

# From supply management to agricultural subsidies—and back again? The U.S. Farm Bill & agrarian (in)viability



Garrett Graddy-Lovelace\*, Adam Diamond

American University School of International Service, 4400 Massachusetts Avenue NW, Washington DC 20016, USA

## ARTICLE INFO

### Article history:

Received 26 May 2016

Received in revised form

2 December 2016

Accepted 16 December 2016

Available online 10 January 2017

### Keywords:

Agricultural policy analysis

U.S. Farm Bill

Supply management

Food regimes

Agrarian viability

Polanyian double movement

## ABSTRACT

Farm subsidies have become increasingly maligned in agricultural policy debates, but the merits of subsidies are a distraction from deeper political, economic, and ecological problems in agriculture. Drawing on a history of the U.S. Farm Bill, this paper argues that a fixation on farm subsidies ignores why they came into being, and more generally glosses over the imperative for modern states to intervene into agricultural economies. Karl Polanyi's 'double movement' framework is used to situate the rise and fall of agricultural supply management within food regime theory. In the second, or surplus food regime, the U.S. government wielded excess commodities as geopolitical tools—even as domestic farm policy labored to contain overproduction, and thus support agrarian viability. In the subsequent corporate food regime, "free market" agriculture displaces and discredits supply management, even as massive government intervention into how food is grown and sold continues. Making space to remember historical price support programs, to situate their accomplishments and limitations, and to recognize residual supply-management mechanisms (such as farm cooperatives and agricultural marketing orders) is crucial for fostering agricultural viability in the US and beyond. Twentieth century supply management had flaws, but it cannot be wholly omitted. This paper highlights key motivations, elements, and contradictions of these policies and programs to begin the process of considering how supply management principles and strategies could be updated and enhanced for 21st century agriculture. Such a framework would need to pay more attention to diversity within domestic and international agricultures, and be more sensitive to the multi-scalar dimensions of food systems.

© 2016 Elsevier Ltd. All rights reserved.

## 1. Introduction

In a highly partisan and deeply divided United States political culture, there nevertheless remains nearly universal disdain for

agricultural subsidies.<sup>1</sup> However, framing agricultural subsidies as waste and corruption produces confusion around the origin and purpose of farm programs in the first place, *and* fails to eliminate them.<sup>2</sup> A persistent few (Ray et al., 2003; NFFC, 2007; Naylor, 2011; Wilson, 2016) have argued that subsidies are not the wound, but the (inadequate) band-aid: or, even more evocatively, not the fire to be extinguished, but the smokescreen.<sup>3</sup> U.S. farm subsidies stay in place through changing political winds and intense opposition from across the political spectrum. Understanding why this happens requires an investigation of the political and economic origins of subsidies, which in turn requires looking back into the rise and fall of agricultural supply management in the U.S. Accordingly, the

\* Corresponding author.

E-mail addresses: [graddy@american.edu](mailto:graddy@american.edu) (G. Graddy-Lovelace), [adiamond@american.edu](mailto:adiamond@american.edu) (A. Diamond).

<sup>1</sup> Definitions of subsidies vary significantly and deserve their own thorough discourse analysis, which is beyond the scope of this paper. An expansive (and derogatory) framing says that subsidies include any government intervention measure that raises the price paid to farmers, including tariffs, import quotas, and price supports, as well as investments in infrastructure, education, and market promotion and supervision. In this paper, however, we define subsidies to only include cash payments to farmers, including crop insurance premium coverage.

<sup>2</sup> This paper is an analysis of key issues and fault lines that have emerged from multi-year community-based participatory action research on Farm Bill policy assessment with two U.S.-based, grassroots agrarian groups—the National Family Farm Coalition ([nffc.net](http://nffc.net)) and the Rural Coalition ([ruralco.org](http://ruralco.org)), both of whom are part of the transnational agrarian movement, La Via Campesina.

<sup>3</sup> These metaphors appear throughout formal publications, informal blogs, and at National Family Farm Coalition (NFFC) annual meetings, where Darryl Ray was the 2015 annual meeting key-note speaker. George Naylor was president of NFFC 2003–2008, and Brad Wilson was an NFFC board-member and remains a persistent proponent for price-oriented farm justice history and advocacy.

question guiding this paper asks: Why is there such scant discussion of supply management and instead a fixation on subsidies in agricultural policy debates—when the former has long been the critical driver of U.S. agricultural policy? This animosity towards subsidies excludes serious deliberation regarding the purpose and benefits of supply management and price supports in agricultural policy debates.<sup>4</sup>

In contemporary discussions around food and agricultural policy in the U.S., critics in the media, academia, and civil society have tended to gloss over the historical, economic, and political bases for farm subsidies. When agricultural policy finally makes the news, it is usually in the form of a fixation on subsidies as the chief problem. Criticisms span—and even confound—the political spectrum. On the conventionally understood ‘right,’ conservatives blast farm subsidies as impediments and affronts to market liberalism, dismissing them as passé “farm welfare” that distorts planting decisions, leads to a misallocation of resources, and wastes government funds supporting farmers who do not need help. Neoliberal Democrats have joined their Republican counterparts in this Smithian pro-market orthodoxy, which represents the dominant critique of subsidies, and the most potent (though not fully successful) threat to them. While the broad consensus governing the neoliberal agricultural regime is that farm policy should not intervene in the market, agricultural markets require a whole range of policies to function, and even exist—a paradoxical phenomenon astutely described by Karl Polanyi in his landmark book *The Great Transformation: The Political & Economic Origins of Our Time*.

Meanwhile, conventionally described ‘Left’ critics, activists and policy analysts argue that agricultural subsidies further enrich the wealthiest absentee landholders and serve the needs of industrial meat producers for cheap feed, thereby contributing to land and market consolidation and aggravating ‘corporate welfare.’ Another branch of the progressives decry the international impact of U.S. subsidies on farmers (and eaters) around the world. Despite vast ideological differences across the traditional left-right divide (which is often a poor fit for agricultural debates), there is an ironic convergence in policy prescriptions around ending subsidies (see Fig. 1).

Moreover, while the World Trade Organization (WTO) dictates that domestic farm policies should cause minimal trade distortion, the U.S. is willing and able to flout this consensus with agricultural policies that best meet dominant domestic political demands. We employ the insightful framework of ‘food regimes’ to help explain the rise of this WTO mandate, and also how the U.S. state retains political power to defy and concurrently benefit from the neoliberal mandate. Though food regime analysis crystallizes the geopolitical context and implications of U.S. overproduction and exports, it glosses over a key aspect of the story: *domestic* causes and results of commodity crop surpluses, and that subsidies emerged in the wake of the rise, and fall of supply management.

Accordingly, we aim to answer our central question—Why is there such scant discussion of supply management and instead a fixation on subsidies in agricultural policy debates—when the former has long been the critical driver of U.S. agricultural policy?—through an historical overview of the supply management regime in the United States dating to the New Deal. Supply management was not the end-goal of these policies, but rather the central technique for reaching stable, viable farmgate prices; as such, it merits attention. To answer our central question, we analyze Farm

Bill history by applying and combining the two aforementioned influential political-economic theories: the ‘food regime’ periodization effectively contextualizes the current neoliberalization of agri-food geopolitics, while Polanyi’s ‘double movement’ theory helps explain the domestic context for U.S. supply management policies throughout the 20th century. Shifting the discussion beyond subsidies back to root causes of agrarian inviability sheds light on the drivers of agricultural policy—and their failures. Chronically low and volatile farm-gate prices are the root cause of agrarian instability (Mazoyer and Roudart, 2006), and are aggravated by surplus production, globalized trade, and processes of financialization (Ray et al., 2003; Newman, 2009). Accordingly, the broad subject of supply management demands attention, despite—or perhaps because of—its having been systematically blacklisted in policy and political circles for decades. The fact that supply management has become untenable as a political possibility—or even legitimate topic—in agricultural policy shows how agrifood systems become *food regimes*, defined by Harriet Friedmann as “the rule-governed structure of production and consumption on a world scale” (1993:30–31). Bill Winders further explains— “[t]wo of the fundamental aspects of a food regime include the extent of state intervention into the market (such as tariffs and subsidies) and the direction of trade flows” (2009: 133).

The ‘food regime’ framework emerged from rural sociologists Friedmann and Philip McMichael (1989) as an attempt to chronicle and explain how food has been deployed in geopolitics, and has since been deepened and expanded by other agri-food scholars (cf 2009 special issue in *Agriculture and Human Values*; Magnan, 2016; Pechlaner and Otero, 2010). This historical periodization begins with British-led late colonialism, and moves on to a second food regime, this time U.S.-led and grounded in food aid and trade. According to McMichael and other scholars, the late 20th century brought a third food regime, brokered and dominated by transnational agribusiness interests and the WTO itself.<sup>5</sup> Friedmann meanwhile contends that an extended, complex period of transition has unfolded after the demise of the second food regime: agro-corporate actors respond to consumer and civil society demands for sustainability with greenwashing, even as alternative foodways become stronger and robust (2005, 2016). As explained later in the paper, this periodization proves helpful in delineating specific eras in international political economy and in showing how agricultural surpluses expand the power of those who ruled or are ruling their respective regime. It also helps clarify how such food-driven regimes solidify and operate, namely through hegemonic rules. Here, the operative principles are inferred by that which is not spoken, but which wields power by being unspoken or even unspeakable. In this paper, we argue that current agricultural politics’ entrenched aversion to price and supply management drives what has been called the current, corporate “Third Food Regime” (McMichael, 2009, 2016) even as the topic has become politically untouchable.

This essay seeks to further develop the food regime analysis by focusing specifically on the U.S. domestic dynamics within the broader context of international food regime power configurations. Specifically, we foreground the role of U.S. agricultural policy in staving off—or not—the ongoing, differentiated, but hidden U.S. agrarian crisis throughout the second and third food regimes. According to food regime theory, from the 1920s through the 1970s (the second food regime), the U.S. gained geopolitical power by wielding its agricultural surpluses. Yet, surpluses were not the goal

<sup>4</sup> Price supports are mechanisms a government uses to provide a viable price floor for a commodity crop. They have historically been a key element of supply management programs, which are a set of government policies used to prevent overproduction of a commodity crop so as to prevent price collapse.

<sup>5</sup> The recent wave of neo-mercantilist, proto-nationalist, anti-trade political rhetoric (under Brexit and Trump elections) could portend a fourth food regime of post-neoliberal capitalism—or not.

