



# EFSA

Risk communication in practice:  
what role for scientists?

**Simon Terry**

Communication, Engagement & Cooperation

**Parma Summer School, 15-17 May 2018**





Budget Has  
Rough Path

CLARK BERRY  
PROVES CASE  
FOR JURY

Citrus Trees

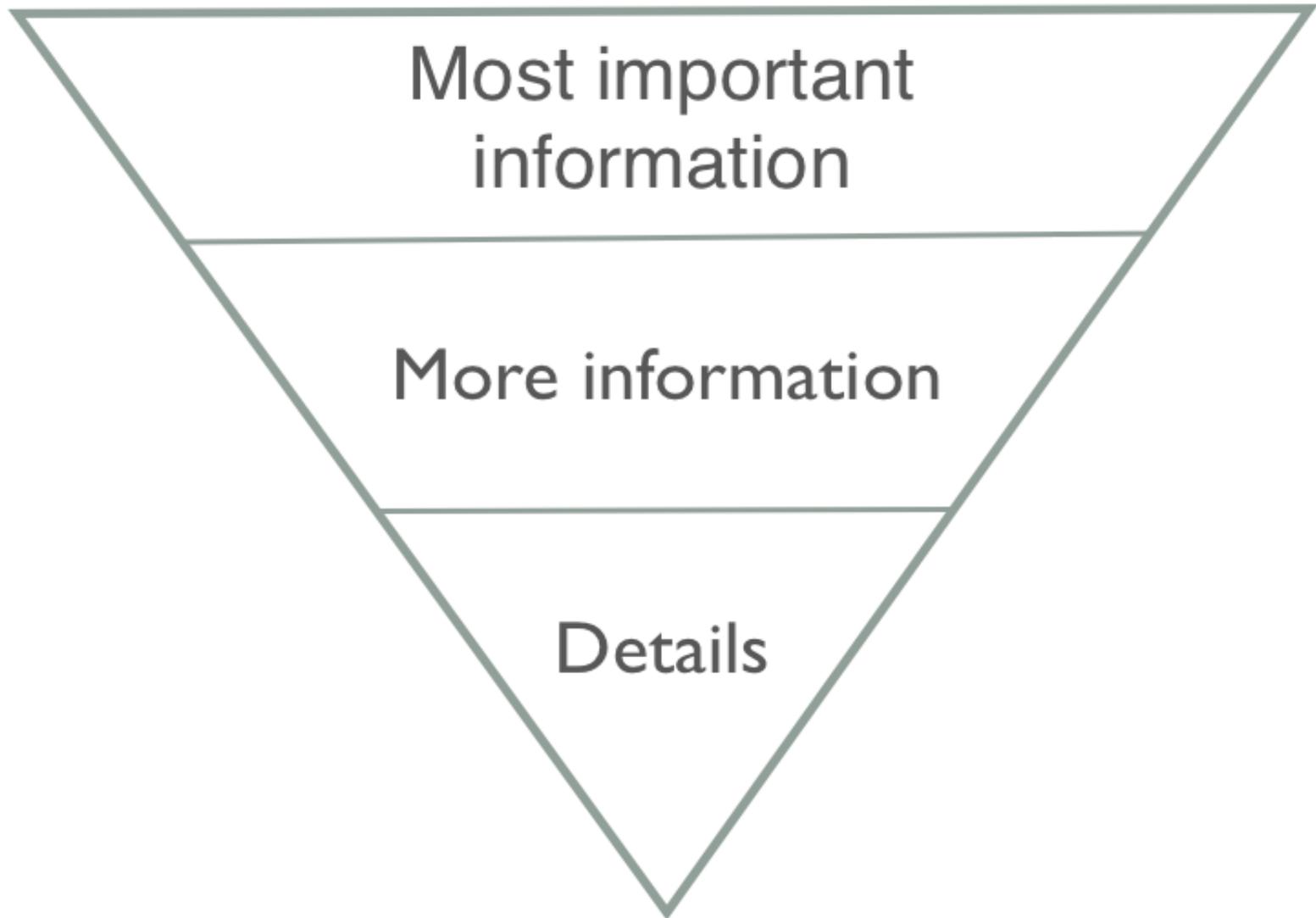
Can Be  
Blended  
By Blackboard

Gambler's

TRIVOR NOAN  
SAMPOW CRASH

BRAD  
M  
AN

## HOW EDITORS WRITE



# HOW SCIENTISTS WRITE

**Long, descriptive title**

**Abstract**

**Introduction**

**Methods**

**Results**

**Discussion**

**Conclusions**

**References**

## EFSA'S MANDATE IS TO



Food and feed  
safety advice to its  
principal partners,  
stakeholders and the public at  
large **in a clear and  
accessible way.**

# HOW?

## MULTIMEDIA

- Videos
- Interactive tools
- Infographics,
- Data visualisation

## EFSA WEBSITE

- News,
- Topics
- Alerts,
- Newsletter
- Lay Summaries
- Factsheets
- Events

## EFSA JOURNAL

- All EFSA scientific outputs



## SOCIAL MEDIA

- Twitter,
- LinkedIn
- YouTube

## SCIENTIFIC OUTREACH

- Science networks
- Infosessions
- Scientific Conferences
- Webinars

## HOW: CREATE A BRIDGE SCIENCE - CITIZENS

### More complex science – new ways to explain

- **Visual** representation: Infographics ....
- **Engaging**: interactive infographics, videos, blogs
- **Campaigns**
- **Social media**: YouTube, LinkedIn, ResearchGate, Twitter
- **Data visualisation**



-  PDF
-  Info
-  References
-  Figures



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Scientific Opinion

## Malachite green in food

### EFSA Panel on Contaminants in the Food Chain (CONTAM)

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**Requestor:** European Commission

