Messengers of Gates' Agenda

A Case Study of the Cornell Alliance for Science Global Leadership Fellows Program

BILL & MELINDA GATES foundation

AGRA Watch Report

August 2020

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Acronyms

AFSA	Alliance for Food Sovereignty in Africa
AGRA	Alliance for a Green Revolution in Africa
BMGF	Bill and Melinda Gates Foundation
CAGJ	Community Alliance for Global Justice
CAS	Cornell Alliance for Science
CNOP	Coordination Nationale des Organisations Paysannes
FAO	Food and Agriculture Organization of the United Nations
GMO	genetically modified organism
IFPRI	International Food Policy Research Institute
NaCRRI	National Crops Resources Research Initiative of the National Agricultural Research
	Organization, Uganda
NARO	National Agricultural Research Organization, Uganda
NGO	nongovernmental organization
UBIC	Uganda Biosciences Information Center
UN	United Nations
USAID	United States Agency for International Development

Executive Summary

The Bill and Melinda Gates Foundation (BMGF) has emerged over the past decade as an extremely influential actor in an ever-intensifying battle over the future of food and agriculture, pumping major funding into industrial agriculture while participating in powerful alliances seeking to reshape the trajectory of global governance of the food system. While some of these activities are drawing increasing scrutiny and analysis, this study examines a lesser-known aspect of BMGF's strategy: framing the debates and shaping how issues are communicated, as well as fostering a new generation of leadership to carry forward its mission. Funded by BMGF, the Cornell Alliance for Science (CAS) uses its affiliation with Cornell University to claim scientific neutrality while assiduously promoting communications aligned with agribusiness through its use of fellows, especially those from Africa. In taking a deeper look at the CAS Fellowship Program and the types of messaging it propagates, we expose the pernicious methods used by the Gates Foundation to influence the communications, narratives and policies regarding agricultural development in Africa and beyond.

The report begins with an overview of the CAS Global Leadership Fellows program, a 12-week intensive training course on "science-based communications" held each year at Cornell bringing together 20–30 young professionals, mainly from the Global South, and particularly Africa. Upon examination of the fellows' affiliations, multiple linkages with BMGF become apparent.

Cross checking the fellows' affiliations with grant disbursement data provided on the BMGF website, we can see that 34% of all the African CAS fellows from 2015–2019 were associated with organizations that received funding from BMGF. Together, organizations connected to the fellows received over \$775 million from BMGF between 2006 and 2019.

The strong overlap between the groups funded by BMGF for agricultural development and the CAS fellows gives additional meaning to the CAS strategy of "building a global network," begging the question, whom does this network serve, and toward what ends? In analyzing the work put out by CAS and its fellows, a striking pattern emerges of there being a singular focus and message running throughout almost all of it: an uncritical promotion of biotechnology. A key communications strategy of CAS is to promote narratives in which biotechnology is equated with 'science' and critique of biotechnology is equated with being 'anti-science.' CAS does not appear to seriously consider science-based alternatives to biotechnology, such as agroecology, despite widespread recognition that it provides the most promising pathway to sustainable and just food systems. Instead, CAS seeks to discredit both the concept of agroecology and the movements and researchers promoting it. This report takes a closer look at this strategy by analyzing a widely circulated article by a CAS fellow, identifying the false narratives on agroecology it contains.

What adds power to the narratives of CAS is

that its messages are not coming from BMGF or from its agribusiness partners directly, but from mostly young, African voices that make up its Fellowship Program, ostensibly informed by their lived experiences and claimed scientific rigor, given the affiliation with Cornell. This matters in terms of how these messages are received by the public. Through a case study on one of the CAS fellows, this report highlights how CAS is nurturing an elite body of purported science experts to become regulators in institutions creating policies that facilitate the expansion of corporate biotechnology in Africa. The case study also illustrates how BMGF has strategically inserted itself in key institutions across a variety of sectors, both inside and outside Africa, to increase the acceptability of its desired policy ends.

Given the blatant lack of academic integrity associated with CAS, the report concludes with a call to Cornell to undertake an open assessment of CAS and its relationship to academic goals. It also urges the many members of the Cornell community who oppose CAS to be vocal in their dissent, and encourages activist networks to support them in doing so. Finally, by analyzing the Gates Foundation's networks of influence, the report points to the need for the food sovereignty movement to develop robust communication strategies of our own.

1. Introduction

This report examines the Cornell Alliance for Science (CAS), an initiative funded by the Bill and Melinda Gates Foundation to influence global debate and policy on biotechnology, and the CAS effort to influence African agriculture. Despite its neutralsounding name, and being embedded in the ostensibly neutral terrain of a prestigious university, CAS in fact serves as a propaganda arm of the Bill and Melinda Gates Foundation - an attempt to legitimize a top-down approach to transform Africa's agricultural systems in favor of corporate biotechnology. Following the introduction to the study, Section 2 gives an overview of CAS and its Global Leadership Fellows program; Section 3 provides an analysis of a widely circulated article written by a former fellow and current associate of CAS; and Section 4 presents a case study to illustrate the intricate networks of knowledge production funded by the Bill and Melinda Gates Foundation. Section 5 shares some concluding remarks about CAS and implications for broader food politics and activism.

Over the past decade, the Bill and Melinda Gates Foundation (hereafter Gates Foundation or BMGF) has emerged as an extremely influential actor in an ever-intensifying battle over the future of food and

agriculture. The reach of the Gates Foundation in the global food and agriculture scene is difficult to overstate, with over \$375 million distributed by BMGF in grants towards agricultural development in 2019 alone,¹ along with BMGF's participation in powerful alliances seeking to reshape the trajectory of global governance of the food system.² The continent of Africa – dubbed by the World Bank as "the 'last frontier' in global food and agricultural markets"³ - has been a particular focus of such efforts. BMGF's main presence in Africa is through AGRA, the Alliance for a Green Revolution in Africa, founded by BMGF and the Rockefeller Foundation in 2006. Just as the Green Revolution of the twentieth century fostered dependency upon commercial seeds, inputs and machinery from the US throughout much of the Global South,⁴ true to its name, AGRA has served as a major vehicle for the expansion of corporate agribusiness in Africa.⁵ In addition to its contributions to AGRA, the Gates Foundation supports Green Revolution technologies through its Agricultural and Global Development programs.

While AGRA and other agricultural investment activities of the Gates Foundation have been increasingly subject to analysis and scrutiny,⁶ this

¹ Based on data acquired from BMGF grants database: https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database.

² See, for example, ETC Group. 2020. The Next Agribusiness Takeover: Multilateral Food Agencies.

https://www.etcgroup.org/sites/www.etcgroup.org/files/files/etc_nextagtake_a4_v7.pdf.

³ World Bank. 2013. Growing Africa: Unlocking the Potential of Agribusiness. http://documents.worldbank.org/curated/en/327811467990084951/Main-report.

⁴ Patel, R. 2013. The Long Green Revolution. Journal of Peasant Studies 40:1, 1-63. https://www.tandfonline.com/doi/pdf/10.1080/03066150.2012.719224.

⁵Oakland Institute. 2016. The Unholy Alliance, Five Western Donors Shape a Pro-Corporate Agenda for African Agriculture.

https://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/unholy_alliance_web.pdf.

⁶ See footnote 5, and additional sources at https://cagj.org/agra-watch/resources/. See also chapter 6 of Biovision Foundation for Ecological Development; IPES-Food. 2020. Money Flows: What is holding back investment in agroecological research for Africa?

http://www.ipes-food.org/_img/upload/files/Money%20Flows_Full%20report.pdf; Wise, T.A. 2020. Failing Africa's Farmers: An Impact Assessment of the Alliance for a Green Revolution in Africa. https://sites.tufts.edu/gdae/files/2020/07/20-01_Wise_FailureToYield.pdf.

report examines a lesser-known aspect of BMGF's strategy: framing the debates and shaping how issues are communicated, as well as fostering a new generation of leadership to carry forward its mission. Funded by BMGF, CAS uses its affiliation with the only ivy league institution that is a land-grant college to claim scientific neutrality while assiduously promoting communications aligned with agribusiness in its use of fellows, especially those from Africa. In taking a deeper look at the CAS fellowship program and the types of messaging it propagates, this report exposes the pernicious methods used by the Gates Foundation to influence the communications, narratives and policies regarding agricultural development in Africa and beyond.