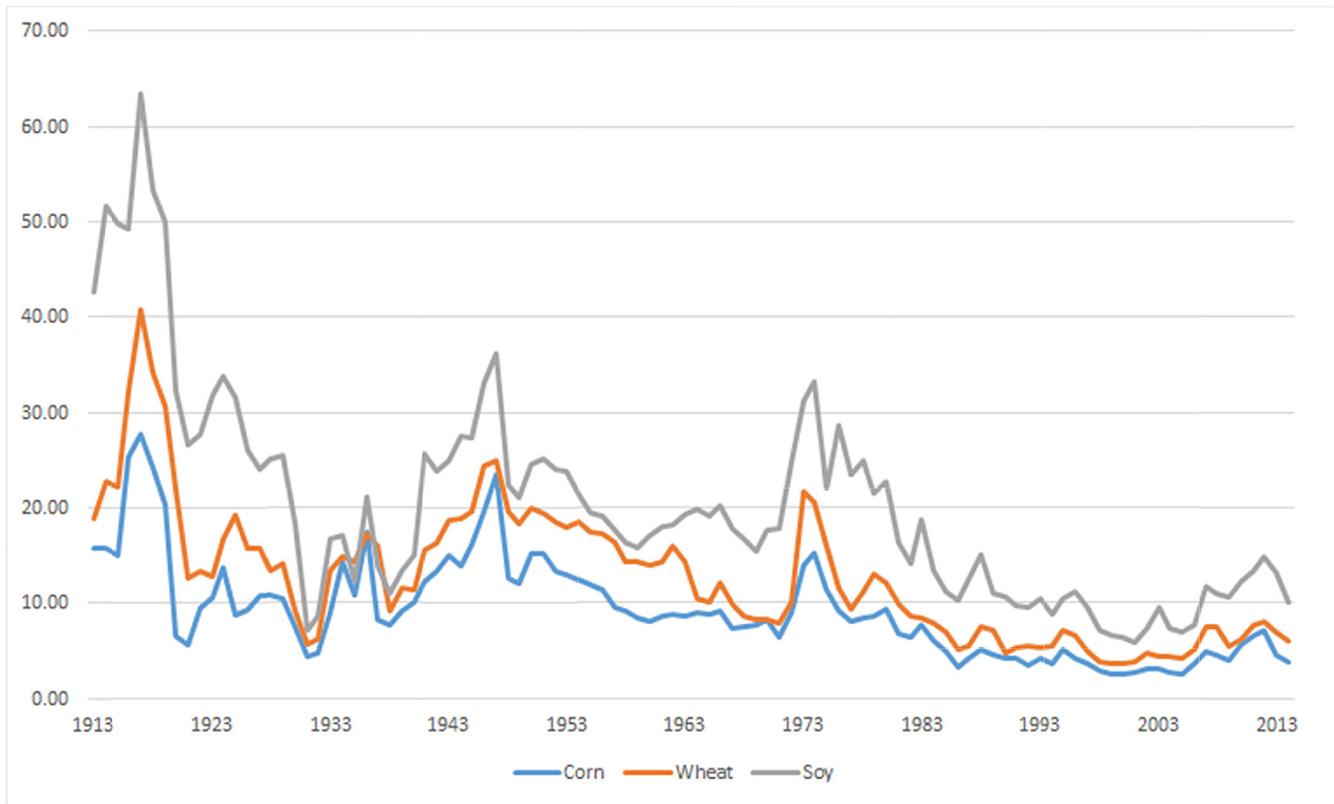


Fig. 1. Price Received in \$/Bushel for U.S. Growers (2015\$).

of U.S. agricultural policy; in fact, from the domestic perspective, growers lobbied for policies—specifically supply management policies—so as to avoid the scourge of surpluses, which wreak havoc on farmgate prices. We give an historical overview of the U.S. Farm Bill to show how price and supply management programs aimed, though largely failed, to prevent surpluses.

In order to understand the domestic rationale for 20th century U.S. supply management policies, this paper draws upon the Polanyian concept of the “double movement” to highlight how governments have long intervened in agricultural economies, through price floors or ceilings and through supply control measures (Peck, 2013). U.S. agricultural policy throughout the 20th century exemplified both sides of this movement: free-market reforms for commodities on the global market and the counter-movement to protect growers from subsequent price fallouts. This double-move is by no means unique to the U.S., and has characterized national agricultural policies across the world. However, it is worth focusing on the U.S. situation in particular, both because the country led and embodied the second, surplus food regime and because a defining aspect of its surplus food regime has been largely overlooked. We argue that preoccupation with subsidies obscures the ‘double-movement’ context of supply management—and that this obfuscation is a problem in scholarship, but also in political negotiations, debates, advocacy, and outcomes.

The paper excavates the deliberately hidden subject of supply management policies and programs, so as to catalyze research on which past policies are applicable, desirable, and/or updatable to 21st century agricultural needs and dynamics. We present two brief case studies of vestiges of supply management: a large organic dairy cooperative and a raisin marketing order. The former has achieved a degree of success securing a price floor for its members, mostly due to its extensive size, which confers leverage and

lobbying power; the latter, on the other hand, was recently dealt a blow in the 2015 Supreme Court decision, which ruled the government-held raisin reserve unconstitutional. Updating U.S. supply management for the 21st century would entail analyzing its history, clarifying its context, and building off of such extant iterations as cooperatives and marketing orders.

We conclude the paper by asking if agricultural production *and* markets could be coordinated at different scales, across nation-state boundaries, to support farmer livelihoods. A stable price floor allows farmers more leeway to pursue ecological sustainability, diversified production, social justice, and culturally appropriate nutritious food. Operationalizing supply management in an era of interconnected global agricultural trade will be very complex and challenging, but that is no reason to neglect it. Rather, that is all the more reason to have multiple stakeholders—diverse farmers, interdisciplinary scholars, policy makers, and civil society—proactively debate, research, and engage with the puzzle that is supply management across multiple scales and agricultures. The whole spectrum of organizations and movements that are interested in smallholder viability, sustainable agriculture, rural community development, nutritious food, and farm labor equity would be interested in solving this puzzle; ensuring that farmgate prices cover production costs and provide for adequate farmer and farm labor income could help solve many other problems. Though the operative details of such multi-scalar coordinated supply management would necessarily vary across regions and crops, we argue it will be pivotal to achieving these bold—but critical—goals.

## 2. The problem of (focusing on) subsidies

At the policy level, among civil society actors across the political spectrum, in media coverage, and among scholars there is near

universal opprobrium for farm subsidies, with conservatives seeking austerity, and progressives opposing government facilitation of corporate consolidation and the decimation of developing world agricultures through subsidized U.S. exports; paradoxically, however, these programs persist. In some contexts, governmental farm supports have been accused of fostering state-centric governmentality and surveillance (Kovacs, 2015); while in other contexts, they are lambasted as tools of further concentration and corporatization of agriculture (Hauter, 2013). Myriad actors posit them as unnecessary at best, and perverse and destructive at worst. Subsidies variously enrich large landowners, cause obesity, erode soil, devastate peasants around the world, and sabotage trade negotiations. Many of the various programs and policies lumped together as ‘subsidies’ do in fact aggravate existing problems. Export subsidies are destructive to foreign domestic markets and growers around the world. Direct payments channel money mostly to the largest farm owners, and like countercyclical payments, do not encourage diversification. Additionally, overproduction of grains serves as a particularly problematic subsidy for industrial meat production (Weis, 2007). In short, most of these federally (as in taxpayer) funded programs are inefficient, wasteful, and unfair.

These criticisms are certainly legitimate and important, but they often still fall into the trap of assuming subsidies are distorting what would otherwise be a smoothly operating free market. Even nuanced scholarly critiques of how farm bill political discourse hijacks the agrarian ideal for agribusiness gain do not focus enough on the historical roots of price and supply management and why subsidies emerged in the first place. Dixon and Hapke offered an astute discourse analysis of the 1996 Farm Bill (2003); but even this analysis frames the subsequent 2002 bill as “protectionist” and “cutting America off from rest of the world” (160) thus conflating liberalized trade policies with openness and fairness. Meanwhile, even attempts by civil society and multilateral organizations to call out the hypocrisy of the U.S. with respect to the WTO fall into the same trap of condemning subsidies writ large as protectionism, without addressing the structural and logical reasons why subsidies persist. A Third World Network and International Fund for Agricultural Development report draws important attention to negative impacts of trade neoliberalization, but nevertheless, their first lesson concludes that, “the rules governing agriculture in the WTO have to be modified so that export subsidies and domestic support in developed countries are eliminated or phased out” (TWN, 2006: 10). Here, domestic support programs are lumped with export subsidies as a problem to be terminated. Yet the two are vastly different: the latter have been justifiably indicted for undercutting smallholders the world over; the former, on the other hand, encompasses such public goods as roads, processing facilities, and agricultural extension as well as risk management programs that protect farmers from price volatility and natural disasters. Valuation of growers in low-income countries is juxtaposed with a blindness to the diversity within ‘developed’ countries’ agriculture, further masking the agrarian crises there (Potter and Tilzey, 2007) and needlessly exacerbating a dichotomization between farmers in the ‘Global North’ and those in the South.

The framing of U.S. subsidies as the source of dysfunction in the global food system assumes that “free trade,” which precludes protectionist measures for domestic agriculture or industry, is a form of political and economic liberty rather than submission to the hegemon (Hopkins and Wallerstein, 1977). It neglects to consider how “virtually every government in the world today is currently exercising [protectionism] ... The only ones who exercise it minimally are those who are too weak politically to exercise it” (Wallerstein, 2009:89). The growers and ranchers comprising National Family Farm Coalition launched a scathing critique of this oversight in their agricultural policy report before the 2008 Farm

Bill:

“The current free trade subsidy system, with no price supports for crops and meaningless 1970’s-level price supports for milk, benefits multinational corporations including giant exporters, processors, and retailers, who profit by buying the cheapest commodities from all over the world, processing them and marketing them in monopolistic markets devoid of honest competition ... Restoring farm income from the sale of farm commodities at a fair price, rather than making farmers and ranchers dependent on government subsidies, must be the primary focus of any new farm program” (2–3).

This frustration drove the early alternative agriculture movement of the early 1980s, which “initially focused on long-time populist concerns regarding the viability of small and mid-sized independent family farms and the overall structure of the agricultural sector and its relationship to the broader economy” (Clark et al., 2015: 113). By the early 1980s, farmers in the US went bankrupt in record numbers (1998 National Commission on Small Farms) and farmer suicide hotlines emerged in the wake of the crisis. During this time, the American Agricultural Movement began to gain ground, eventually attracting 2.5 million participants. This grassroots network of growers worked with rural banks and local food processors and distributors to call national attention to the struggles of rural economies and communities. It culminated in the late 1970s ‘Tractorcades,’ wherein 50,000 farmers and allies travelled to Washington DC, thousands by tractor, to gather public for their cause: agricultural policies that would support viable and equitable prices and markets for family farms (Farm Aid, 2009; AAM N.D.). Nevertheless, contemporary alternative agri-food movements—and scholarship on those movements—rarely address the fundamental role of farmgate prices in agrarian viability.

