SECTION 3

ONE EMPIRE OVER AGRICULTURE


Ag One:
Recolonisation of Agriculture

GATES AG-ONE
AND THE RECOLONISATION OF AGRICULTURE

Navdanya

Bill Gates having become a billionaire through the deregulation of corporate globalisation is now leading the recolonization of Asian, Latin American and African Agriculture. Gates has taken the failed Green Revolution to Africa as AGRA (the Alliance for the Green Revolution in Africa) and now has launched the same initiative under the new name AgOne[1]. This time pushing the new technologically updated Green Revolution to shape the future of Agriculture.

What is AgOne and what is its aim?

In January 2020, a new initiative announced by the Gates foundation called "The Bill & Melinda Gates Agricultural Innovations LLC", or "Gates Ag One" in short was launched. Gates Ag One was formulated to be a subsidiary of the Gates Foundation and is to be led by Joe Cornelius, the previous director of the BMGF Global Growth & Opportunity Division. It is interesting to note that Cornelius came from being the former food, nutrition and technology development executive at Bayer Crop Science, following his previous position, in the 1990s, as Director for International Development at Monsanto.[2]

It is being hailed as a new non-profit to "bring scientific breakthroughs to smallholder farmers whose yields are threatened by the effects of climate change" and shrink the supposed 'productivity gaps' present in Africa, Asia, and Latin America.[3] It will work with the Gates Foundation's Agricultural Development Team and other partners across sectors to "accelerate the development of innovations" that are "needed to improve crop productivity and help smallholder farmers, the majority of whom are women, adapt to climate change".[4]

The goal of Gates Ag One is claimed to be "to empower smallholder farmers with the affordable, high-quality tools, technologies, and resources they need to lift themselves out of poverty." According to the creation document, "yields on farms in these regions are already far below what farmers elsewhere in the world achieve, and climate change will make their crops even less productive."[5]

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[1] See also: Shiva, V., Anilkumar, P., Ahluwalia, U., "Ag One: Recolonisation of Agriculture", Navdanya/RFSTE, 2020, http://navdanya.org/site/latest-news-at-navdanya/703-ag-one-recolonoisation-of-agriculture

[2] Gray, Bryce. "Gates Foundation Plans Crop Research Center in St. Louis." *Online Research Library: Questia | St Louis Post-Dispatch (MO)*, January 30, 2020. https://www.questia.com/newspaper/1P4-2348219385/gates-foundation-plans-crop-research-center-in-st

[3] "Overview: Bill & Melinda Gates Agricultural Innovations." Bill & Melinda Gates Foundation, January 2020. https://docs.gatesfoundation.org/Documents/GatesAgOne_OverviewandFAQ.pdf

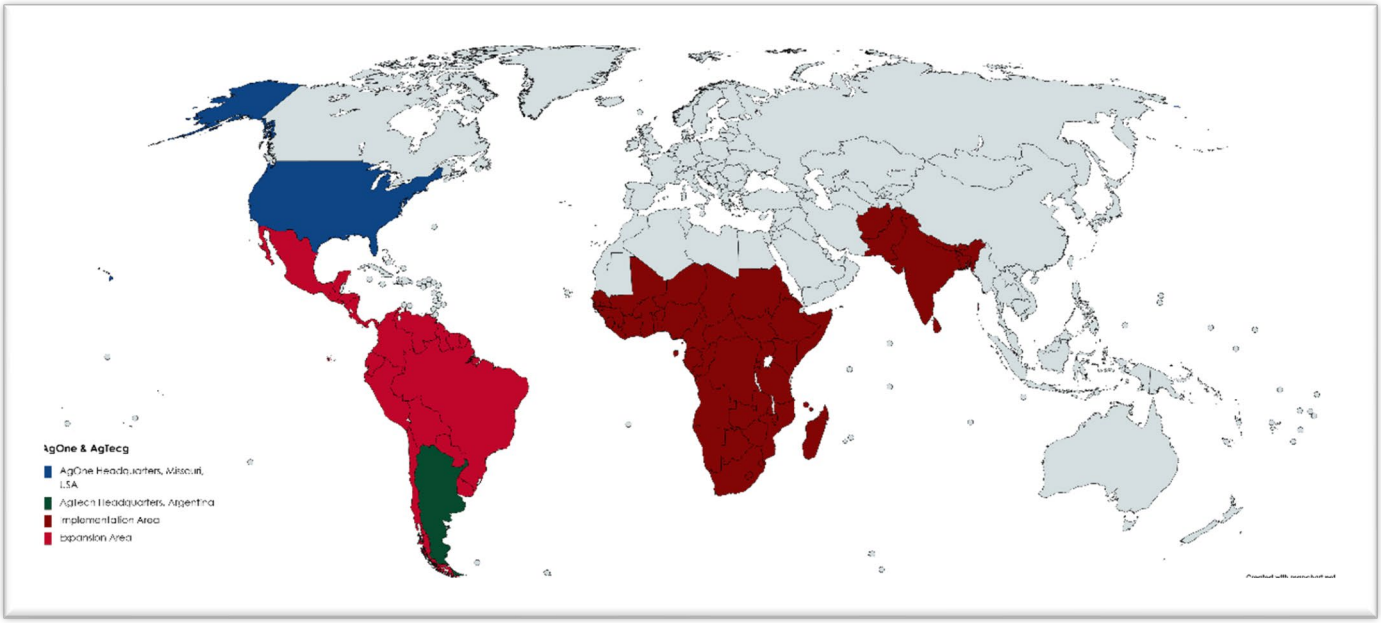
[4] Ibid.

[5] "Gates Foundation on Intention to Create Nonprofit Agricultural Research Institute." *Bill & Melinda Gates Foundation | Press Releases*, January 21, 2020. https://www.gatesfoundation.org/Media-

Rodger Voorhies, president of the Foundation's Global Growth & Opportunity division, has said that Gates Ag One plans to work with partners from the *public and private sector to commercialize* "resilient, yield-enhancing seeds and traits". He adds, "We needed to accelerate the access to the kinds of products and services that low income people and smallholder farmers need," due to the long time it takes for these new discoveries to move from invention, to development, to lab testing and then once commercially viable for the field, to move through regulation. [6] Voorhies explains, "We didn't think that research was flowing down to the crops that matter most to smallholder farmers in a timeframe that could reach them...But ultimately the Gates Foundation did not see another way to ensure that early-stage discoveries, such as water use efficiency for crops that will face extremes of droughts and floods, are made accessible and affordable to smallholder farmers as quickly as possible."[7] In short they are hoping to artificially accelerate the process of introducing 'new technologies' to farmers through increased investment and public and private partnerships while having total freedom in their business model as a separate entity to the Bill and Melinda Gates Foundation.

Where will it work?

In a document released by the Gates foundation itself, it is claimed that Ag One will work in "South Asia - with a population of about 1.8 billion - and Sub-Saharan Africa- home to around 1 billion people."[8]



Center/Press-Releases/2020/01/Gates-Foundation-Statement-on-Creation-of-Nonprofit-Agricultural-Research-Institute

[6] Cheney, Catherine. "Exclusive: Gates Foundation Launches New Agriculture-Focused Nonprofit." *Devex*. Last modified January 21, 2020. https://www.devex.com/news/sponsored/exclusive-gates-foundation-launches-new-agriculture-focused-nonprofit-96384

[7] Ibid.

[8] Ibid.

What is not mentioned in their creation statement is the implementation of the AgOne programme in Latin America, called 'AgTech', through a partnership with Inter-American Institute for Cooperation on Agriculture (IICA).[9] The programme's initiation point is planned to be in Argentina, to then subsequently be implemented throughout the rest of Latin America.

Ag One, Gates Global Commission on Adaptation and the takeover of the CGIAR system

Overlapping behind several of the initiatives launched by Bill and Melinda Gates, is a characteristic urgency that all new technologies and mitigation efforts must be pushed, adopted and quickly implemented in the name of stopping climate change. This rhetoric stands to mask a wide section of the Gates' initiatives, organizations, and funding schemes whose real purpose actually runs counter to any type of true climate change alleviation.

The same is true for AgOne, as the foundation is tied indirectly to another Gates initiative called the Gates Global Commission on Adaptation[10] focused exactly on only pushing technological solutions to climate change adaptation and mitigation, through such things as filling in the 'data gap' of the global south, green smart cities, and increased development (and return investment) opportunities through these efforts. AgOne was, therefore, launched as part of its 2019 year of Climate action.[11]

The Global Commission on Adaptation hosts as its co-chairs, along with Gates, some international organization heavyweights such as the previous 8th secretary general of the UN, Ban-Ki Moon who serves as the head of the organization's board, and Kristalina Georgieva, the current managing director at the International Monetary Fund (IMF).

Forming part of AgOne's strategy will be the doubling of funding to CGIAR, an organization Gates has had his eye on for quite some time. Hence, in September of 2019 at the UN Climate Summit, and as part of the Gates Global Commission on Adaptation's year of climate action, CGIAR announced the gift of more than $79 million dollars of an investment coalition headed by Bill Gates, and made up of the World Bank, the UK, the Netherlands, the European Commission, Switzerland, Sweden and Germany. [12] According to the CGIAR announcement, *"US $310 million [is to be given by] the Bill & Melinda Gates Foundation over the next three years to support CGIAR's shared agenda to tackle climate change and make food production in the developing world more productive, resilient and sustainable. The foundation is the second largest donor to CGIAR after the US Agency for International Development (USAID), with investments contributing to*

[9] "Microsoft y El IICA Definieron Hoja de Ruta Para La Transformación Digital Del Agro de Las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*. https://www.iica.int/en/node/16190
[10] "About." *Global Center on Adaptation*. https://gca.org/about
[11] "Global Coalition Promises More than $650 Million to Accelerate CGIAR Efforts to Help 300 Million Smallholder Farmers Adapt to Climate Change." *CGIAR*, September 23, 2019. https://www.cgiar.org/news-events/news/uncas-global-coalition-funds-cgiar/
[12] Ibid.

work in crop breeding, seed systems, gender equity, livestock, nutrition, and policy."[13] Therefore, aligning the vision of CGIAR with that of AgOne.

A move made even more significant as, the recently released ETC report states, a new System Reference Group (SRG) struck in 2018, has delivered its recommendations in July 2019 calling for the formal consolidation of the 15 Centers of the (CGIAR) into one. The meeting of the 15 Center Chairs was convened at Bioversity International (BI) headquarters outside Rome in December 2019 to discuss the "mega-merger". The consolidation would involve one international board which would be responsible for all 15 Centers.[14] The dangers seem imminent when one looks deeper and sees that the SRG is co-chaired by Tony Cavalieri, Senior Program Officer of the Bill & Melinda Gates Foundation, and Marco Ferroni, Chair of the System Management Board and recently retired as head of the Syngenta Foundation. The unification is being pushed by Gates and Syngenta Foundations, USAID, UK, Canada, Australia and Germany. Unification will mean an even stronger blurring of lines between the private and public sectors. Private agendas of making profits will be clothed as the public agenda. Now to be even further blurred through the launching of AgOne. This also provides unprecedented leverage in individual country policy and mass access to genetic seed resources. This hunger for influencing global food policy comes as no surprise as the Gates' foundation website itself states, "a key trigger of agricultural transformation is a conducive policy environment."[15]

When one reads the agenda of the newly launched AgOne, one can also not help but think of the rhetoric of 2008 launched Alliance for the Green Revolution in Africa or AGRA, which essentially served to revamp the ghost of the already dead and failed Green Revolution of the 1960s. Considering the multiple alliances to Agrochem companies, one can only assume AgOne is meant to pick up AGRA's baton with a new tech twist, and run to the rest of the global south.

Poison Cartel and Gates Foundation:

The fact that Ag One will be based in St. Louis, Missouri USA, home of Monsanto and other GMO and pesticide giants, is not a coincidence. AgOne claims to "empower smallholder farmers" by providing more accessible technology to help them face climate change. This sounds eerily like Bayer who also claims to "empower 100 million smallholder farmers around the world by providing more access to sustainable farming solutions – all by the year 2030." Through looking at examples of current and past co-investments, one can start to see what 'private-partnerships' will most likely emerge in AgOne's quest to "empower smallholder farmers to lift themselves out of poverty." In 2010, a US financial website published the Gates foundation's annual investment portfolio,

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[13] Ibid.
[14] "The Next Agribusiness Takeover: Multilateral Food Agencies." *ETC Group*. Last modified February 12, 2020. https://www.etcgroup.org/content/next-agribusiness-takeover-multilateral-food-agencies
[15] "Agricultural Development." *Bill & Melinda Gates Foundation*. https://www.gatesfoundation.org/What-We-Do/Global-Growth-and-Opportunity/Agricultural-Development

Poison Cartel.Toxic Capital.

The Vanguard Group, Inc.
Norges Bank Investment Management
Northern Cross LLC
Jupiter Asset Management Ltd.
Fidelity Management & Research Co.
UBS AG (Investment Management)
Artisan Partners LP
Credit Suisse AG
Capital Research & Management Co. (World Investors)
Syngenta AG

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BASF
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The Vanguard Group, Inc.
Norges Bank Investment Management
Northern Cross LLC
Fidelity Management & Research Co.
Capital Research & Management Co. (Global Investors)
Jupiter Asset Management Ltd.
UBS AG (Investment Management)
Artisan Partners LP
Credit Suisse AG
Capital Research & Management Co. (World Investors)
as of 31 Dec 2015

syngenta

BAYER

Capital Research & Management Co. (World Investors)
The Vanguard Group, Inc.
Lyxor International Asset Management SAS
Norges Bank Investment Management
State Street Global Advisors Ltd.
BlackRock Fund Advisors
Massachusetts Financial Services Co.
BlackRock Asset Management Deutschland AG
Amundi Asset Management SA (Investment Management)
Dodge & Cox

Capital Research & Management Co. (World Investors)
The Vanguard Group, Inc.
SSgA Funds Management, Inc.
BlackRock Fund Advisors
Trian Fund Management LP
T. Rowe Price Associates, Inc.
Fidelity Management & Research Co.
Highfields Capital Management LP
Northern Trust Investments, Inc.
DuPont Capital Management Corp.