Ultimately, CAS represents a complement to AGRA in the Gates Foundation's effort to sell the benefits of corporate agriculture to policy makers, decision makers, governments and agricultural workers. This report demonstrates that in promoting biotechnology for the industry, BMGF is effectively doing the work of corporations under the veil of philanthropic benevolence.

This study is part of an ongoing effort since 2007 by the AGRA Watch campaign of Community Alliance for Global Justice (CAGJ) to document the interlocking ways in which money and influence of the Gates Foundation flow through AGRA and parallel institutions to promote corporate biotechnology in Africa. It responds to growing concerns among AGRA Watch partners, particularly African organizations and their allies, over the types of messages being put out by CAS under the guise of science-based communication. Our partners see such messaging as undermining their work on the ground to build more just and sustainable food systems grounded in agroecology and food sovereignty.

Initiated in 2017, the research contained within this report tracks the first five years of CAS from 2015–2019, compiling and analyzing data available on the CAS and BMGF websites, complemented by secondary sources. The objective is to shed light on how CAS functions and what types of messaging it is promoting, in order to situate CAS within the range of strategies employed by the Gates Foundation and within a broader web of powerful actors and initiatives shaping African and global food politics. By adding to the body of critique on the Gates Foundation and the Cornell Alliance for Science,⁷ it is hoped that this information will arm AGRA Watch partners and others in their struggles for food sovereignty by having a clearer understanding of what they are up against.

⁷ Other colleagues have also critically evaluated aspects of CAS. In particular, we acknowledge the contributions of Jonathan Latham of the Bioscience Resource Project and Independent Science News, who has challenged the questionable science and ethics behind CAS, and Stacy Malkan of US Right to Know, who has exposed the industry linkages that CAS has sought to hide. See, e.g., Independent Science News. 2017. Gates Foundation Grants Additional \$6.4 million to Cornell's Controversial Alliance for Science.

https://www.independentsciencenews.org/news/gates-foundation-grants-additional-6-4million-to-cornells-controversial-alliance-for-science/; Latham, J. 2016. Cornell Faculty Refuse to Defend GMO Crops. https://www.independentsciencenews.org/un-sustainable-farming/cornell-faculty-refuse-to-defend-gmo-crops/; Latham, J. 2015. The Puppetmasters of Academia (or What the NY Times Left out).

https://www.independentsciencenews.org/science-media/the-puppetmasters-of-academia-ny-times-left-out/; Malkan, S. 2016. Why is Cornell University hosting a GMO propaganda campaign? https://theecologist.org/2016/jan/22/why-cornell-university-hosting-gmo-propaganda-campaign; and Malkan, S. 2019. Cornell Alliance for Science is a PR Campaign for the Agrichemical Industry.

https://usrtk.org/our-investigations/cornell-alliance-for-science-is-a-pr-campaign-for-the-agrichemical-industry/.

2. About the Cornell Alliance for Science and its Global Leadership Fellows

Housed in Cornell University's College of Agriculture and Life Sciences in Ithaca, New York, the Cornell Alliance for Science (CAS) was launched in 2014 through a \$5.6 million endowment by the Gates Foundation "to promote access to scientific innovation as a means of enhancing food security, improving environmental sustainability and raising the quality of life globally."8 According to CAS director Sarah Evanega, CAS aims to "depolarize the GMO debate and engage with potential partners who may share common values around poverty reduction and sustainable agriculture, but may not be well informed about the potential biotechnology has for solving major agricultural challenges."9 A second grant of \$6.4 million in 2017 brought the total contribution of BMGF to CAS to \$12 million. BMGF remains the primary funder of CAS to date, while fifteen additional institutional and individual contributors of \$1000 or more are listed on the CAS website.

CAS describes its main strategies as a) establishing a global network; b) training "with a purpose"; and c) developing multimedia communications on agricultural biotechnology. These strategies come together through its Global Leadership Fellows Program, a 12-week intensive training course held each year at Cornell bringing together

20-30 young professionals, mainly from the Global South, and particularly Africa. The course includes specialized modules in "strategic planning and grassroots organizing; personal storytelling and telling stories of science; communicating on biotechnology and emerging technologies; public speaking, media training, and messaging; driving law and policy; fundraising; and more" as well as an independent study component.¹⁰ The work of the fellows is featured through an active online and social media presence, with frequent updates to the CAS website and Facebook page and circulation of pieces authored by fellows across multiple media outlets. News items on the CAS website also highlight the participation of fellows in a variety of events, underscoring CAS' influence in global food and agricultural policy spaces. At a January 2020 meeting at the World Bank, for instance, fellows lobbied officials on investment needs for Africa, including genetic engineering and gene editing, and "science communication."11

To gain a deeper understanding of the Global Leadership Fellows Program, it is helpful to take a look at both the geographical and institutional backgrounds of its fellows. Figure 1 provides a breakdown of the home continents of the 2019 fellows. While the geographical reach

⁸ Cornell Alliance for Science. no date. Our Mission. https://allianceforscience.cornell.edu/about/mission/.

⁹ Shackford, S. 2014. New Cornell Alliance for Science gets \$5.6 million grant.

https://news.cornell.edu/stories/2014/08/new-cornell-alliance-science-gets-56-million-grant.

¹⁰ Cornell Alliance for Science. no date. Global Leadership Fellows Program. https://allianceforscience.cornell.edu/education/global-leadership-fellowship/.

¹¹ Gakpo, J.O. 2020. Alliance Fellows advise World Bank on funding priorities for Africa.

https://allianceforscience.cornell.edu/blog/2020/01/alliance-fellows-advise-world-bank-on-funding-priorities-for-africa/.

of the program has been broadening, the majority of fellows – 60.6% in 2019 – were of African origin, in keeping with prior years. Figures 2 and 3 provide a breakdown of countries of origin of the African Fellows, both in 2019 and from 2015-2019, while Figure 4 provides a breakdown of sectors from which the 2019 African fellows originate. The figures show that fellows come from a fairly even spread across four sectors: media/communications, policy/ research, entrepreneurial/private, and government/ university. Appendix I contains the organizational/ institutional affiliations of the 2019 African fellows and Appendix 2 contains the affiliations of all of the African fellows from 2014–2019. The range of sectors covered by the fellowship program is strategic for CAS in terms of amplifying its power and influence. For instance, universities transform local knowledge and reframe debates through their expertise, while government organizations shape the positions of regulators as well as the language of policies.