This omission persists because of an array of misunderstandings, which this paper explores. Amidst broader ideological biases regarding political economy, there are misconceptions about how the price mechanism operates within agriculture, and thus about the role of subsidies. Subsidies serve a social role in providing some measure of support for farmers, even as they basically elide the fundamental tensions and dysfunctions within agriculture, which is unique as an economic sector. Unlike manufacturing, farm production cannot be stopped and started in response to changing demand as the biophysical requirements of agriculture prevent this. Without some larger scale authority such as a cooperative or a government agency coordinating production, individual farmers would only be hurting themselves when they reduce acreage voluntarily. Even the biggest farmers, with sales over \$5 million, still compete with thousands of similar sized farmers and cannot appreciably move the market through their individual actions. The highly competitive nature of primary food production coexists with very consolidated, uncompetitive, agricultural supply, food processing and marketing sectors.

This produces a combustible, highly asymmetric relationship wherein farmers are subject to the vagaries of the weather, pests, and shifts in demand, and yet have little bargaining power relative to input suppliers and food processors. Farmers bear the biophysical risks inherent in farming (Goodman and Redclift, 1991), while grain brokers, equipment manufacturers, pesticide formulators, and livestock companies inflict a cost price squeeze on farmers, offloading the most unstable, and unprofitable activities within the food chain onto farmers. What this means in practice is that agriculture has frequent periods of overproduction, punctuated by shortages. Given the critical role of food production in the economy and society, and the unique characteristics of agriculture as compared to other economic sectors, the state—and people in

general—have an overriding interest in preserving agricultural productive capacity, hence the need for state intervention (Naylor, 2011; Schaffer and Ray, 2016).

Subsidies—in reality and in rhetoric—divert attention from the endemic problems of agriculture wrought by inequalities in land, inelastic demand for food, growing market integration across diverse economies and production systems and the technological treadmill (Marsden, 1998). Fixating on subsidies allows the real issues to fester, namely the cycle of market concentration, subsequent domination of consuming and growing populations by the ‘middle spaces’ of agribusiness intermediaries (Wise, 2004; Mazoyer and Roudart, 2006; Clapp and Fuchs, 2009), and the race to the bottom, wherein price preempts all other considerations in the food chain (Patel, 2012; Weis, 2007).

There are different angles and versions of the anti-subsidy argument: some more ideological, some more pragmatic, but all ultimately echo Polanyi’s argument that government attempts to mitigate the harmful effects of ‘free markets’ fall short of locating the root problem. As they blunt the excesses of extreme deregulation, they can end up enabling the broader phenomenon of market-rule and the broader illusion of a self-regulating, self-correcting market. Subsidies, which are seen as a correction to market imbalances, can then be taken away once the market regains equilibrium. The nuances of the various subsidy programs and criticisms of them merit more analysis, but remain beyond the scope of this paper—which focuses on price and supply management. In fact, this is the main point of our paper: that discussion of subsidies must broaden to address supply management itself because that helps understand why we are even having a debate about subsidies.

In the current era of unprecedented, globalized agricultural trade, small and medium-scale growers in the U.S. and abroad have never needed more protection from the volatility of market swings (amidst the ecological volatility of climate change), and the intense price competition among producers of vastly different scales, resources, production systems, and costs of production who are all increasingly selling into the same markets (Mazoyer and Roudart, 2006). Accordingly, opening up space in political and scholarly debates to remember, consider, and deliberate openly on the rationale, dynamics, and merits of supply management programs both acknowledges the needs of small and medium-scale growers and threatens a central tenet propelling the third food regime: that the topic of agricultural price floors has become politically untouchable.

To answer this question, it is important to study the policies that comprised supply management throughout the 20th century so as to understand why they failed to curb overproduction: their intended purpose. On some level, they mitigated agrarian crises in the U.S.—even as the concurrent surplus aggravated agrarian crises across the world. This tension—between solving the problem of surplus domestically, while exporting it internationally—hinged upon how overproduction was redefined and rendered invisible over time. Once the nemesis of farmers and thus of government, commodity surplus became an opportunity for expanding geopolitical influence and agribusiness growth. Meanwhile, agrarian crises in the U.S. grew—and grew more unnoticed.

This article emerges from a normative commitment to agrarian viability, defined as the ability of small and mid-sized growers to maintain a decent livelihood and farm in a way that does not degrade ecosystems or rural communities. This implies the reduction of pressures to scale up farm size, cut corners at the expense of animal welfare, farm labor or soil health. The goal is not that one

farmer succeeds at the expense of her neighbors, or that the overall numbers of farmers decreases in the name of efficiency.<sup>6</sup> Rather, agrarian viability implies preservation of the rich network of economic and social relationships that constitute the fabric of healthy agrarian communities and landscapes; rural studies scholars have recently demonstrated the crucial dimension of social relationships in family farm resilience and lack thereof (Darnhofer et al., 2016).<sup>7</sup> The goal is for a segment of the population to be able to make a dignified living producing high quality food and fiber. This expanded notion of agricultural viability logically entails taking supply management seriously, in both historical and contemporary political analysis and debates. We wish to redeem mechanisms of supply management—not subsidies per se. There is a key difference, and the conflation of the two is a large part of the conceptual—and thus political—confusion. Accordingly, we aim to bring renewed attention to overproduction and subsequent price collapses as serious problems for farmers in the U.S. and beyond.

### 3. Situating food regimes and market myths

Clearly agriculture has propelled politics since ancient Egyptian, Chinese, Malian, and Andean empires as rulers recognized very early on how control of the food supply supported political power. Additionally, farmers have sought to protect themselves from market volatility for centuries, including American tobacco starting in the 17th century (Taylor, 1953).<sup>8</sup> However, we focus on how food regime theory underscores the particularly modern, global iterations of food-based power relations, wherein surpluses of staple foods are moved across oceans and continents to achieve geopolitical dominance. The food regime periodization begins in 1870, which marks the last scramble for colonies by European colonial powers, particularly Great Britain and France seeking colonies in Africa along with colonial expansion by Japan, the U.S. and European powers in Asia. It also marks the beginning of the modern nation-state system in which:

“The settler states anticipated an alternative organization of world economy ... In contrast to the colonial system, with the colonial service an arm of the metropolitan state, settler nations developed representative governments which regulated the national economies within their jurisdictions ... A truly international division of labour emerged as settler states replicated European agricultural production—and industry—on a more cost-efficient basis appropriate to the large-scale provisioning of the growing European working classes.” (Friedmann and McMichael, 1989:96)

The paper seeks to further develop the spatial dimensions of the second and third food regimes. In doing so we also highlight shifts back and forth from relatively liberal agricultural markets, to a more protectionist regime, and then back again to liberalized trade, illustrating Polanyi’s double movement as applied to agriculture. In the “First Food Regime” (1870–1930), Great Britain solidified its geopolitical dominance through its ‘workshop of the world’ colonialism, wherein monocultural agricultures in colonies grew luxury goods and commodity crops for the imperial center, which placed few restrictions on raw material imports so as to feed its workshops and factories, even if that came at the expense of some British

<sup>7</sup> Agrarian viability encompasses but is not limited to rurality; it would now increasingly pertain to urban and peri-urban agricultural landscapes, which are expanding.

<sup>8</sup> We thank an anonymous reviewer for pointing us to this important example.

<sup>6</sup> There is much debate surrounding this issue (Altieri, 2009).

farmers.<sup>9</sup> The British government came to see that it was to its economic, and resulting political advantage to encourage raw material imports while restricting manufactured imports. However, with the aftermath of World War I and the onset of the Great Depression Great Britain was no longer the global superpower it once was, leading to the dissolution of the first food regime. In the “Second Food Regime” (1950s–1970s), the U.S. strengthened its geopolitical dominance that emerged from the ashes of World War II through intensive (over)production of staple grains. Wheat in particular was then distributed around the world, first via aid and then trade, producing consumer dependency in the new post-colonial world order (Friedmann and McMichael, 1989; Weis, 2007). World Wars interrupted the first food regime and transitioned it into the second, while the farm and debt crises of the 1980s interrupted the second food regime and transitioned it into the third, which is alternately called the corporate (McMichael, 2009), neoliberal (Pechlaner and Otero, 2010), or bifurcated (Friedmann, 2009) regime, among other classifications (Pritchard, 1998). In the current food regime, the WTO, and multinational corporations, serve as geopolitical hegemony, displacing the prior role of nation-state hegemony. A provocative theoretical lens, the food regime concept helps “unlock not only structured moments and transitions in the history of capitalist food relations, but also the history of capitalism itself ... [it] allows us to refocus from the commodity as object to the commodity as relation, with definite geo-political, social, ecological, and nutritional relations at significant historical moments” (McMichael, 2009: 163). Examining the history of supply management in the second food regime offers insight into how a commodity—or, in this case, a set of commodity programs—can become the medium for multiple and even divergent social, political, economic and environmental objectives.

While the second food regime extended U.S. geopolitical hegemony, it also provided a measure of protection for a segment of the U.S. farming population and of the global farming population. Critical voices such as the Cato Institute charge that, “[d]omestic supports ... depress global prices, hurting poor people abroad and complicating efforts to open markets for U.S. exporters” (Griswold, 2007), but in fact farmers around the world have benefitted from U.S. price supports (Wise ND). For instance, global cotton prices fell after the 1996 Farm Bill eliminated a price floor; this resulted in disastrously low prices for Francophone African cotton growers.<sup>10</sup> It is export subsidies that most directly harm poor farmers abroad, not price supports. While far from ideal with respect to racial and economic equity, cropping patterns, and agroecological practices, 20th century U.S. price support and supply management policies offered some degree of support for agrarian viability. Glossing over this domestic context conflates the original problem of surpluses—and how they depress prices—with the inability of supply management to mitigate the problem effectively. After all, the problem of surplus commodity production predates supply management policies. This conflation has become discursively and politically institutionalized in the third food regime, which runs on the axiom that price supports are indefensible.

Though the food regime framework effectively helps explain current political economics of agribusiness (in the third food regime), as well as the international political-economic impacts of the second food regime, it does not sufficiently focus on the

domestic context of the second food regime’s (in)famous surpluses. McMichael points out that “the agricultural subsidy system that formerly regulated national economies was now transformed into a competitive world market instrument, to the advantage of grain traders and food retailers, institutionally embedded in the WTO” (2016: 665). While astutely pointing out the benefactors of the current, corporate food regime, this analysis glosses over why the subsidy system was needed in regulating national agro-economies in the first place.

Accordingly, Polanyi’s “double movement” theory of governance in market-ruled political economies helps situate food regime theory within the context of U.S. farm politics; it helps elucidate the divergent and at times contradictory motivations and implications of 20th century supply management. “While on one hand markets spread all over the face of the globe and the amount of goods involved grew to unbelievable dimensions, on the other hand a network of measures and policies [in this case: commodity programs] was integrated into powerful institutions designed to check the action of the market relative to labor, land, and money” (Polanyi, 2001: 79). Yet, with agriculture it is clear that while protectionist policies mitigated harm from volatile market swings, they also enabled trade and marketization by managing overall risk and mollifying the sharp edge of labor and ecological exploitation. As Polanyi explains: “The road to the free market was opened and kept open by an enormous increase in continuous, centrally organized and controlled interventionism” (146). However, debates around government intervention in agriculture in the age of neoliberalism continue to assume there is in fact such a thing as a self-regulating market, and that state action invariably gums up the works of the market.

