



ALTERNAUTAS

(Re)Searching Development: The Abya Yala Chapter

Vol.4 – Issue 2 [December 2017]

Alexander Liebman and Henry A. Peller

***¿Y si no en Habana?* Landless science, peasant struggle, and capitalist development in Colombia.**

Alternautas is a peer reviewed academic journal that publishes content related to Latin American Critical Development Thinking.

It intends to serve as a platform for testing, circulating, and debating new ideas and reflections on these topics, expanding beyond the geographical, cultural and linguistic boundaries of Latin America - Abya Yala. We hope to contribute to connecting ideas, and to provide a space for intellectual exchange and discussion for a nascent academic community of scholars, devoted to counter-balancing mainstream understandings of development.

How to cite:

Liebman, A. & Peller, H. A. (2017), *¿Y si no en Habana? Landless science, peasant struggle, and capitalist development in Colombia*, *Alternautas*, 4(2), 92-113. URL : <http://www.alternautas.net/blog/2017/10/31/y-si-no-en-habana-landless-science-peasant-struggle-and-capitalist-development-in-colombia>

Editor : Alternautas
<http://www.alternautas.net>
London, UK.
ISSN - 2057-4924

ISSN - 2057-4924

ALEXANDER LIEBMAN AND HENRY A. PELLER¹

***¿Y si no en Habana?* Landless science, peasant struggle, and capitalist development in Colombia²**

On November 30th 2016, the Colombian government and FARC signed a peace agreement despite its narrow rejection in a national plebiscite two months earlier. The Havana Accords promise to end five decades of civil war. Among the FARC's central objectives in the negotiations was agrarian reform. This, in order to resolve the highest land inequity in the Western Hemisphere and the accumulated centuries of violent injustice onto the rural poor. About 80% of agricultural land in Colombia is concentrated among 14% of landowners (USAID 2010). Land is most often used for export production and extensive cattle production. From the Andean highlands to the Eastern Plains, cattle dominate the landscape, occupying 80% of agricultural land, often the most productive areas. Another 40% of Colombian territory is under contract with multinational productions for agriculture, forestry, or mining export (OXFAM 2013). Inequality of land access is also borne unequally across race and gender – Afro-Colombians and women facing the highest levels of

¹ ALEXANDER LIEBMAN is a researcher in political ecology and plant-soil agroecology, currently finishing a MSc in agronomy at the University of Minnesota.

HENRY ANTON PELLER is a doctoral student in soil science at Ohio State University. He works on number of agroecology, climate justice, and food sovereignty projects in the Americas.

² This article was originally published in <http://www.alternautas.net/blog/2017/10/31/y-si-no-en-habana-landless-science-peasant-struggle-and-capitalist-development-in-colombia> on October 31st, 2017.

internal displacement due to rural conflict and agri-business land accumulation (Gomez 2012).

Unfortunately, among the consequences of post-plebiscite negotiations include the substantial weakening of agrarian reform. There is little to suggest that change to the *status quo* is on the horizon with the Havana Accords, a conclusion that the anti-capitalist left (and actually many more liberal Colombian intellectuals) had reached long before the peace doves and white linens.

We became interested in the question of agrarian reform in Colombia while conducting soils research at the International Center for Tropical Agriculture (CIAT) – the South American outpost of the world’s largest agricultural development institute, the Consultative Group in International Agriculture Research (CGIAR). During a semester of research on soil carbon dynamics in grazed agroforestry systems, we kept wondering: If not agrarian reform, what do foreign and Colombian elites offer as a resolution to the deep contradictions of rural Colombia? The contradictions were glaring – food production on precarious hillsides, alluvial valleys dominated by extensive monocultures, masses of displaced rural people surviving in the urban informal economy.

More concretely, what did the CGIAR and CIAT have to say about land?

After all, CGIAR’s stated mission is: ‘to advance agricultural science and innovation to enable poor people... [to] share in economic growth and manage natural resources in the face of climate change and other challenges’ (CGIAR 2016). After analyzing a decade of public archives from CGIAR and CIAT, our findings support our initial hypothesis: on land, CGIAR science maintains abject silence. It would follow that land must not be a challenge that rural poor people face in Colombia.

How do we explain this silence, and what fills the void? More precisely, what does ‘landless science’ tell us about the relationship between science and capitalism in Colombia? In this piece, we synthesize key features of capitalist development and land conflict in Colombia. We then move to discuss the ideological and political

contributions of international agro-science in this history.³ We argue that CGIAR science serves precisely to relieve the contradictions of rural Colombia *without* addressing land.

Historical Political Economy of Colombian Agriculture and Land

How can we explain the roots of Colombia's land conflict, and what does this have to do with the failed plebiscite in November 2016? We begin at the onset of colonial violence. Many pages of Colombia history through the 16th to the 20th century are scribed with genocide and enslavement of indigenous peoples, plunder of raw materials, and colonization of arable land. Semi-feudal social relations characterized the Colombian countryside, with large-scale haciendas and latifundios⁴ in fertile valleys, and a mix of impoverished peasants in the peripheries. In the late 19th century, coffee bean production became the key crop that integrated Colombian capital into global agro-commodity markets, which have diversified and expanded ever since.