Figure 1: Home continents of 2019 CAS Fellows







Source: authors' own, based on data from CAS website



Figure 3: Home countries of African CAS Fellows, 2015-2019

Source: authors' own, based on data from CAS website

Figure 4: Sectors represented by 2019 African CAS Fellows



Source: authors' own, based on data from CAS website

Upon examination of the fellows' affiliations, multiple linkages with BMGF become apparent. Cross checking the fellows' affiliations with grant disbursement data provided on the BMGF website, we can see that 34% of all the African fellows from 2015–2019 were associated with organizations that received funding

from BMGF.¹² Together, organizations connected to the fellows received over \$775 million from BMGF between 2006 and 2019 (see Appendix 1 for breakdown). Among these BMGF grantees, three stand out for being connected to multiple rounds of fellows: the International Food Policy Research Institute (IFPRI), Makerere University of Uganda, and Sokoine University of Agriculture of Tanzania. Figure 5 provides further insight into the allocation of the \$775 million from BMGF to organizations associated with the fellows, showing that despite the focus on Africa, the majority of funding is going to non-African organizations. This is in keeping with a funding pattern that BMGF has been criticized for in the past. A 2014 article in *The Guardian* cited that of the \$669 million granted by BMGF to nongovernmental groups for agriculture work, "Africa-based groups received just 4%. Over 75% went to organizations based in the US."¹³ Similar trends in BMGF funding patterns have been noted in more recent studies by CAGJ¹⁴ and Biovision and IPES-Food.¹⁵

Figure 5: Breakdown of funding from BMGF to organizations associated with the CAS fellows, by



Source: authors' own, based on data from CAS website

¹² To establish funding links, we identified all agriculture-related BMGF grants on their website

⁽https://www.gatesfoundation.org/how-we-work/quick-links/grants-database#) in any category (agricultural and others) that went to institutions once or currently affiliated with Fellows, from 2006 through 2019. Institutions were determined from Fellows' most current affiliation as listed in their bios on the Cornell Alliance for Science website. Additionally, if the fellow had prior affiliations that received BMGF funding (such as graduated from a university), this was also included. ¹³Vidal, J. 2014. Gates foundation spends bulk of agriculture grants in rich countries. *The Guardian* (4 November)

https://www.theguardian.com/global-development/2014/nov/04/bill-melinda-gates-foundation-grants-usa-uk-africa.

¹⁴ Sugihara, M. 2016. Wageningen University and Research Foundation and the Gates Foundation: A Case Study.

https://cagj.org/wp-content/uploads/WUR-Case-Study-FINAL-11-30-16-.pdf.

¹⁵ Biovision Foundation for Ecological Development and IPES-Food. 2020. *Money Flows: What is holding back investment in agroecological research for Africa?* http://www.ipes-food.org/_img/upload/files/Money%20Flows_Full%20report.pdf.

The strong overlap between the groups funded by BMGF for agricultural development and the CAS fellows gives additional meaning to the CAS strategy of building a global network, begging the question, whom does this network serve, and toward what ends? Given these linkages, it comes as little surprise that there are strong parallels between the types of technologies promoted by BMGF through its agricultural investments and the messages coming from CAS and its fellows - many of whom come from BMGF-backed organizations. In analyzing the work put out by CAS and its fellows, a striking pattern emerges of there being a singular focus and message running throughout almost all of it: an uncritical promotion of biotechnology. Furthermore, in a distortion of scientific methodology, this position is not vetted against any diverging ones. As a group of New York State farmers pointed out in a letter to Cornell University, "...nothing in the materials or programs of 'The Alliance for Science' is anything but entirely pro-biotechnology. They are without balance or significant critical evaluation of the range of agricultural systems and technologies that exist in food production today."16

The blatant bias of CAS has similarly been critiqued by members of the Cornell faculty,¹⁷ student body,¹⁸ and broader Cornell and Ithaca

community. According to Jonathan Latham of the Ithaca-based Bioscience Resource Project, "Of several hundred talks at Cornell sponsored by the Alliance, only one has only ever offered a contrary view. Worse, most of its guests are simply corporate propagandists who have nothing, academically, to offer. For an organization that claims to be a promoter of debate, that it is a remarkably lop-sided record."¹⁹

What adds power to the narratives of CAS is that its messages are not coming from BMGF or from its agribusiness partners directly, but from mostly young African voices that make up its Fellowship Program, ostensibly informed by their lived experiences and claimed scientific rigor, given the affiliation with Cornell. This matters in terms of how these messages are received by the public. Communications studies have demonstrated that the public is more likely to be receptive to a message when it believes it has come from independent scientists as opposed to industry.²⁰ Perhaps this is why CAS goes to great lengths in its publicity materials to distance itself from the biotech industry, despite its well-documented industry links.²¹ To further explore how CAS and its fellowship program operate, the next section provides an analysis of a well-circulated article written by a 2015 CAS fellow and current CAS team member.

¹⁶ Henderson, E. 2016. Press Release: NY Farmers Call for Cornell to Evict "the Alliance for Science."

https://bioscienceresource.org/pressrelease-farmers-alliance-for-science/.

¹⁷ Pinch, T. Letter: For Whom the Bell Tolls. https://www.ithaca.com/opinion/letter-for-whom-the-bell-tolls/article_f501c81c-5c8b-11e5-bdac-eb084a5872b3.html. ¹⁸ Schooler, R. 2016. The GMO Debate: One Student's Experience of Pro-GMO Propaganda at Cornell University.

https://www.independentsciencenews.org/health/the-gmo-debate-one-students-experience-of-pro-gmo-propaganda-at-cornell-university/.

¹⁹ Personal communication, April 11, 2020.

²⁰ Kasperson, R.E., Renn, O., Slovic, P., Brown, H.S., Emel, J., Goble, R., Kasperson, J.X. and Ratick, S. 1988. The social amplification of risk: a conceptual framework. *Risk Analysis* 8:2, 177-187. https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1539-6924.1988.tb01168.x.

²¹ See, e.g., Malkan, S. Cornell Alliance for Science is a PR Campaign for the Agrichemical Industry.

https://usrtk.org/our-investigations/cornell-alliance-for-science-is-a-pr-campaign-for-the-agrichemical-industry/ and Latham, J. 2015. The Puppetmasters of Academia (or What the NY Times Left out). https://www.independentsciencenews.org/science-media/the-puppetmasters-of-academia-ny-times-left-out/.

3. A Closer Look at CAS' Messaging

Having looked into the composition of the CAS fellowship program in the previous section, this section examines a widely circulated article authored by 2015 CAS fellow and current CAS Training Team member, Nassib Mugwanya. The article contains a number of elements that reflect common trends in the materials put out by CAS and its fellows, as we explore here.

On February 4, 2019, an article by Mugwanya entitled 'After Agroecology: Why Traditional Agricultural Practices Can't Transform African Agriculture' was published on the website of the Breakthrough Institute,²² a think tank known for climate change skepticism, critiquing environmental movements, and its attempts to discredit renewable energy.23 Several days later, the piece was reposted on the CAS website²⁴ and social media channels and was circulating across numerous other outlets under various titles. The main thrust of the article is an argument about why agroecology is not a solution for Africa. This reflects a tactic seen in CAS materials not only to equate pro-GMO with 'pro-science,' but also to paint alternative forms of agricultural development as 'anti-science,' groundless and harmful. Particularly notable in the article are strong usages of metaphors (e.g., agroecology likened to

handcuffs), generalizations, omissions of information and a number of factual inaccuracies. Here we identify four false narratives included in Mugwanya's article that are common to Gates Foundation propaganda.

False Narrative 1: Agroecology can be characterized as a particular (limited) set of agricultural practices.

Among the article's omissions, and perhaps the most glaring for an article on agroecology, is an actual definition of agroecology. While the author rightly states that there is no universal definition of agroecology, there is no shortage of authoritative sources to draw from, such as the Agroecology Knowledge Hub of the Food and Agriculture Organization (FAO), which states "Agroecology is based on applying ecological concepts and principles to optimize interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system."25 The closest to a definition readers are offered by the author is that agroecology is a "codification of traditional farming practices" practices such as intercropping, mulching, and integration of crops and livestock - that the majority

²² Mugwanya, N. 2019. After Agroecology: Why Traditional Agricultural Practices Can't Transform African Agriculture. https://thebreakthrough.org/journal/no-10-winter-2019/after-agroecology.

²³ See, for example, Thacker, P.D. 2014. The Breakthrough Institute's Inconvenient History with Al Gore.

https://ethics.harvard.edu/blog/breakthrough-institutes-inconvenient-history-al-gore; Cooper, R. 2014. Nate Silver's *FiveThirtyEight* and the dangers of being ideologically neutral. https://theweek.com/articles/449197/nate-silvers-fivethirtyeight-dangers-being-ideologically-neutral; and Gerke, T. 2013. The Breakthrough Institute – Why The Hot Air? https://cleantechnica.com/2013/06/17/the-breakthrough-institute-why-the-hot-air/.