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The Vanguard Group, Inc.
SSgA Funds Management, Inc.
BlackRock Fund Advisors
Capital Research & Management Co. (World Investors)
Third Point LLC
Capital Research & Management Co. (Global Investors)
Wellington Management Co. LLP
Northern Trust Investments, Inc.
Capital Research & Management Co. (International Investors)
Franklin Advisers, Inc.

Capital Research & Management Co. (Global Investors)
The Vanguard Group, Inc.
SSgA Funds Management, Inc.
BlackRock Fund Advisors
Massachusetts Financial Services Co.
Glenview Capital Management LLC
Fidelity Management & Research Co.
Sands Capital Management LLC
PRIMECAP Management Co.
Davis Selected Advisers LP

Monsanto

MONOPOLY

NAVDANYA

Graphic: Navdanya

which showed it had bought 500,000 Monsanto shares around $23m.[16] More recently, publications of Gates' Annual investment portfolio, or "strategic investment fund" which is stated to allow the foundation to advance its 'philanthropic goals' through investments in for-profit companies, showed a $7 million equity stake in AgBiome, a biotech start-up focused on developing synthetic biological products through CRISPR technology for the agricultural sector.[17] A start-up who also holds investments from agrochem companies Monsanto and Syngenta and who the Gates foundation gave a $20 million grant to develop pesticides for Africa. [18]

This shows just one of the numerous ventures where Bill and Melinda Gates Foundation and Monsanto have invested together with a false narrative of "helping the poor in South Africa". Pivot Bio, a biotech startup that focuses on making nitrogen fixing microbes, being another example. Pivot Bio also being another Gates Foundation funded startup who later received another $70 million dollars, and who holds investments from Monsanto Growth Ventures and the US's Defense Advanced Research Projects Agency or DARPA. [19]

More explicitly, with its launch of the Latin American AgOne, 'AgTech', IICA has announced partnerships for its implementation with Microsoft[20], Bayer[21], Corteva[22], and Syngenta[23], all along with the Bill and Melinda Gates Foundation.

By looking to the outcomes of AGRA we can start to see what pattern wishes to be repeated with all of these strategic alliances in the launching of AgOne. Through the Gates foundation's promotion of chemical and genetically modified inputs, they have worked to essentially open up previously isolated or hard to reach markets in Africa, South Asia and Latin America for the benefit of private corporations, as these patented 'high-yield' seeds are not owned by no one and investments are very clearly made for for-profit companies. The commercialization mentioned by Voorhies means private company profit.

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[16] Vidal, John. "Why Is the Gates Foundation Investing in GM Giant Monsanto?". *The Guardian*, September 29, 2010. http://www.theguardian.com/global-development/poverty-matters/2010/sep/29/gates-foundation-gm-monsanto

[17] Schwab, Tim. "Bill Gates's Charity Paradox." *The Nation*, March 17, 2020. https://www.thenation.com/article/society/bill-gates-foundation-philanthropy/
"Platform | AgBiome." https://www.agbiome.com/platform/
Burwood-Taylor, Louisa. "Bill & Melinda Gates Foundation Makes First Agtech Investment in AgBiome's $34.5m Series B." *AgFunderNews*, August 20, 2015. https://agfundernews.com/bill-melinda-gates-foundation-first-agtech-investment-agbiome-011.html

[18] Ibid.

[19] Vinluan, Frank. "Pivot Bio Gets $70M, Led by Bill Gates's Fund, to Replace Fertilizer - Page 2 of 2." *Xconomy*. Last modified October 2, 2018. https://xconomy.com/san-francisco/2018/10/02/pivot-bio-gets-70m-led-by-bill-gatess-fund-to-replace-fertilizer/

[20] "Microsoft e IICA Firmaron Un Acuerdo Para Potenciar El Uso de Tecnología En El Agro | Solo Campo." Last modified December 24, 2018. http://solocampo.com.ar/index/microsoft-e-iica-firmaron-un-acuerdo-para-potenciar-el-uso-de-tecnologia-en-el-agro/

[21] "El IICA y Bayer firman acuerdo para promover seguridad alimentaria en América." *Nuevos Papeles*, February 7, 2019. https://www.nuevospapeles.com/nota/17625-el-iica-y-bayer-firman-acuerdo-para-promover-seguridad-alimentaria-en-america

[22] "Acuerdo entre Corteva Agriscience y el IICA fortalecerá producción de alimentos de calidad en las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*, October 31, 2019. https://iica.int/es/prensa/noticias/acuerdo-entre-corteva-agriscience-y-el-iica-fortalecera-produccion-de-alimentos-de

[23] "Syngenta y el IICA se unen para impulsar la innovación en la agricultura de las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*, July 7, 2020. https://iica.int/es/prensa/noticias/syngenta-y-el-iica-se-unen-para-impulsar-la-innovacion-en-la-agricultura-de-las

Source: https://agra.org/ar-2019/#2019-highlights

To be specific, in 2008, the year AGRA was launched, South Africa was the only African country that had approved the use of GM seeds. Subsequently, GM seeds were expanded to the previously GM-free Egypt, Burkina Faso, and Sudan. While other countries such as Ghana, Kenya, Tanzania, Uganda, Malawi, Mali, Zimbabwe, and Nigeria began conducting research into GM crops. By 2017, some countries had even moved into implementing field trials.[24] This huge expansion of GM crop use, particularly maize, is a consequence of large-scale promotion directly aimed at increasing market share to the large agribusiness companies that own the patented seed. Those patented GM seeds also go along with their accoutrements of chemical inputs, all promoted through alliances with agrochemical companies through the guises of AGRA. In sum, roughly ten years after the revival of the Green Revolution through AGRA, industrial agriculture expanded in some form or another, from one country to eleven, showcasing a huge expansion in BigAg business. As explained by Tim Wise in his report on AGRA, in 10 years, productivity rates in these countries only increased due to these inputs being highly subsidized, and were nowhere near enough to alleviate poverty and hunger.[25] Meaning only big agrochemical companies directly benefited from Gates' push for 'agricultural development'.

This comes as no surprise, as in a video shot by the Gates Foundation to explain the necessity of development of agricultural innovation, Gates exposes the Green Revolution as being, "the most significant advancement in human

[24] Curtis, M. 2016. Gated Development: Is the Gates Foundation Always a Force for Good? Second Ed., Global Justice Now. June 2016. Pg. 31. https://www.globaljustice.org.uk/sites/default/files/files/resources/gjn_gates_report_june_2016_web_final_version_2.pdf

[25] Wise, Timothy A. "AGRA at Ten Years: Searching for Evidence of a Green Revolution in Africa," November 2017. https://afsafrica.org/wp-content/uploads/2019/10/agrawiseprelimfindings2017.pdf

history behind modern medicine, due to its ability to drastically increase yields."[26] With just this one statement, which shows his full scale support of industrial agriculture, we can almost guarantee this pattern will be repeated with the implementation of AgOne.

Unveiling the rhetoric of Ag One

Once one begins to look closely at the AgOne concept note, one can quickly start to pick apart how its rhetoric is completely disconnected from any true lived experience of the impacts of the first Green Revolution, as well as its unprecedented global ecological, social, economic and cultural impacts. Contrary to what Bill Gates might think, agroecological food systems are overall more productive, more resilient to climate change, and provide greater livelihood security.

Rhetoric 1: "*Yields on farms in regions like Sub-Saharan Africa and South Asia are already far below what farmers elsewhere in the world achieve and in the future the crop production will further worsen because of climate change*" and so we need Ag One to "*accelerate the development of innovations*" *that are "needed to improve crop productivity*".

Counter: Contrary to the myth that small farmers and their agroecological systems are unproductive, and we should leave the future of our food in the hands of the Poison Cartel, small farmers are providing 80% of global food using just 25% of the land that goes into agriculture.[27] There have also been countless studies that have proven that agroecological, organic agriculture, especially those based on biodiversity, are all around more resilient to climate change, more economically viable and lead to increases in crop productivity. [28] For example, biodiversity helps reduce diseases in agroecosystems, improving the resilience of the plant and inevitably leading to higher yields.

The diversity of knowledge embedded in agroecological and traditional farming systems also provides a greater safety net for confronting extreme weather patterns and ecological shifts. As stated by Altieri et. Al in the study over the climate resiliencies of agroecological systems, "Observations of agricultural

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[26] *Slideshow: Bill Gates on Agricultural Innovations - YouTube*, 2009. https://www.youtube.com/watch?v=xXcB8k7Ysk4

[27] "Hungry for Land: Small Farmers Feed the World with Less than a Quarter of All Farmland." *Grain*, May 28, 2014. https://www.grain.org/article/entries/4929-hungry-for-land-small-farmers-feed-the-world-with-less-than-a-quarter-of-all-farmland

[28] 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

Shefali , Sharma. "Agroecology: Key to Agricultural Resilience and Ecosystem Recovery." *Institute for Agriculture & Trade Policy (IATP)*, June 16, 2019. https://www.iatp.org/agroecology-key-agricultural-resilience-and-ecosystem-recovery

De Schutter Olivier, Report of the Special Rapporteur for the Right to Food, A/HRC/16/49, United Nations - Human Rights Council, 2010 https://www2.ohchr.org/english/issues/food/docs/a-hrc-16-49.pdf

Mcintyre, Beverly & Herren, Hans & Wakhungu, Judi & Watson, Robert. (2009). Agriculture at a Crossroads: The Global Report. https://www.researchgate.net/publication/258099731_Agriculture_at_a_Crossroads_The_Global_Report

performance after extreme climatic events (hurricanes and droughts) in the last two decades have revealed that resiliency to climate disasters is closely linked to farms with increased levels of biodiversity."[29]

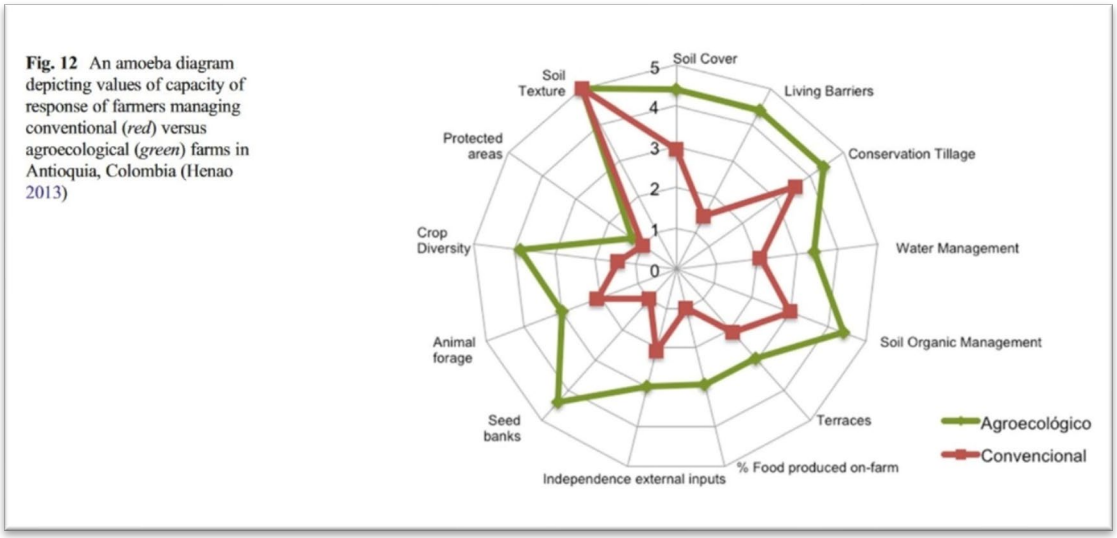
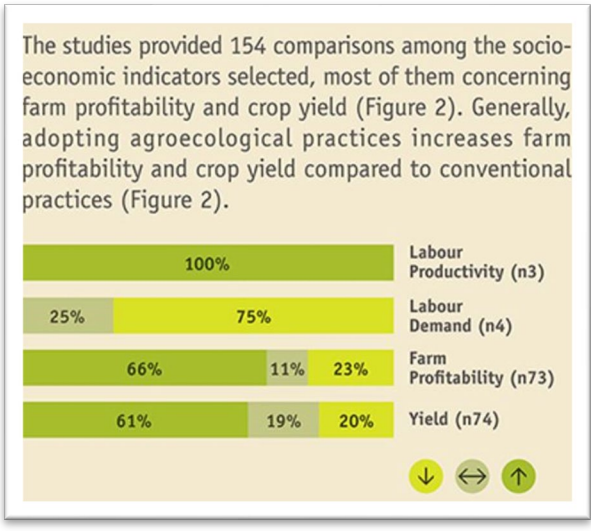


Fig. 12 An amoeba diagram depicting values of capacity of response of farmers managing conventional (*red*) versus agroecological (*green*) farms in Antioquia, Colombia (Henao 2013)

Source: https://link.springer.com/article/10.1007/s13593-015-0285-2

Rhetoric 2**:** Ag One will "*empower smallholder farmers with the affordable, high-quality tools, technologies, and resources they need to lift themselves out of poverty.*"



Source: https://www.researchgate.net/publication/283721240_Social_and_economic_performance_of_Agroecology

Counter**:** Reliance on internal inputs and recycling of resources leads to less cash strain for costly chemical inputs. Coupled with increased productivity, this means farmers are better able to meet their monetary needs and overall livelihoods. This fact was corroborated in a study presented at the 2nd International Conference on Global Food Security, through looking at global comparative data. The study found that adopting agroecological farming practices, generally led to increased crop yield and profitability in comparison to conventional practices. [30]

[29] Altieri M.A., Nicholls C., Henao A., Lana M., Agroecology and the design of climate change-resilient farming systems, 869 – 890, 35 (3), SN 1773-0155, Springer, Agronomy for Sustainable Development, 2015, https://link.springer.com/article/10.1007/s13593-015-0285-2

[30] D'Annolfo, Raffaele & Gemmill-Herren, Barbara & Graeub, Benjamin & Garibaldi, Lucas. (2015). Social and economic performance of Agroecology. https://www.researchgate.net/publication/283721240_Social_and_economic_performance_of_Agr

So, this begs the question, does being lifted out of poverty mean being folded into the commodity market? Considering Gates' longstanding alliance with giant industrial agriculture companies, this is most likely the objective. While farmers have bred hundreds of thousands of varieties, of thousands of species, the Green Revolution has reduced the agriculture and food base to a handful of globally traded commodities, with only 30 plants supplying 95% of global food demand.[31] Genetic Engineering has further narrowed the commercially planted crops to four - Corn, Soya, Cotton, Canola and 2 traits - Bt and HT (herbicide tolerant). This reduction of marketable crops also creates a flooding of commodity crops which keep prices low, making it all the more difficult for small-scale nonorganic farmers to make a living.

