



Fungicide Resistance Action Committee

FRAC

The Fungicide Resistance Action Committee (FRAC) is a specialist technical group of CropLife International (CLI). The purpose of FRAC is to provide fungicide resistance management guidelines to prolong the effectiveness of "at risk" fungicides and to limit crop losses should resistance occur. FRAC operates according to the CLI antitrust guidelines provided in Annex 1 of this document.

CONSTITUTION

FRAC OBJECTIVES

To prolong the effectiveness of fungicides likely to encounter resistance problems by recommending resistance management strategies and guidelines for fungicide use and to limit crop damage during the emergence of resistance.

To foster a responsible attitude of industry to resistance issues.

Approach

- Identify existing and potential resistance issues
- Establish a working group / expert forum for fungicide types considered to be at risk from resistance issues.
- Collate existing information on fungicide resistance for the "at risk" fungicides; any data collection is to be carried out in full compliance with anti-trust regulations.
- Generate new information on the "at risk" fungicides including technical resistance management strategies.
- Communicate the results of the information to those involved in fungicide research, distribution, registration and use.

FUNCTIONS

To be a professional body representing the agrochemical industry in all technical and scientific matters relating to fungicide resistance and its management.

In particular to:



- Initiate, stimulate and monitor the working groups and expert fora.
- Provide guidelines for resistance management and co-ordinate the efforts of the working groups and expert fora in formulating said guidelines (1).
- Help working groups and expert fora communicate their conclusions and resistance management guidelines.
- Publicise guidelines on procedures/definitions of practical resistance research
- Develop, maintain and publicise a FRAC Mode of Action (MoA) code list and associated documents.
- Provide technical counsel for fungicide resistance courses and research studies.
- Liaise with regional and local FRAC groups, local FRAG groups, groups dealing with resistance matters, universities, advisory and extension services, farmers, distributors, government.
- Provide advice and guidance on resistance management strategies for fungicides not covered by either working groups or expert forum.

(1) Note that FRAC does not provide specific product recommendations; it provides general technical recommendations for resistance management strategies of groups of fungicides according to their mode of action.

STATUS

FRAC is a specialist technical group of CropLife International (CLI). The FRAC Constitution shall be governed by the law applicable to CLI, currently the Belgian law.

FRAC has equal status with specialist groups dealing with Herbicides (HRAC), Insecticides (IRAC) and Rodenticides (RRAC), but FRAC operating procedures and financial management are independent of any other group.

THE FRAC STEERING COMMITTEE

FRAC is managed by the FRAC Steering Committee (hereafter referred to as “the SC”). The SC will delegate authority to FRAC working groups and expert fora as appropriate.

Membership of the FRAC Steering Committee

The SC comprises senior technical people from the R & D functions of agrochemical manufacturers. However the SC may appoint a member from another function providing that person has a suitably technical qualification. Representatives must be experienced and influential in company fungicide resistance management matters.



The SC may appoint an external contractor to serve in an administrative capacity only, for example as committee scientific officer or treasurer, as agreed by SC members.

Representatives from companies who are not members of CLI may be admitted to the FRAC SC and working groups. Non-member participation in these teams shall be: time-limited, with possible renewal; restricted from any leadership role or decision right pertaining to CLI strategy or budget; shall be subject to payment of established fees; and may be suspended by CLI without appeal for failure to continue to meet eligibility requirements.

There are two options available for non-members to pay fees:

1. A fee is paid to participate both on the SC and working groups as set out by CLI.

A fee is paid to participate per working group to a maximum of 3 working groups as set out by CLI. If a company intends to participate to more than 3 working groups the SC fee applies.

Structure of the FRAC Steering Committee

The SC comprises:

- Chairperson;
- Vice-Chairperson;
- Secretary / Scientific Officer;
- Treasurer;
- Chair of the MOA Expert Panel;
- Communications Officer;
- Chairpersons, or representatives, of working groups;
- Chairpersons, or representatives, of Expert Fora;
- Ordinary members;
- CLI representative.