²⁴ Mugwanya, N. 2019. Why traditional agricultural practices can't transform African agriculture.

https://allianceforscience.cornell.edu/blog/2019/02/traditional-agricultural-practices-cant-transform-african-agriculture/.

²⁵ FAO's agroecology knowledge hub contains a description of agroecology on its main landing page (http://www.fao.org/agroecology/home/en/) as well as containing a special section on definitions of agroecology (http://www.fao.org/agroecology/knowledge/definitions/en/).

of African farmers have long been employing. While the practices cited in the article indeed fit within an agroecological framework, the author reduces agroecology – a dynamic concept and a transdisciplinary science – to the employment of a limited set of practices. A look at FAO's '10 Elements of Agroecology,' which provides an overview of the multiple facets of agroecology,²⁶ points to Mugwanya's narrow characterization of agroecology in his attempt to argue its limitations.

False Narrative 2: Agroecology involves a glorification of the past and a rejection of the modern.

Related to the point above are multiple references throughout the article indicating that agroecology embraces the past while rejecting the modern. This is another mischaracterization of agroecology, which by most definitions explicitly integrates traditional knowledge with modern science. According to FAO, for instance, agroecology "combin[es] science with the traditional, practical and local knowledge of producers."27 This element of agroecology is part of what makes it so powerful and effective across diverse contexts. It is ironic when Mugwanya claims that "We should jettison the arbitrary distinction because between traditional and modern" agroecology actually does just that by drawing on centuries of farmers' field-based practices combined scientific with innovative and technological developments to design and sustainably manage food and agricultural systems. In other words,

"the arbitrary distinction between traditional and modern" is precisely the false dichotomy rejected by agroecologists that the article serves to reinforce.

False Narrative 3: Agroecology is being imposed upon African farmers from outside of Africa.

According to Mugwanya, those opposing GMOs in his home country of Uganda are doing so "under the influence of international environmental NGOs." He further asserts that agroecology advocacy in Africa "wraps itself in the cloak of anti-colonialism even as the NGOs promoting agroecology are funded primarily by Western, developed-world donors." Such statements, however, obscure the reality that peasants, including African peasants, are in fact at the helm of the agroecology movement. This includes the members of the 200 million-strong international peasant movement La Via Campesina, whose global headquarters is in Harare, Zimbabwe, with a presence in 18 African countries. In Mali alone, approximately 15,000 peasants have been trained in agroecology by Via Campesina member CNOP (Coordination Nationale des Organisations Paysannes).²⁸ These are not the front groups for foreign interests that CAS may be familiar with, but mass movements with long trajectories of struggles and resistance. The same is true for many of the other small farmer, fisher and pastoral organizations associated with the continent-wide Alliance for Food Sovereignty in Africa (AFSA), whose campaign for 2019-21 is 'Agroecology for Climate Action' and

²⁶ FAO. 2020. The 10 Elements of Agroecology. http://www.fao.org/agroecology/knowledge/10-elements/en/.

²⁷ FAO. 2018. The 10 Elements of Agroecology: Guiding the Transition to Sustainable Food and Agricultural Systems. http://www.fao.org/3/i9037en/I9037EN.pdf. ²⁸ La Via Campesina. 2019. Peasant Organizations from 18 African Countries Take Part in an Agroecology Encounter in Harare.

https://viacampesina.org/en/peasant-organisations-from-18-african-countries-take-part-in-an-agroecology-encounter-in-harare/.

for whom agroecology is an ongoing area of work.²⁹ Furthermore, while Mugwanya dismissively refers to agroecology bearing a "cloak of anticolonialism," because some initiatives have been funded by Western donors, many African-based food and farming organizations in fact argue that the approach of BMGF – embodied by CAS – is the epitome of neocolonialism. For example, they point to lobbying by BMGF to open up new markets for multinational corporations outside of Africa (mostly in the global North) through securing African farmers' dependency on technologies that they have no control over – under a pretext of "development."

False Narrative 4: Agroecology will keep farmers locked into poverty and drudgery.

Building upon the notion that agroecology and concern over GMOs is coming from outsiders who are out of touch with the realities of African farmers, Mugwanya's article writes of agroecology "return[ing] food production to the hands and backs of so-called peasants" (emphasis added) and keeping farmers "bound to the soil and confined to poverty." He further asserts that "proponents of agroecological farming in Africa effectively advocate for the status quo, not transformation. They are proscribing technology and agricultural modernization in the name of social justice and working within the limits of nature, rather than giving African farmers a plausible pathway out of hunger and poverty." Once again, this inaccurately depicts agroecology, a central thrust of which is a wholesale transformation of the food system. AFSA's 'Agroecology: The Bold Future of Farming in Africa' report describes how agroecology:

reforms food systems to promote better nutrition and health, especially among poor communities; how it diversifies livelihoods and defends the dignity of women farmers; how it enables and empowers us to revive our soils and lands, cultivate relevant crops, advance food sovereignty, and build resilient ecosystems and communities; and how such innovative production systems, based on indigenous knowledge, meet the nutritional, cultural and spiritual needs of Africa's people.³⁰

Far from a maintenance of the status quo, the agroecological framework being put forward by African farmers themselves addresses the root causes of hunger and poverty while laying out steps for a wholesale transformation of the food system. This is in contrast to biotechnologybased approaches espoused by CAS and BMGF. By focusing on "improved crops" to the exclusion of fundamental issues such as the distribution of resources, fair pricing and the cultural needs of communities, such approaches in fact serve to perpetuate hunger and poverty.

The article is problematic not only because of the points elaborated above; it also contains multiple factual inaccuracies. It states, for instance, that evidence that agroecology "can generate yields that rival, or even surpass, those of conventional systems" is "limited to isolated proof-of-concept case studies

²⁹ See AFSA. 2019. Agroecology for Climate Action: A Call to Action

https://afsafrica.org/climate-campaign/ and AFSA. 2019. About AFSA. https://afsafrica.org/about-us/.

³⁰ AFSA. 2017. Agroecology: The Bold Future of Farming in Africa. https://afsafrica.org/agroecology-the-bold-future-of-farming-in-africa/.

that provide no direct comparison with conventional production." This simply is not the case. A growing number of studies show yield increases through agroecology when compared against conventional systems, as documented in the recent High Level Panel of Experts report on agroecology prepared for the UN Committee on World Food Security,³¹ although it is true that research remains limited to date. While more research is merited on the long-term yields of agroecological systems, there is documented evidence that the "improved varieties" of crops promoted by Gates-funded AGRA over the past decade - the same crops that CAS fellows are promoting - have had modest yield increases at best and in some cases and even yield declines.³² Recent assessment of AGRA's effectiveness in its thirteen priority countries has found AGRA has failed to increase farmer incomes or mitigate food insecurity. In Kenya, where AGRA is headquartered, food insecurity actually increased.33

The statement that "Basic infrastructure is also an important part of the story but is not even considered by agroecologists" is another inaccuracy. To the contrary, and unlike many biotechnological approaches, agroecology is grounded in a food systems approach that explicitly includes the elements of "environment, people, inputs, processes, infrastructures and institutions."³⁴ Infrastructure is in fact a key component in the types of local, regional and national food

systems envisaged in an agroecology framework.

Analyzing these four false narratives, the overall message left with readers of Mugwanya's article can be summed up as follows: Agroecology is being foisted upon unsuspecting African farmers from the outside – by wealthy NGOs that romanticize peasant lifestyles. Claims of the benefits of agroecology are not well grounded in science. What farmers really need is biotech and accompanying technological packages, and agroecology is dangerous and immoral for serving as an impediment to this.

It is important for agroecology advocates in Africa and elsewhere to understand that this is the type of messaging they are up against – packaged to represent the cutting edge of science-based communication.