During the 20th century, there has been little change in the general strategy for capitalist development. The template is to convert oligarchic and upper peasant holdings into export-commodity operations, while enrolling middle peasants into

³ For examples of a breadth of alternative agronomic institutions and agroecological science and social movements operating in Colombia, see articles such as Leon-Sicard et al. 2017, Altieri et al. 2017, and university and autonomous organizations such as the agroecology working group at UNAL Palmira, Agencia Prensa Rural, Fensuagro, Red Nacional de Agricultura Familiar, and the Instituto de Agroecología Latinoamericano "María Cano"

⁴ *Latifundios* are large landholdings, dependent on large numbers of agricultural laborers, as opposed to *minifundios* or peasant landholdings that are smaller and have historically comprised the basis of Colombia's subsistence economy (USAID (2010)). *Latifundios* formed the basis of conservative rural political relations in post-colonial Colombia, geographically located in the eastern cordillera regions of Santander, Cundinamarca, and Boyaca (Hylton 2014). The historical dynamics of *latifundios*, their conflict with urban finance and the rise of Colombian export commodity production, and 20th century associations with paramilitary, extrajudicial violence, are outside of the scope of this paper but have been explored in-depth by Machado (1999), Grajales (2011), and Hylton (2014).

the supply chain and deliberately eliminating lower peasants.⁵ The first phase of development began with a 1936 law to displace sharecroppers from latifundios. After World War II, Colombia was the first country in the world to receive economic and military loans from the World Bank in order to reduce “revolutionary pressures” (Chasteen, 2001: 277). During the next decades, debate raged over the nature and content of the reforms. Keynesians placed the lower and middle class peasants at the center of development strategy to produce cheap foods and relieve rural poverty. Winning the debate, however, were monetarists who argued for large-scale export enterprises. Lauchlin Currie, a chief architect of the World Bank development policy, proposed a pathway of ‘accelerated economic development’ via a process that De Janvry characterizes as “the elimination of the peasantry, the strengthening of commercial farms, and the absorption of the rural poor into the urban labor force” (De Janvry 1981, 162). On its own terms, the strategy has been enormously successful in rapidly expanding the agro-export sector of Colombia.

On the terms of the rural poor, however, the story is different. As Hector Mondragon writes:

Currie and today’s dominant class in Colombia believed in trying to remove the ‘primitive’ farmer by ‘pull’ or by ‘push’... Unable to remove the farmers by consent, the [civil] war became a programme of ‘deliberately accelerated mobility’, or one in which coercion replaced economic forces (Mondragon 2000, in Brittain 2005).

⁵ We employ the distinctions of ‘upper’, ‘middle’, and ‘lower’ peasants to highlight class mobility (or lack thereof) among peasants in rural Colombia during the 19th and 20th centuries. This corresponds with a description of ‘junker’ versus ‘farmer’ patterns of development (Lenin 1974). In the ‘farmer’ pattern, some peasants are able to accumulate capital and concentrate the means of production, corresponding to an ascendancy into a rural bourgeois class. Meanwhile, the majority of peasants lose control of the means of production and maintain a precarious, subsistence existence or are proletarianized (De Janvry 1978). The rural bourgeois ‘upper’ and ‘middle’ peasants largely share political control with bourgeois interests.

Alongside expansion of capitalist agriculture, a ‘second Colombia’ has persisted in the rural periphery. These regions inhabited by lower peasants have received minimal state investments in infrastructure and public services. Parallel to the initial influx of World Bank development funds, conflict between agrarian elites and rural poor sparked multiple uprisings, such as the violent strikes against United Fruit Company and protracted violence during the 1940s and 50s. Many of the components that would come to define Colombia’s civil war – extrajudicial killings by secret police, violent expansion of agricultural territory, and organized self-defense among peasant groups – emerged during this time.

Since its founding in the 1960s the FARC embodied the latter tendency of peasant self-defense by setting up armed rural communes that threatened large landholders and state control. While the FARC’s demands for land redistribution resonate today, they failed to transform guerilla activity into a tractable worker-peasant political alliance. This is largely due to tactics such as kidnappings and drug dealing which eroded public support. And the FARC’s failure must be understood within the brute repression by paramilitaries in collusion with the Colombian state and U.S. imperialism (Dudley 2006, 93).

However, the FARC was not alone in the idea of agrarian reform. Liberal Colombian governments have intermittently viewed land redistribution as a way to ameliorate rural conflict. Major government-led agrarian reform programs were established in the 1930s and 60s. Right wing reactions, in turn, subverted these programs in the interest of existing landholders. For example, President Pastrana (1970-1974) coordinated a national group of cattle ranchers (FEDEGAN), agribusiness executives, landlords, and urban industrialists to undo comprehensive lands reforms orchestrated by President Carlos Lleras Restrepo in 1961 under Law 135. The so-called 1972 “Chicoral Pact” group institutionalized rural land tax structures, while in exchange landowners were given favorable credit terms, loans, and protection from redistributive land reforms. Thus, ten years after the passage of Law 135, only about 1% of land identified for distribution had been expropriated.

Reforms and counter-reforms further concatenated the trajectories of ‘two Colombias’ that would strengthen FARC’s popularity in a divested countryside. And so today, it is no surprise that October 2016’s plebiscite vote split the electorate down the middle. The rural poor of ‘second Colombia’ voted for the peace accords; urban areas and major agribusiness departments of the ‘first Colombia’ overwhelmingly voted in opposition to the armistice.