This assumption fails to acknowledge the ongoing historical dynamic wherein efforts to embed the economy within society—in this case: price supports to protect farmer livelihood—operate in constant tension with desires to release the economy from the shackles of regulation and government involvement. In this double movement, “the principle of economic liberalism, aiming at the establishment of a self-regulating market” ironically coexists with “the principle of social protection aiming at the conservation of man and nature as well as productive organization” (Polanyi, 2001: 132): the twin processes of liberalization and protection work together. Winders illustrates how this contradiction actually comprises agricultural capitalism: “The free market does not exist without its counterpart of state intervention” (2009: 205). Moreover, the Farm Bill’s domestic focus, yet international context, shows how such double movements necessarily take place in a world economy. Here, protectionism serves as a reaction against the excesses of economic liberalism; it ultimately fuels the very system that produced demand for it, helping to maintain the political-economic and ideological dominance of the “free-market” over society even as it serves to minimize societal damage from market dysfunction.

Tracing how market logic is produced, reproduced, imposed, negotiated, and experienced on the ground—in this case, on farms—helps differentiate market ideals from market realities (Berndt, 2015; Muellerleile and Akers, 2015). An historical overview shows how U.S. agricultural policy moved from price and supply management to reactive subsidies, and how political debate concurrently moved away from questions of fair prices and agrarian viability—to viewing subsidies as the root problem. This is a trajectory chronicled in the history of the U.S. Farm Bill.

<sup>9</sup> Even within early British imperialism, Great Britain deployed mercantilist food policies within and through settlements; settlers in the colonies had to sell only to British-controlled markets. Food regime theory addresses the pivotal role of indigenous displacement in securing cheap lands for settler farmers in US, Canada, and Australia (Friedmann, 2005).

<sup>10</sup> We thank an anonymous reviewer for pointing us to this important example.

#### 4. The U.S. Farm bill : (not) staving off agrarian crisis

##### 4.1. Birth of supply management

The U.S. Farm Bill was born of supply management strategies developed in the 1920s and 1930s. Overproduction emerged as a serious problem in the 1920s as export markets weakened with the resurgence of European agriculture after World War I, but it was the onset of the economic depression in the 1930s that threatened to put millions of farmers out of business, and in the process decimate the country's rural economy and food production capacity. Farmers were producing bumper crops, consumer demand was down, and prices were collapsing; the uniquely inelastic character of food demand means that food prices have to move a great deal for a small shift in food demand to occur; conversely small increases in supply lead to much larger relative price changes to bring supply and demand into equilibrium. With the onset of the Depression there was a perfect storm of lower demand and higher supply, leading to collapsing prices. Farmers plowed and planted more—not less—and the Dust Bowl ensued, bankrupting thousands of families. The federal government, as part of the New Deal's series of reforms intended to lift the country out of the Great Depression, wanted to restructure the economic environment facing farmers so that farmgate prices would cover the cost of production. The policy instrument developed to achieve these goals was supply management. What did it do—or not do?

The Agricultural Adjustment Act in 1933, updated in 1938, established price floors, production controls and import restrictions for a select few agricultural commodities, including wheat, field corn, cotton and rice. The three policies were meant to work in tandem to bring greater stability to agricultural markets by flattening the peaks and the valleys of price fluctuations, and in so doing ensure that farmers were able to cover their costs of production and that consumers had an adequate and affordable supply of basic foods. This overall policy of supply management aimed to keep prices in a narrow band that would balance the interests of farmers and consumers.

The price floors were pegged to “parity,” a term that refers to the purchasing power of the main agricultural crops such as corn, cotton and wheat relative to manufactured goods at a period of very high agricultural commodity prices from 1909 to 1914. Farmers were offered nonrecourse loans at a target price to help achieve parity. If the market price fell below the support price, farmers would relinquish their crop to the government, which would then store it until prices recovered. The government would accept forfeiture of the crop in lieu of repayment of the loan. Import controls were necessary to maintain balance between supply and demand and avoid collapsing prices and excessive costs for the price supports. For generations thereafter, price supports presented themselves as a fiscally prudent means of supporting farmers' income; from the 1930s–1960s, agricultural policy aimed to keep surpluses in check through acreage restrictions and marketing quotas; the government only had to pay a fraction of farmers the support price to lift the overall market price. In theory, supply management could cost the government next to nothing over the long-term as any losses on the loans would be recouped later with the selling of reserve stocks when markets tightened (Schaffer et al., 2012). However, the strong support under the New Deal for price supports weakened in a changing economic and political environment.

By the late 1940s, opposing viewpoints regarding price supports emerged. One side sought to expand wartime direction of high, fixed price floors; while the other argued for a return to the prewar ‘flexible’ price support. The Agricultural Act of 1948 compromised between these two positions. After the Korean War in 1953, “the

specter of surpluses once again dominated agricultural policy-making” (Bowers et al., 1984: 21); the Agricultural Act of 1954 set flexible supports for basic commodities at 75–90% of parity, depending on the crop. All the while, production levels were rising across the board. Congress established the Soil Bank to idle more lands—partly for ecological, but mostly for economic reasons. Wheat surpluses in the early 1960s were so high that carry-over stocks, i.e. what is unused and not exported at the end of the year, were more than 100% of annual production for three years running (Winders, 2009: 139). The 1970s brought target prices in lieu of price controls, and by the 1980s farm crisis (Lianos and Paris, 1972) voluntary acreage reduction, cash paid land diversions, and Payment In Kind programs were instituted in lieu of full nonrecourse loans. Yet, prices for the main commodity crops kept tumbling precipitously, falling to 1933 levels by the mid-1980s. Net farm income per farm fell dramatically, loan delinquencies grew, and farmland values crashed. The intractable problem of surplus took center stage again in the early 1980s.

Importantly, the original round of U.S. supply control was propelled by the economic and ecological woes of overproduction (Culver and Hyde, 2000; Roosevelt, 1935). The economic catastrophe and the disastrous erosion that precipitated the Dust Bowl and mass exodus of Great Plains farmers ushered in government response. The USDA's Natural Resource Conservation Service (NRCS) director explained: “We began the Farm Bill during the Dust Bowl ... [Dust from the west made an] ... orange sky for a week, 200 miles over the Atlantic Ocean. The dust cloud was man-made from bad agricultural practices.”<sup>11</sup> Conservation goals bolstered supply management goals by putting marginal lands out of production to reduce soil erosion, with the hopes also of reducing production, and hence increasing farmgate commodity prices and agrarian livelihoods. For nearly a century, the Farm Bill—in all of its permutations—has retained the primary two goals of Commodity (supply management) and Conservation (also as supply management) as its first two Titles, demonstrating by default how ecology and economy are but two sides of the same coin (Moore, 2015).<sup>12</sup>

##### 4.2. Death of supply management

Why did formal supply management strategies not work? What led to its slow weakening and eventual abandonment with the pivotal 1996 Farm Bill? From the outset there were major errors in its architecture. Firstly, support prices were based on bushels, while acreage restrictions meant to reduce overproduction were in acres. This incentivized farmers to produce more and more on the acres they were allowed to plant. Moreover, with generous funding of agricultural research and extension by the government leading to higher yields per acre, farmers largely leapfrogged the acreage restrictions to produce more and more commodity crops on their allowable acres. Through mechanization, hybrid and then transgenic seeds, intensive irrigation, and deployment of an arsenal of agricultural chemicals, total factor productivity of commodity crop farming has increased an average of 2% annually since 1940, and real farm prices have declined an average of 1.5% annually (Gardner, 2002: 130). From the mid 1930s onward the trend has been fewer and larger farms, higher yields per acre, and higher overall production. Rapid productivity growth under the second food regime became its central faultline (Hurt, 2002), consistently stymieing

<sup>11</sup> Participant observation of meeting: December 2014, USDA headquarters, Washington DC.

<sup>12</sup> A political-economic analysis of agricultural policy necessitates a political-ecological analysis; this paper only touches on this important dimension, which merits another paper altogether.

efforts to control production (Friedmann, 1993; Tweeten and Zulauf, 1997).<sup>13</sup>

The mid-20th century USDA mantra ‘get big or get out’ served as both prescription—and description: U.S. farmer debt rose from \$250 billion in 1970 to almost \$400 billion in 1980 in 2005 constant dollars (Henderson et al., 2011). Yet, despite the extent of agricultural crisis and its impact on rural communities, the early 1990s Farm Bills continued in the directions of further gutting supply management and of opening world trade channels to the vicissitudes and downward pressure of globalized market commodity prices. The 1996 Federal Agricultural Improvement and Reform Act ushered in a radical shift in U.S. farm policy: the twin pillars of price supports and production controls had been significantly weakened by the 1990 Farm Bill, but in 1996 were done away with completely.

This shift to decoupled payments notwithstanding, the debate around farm subsidies has continued to revolve around whether or not payments to farmers were necessary, fair, or wasteful, as discussed above. The environmental organization the Environmental Working Group ranks the largest subsidy recipients over the previous five-year period, with scandalous disclosures of politicians, celebrities, and Fortune 500 companies receiving millions of dollars in farm payments. The message is clear—farm subsidies are the worst kind of political pork; wealthy “farmers” are gaming the system to get undeserved, unneeded payments under Farm Bill programs that were passed ostensibly to help struggling family farmers stay on the land and keep producing essential foodstuffs for consumers at home and abroad. If only we could remove the shackles on the free market all would be good for farmers, consumers, and the public purse.

However, this anti-subsidy, “pro-market” framing obscures the fundamentally unique character of agriculture in an industrial/market economy vis-a-vis government intervention (Ray et al., 2003). Furthermore, it obscures the fact that subsidies tend to result from low prices, thus confusing the problems with the (failed) attempt to solve them. This confusion is ultimately born of the convoluted double-movement Polanyi elucidated nearly a century ago and which remains so emblematic of market-dominated agricultural governance. Increasingly liberalized trade paradigms have pressured governments to eliminate tariffs and protected domestic markets, even as, analysts have argued, “globalization induces countries to increase agricultural protection” (Garmann, 2014). In the U.S., this pressure won out in 1996 and put the nail in the coffin of price and supply management.