³³ Wise, T.A. 2020. Failing Africa's Farmers: An Impact Assessment of the Alliance for a Green Revolution in Africa.

³¹ HLPE. 2019. Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. http://www.fao.org/3/ca5602en/ca5602en.pdf. ³² Wise, T.A. 2017. AGRA at Ten Years: Searching for Evidence of a Green Revolution in Africa.

https://afsafrica.org/agra-at-ten-years-searching-for-evidence-of-a-green-revolution-in-africa/. In addition to the failures of AGRA, there is also documented evidence of the failures of the types of GMO crops promoted by CAS. See, e.g., Gurian-Sherman, D., 2009. *Failure to yield: Evaluating the performance of genetically engineered crops.* Cambridge, MA: Union of Concerned Scientists. https://www.ucsusa.org/sites/default/files/2019-10/failure-to-yield.pdf.

 $https://sites.tufts.edu/gdae/files/2020/07/20-01_Wise_FailureToYield.pdf.$

³⁴ See footnote 31 above.

4. Case Study of a Cornell Alliance for Science Fellow

The narratives described above are an example of the kinds of messages that BMGF and CAS promote through their fellows. To illustrate the complex web of relationships through which BMGF is exerting its influence, we offer a case study of the author of the article, Nassib Mugwanya, because it demonstrates how the academic and career trajectory of a CAS fellow is aligned with the interests of BMGF.

In 2015, Nassib Mugwanya joined the first cohort of CAS Fellows, and he remains affiliated with CAS as a member of the CAS Training Team as of spring 2020.³⁵ Born in Kampala, Uganda, Mugwanya completed his undergraduate degree in agriculture at Makerere University in 2010. In 2011 he received a scholarship from University of California-Davis under the USAID-funded Horticulture Collaborative Research Support Program to pursue a masters' degree in agricultural extension and education at Makerere University. With an initial interest in extension models such as farmer field schools, over the course of his studies Mugwanya grew increasingly interested in biotechnology and involved in convincing Ugandan farmers of its merits.

In 2014, Mugwanya joined the Uganda Biosciences Information Center (UBIC) as outreach officer, a position he held through 2019. UBIC is housed under the National Crops Resources Research

Institute (NaCRRI) of the National Agricultural Research Organization (NARO). NARO launched UBIC in September 2013 to serve as a designated reference center for biotechnology communication in agricultural research.³⁶ Mugwanya maintained his position with UBIC while a CAS fellow, enabling him to put the training that he received at CAS to direct practical use in his promotion of GMOs to Ugandan farmers' associations. This work was – and continues to be - carried out against a backdrop of an intense national debate surrounding GMOs in Uganda involving proposed legislation for the legalization and regulation of GMOs in the country. Both UBIC and CAS have been deeply engaged in these activities from a pro-GMO perspective. Mugwanya has thus served as a key figure in a coordinated effort to sway public opinion in favor of GMOs in Uganda. It bears emphasizing that Uganda has been a major target of the Gates Foundation, with \$36 million granted to agriculture-related organizations and initiatives there, including NARO and NaCRRI, between 2003 and 2014.³⁷ It also bears emphasizing that each of the major organizations Mugwanya was affiliated with through 2019 - Makerere University, UC Davis, Cornell University and UBIC - is a recipient of Gates funding, underscoring that he is part of an extensive BMGF-funded network of organizations dedicated to transforming knowledge about GMOs.³⁸

³⁵ Cornell Alliance for Science. no date. Nassib Mugwanya. https://allianceforscience.cornell.edu/team/nassib-mugwanya/.

³⁶ International Service for the Acquisition of Agri-Biotech Applications. 2013. NARO-Uganda Launches Biosciences Information Center.

http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=11502.

³⁷ See GRAIN. 2014. How does the Gates Foundation spend its money to feed the world?

https://www.grain.org/article/entries/5064-how-does-the-gates-foundation-spend-its-money-to-feed-the-world as well as the BMGF grants database: https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database.

³⁸ For information on BMGF grantees, see the BMGF grants database: https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database.

Through his fellowship and ongoing engagement with CAS, Mugwanya has refined a particular narrative that can be seen throughout much of his work – that GMOs are a panacea for the hunger and poverty faced by African farming communities, and that those who critique GMOs are 'anti-science' and standing in the way of life-saving solutions. Such a narrative, and a particular zeal for discrediting agroecology and food sovereignty activism, is reflected in Mugwanya's works such as 'Your ideology, not GMOs, could be hurting the hungry'³⁹ which targets the Alliance for Food Sovereignty in Africa, and the article discussed in the previous section, 'Why traditional agricultural practices can't transform African agriculture' arguing that "agroecology is a dead end for Africa."⁴⁰

Mugwanya describes his passion as "communicating science in a way that empowers the ordinary farmer."⁴¹ His communications, however, are strikingly similar to those of the biotech industry, for instance in his assertion that "the current mainstream scientific consensus [on GMOs] is rock solid,"⁴² even though

this is simply not true.43 When questioned in an interview about allegations of CAS disseminating corporate propaganda, Mugwanya claimed that "all a farmer needs is a solution to the problem, not the debate. I have chosen to promote any scientific solution out there that could solve farmers' problems. If that means being a propagandist, I am unapologetic about it!"44 In 2018, Mugwanya became a fellow of the Breakthrough Institute⁴⁵ and in 2019 he left UBIC to pursue a doctoral degree through an AgBioFEWS (Agricultural Biotechnology in Our Evolving Food, Energy, and Water Systems) fellowship at North Carolina State University.⁴⁶ Notably, North Carolina State University is yet another recipient of BMGF funding for projects focused on biotechnology in Africa.47

This case study illustrates how CAS is nurturing an elite body of purported science experts to become regulators in institutions creating policies that facilitate the expansion of corporate biotechnology in Africa. Furthermore, the fact that

³⁹ Mugwanya, N. 2017. Your ideology, not GMOs, could be hurting the hungry.

https://allianceforscience.cornell.edu/blog/2017/12/your-ideology-not-gmos-could-be-hurting-the-hungry/.

⁴⁰ These narratives are also reflected in his public appearances. At a conversation on ending global hunger at the UN in November 2015, Mugwanya shared the plight of a female farmer (also referenced in his articles), whose life, he claimed, could be significantly improved through access to GMO technology, if it weren't for political activists blocking solutions that are "right in front of us, right within our reach"

⁽see https://news.cornell.edu/stories/2015/12/alliance-science-launches-hunger-conversation-un). In February 2017, he spoke at a workshop series addressing media concerns over biotechnology and biosafety developments in Uganda, urging participants to be skeptical of the anti-GMO movement, pointing to the "growing trend of fake news as one of the biggest contributors to wrong information among the public" (http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=15223). He has also shared similar messages on several podcasts (e.g., http://www.talkingbiotechpodcast.com/134-biotech-farming-and-the-developing-world/) and in other forums.

⁴¹ Cornell Alliance for Science. 2015. Our 2015 Global Fellows: Nassib Mugwanya. http://allianceforscience.cornell.edu/fellows/nassib-mugwanya/.

⁴² These remarks appeared in the comments section in response to an article written in June 2017 exposing NARO for carrying out GMO research funded in part by the Gates Foundation and Monsanto (see The Independent. 2017. EXPOSED: Uganda's secret GMO research. June 21.

https://www.independent.co.ug/exposed-ugandas-secret-gmo-research/2/).

 ⁴³ Hilbeck, A., Binimelis, R., Defarge, N., Steinbrecher, R., Székács, A., Wickson, F., Antoniou, M., Bereano, P.L., Clark, E.A., Hansen, M. and Novotny, E. 2015. No scientific consensus on GMO safety. Environmental Sciences Europe, 27:1, 1-6. https://enveurope.springeropen.com/articles/10.1186/s12302-014-0034-1.
⁴⁴ Ongu, I. 2018. View from Uganda: Anti-GMO critics smear Cornell, African science communicators.

https://www.scifode-foundation.org/index.php/blog/56-view-from-uganda-anti-gmo-critics-smear-cornell-african-science-communicators.