In addition, *members* may be appointed by the SC for specific purposes:

- Chairpersons or representatives of selected local FRAC groups
- Chairpersons or representatives of task forces

Individuals make a commitment to undertake an active and constructive role in resistance management matters.

Roles like chair or vice chair are typically elected from within the SC members, they might have additional roles within FRAC.

Membership is expected to be limited to a manageable number.

For liaison, the chairperson of any other Resistance Action Committee (RAC) may attend FRAC meetings and vice versa.



Appointment of Office Bearers of the FRAC Steering Committee

All Office Bearers are appointed by the SC and serve for a period of 2 years. These positions can be renewed but provisions should be made for nominations and elections at the FRAC SC meeting following this period. Nominations should be distributed to the FRAC SC members at least four (4) weeks before the meeting. The chairperson and vice-chairperson must be a representative of a CLI member company.

Chairperson,

The chairperson represents FRAC on the Resistance Management Project Team within CLI. In special circumstances this role can be delegated within the SC to another representative of a CLI member company.

Chair of the MOA Expert Panel is appointed by the SC and may or may not hold another position on the SC.

Treasurer shall be appointed by the SC to keep an overview on income and expenditure, in coordination with CLI who manage the accounts. The treasurer may or may not hold another position on the SC, but shall not be chairperson nor vice-chairperson.

Communications Officer shall be appointed to manage communication matters which will include management of the FRAC communication tools. The communications officer may or may not hold another position on the SC, but shall not be chairperson nor vice-chairperson.

Election of Office Bearers:

An election for any of these positions may be called by any SC member to take place at the following FRAC SC meeting. Notification of such a call must be made in writing (hard copy or electronic text) to all SC members at least four weeks in advance of the meeting. Votes may be cast in person or in writing to the SC.

Each CLI member company represented on the FRAC SC has one vote, which can be made in person or in writing (75% of CLI member companies needed for a quorum)

Elections are decided on a simple majority vote and become effective immediately. Incumbent(s), or candidate(s) for positions, may vote for themselves. In the event of a tie the incumbent remains in office.

Working Group Representation on the FRAC Steering Committee

A representative from each working group is appointed to serve on the SC by the appropriate working group members. Representatives are usually the chairpersons of the working groups.



Expert Fora Representation on the FRAC Steering Committee

A representative from each expert forum is appointed by the SC to serve on it. Representatives are usually the chairpersons of the Expert Fora.

Ordinary Members of the FRAC Steering Committee

Each CLI member company has the right to nominate a candidate for SC membership. The selected candidate should fit the basic requirements as stated in this constitution.

For appointments of non-CLI company representatives, FRAC will follow the 2017 CLI policy concerning *participation of companies which are not members of CLI in selected CLI project teams*. The SC must agree to the appointment of any member representing a non-CLI Company.

Additional Members of the FRAC Steering Committee

The SC must agree on the need to appoint additional members and may specify the terms of such membership prior to the appointment of such members. *Ad-hoc* members have no voting rights.

Where appropriate, the chairperson or a representative of a local FRAC committee will be invited to join the SC as an *ad hoc* member.

FRAC Policy Decisions taken by the FRAC Steering Committee

FRAC policy decisions on matters such as fungicide usage recommendations for resistance management, monitoring methods, classifications, definitions etc., must be unanimous.

Committee Financial and Management Decisions

CLI members enjoy decision right pertaining to CLI strategy or budget.

Decisions shall be taken on a simple majority vote of those attending (75% of FRAC SC member companies needed for a quorum). In the event of a tie the chairperson (or in his / her absence the vice-chairperson) has a deciding vote.