#### 4.3. *In the wake of supply management*

In the transition away from remaining vestiges of price supports, the 1996 Farm Bill instituted “direct payments” which were seen as non-trade-distorting, and hence allowable without restriction under the WTO’s Agreement on Agriculture. These were based on historic base acreage but otherwise decoupled from current production levels, and were supposed to decline over time, thus reducing government expenditures on farm subsidies while giving

farmers more planting freedom. Meanwhile, the 2002 Farm Bill institutionalized late 1990s emergency payments in the form of counter-cyclical payments. Overall government payments to growers ballooned. By the 2008 Farm Bill, across the political spectrum there was growing consensus on the inefficiency of the sheer scale and scope of the payouts.<sup>14</sup>

The 2014 Farm Bill emphatically repealed direct and counter-cyclical payments, replacing them with two risk management programs: Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC), that function as shallow loss coverage, i.e. they cover the deductible of crop insurance. Additionally, this legislation expanded some existing crop insurance programs and created a new one for cotton growers that replaced previous supports.<sup>15</sup> These changes picked up where direct payments left off, as a more politically palatable response to the inherent volatility of farming that will only worsen with climate change. These insurance-like risk management programs appeal to farmers, who increasingly face unprecedented economic and ecological vagaries, and they seem less like a ‘hand-out’ than their Direct Payment predecessor; furthermore, they are classified by WTO standards as less trade distorting than counter-cyclical programs. Yet, they are a non-response response that continue to encourage overproduction and monocropping. A recent USDA agricultural economist report calculates that ARC and PLC will cost the government significantly more than the discredited and now defunct direct payments (Zulauf et al., 2015). Originally, crop insurance itself was not designed for systemic, chronic problems, just random disasters, and neither are the more recent shallow-loss supplements. Yet, in this era of systemic, chronic economic and ecological shocks and even crises, growers endure ongoing high risk while taxpayers cover most of the cost of crop insurance and its recent supplements: ARC and PLC. U.S. farm policy “has been trending toward reliance on policy parameters that adjust with the market” such as crop insurance guarantees that reset yearly based on market prices (Orden and Zulauf, 2015: 1306); nevertheless, Congress and commodity farm groups work to keep fixed parameter levels [reference prices] to measure and protect against multiple year losses and downside risk. Here, the ongoing tension within Polanyi’s double movement recurs: farm policy works to liberate the allegedly self-regulating agricultural market, even as it seeks to protect its constituents from the damaging repercussions of marketplace vicissitudes.

### 5. Agrarian (In)Viability & the double movement of food regimes

#### 5.1. *Hidden troubles*

A normative commitment to agrarian viability necessitates more attention to and consideration of supply management—from its historical successes and limitations to its current possibilities. Part of the reason supply management remains hidden in U.S. policy analysis and discussions is that the crisis of U.S. agrarian invariability has largely remained hidden. On the surface, it has long seemed as though U.S. agriculture was booming, due to record

<sup>13</sup> Henry Wallace, the USDA Secretary of Agriculture during the first Farm Bill, embodied this tension as he strongly pushed for supply management and developed the first commercialized hybrid seed corn as an entrepreneur prior to his government service.

<sup>14</sup> The 2008 Farm Bill also established a whole new title dedicated to Energy, which housed the greatly expanded Renewable Fuel Standard mandate. Though beyond the scope of this paper, the ethanol subsidies absorbed excess corn surplus—while further driving up production levels and domestic and global prices. This corn boom—alongside an export boom of soy to China—temporarily raised incomes for the largest row crop growers, and raised land prices across the board. The bubble soon began to burst, and prices have dropped dramatically since.

<sup>15</sup> See Suppan 2014 regarding the US and Brazil’s 2002 WTO trade dispute over cotton subsidies. The US agreed to pay the Brazilian Cotton Institute \$147 million annually rather than terminate their own domestic supports and export subsidies for upland cotton. The 2014 Farm Bill “settled” the dispute, but the lingering hypocrisy of US’s position on subsidies at the WTO remains.

exports, but agribusiness gains obscure farmers' losses.<sup>16</sup> Yet, even when separated from agribusiness revenue, farm household income—and farmers overall—need disaggregation. While 2013 average farm household income is significantly higher than overall average incomes, \$118,373 versus \$72,641, only 14% of household income for farm households comes from farming activities, for an average of \$27,897. This rose nearly 200% from 2008 during the ethanol bubble, but decreased dramatically just two years later to \$15,908. In 2011—an above average year for U.S. farming—three fourths of all U.S. farmers received a rate of return on assets of less than 1% (Hoppe, 2014). Overall, the median farm for this year had a net farm income of -\$2250 (ERS/ARMS), while large family farms, with more than \$1 million and less than \$5 million in gross cash farm income (GCFI) had a median net farm income of \$476,000 and a 9.2% average return on equity.

In short, the net farm income of most U.S. farms is very low. The relatively high per household incomes for the typical farm are due to off-farm income—itsself a likely indication that because of the cost of land the barriers to entry for having any farm at all are fairly high. Then there is the missing story of those who have already gone bankrupt and left the sector altogether (Lobao and Moyer, 2001). The untold story of progress in American agriculture is the fate of those pushed out of farming, yet the USDA census only surveys those still farming. Rural studies scholarship has chronicled how the social and psychological toll of farmer distress, debt, and bankruptcy “need to be contextualized within the neoliberal transformation of the political economy of agriculture, which entailed dismantling government legislation such as statutory pricing and subsidies that traditionally supported farming families” (Bryant and Garnham, 2014: 305). Notably, the rates of bankruptcy and land loss were even higher throughout the 20th century for African-American farmers and other communities facing chronic discrimination in USDA credit, support, and outreach.<sup>17</sup>

Even the most robust commodity programs did not constitute agrarian reform; they did not break up big farms and redistribute the land amongst land hungry tenant farmers (Winders, 2009), nor did they counter existing class, racial, or gender disparities. From the outset U.S. supply management had an inherent scale bias as it locked in the existing, highly uneven distribution of agricultural land in the country. With price supports provided on a per bushel basis, bigger farmers received more benefits. A farmer with 1000 acres of corn would receive ten times the support of a farmer with 100 acres of corn. While this makes sense if the goal is to maintain agricultural capacity and to ensure that farmgate prices cover actual production costs, such a policy serves to accentuate extant divisions between politically over-represented and politically under-represented farmers and accelerate the technologically induced consolidation process. Total number of farms peaked in 1935 at almost 7 million, and has been in decline since then, with recent (last 10–15 years) apparent stabilization in farm numbers masking real decline, as the sales threshold for what counts as a farm under the USDA's Census of Agriculture has not changed since 1974. Rising productivity (Gardner, 2002) has led to fewer, larger farmers, producing more per acre and per labor hour, and more commodities in toto, whether measured by bulk volume or revenue (Lyson et al., 2008).

Supply management has not always been pivotal, but today is more important than ever; by securing a price floor and stable income for growers, it could help make farming a viable, solid livelihood and encourage a new and diverse generation of growers to join—within and beyond the U.S. Viable farming could also strengthen conservation compliance, and thus agro-ecological goals. It could encourage rural, urban, and suburban growers to focus on quality of nutritional food over quantity of yield, thereby supporting public health goals and other spillover effects.

“Public policies will need to be put in place to provide a variety of organizational forms that producers can use to coordinate the production, processing, and marketing of their products. The land grant triad of education, research, and extension needs to direct more of its resources toward meeting the needs of the producers who seek to engage in farming as a household livelihood strategy” (Ray and Schaffer, 2008: 163).

More research is needed on how a more secure price for growers could help diversify farming and, allowing those with little prior income to learn the skills and embark upon the profession—particularly those populations under-served in prior U.S. agricultural policies (Graddy-Lovelace, 2016).

Yet another key aspect of agricultural injustice and agrarian crisis are the migrant farm workers, usually displaced from their own farms due to agrarian crisis and unviable farmgate prices, and who have risked their lives and well-being to toil in U.S. fields.<sup>18</sup> More research is needed on whether working conditions for farmworkers could be improved if the commodity in question fetched a higher and more stable price in the U.S. and elsewhere. Furthermore, if international trade rules were altered to allow price supports, would displaced farmers be able to resume farming themselves, either in their new country or in their original lands? Such ambitious questions are worth exploring. After all, the improbable rise of the Living Wage campaign and policies among fast food workers in the U.S. and the linkage of food and farmworker labor movements could catalyze a discussion of ‘living prices’ or price floors for farmers themselves.

## 5.2. (Over)supply ‘management’ ushers in the third food regime

In the first food regime, Great Britain used its colonies to source luxury goods for the upper classes and commodities to feed industrial workers and industrial processes (e.g. cotton). It reduced tariffs, which led to growing food imports from temperate and tropical climes, hurting domestic farmers in the process (McMichael, 2013). Cheap commodities fueled British economic power and geopolitical hegemony. In the second food regime hegemony shifts from an industrial power with a small land base to a rising hegemon with enormous agricultural capacity. However, the U.S.'s fecundity represented a domestic danger in the form of overproduction. Agricultural exports become the solution to domestic overproduction, and in so doing complemented domestic commodity price supports. The colonial trade of the first food regime gives way to the second food regime's managed trade paradigm in which U.S. and later European growers are protected from imports. These hegemonies created new markets for agricultural commodities to expand their economic and political

<sup>16</sup> While writing this paper heretofore hidden agrarian crises have become unhideable. Net farm income for 2016 is forecast to decline for the third consecutive year, with the estimate of \$71.5 billion down 42% from \$123.8 billion in 2013. [http://www.hqj.com/ag\\_news/net-farm-income-weakness-remains-but-only-slightly/article\\_ae97679b-2db3-54e8-af69-e6585ae2d2a0.html](http://www.hqj.com/ag_news/net-farm-income-weakness-remains-but-only-slightly/article_ae97679b-2db3-54e8-af69-e6585ae2d2a0.html).

<sup>17</sup> The recent civil rights lawsuits against the USDA chronicle and attest to these racial and gender-based discriminations, on behalf of African-American, Native American, Hispanic and female growers.

<sup>18</sup> This paper focuses on the U.S.'s domestic experience of agrarian (in)viability, but this realm of course interacts and overlaps with international experiences of agricultural and rural crisis, leading to urban migration, border crossings, and migrant labor experiences and struggles, most notably in Central America, the Caribbean, and Mexico.

influence, and to support domestic agricultural policies by reducing commodity surpluses. Initially exports of agricultural commodities were heavily supported by aid programs such as PL 480, in which receiving countries only had to pay for shipping costs (on American flagged ships) (Cullather, 2010). Aid-driven exports paved the way for commercial sales, which were still subsidized as the U.S. government made up the difference between the higher domestic support prices and the lower world prices. Over time, though, this tactic becomes untenable as other countries mimicked U.S. policies, raising the cost of the subsidies (Bowers et al., 1984); what was an opportunity became a burden.

In the third food regime, public grain stocks disappear and trade becomes a rhetorical and material tactic for dissolving the surplus of commodity stocks. Expansion of global markets becomes a defining feature of the third food regime. Agribusiness is now well positioned to globally source cheap commodities for livestock and processed foods, while national agricultures are pitted against each other (Weis, 2007). While overproduction was seen as one of the central problems of the second food regime, now agricultural policy positions underproduction as the defining feature and crisis of global agriculture, to be addressed through diffusion of productivist, industrial agricultural technology packages and exports of basic grains. Each regime defines its own problems: when the goal is to manage supply and support commodity prices overproduction undercuts this goal; when the goal is to increase global agricultural trade underproduction is the nemesis. We suggest that the former goal fosters agrarian viability, while the latter goal ignores and thus undermines it.