 $^{^{\}rm 45}\,{\rm See}$ footnote 23 above.

⁴⁶ North Carolina State University. 2019. Meet Our Students: 2019 Fellows. https://research.ncsu.edu/ges/academics/agbiofews/students/.

⁴⁷ See https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database#q/k=%22North%20Carolina%20State%20University%22.

nearly every major institute shaping Mugwanya's education and career has been funded by BMGF illustrates that the foundation has strategically inserted itself in key institutions across a variety of sectors, both inside and outside Africa, to increase the acceptability of its desired policy ends.

5. Conclusion

Through its funding for the Cornell Alliance for Science, the Bill and Melinda Gates Foundation is seeking to shape public opinion in favor of adopting GMOs and corporate agriculture. CAS is building a new generation of leaders to carry out BMGF's mission of spreading corporate biotechnology across the Global South, particularly Africa. A key communications strategy of CAS is to promote narratives in which biotechnology is equated with 'science' and critique of biotechnology is equated with being 'antiscience.' Furthermore, as is reflected in the work of Mugwanya, CAS seeks to discredit both the concept of agroecology and the movements and researchers promoting it. These efforts are coming at a time at which agroecology has been receiving increasing recognition and making unprecedented advances on the global stage: from the International Forum for Agroecology at Nyéléni held in Mali in 2015, which brought together social movements throughout the world toward a common agenda for agroecology,48 to the FAO's Global Dialogue on Agroecology from 2014-2018 in the form of two international and six regional symposia involving more than participants from 170 countries,49 1400 to

agroecology being a key item on the agenda at the United Nations Committee on World Food Security in 2019, extending into 2020.⁵⁰

That the attacks on agroecology by CAS are coming at the same time that there is a mounting global scientific consensus around the merits of agroecology is no coincidence. Studies have demonstrated that perceived scientific consensus is a key factor in influencing public support on a given issue and that this tends to encourage counter-efforts around "the 'manufacture of doubt' by political and vested interests."⁵¹ As momentum continues to build around agroecology, its advocates can be certain that further smear campaigns and other attempts to manufacture doubt will continue. It is hoped that this report can be instructive in this light.

It is important to look at CAS not in isolation, but to understand it as part of a broader set of efforts being employed by BMGF and as part of a large web of actors and initiatives shaping the politics of food and agriculture. Among the most significant of these is a Global Food Systems Summit being planned for

⁴⁸ See Declaration of the International Forum for Agroecology, Nyéléni, Mali, 27 February, 2015

⁽https://www.foodsovereignty.org/wp-content/uploads/2015/02/Declaration-of-the-International-Forum-for-Agroecology-Nyeleni-2015.pdf).

⁴⁹ Bruil, J., Anderson, C., Bernhart, A. and Pimbert, M. 2019. Strengthening FAO's commitment to agroecology.

https://www.agroecologynow.com/wp-content/uploads/2019/02/coventry-fao-agroecology-Feb7.pdf.

⁵⁰ FAO. 2019. CFS paves the way for policy recommendations on Agroecology. http://www.fao.org/agroecology/slideshow/news-article/en/c/1241306/.

⁵¹ Lewandowsky, S., Gignac, G.E. and Vaughan, S., 2013. The pivotal role of perceived scientific consensus in acceptance of science. Nature Climate Change, 3(4), pp.399-404. https://www.nature.com/articles/nclimate1720.

2021 that could shift the power in global governance away from the relatively democratic UN Committee on World Food Security toward more closed spaces dominated by agribusiness interests, as indicated by the summit's sponsorship by the World Economic Forum.⁵² The special envoy of this summit is none other than Agnes Kalibata, president of AGRA, whose appointment to this post has been opposed by more than 500 food and agricultural organizations.⁵³

It is also important to take a deeper look at the relationship between BMGF and Cornell University. Along with the multiple linkages between CAS and BMGF detailed throughout this report, there are additional associations between BMGF and Cornell,⁵⁴ with Cornell receiving over \$226 million from BMGF for a variety of agricultural development-related initiatives since 2009.55 We are in full agreement with Jonathan Latham in his statement that "It is appropriate on many levels to critique the deceptive nature of the Cornell Alliance for Science, but equally culpable is a university that gives them a home."56 We therefore call upon Cornell and its College of Agriculture and Life Sciences that houses CAS to have an open assessment of CAS and its relationship to academic goals. We also urge the many members

of Cornell faculty and students who oppose CAS to be vocal in their dissent and encourage activist networks to support them in doing so.

Finally, while this report demonstrates that movements for agroecology and food sovereignty have our work cut out for us in the face of disinformation campaigns backed by powerful interests, we must also remember that the reason why these campaigns exist is because we are advancing. We are forging on-the-ground alternatives with tangible results – increasingly validated by a growing body of science – while influencing both public opinion and public policy. And industry is taking notice and responding. Perhaps our next line of order lies in developing robust communication strategies of our own to effectively counter the vastly misleading claims of entities like CAS while proactively amplifying the voices of our movements.

 ⁵² Dehghan, S.K. and Ahmed, K. 2020. UN under fire over choice of 'corporate puppet' as envoy at key food summit. *The Guardian* (March 12) https://www.theguardian.com/global-development/2020/mar/12/un-under-fire-over-choice-of-corporate-puppet-as-envoy-at-key-food-summit.
⁵³ See CSOs Letter on UN Food Systems Summit

⁽https://www.foodsovereignty.org/wp-content/uploads/2020/03/EN_Edited_draft-letter-UN-food-systems-summit_070220.pdf) and Call to Revoke AGRA's Agnes Kalibata as Special Envoy to 2021 UN Food Systems Summit (https://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/letter_antonio_guterresenglish.pdf). ⁵⁴ A high-profile one among these, initiated in 2018, is Ceres2030 focused on the Sustainable Development Goal of ending hunger by 2030

⁽https://ceres2030.org/). Jonathan Latham explains that there are a number of reasons why this initiative should "ring alarm bells." First and foremost is its explicit focus on production above all else, providing "a ready-made entry point for certain other classes of solutions: the chemicals and GMOs of agribusiness, the promotion of which the Gates Foundation is rapidly becoming known for." Latham adds that, "Comparisons between Ceres2030 and the Cornell Alliance for Science extend not only to the similar PR strategy of using science to advance specific ends, Gates funding, and reporting to the same boss, but even to sharing the same Cornell office" (see https://www.independentsciencenews.org/environment/the-gates-foundations-ceres2030-plan-pushes-agenda-of-agribusiness/).

https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database#q/k=cornell&issue=Agricultural Development. ⁵⁶ Personal communication, April 11, 2020.

