



# JRC TECHNICAL REPORT

## JRC MARS Bulletin Survey 2018

*Feedback from readers*

Biavetti, I, Bassu, S, Seguni, L, Van den Berg, M

2022



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**Contact information**

Name: Irene BIAVETTI  
Address: Via Fermi, Ispra (VA) - ITALY  
Email: irene.biavetti@ec.europa.eu  
Tel.: +39 0332 789476

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## Executive summary

The '**JRC MARS Bulletin – Crop monitoring in Europe**' provides information on crop growing conditions and quantitative **crop yield forecasts** in the **EU** and several **neighbouring countries**.

The Bulletin is published by the Joint Research Centre (JRC) of the European Commission (EC), on a monthly basis. The primary user of the Bulletin is the Directorate General of Agriculture and Rural Development (DG-AGRI) of the European Commission. In addition, the Bulletin is released publically through the EU Science Hub and the JRC Publications Repository.

In 2018, the team responsible for the elaboration of the JRC MARS Bulletin, published a "**EUSurvey**" to assess the use and usefulness of the information provided by the Bulletin, through collecting information to better understand the public readers, and the way they use the information provided in the Bulletin. The final purpose of the survey was to enable the team to improve the service in the future. The survey ran from May to November 2018. The survey was conducted in the form of 10 multiple choice questions, complemented by open-ended text fields at the end of each question or group of questions. The objective of this report is to summarise the outcomes of the survey. The survey was completed by **149 respondents**.

The results reflect a great diversity of **backgrounds among the readership**: 69% of the respondents work in the private sector; mainly trade (34%), farming or farmers' organization (17%), followed by finance or insurance (7%) and journalism (7%). 31% of the respondents work in the public sector, mainly in Universities and Research Institutes (22%), followed by national Governments/Ministries (7%), and EU Institutions (2%).

30% of the respondents have been reading the Bulletin for more than 4 years; 40% for less than 1 year. Respondents working in the public sector are strongly represented in the group of "**new readers**". Respondents working in journalism are most strongly represented in the group of "**long-term readers**". More than 80% of the respondents retrieve the information from the Bulletin in less than 30 minutes. As it is practically impossible to read an entire issue of the Bulletin in less than 30 minutes – most readers focus their attention on specific **sections of their interest**. Only the respondents working in journalism retrieve the information on average in more than 30 minutes, suggesting a broader interest in this group and/or a more diverse audience served by this group.

Most of the respondents to the survey have a broad **geographic focus**. Almost half of them indicated to be interested in all countries addressed in the Bulletin. Concerning specific countries of interest, France, Germany, and Ukraine raise the highest interest, followed by Romania, United Kingdom, Spain, European Russia, Poland, Hungary, and Italy. The sequence roughly corresponds with the size of agricultural production in the countries concerned. However, some countries, including Poland (the EU's third largest grain producer) appear to be underrepresented. This suggests that there may be a potential to attract more readers from such countries. Likewise, the ranking order of specific crops of interest is almost the same as the order of the cultivation area of these crops in the EU.

Concerning the **usefulness of the information** content of the JRC MARS Bulletin, almost 75% of the participants rate the overall bulletin as very useful (43%) or useful (30%). The Bulletin sections 'Crop yield forecasts', 'Areas of concern', and 'Agro-meteorological overview' were rated by more than 80% of the respondents as useful or very useful. The lowest rated sections, 'Pasture analysis' and 'Rice analysis' are rated as very useful or useful by between 40% and 50% of the survey participants, and as acceptable by around 25% of the respondents. Interestingly, the answers from respondents from the different sectors are quite evenly distributed. For example, the crop yield forecast tables scored highest or among the highest for respondents from all sectors.

Almost half (46%) of the respondents makes use also of **other information services** provided by the JRC MARS4CAST group. The AGRI4CAST Portal (35%) serves the highest proportion of respondents. The MARS Explorer is used by 20% of the respondents.

Open questions for **suggestions** to improve the Bulletin and related JRC MARS services were responded by a minority of participants, yet with a wide range of suggestions, such as to include additional crops, to include more information (e.g. on distribution and cultivation areas of crops); to provide the service in more languages, and to improve the visibility of the work.

# 1 Introduction

## The JRC MARS Bulletin – Crop monitoring in Europe

The ‘JRC MARS Bulletin – Crop monitoring in Europe’ provides information on crop growing conditions and quantitative crop yield forecasts in the EU and several neighbouring countries<sup>1</sup>, published by the Joint Research Centre (JRC) of the European Commission (EC) since 1993. The Bulletin is published on a monthly basis, according to a fixed schedule determined at the beginning of each year.

## The audience of the JRC MARS Bulletin

In the broadest but direct policy context, the crop monitoring and yield forecasting activities contribute to the implementation of the European Union's (EU) Common Agricultural Policy (CAP), It currently directly implements Article 22 of REG(2013)1306 on Monitoring Agricultural Resources (MARS)<sup>2</sup>.

The primary user and financial supporter of the Bulletin is the Directorate General of Agriculture and Rural Development (DG-AGRI) of the European Commission. User requirements were specified according to their needs (Van der Velde et al., 2018). Stakeholders from DG-AGRI, and also from Eurostat, with direct interest in the information provided in the Bulletin receive the Bulletin by email.

In addition, the Bulletin is released publically through the EU Science Hub of the JRC at the JRC MARS Bulletin web page<sup>3</sup>, and through the JRC Publications Repository<sup>4</sup>. In 2018, the EU Science Hub was the only “real-time” publishing platform for the JRC MARS Bulletin.

Readers download the ‘JRC MARS Bulletin – Crop monitoring in Europe’ from the EU Science Hub since July 2015. Interested users have the option to subscribe to an email system which sends an alert immediately after the release of a new issue of the Bulletin. In 2018, about 200 users were subscribed to this list.

## The 2018 JRC MARS Bulletin survey

In 2018, the team responsible for the elaboration of the JRC MARS Bulletin, then called MARS4CAST<sup>5</sup>, published a “EUSurvey” to assess the use and usefulness of the information provided by the Bulletin, through collecting information to better understand the public readers, and the way they use the information provided in the Bulletin. The final purpose of the survey was to enable the team to improve the service in the future. The survey ran from May to November 2018. The previous survey about the JRC MARS Bulletin was published in 2015, and its outcomes are described in an internal report (Kartesos et al., 2015).

In order to foster an honest feedback about the use and usefulness of the information provided by the JRC MARS Bulletin, the survey was anonymous and no personal information was asked.

In order to get a high response rate, the survey was conducted in the form of a small number (10) of focused multiple choice questions. In addition, open-ended text fields were placed at the end of each question (or group of questions) to collect comments and suggestions that readers would have thought useful for the improvement of the service. The objective of this report is to summarise the outcomes of the survey

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<sup>1</sup> Turkey, Ukraine, European Russia, Morocco, Algeria, Tunisia.

<sup>2</sup> The new CAP proposals include a corresponding Article 23 of COM(2018)393 final.

<sup>3</sup> [https://joint-research-centre.ec.europa.eu/monitoring-agricultural-resources-mars/jrc-mars-bulletin\\_en](https://joint-research-centre.ec.europa.eu/monitoring-agricultural-resources-mars/jrc-mars-bulletin_en)

<sup>4</sup> <http://publications.jrc.ec.europa.eu/repository/>

<sup>5</sup> A team of scientific and technical experts in the Food Security Unit (D.5) of the JRC Directorate D – Sustainable Resources, roughly equivalent to today's (2022) AGRI4CAST project

## 2 The 2018 JRC MARS Bulletin survey method

### 2.1 The survey site

The 2018 JRC MARS Bulletin survey was conducted on the EUSurvey<sup>6</sup>, from May to November 2018. EUSurvey is the Commission's online survey management tool used to create and conduct surveys.