Regardless, such a simplistic view of simply solving poverty with technological innovation reduces the multidimensionality of why certain populations remain poor.

Through this and similar rhetorics, Gates pushes the philanthropist ethic where the rich give to the poor, painting the rich as providing favors to the poor they exploited to gain their wealth, in the end making the poor evermore dependent on the rich. Coupled with his development agenda, a chimera of charity development' emerges which reinforces the power structures of inequality in the areas where they work, reiterating the trope of white saviorism.

For example, Gates chief scientist at Microsoft Azure Global, Ranveer Chandra who is in charge of developing sensors for data gathering on farms through the FarmBeats project, has himself, as well as Gates, readily admit they have no expertise in agronomy, biology, farming or related fields, but still believe that through computer and data science, they can solve complex, multidimensional ecological and social problems, such as poverty.[32] Reiterating the trope of the technical expert who comes to bestow the poor with their knowledge, never leading to empowerment but only to dependence. In the end this reductionist way of implementing top-down technologies, works to deepen global poverty through creating further dependence on centralized high-cost inputs.

Rhetoric 3: "*Smallholder farmers are involved in unsustainable practices like grazing into forests which affects fragile ecosystems and will cause further damage to the environment and exacerbate the effects of climate change.***"**

Counter: Commodity based, fossil fuel intensive, monocultural industrial agriculture is, by far, more responsible for the effects of climate change and ecosystem destruction.[33] Chemical pesticides are directly responsible for the mass killing of

oecology

[31] FAO 2010. The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture. Rome. http://www.fao.org/3/i1500e/i1500e.pdf

[32] *How Data-Driven Farming Could Transform Agriculture | Ranveer Chandra | TEDxUniversityofRochester - YouTube*. TEDx TALKS, 2018. https://youtu.be/dpVylFjT-Cw

[33] IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany. https://ipbes.net/global-assessment

birds and insects.[34] Fossil fuels are used in almost every step of the industrial food system from, in the field through nitrogen fertilizers, diesel fuel for the myriad of industrial agricultural equipment, to transportation of commodities in the international supply chain, their storage, and eventually their disposal.[35] Nitrogen fertilizers also pollute water sources, dry out land and destroy soil.[36] Leading to, overall, more water being necessary in industrial agriculture leading to furthering the global water strain.[37]

The true culprits of large-scale deforestation has been the industrial agriculture sector, who' search for the perpetual amplification of the agricultural frontier is responsible for 70-90% of global deforestation.[38] The land cleared is then used for the production of chemically intensive monocultures of commodity crops like maize, soy, sugarcane, cotton, palm oil and so on. These crops are then used in industrial food making processes, biofuels, or animal feed - creating a vicious cycle of GHG emissions with the other areas of the industrialized food system.[39] Gates seems to completely disregard this, as in 2016, he invested $14 million into biofuel conversion company Renmatix. A company who produces a technology to aid in the conversion of biomass to cellulose sugars for biofuels.[40] Biofuels have been responsible for the clearance of rainforests all around the world, especially in the Amazon in Brazil, not small farmers.[41]

IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press. https://www.ipcc.ch/report/srccl/

FAO. 2019. The State of the World's Biodiversity for Food and Agriculture, J. Bélanger & D. Pilling (eds.). FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome. 572 pp. (http://www.fao.org/3/CA3129EN/CA3129EN.pdf) Licence: CC BY-NC-SA 3.0 IGO.

[34] Sánchez-Bayo, F., & Wyckhuys, K. A. G. (2019). Worldwide decline of the entomofauna: A review of its drivers. *Biological Conservation*, *232*, 8–27. https://doi.org/10.1016/j.biocon.2019.01.020

Goulson, D., Insect decline and why they matter, Wildlife Trusts, 2019, https://www.somersetwildlife.org/sites/default/files/2019-11/FULL%20AFI%20REPORT%20WEB1_1.pdf

Brain RA, Anderson JC. The agro-enabled urban revolution, pesticides, politics, and popular culture: a case study of land use, birds, and insecticides in the USA. *Environ Sci Pollut Res Int*. 2019;26(21):21717-21735. doi:10.1007/s11356-019-05305-9, https://pubmed.ncbi.nlm.nih.gov/31129901/

Gabbatiss, J., 'Shocking' decline in birds across Europe due to pesticide use, say scientists, The Independent, 21 march 2018, https://www.independent.co.uk/environment/europe-bird-population-countryside-reduced-pesticides-france-wildlife-cnrs-a8267246.html

[35] La Vía Campesina and GRAIN. "Food Sovereignty: Five Steps to Cool the Planet and Feed Its People." *Grain*, December 15, 2014. https://www.grain.org/article/entries/5102-food-sovereignty-five-steps-to-cool-the-planet-and-feed-its-people

[36] Mateo-Sagasta, J., Marjani Zadeh, S., & Turral, H. (2018). *More people, more food… worse water? - Water Pollution from Agriculture: a global review*. FAO. http://www.fao.org/documents/card/en/c/CA0146EN

Rodríguez-Eugenio, N., McLaughlin, M. and Pennock, D. 2018. Soil Pollution: a hidden reality. Rome, FAO. 142 pp. http://www.fao.org/3/I9183EN/i9183en.pdf

[37] "Organic vs Conventional." *Rodale Institute*. https://rodaleinstitute.org/why-organic/organic-basics/organic-vs-conventional/

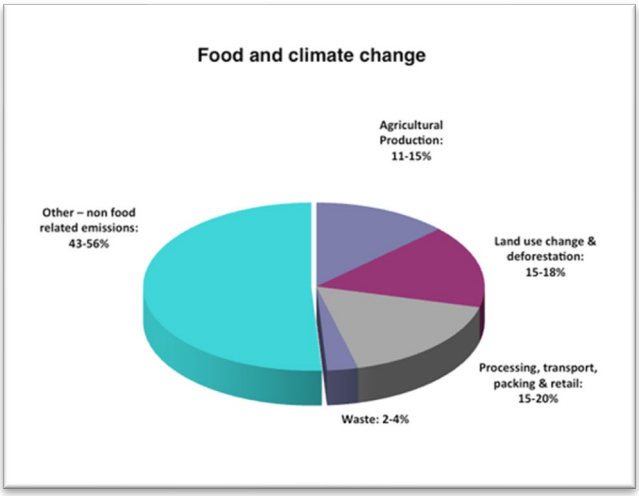
[38] "Food and Climate Change: The Forgotten Link." *Grain*, September 28, 2011. https://www.grain.org/e/4357

[39] Ibid.

[40] Renmatix. "Renmatix Secures $14M Investment from Bill Gates and Total, the Global Energy Major, In Concert with Signing of 1 Million Ton Cellulosic Sugar License," September 15, 2016. https://renmatix.com/uploads/renmatix-bulletin-gates-press-release.pdf

[41] "Sugar Cane, Palm Oil, and Biofuels in the Amazon." *Yale School of the Environment | Global Forest Atlas*, n.d. https://globalforestatlas.yale.edu/amazon/land-use-and-agriculture/biofuels

By framing the narrative in a way that pins the responsibility of climate change on "smallholder farmers who are involved in unsustainable practices" the Gates foundation evades responsibility for the destruction it has been instrumental in causing. We cannot address climate change, and its very real consequences, without recognising the central role of the industrial and globalised food system, actively supported by the Gates Foundation. The globalised food system contributes from 44% to 57% of all greenhouse gas emissions through deforestation, industrial inputs (such as chemical fertilizers, petrol, fertilizer, irrigation and so on), animals in concentrated animal feeding operations (CAFOs), plastics and aluminium packaging, long distance transport and food waste.[42]



Source: https://www.grain.org/e/4357

We cannot solve climate change without small-scale, ecological agriculture, based on biodiversity through living seeds, living soils, living and local food systems. A proven way to decrease CO2 emissions is exactly through local food economies which eliminate fossil fuel intensive methods, and global supply chains, in favor of resource recycling, low intensity inputs to heal the soil, and biodiversity. Slow, whole, organic diets increase nutrition and lessen climate impact in a multidimensional fashion. [43]

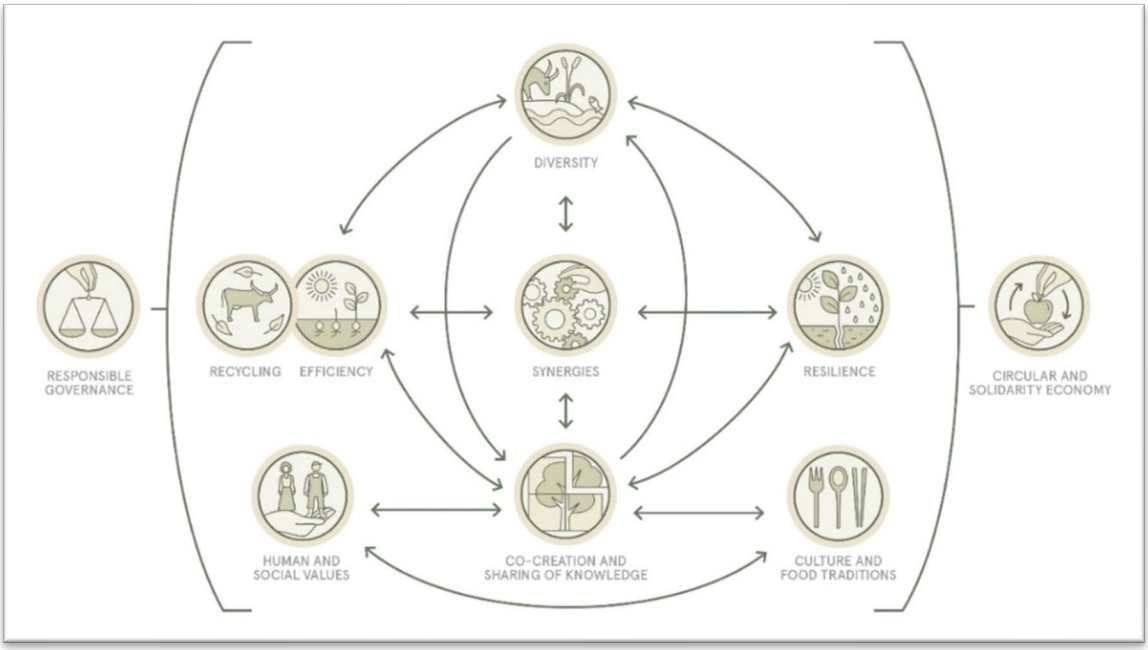
Rhetoric 4: *"we believe that everyone has the right to live a healthy, productive life. But many of the world's poorest people—those who make their living through agriculture—will not have that opportunity unless they can access the innovations needed to adapt to the challenges caused by climate change" and we will "help smallholder farmers, the majority of whom are women, adapt to climate change".*

Counter: They make it sound like farmers cannot live a healthy and productive life without technology. They also make it sound like the only way to face climate change is with the help of their "innovations" when they will profit massively from them. Through this elevation of technological means to human ends, the corporate agenda is made the human agenda, imposition is defined as "inclusion" and "Democratization". Corporations endow their tools with inevitability and rob societies of thinking of options and alternatives. However, there is no inevitability in the tools humanity uses. Chemicals and the Green Revolution were not inevitable. They were imposed through conditionalities[44]. The failures of the Green Revolution and its 'innovations' do not provide a solid base

[42] Ibid.
[43] Ibid.
[44] Ibid.

for the argument of new technological innovations[45]. Technology itself also greatly impacts climate change through its whole chain of its material extraction, production, distribution and waste processing[46]. A new technological fundamentalism makes corporate tools a measure and indicator of human progress, immune to social and democratic assessments.

With the ecological emergency, climate emergency and the food emergency, the technologies that are needed are participatory and evolutionary, breeding for climate resilience, for increasing nutrition, and making agriculture poison free.



"Interaction of the 10 Elements of Agroecology". Source: FAO, http://www.fao.org/agroecology/knowledge/10-elements/en/

The urgency implied around the need for technological solutions to climate change provides the mask through which they can push the universal adoption of a new series of data-reliant technologies. Since climate change is 'new' there must also be a 'new, innovative' solution to solve it, leading to a new wave of epistemic colonization. "One Agriculture One Science"[47] essentially means "one research and one knowledge". In a world of diversity, claiming to be the "One" is a design for Imperialism. It is a design for epistemic colonisation. It is a denial of the richness of agroecological knowledges and practices that are resurging around the world.