The Land Question in Development Theory

The debate over land reform takes a particular form within international development theory. Exploring its basic contours provides context for both Colombian development trajectories and international science’s conspicuous silence on the ‘land question’. A window into these phenomena is through a longstanding and ongoing debate in development economics surrounding the relationship of farm size to productivity and rural economic growth. In ‘labour-plentiful developing rural areas’, empirical studies have demonstrated an inverse relationship (IR) between farm size and land productivity (Lipton 2009).⁶ The IR is largely explained by transactional costs per unit production in developing countries, in which small, labor intensive farms can take advantage of family labor, informal relationships, aggregated, local knowledge, and adaptable systems. In developed countries with labor scarce, rural regions, the relationship is reversed and a direct relationship (DR) between farm size and productivity exists. In these scenarios, capital-oriented investments provide the highest returns. Small farms have advantages in managing labor, whereas large farms have advantages in managing

⁶The full debate regarding the existence of the inverse-relationship and its potential factors is wide-ranging, complex, and outside the scope of this paper. See Carter 1984, Chattapoadhyay and Sengupta 1997, Guarav and Mishra 2015 for a series of empirical studies at various scales and Bellemare 2012 on arguments *against* using the inverse relationship as a measure of peasant productivity.

capital. Counter-arguments generally identify market failures (sub-optimal use of labor), omitted variables such as soil properties (large farms are likely to cultivate larger percentages of suboptimal land), or measurement error (over-reporting of land size due to its relationship to prestige and political power) as main explanations for a perceived, yet false, increase in productivity on small farms (Bhalla and Roy 1998, Bellemare 2012).

However, in recent decades, major international development organizations such as the FAO and World Bank have avoided the IR-DR debate entirely, advocating for market-based land distribution. Whatever the effect of farm size or land reform on productivity, these ideas are irrelevant to the theory that unimpeded markets are the *causa sui* of optimum land allocation. To borrow the language from an FAO document published in 1997 tracing their own historical stance to land policy,

The 1945 Quebec Conference that founded FAO stated: 'Recourse to land reform may be necessary to remove impediments resulting from an inadequate system of land tenure.' [By the] 1966 FAO World Conference on Land Reform the consensus [was] that land reforms were important [for] equity and economic growth in rural areas. [I]n 1979 FAO's first World Conference on Agrarian Reform and Rural Development [produced a] plan of action [including] access to land, water, and other natural resources [with] people's participation. [However], land policies can only take shape as part of a larger economic and political canvas...agricultural policies during the 1970s and 1980s were mainly characterised by special agricultural programmes such as price controls, subsidised agricultural services and inputs, state intervention and regulations to protect domestic markets and *land immobility through agrarian reform regulations which intimidated investments*. The programmes proved to be unsustainable. Thus, we enter into the current period, following the collapse of the Berlin wall, with a return full circle to the marketplace to be the ultimate distributor of land (Herrera et al. 1997).

Taken at face value, neoliberal logics of land distribution should theoretically inform whether the inverse relationship between farm size and productivity holds true. That is, if small farms are more efficient at production, well-functioning land

markets should transfer land from the land-rich to the land-poor. The reality is opposite. Land markets are segmented and segregated throughout Latin America, and thus an exclusionary, two-tiered system of land transfers has flourished. Cadastral survey and titling promotes formal land market and capital accumulation for the land-rich, who further leverage their power to restrict transactional deals. Poor peasants meanwhile conduct informal transactions and are precariously susceptible to dispossession (Baranyi et al. 2004).

Neoliberalism has exacerbated this kind of land market. Within neoliberal theory, vestigial attempts at state-assisted reform (thwarted as they are in Colombia by the *latifundio* elites) are seen as an obstacle to the 'true' functioning of the market. The market, it is argued, will foster a more equal distribution of land (Lahiff et al. 2007). Among the policies considered damaging to market functioning are prohibitions on land rentals and sharecropping, limits on land sales, maximum size limits on land ownership, and price ceilings on land sales (Baranyi et al. 2004).

In practice, the World Bank's market-based policies, as they became implemented in Colombia, prove to have a disastrous effect on the rural poor. A 2004 report by the International Development Research Centre states that land sales by Latin America's peasantry are often "...distress sales, compelled by either excessive indebtedness or the lack of support for cooperative production (in the form of credit, technical assistance or market channels) under the new policy regime" (Baranyi et al. 2004). How, then, have recent market-based land reforms taken shape in Colombia?

Contemporary Colombia and the ZIDRES

Contemporary land reform attempts in Colombia have followed this neoliberal shift (Pereira and Fajardo 2015). With the embrace of World Bank pilot projects, a market-based strategy offers a minor role for state institutions and are aimed at high-performing, mid-sized entrepreneurial farmer. In the 1980s and 1990s the

government acquired Bank funds for “associations of production”, aimed to create strategic alliances between large-scale farmers, small-scale peasants, and businessmen. Under the motto ‘change in order to build peace’ the government financed projects with a ‘high probability of competitiveness’ (Pastrana 1988). As Mondragon writes, “the government proposed a rural reform that would be completely dependent on a large central investment, creating as satellites small-scale producers in the ‘alliance’ system, a euphemism for their actual subordination.” (Mondragon 2006).