Appendix I

Affiliations of 2019 African CAS Fellows

U

Universities
Ahmedu Bello University (Nigeria)
Purdue University
Cairo University
Jimma University (Ethiopia)
Wageningen University (Netherlands)
University of California, Davis
University of Callabar (Nigeria)
University of Dar es Salaam (Tanzania)
University of Ghana
University of Ibadan (Nigeria)
University of Rwanda
Chalimbana University (Zambia)
Makarere University (Uganda)
Michigan State University
Mississippi State University
Sokoine University of Agriculture (SUA) (Tanzania)
Research/Policy
Institute of Research in Applied Sciences and Technologies (IRSAT)
Environmental Institute for Agricultural Research - Burkina Faso (INERA)
Ethiopian Biotechnology Institute
French Agricultural Research Center for International Development (CIRAD)
Leibniz Institute of Plant Genetics and Crop Plant Research
International Food Policy Research Institute (IFPRI)
Kenya Agricultural and Livestock Research Organization (KALRO) Food and Agriculture Organization (FAO) of the UN
National Agricultural Research Organization (NARO)
National Crops Resource Research Institute (NaCRRI)
National Resource and Land Management – Lake Zone Agricultural Research Development Institute
(LZARDI)
Uganda's National Agricultural Research Laboratories Institute (NARL)
Virus Resistant Cassava (VIRCA), part of the Donald Danforth Plant Science Center
Media organizations
Ghana Agricultural and Rural Development Journalists Association (GARDJA)
Radio Maisha (Kenya)
Science and Development Network via Centre for Agriculture and Biosciences International (CAB)
TV7 (Rwanda)

Startup companies/Private organizations

Real Green Gold Ltd - social enterprise specializing in organic farming of tropical fruits Rwanda Youth in Agribusiness Forum - a platform established to bring together different youth organizations, individual youth farmers and entrepreneurs in the agriculture sector Mnandi Africa - helps rural women combat poverty and malnutrition through skills development, market access and agro-technologies

AGCO Corporation - supports high-tech solutions for farmers

Government-related

Open Forum on Agricultural Biotechnology (OFAB) Chamber of Agribusiness Ghana (CAG) National Science and Technology Council

Source of Appendix I: authors' own, based on data from CAS website

Appendix II

Compilation of 2015–2019 CAS African Fellows' Affiliations and Associated BMGF Funding

A. Universities

University	Country	CAS Fellow (Year)	BMGF Funding
Ahmadu Bello University	Nigeria	Sulaiman Usman Tsauri (2016)	\$586,732
Arba Minch University	Ethiopia	Alemayehu Hailemicael Mezgebe (2016)	
Cairo University	Egypt	Ahmed Badr (2019) Shaimaa Reda (2019)	
Chalimbana University	Zambia	Sussana Phiri (2019)	
Egerton University	Kenya	Victoria Mbridde (2018)	
Jimma University	Ethiopia	Yemisrach Abebaw (2019)	\$499,950
Lilgonwe University	Malawi	Deborah Charlene Tsukuluza (2016) Yohane Chimbalanga (2016)	
Makerere University	Uganda	Nassib Mugwanya (2015) Winniefred Nanteza (2018) Jonan Twinatmatsiko (2018)	\$1,392,963
Michigan State University	United States	Nyasha Mudukuti (2019)	\$52,232,226
Mississippi State University	United States	Yohane Chimbalanga (2016)	\$98,577
Moi University	Kenya	Gerald Andae (2018)	
Nasarawa State University	Nigeria	Ubani Nkechi Isaac (2016)	
Oklahoma State University	United States	Peter Wamboga-Mugirya (2015)	
Purdue University	United States	Wiledio Naboho (2019)	\$35,300,975
Sokoine University of Agriculture	Tanzania	Philbert Nyinondi (2015) Isabellah Leone Mrema (2016) Louis Juma Baraka (2018) Calvin Edward Gwabara (2018)	\$499,160
University for Peace	Costa Rica	Catherine Alinane Chaweza (2016)	
University of California, Davis	United States	Nassib Mugwanya (2015)	\$2,638,906
University of Callabar	Nigeria	Opuah Abeikwen Opuah (2016)	\$499,936
University of Cape Coast	Ghana	Dennis Baffour-Awuah (2018)	
University of Dar es Salaam	Tanzania	Philbert Nyinondi (2015)	\$447,450
University of Ghana	Ghana	Joseph Opoku Gakpo (2016) Eric Paul Eke (2016) Slyvia Tetteh (2019)	\$465,697
University of Gondar	Ethiopia	Nega Berhane Tessemma (2016)	
University of Ibadan	Nigeria	Okon Odiong Unung (2018)	\$492,478

University	Country	CAS Fellow (Year)	BMGF Funding
University of Malawi	Malawi	Ellen Tamanda Chabvuta (2016) Yohane Chimbalanga (2016)	
University of Nigeria	Nigeria	Modesta Nnedinso Abugu (2015) Eric Paul Eke (2016)	
University of Rwanda	Rwanda	Jean Claude Habimana (2019)	
University of Zimbabwe	Zimbabwe	Samantha Salimu (2018)	
Wageningen University	Netherlands	Yemisrach Abebaw (2019)	\$54,725,471
		Total Funding:	\$149,880,521

B. Research/Policy Organizations

Organization	Country	CAS Fellow (Year)	BMGF Funding
African Center for Global Health and Social Transformation	Uganda	Patricia Nanteza (2015)	
Agricultural Research Development Institute in Tanzania	Tanzania	Isabellah Leone Mrema (2016)	
Association for Strengthening Agricultural Research in East and Central Africa (ASARECA)	Multinational	Clet Wandui Masiga (2015)	
CIRAD - French Agricultural Research Center for International Development	Multinational (based in France)	Kudzai Mafuwe (2018)	\$8,295,632
Environmental Institute for Agricultural Research - Burkina Faso (INERA)	Burkina Faso	Hamadou Sidibe (2019)	
Ethiopian Biotechnology Institute	Ethiopia	Yemisrach Abebaw (2019)	
Food and Agriculture Organization (FAO) of the UN	Multinational	Jean Claude Habimana (2019)	\$82,677,597
Food Research Institute for the Council for Scientific and Industrial Research (CSIR)	Ghana`	Rufai Ahmed Braimah (2015)	
Institute for Agricultural Research	Nigeria	Iro Suleiman (2015)	

Organization	Country	CAS Fellow (Year)	BMGF Funding
Institute of Research in Applied Sciences and Technologies (IRSAT)	Multinational	Diarra Compaore-Sereme (2019)	
International Food Policy Research Institute (IFPRI)	Multinational	Catherine Alinane Chaweza (2016) Abigail Dankwah Ntiamoah (2018) Nardos Amdework (2019)	\$205,955,720
Kenya Agricultural and Livestock Research Organization (KALRO)	Kenya	Kenneth Monjero Igadwa (2018), Mwimali Murenga (2019)	
Leibniz Institute of Plant Genetics and Crop Plant Research	Multinational (based in Germany)	Yemisrach Abebaw (2019)	\$813,348
National Agricultural Extension and Research Liaison Services (NAERLS)	Nigeria	Sulaiman Usman Tsauri (2016)	
National Agricultural Research Organisation (NARO)	Uganda	Victoria Mbridde (2018) Winniefred Nanteza (2018)	\$699,853
National Biotechnology Development Agency	Nigeria	Aisha Umar Agaie (2016) Ubani Nkechi Isaac (2016) Okon Odiong Unung (2018)	
Natural Resource and Land Management - Lake Zone Agricultural Research Development Institute (LZARDI)	Tanzania	Isabellah Leone Mrema (2016)	\$1,494,983
Tropical Institute of Development Innovations	Uganda	Clet Wandui Masiga (2015)	
Uganda's National Agricultural Research Laboratories Institute (NARL)	Uganda	Patricia Nanteza (2015)	\$6,148,864
Virus Resistant Cassava for Africa (VIRCA) - part of the Donald Danforth Plant Science Center	Multinational (based in the United States)	Peter Wamboga-Mugirya (2015)	\$48,394,282
Water Efficient Maize for Africa (WEMA) Project	Multinational	Peter Wamboga-Mugirya (2015) Mwimali Murenga (2019)	\$88,000,00057
		Total Funding:	\$442,480,279

⁵⁷ African Centre for Biodiversity. 2015. Profiting from the Climate Crisis, Undermining Resilience in Africa: Gates and Monsanto's Water Efficient Maize for Africa (WEMA) Project. https://www.acbio.org.za/wp-content/uploads/2015/05/WEMA_report_may2015.pdf

