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### ► To cite this version:

Marjolaine Hamelin, Eric Lichtfouse. Increasing citation diversity in the journal *Agronomy for Sustainable Development*. 9. Annual North American Conference, International Society of Managing and Technical Editors (ISMTE). INT., Aug 2016, Philadelphie, United States. hal-01594730

**HAL Id: hal-01594730**

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Submitted on 5 Jun 2020

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# Increasing citation diversity in the journal Agronomy for Sustainable Development

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**Purpose** We wanted to check if our journal had an influence on disciplinary fields other than Agronomy, and if its influence varied with time.

## Background

Agronomy for Sustainable Development (ASD) is an **international peer-reviewed journal of the French National Institute for Agricultural Research (INRA)**. The journal has been **renovated from 2003** by changing the title, the editorial policies, by communicating in a blog and in social media, and by increasing the number of published review articles<sup>1</sup>.

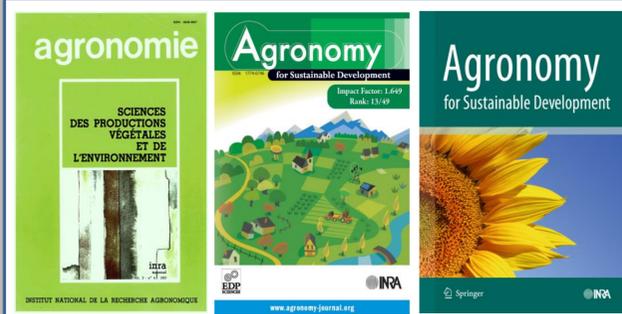


Figure 1: Evolution of the journal covers  
1: 1981 ; 2: 2003 ; 3: 2011

## Methods

We first **extracted from the Web of Science (WoS)** the references of articles and reviews published between 2006 and 2015 and **citing ASD articles, except self-citations**.

We compared the dataset to one of a **narrower-scope journal** in the top 20 of the Agronomy category (Rice).

For journals belonging to **several WoS categories**, only the first one was considered.

The 67 WoS categories were gathered into **8 broader disciplinary fields**.

**Statistical analyses** (correlation, regression) were performed with the R software<sup>3</sup>.

The scope was also **broadened** to publish studies at the interface of ecological, economic and social sciences. Various “hot” topics such as biofuels, genetically modified crops or urban agriculture emerged in the journal<sup>2</sup>.

The journal rank in the Thomson Journal Citation Reports (JCR) Agronomy category **increased from 29/53 (2-years Impact Factor of 0.56) in 2003, to 4/83 (2-years Impact Factor of 4,14) in 2015**

## Results

Figure 2

Number of WOS categories of articles citing the journal  
Agronomy for sustainable Development

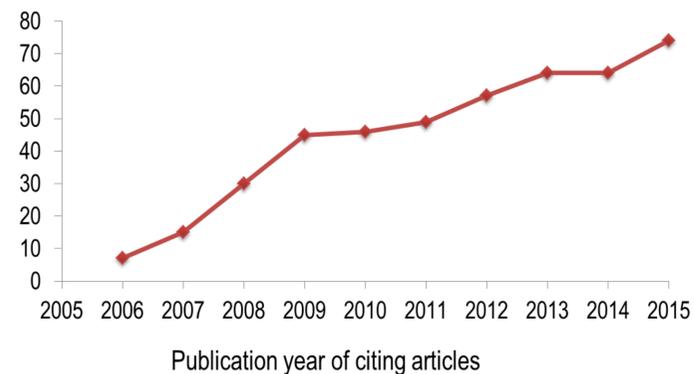
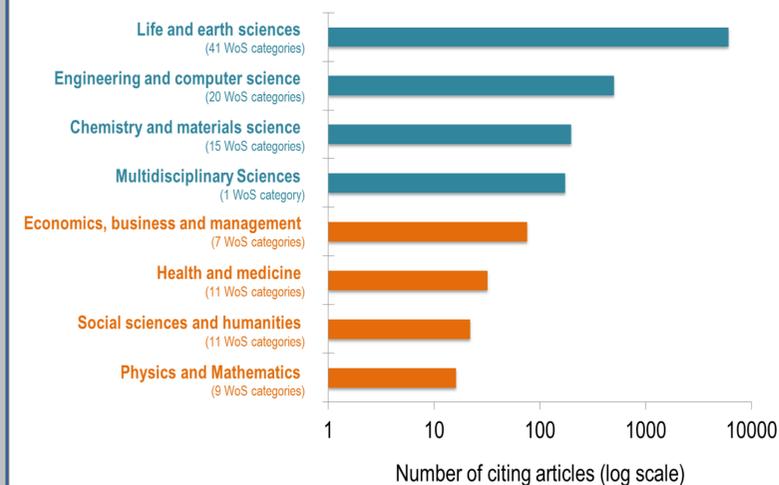


