



Improving animal production and health in the tropics—the challenge of humankind

André M. de Almeida¹

Published online: 21 June 2018
© Springer Nature B.V. 2018

The tropics are by definition a broad area of the globe. They are located between the Tropics of Cancer and Capricorn, the two 23° latitude limits. This region encompasses most of Central and South America, the Caribbean, Africa, India, Southeast Asia, Northern Australia and many Pacific islands. If we add the subtropical zones, the ‘tropics’ will stretch all the way to the Southern USA, the Mediterranean, Northern India and China to the North and South Africa, Australia and Southern Brazil to the South, representing the over 50% of the human population of the globe. Environmental and edaphic characteristics in the tropics and subtropics are very diverse. Characterized by a variety of climates, from deserts to rainforests and from high-altitude plateaus to savannahs, the tropics shaped animal production systems. They are very different from their counterparts developed in the temperate regions of Europe and North America, providing a much more complex and difficult context. Indeed, heat, humidity, soils and plants, as well as parasites and diseases that exist only in the tropics, make animal production particularly challenging. If we add, the developing stage of many of the tropical countries, the complex and intricate social and political contexts, frequently involving different religions, numerous and varied ethnic groups and different land ownership patterns, animal production in these regions becomes difficult, to say the least, particularly by temperate country standards. Yet, despite the challenging nature, animal production in the tropics is incredibly varied and interesting. Definitely out of the ordinary, cattle and sheep have fat depots, goats have long ears and species like alpacas, llamas, dromedaries, ostriches and water buffalo

play a vital role in supplying animal protein, transport, fibre and even fuel to the populations in these regions. Improving animal production and minimizing losses due to health issues are among the most important goals for humankind. Such improvement necessarily translates into an enhancement of food security and living standards of populations all across the globe. In fact, more than a necessity, improving animal production in the tropics is vital.

Setting aside political and economic stability, achieving such goals is only possible through the conjunction and interaction of the three major pillars: science, technology and extension. In such a context, scientific development is particularly important for tropical animal health and production. Indeed, many of the genetic resources in the tropics are poorly characterized and their production levels and suitability to the different feeding and production systems are virtually unknown. The same applies to pasture composition and grazing and production performances, animal production traits under heat stress and the use of alternative feedstuffs such as algae, cactuses or tropical food industry by-products. Regarding animal health, the background is with certainty even more complex. In fact, tropical diseases and parasitoses are poorly studied, as are the control mechanisms, vaccination strategies or even the very existence and development of such control mechanisms. The problem is furthermore exacerbated by the lack of availability of pharmaceutical companies to invest in novel veterinary drugs, particularly aiming tropical diseases. Additionally, the particular political and societal conditions make disease boundary containment very difficult, if not impossible. Finally, global warming and climate change imply that many of the temperate regions face, or will face in the near future, problems and constraints one normally associates to animal and veterinary science in the tropics.

Scientific-borne knowledge and their effective transfer to animal scientists, veterinarians, farmers, policymakers, industry, consumers and other stakeholders is of utmost importance to address the abovementioned problems. Peer-reviewed journals are in turn the best forum to disseminate scientific

✉ André M. de Almeida
aalmeida@isa.ulisboa.pt

¹ Instituto Superior de Agronomia, University of Lisbon, Tapada da Ajuda, 1349-017 Lisbon, Portugal

knowledge, firstly to the scientific community, but also to a broader audience.

Tropical Animal Health and Production (TROP) is the only journal in the area of Animal and Veterinary Sciences, specifically dedicated to animal production and health in the tropics and subtropics. Regarding animal production, it has also the innuendo of being the only journal dedicated to non-conventional temperate climate-oriented animal production. The Journal has a formidable history. In fact, from its earlier years, very centred on English-speaking and novel commonwealth nations, TROP has acquired, over the years, an important international reputation and significance. Today, TROP is widely recognized by researchers and professionals in the field as one of the major publications worldwide. TROP's manuscripts encompass completely the tropical world in the five continents. Submissions are growing and they come from all over, including giants such as China, India, Indonesia, Brazil, Mexico, South Africa or Nigeria and also small nations in Central America, Africa or the Pacific and the Caribbean. Interestingly, many publications also arise from 'officially non-tropical' countries such as Turkey, Iran or certain Mediterranean countries.