A link to the survey was given on the JRC MARS Bulletin page on the EU Science Hub of the Joint Research Centre (JRC) of the European Commission (EC).

In addition, the survey was also mentioned in some of the emails to subscribers to the earlier mentioned email alert system at the release of a new issue of the Bulletin.

Stakeholders from DG-AGRI and Eurostat (at the time, 39 in total) that receive the Bulletin by separate email were not targeted for this survey.

Figure 1. Link to the survey in EU Science Hub

The screenshot shows the 'MARS bulletins - crop monitoring in Europe' page on the EU Science Hub. A callout box with a purple border and arrow points to a link: 'link to the MARS Bulletin survey on MARS Bulletin page https://ec.europa.eu/jrc/en/mars/bulletins'. The page content includes a navigation bar, a 'MARS' header, a list of publication dates for 2018, a 'We need your help' section with a survey link, a list of recent bulletins, and sidebars for 'Related Publications' and 'Updates'.

European Commission > EU Science Hub > Monitoring Agricultural Resources (MARS) > MARS bulletins - crop monitoring in Europe

About Us Research Knowledge Working With Us Procurement News & Events Our Communities

**MARS**  
Monitoring Agricultural Resources

### MARS bulletins - crop monitoring in Europe

The JRC MARS Bulletins will be published in 2018 on the following dates: 22 January, 19 February, 19 March, 16 April, 22 May, 18 June, 23 July, 27 August, 17 September, 22 October, 26 November and 17 December.

**We need your help.**  
**Help us by answering 10 questions in our survey.**

We would like to understand better how you use the JRC MARS Bulletins. This will allow us to improve our service in the future.

It should take less than 10 minutes of your time.

All information collected will be anonymous, no personal information is asked.

**JRC MARS Bulletins**

- JRC MARS Bulletin Vol. 26 No 10**  
Dry weather favourable for harvesting
- JRC MARS Bulletin global outlook, October 2018 - Kazakhstan**  
Yield forecast for all cereals slightly above average
- JRC MARS Bulletin global outlook, October 2018 - Russia**  
Water deficit reduced yields
- JRC MARS Bulletin Vol 26 No 09**  
Weather improvements too late for crops
- JRC MARS Bulletin global outlook, September 2018 - Turkey**  
Favourable summer conditions

**Related Publications**

- PannEx: the Pannonian Basin Experiment
- ASAP Water Satisfaction Index
- Prediction of drought-induced reduction of agricultural productivity in Chile from MODIS, rainfall estimates, and climate oscillation indices
- New sensors benchmark report on KOMPSAT-3A: Geometric benchmarking over Maussane test site for CAP purposes
- Development of a national and sub-national crop calendars data set compatible with remote sensing derived land surface phenology

**Related Content**

Publications archive: MARS Bulletin

**Updates**

- OCT 18 2018** Forecasting wheat yields under extreme weather conditions
- OCT 16 2018** Slightly above-average yield expectations in Kazakhstan; reduced yield outlook in Russia
- SEP 17 2018** Weather improvements too late for crops
- SEP 12 2018** Fair yield outlook despite challenging weather conditions in Ukraine, favourable summer conditions in Turkey
- AUG 27 2018** Crop yield forecasts further reduced due to exceptional weather conditions

<sup>6</sup> <https://ec.europa.eu/eusurvey/runner/JRCMARSBulletinSurvey2018>

## 2.2 The survey questionnaire

The questions asked in the survey refer to the composition of the worldwide audience of the JRC MARS Bulletin, the regions and the crops that are of most interest to the readers, the sections of the JRC MARS Bulletin that are considered as more informative or more important to the public, and the use (or awareness) of other MARS information services.

### ***Characterisation of the readers of the JRC MARS Bulletin***

To understand the context from which the public audience perceives the JRC MARS Bulletin and its contents, the survey collected information regarding the working environment of the readers, since when the readers have been following the JRC MARS Bulletins, and the time spent on reading them:

- Working environment (e.g. private sector, research, government, EU)
- Reading since when?
- Reading time

### ***Regions and crops of interest to the readers of the JRC MARS Bulletin***

The survey collected information regarding the regions and the crops the readers focus on, together with their suggestions to include important crops that are currently not covered by the JRC MARS Bulletin:

- Regional focus (e.g. EU, specific countries or regions)
- Crop focus
- Missing crops

### ***Sections of interest to the readers of the JRC MARS Bulletin***

The survey investigated the interest of the readers to the sections of the JRC MARS Bulletin. The survey collected information regarding the sections which the readers identified as more important and informative, together with their suggestions on additional topics or sections that they feel should be covered by the JRC MARS Bulletin:

- Information content of the JRC MARS Bulletin sections
- Importance of the JRC MARS Bulletin sections
- Missing topic or sections in the JRC MARS Bulletin

### ***Use of other JRC MARS information services***

The survey collected information regarding the JRC MARS information services the readers find useful as additional information to the JRC MARS Bulletin:

- JRC MARS information services

### ***Open contribution***

The last question aims at collecting spontaneous suggestions, remarks, and contributions from the readers.

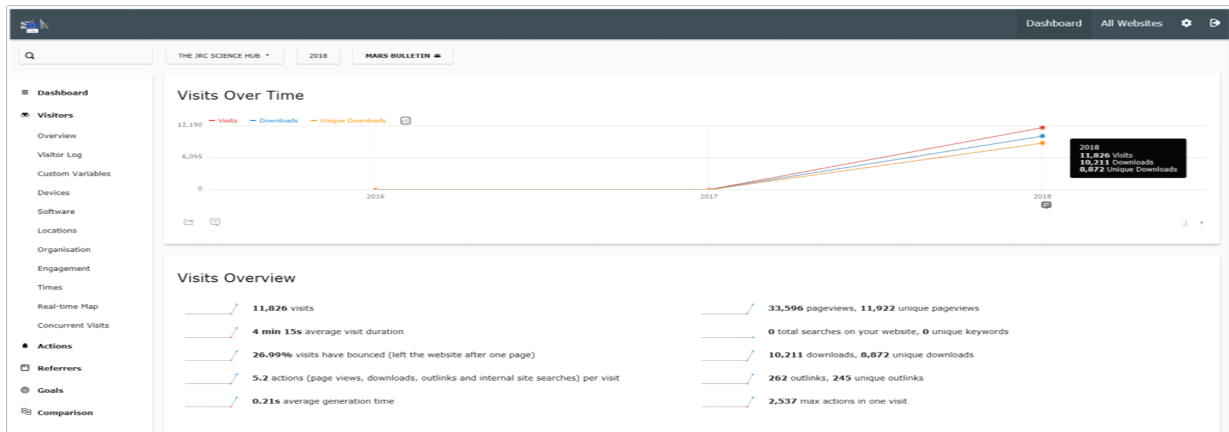
- Is there anything you would like to share with us before submitting your contribution?

### 3 JRC MARS Bulletin survey 2018 - results

The number of respondents to the survey was 149. This number appears to be substantial, but still fairly small compared with, the number of downloads of the Bulletin, which varied between 1500 and 2500 from May to December 2018. Therefore, it cannot be judged if the number of respondents is representative for the entire population of readers, and the results below should be taken as indicative only.

As not all respondents answered all questions, and some questions allowed for more than one answer, the exact number of answers and respondents are provided for each question.

Figure 2. Screenshot taken from webanalytics.ec.europa.eu



The following sections detail and analyse the answers provided by the respondents to the survey.

