
AgShare TODAY



RESEARCH
COORDINATION
PLATFORM

Joining up research

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Supporting BMGF-funded projects

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Faster project access to mobile survey technology *(see page 5)*



Tackling the problems that almost every project faces

Find out how AgShare.Today can help you improve your project's impact. (See page 2 for full story)



Helping you publish in international journals

Find out how AgShare.Today can help you speed up your publication rate. (See page 6 for full story)

A new approach to helping projects tackle commonly occurring problems

Find out how AgShare.Today can provide you with key services to help you improve your project's impact

A common set of issues faced by project teams

All major research projects share a common set of problems that they need to solve if they are going to be really successful. Does that sound like a sweeping statement? After all, what problems can a livestock project in China really have in common with a child nutrition project in Uganda or a malaria project in the Sudan?

The answer is simple: all projects face problems focused around data management, information management, knowledge management and programme management.

Projects with larger budgets and multiple team members always result in a lot of information being generated very quickly (examples range from written reports to quantitative datasets). And having a lot of different teams working on different goals at the same time always raises issues of coordination (how do you make sure that everyone is following the same methodology or even thinking in a joined-up way, for example?). Or how do you ensure that results are published quickly in good international journals accessible to all?

The danger is that if project leaders don't tackle these issues very early in the project cycle, the inevitable result is considerable stress for



Managing busy project teams is a nightmare if you don't have the right systems in place from very early on

both staff and team leaders and a reduction in efficiency. However, achieving this isn't easy when you are trying to run a complex project with fixed resources.

An innovative new solution

The AgShare.Today programme is having a lot of success addressing these issues by taking an approach that flips the usual solution onto its head. Rather than projects being left to solve these difficult everyday issues themselves without support, the donors have funded the AgShare.Today programme to focus on key areas of knowledge and data management,

communications and capacity building. The aim is to provide projects with proven, workable solutions when they need them.

To achieve this aim, AgShare.Today provides a wide range of services – from training teams in journal article writing, to providing mobile survey apps, cloud-based data storage systems, and advice on data management and use of statistics.

The programme also provides the Bill & Melinda Gates Foundation (BMGF) projects that join the network with a state-of-the-art, cloud-based programme management system that can be used to coordinate inputs from teams working in different countries.