In the last decade, TROP has become the reference publication in this area. Such growth was furthermore accomplished in a context of fierce scientific journal competition, similarly to other science areas. We owe much of that success to the former Editor-in-Chief, Dr. Leslie Harrison, and the previous TROP editorial team. Their work over the years has been remarkable and truly inspiring. I joined the Editorial board in 2011 as Associated Editor for Animal Production, particularly the ruminant production area. Later, I took a lot of the responsibility for poultry and pig production submissions. Before that, I had edited and coordinated a special issue on fat-tailed sheep. Being Associated Editor for TROP was a very gratifying experience. It is overwhelming sometimes, as the number of submitted manuscripts grew immensely since the earlier days. Nevertheless, it is extremely gratifying, particularly due to the access to state-of-the-art animal and veterinary sciences research from all over the world. I thank the previous Editor-in-Chief and the previous editorial board the kind invitation to join TROP. It has been an immense privilege to be part of this team and to work with you all.

I thank also Dr. Harrison, the former TROP editorial team, and Springer for the invitation to assume the role of Editor-in-Chief for this journal from July 1, 2018 onwards. It is an enormous responsibility and I feel very honoured that it was bestowed upon me. The first goal for TROP and for the new editorial team led by me will be to continue the path that has taken us this far. Still, I believe there is plenty of room for improvement and to further strength the leading role TROP plays in animal and veterinary sciences. After all, innovation is inherent to human nature.

For the next 4 years, the following major avenues will guide TROP editorial policies:

- (1) Increase TROP presence in Latin America and the Caribbean. This region of the globe is one of the major producers of food of animal origin, with certain countries exporting meat to the whole world. It is also a region where animal production, particularly extensive ruminant production, is most advanced and where animal science and technology is firmly embedded with the productive sector. It is therefore vital that to countries like Brazil, Chile, Argentina or Mexico, TROP must be the first choice to publish research in the field.
- (2) Increase TROP presence in SE Asia. This region is one with the fastest growing population in the world. It faces challenges on animal science, particularly at the level of intensive pig, poultry and duck production. In this region, heat stress and specific health-related issues are particularly important and some of the work done there represents leading world standards. Again, science and technology are firmly associated to the animal production section in the region and it is very important that TROP becomes the first choice for publication in this region.
- (3) Reinforcing TROP leading role in Africa. TROP has a long history in Africa. English-speaking Africa, specifically, was the initial target audience for TROP. It is today the leading and specifically dedicated journal to animal production under the African context. There is still a lot of room for improvement though, and we believe that increasing the papers submitted from French and Portuguese-speaking Africa will be a major achievement.
- (4) Reinforcing TROP leading role in the Middle East. Animal production is assuming a growing importance in the Middle Eastern countries like Iran, Saudi Arabia or Turkey. In these countries, traditional animal production systems co-exist with highly developed systems. Again, TROP should reinforce its role as the leading publication for the region.
- (5) Grow in the USA and Australia. The USA and Australia are responsible for a large proportion of the research done worldwide in animal and veterinary sciences. Northern Australia and the Southern USA face many of the challenges the tropical world does. TROP is not a widely known option for publication in these two countries, given the fact that international top journals are published there. Nevertheless, it is desirable that TROP becomes an option for publication in these regions. Its growth there will be a major accomplishment and will help increase the internationalization of the journal.
- (6) Increase the number of papers dealing with less conventional species: water buffalo, dromedaries and South

American camelids. These species are growing in importance, not just at the local level. It is therefore paramount that TROP becomes the leading forum for publication in these species.

- (7) Growing internationalization and scientific impact. This is perhaps the major challenge TROP is facing. Competition with other journals is growing and the ability to attract novel readership and authors is of capital importance. This may be achieved through the major points highlighted previously. However, the overall quality of the journal has to continue to improve based on the scientific quality of the articles published. This was the general philosophy of the previous Editorial board and this work will continue in this tenure.
- (8) Increase and diversify the Editorial Board and the Reviewer platform. With growth and dedication to specific animal and veterinary science issues, TROP is publishing papers that are growing in specificity. To address such specificity, the Editorial Board and the journal reviewers will have also to become more specialized. For that reason, during this tenure, the Editorial Board will

increase in size, addressing the growing variety of topics inherent to the submissions to our journal. We aim also to improve the Editorial Manager system in order to highlight the specialist nature of the different reviewers.

The challenges ahead for animal production and health in the tropics are enormous. They require determined responses from the animal and veterinary science community that must be the cornerstone of that response. To do so, the existence of a forum for discussion among animal and veterinary scientists is of utmost importance. *Tropical Animal Health and Production* is in a privileged position to be that forum. To maintain and increase that position, it needs to grow and to gain international recognition and scope. Ultimately, it will have to keep on the right track continuing to privilege quality and soundness of the science it reports. If we manage to do so, all the rest will follow.

Those are the challenges, those are the responsibilities and those are our duties and action plan.

We look forward for the exciting years ahead.

André M. de Almeida