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**Panel members:** Jan Alexander, Lars Barregård, Margherita Bignami, Sandra Ceccatelli, Bruce Cottrill, Michael Dinovi, Lutz Edler, Bettina Gr Kraupp, Christer Hogstrand, Laurentius (Ron) Hoogenboom, Helle Katrine Knutsen, Carlo Stefano Nebbia, Isabelle Oswald, Annette Peterse Vera Maria Rogiers (until 9 May 2016), Martin Rose, Alain-Claude Roudot, Tanja Schwerdtle, Christiane Vleminckx, Günter Vollmer and Heat Wallace

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**Adopted:** 24 June 2016

 Correspondence: [contam@efsa.europa.eu](mailto:contam@efsa.europa.eu)



### Abstract

Malachite green (MG) has been used globally in aquaculture but is not registered for use in food-producing animals in the European Union. The European Commission requested EFSA to evaluate whether a reference point for action (RPA) of 2 µg/kg for the sum of MG and its major metabolite leucomalachite green (LMG) is adequate to protect public health. Available occurrence data were not suitable for a reliable exposure assessment. The hypothetical dietary exposure was calculated, considering the RPA as occurrence value for all types of fish, fish products and crustaceans. Mean dietary exposure across different European dietary surveys and age classes would range from 0.1 to 5.0 ng/kg body weight (bw) per day. For high and frequent fish

Text size Share

- Abstract
- Summary
- 1 Introduction
- 2 Data and methodologies
- 3 Assessment
- 4 Conclusions
- 5 Recommendations
- Documentation provided to EFSA
- Abbreviations

What is this page? Embed badge Share

## Scientific Opinion on the risks to plant health posed by *Xylella fastidiosa* in the EU territory, with the identification and evaluation of risk reduction options

