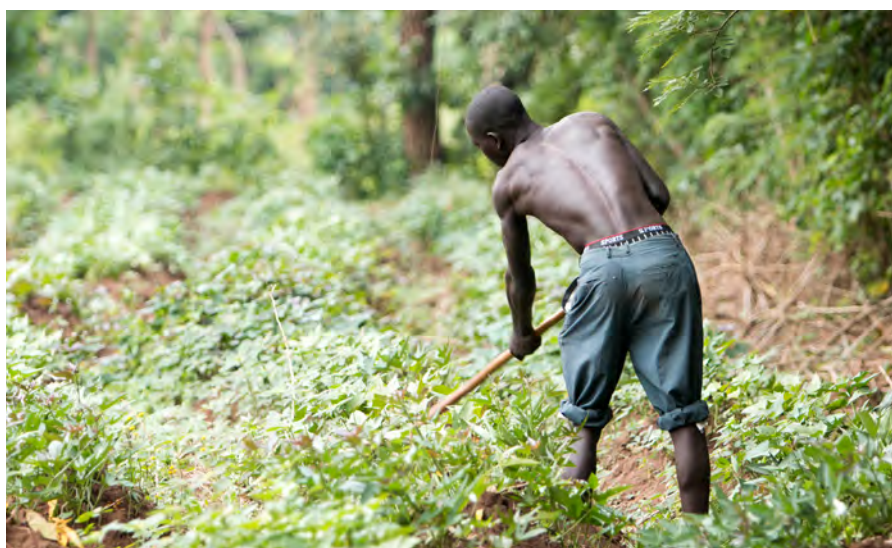


Ugandan entomologist overcame barriers to publication with help from the AuthorAID network

Researcher now mentors other early-career scientists in Africa

For farming communities, the risk of loss of crops to pests is an ever-present concern, and the changing climate is expected to transform the abundance and distribution of crop pests and diseases. Understanding the issues and managing the response to crop pests is crucial, but there is a dearth of information about how crops will be affected. Ugandan entomologist Joshua Okonya's research on this subject is of vital importance for development in many African countries and globally, but before joining AuthorAID he found it challenging to get his research published in scientific journals. Here he talks about the realities of publication for emerging researchers in many developing countries.

English is not the first language for many science graduates and early-career researchers in Africa and according to Okonya, "Many journals won't accept a piece of research - even if the work is scientifically sound - if the English is not well written. Master's students struggle to get their work accepted by journals,



Okonya's research is providing baseline information about pest crop losses, with the hope of improving the food security and livelihoods of smallholder farmers in Uganda.

Joshua Okonya

Joshua Okonya is a crop entomologist from Uganda. He holds an MSc in Tropical Agriculture from the University of Goettingen, Germany, and currently works with the International Potato Center (cipotato.org) in Kampala, whose mission is "to work with partners to achieve food security, well-being, and gender equity for poor people in root and tuber farming and food systems in the developing world". Okonya's research focusses on understanding the impact of pest crop losses on farmers' livelihoods in the face of climate change, and the use of integrated pest management strategies for sustainable crop production.





Sweet potato is rich in vitamin A and remains a staple food crop in Africa, but is threatened by a number of insect pests including sweet potato weevils.

particularly European journals". While attempting to get his research published, Okonya looked for support from his university, but with little success. "In Africa and in Asia, you find many young scientists who want to start to publish, and they don't get much help from their bosses, academic staff or lecturers. The professors are so busy."

AuthorAID support

INASP's AuthorAID project aims to help fill this gap: it is a global network providing support,

mentoring, resources and training for researchers in developing countries. AuthorAID, for which registration is free, offers practical answers to specific questions that emerging scientists have about getting published.

One of the most significant strengths of the project is that it links up new researchers with highly published researchers and professional editors who provide personal mentoring. "I had never published," said Okonya. "It's a really good thing that somebody

who doesn't know you gives their time to read through your work and give comments."

After joining AuthorAID, he was put into contact with two different mentors, one based in the UK and the other in Australia. The mentors helped him prepare his papers for publication. As a result, Okonya published four papers in 2013 and five papers in 2014 - a high output by any standard. "Once you break the barrier of knowing how to write scientifically, then you can become prolific after that," he explained.

What is AuthorAID?

AuthorAID is a global network that provides support, mentoring, resources, and training for researchers in developing countries.

To find out more about AuthorAID mentoring, visit the AuthorAID website: www.authoraid.info/en/mentoring.



Published research helps understanding of crop yields

Okonya's published research is contributing to understanding the challenges for agriculture in Uganda. In a paper published in the International Journal of Insect Science in late 2013¹, for example, Okonya records the pest status for sweet potato in the Lake Albert Crescent agro-ecological zone of Uganda. Sweet potato is rich in vitamin A and remains a staple food crop in Africa, but is threatened by a number of insect pests including sweet potato weevils (*Cylas brunneus* F. and *C. puncticollis*), resulting in a decline in crop yields and quality. Larvae feeding on sweet potato roots and stems can result in 100% root yield loss, particularly during long dry seasons.

Following on from this work, his research paper on the effect of temperature on the development, reproduction and mortality of the sweet potato weevil was published the next year in the Uganda Journal of Agricultural Sciences. The fifth assessment report of the Intergovernmental Panel on Climate Change (IPCC) predicts that, in Africa, land temperatures will rise faster than the global land average by 3-6°C by 2050 (IPCC, 2013). It is thought that even modest temperature rises could lead to increased abundance and outbreaks of insect pests. Information on how temperature affects pests will help in the development of more appropriate pest control strategies or treatments, and is therefore vital and urgent for countries in which sweet potato is a staple food crop.