Decades later, the same strategy for capitalist development persists in the ZIDRES program. In a 2016 speech to U.S. development experts concerning the peace process, Colombian President Santos claimed:

We have half of Colombia still to conquer, in a way, like you conquered the West here in the United States in the 18th century, we have to conquer half of Colombia. We are one of the few countries who can produce more food, a lot more food, in the world (Oxfam 2016).

The ZIDRES (*Zonas de Interés de Desarrollo Rural Económico y Social*) laws designate agricultural investment for farmer associations in regions with limited infrastructure and far removed from city centers. The ZIDRES claim titling ‘*tierras baldías*’ (‘vacant, unused lands’) will stimulate development and reduce small farmer and agro-business conflict through shared business partnerships. Peasant groups including the FARC view the laws with skepticism, seeing ‘partnerships’ as a euphemism for continued peasant dispossession. For instance, the Altillanura, a vast tropical plain with acidic, weathered soils in the northeastern Colombia states of Meta and Vichada, is a focal point of ZIDRES. Brazil’s state-owned agricultural research corporation, EMBRAPA, is advising Colombia on the adoption of

⁷ The ZIDRES pertain to Decreto 1223, Ley 1776, passed in Colombian congress in 2016, see Colombian Ministry of Agriculture for full text: https://www.minagricultura.gov.co/Normatividad/Decretos/Decreto_1273_2016.pdf.

monoculture production in the Altillanura by transferring models from Brazil's conversion of the Cerrado into an expanse of grain. Due to its remote location and poor soils, the government touts large-scale investment as the only viable mode of rural development. This strategy overlooks subsistence growers and farmers who already live in the Altillanura but are unable to finance expansion (Alvarez et al. 2015). Foreign multinationals meanwhile circle as hawks above ZIDRES, enticed by the promise of larger land aggregations under formal ownership or lease agreements (USDA FAS 2015). Santos' rhetoric on rural agricultural development lays bare his interests – the production of commodities and raw materials, largely for animal proteins to meet rising demand in Indian and Chinese markets (Santos 2011). In total, the country seeks to rapidly open twenty-five million acres for agricultural development in the coming years.

Proponents of ZIDRES argue that legislation prohibiting land acquisition and ownership will prevent land accumulation. This is a dubious claim. The laws allow for long-term, renewable leases. Under novel forms of globalized agricultural capital, land ownership is often no longer required nor seen as desirable. Jan van der Ploeg's writings on the peasantry in the age of global economic and political Empire illuminate how, in a clear transition from classic hacienda models, land ownership is often viewed as unnecessary and risky. He writes: "Empire is a hit-and-run phenomenon. As soon as conditions for production and trafficking are better in some other place, Empire will move its 'roots', leaving behind only ecological destruction and a generalized impoverishment" (van der Ploeg 2008).

What emerges in Colombia is a formula for ongoing peasant disenfranchisement: forced expropriation of lands, deliberate exclusion from agrarian reform programs, and the steady deterioration of the social and material elements of the peasant economy. As Mondragon writes,

Campeños no longer face only landowners as employers, but now must deal with a range of other forces as they compete directly as entrepreneurs in the global market. Such a market, and its "globalization" model, seeks to "clean" territories of "inefficient" people. While elsewhere this happens

as a result of so-called Darwinian economic competition, in Colombia it is being attempted through war.” (Mondragon 2006).

Such is the contemporary strategy of capitalist development co-authored by Colombian and transnational elites. It flows out of the dominant historical currents in favor of wealthier peasants and agri-business. What, then, is the contribution of international institutions that claim, similarly to the Colombian FARC guerrillas, to represent the rural poor?

CGIAR/CIAT: Landless Science

In the thick of civil war, in 1967, the International Center for Tropical Agriculture entered the realm of Colombian agriculture. CIAT was an early member institution of the CGIAR (Consultative Group on International Agriculture Research), a global umbrella organization with 15 stations around the world whose mission is to apply modern scientific methods to the complexities of smallholder tropical agriculture. Its establishment marked the beginning of a new type of development strategy, organized into an expansive array of programs that claimed, as Cullather writes, “guardianship over the 40 percent of the developing world living in ‘absolute poverty’” (Cullather 2010, 238). CGIAR funding came from the Rockefeller and Ford Foundations and later joined the ambit of the UN and World Bank. Through the CG system, the World Bank sought to construct an alternative development praxis that would largely bypass national governments to focus on small entrepreneurial farmers. Designed to institutionalize early Green Revolution crop development advances, the CGIAR system was directly linked to broader geopolitical aims to quell the global rise of rural Communist political movements (Cullather 2010, 7).

From the outset, CGIAR research focused on industrialization and inclusion of lower peasants into global markets. Yet these technological and economic levers did little to address fundamental production constraints in areas with unequal land distribution (Lipton 2009, 118). Nowadays, CIAT’s strategy is to increase yields

while reducing ecological degradation of soils and forests. Their methods include farm management trials, econometric analyses, and crop breeding under the catchphrase “increasing eco-efficiency of agriculture for the poor” (CIAT 2012).