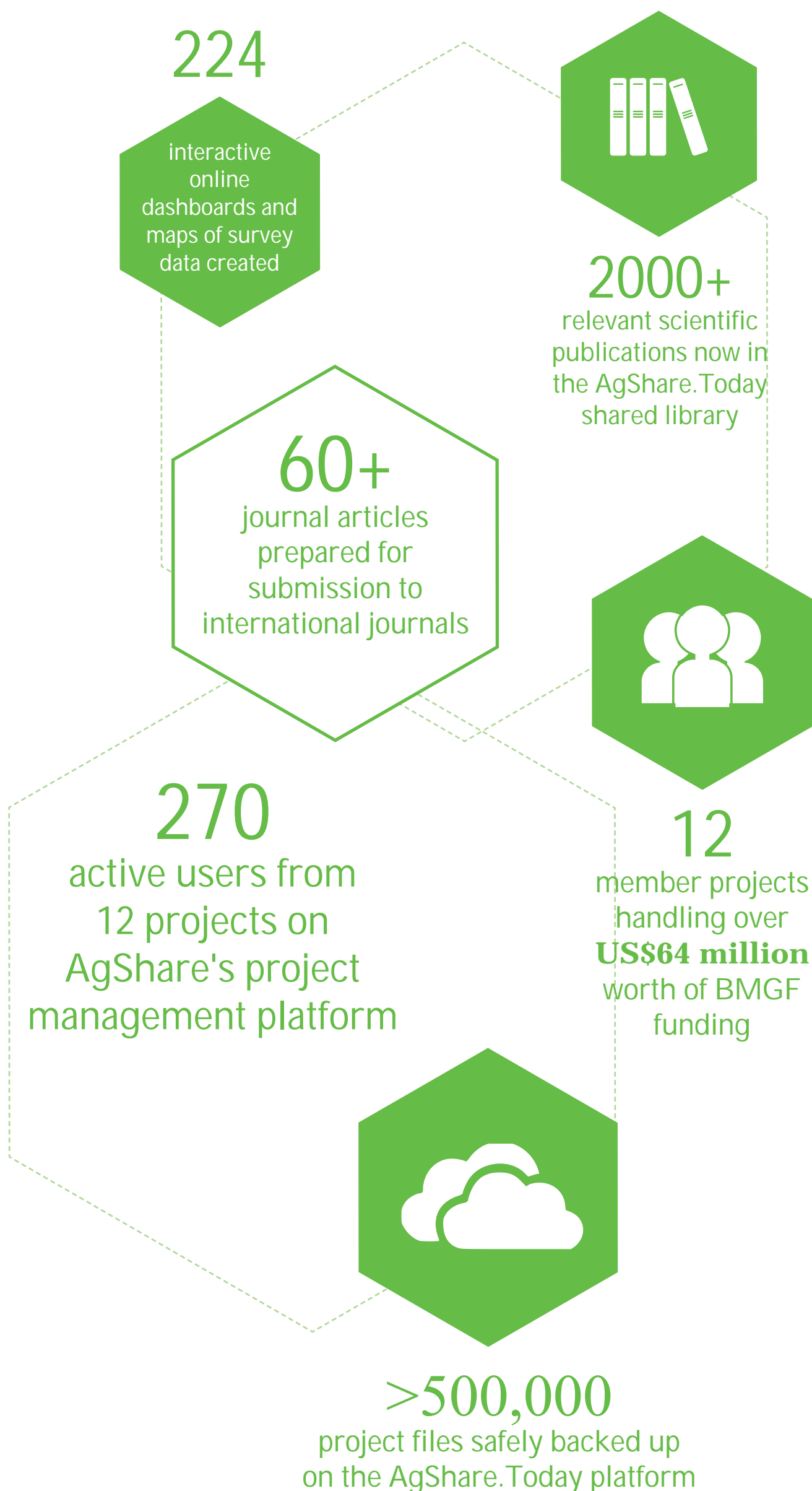
all projects face common problems focused around data management, information management, knowledge management and programme management



The AgShare.Today team is attending the Grand Challenges meeting this week in Berlin. If you'd like to take advantage of the free support they offer in data and information handling, results dissemination and programme management, email **Dr Sandy Williams** today to arrange a meeting.

s.e.williams@agshare.today

AgShare.Today in numbers



News in brief

33GB OF FILES RETRIEVED AFTER STUDENT'S LAPTOP IS STOLEN

Kasifa Katono, a young researcher working on the BMGF-funded African Cassava Whitefly Project (ACWP), recently benefited from her project's membership of AgShare after her laptop was stolen. In the past this would have meant she lost all her work. However, in this case because Kasifa's computer had been automatically backed up to the AgShare platform, the team was able to rapidly restore all 33 gigabytes of data to a new computer.

UNIVERSITY AWARDED US\$50,000

Kebbi State University of Science and Technology, Aliero (KSUSTA) in Northern Nigeria has just been awarded funding of US\$50,000 through the Tertiary Education Fund. The laboratories at KSUSTA are home to two AgShare.Today member projects that will benefit from this funding. Team members will gain access to new equipment including a UV spectrophotometer and temperature-controlled centrifuge.

AGSHARE DISCUSSION FORUM LEADS TO INNOVATION

In early 2016, a discussion was sparked on Yammer (the AgShare.Today social network and discussion forum) when one of the researchers on the network posted a news article about a hand-held DNA sequencer (called MinION), which was being used to detect viruses like Ebola and Zika.

The conversation inspired the AgShare team to ask the makers of MinION if the technology could be used to identify plant viruses. When the manufacturers said it could, the AgShare.Today team connected them with relevant AgShare partners to discuss possible uses. This resulted in those projects testing the system in depth and setting up detailed trials – a strong example of how the AgShare network can bring teams together to innovate.