**Section 3.1** provides information about the respondents and how they judge the readability of the JRC MARS bulletin.

- 3.1.1 Working environment of the reader
- 3.1.2 Time since started reading the JRC MARS Bulletin
- 3.1.3 Average time spent on reading one issue of the JRC MARS Bulletin
- 3.1.4 Readability of the JRC MARS Bulletin

**Section 3.2** addresses the regions and the crops of main interest to the readers, and whether important crop analysis is missing, from the answers.

- 3.2.1 Regional focus
- 3.2.2 Crop focus
- 3.2.3 Missing crop analysis in the JRC MARS Bulletin

**Section 3.3** addresses which topics, or sections of the JRC MARS Bulletin are of most interest to the readers

- 3.3.1 Information content of the JRC MARS Bulletin
- 3.3.2 Importance of the sections of the JRC MARS Bulletin
- 3.3.3 Missing topics in the sections of the JRC MARS Bulletin

**Section 3.4** explores whether other JRC MARS information **services** are useful to the readers of the JRC MARS Bulletin.

**Section 3.5** collects spontaneous suggestions from the readers.



### 3.1 Interest of the readers in the JRC MARS Bulletin

#### 3.1.1 Working environment

##### Question 1. Where do you work?

List of possible answers

- EU Institution
- National Government (Ministry)
- Journalism
- University, Research Institute
- Private Sector – Farming, Farmers’ organization
- Private Sector – Finance, Insurance
- Private Sector – Trade
- Other

Question type: multiple choice allowed and free text field.

Number of answers provided: 149.

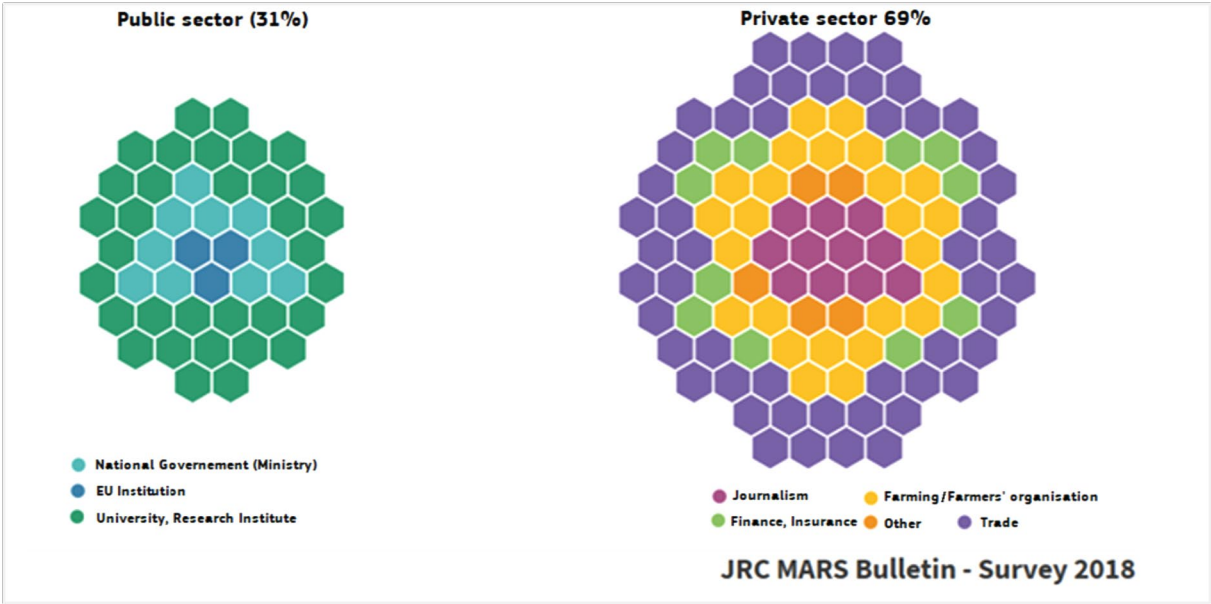
Percentage of respondents: 100%.

This question aimed at understanding the type of audience of the JRC MARS Bulletin. All the respondents to the survey provided a single answer to this question.

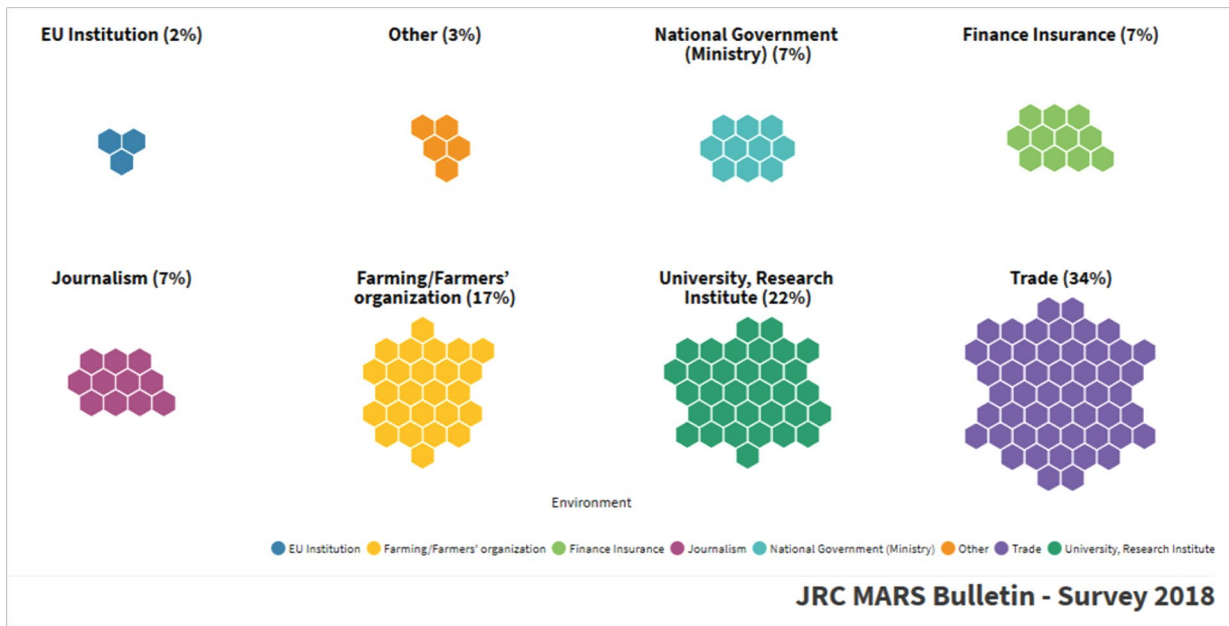
The results (figure 3 and figure 4) show that almost 70% of the respondents work in private sector: mainly trade (34%), farming or farmers' organization (17%), followed by finance or insurance (7%), journalism (7%), and other areas (3%) indicated more precisely in the free text field.

More than 30% of respondents work in the public sector, mainly in Universities and Research Institutes (22%), followed by national Governments/Ministries (7%), and EU Institutions (2%).

Figure 3. JRC MARS Bulletin, Survey 2018 - Working sector of the readers



**Figure 4.** JRC MARS Bulletin, Survey 2018 - Working environment of the readers



### 3.1.1 Reading since when?

#### Question 2. Since when have you been reading the JRC MARS Bulletin?

List of possible answers

- Less than 1 year (new reader)
- From 1 to 3 years (medium-term reader)
- More than 4 years (long-term reader)

Question type: single choice allowed.