The rise of agribusiness and the increase in international grain trade from the 1950s onward, culminating in the Soviet grain deal in 1972, led to growing opposition to supply management as these powerful intermediaries did not see it as in their interests to have restrictions on supply or trade (Morgan, 1979; Winders, 2009). The shift towards neoliberalization of agriculture started in the 1970s but picked up steam in the 1990s; it represents the emergence of the third food regime, whose contours and precise agenda are still somewhat indeterminate, but which clearly represents a departure from its predecessor. However, pushing surplus commodities elsewhere serves as an all too temporary fix to a problem that requires long-term international coordination. Agricultural trade is positioned as a tool to lift the fortunes of American farmers, increasing demand, and likewise prices, but in practice it exports the problems underway in the U.S., such as chronically low farm-gate prices, chemical-dependent monoculture, corporate consolidation, and land concentration.<sup>19</sup> A scalar disconnect works to render surpluses invisible, once the scale of reference expands to the nebulous 'world market.' As the second food regime transitioned into the third, the urgency of overproduction dissipated into a vast and vague 'global' scale. The destabilizing impacts of surplus production disappears as a governance concern in the third food regime.

One of the most important arguments within food regime theory concerns the implicit rules that govern and define each regime. Regimes are defined by "an organizing principle that expresses a form of rule or hegemony" (McMichael, 2013: 21). Though true of all marketization (Berndt, 2015), agri-food marketization depends directly on the naturalization of its particular rationale. Each food regime operates with invisible laws—and geopolitical constructions—of surplus and stability. "While the postwar regime

lasted, agricultural commodity prices remained relatively stable because of the publically regulated trade in foodstuffs" (McMichael, 2013: 38). This situation crashed with the U.S.' 1972 détente with Soviet Union, which cleared surplus grain stocks, tripled grain prices, and led to world food crisis, thereby eroding the second food regime. However, the relative stability lasting from the late 1930s through the mid-1970s—afforded by the second food regime's supply management policies—cannot be discounted purely as geopolitical foreign policy agenda: it served a domestic purpose as well.

While the topic of agricultural surpluses has largely receded from agricultural economics and policy, it remains here and there, subsumed within the heated debate about trade distortion (Orden and Zulauf 2015)—itself a product of the third food regime. In regime crisis moments, key implicit rules are laid bare and named, thus showing and leading to the hegemony's limitations and demise. The critique of 'food aid' as 'dumping' signaled the demise of the second food regime. Currently, agricultural policy is saturated with language of "systemic risk," but obscures how the risk is enabled via neoliberalized mega-trade. This discourse of systemic risk naturalizes the chronic vulnerabilities of price volatility and 'free' trade, masking how institutions and policies can contribute to low and wildly fluctuating prices.

## 6. Updating supply management

### 6.1. Supply management's lessons & limits

A wide range of supply management techniques emerged in 20th century U.S. agricultural policy, each attempting to mitigate the limitations of and expand accomplishments of predecessors. Grain reserves first worked with import restrictions; full commodity crop programs built upon these policies, ushering nonrecourse loans, and set-aside land reserve programs and other price-setting mechanisms. Meanwhile more decentralized initiatives arose to complement government-driven programs. The Burley Tobacco Growers Cooperatives employed quotas to ensure a fair price—and collective compliance among participants. More recent attempts to uphold farmgate prices are less government-centered and more marketing-oriented (Meulenberg, 2000), such as *terroir*/geographical indications (Bowen and Mutersbaugh, 2014; Conneely and Mahon, 2015), though they still rely on active farmer participation and mutual trust. Other existing initiatives, projects, policy proposals are already moving in this direction, from food hubs to federated cooperatives to a proposed farmer-owned Market-Driven Inventory System (Schaffer et al., 2012). While large cooperatives seem to be surviving, for instance, agricultural marketing orders were recently dealt a major legal blow; both examples demonstrate the conflicting notions of liberty and private property at work in vestigial supply management, and thus both merit attention. Here we briefly examine the role of one large cooperative in the organic dairy industry, and the purpose of agricultural marketing agreements and orders, all of which represent more decentralized tools for supply management. Of note, neither of these important examples of extant techniques of supply management classify as 'subsidies.'

### 6.2. Cooperative organic milk

Agricultural cooperatives are organizations that are designed to serve their farmer member-owners, providing services that make it easier for farmers to farm and market their products profitably. Under the 1922 Capper Volstead Act, cooperatives receive an exemption from antitrust regulations that allow them to negotiate prices with food commodity buyers on behalf of all member-

<sup>19</sup> This conundrum pertains to growers around the world, though to differing extents and contexts. More research is needed on how in various countries and countrysides, tensions play out between the need for and omission of supply management and the stopgap fix—and fixation—on subsidies.

owners. Traditionally, agricultural cooperatives and their members are bound by exclusive arrangements by which the members market all their production through the cooperative, and the cooperative is obligated to buy all the production of its members. The problem with such an arrangement in a bulk agricultural commodity sector such as milk is that the cooperative has little ability to influence prices in the face of gluts. If production is up, the co-op has to buy the extra milk and suffer the consequences in the face of lower prices, which are then passed on to its members.

A new generation of cooperatives is emerging in which cooperatives are not bound to purchase and market all of their members' production, recognizing the importance of close calibration between supply and demand, and the need to differentiate one's production so as to increase farmgate prices. Organic Valley is the largest organic farmer cooperative in the world with annual revenues that topped \$1 billion in 2015 and more than 1800 owner-members across the United States, Canada, and Australia. Organic Valley sees organic certification and production methods as a strategy for saving family farms, and aims to operate the cooperative so as to provide stable prices that provide a decent living to its farmers. Organic Valley manages its own system of internal supply management in which it only takes on new producers when it has a secure organic market for the milk, otherwise it runs the risk of having to pay farmers the organic pay price while only earning the conventional milk pay price.

However, there are two additional layers to Organic Valley's supply management. One, when member-farmers join the cooperative they pay in a level of equity corresponding to their average production level. If they want to go above this "active base," which is based on the last three years of production they need to increase their equity buy-in. If members exceed their base they risk not being able to earn the organic premium for some of their milk, which ranges from 50 to 100% over the price of conventional milk. Two, when supply exceeds demand, as happened in 2009, the cooperative acts to spread the pain as widely as possible and slightly reduce its purchases by an even percentage from all farmers, rather than cutting producers off completely, which was the policy of competing investor owned organic dairy firms such as Horizon Organic. Production differentiation can be an important vehicle for maintaining farm viability in a competitive, globalized agri-food marketplace (Barham, 2002). Organic Valley is one of the premier examples of values-based value chains that allow individual farmers to focus on farming while aggregating their market leverage and thus gain improved bargaining power in the marketplace (Stevenson and Pirog, 2008).

However, with niche markets such as organic milk, the bottom could easily fall out of the market with a slight imbalance, hence the need to carefully watch supply and keep it in line with demand. Government policy can and should encourage the creation and growth of these decentralized instruments of supply coordination. While Organic Valley is exceptional, there are hundreds of organizations, known as food hubs (Rogoff, 2014) or value chains (Diamond and Barham, 2011), using similar strategies of collective action and market differentiation in order to support farm viability and values such as environmental sustainability, food justice, and rural development (Diamond et al., 2014). Current policy encourages development of such enterprises through competitive grant programs such as the Local Food Promotion Program, funded at \$15 million a year in the 2014 Farm Bill. Yet without accompanying measures to change the structural conditions facing most farmers, small programs will not fundamentally rebalance the agro-economic landscape. It would seem that for market differentiation to be a broad-based solution to the problems facing small and mid-sized farmers there would need to be measures taken to stabilize prices, either through marketing quotas or other means to

keep supply in line with demand.

### 6.3. Agricultural marketing agreements & boards

Agricultural marketing boards, orders, and agreements encompass another category of decentralized supply management: one that necessitates some government intervention, but operates apart from direct state management. The degree and mode of centralization depends upon many factors, such as the degree of geographical specialization and concentration of the crop in question. These programs allow growers of a certain commodity—through government intervention—to coordinate and limit their production levels so as to not flood the market and bottom-out prices (Moran et al., 1996). Troughton (1989) argues that farm marketing boards emerged in response to 1920s agribusiness monopolies, and that each successive wave of agribusiness consolidation impels further market-orientation on the part of the boards.

In lieu of outright marketing boards (Abbot, 1967), the United States established the Agricultural Marketing Agreement Act in 1937, which authorized the USDA to enact and promote "marketing orders" to help maintain stable markets for agricultural products, particularly produce, dairy, and other perishable items not covered by commodity crop programs. These voluntary price support programs are initiated by growers—or as the USDA Agricultural Marketing Service describes it: "by industry." This slippage tellingly blurs the lines between private sector agribusiness and growers themselves. Marketing orders, once approved by the Secretary of Agriculture, serve as a binding regulatory framework for the "entire industry in the specified geographical area" (AMS, 2016a,b), while marketing agreements bind only those handlers who sign on. AMS frames both as ways for "producers and handlers ... to solve marketing problems" they could not solve individually. The orders and agreements regulate the flow of product to market and establish reserve pools for storable commodities. The 1937 California Marketing Order, for instance, declared that the marketing of commodities "in excess of reasonable and normal market demands" results in the "economic waste of the agricultural wealth of this state" (Section 58651), and that the orderly and fair marketing of farm supply constituted a "public interest" and thus needed to be policed to protect public "health, peace, safety, and general welfare" (Section 58653).<sup>20</sup> Marketing orders and boards were originally intended to strengthen the voice of growers while concurrently checking the power of corporate food processors and distributors. They also are supposed to pool knowledge and counter information asymmetry. "An individual seller is most vulnerable to hold-ups when [s]he is isolated from other sellers and hence clueless about prices paid to others and quantities being offered" (Larue and Lambert, 2012: 51). Alone, farmers generally have weak bargaining positions.

By the end of the 20th century, however, public concern for farmer viability had lessened, and agricultural marketing orders were disparaged by many—even some growers themselves—as manifestations of heavy-handed state control over individual output. The quotas that limit individual producers' production under marketing order quotas have spurred intense opposition based on values of personal liberty and private property. The pivotal—yet altogether unreported—2015 Supreme Court case *Horne v USDA* struck a near-death blow to marketing orders in the US (Lane, 2015). After refusing to hand over their raisin reserve requirement to the California Raisin Marketing Order, the Hornes

<sup>20</sup> See California Legislative Information's Food and Agricultural Code [https://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=FAC&26sectionNum=58651](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=FAC&26sectionNum=58651).

sued, alleging that the Order allowed the government to seize their private property, unconstitutionally. Justice Roberts cited the Constitution's Fifth Amendment 'Taking Clause', in his majority decision supporting the Hornes. Justices Breyer and Sotomayor argued in their dissent that by growing raisins in California the Hornes were subject to the marketing order, which historically benefitted growers in the aggregate. The order buffered the Hornes and other farmers from price volatility, supported the orderly marketing of produce through grading, quality and packing requirements, and expanded demand through consumer outreach. The notorious 'free rider' problem was to be addressed through compulsory handing over of the raisin reserve. Moreover, the government was not taking land itself, nor even the majority of that year's raisin harvest.

