



Issue Brief:

EXTRACTIVE AGRICULTURE

Revealing the harms of extractive agriculture
and providing actionable insights for investors

September 2024

TABLE OF CONTENTS

BACKGROUND	1
Introduction	1
Defining Extractive Agriculture	1
Adasina's Issue Goal	2
Our Social Justice Partners	3
Why Extractive Agriculture	4
The 7 Industries Fueling the Harms of Extractive Agriculture	6
Extractive Agriculture is a Social Justice Issue	7
INVESTOR CASE FOR ACTION	8
Finance is Failing to Price Extractive Agriculture “Externalities”	8
Extractive Agriculture Poses Urgent Climate Justice and Economic Stability Threats	9
Extractive Agriculture Poses Material Concerns for Investors	10
ADASINA'S RESPONSE TO EXTRACTIVE AGRICULTURE HARMS	12
Our Approach	12
Adasina's Extractive Agriculture Campaign	13
HOW YOU CAN TAKE ACTION WITH US	16
For Public Market Investors	16
For Partners & Allies	17
CLOSING REMARKS	18

Issue Brief: Extractive Agriculture

Background

INTRODUCTION

At Adasina, our investment strategy is informed by the wisdom of our [Social Justice Partners](#), who work directly with communities on issues of racial, gender, economic, and climate justice. One key issue they consistently flag for urgent attention is *extractive agriculture*. Despite limited scholarly attention to the topic, we learned from our partners that extractive agriculture intersects all social justice issues and impedes many — perhaps all — climate and sustainability goals.

This Issue Brief, guided by our Social Justice Partners' expertise, aims to reveal the harms of extractive agriculture and provide actionable steps for investors. It does not serve as a comprehensive catalog or analysis of those harms, as our purpose is not to produce an academic or journalistic report. Our goal is to inform, spark conversation, and mobilize collective action among fellow investors. We hope you find it insightful and encourage you to share it within your sustainability and justice investment networks. Most importantly, we encourage you to respond by applying your takeaways to your portfolios.



Photo source: Freepik (Licensed)

DEFINING EXTRACTIVE AGRICULTURE

Extractive agriculture poses one of the biggest obstacles to climate justice and sustainability.

A subset of industrial agriculture, extractive agriculture refers to the extreme dominance of only a few companies that control the global food and feed supply chain, whose business models directly drive biodiversity loss, excessive greenhouse gas emissions, elimination of smallhold farms, abuses of farm workers, proliferation of toxic and carcinogenic chemicals, topsoil loss, and other harms.

It is impossible to meet climate justice or sustainability goals without addressing extractive agriculture.

ADASINA'S ISSUE GOAL

To reduce the harms of extractive agriculture, we seek to invest in alignment with social justice movements, and inform and mobilize the finance community to invest for systemic change.

As cited throughout this Brief, the negative impacts created by extractive agriculture are well documented by numerous qualified sources. However, when Adasina sought investor resources, strategies, and products regarding extractive agriculture, we found none.

In response to this gap, and in keeping with our community-centered Social Justice Investing approach, we first partnered with [ETC Group](#) to inform our own strategy and particularly our Social Justice Investment Criteria and metrics. We subsequently implemented those criteria and metrics in our investment portfolios, and we partnered with ETC Group to publish Adasina's [Extractive Agriculture Investor Dataset](#). We also hosted a [panel](#) with ETC Group on the harms of extractive agriculture and sponsored [ETC Group's Food Barons 2022 Report](#). Additionally, we partnered with [Friends of the Earth](#) to create campaign goals and to develop investor and shareholder engagement strategies.

In further keeping with our Social Justice Investing approach, we share this Issue Brief to inform our clients and fellow investors, and provide actionable steps for climate- and sustainability-aligned investors to take in their own portfolios.

We hope you find these resources illuminating and useful. We invite you to take action, and [stay tuned](#) for further updates and investor mobilization campaign developments.



Photo source: Freepik (Licensed)

OUR SOCIAL JUSTICE PARTNERS



ETC Group

ETC Group is a global organization with direct farmer engagement worldwide. For nearly 40 years, they have documented the damaging effects of soil erosion, corporate consolidation, and technology infiltration in agriculture.