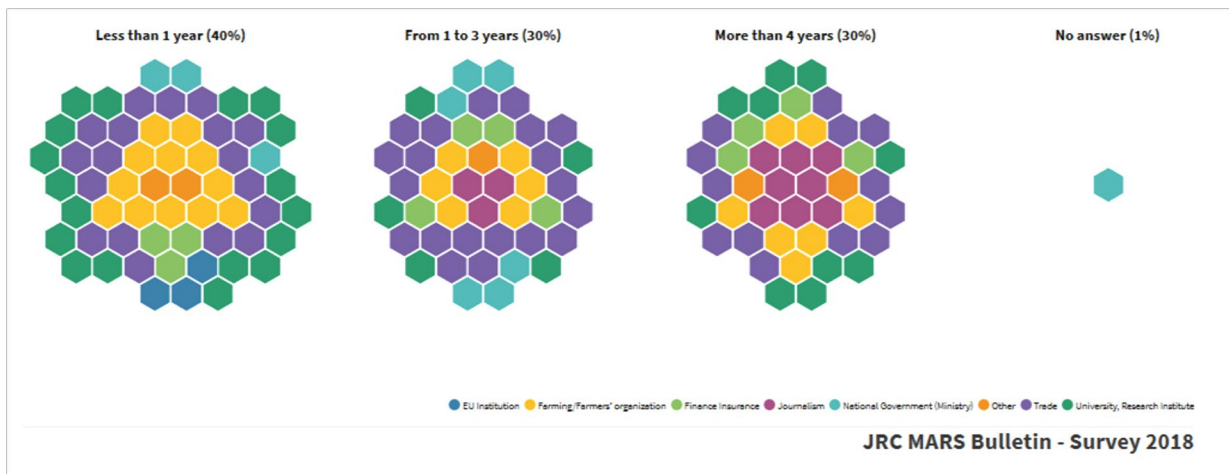
Number of answers provided: 148.

Percentage of respondents: 99.3%.

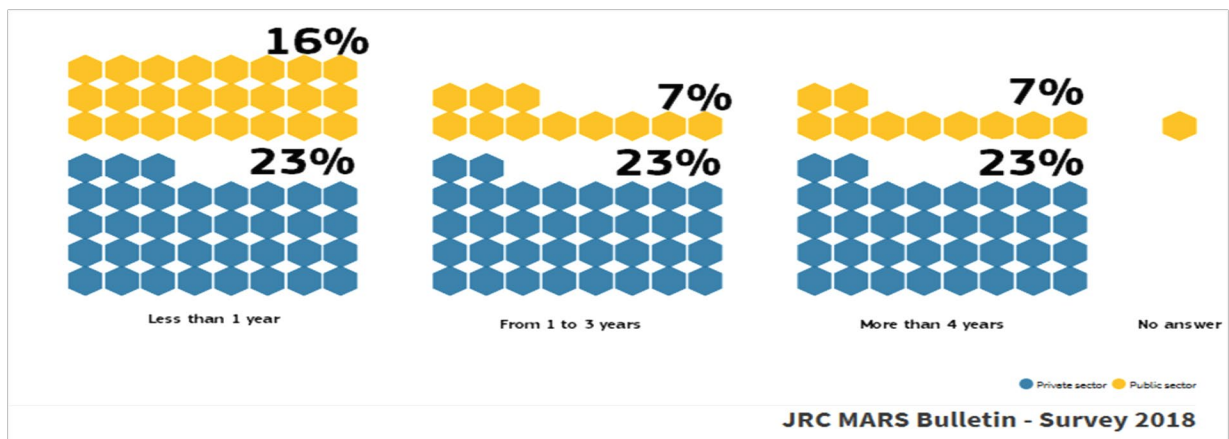
Readers have been divided in three groups: Long-term readers are those who have been reading the JRC MARS Bulletin for more than 4 years. Medium-term readers are those who have been reading the JRC MARS Bulletin for 3 to 1 years. New readers are those who have been reading the JRC MARS Bulletin since less than 1 year.

As shown in figure 5, these three groups are quite balanced with a slightly higher number of new readers (40%). In particular readers working in the public sector are strongly represented in this group. Respondents working in journalism are most strongly represented in the group of “long-term readers”.

**Figure 5.** JRC MARS Bulletin, Survey 2018 - Long-term readers, medium-term readers, new readers



**Figure 6.** JRC MARS Bulletin, Survey 2018 - Long-term readers, medium-term readers, new readers in public and private sector



### 3.1.2 Reading time

#### Question 3. On average, how much time do you spend reading the JRC MARS Bulletin?

List of possible answers

- Less than 15 minutes
- From 15 to 30 minutes
- More than 30 minutes

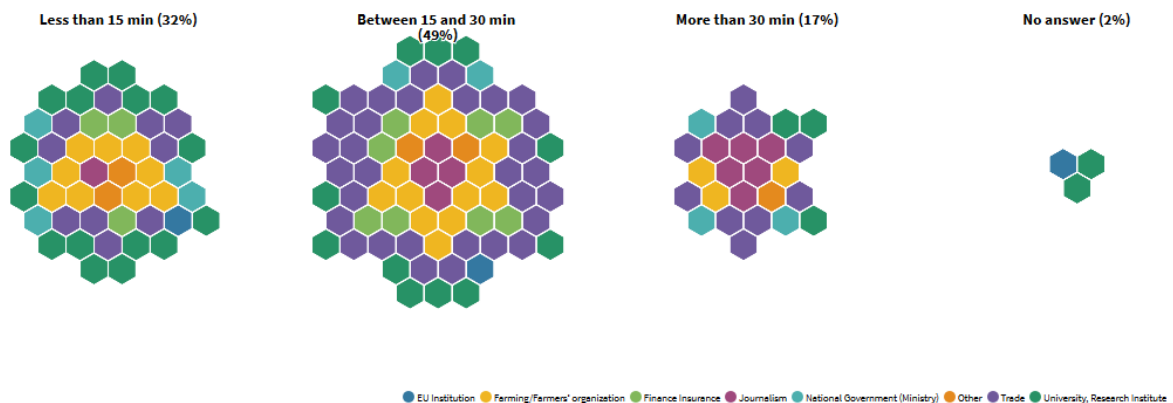
Question type: single choice allowed.

Number of answers provided: 146.

Percentage of respondents: 98%.

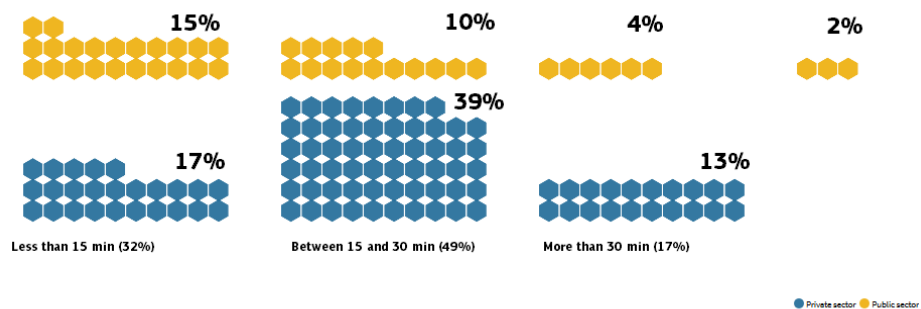
More than 80% of the respondents retrieve the information from the JRC MARS Bulletin in less than half an hour. Half of the readers in the public sector takes less than 15 minutes to retrieve the information from the JRC MARS Bulletin, one third takes from 15 to 30 minutes, and less than one in seven readers takes more than 30 minutes. More than a half of the readers in private sector takes from 15 to 30 minutes to retrieve the information from the JRC MARS Bulletin; a quarter of them takes less than 15 minutes, and almost another quarter takes more than 30 minutes. These results suggest that – as it is practically impossible to read an entire issue of the Bulletin in less than 30 minutes – most readers focus their attention on specific sections of their interest.