AGSHARE.TODAY SECURES FURTHER FUNDING TO EXTEND AND EXPAND

AgShare.Today has secured a further US\$1.2 million in funding from the Bill & Melinda Gates Foundation – extending the programme's impact-rich work. The new funds will allow AgShare to greatly increase the communications and knowledge management support it provides to partner projects conducting vital research to improve food security in Africa. If you are interested in becoming a partner project, please email Dr Jim Weale (j.c.weale@agshare.today).

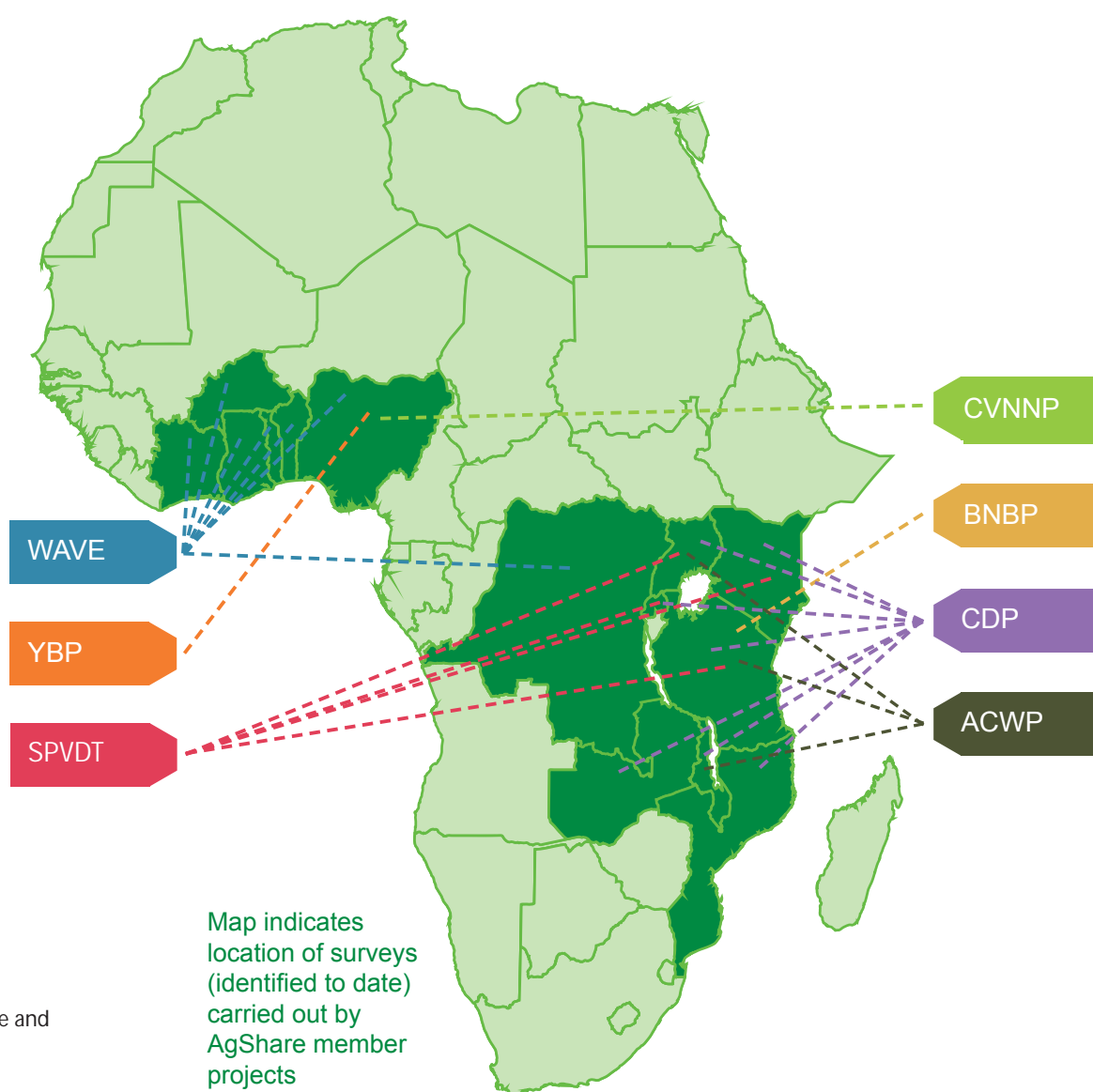
FINDING LOST RESEARCH – THE AGSHARE.TODAY RESOURCE CENTRE