ETC Group's research spans from India and the Philippines to Canada and has enabled us to build an international coalition of climate justice advocates.



**Friends of
the Earth**

Friends of the Earth

For 50 years, Friends of the Earth has delivered important environmental victories – from protecting pristine rainforests and stopping reckless fossil fuel projects to reducing the use of dangerous pesticides that decimate bee and butterfly populations.

Friends of the Earth has been instrumental in helping us design our Extractive Agriculture Campaign goals and strategy.



Our engagement with Adasina in the Extractive Agriculture Campaign opened new horizons for ETC Group. Our research on the extractive agriculture screen enabled us to work with non-conventional partners in socially responsible impact investing, beyond our "comfort zone" as a civil society organization tracking corporate concentration in global food and agriculture and the impacts of new technologies on marginalized communities. We are inspired to go into this uncharted territory, assured that we are taking the journey with colleagues at Adasina Social Capital who share our commitment and passion to work for social and environmental justice, human rights and the defense of just and ecological agri-food systems and the web of life.

— NETH DAÑO
ETC Group



WHY EXTRACTIVE AGRICULTURE

As a set of practices, extractive agriculture is bad for our planet, bad for people, and a bad business model.



Extractive agriculture is responsible for more than one-third of global greenhouse gas (GHG) emissions¹; one of the biggest consumers of fossil fuels²; and a leading cause of approximately 80% of tropical forest loss and up to 90% of all deforestation³, along with corresponding water cycle disruption and soil erosion.



Extractive agriculture spreads carcinogenic pesticides and fertilizers into water supplies, disproportionately impacting poor and Black, Indigenous, and People of Color (BIPOC) communities.⁴ It consistently ranks on the U.S. Bureau of Labor Statistics (BLS) most dangerous jobs list⁵ and drives smallhold and BIPOC farmers off their land in favor of industrial mono-crop production.⁶



Contrary to claims about the industry “feeding the world,” industrial agriculture uses 75% of available agricultural resources to feed only 30% of the world, with increasingly unhealthy and highly processed food products.⁷ Extractive agriculture produces only a single food calorie per 10 fossil fuel calories used.⁸ Compared to 1940, when the agriculture sector produced 2.3 food calories per fossil fuel calorie,⁹ **extractive agriculture is 23 times less efficient than pre-WWII agricultural production.**

Furthermore, increasingly aggressive industry practices around seed ownership and other market consolidation impede free markets, competition, new business, and innovation. This is a concern because monopolistic control of a market stifles innovation and increases risks.¹⁰



Photo source: Freepik (Licensed)

THE 7 INDUSTRIES FUELING THE HARMS OF EXTRACTIVE AGRICULTURE

Adasina defines extractive agriculture as industrial agricultural practices that extract unsustainably from people and the planet, including extreme corporate concentration in the following industries:

<p>Agrochemicals & Pesticides</p> <p><i>Companies that manufacture or sell pesticides, herbicides, etc.</i></p> <p>⚠ Indicative Harm(s): Agrochemicals and pesticides pose chemical-related health impacts, such as endocrine-disrupting pesticides linked to breast cancer and reproductive damage.¹¹</p>	<p>Synthetic Fertilizers</p> <p><i>Companies that sell inorganic plant nutrients (e.g., nitrogen, phosphorus, and potassium) manufactured via energy-intensive chemical processes.</i></p> <p>⚠ Indicative Harm(s): Runoff from synthetic fertilizers contributes to excess algae growth, marine biodiversity loss, and overgrowth of bacteria. Synthetic fertilizers also disrupt soil biology, contribute to soil acidification, and pose human health risks from exposure to nitrosamine.¹²</p>	<p>Commercial Seeds</p> <p><i>Seeds created using commercialized molecular biotechnologies. Five leading pesticide companies dominate the world market for commercialized seeds/traits.</i></p> <p>⚠ Indicative Harm(s): Genetically homogenous crops are not resilient to extreme weather events or climate change, and require increased pesticide use. When GMO seeds mix with wild plant genes, it threatens reproduction and contributes to soil erosion.¹³</p>
<p>Livestock Breeding & Genetics</p> <p><i>A sector that focuses on breeding material and reproductive technologies. Industrial breeds require high-protein feeds, expensive medications, and climate-controlled housing.</i></p> <p>⚠ Indicative Harm(s): Industrial livestock genetics is the primary driver of the loss of farm animal genetic diversity worldwide, and industrial breeding contributes to environmental pollution, disease spread, and proliferation of parasites.¹⁴</p>	<p>Agricultural Commodity Traders</p> <p><i>Diversified firms that produce, procure, process, transport, finance, and globally trade grains, meat, livestock, etc. These firms are among the industrial food chain's most powerful and least transparent companies.</i></p> <p>⚠ Indicative Harm(s): Only six firms finance the entire food system, creating transparency and competition concerns with associated lawsuit, antitrust and monopoly hazards, and at least one divestment campaign.¹⁵</p>	<p>Gene Editing in Food</p> <p><i>Alteration of the genetic material of a living organism by inserting, replacing, or deleting a DNA sequence.</i></p> <p>⚠ Indicative Harm(s): Gene editing poses potential health risks and contributes to poverty by limiting subsistence farming for 570 million people globally, primarily impacting women, BIPOC, and smallhold farmers.^{16, 17}</p>
<p>Industrial Livestock & Meat Processing</p> <p><i>Industry that involves slaughtering, processing, packaging, and distributing animal protein. Increasingly, the industrial meat sector is also linked to producing “alternative proteins.”</i></p> <p>⚠ Indicative Harm(s): Contaminates food and water supply and is a major contributor to deforestation in South America and biodiversity loss in the Midwestern United States.¹⁸</p>		

Extractive Agriculture Is An Intersectional Issue

Extractive agriculture is an urgent, global climate justice issue. It is also fundamentally intersectional, perpetuating harm across the other three Adasina Social Justice Pillars: [Racial Justice](#), [Gender Justice](#), and [Economic Justice](#).



Extractive Agriculture drives deforestation, leading to the displacement and loss of livelihoods for local communities. These impacts are especially devastating for communities living in extreme poverty, as an overwhelming 90% of these populations depend on forests for their survival.¹⁹



Agricultural work is consistently ranked as one of the most dangerous jobs in the U.S.,²⁰ employing some of the most vulnerable workers, with 76% of workers being foreign-born, often lacking healthcare and immigration security.²¹



The use of pesticides and agrochemicals poses specific risks to women, girls, and children of all genders, who are more susceptible to health issues resulting from chemical exposure,²² with BIPOC communities being disproportionately affected.²³



The interconnected effects of climate change and industrial agriculture disproportionately impact women, girls, and gender-diverse people. Women are 14 times more likely to die in a climate change-related disaster than men, and represent 80% of people displaced by extreme weather.²⁴

The Investor Case for Action

FINANCE IS FAILING TO PRICE EXTRACTIVE AGRICULTURE EXTERNALITIES

Despite growing awareness of the harms of extractive agriculture, public markets have so far failed to price the risks associated with the seven component industries, or with individual corporations.

Extractive agriculture is beginning to face increased legal and public scrutiny. In April 2024, New York Attorney General Letitia James announced a lawsuit against JBS, the world's largest meat company, for making misleading statements about greenhouse gas emissions commitments.²⁵ The documentary [Food, Inc. 2](#), released in April 2024, underscores the harms of extractive agriculture and links corporate consolidation to the food industry's racial, economic, and climate ills. The sources cited throughout this Issue Brief are an indicative sample of the growing body of evidence of the human, environmental, and economic damage caused by extractive agriculture.



Adasina believes the evidence of extractive agriculture's harms and risks to the climate, sustainability, biodiversity, and human health is overwhelming. However, until now investors have had few, if any, resources framed in terms they could use to inform their investment decisions. Markets have also not yet priced the true costs or risks associated with extractive agriculture. Currently, the costs of these harms and risks are passed on to the public and investors without any clear information or compensation.

— Renee Morgan
Adasina Social Capital



Investors have the right, and fiduciaries have the responsibility, to act on all legitimate, material, publicly available information regarding an investment's material facts. We believe investors should take action to reduce exposure to extractive agriculture's harms, risks, and unpriced costs in their portfolios.