Financial Management

CLI will administer FRAC financial matters according to the following guidelines:

- The SC shall determine a budget in the second quarter of each year to cover planned expenditure in the subsequent year.
- The budget shall be communicated to CLI who will be responsible for obtaining the necessary funds to cover the budget from the FRAC Member companies.
- Expenditure against budget must be approved by the SC in advance.
- Invoices for payment will be approved as appropriate and passed to CLI for payment according to the authority guidelines given below.
- Where payment is required for items not included in the budget, the matter will be referred to CLI and the appropriate course of action agreed.
- Budget for FRAC is allocated by CLI per calendar year. Should certain already committed funds not be paid in the designated financial year, FRAC SC needs to agree with CLI on an accrual to the following year.

Financial Payment Authorities Guidelines

- All budgeted items must have been previously agreed in principle by the SC.
- The treasurer, chairperson or vice-chairperson alone may authorise CLI to pay invoices up to a value of 5000 (five thousand) Euro as appropriate.
- For payment of invoices over 5000 (five thousand) Euro the authority of two persons out of: the chairperson, treasurer and vice-chairperson is required.
- No SC or other FRAC group member may authorise payment to himself/herself.

CLI shall provide the treasurer with a statement of accounts in time for the treasurer to present the FRAC accounts for approval at each SC meeting.

DISSOLUTION OF FRAC

FRAC can only be dissolved in compliance with the CLI Articles of Association and By-Laws.

In the event of dissolution of FRAC, all monies held in the FRAC account after settlement of any outstanding debts shall be returned to CLI. The FRAC SC reserves the right to stipulate how the funds should be used by CLI.



FRAC MOA EXPERT PANEL

The FRAC MOA Expert Panel exists to advise the SC on all matters relating to the mode of action of antifungal agents considered by the SC and is responsible for the technical content of the FRAC MOA Code List and associated publications e.g. the MOA poster. The chair of the Expert Panel will be elected by the SC and will be from industry. Panel members will be nominated by the chair of the MOA Expert Panel and by SC members. Membership will be decided by the SC in consultation with the chair of the MOA Expert Panel. Members, who will be recognised experts in the field, will usually, but not necessarily, be from the industry.

The Panel will have the responsibility of liaising with manufacturers, licensees or other responsible organisations in order to agree the mode of action of molecules as appropriate.

FRAC WORKING GROUPS

Where two or more companies having compounds of similar mode of action and/or cross-resistance potential exist, the companies involved will be encouraged to establish a FRAC working group in order to co-ordinate resistance management activities. Each working group comprises technical representatives from companies with a compound in the market or as publicly known in development/registration process e.g. by common name publication. A condition to participation in the group is the commitment to actively contribute to the activities of the group.

Organisations involved only in the distribution of a product (i.e. not prime manufacturers) may be invited to join the working group providing they make a commitment to actively participate in the activities of the group e.g. by provision of sensitivity monitoring data. Otherwise they can be invited to special meetings of the working group as appropriate.

The contact person from each company is a senior scientist with the technical expertise and authority to represent his/her company. Collectively, these contact persons foster technical collaboration. Representatives of company marketing functions may be members of working groups providing their inclusion aids working group decision making. All members are made aware of and operate in compliance with anti-trust regulations.

Members of each working group establish an atmosphere of mutual trust, pool all relevant information for their group in compliance with anti-trust regulations, define the scope of the problem(s) and assess the risks.



Working group members are responsible for appointing their own group officials. The chairperson, who should be a representative of a CLI member company should be appointed for a period of 2 years which is renewable. Working group members should also select a representative to the SC who is usually the chairperson. Each CLI member company on the working group is allowed to one vote in this process.

Responsibilities of Working Groups

After considering all available data and information and calling on experts for technical and legal advice as appropriate the working groups recommend technical strategies aimed at prolonging the useful life of the group of fungicides at risk and encourage their implementation. The strategies are communicated as Guidelines on the FRAC website and by other means as decided by the SC, to inform appropriate personnel (users, advisory services, registration authorities and independent distributors) of the strategies and the reasons for them.