To take a closer look at the place of land in international agricultural research, we analyzed policy documents published by the CGIAR and CIAT. Given the bloody history of land, we wondered whether CGIAR science demonstrates any concern over land distribution in last decade. We derived keywords from an initial review of policy documents, cataloguing the most frequently appearing terms (see *table 1*). We analyzed 5 CGIAR strategic plan documents, 9 CIAT policy briefs, and 4 CIAT program development documents. We used these terms to delineate main categories of CGIAR and CIAT research: environment, poverty/hunger, markets, gender, genetics, and land.

Categories	Search Terms
poverty/hunger	poverty, hunger, nutrition, food security
environment	climate, ecosystem services, natural resources, conservation, sustainable, resilience environmental degradation
markets/productivity	markets, opportunities, income, (economic) growth, productivity
genetics	gene, genetics, breeding
Land (no link to reform or distribution)	*Land designation determined by context of article, dominant association (e.g. landscape, land degradation)
Land (link to reform or distribution)	* Land designation determined by context of article, dominant association (e.g. land inequality, land reform)

Table 1: Categories for document analysis and component search terms derived from review of CGIAR and CIAT policy documents.

Preliminary results demonstrate abject lack of research and directives on land distribution and land conflict in the CGIAR system. Across both organizations, land reform/redistribution is < 1% of search term results. Of the five CGIAR documents, land inequality is never identified as a focus point. A single CIAT policy brief from February 2013, “Bridging the Urban-Rural Gap in Colombia” comprises 13 of the 18 total references to land distribution. In comparison, poverty/hunger, markets/productivity, and environment are mentioned 482, 540, and 610 times, respectively.

Although both CIAT and the CG broadly maintain a conspicuous silence on the land question, one of the CG centers, the International Food Policy Research Institute (IFPRI) does give the topic some attention. Specifically, it aims to support market-based land reform for farmers to ensure supportive linkages between market-based food security and land tenure, as well as fostering global South-South collaboration for sustained growth. Rural areas are perceived as a potential space for entrepreneurial development if international assistance is coupled with pro-growth trade policies. Gender equality is framed as the inclusion of women into market-oriented production. As a 2010 IFPRI policy brief states,

Latin America can learn lessons from Asia's experience in smallholder land reform, investment in infrastructure and agriculture, and regional trade [...] Asia, in turn, can learn from Latin America's experience with opening up trade within and beyond the region, privatizing public services, and improving access to markets for high-value agricultural products [...] Asia, with its rapid economic expansion, population growth, and poverty levels, is generating huge demand for food and intense pressure on land and water [...] Latin America's agricultural capacity and export orientation makes it a natural partner in trade as well as learning. Both regions can gain from each other. (IFPRI 2010)

In the rare case that reform makes a splash in CG policy and research, subsistence production, land conflict, political struggle, and gendered dynamics of accumulation are conspicuously absent. The obvious conclusion then is that neither economists' support of land reform according to the logics of the inverse productivity relationship, nor early State approaches for resolving conflict over land have been aligned with radical goals of communist revolution or militant opposition to the State as espoused by the FARC. Rather they viewed land reform as a central engine of capitalist growth. But thus, it is doubly surprising that international research stations such as CIAT neglected (and continue to neglect) to study land reform or situate their research around the land question. While it would be quite unexpected to witness these institutions approaching the land question from an anti-capitalist, revolutionary lens, it is even more shocking that

capitalist development approaches to land reform are equally absent from research agendas.

Landless Agricultural Science: Development's Underbelly

Having demonstrated an abject silence on land, one could criticize CGIAR science from a Keynesian lens that argues in favor of progressive land redistribution. Instead, we isolate a more incisive question: What does silence on land reveal about the relationship between science and capitalist development in Colombia? Antonio Gramsci's thoughts on science are helpful here. He argues that science is, at its most elementary, the process by which humans form and refine their "conceptions of the world" (Gramsci 1976, p. 34); and furthermore, that "Scientific experiment is the first cell of the new method of production, of the new form of active union of man and nature" (Gramsci 1976, p. 446). What kinds of conceptions does CGIAR science produce, and what form of capitalist development is CIAT attempting to seed?

We argue that CGIAR science serves precisely to relieve the contradictions of rural Colombia *without* addressing land. In other words, CGIAR science is a subordinate component of broad development strategies that is designed to contain development's inevitable social fallout—dispossession, landlessness, and precarious rural economies. This is accomplished by emphasizing the integration of lower peasants into global agro-commodity markets using new technologies of land use. While it is true that new technologies can lower transactional costs of agricultural production, it is crucial to recognize that the strategy is spatially constrained to the marginalized patches of land onto which rural violence and displacement has reduced lower peasants. Markets and technology do the work of resolving poverty *in situ*. CGIAR centers perform experiments upon this 'landless strategy' and create ideological justification (papers, reports, conferences) for its broader reproduction. And so, a conception of the world is formed in the minds of scientists, a conception in which land is subtracted from the calculus of how to

advance the interests of the rural poor. Globalized land grabbing and extreme rural poverty cohabit the land, apparently in harmony.