Photo source: [Li-An Lim](#) on Unsplash

EXTRACTIVE AGRICULTURE POSES URGENT CLIMATE JUSTICE & ECONOMIC STABILITY THREATS

It is impossible to achieve net zero, sustainability, biodiversity, and food security goals without curtailing extractive agriculture.

- **Climate, Sustainability, & Biodiversity Hazards**

Through increased greenhouse emissions, excess energy use, land loss, biodiversity loss, and other mechanisms, extractive agriculture undermines major climate goals – including the [United Nations's Sustainable Development Goal 13](#)²⁶ calling for urgent action to combat climate change and its impacts – and threatens life in Earth's biosphere. Therefore, it is existentially important for investors working toward a more just and sustainable future to stop investing in extractive agriculture. Investors must hold companies in the extractive agriculture industries accountable to transition to less extractive business models and adopt climate-responsible practices.

- **Environmental & Economic Hazards**

Extractive agriculture causes land degradation, leading to food insecurity,²⁷ for the 2.4 billion people globally who already lack consistent access to food.²⁸ Practices such as intensive cultivation, overgrazing, and deforestation exacerbate this issue, resulting in higher healthcare costs, reduced workforce productivity, and increased poverty levels.²⁹ Consequently, investors who wish to avoid or mitigate the detrimental economic impacts of extractive agricultural practices are well advised to avoid supporting companies that engage in these harmful activities, or to challenge those corporations to adopt more holistic business models.

Beyond its direct and catastrophic effects on our environment, communities, and economies, extractive agriculture is associated with antitrust, worker safety, and human rights and gender related hazards, and is drawing legislative, regulatory, and public scrutiny.

- **Antitrust**

Antitrust scholars generally deem markets to be effective monopolies or “tight oligopolies” if the top four firms control more than 40% of the market.³⁰ The extractive agriculture industry exhibits increasing concentration, meeting or exceeding that threshold in all seven problematic industries identified here, as well as at least two more — farm machinery and animal pharma.³¹ This significant level of influence enables these few entities to control markets, agricultural research, and policy development, increasing the likelihood of power abuse, price collusion, and anti-competitive practices.³² In response, Congress and the USDA have already taken steps to address corporate consolidation in the food industry.³³ Commodity traders in the sector also face significant legislative, business, and environmental risks, which have led to divestment campaigns.³⁴

- **Worker Safety**

The agriculture sector is ranked among the most dangerous in the U.S., according to the Bureau of Labor Statistics (BLS).³⁵ Although the BLS does not distinguish extractive agriculture from sustainable agriculture or agriculture in general, three of the seven problematic industries — agrochemicals & pesticides, synthetic fertilizers, and industrial livestock & meat processing — pose direct hazards to worker health and safety. One company has paid over \$10B for cancer claims linked to its pesticide.³⁶ Additionally, the COVID-19 pandemic, particularly the Omicron variant, exposed safety vulnerabilities in the meat processing industry, resulting in 59,000 infections and 269 deaths.³⁷ Investors should recognize that proactive safety measures safeguard workers and operations, whereas neglecting worker safety can lead to higher costs and reputational harm. Companies prioritizing workforce well-being are likely better investment choices.

- **Human Rights**

In the United States, 76% of the 2.4 million farmworkers are immigrants, mostly from Mexico.³⁸ Migrant laborers in the US and around the world are vulnerable to “agricultural exceptionalism undergirded by structural racism,”³⁸ labor abuses including child labor violations^{40,41} and trafficking.^{42,43} Globally, 1.6 billion people, including nearly 70 million Indigenous Peoples, rely on forest resources for their livelihoods,⁴⁴ and 90% of people living in extreme poverty depend on forests for some of their livelihoods.⁴⁵ Extractive agriculture drives deforestation, leading to the loss of vital resources for communities that depend on forests, which in turn pushes them further into poverty.

As a result of these and other human rights exposures, companies engaging in the highly concentrated seven problematic industries in extractive agriculture may carry undisclosed and unquantified financial risk, as they may face potential lawsuits, regulatory action and/or public disfavor, and reputational damage that can severely impact profitability and pose significant unpriced business and market risks.