**Figure 7.** JRC MARS Bulletin, Survey 2018 - Average time spent by respondents to read the JRC MARS Bulletin



JRC MARS Bulletin - Survey 2018

**Figure 8.** JRC MARS Bulletin, Survey 2018 - Average time spent by respondents to read the JRC MARS Bulletin in public and private sector



JRC MARS Bulletin - Survey 2018

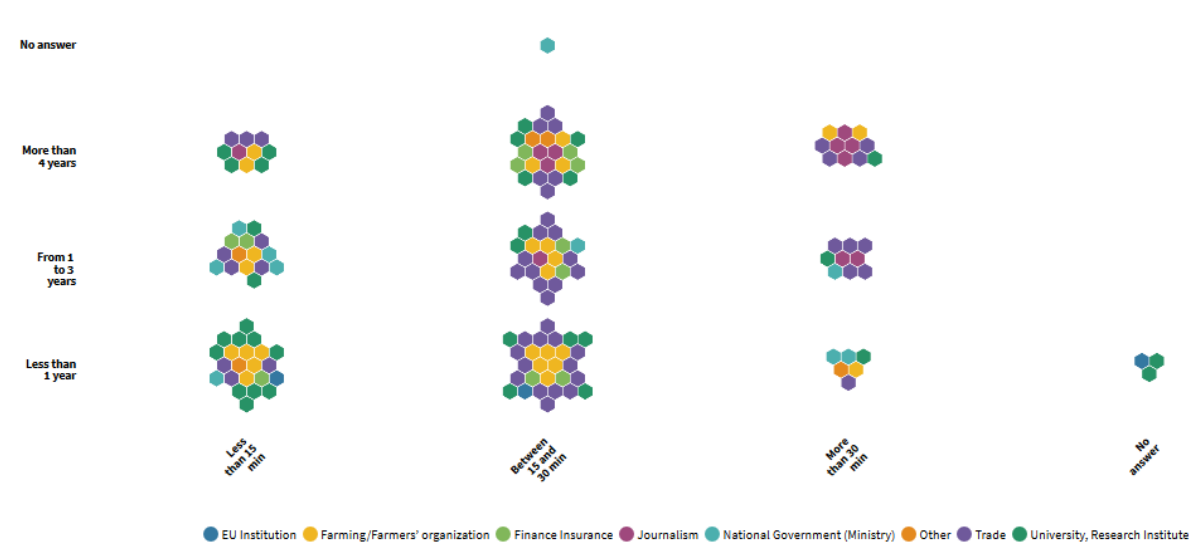
### 3.1.3 Readability of the JRC MARS Bulletin

Cross referring the time and period spent on reading the JRC MARS Bulletin (figure 9), shows that new readers, medium-term readers and long-term readers from either public or private sector spend a similar amount of time on the JRC MARS Bulletin, thus suggesting a good readability of the Bulletin.

By cross referring the time respondents spend reading the JRC MARS Bulletin and their working environment, it is clear that readers from different working environment spend the same amount of time in retrieving and using the information of the JRC MARS Bulletin. Therefore, it seems that the JRC MARS Bulletin is communicating in a language that can generally be understood and appreciated in all these working environments.

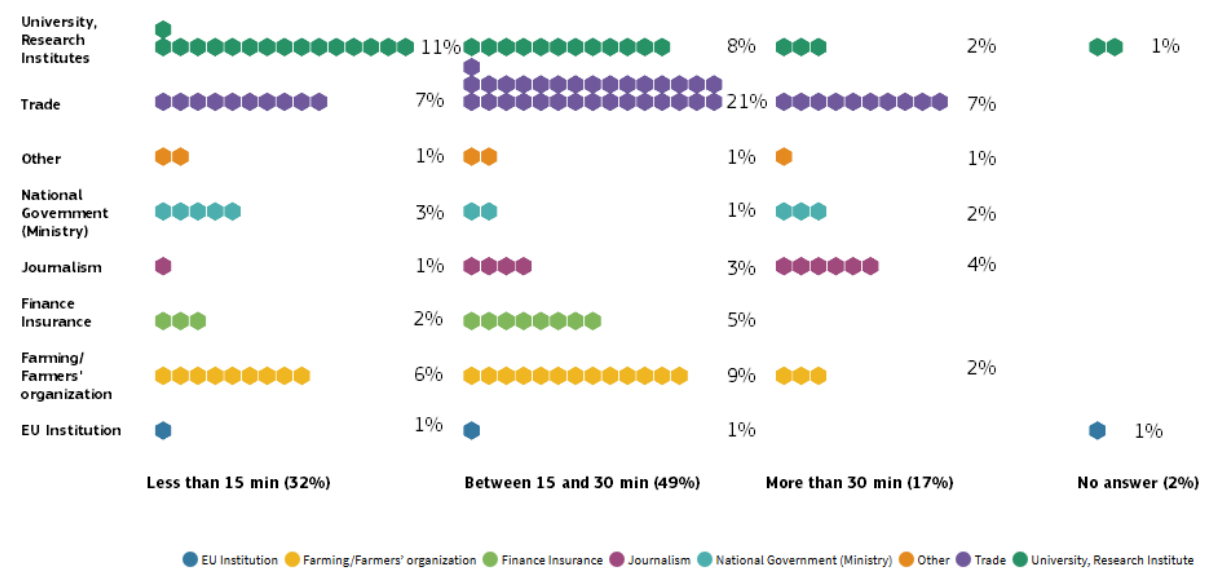
In all working environments except journalism, the majority of respondents retrieve the information from the Bulletin in less than 30 minutes. Only in journalism the majority of readers retrieve the information in more than 30 minutes, suggesting a broader interest in this group and/or a more diverse audience served by this group.

**Figure 9.** JRC MARS Bulletin, Survey 2018 - Period and time spent on reading the JRC MARS Bulletin



### JRC MARS Bulletin - Survey 2018

**Figure 10.** JRC MARS Bulletin, Survey 2018 - Average time spent reading the JRC MARS Bulletin and readers' working environment



### JRC MARS Bulletin - Survey 2018

### 3.2 Regions and crops of interest

#### 3.2.1 Regional focus

**Question 4. Where is your focus when reading the JRC MARS Bulletin?**

List of possible answers

- All countries
- No specific country
- Black Sea Area Countries
- European Russia and Belarus
- European Union Countries
- Maghreb Countries
- Algeria
- Austria
- Belarus
- Belgium
- Bulgaria
- Cyprus
- Croatia
- Denmark
- Estonia
- European Russia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Morocco
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- The Czech Republic
- The Netherlands
- Tunisia
- Turkey
- Ukraine
- United Kingdom

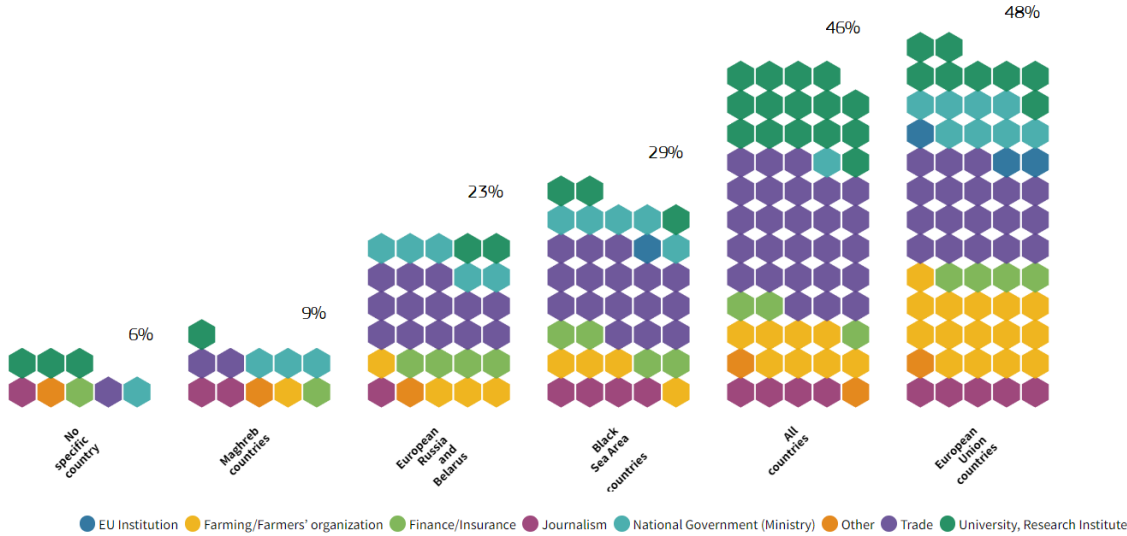
Question type: multiple choice allowed.