Overview of attention for article published in EFSA Journal, January 2015



**66**

**About this Attention Score**

In the top 5% of all research outputs scored by Altmetric

**Mentioned by**

- 5 news outlets
- 1 blog
- 1 policy source
- 12 tweeters
- 9 Facebook pages

**Readers on**

- 22 Mendeley

SUMMARY	News	Blogs	Policy documents	Twitter	Facebook
<b>Title</b> Scientific Opinion on the risks to plant health posed by <i>Xylella fastidiosa</i> in the EU territory, with the identification and evaluation of risk reduction options					
<b>Published in</b> EFSA Journal, January 2015					
<b>DOI</b> 10.2903/j.efsa.2015.3989					
<b>Authors</b> EFSA Panel on Plant Health (PLH)					

**TWITTER DEMOGRAPHICS** MENDELEY READERS ATTENTION SCORE IN CONTEXT

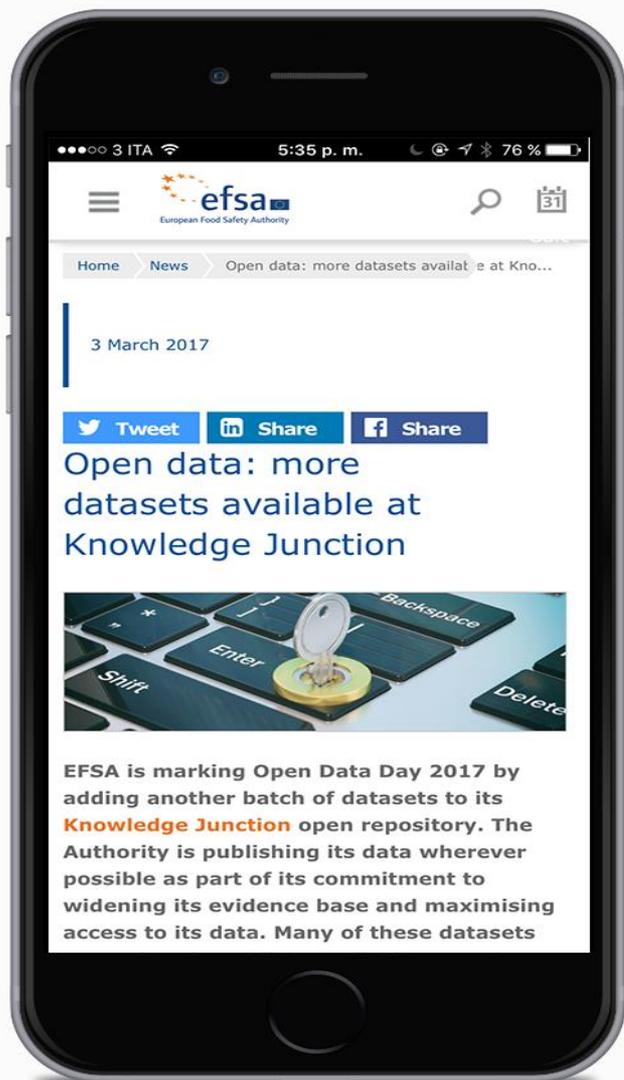
The data shown below were collected from the profiles of 12 tweeters who shared this research output. [Click here to find out more about how the information was compiled.](#)



# HOW: WEBSITE



# HOW: A SCIENCE HUB



Evolving from a “noticeboard”  
service only to **an**  
**interactive hub**

# SOCIAL MEDIA



**Main account** launched in 2012

- Followers: **+16k**

**Thematic accounts** launched 2016

- @Plants\_EFSA
- @ Methods\_EFSA



**Channel** opened in 2012

- **+200** videos
- **+500k** views



**LinkedIn account** launched in 2012

- **+20k** followers



# UNDERSTANDING SCIENCE VIDEOS



[https://www.youtube.com/watch?v=yyySfT4\\_1Ss&list=PL77B6F5984D1D92AE](https://www.youtube.com/watch?v=yyySfT4_1Ss&list=PL77B6F5984D1D92AE)

# DATA VISUALISATION



## Antimicrobial resistance in Europe

# SHARING EXPERTISE: COMMUNICATION EXPERTS NETWORK



# CASE STUDY: GLYPHOSATE

## BACKGROUND

Glyphosate is a chemical substance widely used in a number of pesticide products, notably Roundup. Its use in Europe is subject to strict regulation.