- **Gender**

Extractive agriculture exacerbates gender inequality. Direct chemical exposure ([see Agrochemicals & Pesticides Indicative Harms](#)) from fieldwork or proximity to treated crops exposes all individuals with reproductive organs to endocrine-disrupting pesticides, resulting in increased reproductive risks which disproportionately affect women and girls.⁴⁶ Beyond the direct harm to human health, this also exposes companies to regulatory, criminal, or civil legal actions due to the health hazards posed to workers and nearby residents. Moreover, we anticipate gender-concentrated harms could lead to heightened scrutiny and stricter regulations, based on historical regulatory responses to workplace discrimination and the growing emphasis on gender-focused considerations in ESG criteria by major investors. Consequently, companies failing to address these issues potentially face significant reputational damage, legal challenges, and financial risks.

Investors should be aware of these potential liabilities and consider the long-term sustainability and ethical practices of companies in the extractive agriculture sector.



Photo source: [Kiyoshi](#) on Unsplash

TOWARD A JUST TRANSITION

Investing in extractive agriculture exacerbates climate risks and perpetuates economic, racial, and gender inequities that necessitate a Just Transition.

A [Just Transition](#) requires careful examination of social, economic, and environmental factors to ensure that communities impacted by extractive agriculture are not disproportionately affected by any shifts to sustainable practices.

Because a Just Transition to a safer, healthier, and more prosperous future for everyone benefits both impact-driven and returns-focused investors, all investors are well advised to address these issues in their portfolios. A comprehensive approach comprises both environmental sustainability and social responsibility, reducing potential negative impacts on people and the planet, along with associated portfolio risks. This includes both demanding that corporations discontinue and desist from unjust and extractive practices, and supporting companies implementing initiatives that promote equitable economic value creation — particularly those centering marginalized populations.

How Adasina Is Taking Action

OUR APPROACH

Adasina believes that creating a safe and inclusive society requires centering and actively listening to the communities most impacted by the systemic oppressions fueled by capital markets.

As a public equities impact asset manager with a global strategy, we are committed to making large-scale, systemic change through investments in public markets.

Our approach begins by partnering with social justice movements to identify critical metrics not yet recognized or priced in public markets. We then prove social justice metrics are both material and investable by being the first asset manager to apply them to our own public equities portfolios. Finally, we share actionable issue-specific datasets, and mobilize other investors to act in solidarity with social justice movements to have large-scale systemic impact.



Photo source: Freepik (Licensed)

ADASINA'S EXTRACTIVE AGRICULTURE CAMPAIGN

In response to an absence of investor focus on the harmful effects of industrialized agriculture on communities and the environment, and in collaboration with our Social Justice Partners, Adasina is taking action to address the injustices, inefficiencies, and environmental damage caused by the seven extractive industries overwhelmingly dominating the global food system.

To that end, we have created a campaign to mobilize investors and significantly reduce the harms of extractive agriculture before it is too late.

To date, we have achieved the following milestones:

- **Learning from our Social Justice Partners, and adopting their preferred language:** Our first step in aligning with social justice movements is centering them and their perspectives. Through partnerships with ETC Group, Friends of the Earth, and others, we learned about the extreme market concentration, problematic industries, and intersectional harms that collectively define extractive agriculture. In collaboration with our

Social Justice Partners, we chose to use their preferred language — such as *extractive agriculture* and *agroecology* — to honor their deep knowledge and relationships, foster mutual understanding and collaboration, and provide a foundation for our work together toward large-scale, systemic change. Adopting terms championed by our Social Justice Partners also equips us to more effectively communicate these harmful impacts of unsustainable industrial agriculture practices to other investors, and mobilize investor support for equitable, sustainable food systems.