Number of answers provided: 470.

Number of respondents: 129.

Question 4 aimed at understanding the regional or country focus of the readers of the JRC MARS Bulletin.

**Figure 11.** JRC MARS Bulletin, Survey 2018 - JRC MARS Bulletin - Regional focus of readers



**JRC MARS Bulletin - Survey 2018**

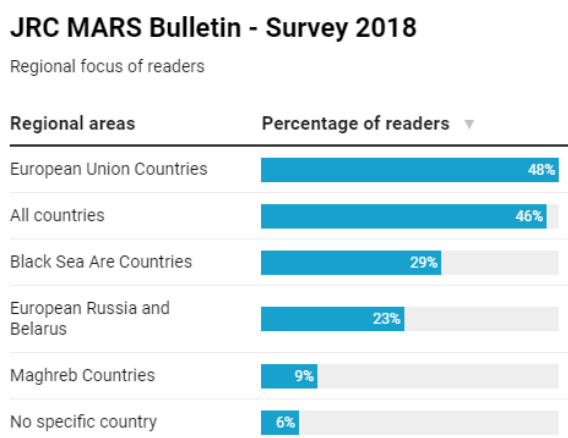
As indicated in figure 11 and in figure 12, most of the respondents to the survey have a broad geographic focus and indicated to be interested in all EU Countries (48%) or all countries (46%) addressed in the Bulletin. A fairly high proportion of respondents is specifically interested in the Black Sea Area countries (29%) and in European Russia and Belarus (23%). The Maghreb countries seem to attract a rather low proportion of readers.

Concerning specific countries (see table 1), France, Germany, and Ukraine raise the highest interest of the respondents (22%), followed by Romania, United Kingdom, Spain, European Russia, Poland, Hungary, and Italy (10-16%). A third group of countries for which 6-9% of respondents expressed a specific interest includes Bulgaria, Turkey, the Czech Republic, the Netherlands, Algeria, Belgium, Denmark, Portugal, and Slovakia. For the remaining countries, 5% or less of the respondents expressed specific interest.

**Table 1.** JRC MARS Bulletin, Survey 2018 results – Country focus

<b>JRC MARS Bulletin - Survey 2018</b>	
Regional focus of readers	
<b>Country</b>	<b>Percentage of readers</b>
<b>France</b>	<b>22%</b>
<b>Germany</b>	<b>22%</b>
<b>Ukraine</b>	<b>22%</b>
Romania	16%
United Kingdom	16%
Spain	14%
<b>European Russia</b>	<b>12%</b>
Poland	12%
Hungary	10%
Italy	10%
Bulgaria	9%
<b>Turkey</b>	<b>9%</b>
The Czech Republic	8%
The Netherlands	7%
<b>Algeria</b>	<b>6%</b>
Belgium	6%
Denmark	6%
Portugal	6%
Slovakia	6%
<b>Belarus</b>	<b>5%</b>
Greece	5%
<b>Morocco</b>	<b>5%</b>
Croatia	5%
Sweden	4%
Ireland	3%
Slovenia	3%
<b>Tunisia</b>	<b>3%</b>
Austria	2%
Cyprus	2%
Estonia	2%
Finland	2%
Latvia	2%
Lithuania	2%
Luxembourg	2%

**Figure 12.** JRC MARS Bulletin, Survey 2018 results – Regional focus



The above groupings roughly correspond with the size of agricultural production in the countries concerned. Poland, the EU's third largest grain producing country, appears to be underrepresented though, whereas the Czech Republic, Slovakia, Netherlands and Belgium attract relatively high interest, compared with several other countries with similar or higher grain production, such as Austria, the Baltic countries and Finland.

Interestingly, the countries that are also included in the Global outlook series of the JRC MARS Bulletin attract the focus of readers more than many other countries included in the Crop monitoring in Europe series.

It is noted that some respondents indicated many regions and many countries, whereas others indicated just one specific region or country, thus reflecting the large diversity of interests among the respondents.

### 3.2.2 Crop focus

Questions 5 and 6 aimed at understanding the crop focus of the readers of the JRC MARS Bulletin. 85% of the respondents to the survey provided an answer to question #5.

#### **Question 5. Do you have a specific interest in a certain crop?**

List of possible answers

All crops	Grain maize	Rice	Sunflower
No specific crop	Potato	Rye	Triticale
Barley	Rape and Turnip rape	Sugar beets	Wheat

Question type: multiple choice allowed and free text field.

Number of answers: 353.

**Table 2.** JRC MARS Bulletin, Survey 2018 results – crop focus

<b>JRC MARS Bulletin - Survey 2018</b>	
Crop focus of readers	
<b>Crop focus</b>	<b>Percentage of readers</b>
<b>Wheat</b>	<b>56%</b>
Barley	47%
Grain Maize	44%
All crops	38%
Rape and Turnip rape	32%
Sunflower	25%
Triticale	18%
Rye	16%
Sugar beets	13%
Potato	11%
No specific crop	10%
<b>Rice</b>	<b>10%</b>

As shown in table 2, more than one third (38%) of the respondents to the survey indicated to be interested in all crops, and one tenth of the respondents do not declare particular interest in any specific crop (10%).

The ranking order of specific crops in table 2, is practically the same as the order of the cultivation area of these crops in the EU, with the exception of potatoes, which have a slightly larger area of cultivation than sugar beet. This could possibly be explained by sugar being considered more a typical commodity than potatoes. In relative terms, the interest is high, also for the minor crops. For example, the cultivation area of wheat in the EU (2014-2018 average) is more than twice the area of barley, four times the area of sunflowers, 15 times the area of potatoes and 60 times the area of rice.

It is also noted that some respondents focus on many crops, whereas others focus on a specific crop, which, again, confirms the large diversity of interests among the respondents.



