



# Editorial: Buffalo Health and Production

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## Editorial on the Research Topic

### Buffalo Health and Production

The domestic buffalo (*Bubalus bubalis*), also known as water buffalo or Asian buffalo comprises two subspecies: the river buffalo (*B. bubalis bubalis*) and the swamp buffalo (*B. bubalis kerebau*) (1). Considering buffalo characteristics such as rusticity and productivity, we believe that buffalo production should be expanded worldwide, especially in developing countries with adequate natural conditions (2). This amazing and underused animal can become more productive and should be promoted as a target species to be used in smallholder and sustainable production systems (3).

To provide a venue for quality research on buffalo this Research Topic on **Buffalo Health and Production** has a deliberately broad scope to allow a wide range of articles to be published. A total of 29 papers are included, with three review articles, 21 original research articles, and five brief research reports from 223 authors from around the globe. **Figure 1** presents a word cloud with the most common words used in the manuscript titles.

Two papers comprise comprehensive reviews of important buffalo diseases. The first review from de Barros et al. evaluates the available published literature of *Toxoplasma gondii* and *Neospora caninum* in buffalos and related serological evidence on these parasitic diseases in buffalos from most continents. The second review of parasite infections from de Aquino et al. presents an overview of the occurrence of cryptosporidiosis and giardiasis in water buffaloes and demonstrates that *Cryptosporidium* spp. and assemblages of *Giardia duodenalis* and may be sources for potential zoonotic infections. Moreover, the review of published data suggests that young buffalo are more prone to infection than their older counterparts and that infected buffalos can be asymptomatic or with clinical manifestations of these protozoan diseases.

An additional review paper from Minervino et al. presented the basic aspects of the water buffalo and unraveled the buffalo path followed from the origin of the species to its current global distribution, providing a more accurate estimate of the world buffalo count and distribution.

Considering original/brief research, the Research Topic published five articles related to infectious disease, one describing infection with *Leptospira* spp. in Brazil from Guedes et al. and an interesting study from Esposito et al. showing abortions due to *Listeria monocytogenes* in Italy, indicating that *Listeria* must be included as a possible cause of abortions in buffalo herds. The remaining infectious disease articles address new diagnostic tools to detect infections, such as the use of an interferon-gamma assay as a diagnostic strategy for *Mycobacterium bovis* in water buffalos from Martucciello et al.; a pulsed-field gel electrophoresis to detect *Salmonella* described by Santana et al.; and a flow cytometry to Study Leukocyte alterations during BVDV Acute Infection proposed by Grandoni et al.

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