- **Creating and implementing the Extractive Agriculture Investment Screen:** Adasina funded a nine-month investigation on climate, racial, gender, and economic injustices perpetrated by extractive agriculture. With research conducted by ETC Group, this investigation yielded an Extractive Agriculture Investment Screen for publicly traded companies based on corporate concentration across seven problematic agricultural industries. We have implemented the Screen in our portfolio by excluding the identified companies.
- **Funding ETC Group’s *Food Barons 2022 Report*:** We contributed to and secured funding for our Social Justice Partner ETC Group’s [Food Barons 2022 Report](#), examining the few corporations that control key industrial agricultural sectors and engage in extractive agricultural practices.
- **Publishing the Extractive Agriculture Investor Dataset:** Drawing on findings from the *Food Barons 2022 Report* and our own research, we developed the first-ever [Extractive Agriculture Investor Dataset](#).
- **Educating and mobilizing investors on extractive agriculture materiality:** Adasina conducted and participated in a series of initiatives to raise awareness about the impacts of extractive agriculture on people and the planet. These included:
 - **Investor Education Panel:** Adasina and ETC Group hosted a [panel](#) to mobilize investors to recognize and act on the material consequences of extractive agriculture.
 - **Industry Events:**
 - Along with Friends of the Earth and Domini, Adasina participated in the Interfaith Center on Corporate Responsibility’s (ICCR) 2023 event, [A Seat at the Table: Centering Workers to Build a More Inclusive and Equitable Economy](#), where we explored the intersectional impacts of extractive agriculture.



- At the [Adasina-ETC Group Impact Experience](#), Adasina staff members joined with other investors and social justice movement leaders to discuss the racial, gender, economic, and climate repercussions of the extractive "food chain" model of agriculture.



We will formally announce the next phase of our Extractive Agriculture investor mobilization campaign in the second half of 2024. All investors are welcome to join. We invite you to contact us at invest@adasina.com to express your interest.

How You Can Take Action With Us

FOR PUBLIC MARKET INVESTORS

Public market investors can take action ***right now*** to help curtail extractive agriculture.

- Access the [Adasina Extractive Agriculture Investor Dataset](#)
- Evaluate your portfolio for [extractive agriculture holdings](#)
- Sign the [Adasina Extractive Agriculture Investor Statement](#)
- Share widely with your network
- Join the [Adasina mailing list](#) to receive further updates and education on this and other Social Justice Investing topics
- Invest in Adasina investment products, or ask your financial advisor to do so. Reach out to invest@adasina.com to learn more

Investors can support systemic change through:



Exclusion

Identify companies to exclude from your investment portfolio using [Adasina's Extractive Agriculture Investor Dataset](#).



Engagement

Using the investor and business case set out in the [Extractive Agriculture Investor Statement](#), engage with companies listed in the Adasina Extractive Agriculture Investor Dataset, and insist that corporations engaging in extractive agricultural practices address:

- Greenhouse gas emissions**, by adopting disaggregated [scope 1-3 disclosure](#) and scientifically verified, Paris Agreement-aligned reduction targets.
- Deforestation and biodiversity loss**, by discontinuing deforestation activities, including in supply chains; reducing reliance on industrial monocropping, synthetic pesticides, and fertilizers; and minimizing irrigation through drought-resistant crops, soil health improvement, rainwater harvesting, and agroecological practices, particularly in water-stressed areas.
- Indigenous Peoples' and local communities' rights**, by implementing the best standards of [Free, Prior, and Informed Consent](#) as a means to reduce human rights infringements, including community displacement and health harms from pesticides, fertilizers, and other toxic agents.

These initial actions were developed in collaboration with [Friends of the Earth](#). Stay tuned for additional recommendations as our work progresses.

FOR PARTNERS & ALLIES

Extractive agriculture affects everyone — you don't have to be an investor to take action.

Partners and allies can help increase awareness of extractive agriculture, and demand solutions and accountability:

- Support the work of our Social Justice Partners**

Organizations like [ETC Group](#) and [Friends of the Earth](#) are leading the way to curtail extractive agriculture through their robust global networks and research efforts.

- Take action with your finances and in your community**

Identify companies profiting from extractive agricultural practices using Adasina's [Extractive Agriculture Investor Dataset](#). Consider changing your purchasing and banking decisions; volunteer with organizations mitigating the harms caused by extractive agriculture; and support federal, state, and local public policies that end extractive agricultural practices.

- Adopt shared vocabulary**

Honor the experience and knowledge of the people, communities, and social justice movements working to end extractive agricultural practices by adopting the language they advocate.