C. Media/Communications

Organization	Country	CAS Fellow (Year)	BMGF Funding
Africa Science Buskers Festival	Multinational	Knowledge Chikundi (2018)	
African Biotechnology Stakeholders Forum	Kenya	Kennedy Oyugi (2015)	
Biosciences for Farming in Africa Project (B4FA)	Uganda	Nassib Mugwanya (2015)	
Dziwa Science and Technology Trust	Zambia	Veronica Mwaba (2018)	
Forefront (magazine)	Nigeria	Etta Michael Bisong (2018)	
Ghana Agricultural and Rural Development Journalists Association (GARDJA)	Ghana	Joseph Opoku Gakpo (2016) Reuben Quainoo (2018) Richmond Frimpong (2019)	
Joy FM/Joy News TV	Ghana	Joseph Opoku Gakpo (2016)	
Kenya University Biotechnology Consortium (KUBICO)	Kenya	Vivian Tuei (2015)	
Leadership Newspaper	Nigeria	Ubani Nkechi Isaac (2016)	
Love FM Radio	Nigeria	Tracy Uzoigwe (2018)	
Multimedia Group Limited	Ghana	Joseph Opoku Gakpo (2016)	
National Farmers' and Youth Forum on Agro- Biotechnology	Uganda	Peter Wamboga-Mugirya (2015)	
Nigeria Institute of Public Relations (NIPR)	Nigeria	Aisha Umar Agaie (2016)	
Radio Maisha	Kenya	Rose Mukonyo (2019)	
Science and Development Network	Multinational	Verenardo Meeme (2018)	\$13,172,384 (via CAB International ⁵⁸)
Science Foundation for Livelihoods and Development	Uganda	Jonan Twinatmatsiko (2018)	
Thisruption communications (advertising agency)	Nigeria	Chidi Okereke (2018)	
TV7	Rwanda	Gisele Ndizeye (2019)	
Uganda Biosciences Information Center (UBIC)	Uganda	Nassib Mugwanya (2015)	\$4,206,468 (via NaCCRI ⁵⁹)

⁵⁸ Science and Development Network is a project of CAB International; therefore we included all Gates Foundation funding to CAB International here.

⁵⁹ Uganda Biosciences Information Center (UBIC) is a project of NaCCRI; therefore we included all Gates Foundation funding to NaCCRI here.

Organization	Country	CAS Fellow (Year)	BMGF Funding
Uganda Science Journalists' Association (USJA)	Uganda	Peter Wamboga-Mugirya (2015)	
Wandieville Media	Nigeria	Yewande Kazeem (2018)	
		Total Funding:	\$17,378,852

D. Entrepreneurial/Private Organizations

Organization	Country	CAS Fellow (Year)	BMGF Funding
AGCO Corporation - supports high- tech solutions for farmers	Multinational	Nyasha Mudukuti (2019)	
Agriculture is Sexy Network - supports and mentors millennials to embrace agri-food careers	Nigeria	Chibuike Emmanuel (2018)	
Briel's Farms - Manufacturing, Oil & Gas and offering Groundnut Oil, Soya Bean Oil	Nigeria	Opuah Abeikwen Opuah (2016)	
Integrated Community Organisation for Sustainable Empowerment and Education for Development (ICOSEED)	Kenya	Patrick Muriuki (2015) Zola Kazira Madaga (2018)	
Millenium Farms - focuses on plantation of yam tubers and corn in the areas of food sustainability, poverty alleviation and creation of jobs for the youth through agriculture in Ghana	Ghana	Evans Okomeng (2018)	
Mnandi Africa - helps rural women combat poverty and malnutrition with focuses on skills development, market access, and agro- technologies	Multinational	Ruramiso Mashumba (2019)	
National Smallholder Farmers' Association of Malawi	Malawi	Ellen Tamanda Chabvuta (2016)	
Peter's Coin - crowdfunding platform to aid smallholder farmers in raising finances	Nigeria	Chibuike Emmanuel (2018)	
Real Green Gold Ltd - social enterprise specializing in organic farming of tropical fruits	Rwanda	Pacifique Nshimiyimana (2019)	

Organization	Country	CAS Fellow (Year)	BMGF Funding
Rwanda Youth in Agribusiness Forum - a platform established to bring together different youth organizations, individual youth farmers and entrepreneurs in the Agriculture Sector	Rwanda	Pacifique Nshimiyimana (2019)	
Sabunyo Farm - a company of farmers specializing in farm production, seed business, livestock breeding and breed supply, farm input-output supplies, technology brokering, research, on farm experimentation, and influencing agricultural policy reform and implementations	Uganda	Clet Wandui Masiga (2015)	
Seed Trade Association of Malawi - attempts to strengthen the seed industry through contribution to relevant agricultural policies leading to economic development of Malawi in order to promote rural development	Malawi	Yohane Chimbalanga (2016)	
		Total Funding:	

E. Government-related

Organization	Country	CAS Fellow (Year)	BMGF Funding
Chamber of Agribusiness Ghana (CAG)	Ghana	Slyvia Tetteh (2019)	
Ghana National Association of Farmers and Fishermen	Ghana	John Awuku Dziwornu (2016)	
Kenya Agricultural Productivity and Agribusiness Programme (KAPAP)	Kenya	Kennedy Oyugi (2015)	
Mbale District Local Government	Uganda	Alfred Namaasa (2018)	
Ministry of Agriculture, Animal Industry and Fisheries, Uganda	Uganda	Consolata Acayo (2015)	
National Biosafety Authority	Ghana	John Awuku Dziwornu (2016)	
National Commission for Science and Technology (NCST)	Malawi	Catherine Alinane Chaweza (2016) Yohane Chimbalanga (2016)	

Organization	Country	CAS Fellow (Year)	BMGF Funding
National Science and Technology Council	Zambia	Lenganji Sikapizye (2019)	
Open Forum on Agricultural Biotechnology (OFAB) ⁶⁰	Multinational	Consolata Acayo (2015) Modesta Nnedinso Abugu (2015 Rufai Ahmed Braimah (2015) Philbert Nyinondi (2015) Opuah Abeikwen Opuah (2016) Ubani Nkechi Isaac (2016) Alemayehu Hailemicael Mezgebe (2016) John Awuku Dziwornu (2016) Aisha Umar Agaie (2016) Eliane Bayala (2019)	\$165,536,586
Tanzanian Ministry of Agriculture, Food Security and Cooperatives	Tanzania	Louis Juma Baraka (2018)	
		Total Funding:	\$165,536,586
		TOTAL GATES FOUNDATION FUNDING:	\$775,276,238

Source of Appendix II: authors' own, based on data from CAS website

⁶⁰ OFAB is a project of AATF and therefore we included all Gates Foundation funding to AATF here. https://www.aatf-africa.org/aatf_projects/ofab/

About Community Alliance for Global Justice/AGRA Watch

AGRA Watch is a campaign of Community Alliance for Global Justice, a Seattle-based organization founded in 2001 dedicated to strengthening the global food sovereignty movement through popular education and mobilization. AGRA Watch was founded in 2008 to challenge the dominant development ideology for Africa pushed by governments, corporations, and philanthropic bodies, especially the Bill and Melinda Gates Foundation (BMGF). Together, these actors are trying to transform the organization of African agriculture from a system of mostly smallholder production to a corporate-driven, industrial model much like the United States. Among these actors, the Bill & Melinda Gates Foundation (BMGF) and their subsidiary, the Alliance for a Green Revolution in Africa (AGRA), are playing a major role by funding new projects, aggressively lobbying for policy changes, and facilitating corporate development projects across the African continent.

As an ally member of Alliance for Food Sovereignty in Africa (AFSA), AGRA Watch works closely with partner organizations in African civil society to support sustainable, agroecological, socially responsible, and indigenous alternatives in Africa. Our Seattle location gives AGRA Watch a unique advantage for challenging the Gates Foundation. By facilitating the exchange of information concerning sustainable and healthy agricultural policies and practices across continents, we connect global movements to those in our local community and in the rest of the country through our membership in the US Food Sovereignty Alliance.

Where to find the report: Find a downloadable PDF online: www.cagj.org/agra-watch/media/

Printed copies are available upon request: please email us.

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