[45] Shiva, V. (1991). *The Violence of the Green Revolution: Third World Agriculture, Ecology, and Politics*. Other India Press. https://books.google.it/books?id=jPNRPgAACAAJ.
[46] ICTworks. "Digital Technologies Are Part of the Climate Change Problem." *ICTworks*, February 20, 2020. https://www.ictworks.org/digital-technologies-climate-change-problem/
[47] Akbar, Syed. "One Agriculture-One Science: Partnership to Revitalize Global Farm Education | India News - Times of India." *The Times of India*, July 22, 2014. https://timesofindia.indiatimes.com/india/One-agriculture-one-science-Partnership-to-revitalize-global-farm-education/articleshow/38867896.cms

CONSTRUCTIONS AND TECHNOLOGICAL MYTHS TO COLONISE OUR FOOD AND FARMING SYSTEMS

- Corporations turn a blind eye to farmers' innovations and the knowledge and tools farmers have evolved over millennia to breed seeds, renew soil fertility, manage pests and weeds ecologically and produce good food.
- They elevate corporate tools to a new religion and new civilizing mission which has to be imposed to civilize the ecological, independent, knowledge sovereign farmers who are seen as the new barbarians. A new technological fundamentalism makes corporate tools a measure and indicator of human progress, immune to social and democratic assessments. Farmers have a fundamental democratic right to compare their agroecological tools with what the Poison Cartel has to offer and with full knowledge and information make a democratic choice. Through this elevation of technological means to human ends, the corporate agenda is made the human agenda, imposition is defined as "inclusion" and "democratization".
- Corporations endow their tools with inevitability and rob societies of thinking of options and alternatives. However, there is no inevitability in the tools humanity uses. Chemicals and the Green Revolution were not inevitable. They were imposed through conditionalities. GMOs are not inevitable and are failing as tools of pest control and weed control, leading instead to emergence of superpests and superweeds. There is multiple and diverse intelligence in nature and society. Artificial Intelligence or machine learning is not inevitable. It is being imposed through forced digitalization, making us forget the intelligence in nature and her diverse living beings, the intelligence in the soil food web, the ecological intelligence of farmers and women, the intelligence of the microbes in our gut and the enteric nervous system: our second brain.

When society develops and chooses technologies democratically the questions we ask are:

What does the technology do?

What is the tool for? Who controls the tools?

Do we have technological alternatives to address the same problem?

Do we need them for improving human wellbeing and the wellbeing of all species?

What are the ecological impacts of the tools on life on earth and human health?

What are the social impacts of the tools?

The Gates Agenda: Subverting our International Treaties and Biodiversity

Undermining the Protection of Biodiversity

Convention on Biological Diversity

In 1992, the international community adopted this convention at Rio De Janeiro at the Earth Summit.

The objectives of the convention were:

- Conserving biological diversity
- Sustainable use of resources
- Fair and equitable sharing of benefits that arise out of commercial use

Nagoya Protocol

Under CBD, there are multiple protocols created. One of them is the Nagoya protocol on access and benefit sharing, 2010.

The objective was to establish a legally binding framework for the implementation of the concept of access and benefit sharing as birthed in the convention on biological diversity. The protocol creates duties and obligations on the parties engaging with indigenous communities for the use of genetic resources and knowledge.

International Treaty on Plant Genetic Resources Treaty for Food and Agriculture (ITPGRFA)

Also known as the International Seed Treaty, the objective is: conservation and sustainable use of all plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.

Digital Mapping: Subverting these Regulations on Access to Biodiversity

These international frameworks made to protect our biodiversity are being completely subverted through digital mapping of the genome. Biopiracy is being carried out through the convergence of information technology and biotechnology by taking patents through "mapping" genomes and genome sequences. While living seed needs to evolve "in situ", patents on genomes can be taken through access to seed "ex situ". This undermines farmers' rights as you don't need the permission from the farmers anymore once the genome has been digitally mapped.

New GMOs: CRISPR and Gene Editing

Gates has been pushing for it several years now, with a huge investment of $ 120 Million dollars (along with his capitalist friends). Gates used to fund others to get this done, but impatient with lack of progress, he now wants to do it himself.

Source : https://www.cd-genomics.com/blog/120-million-investment-for-crispr-technology-from-bill-gates-and-other-13-investors /

Gene editing is a failed technology.

Gene editing has been proven to be a failure because of how inexact and unpredictable it is. It was found that CRISPR introduced more than 1,500 single-nucleotide unintended mutations, more than 100 larger deletions and insertions into the genome of mice.

Source: Shiva, V and Shiva, K. 2018. The Future of our daily bread: Regeneration or Collapse. Navdanya International / Research foundation for science, technology and ecology

Ag One: Sowing the Seeds of Surveillance

Although we have seen how the new AgOne initiative will line up with previous iterations of Gates' attempt to expand the classic, failed methods of the Green Revolution, AgOne also sees the unveiling of a new generation of external input technologies. The focus of AgOne is to transition small farmers to use 'new digital tools and technologies'. Principally referenced are the 'yield-enhancing' or drought tolerant seeds which include old and new types of GMOs, as well as CRISPR technologies adopted on seeds and living plants.

Gates has been pushing for CRISPR and gene editing several years now. In 2016 an investment firm called bngo headed by former science advisor to Gates, Boris Nikolic, and of whom Gates is a backer, provided a huge seed investment of $120 million dollars to fund Cambridge's Editas Medicine- one of the first to research and develop CRISPR technology. [48] Since then he has publicly expressed his full fledged support of CRISPR for its use in agriculture and medicine.

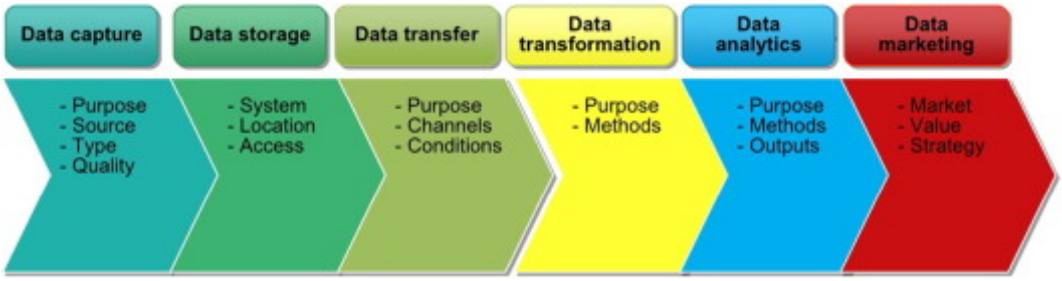
The other most important aspect is the use of digital agricultural extension through sensors to gather data points on everything from mapping soil moisture, weather patterns, soil nutrient levels, individual plant health and so on. The end purpose for the use of such sensors is to fill the 'data-gap' of the global south and provide data as a resource in order to build maps and predictive models of agricultural systems. Big data, data analytics and machine learning are, hence, being incorporated into agriculture through electronic tracing systems, electronic weather data, smartphone mapping and other remote sensing applications, all in order for AI and machine learning to be able to model such things as, when to plant the next season of crops, when to water, when to fertilize or predicting pest outbreaks.

[48] "$120 Million-Investment for CRISPR Technology From Bill Gates and Other 13 Investors." *CD Genomics*, October 16, 2018. https://www.cd-genomics.com/blog/120-million-investment-for-crispr-technology-from-bill-gates-and-other-13-investors/

This new type of data-reliant agriculture is oriented toward the implementation of precision agriculture, which is essentially a "data-generating agriculture" as it is based on observing and measuring crops, environment variables using sensors and satellites, to supposedly lower the use of chemical inputs. But in the end precision agriculture is a double edge sword, on the one hand it is just a way to placate critiques of the high costs of using chemical inputs, while on the other providing the means to reduce farmers to possible data sets to generate their artificial models. This in turn reduces the world's diversity to only an environment to improve predictive models through the complete disregard for (even the concept of) living systems.

Data mining from Farmers

Such experiments with data mapping are already underway. For example, in India, Digital Green, an initiative of the Gates Foundation is described as "a global development organization that empowers smallholder farmers to lift themselves out of poverty by harnessing the collective power of technology and grassroots-level partnerships."[49] It is an NGO that focuses on "training farmers to make and show short videos where they record their problems and share solutions". It was first conceived as a project in Microsoft Research India's Technology for Emerging Markets. It has received a funding of $1.3 million dollars from the Walmart foundation. South Asia Food and Nutrition Security Initiative (SAFANSI), a project of the NGO is funded by the World Bank. It received Rs 3 crore or $400,600 dollars from Global Impact Award from Google in 2013. The Bill and Melinda Gates Foundation has funded more than $10 million into this initiative.



Source: https://www.sciencedirect.com/science/article/pii/S0308521X16303754

This "data" from the farms and farmers is being collected without their knowledge or prior consent. Problematically, this "data" is also closely connected to farmers' personal information like the location of the farms, their yields and other sensitive information. Farmers also have little say as to what even happens to the data being collected. Bringing in questions of data sovereignty as the data being collected is more than likely to be developed into products that are then sold back to farmers as essential products for successful digital farming. In turn, the very institutions that are pushing for this new data-ag and its regulation are indirectly or directly in the hands of Gates Foundation. The most blatant example being the World Economic Forum's World Food Systems Summit (WFSS), to be hosted in 2021,

[49] "About Us." *Digital Green*. https://www.digitalgreen.org/about-us/

which is to be headed by former Rwandan Minister of Agriculture and president of Gates-funded AGRA (Alliance for a Green Revolution in Africa). In the concept paper of the summit there was no mention of agroecology, indigenous peoples or civil society, while it does specifically mention precision agriculture and genetic engineering as important for addressing future food security, while also expressing vocal support for the fourth industrial revolution around data.

For the countries where AgOne is looking to operate there is very little legislation, regulation or concrete trade agreements around digital data transfers, leaving countries in the global south with little capacity to handle this new influx of 'data resources' leaving them even more vulnerable to further predation by large corporations. Gates' digital agenda with AgOne will also serve to exacerbate this already stark power inequality through a centralization of all farming data out of the hands of farmers. This centralization also then leaves the door open for further biopiracy, centrally managing data that can only be accessed through paywalls, surveillance and further policing by big corporations of their product use and so on.

The pivotal example of these consequences being the biopiracy being carried out through the convergence of information technology and biotechnology by taking patents through "mapping" genomes and genome sequences[50]. While living seed needs to evolve "in situ", patents on genomes can be taken through access to seed "ex situ". This undermines farmers' rights as you don't need the permission from the farmers anymore once the genome has been digitally mapped.[51]

Making time an enemy: A Push for Deregulation

All of this is only possible through an active agenda of deregulation. Using the rhetoric of climate change as the cause for extreme urgency, according to Rodger Voorhies, president of Global Growth & Opportunity division, "Research and development takes years to get from the lab to the field, and while the Agricultural Development team funds the development of new tools and technologies designed to meet the needs of smallholder farmers, there were delays in translating these discoveries to affordable products". He added, "we didn't think that research was flowing down to the crops that matter most to smallholder farmers in a timeframe that could reach them."[52] But the only way this rush is possible for AgOne is through the agenda of Deregulation of Biosafety. As the initiative announcement states, its objective is to "get the products from the labs into the fields, faster and more massive than before". The objective of AgOne seems to be to fund these new innovative scientific discoveries with hopes of getting them through as quickly as possible to the point of commercialisation with as little testing, assessment and regulation as possible. One such example is of

[50] Lucchi, N. (2013). Understanding genetic information as a commons: From bioprospecting to personalized medicine. *International Journal of the Commons*, *7*(2), 313–338. DOI: http://doi.org/10.18352/ijc.399

[51] Masucci M., Un accordo per tutelare la biodiversità agricola, Terra Nuova, 16 February 2020, https://www.terranuova.it/Il-Mensile/Un-accordo-per-tutelare-la-biodiversita-agricola/

[52] Cheney, Catherine. "Exclusive: Gates Foundation Launches New Agriculture-Focused Nonprofit." *Devex*, January 21, 2020. https://www.devex.com/news/sponsored/exclusive-gates-foundation-launches-new-agriculture-focused-nonprofit-96384

CRISPR and gene editing where they tried to bypass regulation all together by claiming that gene editing is a non-GMO technology and is different from transgenic.

Building on Thousands of Years of Evolution of Thousands of Diverse Agroecological Knowledges and Cultures

There is an illusion that running faster on the chemical and poison cartel treadmill, now equipped with Artificial Intelligence and Robots will be more effective in producing more food and feeding the hungry. On the contrary, the tools and technologies of the poison cartel have brought the planet and the lives of farmers to the brink with climate havoc, species extinction, water crisis, farmer incomes collapsing to zero and food related diseases killing larger numbers of people.

In the end it appears that Gates' new AgOne initiative is the same wolf in different clothing, where he is attempting to push faster and harder for the whole world to adopt his version of the already failed Green Revolution with a new tech twist. A worldview which is completely disconnected from the realities of small farmers and their need for food system sovereignty.

As shown, the future of agriculture is based on biodiversity, seed sovereignty and agroecology, not on "Ag tech" or "Ag One". We need to rise up and look past the corporate narrative and look towards time tested indigenous knowledge and Agroecology to shape the future of Agriculture based on Biodiversity and Cultural Diversity. We need a rejuvenation of small farms, the real farms with real people who care for the land, who care for life, who care for the future and who produce diverse, healthy, fresh, ecological and real food for all.

THE CASE STUDY OF THE ICRISAT DIGITAL FARMING TOOLS

One such example of digitalization of agriculture comes through a collaboration between ICRISAT and Microsoft in India. Used as a case study by Feed the Future and USAID, ICRISAT is looking to develop four tech initiatives:

Figure 1 Summary of ICRISAT Digital Agriculture Interventions

DIGITAL AGRICULTURE INVESTMENT	PURPOSE OF THE TOOL	VALUE CHAIN STAGE
Sowing App and Intelligent Agricultural Systems Advisory Tool (ISAT)	To deliver targeted and timely SMS messages to farmers about sowing and other farm management practices	On-farm production
iHub	An incubator program and platform to catalyze technology innovations that can change the lives of farmers	Cross-cutting
Plantix	To provide extension officers with automated and targeted responses about diseases and pests through a mobile app	On-farm production
LeasyScan	To rapidly measure leaf surface area characteristics and water stress and accelerate the identification of promising new varieties	Planning
HarvestMaster	To record highly accurate measurements of grain weight and moisture characteristics for development of new varieties	Planning

Source: Manfre, Cristina, and Wesley Laytham. "Digitzing the Science of Discovery and the Science of Delivery: A Case Study of ICRISAT." India: USAID, 2018.

https://www.usaid.gov/sites/default/files/documents/15396/ICRISAT_Case_Study.pdf

The ICRISAT case study on Digital Agriculture shows what Gates Ag One has been preparing for. But one flawed assumption made by such initiatives and in particular Gates, is the continued use of 'yield', a failed measure which hides more than it reveals.

