Where to find FRAC information material?

FRAC’s main communication vehicle is the website. This is a key resource for everybody with an interest in fungicide resistance and its management.

Visit the FRAC Website at www.frac.info

Or download the FRAC Mode of Action App for Android or iOS.

Downloads available on www.frac.info/knowledge-database

The Mode of Action Poster®

The poster shows the molecular structures and respective codes of all fungicides included in the internationally accepted FRAC Code List®. Fungicides sharing the same mode of action and being cross resistant are shown grouped together.

The Monographs

Three Monographs are currently available in the FRAC collection. Each is written by recognized experts and cover essential areas such as risk assessment, resistance management, and sensitivity monitoring.

The Monitoring Methods

The use of the correct methodology is critical when conducting resistance monitoring campaigns and establishing the sensitivity of fungal isolates. The Monitoring Methods pages provide detailed information on validated methods for each of the chemistries covered by FRAC.

Additional publications

List of Confirmed Cases of Resistant Plant Pathogens maintained by FRAC and including key references.

A Pathogen Risk List can be viewed together with background information on diagnostic tests and field location in the FRAC website.

A key strategy to prevent and manage resistance is combining fungicides of different modes of action. Guiding principles on fungicide resistance management and key to the FRAC recommendations for fungicide selection.
What is the impact of resistance?

Field resistance of plant diseases reduces the fungicide’s long-term effectiveness and farmers can lose valuable tools to protect their crops. The more frequently farmers use the same fungicidal mode of action, without applying any resistance management strategy, the more likely resistance will occur.

What needs to be done?

Sound resistance management is key to ensure optimum crop yield and quality. It helps maintain the effectiveness and broad spectrum of modern fungicides that are available to farmers.

How does FRAC help?

Providing Platforms
By providing platforms (FRAC-Working Groups and Expert Panels) to member companies, which enables research to identify and reduce field resistance, so that findings can be published.

Guidelines for Resistance Management
By developing updated Fungicide Resistance Management Guidelines for each Mode of Action Class addressed by a Working Group.

Education Material
By providing educational material to train people in the science of fungicide resistance and the theory and practice of resistance management.

Frequent Contribution
By publishing findings, FRAC members are frequent contributors to scientific publications, conferences and symposia.

How to identify fungicides with different modes of action?

A fungicide’s mode of action is the way in which the active ingredient works to control the target disease.

The FRAC mode of action classification provides farmers, advisors, extension staff, consultants and crop protection professionals with a tool to select fungicides that work in an effective way. It supports the use of fungicides that are compatible and that can be used in an effective way by rotating and mixing fungicides with different modes of action.

How to find FRAC recommendations on Fungicide Resistance Management for MoA-classes?

Working groups, Expert Panels and Task Forces are the major players of FRAC. The groups unanimously agree on resistance management guidelines for all fungicides within the mode of action or classes in relevant crop. Guidelines are published in the FRAC website and are regularly reviewed and updated.

Fungicide applied

The FRAC mode of action classification enables the resistant population to grow.

Survivors are resistant to the mode of action of the chemical and are able to reproduce in the next generation.

when the chemical is used it kills almost all of the sensitive fungi in the population.

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By providing educational material to train people in the science of fungicide resistance and the theory and practice of resistance management.

How does FRAC (net)work at the regional and national level?

Dissemination and implementation of advice is done in very efficient ways by FRAC regional and national groups. They frequently manage resistance monitoring campaigns relevant for their geographical area.

FRAC maintains communication lines with national groups consisting of research institutions, authorities and industry bodies.

Regional FRAC’s work closely with the FRAC Working Groups and the Steering Committee. Additionally, the FRAC network includes the FRAC Regional Expert Fora.

FRAC (Resistence Action Groups) work on country level and typically include advisors and researchers as well as farmers.

How is FRAC coordinating its work?

The Steering Committee is the management team for all FRAC activities. Under the leadership of Jean-Luc Genet, the Steering Committee consists of the Chairpersons of all the Working Groups, Expert Panels and FRAC Groups.

All members of the Steering Committee have broad experience of research institutions, authorities and industry bodies involved in the management of fungicide resistance in different cropping systems throughout the world.

The Steering Committee works with experts to ensure that guidelines are conducted according to strict anti-trust guidelines.