Nevertheless, the court's decision sets a troubling precedent with regard to agrarian viability, as it potentially could destroy a widely used and effective tool for managing risk—particularly for geographically concentrated crops. The USDA's Agricultural Marketing Service, in describing the functions of the Raisin Marketing Order notes that while "the marketing order currently authorizes volume control measures in the form of free and reserve tonnage ... " due to a recent United States Supreme Court decision, these provisions are currently suspended, being reviewed, and will be amended (AMS, 2016b)." The judicial precedent and near-total lack of media coverage reflect the eclipsing of the supply-management programs and paradigms. Furthermore, there is the problem that the average raisin grower is quite large and thus may not garner the sympathy of the average non-farming American. Concerns about consolidation aside, the basic ability of farmers to work together to optimize their return in the marketplace is key to their success in a globalized marketplace.

## 7. Conclusion

This paper began by asking: why is there currently such scant discussion of supply management and instead a fixation on subsidies in agricultural policy debates—when the former has long been the critical driver of US agricultural policy? We argue that answering this inquiry requires an historical overview of the U.S. Farm Bill analyzed through the lenses of Polanyian and food regime political-economic theories. The market conditions and related political dynamics which initially created space for and drove supply management in the second food regime have changed dramatically in the current third food regime, as evinced in post-1996 Farm Bills: agricultural policy is now in a phase in which the (allegedly) *laissez-faire* half of Polanyi's double movement is on the ascendancy, and markets are presumed to be self-correcting and government intervention interferes with this process. According to food regime theory, there are unspoken rules for each regime; we argue that the driving rule in our current regime precludes even a discussion of supply management, which would evoke a previous era of wasteful and excessive interventionism. In fact, the rise and fall of U.S. supply management helps bring to the fore the reality of historical and ongoing agrarian crises amidst overproduction and low and volatile prices. With the erasure of agrarian crisis the concept of surplus—as oversupply—shifts from being the problem to the solution, and hence there is no need to talk about supply management as an essential tool for maintaining agrarian livelihoods.

Scholarship and policy analysis need to explore historical and vestigial instances of supply management in the U.S. (and beyond) to inform possible re-articulations and updated adaptations of such economic logics and projects. The goal of agrarian viability—and the reality, albeit hidden, of agrarian inviability—necessitates this. Accordingly, after explaining how supply management drove US Farm Bills throughout the 20th century, and how current policy and

political debates focus on subsidies to the exclusion of supply management, this paper asks why such a critical driver of agricultural policy has nevertheless been forgotten. We contend that the answer to this pressing question lies at the intersection of two influential political-economic, historical frameworks, one rooted in international rural sociology, the other in economic theory. Both frameworks interrogate and contextualize marketization and market-logic. Though any policy that counters or aims to transcend market-logic seems far-fetched, "[i]f three decades of deepening neoliberalization have yet to yield anything approaching textbook market conditions, what can be concluded about the causes and consequences of these diverse (but interconnected) experiences of often state-assisted marketization?" (Peck, 2012: 127; Lawson, 2010). Both halves of the Polanyian double movement are always embedded within political struggles for power, but in agricultural policy discussions liberalization is largely seen as the outgrowth of technical failures of prior policies, pushing supply management into the shadows and pushing subsidies into the damning limelight. Polanyi's arguments describe the tensions undergirding supply management in agricultural policy: state attempts to protect people from the deleterious impacts of market liberalization are most often corrective reactions and thus ultimately ineffective, and even enable ongoing processes of marketization.

This paper traces how this tension plays out in the history of the U.S. Farm Bill itself. This genealogy illustrates and expands the food regime framework, which foregrounds the role of food in late 19th century imperialism to 20th century developmentalism and then 21st century financialization. A closer look at the Farm Bill elucidates a key aspect of the second food regime that bears scrutiny: the role of price floors in mitigating (somewhat) agrarian crisis among U.S. farmers. Food regime theory hinges upon the role of prices and cheap food for consumers and governments, yet more attention is needed regarding the role of prices for farmers. The analysis is there in general: in both first and second food regimes, "agriculturalists everywhere competed for markets, overproducing in relation to consumer demand and depressing agricultural prices" (McMichael, 2013: 27). Food regime theorists often point to supply management as the direct—even deliberate—cause of surplus, but surpluses in the early 1930s precipitated the implementation of supply management with the AAA. Ironically, a policy that was meant to eliminate overproduction co-existed with continued crises of overproduction, which were punctuated by export booms and shortages. While exporting surplus production was an inadequate and damaging solution to the problem of domestic overproduction, its failures do not merit condemnation of the entire set of principles and policies embodied within the protectionist second food regime as thoroughly implicated in imperialism and thus devoid of any redeeming characteristics.

Changes in agricultural policy over the last eight decades demonstrate how protectionism and liberalism work together to comprise agricultural capitalism. National production interests are formed in response to and in relation to world agricultural economy, international trade, and general food regime context. The paradox is that while protectionism is a reaction against the excesses of economic liberalism, it ultimately fuels the very system that produced demand for it. Protectionism enables market society even as it serves as a corrective (Polanyi, 2001). We argue that this Polanyian contradiction, so intrinsic to market economies, has conflated the agrarian-viability intention of supply management with its geopolitical implications (Cullather, 2010). Supply management policies had far-reaching international impacts well-analyzed by food regime theory, but they had domestic grower origins, intentions, and impacts as well, as Polanyian economic theory helps explain.

Herein lies the problem with supply management,

overproduction and farm policy. Supply management emerged in a particular historical and political context; there was substantial political support for it, but this initial consensus waned, as the more export-oriented fractions of agriculture opposed production controls, and these fractions got bigger and hence more politically powerful over time. One cannot place full blame on supply management for overproduction precisely because supply management came after overproduction was recognized as a pressing public issue. Rather, conflicting forces and goals on the domestic and international stage, and the very effects of earlier policies undermined the political and economic support for supply management among powerful stakeholders (Winders, 2009).

An effective supply management policy has to acknowledge the power of the global economy and the impossibility of autarky, yet at the same time it must recognize the dangers of unrestrained integration of the global agricultural economy. It must go beyond mere buffering of market vicissitudes to a more thorough critique of agricultural market liberalization itself. Moreover, prior versions of supply management favored white, male commodity crop growers, and in so doing helped construct and enable monocultural agriculture in the U.S. (and beyond), as supported commodity crops grew in importance at the expense of other, regional crops. Yet against this dominant trend, counter-trends have emerged, resisting this agricultural homogenization through diversified agricultures. However, these compelling initiatives—from urban farms to farmers markets to agro-ecological networks—remain troublingly unviable as secure livelihoods for most participating or potential growers.

An overdue reorientation toward price supports could build common ground among diverse movements and groups working on issues ranging from fair farmgate prices and just compensation and treatment of farm laborers, to land tenure and land redistribution. All of this would be grounded in a central recognition that farmgate prices must cover farm production costs, and thus, coordinated action is necessary to make sure this happens. Arguably, updated supply management would posit a threat to the dominant agricultural policies and paradigms governing world trade (Wilkinson, 2015). Yet, protection for those who provide sustenance for all has never been more needed, in this era of trade liberalization. Some argue that supply management needs to be heavily government coordinated (Ray et al., 2003); but to be adaptive and effective, as well as reflexive (Marsden, 2013) it would need to engage all sectors: from consumers and civil society to food policy councils and the sharing economy to information technology serving as communication intermediary. Different strategies are needed for different crops, contexts, and methods; better, adaptive communication would also broaden participation but also legitimation and buy-in for the de-legitimized supply management, thereby opening more policy opportunities.

A supply coordination policy has to address on the one hand the need to build alliances across borders, and on the other hand, be led by and accountable to local context, histories, conditions, social dynamics, and capacities. It needs to be attentive to how physical geography impacts optimal cropping patterns, and how policies, agricultural patterns, and position in national and international economies affect specialization, prices, and the type of protection needed. This could unfold in diverse ways, and is already beginning to happen in the U.S. through grassroots alliances such as National Family Farm Coalition, National Farmers Union, and Rural Coalition. There are vestiges of supply management extant. Some are successful, to the point of being market leaders, such as Organic Valley, while others such as the Raisin Marketing Order are under tremendous pressure from the highest legal authority in the land. Nonetheless, even though there is little discussion of supply management in agricultural policy debates, the persistence of it in these

institutional forms demonstrates its ongoing relevance and foundational position in deliberations around what an updated supply management could look like.

The specific configurations of an updated supply management paradigm would necessarily vary, but they would need to move beyond the highly constructed international relations frameworks of discrete, monolithic nation-states competing with each other. Admittedly, it is extremely complicated to foresee how to operationalize this, but this is exactly the reason more research, debate, and attention is needed on the topic. At the same time, an updated supply management policy that recognizes the integration of national agricultures with one another must be cognizant of the conflicting interests across and within national agricultures. What are the sectors within American agriculture that see common cause with Bolivian, Brazilian, and Mexican farmers that want protection? We hypothesize that improved farmer livelihoods are likely to improve farmworker wages and working conditions, expand conservation compliance, and raise nutritional quality with a more diverse food supply. More research is needed on the exact mechanisms, but there is overwhelming evidence that current, third food regime agricultural policies work against all these goals.

The ending-subsidies rhetoric plays into a political-economic logic that pits consumers and growers against each other and also pits farmers across the world against each other, undermining avenues of cooperation, coordination and solidarity. The very act of *making room* for discussions, analysis, deliberations, research on various price support and supply coordination mechanisms is a powerful threat to the neoliberal food regime, which has gained traction and momentum by the rendering the topic itself un-touchable. Stakeholders in sustainable, viable, equitable agri-food systems have much to learn from the historic pitfalls of price supports, supply management, and the potential of updated supply management strategies to extricate agricultural policy and agriculture from the discursive hegemony of the current, neoliberal food regime.

## Acknowledgements

This work is in memory of Kathy Ozer, a mentor, collaborator, friend, and longtime leader of the National Family Farm Coalition. We also thank the Rural Coalition, Brad Wilson, George Naylor, Marion Dixon, and Hannah Wittman. Colton Fagundes helped make the Figure. All errors are ours.