Navdanya's research has shown that industrial agriculture is inefficient, unproductive, creates dependency on corporations for eternal inputs, and dependency on global supply chains which impose uniformity on farms. We have shown that "yield" is an unscientific measure which does not reflect true biological productivity. It is a manipulated measure which promotes monocultures, and commodification.[1]

To highlight one , the Sowing App and the Intelligent Agricultural Systems Advisory Tool (ISAT) use predictive analytics, Cortana artificial intelligence, and machine learning from multiple weather, soil and crop data points to predict sowing times for farmers and provide them with a series of possible decisions. These programs are reliant on mining farmers data, while then portraying farmers as lacking in intelligence or skill. Farmers of forty centuries did not need an SMS through Microsoft software to know how to sow and farm. Not only is this denial of farmers knowledge and intelligence, it is creating a new dependency on an external input –data. The objective is clearly to undermine food sovereignty and food self-reliance and lock farmers into digital dependency. The ICISAT case study is a good example of how Gates is attempting to centralize the knowledge wealth and value created by farmers through turning all aspects of an agricultural environment into a data point. Especially since all the business generated by this digitalization partnership is diverted to Microsoft.

[1] Shiva, V and Shiva, K. 2018. The Future of our daily bread: Regeneration or Collapse. Navdanya International / Research foundation for science, technology and ecology, https://navdanyainternational.org/publications/the-future-of-our-daily-bread-regeneration-or-collapse/

GATES AG ONE IN ARGENTINA [1]

Fernando Cabaleiro

Bill Gates has landed in the Argentine agri-food system. He has done so at the hands of the Inter-American Institute for Cooperation on Agriculture (IICA), an international organization supported by the United States of America. A partnership which has clearly blurred the line between the public and the private sectors, since it is truly a covert entity of agribusiness, through which the Bill & Melinda Gates Philanthrocapitalist Foundation has been operating, since 2011, by making contributions and donations.

In 2018, IICA and Bill Gates' Microsoft built a strategic alliance called the "Alliance for Digital Education in the Americas" [2] with the objective of implementing a complete digitalization of agriculture, through a broad technological platform developed by Gates' computer company using the Internet of Things (IoT), Big Data and Artificial Intelligence (AI) tools; as well as the application of innovation, information technology and communication in development projects, among others.

Previously, IICA and Microsoft had tested the development of prototypes using the Internet of Things and Artificial Intelligence to combat diseases that occur in coffee cultivation, as well as to create a platform to strengthen people's capacities in terms of agricultural issues.

In addition to the celebrated strategic alliance with Bill Gates, he was joined by the Global Hitss corporation, a subsidiary of American Móvil (owned by billionaire Carlos Slim), to strengthen software applications (apps), and the agro-biotechnology companies Bayer Monsanto, Corteva (Dow, Dupont and Pioneer) and Syngenta ChemChina. [3]

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[1] *Extracted from:* Cabaleiro, Fernando. "El socio menos pensado: Bill Gates desembarca en el sistema agroalimentario argentino." Naturaleza de Derechos | Biodiversidad en América Latina, July 3, 2020. http://www.biodiversidadla.org/Documentos/El-socio-menos-pensado-Bill-Gates-desembarca-en-el-sistema-agroalimentario-argentino

[2] "Microsoft e IICA Firmaron Un Acuerdo Para Potenciar El Uso de Tecnología En El Agro | Solo Campo." Last modified December 24, 2018. http://solocampo.com.ar/index/microsoft-e-iica-firmaron-un-acuerdo-para-potenciar-el-uso-de-tecnologia-en-el-agro/

[3] "Alianzas Estratégicas ." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*. https://www.iica.int/es/strategic-alliances

"El IICA y Bayer firman acuerdo para promover seguridad alimentaria en América." *Nuevos Papeles*, February 7, 2019. https://www.nuevospapeles.com/nota/17625-el-iica-y-bayer-firman-acuerdo-para-promover-seguridad-alimentaria-en-america

"Acuerdo entre Corteva Agriscience y el IICA fortalecerá producción de alimentos de calidad en las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*, October 31, 2019. https://iica.int/es/prensa/noticias/acuerdo-entre-corteva-agriscience-y-el-iica-fortalecera-produccion-de-alimentos-de

"Syngenta y el IICA se unen para impulsar la innovación en la agricultura de las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*, July 7, 2020. https://iica.int/es/prensa/noticias/syngenta-y-el-iica-se-unen-para-impulsar-la-innovacion-en-la-agricultura-de-las

The Alliance's one objective is to carry out IICA's Medium-Term Plan (MTP) 2018-2022 for agriculture in the Americas, specifically targeting Argentina and Brazil first, to then implement the plan throughout the Latin American and Caribbean region. IICA's own website states that *"pilot programs will be implemented in Brazil and Argentina, in accordance with the definition of priorities for implementing the agreement that the two organizations (IICA and Microsoft) signed in October to work for the benefit of the rural areas of the countries of Latin America and the Caribbean."* [4]

The plan is called "AgTech" and was presented in Argentina on June 30, 2020 by Manuel Otero, President of IICA, in the presence of the Ministers of Agriculture and Science of Argentina and other public officials in strategic positions.[5]

"AgTech" is nothing other than the "AgOne" that Bill Gates designed and built from his philanthro-capitalism, developing and investing in research and technology projects in Asia and Africa to be applied in the agro-food system and that have no other purpose than to generate processes of accumulation of capital, economic concentration, appropriation of genetic resources and social domination.

IICA is also in partnership with Bill Gates (along with other foundations) in the formation of the System Reference Group (SRG) which has submitted its recommendations in July 2019 calling for the formal unification of the 15 CGIAR (Consultative Group on International Agricultural Research) centers, with their respective seed banks, into one. The intentions of this group were set out in the document *"Feeding the world in a changing climate: an adaptation roadmap for*

[4] "Microsoft y el IICA definieron hoja de ruta para la transformación digital del agro de las Américas." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*. https://www.iica.int/es/prensa/noticias/microsoft-y-el-iica-definieron-hoja-de-ruta-para-la-transformacion-digital-del-agro
Instituto Interamericano de Cooperación Para La Agricultura (IICA). "Acuerdo Microsoft-IICA Potenciará La Innovación y El Uso de Tecnología En El Sector Del Agro de Las Américas." *Laboratorio Nacional de GeoInteligencia (GeoINT)*, n.d. http://mid.geoint.mx/site/publicacion/id/55.html

[5] "El ministro Basterra abrió el ciclo virtual 'El Impacto Científico Tecnológico en el desarrollo del Sector Agropecuario.'" *Argentina.gob.ar*. Last modified July 1, 2020. https://www.argentina.gob.ar/noticias/el-ministro-basterra-abrio-el-ciclo-virtual-el-impacto-cientifico-tecnologico-en-el

agriculture" [6]. IICA itself boasts in the document that with the excuse of accelerating adaptation to climate change, it proposes a transformation of the world agricultural system, "*with the task of feeding an ever-growing population and under more extreme climatic conditions... the adaptation of the food production system is urgent in the Americas, not only because of the high vulnerability of the sector to climate change, but also because the maintenance and increase of the continent's food supply to the world depends on it.*" [7]

IICA, the Bill Gates Foundation, Bayer/Monsanto, Corteva (Dow, Dupont & Pioneer) and Syngenta, without a doubt, make up the most dangerous alliance for agriculture and food sovereignty for each country in Latin America and the Caribbean.

The objectives of "AgTech/AgOne" cover all the productive processes of the agrifood system which are crossed by Bill Gates' hegemonic and domination design. Not good. The gateway chosen was Argentina, just as Monsanto chose our country in 1996 to release its first transgenic seed.

Ultra-processed synthetic meat, cellular material that tastes like chicken or fish, artificial eggs, corn, soybean and sunflower seeds, as well as all the fruits, vegetables, and greens subjected to genetic editing using the CRISPR technique, grown in unpopulated fields controlled by remote-controlled and programmable drones for planting, measuring variables, and continuing to spray with new combinations of agrochemicals and synthetic fertilizers with the incorporation of precision software for mapping and collecting all the information on biological and genetic resources. Automation of physical harvesting processes and all stages of intensive agriculture, where machines decide on their own, super cows, super pigs and baby super chicks resulting from biotechnology applied only to increase production without any concern for human health risks and the complete annulment of the knowledge of thousands of years of farmers, is part of what AgTech presented on June 30, 2020.

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[6] Loboguerrero, A. M., Birch, J., Thornton, P., Meza, L., Sunga, I., Bong, B. B., Rabbinge, R., Reddy, M., Dinesh, D., Korner, J., Martinez-Baron, D., Millan, A., Hansen, J., Huyer, S., & Campbell, B. (2018). *Feeding the world in a changing climate: An adaptation roadmap for agriculture* (October 2018). Global Commission on Adaptation. https://cdn.gca.org/assets/2018-10/18_WP_GCA_Agriculture_1001_Oct5.pdf

[7] "La agricultura mundial dispone de un nuevo instrumento para la adaptación efectiva al cambio climático." *Instituto Interamericano de Cooperación Para La Agricultura (IICA)*, October 25, 2018. https://www.iica.int/es/prensa/noticias/la-agricultura-mundial-dispone-de-un-nuevo-instrumento-para-la-adaptaci%25C3%25B3n-efectiva

A kind of relaunch of the agro-industrial model in Argentina. It is about the dehumanization of agriculture itself. A plan alienated from reality and from the consequences of the immunosuppressive agro-industrial model has had as a pivotal co-author of the obligatory social confinement devastating the planet because of the Covid-19 Pandemic.

The AgTech tests the call for a broad deregulatory framework, as if the agro-industrial model did not know about it. It is enough to mention that, in Argentina, GMOs were never subject to any congressional law and that CRISPR crops and new biotechnology events are not even necessarily subject to a risk review, if it is so determined by a consultative body (CONABIA) whose members are not public officials, but rather belong to public and private entities with, in many cases, have serious conflicts of interest due to their agribusiness links.

IICA suggests that it would be valuable for AgTech to have performance legislation (as opposed to indicative legislation) in key regulatory areas to incentivize innovation-based solutions, according to certain specific technical parameters.

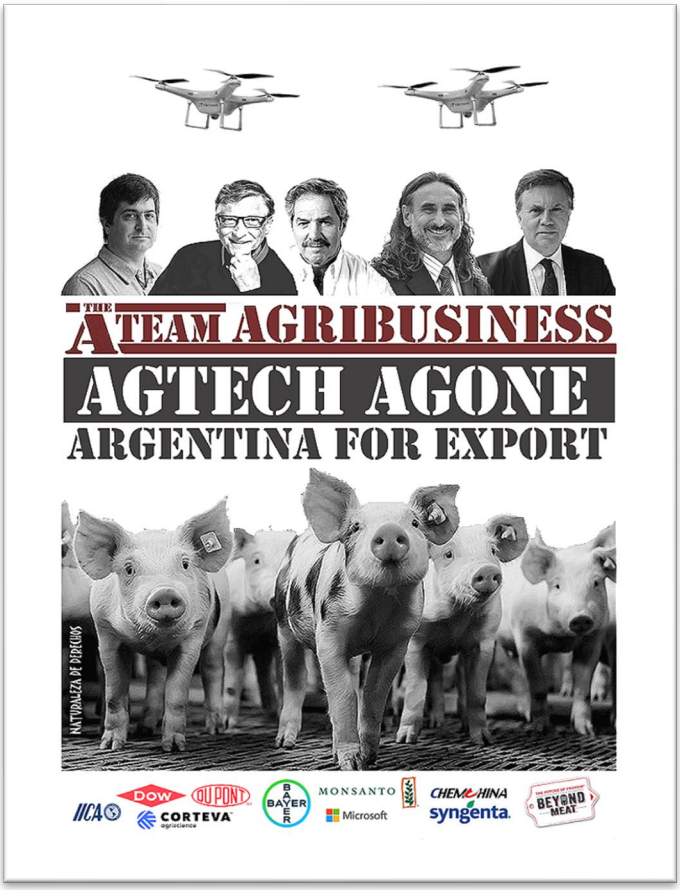
Such a requirement by IICA is intended to make the processes involving AgTech subject to permissive and open regulation. The indicative or prescriptive legislation that IICA opposes is based on the constitutional criterion that there are no absolute rights and the law must operate as a social controller, of course not from the perspective of capitalist persecution, but from the viewpoint of the "common good" which forms the basis of the Argentine legal order, as it is the end purpose of the State which, therefore, empowers it to regulate rights.

Likewise, the areas in which AgTech operates, impose technological advances that open up significant uncertainties in such a sensitive area as food, a key determinant of health, where precaution is a legal criterion that cannot be ignored. IICA's approach is more in line with the need to speed up processes and take for granted that there are no risks whatsoever. The proposed deregulation of AgTech is based on Bill Gates' AgOne Biosafety Deregulation Program.

The rhetoric of Ag Tech, obviously the same as that of Bill Gates' AgOne, talks about the need to provide technological innovation to small and medium farmers to increase their production when they do not even have the right to access land. Most of the actors in family, peasant, indigenous and self-managed farms that produce the food (fruits, vegetables and fruits) consumed by the Argentine population do not own the land and are forced to pay high rents. Furthermore, there is talk of increasing key food production through actions to mitigate climate change, however, agriculture continues to be directed towards the production of monocultures such as soy, which is not food for humans but for animal consumption (mainly as exports to China), or the production of biodiesel for fuels whose climate impact is greater than that of fossil fuels.