### 3.2.3 Missing crops

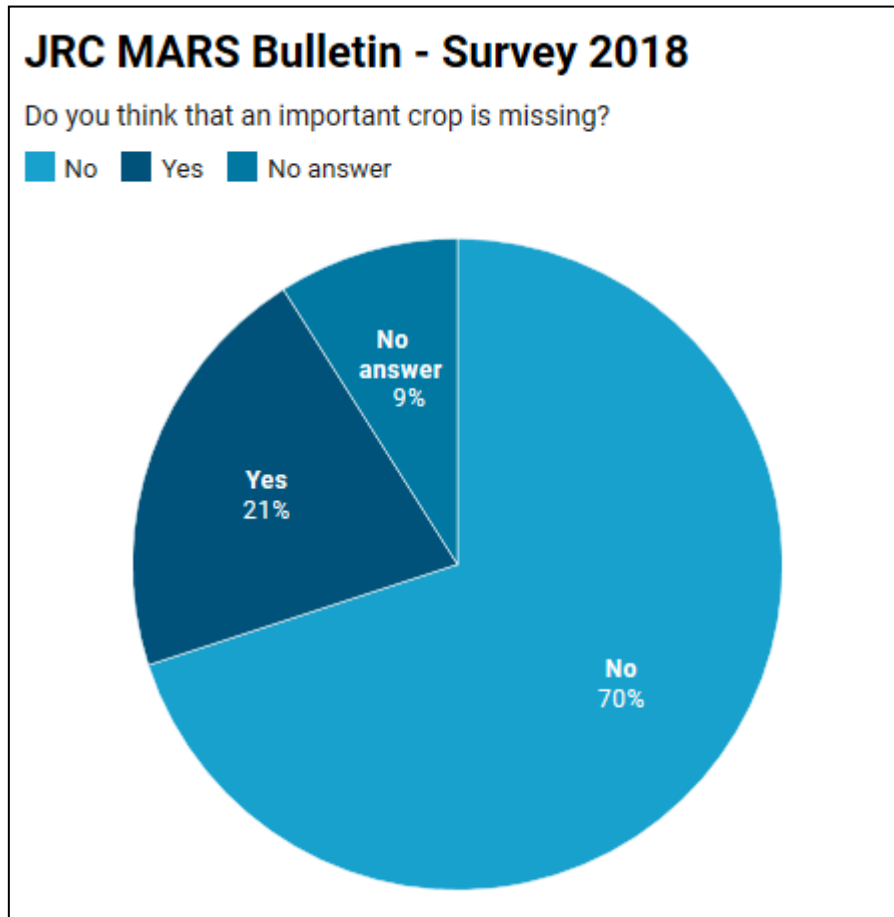
#### Question 6. Do you think that an important crop is missing?

Question type: single choice allowed.

Number of answers: 118.

Number of respondents: 86%.

Figure 13. JRC MARS Bulletin, Survey 2018 results – important missing crops



From the survey sample, as shown in figure 13, 70% of the participants indicated to be happy with the crops currently covered by the Bulletin, and 9% provided no answer. Yet, 21% of the survey participants indicated one or more crops that, in their opinion, are missing from the Bulletin forecasts. These are: soybean (particularly in Black Sea Area countries, and EU countries), green maize (silage maize), flax, cotton, vegetables, tomato, carrots, herbs, canola, grass and fodder crops, legumes, lentils, yellow peas, chickpeas, peas, protein crops, olives for olive oil, grapes for wine, citrus, and other fruits (particularly with regard to spring frost risks) .

It is noted that of the crops mentioned as missing, silage maize and canola are actually already covered in the Bulletin, under the names "green maize" and "Rape and Turnip rape" respectively. Soybean was tentatively introduced in 2018 and is covered since 2019. Grass and fodder crops are currently only semi-quantitatively addressed, by means of the pasture productivity index, derived from remote sensing analysis. Feasibility studies are currently being conducted on the inclusion of some other crops.

### 3.3 Sections of the JRC MARS Bulletin

#### 3.3.1 Information content of the JRC MARS Bulletin sections

**Question 7. How do you rate the information content of the different JRC MARS Bulletin sections and the overall JRC MARS Bulletin?**

List of possible answers

- Overall bulletin                                    very useful      useful      acceptable      insufficient
- Area of concern map                            very useful      useful      acceptable      insufficient
- Agro-meteorological overview            very useful      useful      acceptable      insufficient
- Remote sensing                                    very useful      useful      acceptable      insufficient
- Country analysis                                    very useful      useful      acceptable      insufficient
- Crop yield forecast tables                    very useful      useful      acceptable      insufficient
- Rice analysis    very useful      useful      acceptable      insufficient
- Pasture analysis                                    very useful      useful      acceptable      insufficient
- Atlas maps    very useful      useful      acceptable      insufficient

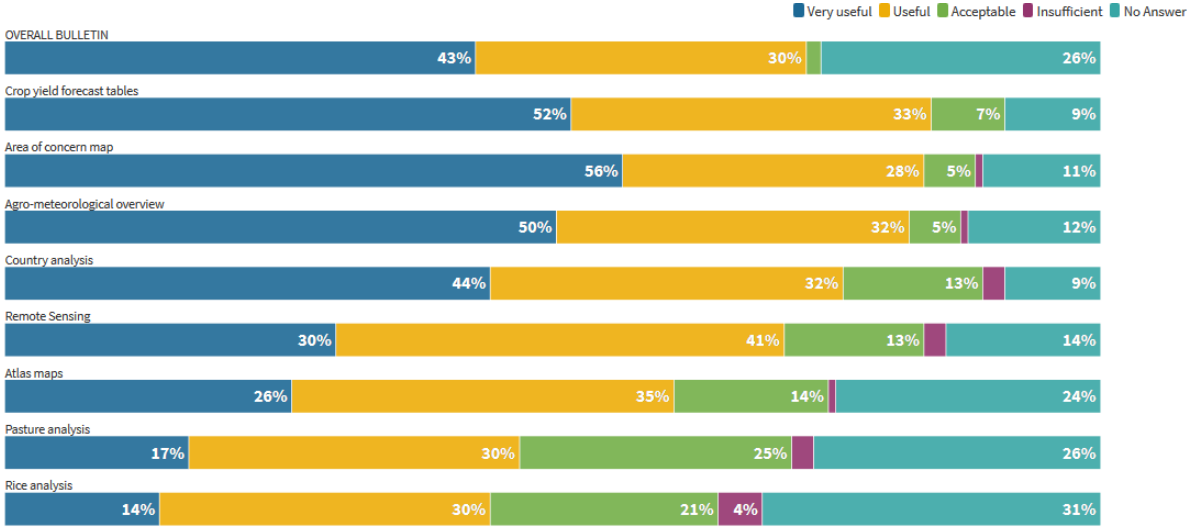
Question type: matrix with only one choice allowed per item.

Number of answer provided: from 111 to 136 per matrix row.

Percentage of respondents: 96%

Questions 7, 8 and 9 aimed at assessing the usefulness of the contents of the various sections of the Bulletin and of the Bulletin as a whole.

**Figure 14.** JRC MARS Bulletin - ratings of the bulletin sections



JRC MARS Bulletin - Survey 2018

From the survey sample, almost 75% of the participants rate the overall bulletin as very useful (43%) or useful (30%). Only 1% of the survey participants rate the overall bulletin as acceptable (1.3%) and none of them rates it as insufficient. More than one fourth (26%) of the respondents provided no rating of the overall information content of the JRC MARS Bulletin.

The contents of almost all the sections of the JRC MARS Bulletin are considered as useful or very useful. ‘Crop yield forecast tables’ (85%), ‘Areas of concern’ (84%), and ‘Agro-meteorological overview’ (83%) are considered as the most informative sections, rated by more than 80% of the readers as either useful or very useful. These three sections are considered as acceptable by around only 5% of the respondents, and as insufficient by almost no respondent.

The sector-specific sections, 'Pasture analysis' (47%) and 'Rice analysis' (43%) are rated as very useful or useful by less than the half of the survey participants. Moreover, these two sections are considered as acceptable by around 25% of the respondents. 'Rice analysis' is rated as insufficient by 4% of the respondents. All other sections, are rated as very useful or useful by more than 60% of the survey participants, as acceptable by 15% of the survey participants, and as insufficient by 2% or less of the participants.