AgShare's new online Resource Centre of hand-picked and carefully sorted products went online this month. As well as useful resources relating to our member projects, we're pulling together what are essentially lost outputs from a range of previous – but still valuable – research work. Go to the website at www.agshare.today to start accessing the resources today.

Joining up research: Mapping the surveys run by AgShare members across Africa

To make it easier for researchers to see what projects have run surveys in which countries, AgShare.Today is building dynamic online maps to track where and when surveys have been run (a small selection is shown here). Making it simple for researchers to see what surveys have already been run and who to contact for more information will have tremendous benefits for researchers working across Africa.

If you'd like to find out more about how your work can be mapped and shared more easily, contact Marina Millan (m.millan@agshare.today).



Banana Nematodes Baseline Project (BNBP)

Identifying and tracking specific plant parasitic nematode species that invade and destroy banana crops across East Africa

Principal Investigator: Dr Nessie Luambano

Project location: Tanzania

Crop: Banana
Lead institute: Kibaha Sugarcane Research Institute, Tanzania

Cassava Diagnostics Project (CDP)

Collaborating with institutes across East Africa since 2009 to combat the threat of increasingly virulent cassava viruses

Principal Investigator: Dr Joseph Ndunguru

Project locations: Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia

Crop: Cassava
Lead institute: Mikocheni Agricultural Research Institute, Tanzania

Cassava Viruses in Northern Nigeria Project (CVNNP)

Working to survey for viruses, educate cassava stakeholders, strengthen quarantine systems and build human and physical capacity across northern Nigeria

Principal Investigator: Dr Ibrahim Mohammad

Project locations: Nigeria

Crop: Cassava
Lead institute: Kebbi State University for Science and Technology, Aliero, Nigeria

Sweet Potato Virus Detection Tool Project (SPVDT)

Identifying and characterising sweet potato viruses threatening crops across East Africa using next generation sequencing tools

Principal Investigator: Dr Richard Echodu

Project locations: Kenya, Rwanda, Tanzania, Uganda

Crop: Sweet potato
Lead institute: Gulu University, Uganda

African Cassava Whitefly Project (ACWP)

Exploring the causes of significantly increased cassava whitefly numbers in East and Central Africa

Principal Investigator: Prof John Colvin

Project location: Malawi, Tanzania, Uganda

Crop: Cassava
Lead institute: Natural Resources Institute, UK

West African Virus Epidemiology Project (WAVE)

Addressing the virus threats to cassava, yams and sweet potato, and guarding against the spread into West Africa of cassava brown streak disease

Principal Investigator: Dr Justin Pita

Project location: Benin, Burkina Faso, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Nigeria, Togo

Crop: Cassava, sweet potato, yam
Lead institute: Université Félix Houphouët-Boigny, Côte d'Ivoire

Yam Badnavirus Project (YBP)

Identifying and tracking mealybug species affecting yam crops across Northern Nigeria

Principal Investigator: Dr Aliyu Turaki

Project location: Nigeria

Crop: Yam
Lead institute: Kebbi State University for Science and Technology, Aliero, Nigeria

Making it easier for projects to access and use mobile survey apps

Find out how AgShare can provide your project with quick, easy access to mobile survey technologies and support in using them effectively



Researchers from the Cassava Diagnostics Project (CDP) collecting data using a mobile app
Photo credit: CamRo

Mobile survey apps have widely recognised benefits

Faster, cleaner data gathering

Most projects recognise the benefits of using mobile field survey apps to gather data in the field. Compared with old-fashioned paper-based surveys, using a mobile app to run a field survey is much quicker and provides much cleaner data. Using such software, data entry errors can be cut out almost entirely for example – which can save countless hours of tedious data cleaning later.