Since the Green Revolution to date, the agro-industrial regime in Argentina has never been the scene of a democratic debate in the institutional and sovereign space of public policy: the National Congress. We are faced with an autocracy over agriculture that, as it has no diverse democratic content of ideas

and opinions, favors - almost automatically - the monolithic and hegemonic influences of the large agribusiness corporations and of Bill Gates (under the representation of IICA).



By twisting the wills of some government officials, visiting their offices (Directorates, Deputy Secretaries, Ministries), reach their goals to advance expeditious regulations made to the mold of their interests, without the need congressional laws, nor to transit the parliamentary procedures with the due citizen participation that, from their perspectives, are obstacles for their inevitable, urgent and immediate objectives.

Therefore, denouncing is the sovereign act of freedom that we exercise by making visible what is happening in Argentina. As if COVID-19 had nothing to do with the agro-industrial model, and as if naiveté governs us in believing that Bill Gates and the Agribusiness corporations, now under the lying mantle of IICA, are part of the solution. They are wrong, they are a big part of the problem, and our critical gaze and skepticism did not enter Quarantine.

Photo: Naturaleza de Derechos

BILL & MELINDA GATES: THE DYSTOPIA OF THE GREEN REVOLUTION IN AFRICA [1]

Nicoletta Dentico

In 2006, just one year before food prices skyrocketed, the Gates Foundation launched the Global Development Programme, whose main focus was agriculture. The money to fund the operation came from the giant and unexpected mountain of money given to him by Warren Buffet, who in turn had been flooded with cash by the activities engaged in during the speculative bubble that would soon burst in the United States. It was enough to cross the sensitivity of the Rockefeller Foundation, and to launch together an invincible proposal: the gospel of the Green Revolution, Rockefeller's old warhorse, and bring it to the underdeveloped African continent.

This is how the Alliance for Green Revolution in Africa (AGRA) was born[2]. The basic concept is always the same. Hunger in Africa is the result of the lack of modernisation of agriculture and the absence of functioning markets. AGRA must fill this gap, it must develop synergistic action with the private sector, it must promote access to markets and disseminate agricultural innovation as a propellant capable of increasing rural productivity. Gates and Rockefeller are AGRA's main sources of funding. As such, they are the ones who identify the problem, direct its solution, place their staff in key positions, and establish the entire approach to the work.

As early as 2001, Gates had already tackled nutrition through seminal funding to the Global Alliance for Improved Nutrition (GAIN[3]), the first in a series of new public-private alliances on food. GAIN had just been born when it was able to obtain a hasty blessing from the United Nations Assembly meeting in a special session dedicated to children in 2002[4]. The Seattle couple's decision to fund this new reality was a desire "to champion the concept of a major new push for improved nutrition on a global scale, initially through *food fortification, working closely together with the private sector* and leveraging partnerships to achieve the maximum possible scale of impact"[5]. Not only did support for GAIN never stop

[1] Extracted from: Dentico N., Ricchi e buoni? Le trame oscure del filantrocapitalismo (2020), Editrice Missionaria Italiana, ISBN: 978-88-307-2433-4, https://www.emi.it/ricchi-e-buoni
[2] "AGRA." https://agra.org/
[3] "Global Alliance for Improved Nutrition (GAIN)." https://www.gainhealth.org/homepage
[4] Moench-Pfanner R. e Van Ameringen M., "The Global Alliance for Improved Nutrition (GAIN): A decade of partnerships to increase access to and affordability of nutritious foods for the poor", in *Food & Nutrition Bulletin*, Vol. 33, supplement 3, pp. 373-380.
[5] Ibid.em, p. 375.

- from 2002 to 2014 the alliance received $251 million from the Gates Foundation out of a total spending budget of $284 million[6] - but in 2003 Gates also began funding the research on the Golden Rice project, the genetically modified rice that "can save the lives of millions of children"[7]. The project is definitely of great value to Gates because it experiments with the idea of a "humanitarian licence", granted by Syngenta, as a donation to public institutions and farmers for the cultivation of this rice. This served as the first instance of a *humanitarianisation* of the right to food[8] which serves to institutionally redefine practices around access to proprietary knowledge, so as to enhance the role of the industrial "donor" as a benefactor, while completely redefining the terms of the GMO debate.

AGRA points in the same direction[9]. AGRA's roots can be traced to a 2006 Rockefeller Foundation document[10] that launched the concept of a dynamic, African-led alliance to help small producers and their families fight poverty and hunger.

AGRA defines Africa's agricultural problem as an issue arising from poor seed varieties, inadequate access to technology, and poor country infrastructure. Reproducing the mechanistic model that had already inspired the first Green Revolution in Asia and Latin America, AGRA was born in September 2006 "to fulfill the vision that "Africa can feed itself and the world, transforming agriculture from a solitary struggle to survive to a business that thrives"[11]. The purpose is to promote this market ideology as a solution to the productivity deficit of African crops, which philanthropists consider to be the reason why there is a lack of food to feed the growing population of the continent, which is obviously *their* definition of the problem.

AGRA claims to be the largest entity dedicated to eradicating hunger in Africa. The Gates Foundation considers it an " African face and voice of our work". Indeed, it is a subsidiary of the foundation on the continent, given the amount of money invested - about 630 million dollars, since its establishment to date. Its faith in genetic engineering is associated with the plan to develop an intensive industrialized system for Africa involving seed companies and small farmers through agro-dealers platforms. These platforms interact with small and medium-sized companies for the supply of hybrid seeds (maize, sorghum, cassava, soya, bananas, rice, sweet potatoes, beans - the main AGRA plants), chemical pesticides, herbicides and fertilizers to farmers. The case of Malawi offers an

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[6] Martens J., and Saetz K., *Philanthropic Power and Development: who shapes the agenda*?, p. 42.
[7] Brooks S., "Investing in Food Security? Philanthrocapitalism, Biotechnology and Development", in Science and Technology Policy Research, Working Papers Series, SWPS 2013-12, University of Sussex, November 2013.
[8] *Ibid.em*, pp. 5-6.
[9] AGRA, Planting the Seeds of a Green Revolution in Africa, 2014, https://reliefweb.int/sites/reliefweb.int/files/resources/agrapassreporthires.pdf
[10] Rockefeller Foundation, "Africa Turn: the Green Revolution for the 21st Century", White Paper, Rockefeller Foundation, 2006.
[11] Ibidem

eloquent example. With $4.3 million, AGRA financed the Malawi Agro-Dealer Strengthening Programme (MASP), conceived by the American organization Cultivating New Frontiers in Agriculture (CNFA)[12], which is in turn financed by Gates. It is an entity that works to promote the private sector - from large corporations to small local entrepreneurs - as a strategy of choice for the spread and development of agricultural markets and the adoption of market-oriented solutions in agriculture[13]. The giant Monsanto is one of the main beneficiaries - if not the main beneficiary - of this programme. Monsanto's own country manager in Malawi has admitted that all of their herbicide and seed sales are channelled through the platform, with an 85% increase in 2007[14] [15]. Through its network of agricultural dealers, these giants thus become the only channel of training and information for African farmers who, absurdly enough, cease to be food producers and become consumers of goods, engines of a powerful agrochemical machine imposed, as in a new civilizing mission, by the private sector (according to World Bank reports in Malawi, Kenya and Uganda)[16].

About 75% of seed supply in Africa comes from recycling and exchange between millions of small farmers from one year to the next but, as the African Centre for Biodiversity (ABC) reports, "a battle against the African seed system is underway"[17]. A concern shared to a large extent, also, by Action Aid. In a 2009 report, the NGO warns against AGRA's overly technical orientation, which completely ignores the complex social system of agricultural production on the continent. The report considers that there is a dangerous asymmetry in the field between small producers (with their seeds) and the multinationals involved in AGRA, with their monopolistic control over seed technology. Finally, it points out the decisive issue of intellectual property rights of seeds, and the transfer of local seeds to private individuals - as was the case in Zambia and Zimbabwe[18].

That, in a nutshell, is the black box of philanthropy. While preaching about "boosting the productivity and income of smallholder farmers across the

[12] "Malawi Agrodealer Strengthening Program." *CNFA*. https://www.cnfa.org/program/malawi-agrodealer-strengthening-program/
[13] "About Us." *Cultivating New Frontiers in Agriculture (CNFA)*. https://www.cnfa.org/about-us/
[14] Curtis M., e Hilary J., *The Hunger Games: How DFID support for agribusiness is fuelling poverty in Africa,* edited by War on Want, 2012, pp. 4-7, https://waronwant.org/sites/default/files/The%20Hunger%20Games%202012.pdf.
[15] Bennet N., "Government ministers should ban Roundup – not sing its praises", in *The Guardian*, 14 August 2018, https://www.theguardian.com/commentisfree/2018/aug/14/roundup-government-uk-minister-ban-glyphosate. On the same subject, see also: Gillam C., "Formulations of glyphosate-based weed killers are toxic, tests show", in *The Guardian,* 23 gennaio 2020, https://www.theguardian.com/business/2020/jan/23/formulations-glyphosate-based-weedkillers-toxic-tests.
[16] Curtis M., *Gated Development. Is The Gates Foundation Always a Force for Good?,* Global Justice Now Report, second edition, June 2016, p. 29. Accessible at https://www.globaljustice.org.uk/sites/default/files/files/resources/gjn_gates_report_june_2016_web_final_version_2.pdf
[17] "Crunch Time for the Seed Treaty." African Centre for Biodiversity (ACBIO), October 8, 2019. https://www.acbio.org.za/en/crunch-time-seed-treaty
[18] Action Aid, *Assessing the Alliance for the Green Revolution in Africa*, Action Aid International Report, 2009, p. 14.

continent"[19], it is spreading opportunities for major economic interests, while undermining any in-depth analysis of African agriculture and respect for local practices and knowledge.

AGRA declares on its website that it embraces a model of participatory and self-determined development (home-grown), calling itself an "alliance led by Africans with roots in farming communities across the continent"[20]. Too bad that there is no trace of indigenous participation at all.

"A dry seed pod of the Moringa oleifera tree", by T.K. Naliaka, is licensed under CC BY-SA 4.0 (https://creativecommons.org/licenses/by-sa/4.0/deed.en).

The Gates Foundation provides subsidies to biotechnological research programmes and uses this economic leverage to finance research circuits that have little or no participation. Farmers are merely recipients of technologies developed in laboratories and sold to them by large companies.

The critical voices on the continent were not long awaited[21], however.

[19] "Agricultural Development." *Bill & Melinda Gates Foundation*. https://www.gatesfoundation.org/What-We-Do/Global-Growth-and-Opportunity/Agricultural-Development

[20] "Our Story." *AGRA*. https://agra.org/our-story/

[21] Daño E., *Unmasking the New Green Revolution in Africa: Motives, Players and Dynamics*, paper by Church Development Services (EED), Third World Network and African Centre for Biosafety, published by Third World Network, 2007, https://www.twn.my/title2/books/green.revolution.in.africa.htm

Taking advantage of the World Social Forum in Nairobi in 2007, a composite platform of African associations, immediately manifested their collective dissent against AGRA, the continent's largest industrial agricultural war machine.[22]

The GMO case is in fact the other tricky issue[23]. In 2007, AGRA released an official communiqué saying that GMOs are not currently part of its programs, but that they could become part of a long-term strategy if African governments would welcome the use of GMOs in their countries. The Rockefeller Foundation had already taken early action to clear the ground with governments, organizing the 'Biotech, Breeding and Seed Systems for African Crops', an initiatory meeting, where participants were given a substantial dose of presentations on GMO research in Africa, and on experiments already underway in the continent. A small consortium of very powerful corporations - Monsanto, Dupont and Syngenta - promptly engaged AGRA to promote this agenda and enter into agreements with several national research centers, so as to establish their activity in Africa with the irrefutable humanitarian excuse. It takes nothing to seduce African scientists by funding their research, convincing decision-makers by glorifying the benefits of GMOs and then imposing them on farmers, who will certainly have no say in the matter. AGRA recruits several of them, more or less well known. Among them the famous Kenya Agricultural Research Institute (KARI): now practically a subsidiary of Syngenta.

According to Bill Gates, GMOs are important innovations in the fight against hunger. Already in 2009, in a famous World Food Prize speech, he admitted that "some of our grants [in Africa] do include transgenic approaches, because we believe they have the potential to address farmers' challenges more efficiently than conventional techniques"[24].

On this basis, the foundation continues with relentless activism in financing the creation of new institutions. The African Agricultural Technology Foundation (AATF)[25], with 169 million dollars in funding over the last ten years, was created - so to speak - to instigate the illusion of African demand for GMOs. AATF acts as a broker between seed multinationals and the scientific communities of these countries to facilitate experiments aimed at developing GM monocultures, sold in the context of humanitarian programs such as Wema (Water Efficient Maize of Africa), and has the negotiating mandate on the management of corporate patents. It promotes food bio-fortification and the digitization of agriculture to bring "prosperity through technology" in the framework of the One Agriculture, One Science initiative[26]: This involves forty-two African universities, working closely

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[22] *Voices from Africa: African Farmers & Environmentalists Speak Out Against a New Green Revolution in Africa*. Oakland Institute, 2009. https://www.oaklandinstitute.org/voices-africa-african-farmers-environmentalists-speak-out-against-new-green-revolution-africa

[23] As the Action Aid International report explains, Cfr. Action Aid, *Assessing the Alliance for the Green Revolution in Africa*, p. 15-16.

[24] Philpott T., "Bill Gates reveals support for GMO", in *Grist,* 22 October 2009, https://grist.org/article/2009-10-21-bill-gates-reveals-support-for-gmo-ag/.

[25] "African Agricultural Technology Foundation (AATF) ." https://www.aatf-africa.org/

[26] "One Agriculture-One Science': A New Partnership to Revitalize Global Agricultural Education ." *|| ICRISAT ||Press Releases 2014*. Last modified July 21, 2014. http://www.icrisat.org/newsroom/news-releases/icrisat-pr-2014-media22.htm

with the giants of the computer industry, starting with Microsoft. In just a few years, AATF has gained enormous importance. It is designed to expand the freedom of manoeuvre of companies, which actually have control over it[27], and at the same time it is accredited to participate in the definition of regional policies.