**3.3.2 Relative importance of the JRC MARS Bulletin sections**

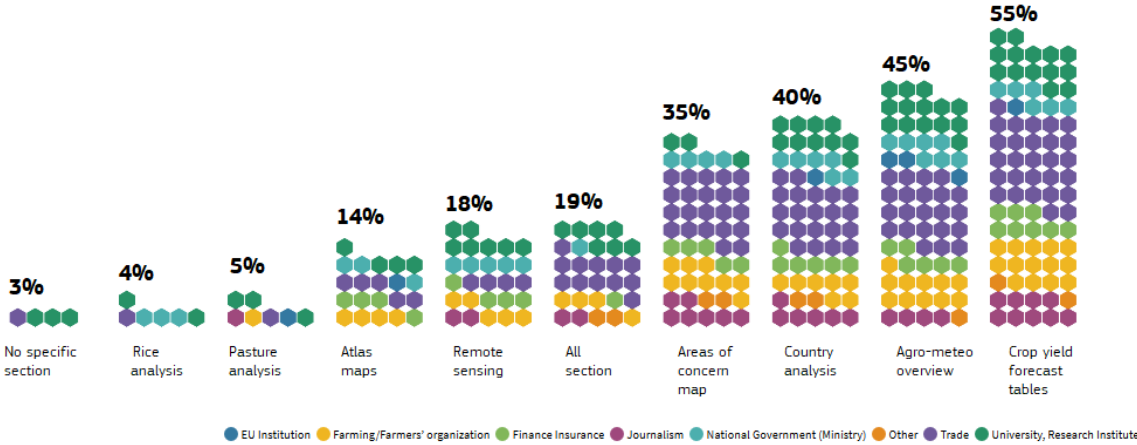
**Question 8. The JRC MARS Bulletin is divided into different sections. Which one of the sections is of most importance and interest to you?**

List of possible answers

All sections	Agro-meteorological overview	Rice analysis
No specific section	Remote sensing – Canopy conditions	Pasture analysis
Areas of concern map	Crop yield forecast tables	Atlas maps

Question type: multiple choice allowed.  
 Number of answers provided: 470.  
 Percentage of respondents: 86.6%.

**Figure 15.**JRC MARS Bulletin, Survey 2018 results - rating the importance of the bulletin contents



**JRC MARS Bulletin - Survey 2018**

The results of question 8 are given in figure 15. Of the survey participants, 22% consider all sections as either equally important (19%) or no specific section (3%) as predominant. The importance and the interest attributed to single sections ranges from around 4% to more than 55% of the respondents to the survey. Crop yield forecast tables (55%) and the agro-meteorological overview (46%) are considered as the most important sections. Country analysis (40%) and areas of concern maps (35%) are also sections of high importance to a large group of survey participants.

A limited group of respondents to the survey is specifically interested in the sector specific pasture analysis (5%) and rice analysis (4%). A small percentage of the respondents provided no answer (4%) or is interested in no specific section (3%) of the Bulletin.

Interestingly, the answers from respondents from the different sectors are quite evenly distributed. For example, the crop yield forecast tables scored highest or among the highest for respondents from all sectors; and respondents from the trade and finance sectors, are not only interested in the forecast tables, but also in other sections of the Bulletin.

### **3.3.3 Missing topics or sections in the JRC MARS Bulletin**

***Question 9. Please indicate whether there is another topic/section of interest to you that is not currently covered by the JRC MARS Bulletin.***

Question type: free text field.

Number of answers: 30.

Percentage of respondents: 20%.

One in five participants (20%) to the survey answered to this question. Of these, one third stated to be happy with the variety of the topics presented in the JRC MARS Bulletin. Respondents that did mention missing topics suggested a wide range of topics, including additional crops (roughly the same as for question 6), information on acreage and production (in addition to yields), soil information, soil water conditions and drought monitoring, relation between crop quality traits and weather conditions, more background information on changes in yield forecasts compared to previous months, pest and disease forecasts, information on uncertainty in forecasts.

### 3.4 Other JRC MARS information services

#### **Question 10. Do you make use of any other JRC MARS information services?**

Question type: multiple choice allowed.

Number of answers: 69.

Percentage of respondents: 46.3%

List of items

MARS Explorer	MARS Crop forecasting videos
AGRI4CAST Data Portal	MARS Crop Yield Forecasting System wiki
AGRI4CAST Software Portal	JRC Science Hub – AGRI4CAST Crop yield forecasting

**Table 3.** JRC MARS Bulletin, Survey 2018 results –use of other JRC MARS information services

#### **JRC MARS Bulletin - Survey 2018**

Use of other JRC MARS information services

<b>MARS Information service</b>	<b>Percentage of readers</b>
No Answer	54%
AGRI4CAST Data Portal	26%
MARS Explorer	20%
MARS Crop Yield Forecasting System (MCYFS) wiki	12%
JRC Science Hub - AGRI4CAST Crop yield forecasting	11%
AGRI4CAST Software Portal	9%
MARS Crop forecasting videos	3%

Question 10 aimed at understanding whether readers are making also use of other JRC MARS services

Almost half (46%) of the respondents makes use also of other information services provided by the JRC MARS4CAST group.

The AGRI4CAST Portal (35%) serves the highest proportion of respondents to the JRC MARS Bulletin survey with its services from AGRI4CAST Data Portal (26%) and the AGRI4CAST Software Portal (9%). The MARS Explorer is used by 20% of the respondents.

Fewer respondents expressed familiarity with the use of the MARS Crop Yield Forecasting System wiki (12%), the – AGRI4CAST Crop yield forecasting web pages of the JRC Science Hub (11%) and the MARS crop forecasting videos (3%).

In the open readers' contribution, some users stated that they were not even aware of the other JRC MARS information services. Others specifically congratulated the AGRI4CAST Data Portal, and still others suggested improvement both in type and quantity of data, together with the downloading techniques. Some others criticised the poor user-friendliness of the MARS Explorer.

### 3.5 Open readers' contributions

#### **Question 11. Is there anything you would like to share with us before submitting your contribution?**

Question type: free text field.

Number of answers: 24.

Percentage of respondents: 16.1%

This last question aimed at collecting suggestion from readers to improve the JRC MARS Bulletin and other JRC MARS services.

In this section, 3% of the respondents simply congratulated or thanked the MARS4CAST team.

Other comments included suggestions, such as:

- To provide the service in more languages
- To provide more (scientific) visibility of the work done
- To inform readers of other existing JRC MARS information services
- To update/modernise the JRC MARS Bulletin series (without further specification)
- To extend the AGRI4CAST data portal services with data and info from the JRC MARS Bulletin
- To extend information to other crops, to fruits and other countries
- To provide more information on information sources
- To alert users (e.g. by email) when a new issue of the Bulletin is published
- To provide information on the geographical distribution of the crops addressed (e.g. in the form of maps)
- To identify on maps the core area of each crop by country or regional area.
- To provide an update of the forecast when crops are being harvested.
- To provide information in the form of geographical areas, not only by country.
- To extend the regional scope of the other analysis such as weather and frost analysis, so that these information could help forecast other vegetable or fruit that are outside the crop focus of the JRC MARS Bulletin.

Moreover, several of the respondents noted that they were not aware of the other agri4cast services provided (as addressed in Question 10).

## References

Van der Velde, M., Biavetti, I., El-Aydam, M., Niemeyer, S., Santini, F., Van den Berg, M., 2019. Use and Relevance of European Union crop monitoring and yield forecasts, *Agricultural Systems*, 168: 224-230. doi:10.1016/j.agsy.2018.05.001.

Karetsos, S., Biavetti, I., Van den Berg, M., 2015. MARS Bulletins Survey - Customer feedback in 2015, European Commission. JRC99612

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