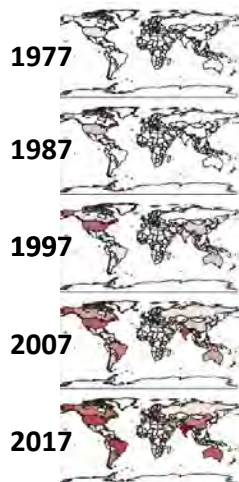


Évaluations des risques

RÉSISTANCE



Mécanisme de



Résistant contre quels fongicides



Adapté de :
Fisher et al. 2018

Évaluations des risques

RÉSISTANCE



FORT	15
MOYEN	61
FAIBLE	46

Botrytis cinerea
Botrytis squamosa
Plasmopora viticola
Venturia inequalis

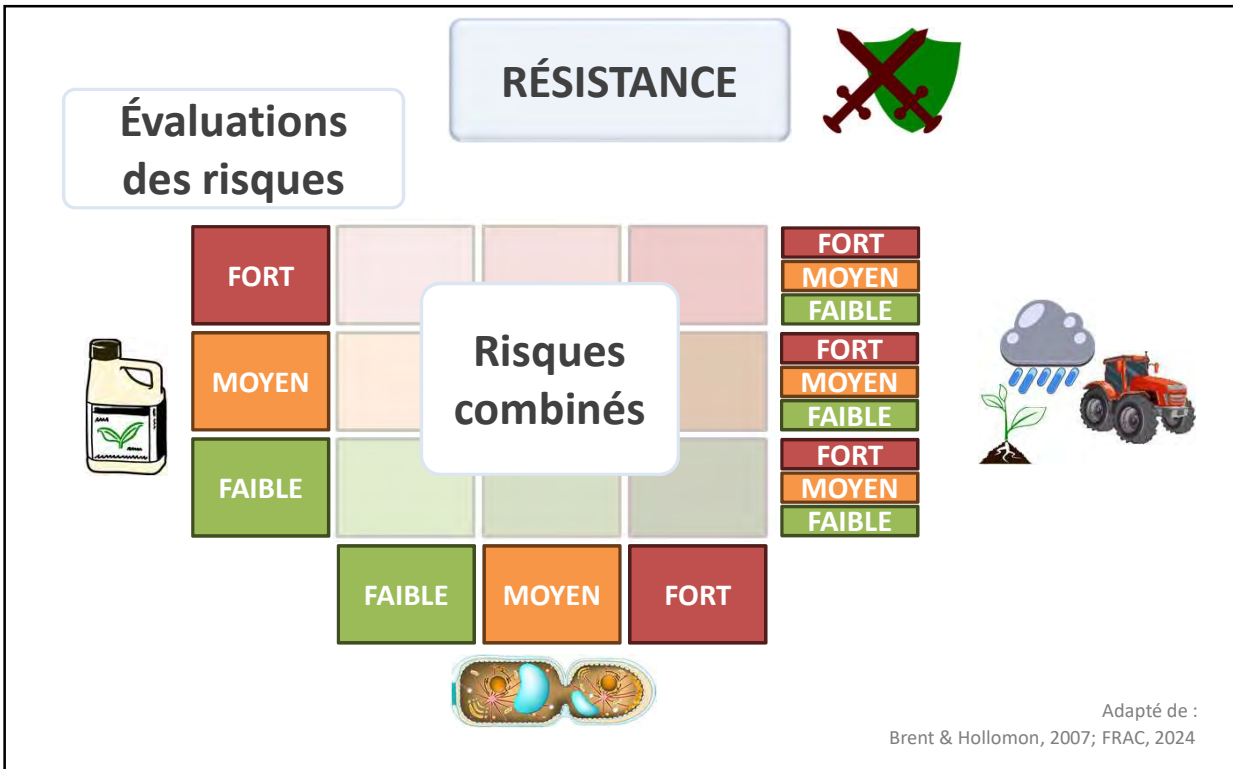
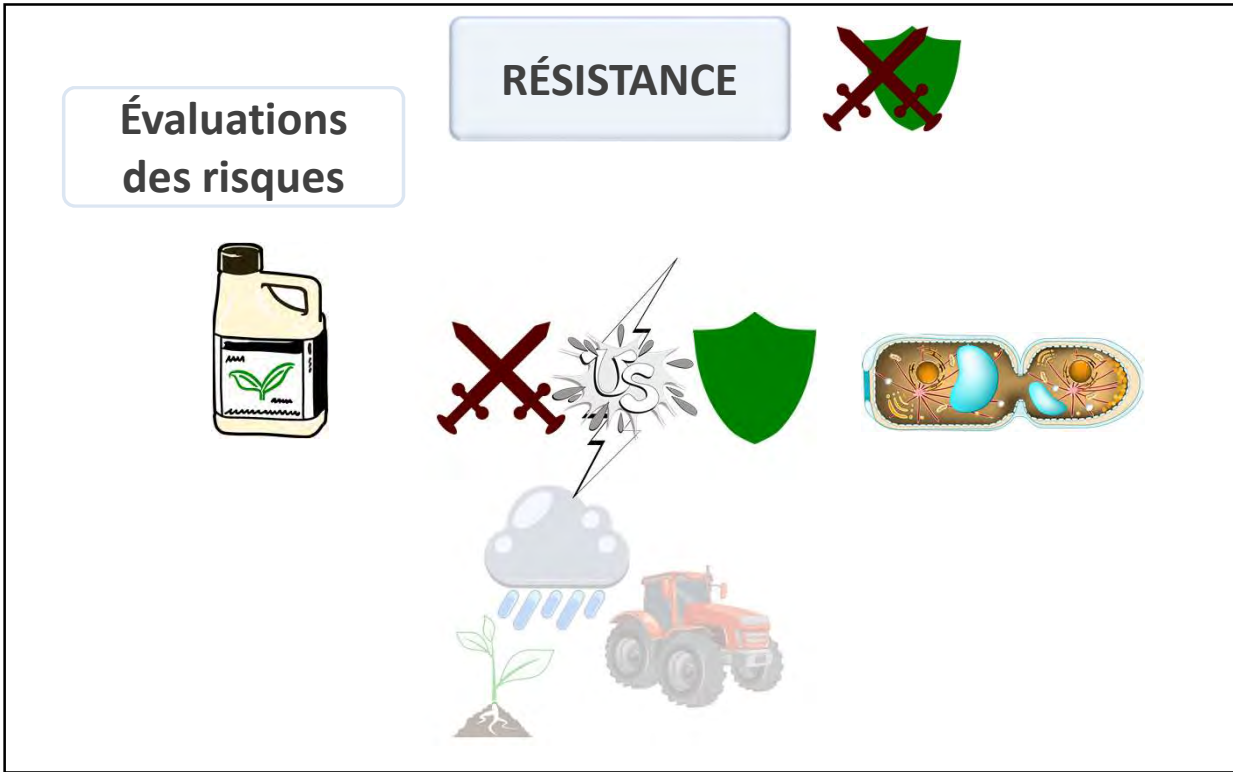
Colletotrichum acutatum
Erysiphe necator
Phytophthora infestans
Sphaerotheca macularis

Leptosphaeria maculans
Phaeosphaeria nodorum
Phytophthora fragariae
Sclerotinia sclerotiorum



PATHOGEN RISK LIST
(September 2019)

Adapté de :
Brent & Hollomon, 2007; FRAC, 2024



Remerciements