In James Brittain's overview of American development intervention in Colombia, he describes the unique role played by academic economists, providing a screen of 'plausible deniability' for the ruling class, government, and international elite (Brittain 2005, 336). Technocratic, politically neutral, and outside advice is used by standing governments to justify coercive policies or deny alternative visions. Scientific information regarding economic models and development trajectories, which is presented as empirical and politically 'neutral', can then be used to shield highly interested decisions about land management and titling, tax structures, and loan packages. Modernist World Bank advisers avoided the specifics of revolutionary struggle and land reforms made by the FARC, focusing instead on the involvement of peasants in the urban industrial sector to alleviate the socio-economic plight of rural poor (Thomson 2011). This form of technocratic logic justified the displacement of peasant class, obscuring the violent procedures necessary to achieve these goals. Economic theory made large-scale and export-oriented agriculture 'legible' (Scott 1998), providing ideological justification for the violent expulsion of peasants at the hands of state warfare, paramilitary organizations, and transnational economic policies.

We argue, that, to its peril, the CG system operates in the same vein. The CG centers provide scientific evidence that is financed by high-profile, global funding networks, and mobilized by transnational research networks and a visible scientific elite. Thus, certain development agronomy approaches, such as 'Climate Smart Agriculture', market chain integration, and the inclusion of women into commodity production gain precedence and visibility, while others, such as land reform, agroecological social movements, and subsistence production do not. National, regional, and local governments can point to CGIAR research as evidence to support continued capitalist development trajectories for rural Latin America (Minagricultura 2016).

Backers of the ZIDRES laws in the Santos administration can highlight the potential for improved marketization of agricultural products as a desirable outcome for Colombia, drawing support from the intellectual contributions of the development agronomy apparatus. In 2011, Santos announced a strategic partnership between CORPOICA (Corporación Colombiana de Investigación Agropecuaria) and CIAT, with technical assistance from EMBRAPA. While a quick acknowledgment is given to the importance of including smallholders in Altillanura development, the role of technical science is one of production – improved genetics, new seed varieties, soil amendments, and climate change adaptation for large-scale landscape transformation (Santos 2011). Under the guise of innovation and international agricultural science, the State and the multinational business interests it beckons are then freer to pursue policies that ignore peasant demands.

It is plausible to propose a strategic connection between CGIAR science and capitalist development among the chief architects of its agenda, which is comprised of a small circle of elites including leaders of transnational agribusiness and billionaire philanthropy. Land is not on their agenda, for good reason. But this leaves us wondering, how does that agenda travel down the chain of command to the mid-level intellectuals who produce CIAT reports? How could these intelligent minds ignore the centerpiece of rural violence in their country? Scientists at CIAT are comprised of upper-middle class Colombians and visiting academic researchers from around the world, many who have long-term relations in-country (author observation). One explanation is that scientists who are most often selected from urban middle and upper classes, have little conception of land struggle and rural conflict. Further, land reform has been excluded from the intellectual formation of scientists since the post-War heyday of Keynesianism. Or, perhaps scientists' silence is due to repression: the politics of land reform have been violently suppressed in Colombia, while the demands on the scientific proletariat to fulfill one's landless research agenda keeps minds in line with the binding bureaucracy of big science. Project demands are endless while the stickiness of land reform and local and regional political structures inconvenience the rollout of development projects (Mosse 2005). Both explanations are plausible.

Meanwhile, the CGIAR system is changing in macro-structural ways. In the face of diminishing government support, it pursues public-private partnerships. This further diminishes the possibilities of science serving interests outside the realm of capital, and reproduces linkages between scientific exploration and capitalist development. There is renewed focus on the smallholder farmer, who is seen as a future entrepreneur who can be removed from subsistence through the right mix of access to superior plant genetics, market chains, and soil management. Land is ominously absent, although it can now be 'salvaged' through limited tillage and cover cropping.

In this instance, CIAT is a self-contained irony: an elite cadre of international scientists working in a gated commune amidst vast sugar cane plantations on fertile soils of Valle del Cauca; scientists who are tasked with resolving the misery of the rural poor thousands of miles away. Only a decade before CIAT's founding, World Bank advisers to the Colombian government had advocated the forced removal of peasants from the valley, as their presence impeded development plans (Brittain 2005).

Can The Left Respond?

In the wake of the Colombian peace treaty, rural Colombia is at a crossroads. Santos' vision for the peace accords is directly intertwined with the expansion of rural agribusiness, creating the likelihood of islands of rural FARC settlements in a sea of palm oil and soya export agriculture (Hylton 2017). An uptick in extrajudicial killings of rural social movement leaders exposes the precariousness of the peace agreement, drawing parallels to the massacre of Union Patriótica leaders in the 1980s, as FARC entered national politics in what became an unsuccessful peace accord (Telesur 2017, Dudley 2006). Will rural and urban Left organizations successfully transform the momentum from the peace accords into anti-racist, anti-capitalist political platforms based on wealth redistribution and increased equality of land, education, and employment? How will international development and

scientific institutions respond and what political trajectories will they implicitly or explicitly support?