Working groups establish and direct collaboration on:

- The WG's should review findings from regions and countries and act as the entry point for relevant information and resistance management actions from Regional and Country FRACs to the global SC.
- Monitoring programmes - share methodologies and definitions (in some cases developing common methodologies), establish base-line data, agree joint interpretation of results.
- Research – define areas of basic and applied research that needs to be done, help to influence the direction, methodology and reporting of work already done.
- Educational programmes – encourage the publication of research results and provide relevant information to the SC.
- Verification of reports on resistance, statements, investigations, remedies.
- Formulation of use strategies in terms of resistance prevention or delay and checking on the implementation of such strategies.
- Monitoring and guiding the activity of national/regional sub-groups.
- If appropriate, multiple working groups could initiate meetings across multiple modes of action to address crop specific resistance management issues.

Working groups shall meet as often as necessary, usually once or twice per annum, in order to collate and discuss progress within the group. The appointed representative of the group will present the findings of the group at the next meeting of the SC and arrange for a suitable summary to be prepared and communicated to the communications officer for inclusion on the FRAC web page. The content of this summary must be agreed by all the member companies of the working group.



Working Group Conditions of Membership

Any manufacturer of an appropriate molecule, including generic manufacturers, are eligible to join a working group providing they meet the conditions of membership and subject to payment of the respective membership fee as defined by CLI:

- The member company, through their representative(s) must be able to make an active contribution to the technical discussions held within the group. The representative member must either have the necessary technical ability or be present to support the technical decision-making process of a suitably qualified technical person from that company who is a member of the working group.
- The term 'active contribution' means that the company will contribute data and active constructive discussion that will lead to formulation of resistance management strategies and subsequent guidelines for the group.
- The term 'data' is understood to include, but not necessarily be limited to, provision of base line sensitivity data, sensitivity monitoring data, mode of action data, cross-resistance information. Such data may be generated in-house or under contract.
- Should any member company consistently fail to make an active contribution and gives no undertaking to provide such a contribution, they shall be liable for exclusion from the group. A written recommendation for exclusion shall be made to the SC by the working group chairperson with a copy to the member company who can make its views known to the SC in writing. The SC shall decide on the appropriate action to be implemented by the working group chairperson with the authority of the SC.
- *Ad hoc* members may be appointed by the working group. The working group must agree a positive need for the appointment of *ad hoc* members and may specify the terms of such membership prior to the appointment of such members. *Ad hoc* members have no voting rights.
- Should a member or members from a company be unable to attend a working group meeting they may request that a temporary replacement person shall attend that meeting in their place. Such requests must be made to the chairperson of the working group, who will, at his discretion, refer the matter to the other working group members. After considering responses, the chairperson will communicate the decision.

Decision making in Working Groups

All technical decisions, recommendations on resistance management strategies and guidelines must be agreed by all member companies of the group by unanimous decision, (CLI and non CLI member companies).

If decisions outside resistance management strategies and use recommendations have to go to a voting process, each company on the working group is allowed one



vote and decisions will be taken on a simple majority. In the event of a tie the chairperson has a deciding vote. In these cases, only votes from those companies present at the meeting or who have made their favoured position known to the chairperson before the meeting will be considered. Voting for positions or CLI strategy relevant topics is restricted to CLI member companies only.

The Banana Working Group

The Banana Working Group differs from other working groups in that it deals with several chemical groups. Terms and conditions of membership are as for other working groups with the following exceptions:

- The chairperson shall be appointed from, and by, members representing the chemical manufacturers.
- The chairperson shall serve for a period of 2 (two) years and may not stand for re-election for the subsequent 2 (two) years. He/she may stand for future election.
- Representatives from the banana producing companies are welcomed as 'invited members. They are encouraged to contribute data for consideration by the group.

FRAC EXPERT FORA

When a working group and the SC agree that the activities of a working group can be stopped, consideration will be given to the formation of an expert forum for the chemical group or area covered by the working group. The expert forum will consist of technical people able to advice on all aspects of resistance management and its history for that group. The Chairperson can arrange ad hoc meetings when changes to current use recommendations become necessary or for other resistance related topics that may become apparent. The FRAC SC will be kept informed of such developments and the Chairperson should update the recommendations accordingly.