Links to databases, visualisation and machine learning

Once the data from a field survey in one country is gathered by a mobile app, it can instantly be transmitted to online databases and combined with data from other surveys in other countries in other years.

Modern data visualisation tools like PowerBI can then be used to create dynamic dashboards that researchers can easily use to explore and analyse data. And, new techniques (such as machine learning) can be applied to vastly speed up the process of interrogating large data sets to identify patterns and trends.

Why doesn't every project make full use of mobile survey technology?

While most projects are aware of at least some of the benefits of using mobile apps to gather survey data, many either aren't yet using them

or aren't making full use of them. Why? Well partly because producing a mobile app is often perceived to be difficult (even though it isn't). But it's also because projects often don't realise just how much can be done with the data they've gathered once it is in an app (usually because they don't have anyone available to advise them).

Support with mobile survey technologies Helping projects produce mobile survey apps

One way that AgShare.Today supports projects is by producing mobile survey apps suited to their needs, and then supporting them in the work to make full use of any data gathered. This is provided as a no-cost service to projects funded by the Bill & Melinda Gates Foundation working in Africa.

AgShare already has a powerful mobile survey app platform in place – so actual programming isn't required. Care just needs to be taken to ensure that the surveys themselves are well structured, well thought through and well administered.

To produce surveys that meet project needs, we therefore often work with the researchers we are supporting to consider in detail exactly what information a survey app needs to gather and the best way to do that. This often has added benefits, such as improving the rigour of protocols developed to run surveys.

Examples of the work done to improve planning might include considering exactly what statistical tests will be used to analyse the data after it is gathered (which also helps with planning your publications). Or, reviewing exactly what overarching questions will need to be answered by the data being targeted – because it's not uncommon for groups to conduct surveys and only at the end realise that there were important questions they should have asked but didn't. Providing training to those administering the survey, to ensure rigour and reproducibility, is also an important part of what we do.

all projects face common problems focused around data management, information and programme management

Making the most of the data

Just as important is the fact that AgShare.Today will provide cloud-based databases to the projects it works with – to hold any data gathered. We'll also provide dynamic dashboards to help projects visualise and aggregate results. Clean data held online can then be used as a resource long into the future without degrading, which overcomes the fact that version control is a major problem when researchers hold their data in Excel.



If you are a Foundation-funded project and want to take advantage of the services that AgShare offers to help you gather and analyse data, please email **Marina Millan**.

m.millan@agshare.today

Helping you publish in international journals

Publishing in international journals is a key pathway for dissemination. Find out how the AgShare.Today programme can help projects in Africa to speed up the rate at which they publish in higher impact journals

“ Thank you for the passion you showed during the editing process of this manuscript. Without you for sure I wouldn't have managed to reach this step.”

Daniel Mukiibi, Cassava Diagnostics Project (CDP)

Pressure to publish

Almost any researcher you talk to will recognise the importance of publishing project results in international journals – both to push forward international research efforts as a whole and to advance their own careers. But they'll also tell you that doing so is not at all easy, especially as they have to juggle a huge range of other commitments ranging from field work and lab work, to teaching and reporting to donors.

A particular problem for African researchers

Researchers also need to bear in mind that where they publish is often as important as when they publish. Results really need to go into open-access, peer-reviewed journals with a high impact factor if they are going to be widely read. But competition for these journals is fierce, which again makes the whole process extremely hard – especially for African researchers whose mother tongue isn't English.

The result is that many findings either remain unpublished for long periods or go into low-impact academic journals which have higher



acceptance rates. Unfortunately, the small readerships of such low-impact journals mean that potentially important pieces of information can go unnoticed by the global research community. And, there's always the risk of falling prey to the so-called “predatory journals” that publish any article submitted to them and have no academic value.