Meanwhile, the continued withering of public support for science and the international rise and powerful consolidation of hetero-patriarchal, economic nationalist agendas in the U.S. and Europe is attempting to change the nature of scientific institutions. This is not to say that research institutions were immune to the agendas of corporatization and national defense before the recent political conjuncture. As we stated previously, the CGIAR legacy has always been one of geo-political control and defining the contours of capitalist development. But, is CG's ongoing silence on land questions a *feature* of capitalist development? Does it act covertly to depoliticize development? Or is it a more complex outcome of generations (or centuries, rather) of disembodied science? As the influence of integrated ecology and in-situ breeding gains *some* leverage in the CG system, the absence of research on land distribution and its effects upon rural well-being and agroecological adoption is increasingly untenable. It seems unlikely that the CG will resolve these contradictions to address rural inequality as it shifts its strategies to the latest entrepreneurial fads in public-private development in a constant struggle for funding.

When the political agenda is set squarely against scientific inquiry, does the possibility exist of transforming the resultant disillusionment and discontent among mid-level scientists into more radical social movement work? What tools do mid-level scientists currently have at their disposal? How can a CGIAR scientist immediately put to use genetic material, intellectually engaged and skilled peers, and legions of data to enact mass democratic futures? Can they? Are there possibilities for a reorientation of a 'science for the people'? If there is any hope of organizing sustained change and reorienting science to support peasant struggle from within the CGIAR system, we believe that land conflict must be placed squarely in the center of scientists' conception of the world.

References

Alvarez, Jaime Forero et al. 2015. "La viabilidad de la agricultura familiar en la altillanura colombiana: Analisis de su eficiencia economica – productiva y su dinamica ecosistemica en comunidades de Puerto Lopez." Bogota: Espacio Creativo Impresores SAS

Altieri, Miguel and Clara Nicholls. 2017. "Agroecology: a brief account of its origins and currents of thought in Latin America." *Agroecology and Sustainable Food Systems*. 41(3-4): 231-237.

Baranyi, Stephen, Carmen Diana Deere and Manuel Morales. 2004. "Land and Development in Latin America: Openings for Policy Research." The North-South Institute and International Development Research Centre, IDRC, Ottawa, Canada. Accessed: http://www.nsi-ins.ca/content/download/land_use_final_eng.pdf

Bellemare, Marc. 2012. "The Inverse Farm Size-Productivity Relationship: "Proof" That Smallholders Can Feed the World?" Blogpost: Marc F. Bellemare: Agriculture and Applied Economics – Without Apology. October 22, 2012, Accessed 8/20/17, <http://marcfbellemare.com/wordpress/7610>

Bhalla, Surjit and Prannoy Roy. 1988. Mis-Specification in Farm Productivity Analysis: The Role of Land Quality. *Oxford Economic Papers* 40(1): 55-73.

Brittain, James J. 2005. "A Theory of Accelerating Rural Violence: Lauchlin Currie's Role in Underdeveloping Colombia." *The Journal of Peasant Studies* 32(2): 335-360.

Burgos, Stephanie. 2016. "On the road to peace in Colombia, it's important to remember the underlying causes of conflict." *The Politics of Poverty*, Oxfam. 2/9/2016. <https://politicsofpoverty.oxfamamerica.org/2016/02/on-the-road-to-peace-in-colombia-its-important-to-remember-the-underlying-causes-of-conflict/>, Accessed 2/10/17.

Carter, Michael. 1984 "Identification of the Inverse Relationship between Farm Size and Productivity: An Empirical Analysis of Peasant Agricultural Production." *Oxford Economic Papers*, New Series 36(1): 131-145.

Chattopadhyay Manabendu and Atanu Sengupta. 1997. "Farm Size and Productivity: A New Look at the Old Debate." *Economic and Political Weekly* 32(52): A172-175.

CIAT. 2012. "Eco-Efficiency: From Vision to Reality: Key Messages from a Publication Describing Advances and Options in Eco-Efficient Agriculture." http://ciatlibrary.ciat.cgiar.org:8080/xmlui/bitstream/handle/123456789/3885/eco_efficiency_from_vision_to_reality.pdf?sequence=1, Accessed 4/18/17.

Cullather, Nick. 2010. *The Hungry World*. Cambridge: Harvard University Press.

De Janvry, A. and Lynn Ground. 1978. "Types and Consequences of Land Reform in Latin America." *Latin American Perspectives* 5(4): 90-112.

De Janvry, A. 1981. *The Agrarian Question and Reformism in Latin America*. Baltimore, MD: Johns Hopkins University Press.

Dudley, Steven. 2006. *Walking Ghosts: Murder and Guerilla Politics in Colombia*. Great Britain: Taylor and Francis Group.

Gomez, Freddy-Ordonez. 2012. *Zonas de Reserva Campesina: Elementos introductorios y de debate*. ILSA, Bogota.

Grajales, Jacobo. 2011. "The rifle and the title: paramilitary violence, land grab and land control in Colombia." *The Journal of Peasant Studies* 38(4): 771-792

Gramsci, A. 1971. *Selections from the Prison Notebooks*. New York: International Publishing.

Guarav, Sarthak and Srijit Mishra. 2015. "Farm Size and Returns to Cultivation in India: Revisiting and Old Debate." *Oxford Development Studies* 43(2): 165-193.

Herrera, Adriana et al. 1997. *Recent FAO experiences in land reform and land tenure*. Land Tenure Service, FAO. 52-64. https://www.researchgate.net/publication/238307482_Recent_FAO_experiences_in_land_reform_and_land_tenure

Hylton, Forrest. 2006. *Evil Hour in Colombia*. New York: Verso.