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“Personally and professionally, AuthorAID has helped [me] to grow in my scientific career.”

The research carried out by scientists also needs to be communicated to farmers so they can make appropriate choices for pest control. Okonya says, “With my Open-Access publications, I am advancing science [and] agricultural development, but above all providing baseline

information to students, researchers and development partners with the hope of improving food security and livelihoods of smallholder farmers in Uganda” (see **Advocating for Open-Access publishing**).

In August 2015, he presented a paper² at the International Plant Protection Congress (IPPC) in Berlin, Germany, on ‘Farmers’ Knowledge and Perceptions of Potato Pests and their Management in Uganda’. The paper concluded, “The low to medium knowledge of insect pests recorded in this study calls for training of both farmers and extension workers in insect pest identification. Empowering farmers with knowledge on insect pests is essential for the reduction of pesticide misuse and uptake of more environmentally friendly



“I’m now giving back to the AuthorAID community.”

approaches like IPM [Integrated Pest Management]”. This paper has also been accepted for publication in the Journal of Agriculture and Rural Development in the Tropics and Subtropics.

Also in 2015, Okonya published ‘A Cross-Sectional Study of Pesticide Use and Knowledge of Smallholder Potato Farmers in Uganda’ in BioMed Research International³. In early 2016 he presented at the World Congress on Root and Tuber crops in Nanning, China⁴, on the effect of climate change on the distribution and abundance of the African sweet potato weevil.

The impact of AuthorAID

Okonya is confident that AuthorAID was a major factor in his journey to become a published author: “Personally and professionally, AuthorAID has helped [me] to grow in my scientific career (or gave me a kick-start)...I strongly recommend fellow researchers, young scientists and students to join this interesting programme. [Without] the goodwill of the mentors at AuthorAID, I may not have been able to publish my first two articles, one of which had been previously rejected by two journals. In just two years, the first paper I published now boasts 17 citations on Google Scholar”⁵.

AuthorAID supports researchers in many ways to communicate their research. According to Okonya, the tips found on the AuthorAID website have been particularly useful. “It is very practical. The tips are one thing I always read when I visit AuthorAID.” In particular, he learned about the ID systems available to researchers: ORCID and Researcher ID. “They are

two different ID systems, where you have a personal number as a researcher - an identifier. I registered for it, so now I have an ID number as a researcher.”⁶

He has also benefited from lectures about how to write for a journal, what reviewers expect, and how to respond to reviewers’ comments.

Giving back: becoming an AuthorAID mentor

Okonya is now himself an AuthorAID mentor, offering early-career researchers his expertise in proofreading, managing the publishing process, editing and responding to peer review⁷. Despite his busy workload, he said, “I can afford some time to give back. Someone offered his time to look through my work, so I’m now giving back to the AuthorAID community ... When I published my third and fourth papers, I thought ‘I’ve got the skill now’. Instead of bothering somebody to help me with editing my article, I thought I could help somebody else who is trying to publish their first article”. ■

“With my Open-Access publications, I am advancing science [and] agricultural development but above all providing baseline information to students, researchers and development partners with the hope of improving food security and livelihoods of smallholder farmers in Uganda.”



Advocating for Open-Access publishing

Okonya is not only a prolific researcher, he is also an enthusiastic supporter of Open-Access publishing (content that is freely accessible online). “I believe information should be free to all,” he explained. Many publishers own the rights to the articles in their journals, and charge fees for access to those articles.

“We do research which is funded by public money, and we want this information to be out there, but the publisher chooses to lock it away behind a pay wall. Even if I publish a journal article myself in a subscription-based journal, I cannot access that article without a subscription. If my colleague sees I’ve published an article and asks me to send it to them, I can’t show them it if I haven’t got a spare copy, because I can’t go to the website and download it.

“With my Open-Access publications, I am advancing science [and] agricultural development but above all providing baseline information to students, researchers and development partners with the hope of improving food security and livelihoods of smallholder farmers in Uganda”, he added.

From his perspective as a researcher in Uganda, Okonya sees the value in both local and international journals. “What is more important,” he explained, “is whether they are a subscription-only journal or an Open-Access journal.” He tries to publish in Open-Access journals that are available in many African countries, so that his work can reach the people who will benefit most from his research. “It is more relevant to African researchers, with more localized information about Africa and Uganda. I don’t think the information should be hidden away from the people who want to access it, in a subscription-based journal.”

He said that there has been progress in recent years, with many more publishers signing up to Open Access, but more improvement is needed. Some suffer from a lack of critical peer review, according to Okonya. “That’s their weaknessthey’re after getting money, so not really paying attention to the quality of the science published.” However, he said, “There are many good-quality local journals available, such as those on AJOL (African Journals Online)”⁸.

Okonya believes researchers are also benefitting from a speedier review process in some Open-Access journals. “Some journals, even international ones, are quite fast. Last year I had an article published in SpringerPlus⁹, which is an Open-Access journal, and it took less than three months to have that manuscript published.”

To find out how researchers can access journals via INASP, visit www.inasp.info/en/training-resources/e-resources.

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- 6 Okonya’s ORCID identifier is 0000-0002-9874-5021 and his Researcher ID is I-8193-2013
- 7 See Okonya’s AuthorAID profile at www.authoraid.info/en/mentoring/contact/7464
- 8 African Journals Online is the world’s largest and pre-eminent collection of peer-reviewed, African-published scholarly journals. It was initiated in May 1998 as a pilot project managed by INASP and moved to African management in 2005: www.ajol.info
- 9 www.springerplus.com/content/3/1/303

Photography courtesy of Chris Dobson

