



## Impact of COVID-19 on the duration of the peer review process of the *Journal of Animal Science and Technology*

Sejong Oh

Division of Animal Science, Chonnam National University, Gwangju, Korea

### Introduction

The unprecedented global spread of coronavirus disease 2019 (COVID-19) has caused rapid changes in existing social systems and industries across the globe.

Even during the most unprecedented times in South Korea, schools have never been locked down. However, since March 1, 2020, South Korea has been on an academic shutdown, which emphasizes just how severe the impact of the virus was on a nationwide scale.

The Great Depression, which started in 1929, was characterized by disruptions in production and supply caused by overproduction. In an interesting echo of those circumstances, one of the characteristics of the COVID-19 outbreak is that production and supply chain logistics have been halted due to the Great Lockdown.

In Korea, the first case of COVID-19 was reported on January 21, 2020 [1]. Despite the efforts of the Korean government to control the spread of this virus, the number of infections started to rise rapidly in late February 2020. Since then, the Korean government has clearly notified residents of Korea to refrain from face-to-face contact and has prohibited group meetings. On March 22, 2020, a social distancing policy was implemented in order to resume daily-life activities.

This essay aims to provide an analysis of the impact of COVID-19 on the editing process of a scholarly journal, *Journal of Animal Science and Technology* (JAST, International Standard Serial Number 2055-0391), which is published by the Korean Society of Animal Sciences and Technology. The analysis presents a comparison of the total time (days) it took for a manuscript to receive a final decision in order to see the impact of COVID-19 on JAST's editing processing time.

### Peer Review Time of JAST

JAST was launched in 1958 as a Korean academic journal that publishes research articles on the subject matter of domestic animal science. It has been published in English since 2014 in order to expand further as an international journal. JAST was listed in PubMed Central in

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**Correspondence to** Sejong Oh  
soh@jnu.ac.kr

**ORCID**

Sejong Oh

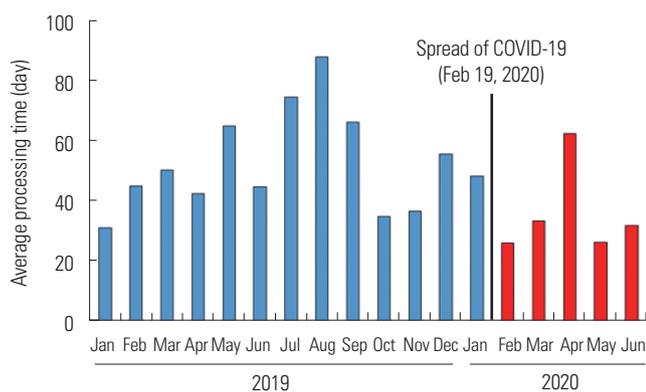
<https://orcid.org/0000-0002-5870-3038>

2015 and listed in Scopus and Science Citation Index Expanded in 2019.

Given the total number of studies published in JAST, it would be premature to directly compare the number of papers published before and after COVID-19. Since JAST was listed in SCIE in October 2019, the number of papers received by Korean authors has increased significantly. Therefore, it would be appropriate to compare the average processing time (APT) for an effective decision to be made on a submitted manuscript. The APT is defined as the average total time it takes for a manuscript to receive a decision from the day it is submitted.

Many of the submitted manuscripts are reviewed by Korean reviewers; therefore, the APT may be affected by aspects of the social situation specific to Korea. For instance, the APT in July and August 2019 was relatively high because there are many conferences, vacations, and personal trips in the summer months in Korea (Fig. 1).

Starting in February 2020, the APT was shorter than average, even during the spread of COVID-19, except for the month of April (Fig. 1). This is because of the social changes caused by COVID-19. In South Korea, the spring semester (also known as the first semester) usually starts around the beginning of March. Due to COVID-19, school opening was postponed 5 times during March and April. On April 9, universities started online classes, and schools (elementary, middle, and high school) slowly followed. Starting in March, the total shutdown of entire social and school systems was mostly dedicated to the preparation of video lectures and logistical operations. Professors had little time to prepare video lectures, office hours, and other changes needed to respond to students' needs. Therefore, due to the changes in the social and educational system that the reviewers had to adapt to, the APT for the manuscripts submitted in April was noticeably



**Fig. 1.** Average processing time for manuscripts submitted to the *Journal of Animal Science and Technology*. The average processing time was defined as the average amount of days it took for a manuscript to receive a final decision.

longer than for those submitted in other months.

However, since May 2020, the APT has stably decreased. It is believed that the APT will continue to become shorter, as time spent at home will increase in the future (Fig. 1).

The Great Lockdown has influenced research at laboratories. Generally, publishing an article requires first collecting data, and then writing, submitting, reviewing, and publishing the manuscript. The lack of new research, due to the lockdown of many laboratories, may impact the ability to collect new data, which then impacts the writing process and subsequent steps of the publishing process. In the early stages of COVID-19, the impact of the shutdown has not led to immediate consequences for academic publishing, since researchers have been able to write and review articles using previously collected data. However, COVID-19 will affect every step of the publishing process in the near future.

Most international journals and publishers have already adopted open access and have completely transitioned to digital and virtual spaces. Therefore, the editorial team has not experienced any difficulties with handling manuscripts. In the future, articles may be reviewed by artificial intelligence or machine learning applications that will grade and numerically value the accuracy and implementation possibilities of each article [2]. Extensive preparatory measures are needed for the development of journals in the post-COVID-19 era.

## Conclusion

There was a notable fluctuation in the interval from submission to the final decision since COVID-19 was first reported in South Korea in January 2020. The APT decreased, increased, and decreased again (Fig. 1). This phenomenon may be explained by changes in the educational environment of the universities with which reviewers are affiliated. The rapid change to remote classes starting in March, the start of the first semester in Korea, may have affected professors' review time of manuscripts. Because this study analyzed the APT of a single journal, it would be difficult to assume that the impact of COVID-19 has been the same for other journals. More data should be collected and analyzed to determine whether this has been a general phenomenon.

## Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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