- Share widely with your network**

Share this Issue Brief and your own discoveries about extractive agriculture with the people around you, so they can also take informed action.

- Connect with us**

Subscribe to the [Adasina mailing list](#) for further updates and education on how investors, partners, and allies can end extractive agriculture practices, as well as other Social Justice Investing topics.

Closing Remarks

Our lives and societies literally depend on agriculture. Yet as we have surveyed in this Issue Brief, there is an abundance of evidence that a safe, healthy, sustainable future is not attainable without curtailing extractive agriculture.

We believe investors have the right — and some have the fiduciary duty — to utilize all legitimately available and material data in making investment decisions. The importance of that prerogative is heightened in the wake of rulings by the Supreme Court of the United States which were issued as this Issue Brief was being finalized. We urge you to seek out additional information, learn from and support social justice organizations and others at the forefront of work to curtail extractive agriculture and other harmful corporate practices, and engage in collective initiatives with Adasina and other public equities investors to demand transparent, responsible practices from the companies in your portfolio.



Photo by: [Gabe Gomez](#)

Endnotes

1. Food and Agriculture Organization, “[Food Systems Account for More Than One Third Of Global Greenhouse Gas Emissions](#),” FAO.org (March 09, 2021).
2. Climate Policy Watcher, “[Fossil Fuel Use in Agriculture](#),” Climate Policy Watcher (December 5, 2023).
3. Toner Buzz, “[Deforestation Facts and Statistics 2024 \[Global Data\]](#),” Toner Buzz (September 14, 2023).
4. Beyond Pesticides, “[Black, Indigenous, and People of Color Community at Disproportionate Risk from Pesticides, Study Finds](#),” Beyond Pesticides (April 22, 2022).
5. CNBC, “[The 10 Most Dangerous Jobs in America](#),” CNBC (December 28, 2019).
6. Tracy Heim, “[The Indigenous Origins of Regenerative Agriculture](#),” National Farmers Union (October 12, 2020). ; Leah Douglas, “[U.S. Black Farmers Lost 326 Bln Worth of Land In 20th Century](#),” Reuters (May 2, 2022).
7. ETC Group, “[Food Barons Report](#),” ETC Group (September 07, 2022).
8. Pesticide Info, “[Industrial Agriculture](#),” Pesticide Info (n.d.).
9. Pesticide Action Network, “[Chemical Reliance in Industrial Ag](#),” Pesticide Action Network (n.d.).
10. Austan Goolsbee, “[Big Companies Are Starting to Swallow the World](#),” The New York Times (September 30, 2020).; Sherman, Eric, “[Business Consolidation Is Crushing the Economy And People](#),” Forbes, (August 29, 2019).
11. Polyxeni Nicolopoulou-Stamati, et al, “[Chemical Pesticides and Human Health: The Urgent Need for a New Concept in Agriculture](#),” National Library of Medicine (July 18, 2016).
12. Bashar Khiatah, “[The Health Impacts of Chemical Fertilizers](#),” Amos Institute (n.d.).
13. Charli Shield, “[Who Controls the World's Food Supply?](#),” DW, (April 8, 2021).
14. ETC Group, “[Livestock Summary](#),” ETC Group (September, 2022).
15. ETC Group, “[Food Barons Report](#),” ETC Group (September 07, 2022).
16. Friends of the Earth, “[Gene Editing Report](#),” Friends of the Earth (September 12, 2018).
17. ETC Group, “[Food Barons Report](#),” ETC Group (September 07, 2022).
18. Clean Water Action, “[The Meat Industry](#),” Clean Water Action (n.d.).
19. Food and Agriculture Organization, “[State of the World's Forests Report](#),” The United Nations (2020).
20. CNBC, “[The 10 Most Dangerous Jobs in America](#),” CNBC (December 28, 2019).
21. Ann Marie Cheney, et al, “[The Intersection of Workplace and Environmental Exposure on Health in Latinx Farm Working Communities](#),” National Library of Medicine (October 19, 2022).
22. Birtukan Atinkut Asmare, et al, “[Women in Agriculture: Pathways of Pesticide Exposure, Potential Health Risks And Vulnerability in Sub-Saharan Africa](#),” Springer Open (13 September, 2022).
23. Beyond Pesticides, [Black, Indigenous, and People of Color Community at Disproportionate Risk from Pesticides, Study Finds](#), Beyond Pesticides (April 22, 2022).
24. Carla Pascoe Leahy, “[Women Are 14 Times More Likely To Die in a Climate Disaster Than Men](#),” United Nations Disaster Risk Reduction (May 30, 2024).
25. Whitney Bauck, “[New York Is Suing the World's Biggest Meat Company. It Might Be a Tipping Point for Greenwashing](#),” The Guardian (April 5, 2024).
26. Office of the United Nations High Commissioner for Human Rights, “[SDG 13: Climate Action](#),” OHCHR Website (n.d.).
27. Gauri Shankar Gupta, “[\(PDF\) Land Degradation and Challenges of Food Security](#),” Review of European Studies, Research Gate (January 25, 2019).
28. The United Nations, “[Extreme Poverty in Developing Countries Inextricably Linked to Global Food Insecurity Crisis](#),” United Nations Website (October 11, 2023).
29. The United Nations, “[Extreme Poverty in Developing Countries Inextricably Linked to Global Food Insecurity Crisis](#),” United Nations Website (October 11, 2023).
30. The Guardian, “[Revealed: The True Extent of America's Food Monopolies, and Who Pays the Price](#),” The Guardian (July 14, 2021).
31. ETC Group, “[Food Barons Report](#),” ETC Group (September 07, 2022).