- The chairperson of the expert forum shall be appointed by the SC.
- Other members of the forum shall be appointed by the SC in consultation with the forum chairperson.
- The chairperson or appointed representative shall be a member of the SC. Terms and conditions of membership of the SC shall be as for other members.

PUBLIC RELATIONS AND COMMUNICATIONS

The minutes of FRAC meetings and summary reports and recommendations of working group activities may be published in the most appropriate format and route, as decided by the SC.



ACKNOWLEDGEMENTS

FRAC acknowledges and applauds the vital role of academic and government research institutes and advisory services throughout the world for their invaluable studies on fungicide resistance.

FRAC sees its role as being complementary to these activities and seeks to encourage basic and applied research into all aspects of fungicide resistance. A concerted effort by all people involved in fungicide use is required if we are to limit the impact of resistance.

Approved by the FRAC SC, March 2020



ANNEX 1

ANTITRUST LAW REMINDER (4/2015) for all CropLife International meetings

I. Background

This Reminder has been **endorsed by the Board of CropLife International** as part of its commitment to compliance with the strictest and most developed antitrust laws and principles. It is intended to **provide antitrust guidance to CropLife International's members** when they interact, both at meetings (including via conference calls, webcasts and other means) hosted, organized or sponsored by CropLife International as well as in informal discussions before or after such meetings.

The Reminder **aims to ensure strict observance and compliance by CropLife International's members with all applicable antitrust laws.** "Applicable antitrust laws" include US/EU laws as well as underlying principles of national laws of the different countries in which CropLife International has presence or is active.

Strict compliance with competition laws forms part of the culture of CropLife International and is key to its success. Any violation of the antitrust laws can expose both CropLife International and your company to lengthy and costly administrative (and in some countries criminal) investigations, significant reputational damage, business disruption, hefty fines and civil liability for damages. In a growing number of countries, such violations can also lead to sanctions against business managers and executives having engaged in illicit conduct.

II. Key Antitrust Principles

While some activities among competitors are both legal and beneficial to the industry, **group activities of competitors**, in particular within trade associations, **are inherently** suspect under the antitrust laws. Agreements or combinations between or among competitors need not be formal to raise questions under antitrust laws, but may include any kind of understanding, formal or informal, secretive or public, under which each of the participants can reasonably expect that another will follow a particular course of action.

Generally speaking, the antitrust laws prohibit any agreement or concerted action which restricts competition unless it produces overriding benefits to consumers. However, **agreements or concerted practices** which are aimed at **coordinating or influencing the competitive behaviour** of companies active on the same market – in particular the fixing of prices and/or output, the allocation of customers or markets - **are treated as cartels**, rarely produce consumer benefits and, hence, are the most **heavily prosecuted** by the antitrust regulators around the world.



Each of you is responsible to see that topics, which may give an appearance of an agreement or concerted action **that would violate the antitrust laws, are not discussed at your meetings**. It is the responsibility of each participant in the first instance to avoid raising improper subjects for discussion.

This Reminder has been prepared to assure that participants in meetings are aware of this obligation.

The DOs and DON'Ts presented below highlight only the most basic **RED FLAGS** when engaging in contact with competitors through CropLife International meetings or events. Each participant in a meeting should be thoroughly familiar with his/her responsibilities under the antitrust laws and should consult in-house or external legal counsel in all cases involving specific situations, interpretations or advice.