The EU assessment concluded that glyphosate is unlikely to pose a carcinogenic hazard to humans.

This was at odds with a report from the WHO's International Agency for Cancer Research, which concluded that glyphosate was "probably carcinogenic to humans".

# CASE STUDY: GLYPHOSATE

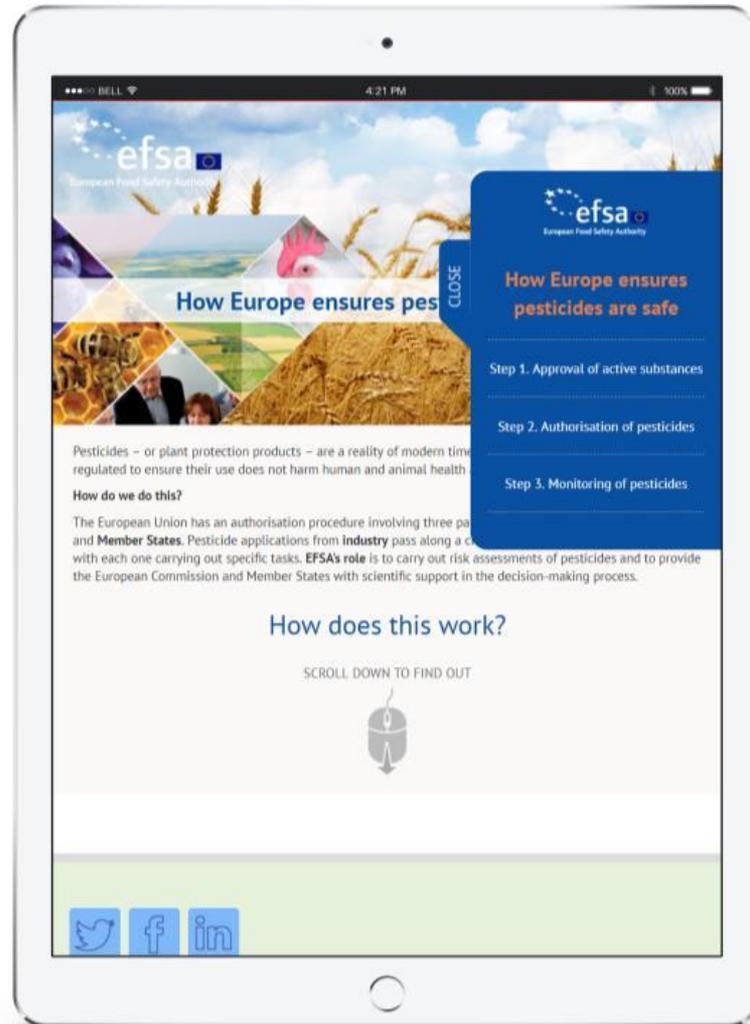
## The challenge

Complex issue, with media attention focused on the issue of carcinogenicity.

Strong anti-glyphosate feeling among wider public – e.g. France banned sale of Roundup following IARC announcement.

How to explain EFSA's role as risk assessor NOT regulator.

# INTERACTIVE SCROLLER



# FACT SHEET



## Why do some scientists say that glyphosate is carcinogenic?

The International Agency for Research on Cancer (IARC) said earlier this year that glyphosate was genotoxic and would “probably” cause cancer in humans.

However, the IARC report looked at both glyphosate – an active substance – and glyphosate-based formulations, grouping all formulations regardless of their composition. The EU assessment, on the other hand, considered only glyphosate. Member States are responsible for evaluating each plant protection product that is marketed in their territories.