Hylton, Forrest. 2014. "The experience of defeat: The Colombian Left and the Cold War that never ended." *Historical Materialism* 22(1): 67-104.

Hylton, Forrest. 2017. "What's Next for the Colombian Left?" *The Dig: Discussing the Politics of American Class Warfare with Daniel Denvir* podcast, August 15, 2017, Accessed 8/16/17, <https://www.blubrry.com/thedig/25999757/forrest-hylton-whats-next-for-the-colombian-left/>

IFPRI. 2010. "Fostering Growth, Reducing Poverty and Hunger: Asia and Latin America Pursue Mutual Learning and Cooperation." IFPRI Press Release. March 22, 2010. Accessed 8/19/17, <http://www.ifpri.org/news-release/fostering-growth-reducing-poverty-and-hunger>

Edward Lahiff, Saturnino M Borrás Jr & Cristóbal Kay (2007) *Market-led agrarian reform: policies, performance and prospects*, *Third World Quarterly*, 28:8, 1417-1436, DOI: 10.1080/01436590701637318

Lenin, V.I. 1974. *The Development of Capitalism in Russia*. Moscow: Progress Publishers.

León-Sicard, Tomás. 2017. "Toward a history of agroecology in Colombia." *Agroecology and Sustainable Food Systems*. 41(3-4): 296-310.

Lipton, Michael. 2009. *Land Reform in Developing Countries: Property rights and property wrongs*. New York, NY: Routledge.

Machado, Absalon. 1999. La cuestión agraria y el desarrollo agropecuario. In *Cuadernos de Economía*, Vol. XVIII, Series 31, p. 237-279, Bogota.

McFarland, Michael. 2015. "The Altillanura – An Uncertain Future." Global Agricultural Information Network, USDA Foreign Agricultural Service, <http://agriexchange.apeda.gov.in/marketreport/Reports/The%20Altillanura%20%E2%80%93%20An%20Uncertain%20Future%20Bogota%20Colombia%2010-13-2015.pdf>, Accessed 2/10/17

Ministerio de Agricultura y Desarrollo Rural, Colombia. 2016. "Informe Rendición de Cuentas de Agricultura y Desarrollo Rural 2015-2016", <https://www.minagricultura.gov.co/InformeRendCuentas2016/RENDICION%20DE%20CUENTAS%20-%20INFORME%202015-2016-julio%2001.pdf> Accessed 4/18/17.

Mondragon, Hector. 2001, "Towards 'Humanitarian Intervention' in Colombia?", July 2001, Accessed 8/18/17, www.zmag.org/crisescurevts/colombia/hemon.htm.

Mondragon, Hector. 2006. Colombia: Agrarian Reform - Fake and Genuine. In Peter Rosset, Raj Patel, Michael Courville (Eds.), *Promised Land: Competing Visions of Agrarian Reform* (pp. 165-176). Oakland: Food First Publishers.

Mosse, D. 2005. *Cultivating Development*. London: Pluto Press.

Pastrana, Andrés. 1988. Plan Nacional de Desarrollo 1998-2002: Campio para construir la paz. República de Colombia, Departamento Nacional de Planeación. https://colaboracion.dnp.gov.co/cdt/pnd/pastrana2_contexto_cambio.pdf, Accessed 8/20/17.

Pereira, J.M.M. and D. Fajardo. 2015. A "reforma agrária assistida pelo mercado" do Banco Mundial na Colômbia e no Brasil (1994-2002). *Revista Brasileira de História* 35: 157-180. doi:10.1590/1806-93472015v35n70001.

Reyes-Posada, Alejandro. 2016. *La reversión del acuerdo agrario*. El Espectador. 10/23/2016. <http://www.elespectador.com/opinion/reversion-del-acuerdo-agrario>, Accessed 2/10/17.

Santos, Juan Manuel. 2011. Palabras del Presidente Juan Manuel Santos den IV Foro de la Altillanura Colombiana. Sistema Informativo del Gobierno. December 2, 2011. Accessed 8/20/17, http://wsp.presidencia.gov.co/Prensa/2011/Diciembre/Paginas/20111202_11.aspx

Scott, James. 1998. *Seeing Like a State*. New Haven: Yale University Press.

Telesur. 2017. 186 Social Leaders Assassinated in Colombia Since 2016. July 13, 2017. Accessed 8/20/17, <http://www.telesurtv.net/english/news/186-Social-Leaders-Assassinated-in-Colombia-Since-2016-20170713-0037.html>

Thomson, Frances. 2011. "The Agrarian Question and Violence in Colombia: Conflict and Development". *Journal of Agrarian Change* 11:321-356.

USAID. 2010. *Property Rights and Resource Governance: Colombia*. USAID Country Profile.

Van der Ploeg, Jan Douwe. 2008. *The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London: Routledge Press.

Vera, Raul R. 2006. *Country Pasture/Forage Resource Profiles, Colombia*. Food and Agriculture Organization of the United Nations, 2006. Accessed 8/20/17, <http://www.fao.org/ag/agp/agpc/doc/counprof/columbia/colombia.htm>.