Anilinopyrimidines (AP's) Working Group

Meeting on December 01, 2015, 8:30 am - 12:30 am
Protocol of the discussions and use recommendations of the AP's Working Group of the Fungicide Resistance Action Committee (FRAC)

Participants

BASF	Randall Gold Gerd Stammler
Bayer CropScience	Andreas Mehl Charles Bergmann
KI Chemical	Isao Kaneko Takumi Katsumata
Syngenta	Stefano Torriani Birgit Forster

Venue:

Lindner Main Plaza Hotel, Frankfurt, Germany

ANTI-TRUST GUIDELINES (FROM FRAC CONSTITUTION) WERE SHOWN BEFORE THE MEETING STARTED

Source: www.frac.info
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1. Monitoring Results 2015 (FRAC members)

1.1 *Botrytis* results

Vineyards
(BASF, Bayer CropScience, K.I. Chemical, Syngenta

Extensive monitoring studies in Europe and Chile have been carried out for more than a decade by Bayer CropScience, KI Chemical, Syngenta, and BASF. In 2015, sensitivity data from commercial vineyards were presented for France, Germany, Chile, Croatia, Italy, Hungary, Portugal, Slovenia, Slovakia, and Switzerland.

Data from these studies show that frequencies of resistant strains varied from low to moderate with high regional variability, thus remaining comparable to the situation observed in 2014.

Products, applied according to the FRAC-AP guidelines in grape spray programs, maintained very good performance in the field.

Strawberries
(Syngenta)

Sensitivity monitoring was carried out during 2015 in Germany, Poland, Belgium, Italy, Austria, Czech Republic, France, Slovakia, and Spain from commercial locations.

Data show that the frequency of resistant isolates is moderate, fluctuating from field to field, ranging from zero to high. Compared to 2014, the frequency of resistant isolates in the monitored populations remained stable.

Products, applied according to the FRAC-AP guidelines in strawberry spray programs, provided good control in commercial situations.

Vegetables
(Syngenta)

Sensitivity monitoring in tomato and beans was carried out during 2015 in the Netherlands, France, and Poland with samples obtained from commercial locations. Overall, data show a low frequency of resistant isolates in all studied crops.

Evidence from field and laboratory trials has shown that there is a medium resistance risk of *Botrytis* to APs. Good agronomic practices and strict adherence to the FRAC AP use guidelines are crucial to ensure that APs remain effective due to the risk of increasing occurrence of multiple- and multidrug resistant strains, particularly in soft fruits (for more information on multiple- and multidrug resistance see quick references).

1.2. *Venturia* results

(BASF, Syngenta)

Monitoring studies for 2015 were presented.
Samples from France, Germany, Italy, Croatia, Belgium, Hungary, Netherlands, Poland, Portugal, Bulgaria, Latvia, Lithuania, Serbia, Spain, Switzerland, Greece, and UK were analyzed. Based on dose-response to APs using *in vivo* biotests, populations are classified as either sensitive, moderatly adapted or resistant.

For 2015, in contrast to the previous years, sensitive populations were found in the majority of the monitored locations. A heterogeneous distribution of sensitive and moderatly adapted populations was detected in the remaining apple growing areas. Cases of resistance were only detected in three single orchards in Europe. Within individual apple growing regions, sensitive sites could be detected next to less sensitive sites.

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2. Use Recommendations

The purpose of the use guidelines for AP containing products is to maintain the sensitivity in the target pathogens and to prevent crop losses due to resistant pathogen populations.

2.1 General AP's Guidelines (all crops)

Where different AP-containing products are used in one season, the cumulative number of applications with cyprodinil-, pyrimethanil- or mepanipyrim-containing products must not exceed the maxima as mentioned below.

The use recommendations were reviewed during the meeting on December 1st, 2015. The *Botrytis* and *Venturia* guidelines have not been changed.

2.2 *Botrytis* Guidelines

- Where up to three treatments are made per season, the number of applications of AP-containing products is limited to one.

- In situations where four to six Botrytis treatments are made per crop and season, a maximum of two applications with AP-containing products are recommended.

- In specific situations where seven or more Botrytis treatments are required per crop and season, a maximum of three applications with AP-containing products is recommended and not more than two consecutive applications.

- For specific crops and products, follow use recommendations of individual companies.

2.3 *Venturia* Guidelines

- Apply a maximum of four AP-containing products per season.

- In locations where resistance has been reported, use APs only in mixture with an effective non cross resistant scab fungicide.

- Individual products should always be used at recommended dose rates and during the period when they are most effective.

- Curative use only in conjunction with reliable scab warning systems.

The next AP FRAC Working Group meeting is scheduled for December, the 13th, 2016.