Providing support writing journal articles

To help Bill & Melinda Gates Foundation-funded projects overcome these issues, and so speed up the publication of important results, the AgShare programme provides free scientific writing support to research groups working in Africa.

The support that AgShare.Today supplies ranges from providing group training courses on journal article writing (to give teams the skills that they need to publish more quickly), to providing one-to-one mentoring (to help give researchers the support needed to bring papers up to international standards). Such work might range from reviewing the quality of language and structure, to discussing and advising on the statistics being applied to a particular data set.

The aim is both to ensure that manuscripts are produced to an excellent standard before submission, and to build authors' capacity to produce stronger papers in the future.

The AgShare team also helps researchers to submit their papers through Chronos – a Bill & Melinda Gates Foundation-funded service which will pay the substantial fees involved in submitting to open-access journals.

To date, AgShare has supported the production of over 60 manuscripts and reports written by more than 30 researchers from 12 different projects.



If you are a Foundation-funded project and want to take advantage of the services that AgShare offers to help you publish your findings, please email **Alex James**.

a.james@agshare.today

Visualising data to provide rapid insights

Find out how the AgShare team helps partner research projects take advantage of cutting-edge data analysis tools like PowerBI and machine learning

Making data reviews more efficient

In order to draw useful conclusions from their data, researchers spend considerable amounts of time visualising it using tools such as Excel or ArcGIS. And, since different teams within a research group generally require what are essentially the same figures and visualisations (only using different data), they tend to spend significant amounts of time replicating work that has actually already been done by others.

The whole process can be made much more efficient using modern online dashboards that draw from an agreed data set and centralise the whole process. Using software like PowerBI to ensure that these visualisations are dynamic means that researchers can interact with them and interrogate the data directly – for example showing the data for different countries or data sets as needed.



Strong tools, systems and training bring teams together – increasing efficiency and output



So why aren't all projects using these systems?

Most researchers are aware that such data visualisation systems exist. What many don't realise is that producing such systems is no longer the province of big business. Centralised dashboards can now be put in place relatively quickly and cheaply for even the smallest projects, as long as sufficient forward planning takes place.

Support is available to you from AgShare

If you are a Bill & Melinda Gates Foundation-funded project working in Africa, AgShare's experts are available to help you make the most of your research by providing centralised dashboards to visualise and bring together your

data using interactive graphs and maps.

By showcasing findings in intuitive charts, researchers are finding new patterns in their data, spotting errors that may otherwise have been missed and, ultimately, speeding up the journey to publication.



The AgShare.Today team is attending the Grand Challenges meeting this week in Berlin. If you want to take advantage of the services that AgShare.Today offers to BMGF-funded projects to help them gather and analyse data, please email **Dr Jim Weale**.

j.c.weale@agshare.today

“ Creating standardised, centralised dashboards makes the whole process of reviewing project data much faster and more efficient.”

Getting to know AgShare.Today

What is AgShare.Today?

AgShare.Today is a Bill & Melinda Gates Foundation-funded programme that's focused on helping other BMGF-funded, agriculture-related projects find ways to better and more efficiently use, manage and disseminate their project information and results. The programme has recently expanded so that it can now offer its services to many new projects. If you would like to access a wide range of free support, please contact us now by emailing Dr Jim Weale (j.c.weale@agshare.today).

How can AgShare help you?

The AgShare.Today programme is very much focused on providing concrete support to its partners. Such support ranges from providing communications training and scientific writing services (to speed up a project's production of journal articles for instance) to the provision of cutting-edge IT services (to improve data gathering and management).

But the team doesn't just provide tools and training. We also provide really strong engagement services too – visiting project teams, discussing problems they are facing and developing solutions that suit them. Basically, providing support whenever and wherever it is needed to improve flows of information, dissemination of results and production of project legacy.

See below for a list of just a few of the services, tools and technologies that AgShare.Today can provide to relevant BMGF-funded projects.