It therefore lobbies governments to persuade them to adopt biosafety laws - a prerequisite for the marketing of genetically modified products. Not surprisingly, the number of countries that have undertaken GMO research or cultivation has risen from 2 to 9 in less than a decade[28].

New institutions, new programmes that intersect and belong to the same core of monopolies[29]. The thread of these processes develops through the classical patterns of the most invincible colonialist interference. AGRA has all the room for manoeuvre it needs in the domestication of governments, starting with financial lubrication. Through its policy and advocacy program, AGRA provides African governments with data collection and analysis on agricultural policies. It unleashes consultants and officials to formulate or reform national policies under the pretext of shaping "home-grown agricultural policies that provide comprehensive support to smallholder farmers"[30].

In this way AGRA avoids the risk of regulatory barriers in advance and adapts the laws of individual countries to its own objectives on issues such as seeds, soil quality, market access, land ownership rights, environmental regulations and digitization of processes. An interesting case in this respect is the reform of seed policies in Ghana in 2011, which allowed the introduction of GMOs and genetic research in agriculture (Ghana Biosafety Act 831)[31]. Similar pathways have been conducted in Egypt, Burkina Faso and South Africa, countries that have already completed GMO approval processes. In a network of synergies with other foundations and the corporate sector,the Gates Foundation's goal is to establish GMOs throughout Africa, with the blessing of multilateral institutions and national governments, in the name of food security by 2030[32]. It is no coincidence that Gates is one of the main financiers of the International Finance Corporation (IFC)[33], the right arm of the private sector within the World Bank, which commits 6% of its portfolio to support the agribusiness agenda. It calls for Sub-Saharan Africa to

[27] Martens J. e Seitz K., Philanthropic Power and Development, op. cit. pp. 50-52.
[28] Rock J., "We are not starving". Challenging Genetically Modified Seeds and Development in Ghana", in *Culture, Agriculture, Food and Environment. The Journal of Culture and Agriculture*, Vol. 41, Issue 1, June 2019, pp. 15-33, https://anthrosource.onlinelibrary.wiley.com/doi/full/10.1111/cuag.12147 .
[29] McKeon N., *Food Security Governance: Empowering Communities, Regulating Corporations*, Routledge, London and New York, 2015, pp. 13-30.
[30] In October 2009, the Gates Foundation announced the release of $15 million in funding for the definition of new agricultural policies in Ethiopia, Ghana, Mali, Mozambique and Tanzania, with activities aimed at training policy analysts in the agricultural sector, creating think tanks, building databases to support evidence-based policy development, etc: https://www.gatesfoundation.org/Media-Center/Press-Releases/2009/10/AGRA-Launches-Policy-Initiative-to-Empower-Africa-To-Shape-Agricultural-Policies
[31] "Ghana Has New Biosafety Law." *Afri-Law*, May 31, 2015. https://www.afri-law.com/ghana-has-new-biosafety-law/
[32] Bill & Melinda Gates Foundation, Agricultural Development Grant Overview, 2011, https://docs.gatesfoundation.org/documents/agricultural-development-grant-overview.pdf
[33] Curtis M., Gated Development, op. cit, p. 36.

"accelerate change on the continent"[34] AGRA is the powerful apparatus that consolidates this agenda. A rather irresistible form of market domination. Every scientific thought based on the recognition of the Earth as living nature is relegated to the rank of "a tradition to be emancipated", that is not science, if not even downright considered anti-science to be fought in the name of innovation.

Yet, contrary to the notion that it is industrial agriculture that feeds the planet, even today only 30% of the food comes from mega farms, and 75% of the corn and soya produced with monocultures are used for fossil fuels and animal feed. 70% is instead the result of the complex knowledge, the ancient and always new work of small farmers who cultivate biodiversity, develop better varieties, in a constant discipline of relationship between soil and food.

The scientific alternative to genetic engineering that inoculates toxic genes in food is agroecology, as recognized by the international IAASTD study[35]. Food sovereignty, freedom from hunger, passes through this route. And this is the path towards justice.

Photo: Food Sovereignty Ghana, April 2015

[34] International Financial Corporation (IFC),) *Investing for Impact*, IFC Annual Report 2019, p. 50. https://www.ifc.org/wps/wcm/connect/4ffd985d-c160-4b5b-8fbe-3ad2d642bbad/IFC-AR19-Full-Report.pdf?MOD=AJPERES&CVID=mV2uYFU

[35] Mcintyre, Beverly & Herren, Hans & Wakhungu, Judi & Watson, Robert. (2009). Agriculture at a Crossroads: The Global Report. https://www.researchgate.net/publication/258099731_Agriculture_at_a_Crossroads_The_Global_Report

GATES FOUNDATION'S GREEN REVOLUTION FAILS AFRICA'S FARMERS

Timothy A. Wise

In 2006, the Bill and Melinda Gates Foundation, the world's largest private foundation, endowed by the fortunes of technology monopolist Bill Gates of Microsoft, got lucky. Barely one year before the food-price spikes in 2007, the foundation launched a new agricultural development initiative to supplement its global health and education programs. Much of the initial funding came from investor Warren Buffett, awash in cash from the speculative bubble that would burst the following year. The Gates Foundation joined the Rockefeller Foundation to launch the Alliance for a Green Revolution in Africa (AGRA), which would prove to be their ready-made answer to the coming question: How can Africa grow more food?

AGRA's goals were ambitious: to double productivity and incomes by 2020 for 30 million small-scale farming households while reducing food insecurity by half in 20 countries. As with other BMGF initiatives, Western technologies would save the poor.

It is 2020, how is that Green Revolution going? AGRA has published no overall evaluation of the impacts of its programs on the number of smallholder households reached, the improvements in their yields and household incomes or their food security. It does not even make reference to those goals or progress in achieving them. Neither has the Gates Foundation, which has provided two-thirds of AGRA's funding roughly $1 billion in funding. This lack of accountability represents a serious oversight problem for a program that has both consumed so much in the way of resources and driven the region's agricultural development policies with its narrative of technology-driven, input-intensive agricultural development.

My research shows that AGRA is failing on its own terms. There has been no productivity surge. Many climate-resilient, nutritious crops have been displaced by the expansion in supported crops such as maize. Even where maize production has increased, incomes and food security have scarcely improved for small-scale farming households, AGRA's supposed beneficiaries. The number of undernourished in AGRA's 13 focus countries has increased 30% during the organization's well-funded Green Revolution campaign.

The Gates Foundation prides itself on being a science-guided, data-driven, results-oriented philanthropy. On AGRA, it has spent two-thirds of a billion dollars. The results have been poor, which is all the more remarkable given that African governments have been persuaded to subsidize the purchases of Green Revolution seeds and fertilizers with up to $1 billion *per year* in support. The Gates model for agricultural development is clearly flawed. Will the foundation recognize its failures and change course?

Failure to yield

As I document in my recent paper, "Failing Africa's Farmers: An Impact Assessment of the Alliance for a Green Revolution in Africa,"[1] and the related report, "False Promises: The Alliance for a Green Revolution in Africa,"[2] AGRA has received nearly $1 billion in contributions and made over $500 million in grants. I set out to fill the accountability gap as AGRA reached its self-declared 2020 deadline. Not surprisingly, AGRA declined my request to provide data from its own internal monitoring and evaluation of progress. That has been my experience with both BMGF and AGRA, that they are more image-conscious than results-oriented, more concerned with protecting a carefully crafted reputation than they are with openly sharing and reflecting on their impacts. As a researcher, I have never gotten past the Communications Department at either institution.

Table SEQ Table * ARABIC 1

AGRA: Limited Signs of Green Revolution
% Growth, selected crops, 13 AGRA Countries
2004-6 to 2016-18

	Production (MT/year)	Area (hectares)	Yield (MT/hectare)
Maize	87	45	29
Rice (paddy)	163	87	41
Wheat[1]	93	28	51
Millet	-24	-5	-21
Sorghum	17	13	3
All Cereals	55	22	27
Cassava	42	51	-6
Roots/tubers (all)	42	51	-7
Pulses (all)	80	19	51
Groundnuts	17	52	-23
Soybean[2]	58	35	18

Source: FAOSTAT for 13 Alliance for a Green Revolution in Africa countries: Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Tanzania, Uganda, Zambia.
[1]excluding Burkina Faso and Ghana
[2]excluding Ghana, Mozambique, and Niger

In the absence of data on AGRA's direct beneficiaries and impacts, we used national-level data from 13 AGRA countries through 2018. We tracked trends in production, yield, and area harvested for most of the region's important food crops to assess the extent to which Green Revolution programs are significantly raising productivity. We also examined data on poverty and hunger to gauge whether there were signs that smallholder farmers' incomes and food security are improving across the region at levels commensurate with AGRA's goals of improved farmer welfare.

As Table 1 shows, we found no evidence that productivity, incomes or food security were increasing significantly for smallholder households. Specifically, we found:

- Little evidence AGRA was reaching a significant number of farmers. Its last progress report says only that AGRA had trained 5.3 million farmers in modern practices with "1.86 million farmers using" such practices. This is vague and far short of the stated goal of doubling productivity and incomes for nine million farmers directly and another 21 million indirectly.

[1] Wise, Timothy A. . "Failing Africa's Farmers: New Report Shows Africa's Green Revolution Is 'Failing on Its Own Terms.'" Global Development and Environment Institute - Tufts University, July 2020. Working Paper No.20-01. https://sites.tufts.edu/gdae/files/2020/07/20-01_Wise_FailureToYield.pdf
[2] Mkindi, A. R., Maina, A., Urhahn, J., Koch, J., Bassermann, L., Goïta, M., Nketani, M., Herre, R., Tanzmann, S., Wise, T. A., Gordon, M., & Gilbert, R. (2020). *False promises: The alliance for a green revolution in africa (Agra)*. Biodiversity and Biosafety Association of Kenya(BIBA), Brot für die Welt, FIAN Germany, German NGO Forum on Environment and Development, INKOTA-netzwerk e.V., Institut de Recherche et de Promotion des Alternatives en Développement (IRPAD), PELUM Zambia , Rosa Luxemburg Stiftung Southern Africa, Tanzania Alliance for Biodiversity (TABIO), Organic Agriculture Movement (TOAM). https://www.rosalux.de/en/publication/id/42635

- No evidence of significant increases in smallholder incomes or food security. For AGRA countries as a whole, there has been a 30% increase in the number of people suffering extreme hunger since AGRA began, a condition affecting 130 million people in AGRA countries. Kenya, home to AGRA's headquarters, saw an increase in the share of its people suffering undernourishment in the AGRA years.
- No evidence of large productivity increases. For staple crops as a whole, yields are up only 18% over 12 years for AGRA's 13 countries. Even maize, heavily promoted by Green Revolution programs, showed just 29% yield growth, well short of AGRA's goal of doubling productivity, which would be a 100% increase.
- Where technology adoption has taken place, input subsidies provided by African governments seem far more influential than AGRA's programs. It is difficult to find evidence that AGRA's programs would have any significant impacts in the absence of such large subsidies from African governments.
- Even where production increased, as in Zambia, a near-tripling of maize production did not result in reductions in rural poverty or hunger. Small-scale farmers were not benefiting; poverty and hunger remained staggeringly high with 78% of rural Zambians in extreme poverty.
- Green Revolution incentives for priority crops such as maize drove land into maize and out of more nutritious and climate-resilient traditional crops such as millet and sorghum, eroding food security and nutrition for poor farmers. Millet production declined 24% with yields falling 21% in the AGRA years.
- No signs of "sustainable intensification," the goal of sustainably increasing production on existing farmland. Environmental impacts are negative, including acidification of soils under monoculture cultivation with fossil-fuel-based fertilizers.
- Production increases have come more from farmers bringing new land under cultivation – "extensification" – than from productivity increases. Subsidies and other support programs encourage farmers to expand the cultivation of supported crops such as maize. This has implications for climate change mitigation and adaptation.

Rwanda: "Africa's Hungry Poster Child"

Rwanda, widely considered an AGRA success story thanks to rising maize production and yields, illustrates AGRA's failings. As the Table 2 shows, Rwanda's relative success in increasing maize yields 66%, with heavy subsidies and pressure from the government, came at the expense of sorghum, sweet potato, and other more nutritious crops. Area expansion was more responsible for production increases than were improved yields, as promised by the Green Revolution. Our more comprehensive measure of yield improvements for a basket of staple crops shows mediocre yield gains of just 24% over 12 years.

More telling, the increased production of maize has done little to improve the lives of Rwanda's small-scale farmers. The number of undernourished has increased 15% in the AGRA years. The national rate of extreme poverty has barely moved, from 63% before AGRA to 60% in 2018.

Most other AGRA countries have done even worse. Only Ethiopia and Ghana show any sign of dynamism in productivity growth while reducing the number of undernourished. As the Table 3 shows, most AGRA countries have seen only small productivity increases with rising numbers of malnourished people. AGRA's home country, Kenya, has seen a 7% *decline* in staple yields with a 43% increase in undernourishment.

Table SEQ Table * ARABIC 2

Rwanda Under AGRA % Growth, selected crops 2004-6 to 2016-18	Production (MT/year)	Area (hectares)	Yield (MT/hectare)
Maize	305	146	66
Rice (paddy)	98	147	-19
Wheat	-46	-60	46
Millet	28	132	-45
Sorghum	-18	-17	0
All Cereals	82	43	27
Cassava	30	-16	55
Roots/tubers (all)	3	-3	6
Groundnuts	76	129	-24
Soybean	1	26	-19
Pulses (all)	89	54	23
Staple Yield Index[1]			24

Source FAOSTAT

[1]Sum of yield increases weighted by relative areas for maize, millet, sorghum, and roots/tubers.