DON'T, in fact or in appearance:

- X** Fix purchase or selling price or other trading conditions.
- X** Limit supply of products, services, output, markets, technical development or investment.
- X** Allocate markets or customers, whether through bid rigging or otherwise with your competitors.
- X** Reach understandings or agreements – verbal or written, implemented or not – or even hold discussion on anything related to commercially sensitive information, such as:
 - Individual company prices, price changes, price differentials, mark-ups, discounts, allowances, credit terms, or data that bear on price, e.g. costs, production, capacity, inventories, sales volumes.
 - Industry pricing policies, price levels, price changes or differentials.
 - Current and future production or capacity levels.
 - Bids on contracts for particular products; procedures for responding to bid invitations.
 - Individual business and Capex plans and marketing plans and strategies.
 - Adoption of new standards, which might have the effect of excluding certain technologies, agricultural techniques, production processes or products from any market.
- X** Attend CropLife International meetings without pre-approved written agenda or clear indication of the purpose.



- X Accept commercially sensitive information from a competitor or agree to share such information with your competitor(s).

- X Participate in any information exchange, market survey, or benchmarking exercise that allows access to individualized competitive information from the various competitors.

- X Engage in conduct the purpose or effect of which is to exclude any competitor or supplier or to engage in collective boycotts.

DON'T discuss or exchange information regarding the above matters during social gatherings incidental to CropLife International meetings, even in jest.

In addition, it is particularly important that you:

- ✓ DO have an agenda and adhere to prepared agendas for all meetings.
- ✓ DO acknowledge the present Reminder at the start of the meetings.
- ✓ DO get minutes taken and object if they do not accurately reflect the discussion and actions taken.
- ✓ DO protest against any discussions or meeting activities which appear to violate the above **RED FLAGS**; dissociate yourself from any such discussions or activities and leave any meeting in which they continue.
- ✓ DO consult with your in-house or external legal counsel on all antitrust questions relating to meetings, and promptly report any violation of the above **RED FLAGS**.



ANNEX 2

Terms of Reference for Chair Persons of FRAC groups; Global, Regional and Country level

Global FRAC working groups:

- Chair of a group must come from a technical function of a CLI member company
- Chair 1-2 formal F2F meetings per year and ad hoc teleconferences as required
 - Take minutes, seek agreement among the group members and publish in sensible time frame after the meetings
- Ensure adherence to antitrust guidelines
- Represent working group in SC either permanently or ad hoc as appropriate
- Align with other FRAC working groups, e.g. for crop/target specific recommendations across multiple modes of action
- Act as primary contact for external enquiries, and address questions to the member of the working group or other SC members as appropriate
- Represent the FRAC working/expert group and ensure importance of resistance management is addressed at scientific meetings (opportunity to share/delegate with other members of the working group)
- Prepare or contribute to presentations/conferences/publications as appropriate
- Must act independent of company interests and needs to be able to balance different positions in the working group (avoid to polarize, needs diplomacy and negotiation skills)
- Act as an advocate for the FRAC agreements and recommendations
- Agree within working group and recommend for approval of new non-CLI members
- Seek updates from regional/country groups
- Ensure appropriate coverage of global aspects as arrived from regions

Regional/country FRAC groups:

- Chair of a group should come from a technical function, if possible, within a CLI member company
- Chair 1-2 formal F2F meetings per year and ad hoc teleconferences as required
 - Take minutes, seek agreement among the group members and publish in sensible time frame after the meetings
 - Share minutes with assigned SC member
 - Share findings on specific MoAs with the respective global working group
- Ensure adherence to antitrust guidelines



- Represent FRAC group in SC or provide updates ad hoc as appropriate
- Agree objectives and priorities for the regional/country group annually
- Act as primary contact for external enquiries in the respective region, and address questions to the member of the regional working group or other SC members as appropriate
- Represent the FRAC working/expert/regional group and ensure importance of resistance management is addressed at scientific meetings (opportunity to share/delegate with other members of the working group)
- Ensure links to local CropLife organizations and other RAC groups in the region or country
- Prepare or contribute to presentations/conferences/publications as appropriate
- Must act independent of company interests and needs to be able to balance different positions in the working group (avoid to polarize, needs diplomacy and negotiation skills)
- Act as an advocate for the FRAC agreements and recommendations
- Be open and connect to outside industry stakeholder and/or scientists in respective geography