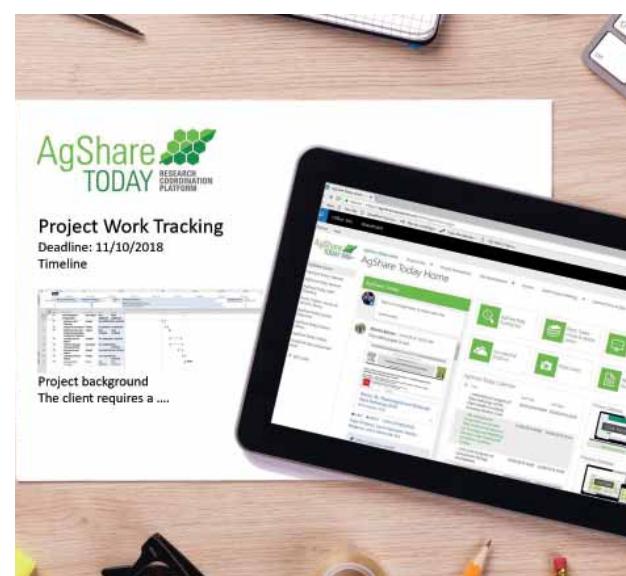
Examples of training courses provided

- Journal article writing
- Grant writing
- Advocacy
- Project management
- Data management
- Use of statistics

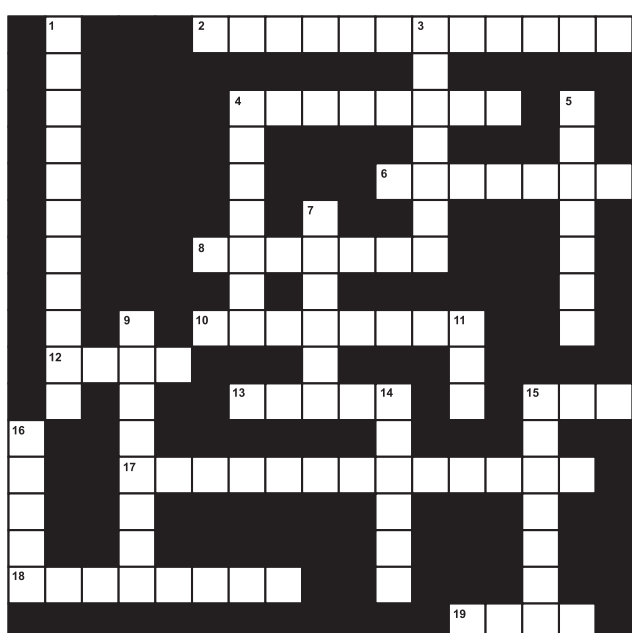


Cloud-based tools provided

- Project management systems
- Document management systems
- Data visualisation dashboards
- Libraries of key documents
- Cross-project chat forum (Yammer)
- Researcher directory (to find expertise)
- Data mapping dashboards
- Mobile field survey apps
- Project information back-up and restore tools
- Databases of primers, protocols, grants



Think you know your agriculture? Try your luck with our AgShare-related crossword



Find the answers at www.AgShare.Today/crossword

Across

2. Reliable access to sufficient nutrients (4,8)
4. Organism living off another (8)
6. Gathering of crops (7)
8. An impairment of health (7)
10. A winged plant pest (8)
12. The part of a plant that attaches it to the ground (4)
13. Infectious agent that replicates itself within the cells of living organisms (5)
15. Biological building block (acronym) (3)
17. Working together (13)
18. Intensity; harshness (8)
19. Information for analysis (4)

Down

1. The science of farming crops (11)
3. Weather conditions over a long period of time (7)
4. Have one's work issued for publication (7)
5. Source of tapioca (7)
7. Agent that carries disease (6)
9. The structural unit of an element or compound (8)
11. Sweet potato-like edible tuber (3)
14. Look at something in a methodical way (6)
15. A prolonged period of low rainfall (7)
16. Cultivated plants (5)