This is because the EU and IARC take different approaches to the classification of chemicals. The EU scheme – assesses each individual chemical, and each marketed mixture separately. IARC assesses generic agents, including groups of related chemicals, as well as occupational or environmental exposure, and cultural or behavioural practices.

This is important because although some studies suggest that certain glyphosate-based formulations may be genotoxic (i.e. damaging to DNA), others that look solely at the active substance

glyphosate do not show this effect. It is likely, therefore, that the genotoxic effects observed in some glyphosate-based formulations are related to the other constituents or “co-formulants”. Similarly, certain glyphosate-based formulations display higher toxicity than that of the active ingredient, presumably because of the presence of co-formulants. In its assessment, EFSA proposes that the toxicity of each pesticide formulation and in particular its genotoxic potential should be further considered and addressed by Member State authorities while they re-assess uses of glyphosate-based formulations in their own territories.

This distinction between active substance and pesticide formulation mainly explains the differences in how EFSA and IARC weighed the available data. For the EU assessment, studies conducted with glyphosate were more relevant than studies conducted with formulated products containing other constituents, particularly when the other constituents could not be clearly identified.

## What data was used in the EU assessment?

The EFSA-led review considered a large body of evidence, including the IARC report. In addition to the original studies submitted by the applicants in line with the legal requirements, all available and published studies were considered.

IARC included a number of epidemiological studies in its monograph that were absent from the draft EU assessment; these studies were later added to the EU dossier.

In total EFSA assessed more evidence including additional key studies that were not considered by IARC.



## How is the safety of pesticides assessed in the EU?

Under EU legislation, pesticide active substances in plant protection products are approved in the EU only if it may be expected that their use will not have any harmful effects on human and animal health or the environment.

The evaluation of both existing and new active substances follows a phased approach:

1. For each substance an initial draft assessment report (DAR) or renewal assessment report (RAR) is produced by a designated rapporteur Member State (RMS). Regarding applications for renewal of an approval, the Commission decides on the designation of a rapporteur Member State in consultation with all Member States and industry.
2. The RMS's risk assessment is peer reviewed by EFSA in cooperation with all Member States.
3. EFSA drafts a report (“Conclusion”) on the active substance. The EFSA Conclusion informs the European Commission in the approval process, the subsequent assessments of plant protection products by the Member States, and the revision of maximum residue levels in food by EFSA.
4. The European Commission decides whether or not to include the substance in the EU's list of approved active substances. This determines whether the substance can be used in a plant protection product in the EU.
5. EU Member States assess or re-assess the safety of pesticides containing the active substance that are sold in their territory.

## How were the animal studies on carcinogenicity interpreted?

The EU peer review concluded that no significant increase in tumour incidence could be observed in any of the treated groups of animals in the nine long term rat studies considered. IARC, on the other hand, interpreted two studies as showing statistically significant carcinogenic effects. Similarly, with the mice studies, IARC identified positive carcinogenic trends in two studies that the EU peer reviewers assessed as insignificant.

The main differences between the EFSA and IARC evaluations are explained in detail in a special background document published by EFSA. As well as reviewing a larger number of studies, EFSA for example considered that carcinogenic effects observed at high doses were unreliable as they could be related to general toxicity.

## What happens next?

The EFSA conclusion will inform the European Commission in deciding whether or not to retain the active substance glyphosate on the EU's list of approved active substances, in other words to authorise its continued use in pesticides in the EU.



# CASE STUDY: GLYPHOSATE

## Response

Press release +  
social media

Plain-language  
summary in  
accessible  
format.

Infographic:  
Who assesses  
pesticides in the  
EU?

Published all  
documents  
related to the  
assessment/  
peer review  
(transparency).

# GLYPHOSATE: IMPACT

• 24,000  
views

Press release



• 5,500  
views

Plain-language  
summary



• 4,000  
views

Background  
documents:



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