Table SEQ Table * ARABIC 3

AGRA: Productivity & Undernourishment	% Change 2004/6-2016/18	
	Staple Yields Index	Number Under-nourished
AGRA TOTAL	18	31
Burkina Faso	-10	15
Ethiopia	73	-29
Ghana	39	-20
Kenya	-7	43
Malawi	50	-3
Mali	19	-14
Mozambique	30	6
Niger	36	71
Nigeria	-8	181
Rwanda	24	13
Tanzania	22	29
Uganda	0	155
Zambia	20	29

Source: FAO; author's calculation of change in number undernourished between 3 year averages 2004/6 - 2016/18

Staple Yield Index: weighted yield increases for maize, millet, sorghum, roots/tubers. For AGRA total, Ethiopia, Nigeria, and Tanzania - cereals plus roots/tubers.

Time to change course

Rwanda's former Agriculture Minister, Agnes Kalibata, now heads AGRA. In a controversial move, the U.N. Secretary General named his Special Envoy to lead a planned U.N. World Food Systems Summit in 2021.

She is likely to bring her narrow Green Revolution perspectives to a discussion meant to address systemic failures in our food systems. The World Food Summit should instead actively consider agroecology and other low-cost, low-input approaches, which have shown far better short and long-term prospects than high-input Green Revolution practices. One University of Essex study[3] surveyed nearly 300 large ecological agriculture projects across more than 50 poor countries and documented an average 79% increase in productivity with decreasing costs and rising incomes. Such results far surpass AGRA's.

AGRA and the Gates Foundation have had their chance to show that they could bring a Green Revolution of agricultural productivity and rising incomes to Africa's small-scale farmers. They have failed, even with the unprecedented levels of subsidies from African governments to entice farmers into buying Green Revolution seeds and fertilizers.

Many farmers' groups in Africa actively opposed AGRA from the start, pointing to negative environmental and social impacts of the first Green Revolution in Asia and Latin America. They have been proven right. Now it is time for the Gates Foundation, donors, and African governments to listen to farmers and shift their support to agroecology and other farmer-led, climate-resilient efforts to transform our food systems.

[3] Pretty, J. N., Noble, A. D., Bossio, D., Dixon, J., Hine, R. E., Penning de Vries, F. W. T., & Morison, J. I. L. (2006). Resource-conserving agriculture increases yields in developing countries. *Environmental Science & Technology*, *40*(4), 1114–1119. https://doi.org/10.1021/es051670d

SEEDS OF SURVEILLANCE CAPITALISM: THE THIRD "GREEN REVOLUTION"

Navdanya

There is an illusion that running faster on the chemical and Poison Cartel treadmill, now equipped with Artificial Intelligence and Robots will be more effective in producing more food and feeding the hungry. On the contrary, the tools and technologies of the Poison Cartel have brought the planet and the lives of farmers to the brink with climate havoc, species extinction, water crisis, farmer incomes collapsing to zero and food related diseases killing larger numbers of people.

As Shoshana Zuboff, Professor Emerita at Harvard Business School writes in her book: "Surveillance capitalism is not a technology; it is a logic that imbues technology and commands it into action."[1]

And as John Hamer, managing director of Monsanto Growth Ventures (Monsanto's venture capital arm) says: "if you think about it, there are only two people on earth that need to know a lot about remote sensing technology – Monsanto and the CIA."[2]

When technology is no longer seen as a tool to be assessed, chosen, adopted or rejected, but as a religion, as a civilizing mission, to be forced undemocratically on people, and when means for money making are elevated to human ends, beyond ethical, social, ecological and democratic assessment, we have re-colonisation in a modern garb. But then, as now, exterminating the diversity of life, of cultures, of knowledges, of economies, sovereignties, democracies through violence, for economic gain and political power has to be the objective.

Zuboff reiterates this in her book when she says "Surveillance capitalism is a rogue force driven by novel economic imperatives that disregards social norms and nullifies the elemental rights associated with individual autonomy that are essential to the very possibility of a democratic society."

Surveillance capitalism refers to an economic system centred around the commodification of personal data with the core purpose of profit-making. Since personal data can be commodified it has become one of the most valuable resources on earth. It is a new mutant form of capitalism that uses tech for its purposes.

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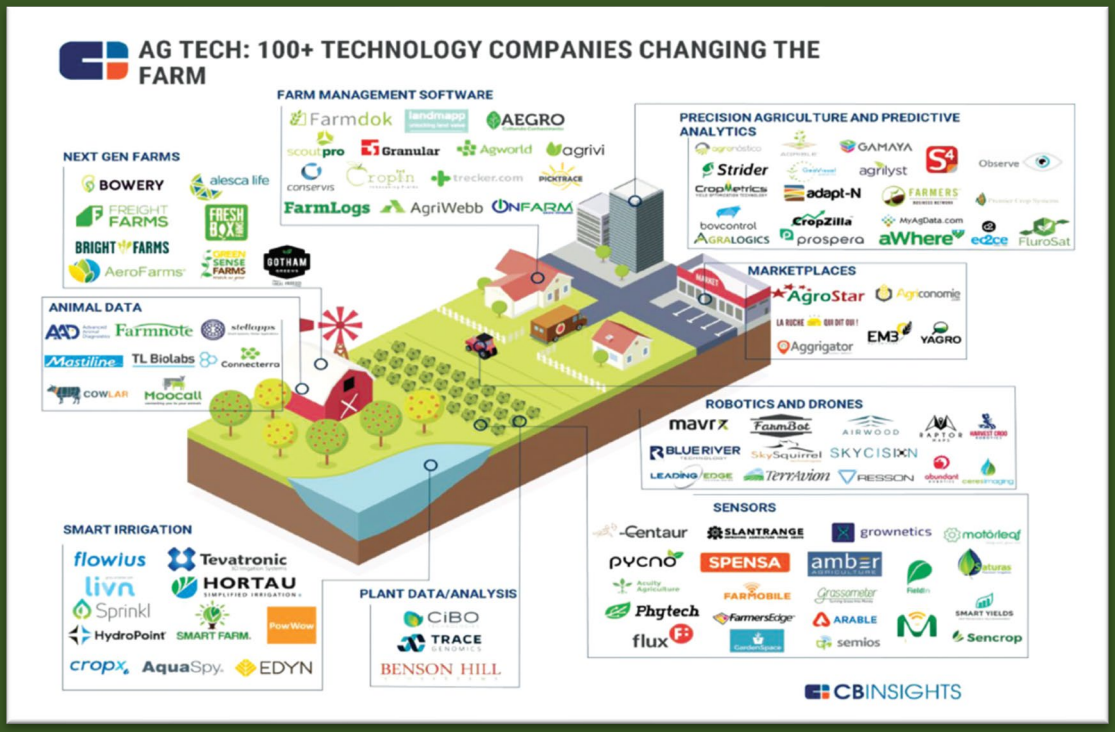
[1] Zuboff, S. (2019). The age of surveillance capitalism: The fight for a human future at the new frontier of power. Profile Books. Pg. 15.

[2] Trotter, Greg. (2016). Monsanto venture capital group brings tech-world approach to agribusiness. Chicago Tribune. Available at: http://www.startribune.com/monsanto-venture-capital-group-brings-tech-world-approach-to-agribusiness/407653476/



Source: CBinsights. 2017. The Ag Tech Market Map: 100+ Startups Powering The Future Of Farming And Agribusiness. Available at https://www.cbinsights.com/research/agriculture-tech-market-map-company-list/

The propaganda for surveillance capitalism is exactly the same that was used in the failed Green Revolution: "To feed the 9.7 billion people in the world in 2050, agriculture efficiency must increase by 35% - 70% and technology is the key. India's rich mix of farming practices and small landholdings provide a massive data set to inform our models." [3] Smallholders and their farming practices have been reduced to a "data set" for surveillance capitalism that will "provide valuable insights for the agri industry, financial institutions, growers and policy makers." [4]

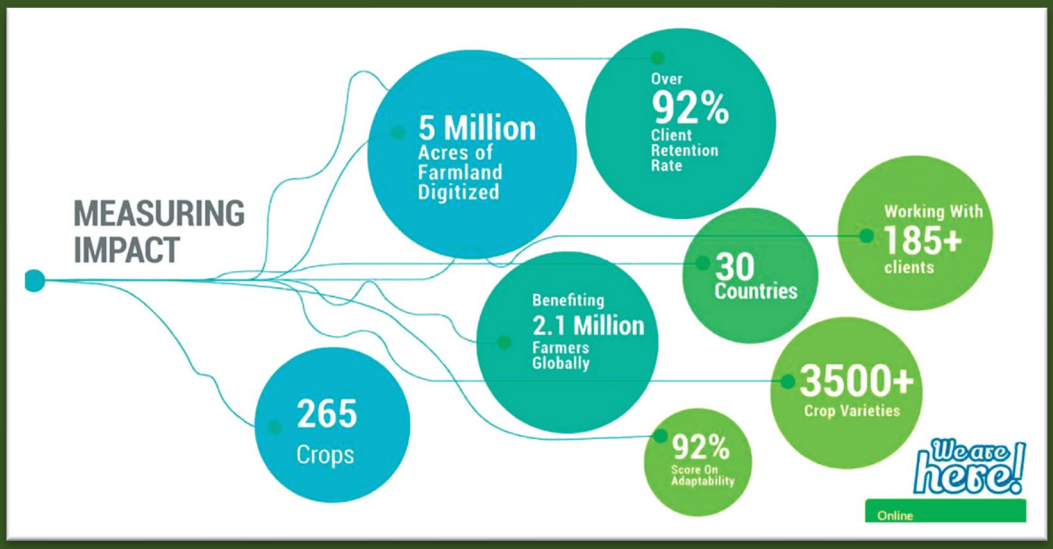
Seeds of Surveillance: Surveillance Capitalism Enters Indian Agriculture

CropIn Technology Pvt. Ltd. a Bengaluru-based company has raised $12 million in funding. It is funded by the Poison Cartel, Venture Capital Firms and Agtech companies like Chiratae Ventures, Bill and Gates Foundation, Strategic Investment Fund, Seeders Ventures Fund, Syngenta, Bayer and BASF. Its clientele includes PepsiCo, Mahindra & Mahindra, ITC, Field Fresh and McCain.

CropIn claims to use Big Data analytics, artificial intelligence and remote sensing to "analyze data" for 265 crops for agriculture processors, distributors,

[3] Ahuja, A. 2018. CropIn Technology raises $8 million from Chiratae Ventures, Gates Foundation. Livemint. Available at: www.livemint.com/Companies/X5TRE10YbgUlqgvhN2IDBL/CropIn-Technology-raises-8-million-from-Chiratae-Ventures.html. Accessed on 20 August 2019.
[4] Economic Times. 2019. SaaS-based agri-tech company CropIn registers 300% growth. Available at: https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/saas-based-agri-tech-company-cropin-registers-300-growth/articleshow/68147881.cms?from=mdr. Accessed on 23 August, 2019.

inputs providers, lenders and insurers. The start-up claims to be building an "agri-information dataset" to detect patterns and "predict the future" of a variety of crops.



Source: https://www.cropin.com/

The company has a tie-up with the Department of Agriculture (DOA), Government of Karnataka, to "help" farmers create "more value" for their crops. The project aims to "assist" 4.15 lakh farmers across 30 districts of Karnataka in digitising 3.4 lakh acres of farmlands.

In 2017, CropIn started a project in collaboration with the Department of Horticulture (DOH), Andhra Pradesh, to digitize farms under two FPO in the districts of Chittoor and Krishna. It also works with the Bihar State Government and is part of the Jeevika project that uses "smart technologies" for climate resilient agriculture.[5]

Additionally, the World Bank has chosen CropIn as the technology partner in the public–private partnership project of the Government of India and World Bank.

CropIn is also partnering with the Government of Punjab's department of agriculture and welfare to plan the certification and traceability of seed potato. Punjab Agri Export Corporation (PAGREXCO) has been reported to deploy blockchain technology with the help of barcode, QR code and geo-tagging to undertake certification and traceability of seed potato right from nucleus to seed level (harvest).

Furthermore, it has been reported that India's agriculture ministry is working with National Informatics Centre on a 5 crore (50 million) rupee project which involves rolling out a software which will barcode all seeds. This has been justified on the grounds of making everything "more transparent" and "more traceable" and to "weed out poor quality seeds". The seeds will be "tracked" throughout the

[5] How CropIn is helping the farmer ecosystem. 2018. Available at: http://smartceo.co/cropin-helping-farmer-ecosystem/. Accessed on 28th August 2019.

supply chain. There are also discussions with state governments to adopt the same software. What is even more troubling is that 5,000 private seed companies have already come on board with this, profits of course being the motivation. The goal of this initiative, within two years, is to know how much of which seed is sold in which area.

However, it must be reiterated that farmers' community seed exchange of farmers' varieties has total reliability and transparency and there is no need for surveillance technologies to monitor and deny farmers' sense of quality and farmers' freedom.

It was recently reported that the 18,000-crore (180,000 million) seed industry has called for the introduction of a National Agricultural Policy and expedition of the 2019 Seed Bill and Biotech Regulatory Authority of India (BRAI) Bill to "ensure policy direction and predictability".[6]

The paradigm of seeds of surveillance is one of the combination of digital agriculture, data science and genetic engineering creating higher level of integration of abstractions and instrument for control. This is also why we see today that not only is the old toxic cartel recombining as a new one through mergers, it is moving beyond the convergence of seeds, pesticides and fertilisers to farm equipment, information technology, climate data, soil data and insurance.[7]

Seeds of Surveillance transform the knowledge and knowing from a participatory process of co creation with the earth, her biodiversity, her soils to take better care of the soil and the seed, based on seed and knowledge sovereignty into "data" for increased control over farming by the Poison Cartel, a continuation of the industrial food system, and the basis of an attempt at epistemic imperialism.

It is essential we resist these seeds of surveillance and defend the seeds of freedom.

[6] Shiva, V and Shiva, K. 2018. The Future of our daily bread: Regeneration or Collapse. Navdanya International / Research foundation for science, technology and ecology, https://navdanyainternational.org/publications/the-future-of-our-daily-bread-regeneration-or-collapse/

[7] Ibid.