Figure 3

Disciplinary fields of ASD citing articles



The **observed number of WoS categories** of the citing articles **increased** from 7 in 2006 to 74 in 2015 (Figure 2). This increase in diversity might be due **the increase of number of citing articles** (Pearson correlation  $cor=0.893$ ,  $p\text{-value}<0.001$ ).

Some citations originate from journals in rather **remote disciplinary fields** such as health and medicine, or humanities and arts (Figure 3).

The **number of WoS categories is higher** for ASD than for a narrower-scope journal such as Rice (Figure 4)

We observed a **sharp increase** of the **number of WoS categories of citing articles with the 5-years Impact Factor** of the journal Agronomy for Sustainable Development (Figure 5).

Figure 4

Number of WoS categories of articles citing the journals

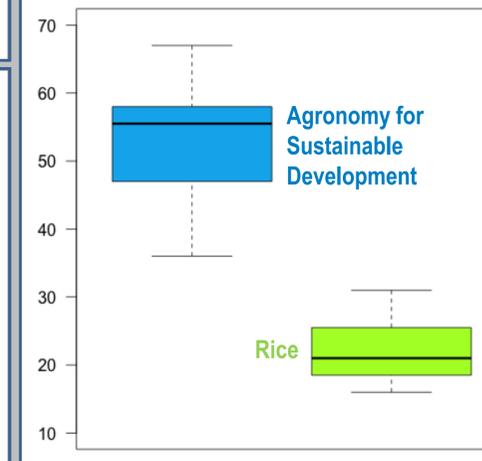
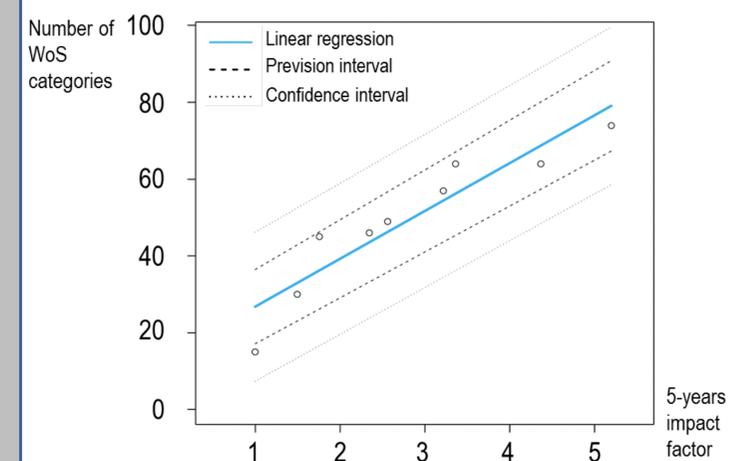


Figure 5

Linear regression between the number of WoS categories and the 5-years Impact factor for ASD



## Take-home message

The **diversity of the readership of articles** from Agronomy for Sustainable Development increases with time. Our observations support the idea that **research at the interface between different disciplinary fields is developing**. Journals with a large scope may benefit from this evolution. This also underlines the importance of **making articles readable by scientists from other disciplines**.

## References

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Work supported by  INRA  
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