32. Claire Kelloway, "[Consolidation in America's Food Supply Chains: A Key Factor in Price Gouging, Shortages, and Inequality](#)," Open Markets Institute (January 19, 2022).
33. Claire Kelloway, "[Consolidation in America's Food Supply Chains: A Key Factor in Price Gouging, Shortages, and Inequality](#)," Open Markets Institute (January 19, 2022).
34. Joseph Baines & Sandy Brian Hager, "[Commodity Trading: The Shadowy Industry Destroying the Planet](#)," OpenDemocracy Website (May 04, 2021).
35. CNBC, "[The 10 Most Dangerous Jobs in America](#)," CNBC Website (December 28, 2019).
36. Patricia Cohen, "[Roundup Maker to Pay \\$10 Billion to Settle Cancer Suits](#)," New York Times (June 24, 2020).
37. Leah Douglas, "[Nearly 90% Of Big U.S. Meat Plants Had Covid-19 Cases in Pandemic's First Year - Data](#)," Reuters Website (January 14, 2022).
38. Ann Marie Cheney, et al, "[The Intersection of Workplace and Environmental Exposure on Health in Latinx Farm Working Communities](#)," National Library of Medicine (October 19, 2022).
39. Bloss JE, LePrevost CE, Zahra AG, et al., "[Advancing the Health of Migrant and Seasonal Farmworkers in the United States: Identifying Gaps in the Existing Literature](#)," Sage Journals (2021).
40. Oxfam International, "[Millions Of Migrant Farm Workers Exploited In Europe's Fields, Says Oxfam](#)," Oxfam Website (June 04, 2024).
41. Kate Gibson, "[Tyson Foods and Perdue Farms Face Federal Probe Over Possible Child Labor Violations](#)," CBS News (September 25, 2023).
42. Ximena Bustillo, "[A Human-Trafficking Case Exposed Farmworker Abuses. The Government is Promising Change](#)," NPR (May 27, 2022).
43. Cara Casey-Boyce, "[Tackling Exploitation Of Migrant Workers in Agriculture](#)," Ethical Trading Initiative (July 28, 2023).
44. Mikaela Weisse, et al, "[Forest Pulse: The Latest on the World's Forests](#)," World Resources Institute (April 4, 2024).
45. Valerie Hickey, "[Forests for Healthy People, Economies, and Ecosystems](#)," World Bank Blogs (November 27, 2023).
46. Reini W Bretveld, "[Pesticide Exposure: The Hormonal Function of the Female Reproductive System Disrupted? - PMC](#)," National Library of Medicine (May 31, 2006).