## References

- AAM (American Agricultural Movement). ND. History. <http://www.aaminc.org/history.htm>.
- Abbot, J., 1967. Agricultural marketing boards in the developing countries. *Am. J. Agric. Econ.* 49 (3), 705–722.
- Aid, Farm, 2009. Farmer Heroes. <https://www.farmaid.org/blog/farmer-heroes/david-senter/>.
- Altieri, Miguel, 2009. Agroecology, small farms, and food sovereignty. *Mon. Rev.* 61 (3), 102–113.
- AMS (Agricultural Marketing Service), 2016a. USDA. <https://www.ams.usda.gov/rules-regulations/moa>.
- AMS (Agricultural Marketing Service), 2016b. USDA. <https://www.ams.usda.gov/rules-regulations/moa/989-raisins>.
- Barham, E., 2002. Towards a theory of values-based labeling. *Agric. Hum. Values* 19, 349–360.
- Berndt, C., 2015. Ruling markets: the marketization of social and economic policy. *Environ. Plan. A* 47, 1866–1872.
- Bowen, S., Mutersbaugh, T., 2014. Local or localized? Explorations the contributions of Franco-Mediterranean agrifood theory to alternative food research. *Agric. Hum. Values* 31 (2), 201–213.
- Bowers, D., Rasmussen, W., Baker, G., 1984. History of Agricultural Price-Support and Adjustment Programs, 1933–1984. Economic Research Service, US Department of Agriculture. Agricultural Information Bulletin No. 485 (December).
- Bryant, L.B., Garnham, 2014. Economies, ethics, and emotions: farmer distress within the moral economy of agribusiness. *J. Rural Stud.* 34, 304–312.

- Clapp, J., Fuchs, D., 2009. *Corporate Power in Global Agrifood Governance*. MIT Press, Cambridge, MA.
- Clark, J., Sharp, J., Dugan, K., 2015. The agri-food system policy agenda and research domain. *J. Rural Stud.* 42, 112–121.
- Conneely, R., Mahon, M., 2015. Protected geographic indications: institutional roles in food systems governance and rural development. *Geoforum* 60, 14–21.
- Cullather, N., 2010. *The Hungry World: America's Cold War Battle against Poverty in Asia*. Harvard University Press, Cambridge.
- Culver, J.C., Hyde, J., 2000. *American Dreamer: the Life and Times of Henry Wallace*. W.W. Norton & Company, New York.
- Darnhofer, I., Lamine, C., Strauss, A., Navarette, M., 2016. The resilience of family farms: towards a relationship approach. *J. Rural Stud.* 44, 111–122.
- Diamond, A., Barham, J., 2011. *J. Agric. Food Syst. Community Dev.* 1 (4), 101–117.
- Diamond, A., Tropp, D.J., Barham, J., Muldoon, M.F., Kiraly, S., Cantrell, P., 2014. *Food Value Chains: Creating Shared Value to Enhance Marketing Success*. U.S. Dept. of Agriculture, Agricultural Marketing Service.
- Dixon, D., Hapke, H., 2003. Cultivating discourse: the social construction of agricultural legislation. *Ann. Assoc. Am. Geogr.* 93 (1), 142–164.
- Friedmann, H., 1993. The political economy of food: a global crisis. *New Left Rev.* 197 (1), 29–57.
- Friedmann, H., 2005. Feeding the empire: the pathologies of globalized agriculture. *Social. Regist.* 41, 124–143.
- Friedmann, H., 2009. Discussion: moving Food regimes forward: reflections on symposium essays. *Agric. Hum. Values.* 26 (4), 335–344.
- Friedmann, H., 2016. Commentary: food regime analysis and agrarian questions: widening the conversation. *J. Peasant Stud.* 43 (3), 671–692.
- Friedmann, H., McMichael, P., 1989. Agriculture and the state system. *Sociol. Rural.* 29, 93–117.
- Gardner, B.L., 2002. *American Agriculture in the Twentieth Century: How it Flourished and what it Cost*. Harvard University Press, Cambridge, MA.
- Garmann, S., 2014. Does globalization influence Protectionism? Empirical evidence from agricultural support. *Food Policy* 49, 281–293.
- Goodman, D., Redclift, M., 1991. *Refashioning Nature: Food, Ecology and Culture*. Routledge, Abingdon.
- Graddy-Lovelace, G., 2016. The coloniality of U.S. Agricultural policy: articulating agrarian (In)Justice. *J. Peasant Stud.* 43 (3), 1–22.
- Griswold, D., 2007. *Should the United States cut its farm subsidies?* Cato Institute. <http://www.cato.org/publications/commentary/should-united-states-cut-its-farm-subsidies>.
- Hauter, W., 2013. *Foodopoly: the Battle over the Future of Food and Farming*. The New Press, New York.
- Henderson, J., Gloy, B., Boehlje, M., 2011. *Agriculture's Boom-bust Cycles: Is This Time Different?* Economic Review, Fourth Quarter. Federal Reserve Bank of Kansas City.
- Hopkins, T., Wallerstein, I., 1977. Research foundation of SUNY patterns of development of the modern world-system. *Rev. (Fernand Braudel Cent.)* 1 (2), 111–145. <http://www.jstor.org/stable/40240765>.
- Hoppe, R.A., 2014. *Structure and Finances of U.S. Farms: Family Farm Report*. EIB-132. U.S. Department of Agriculture, Economic Research Service (December).
- Hurt, D., 2002. *The Problems of Plenty: the American Farmer in the 20th Century*. Ivan Dee, Chicago.
- Kovacs, E., 2015. Surveillance and state-making through EU agricultural policy in Hungary. *Geoforum* 64, 168–181.
- Lane, W., 2015. Your raisins or your life: the harrowing of the takings clause in *Horne v. USDA*. *Harv. J. Law Public Policy* 38 (2), 761–779.
- Larue, B., Lambert, R., 2012. *A primer on the economics of supply management and food supply chains*. Working Paper #2012-9. SPAA Network.
- Lawson, V., 2010. Reshaping economic Geography? Producing spaces of inclusive development. *Econ. Geogr.* 86 (4), 351–360.
- Lianos, T., Paris, Q., 1972. American agriculture and the prophecy of increasing misery. *Am. J. Agric. Econ.* November 570–577.
- Lobao, L., Moyer, K., 2001. The great agricultural transition: crisis, change, and social consequences of twentieth century US farming. *Annu. Rev. Sociol.* 27, 103–124.
- Lyson, T., Stevens, G.W., Welsh, R., 2008. *Food and the Mid-level Farm: Renewing an Agriculture of the Middle*. MIT Press, Cambridge, MA.
- Magnan, A., 2016. *When Wheat Was King: the Rise and Fall of the Canada-UK Grain Trade*. UBC Press, Vancouver.
- Marsden, T., 1998. Agriculture beyond the treadmill: issues for policy, theory, and research practice. *Prog. Hum. Geogr.* 22, 265–275.
- Marsden, T., 2013. From post-productivism to reflexive governance: contested transitions in securing more sustainable food futures. *J. Rural Stud.* 29, 123–134.
- Mazoyer, M., Roudart, L., 2006. *A History of World Agriculture: from the Neolithic Age to the Current Crisis*. Monthly Review Press, New York.
- McMichael, P., 2009. A food regime genealogy. *J. Peasant Stud.* 36 (1), 139–169.
- McMichael, P., 2013. *Food Regimes and Agrarian Questions*. Fernwood, Winnipeg.
- McMichael, P., 2016. Commentary: food regime for thought. *J. Peasant Stud.* 43 (3), 648–670.
- Meulenbergh, M., 2000. Voluntary marketing institutions in food marketing systems. In: Tilburg, A., Moll, H.A.J., Kuyvenhoven, A. (Eds.), *Agricultural Markets beyond Liberalization*. Elsevier, New York, pp. 213–233.
- Moore, J., 2015. *Capitalism in the Web of Life*. Verso, New York.
- Moran, W., Blunden, G., Bradley, A., 1996. Empowering family farms through co-operatives and producer marketing boards. *Econ. Geogr.* 161–177.
- Morgan, D., 1979. *The Power and Profits of the Five Giant Companies at the Center of the World's Food Supply*.
- Muellerleile, C., Akers, J., 2015. Making market rule(s). *Environ. Plan. A* 47, 1781–1786.
- Naylor, G., 2011. Without clarity on parity, all you get is charity. In: Holt-Giménez, E. (Ed.), *Food Movements Unite! Strategies to Transform Our Food Systems*. Food First, Oakland, pp. 35–41.
- Newman, S., 2009. Financialization and changes in the social relations along commodity chains: the case of coffee. *Rev. Radic. Political Econ.* 41 (4), 539–559.
- NFFC (National Family Farm Coalition), 2007. *Food from Family Farms Act: a Proposal for the 2007 US Farm Bill*, pp. 1–8.
- Orden, D., Zulauf, C., 2015. Political economy of the 2014 farm bill. *Am. J. Agric. Econ.* 97 (5), 1298–1311.
- Patel, R., 2012. *Stuffed and Starved: the Hidden Battle for the World Food System*, second ed.. Melville.
- Pechlaner, G., Otero, G., 2010. The neoliberal food regime: neoregulation and the new division of labor in North America. *Rural. Sociol.* 75 (2), 179–208.
- Peck, J., 2012. Economic geography: island life. *Dialogues Hum. Geogr.* 2 (2), 113–133.
- Peck, J., 2013. For polyanian economic geographies. *Environ. Plan. A* 45, 1545–1568.
- Polanyi, K., 2001. *The Great Transformation*. Beacon Press, New York.
- Potter, C., Tilzey, M., 2007. Agricultural multifunctionality, environmental sustainability, and the WTO. *Geoforum* 38, 1290–1303.
- Pritchard, W., 1998. The emerging contours of the third food regime. *Econ. Geogr.* 74 (1), 64–74.
- Ray, D., Schaffer, H.D., 2008. Toward a pro-middle farm policy: what will it take to ensure a promising future for family farming? In: Stevenson, G.W., Welsh, R. (Eds.), *Food and the Mid-level Farm: Renewing an Agriculture of the Middle*. MIT Press, Cambridge, MA, pp. 147–164.
- Ray, D., Ugarte, D., Tiller, K., 2003. *Rethinking Agricultural Policy: Changing Course to Secure Farmer Livelihoods Worldwide*. Agricultural Policy Analysis Center. University of Tennessee, pp. 1–68.
- Rogoff, J., 2014. *Improving Systems of Distribution and Logistics for Regional Food Hubs*. Massachusetts Institute of Technology.
- Roosevelt, F.D., 1935. *Text of Roosevelt's Statement on Agricultural Adjustment Act*.
- Schaffer, H., Ray, D., 2016. *Why farm bill economics Don't work in the real world of agriculture*. AgFax. <http://agfax.com/2016/04/26/farm-bill-economics-dont-work-real-world-agriculture/>.
- Schaffer, H., Hellwinckel, C., Ray, D., Ugarte, D., 2012. *An Analysis of Market-driven Inventory System*. Agricultural Policy Analysis Center. University of Tennessee Institute of Agriculture, pp. 1–72.
- Stevenson, G.W., Pirog, R., 2008. *Value-based supply chains: strategies for agrifood enterprises of the middle*. In: Stevenson, G.W., Welsh, R. (Eds.), *Food and the Mid-level Farm: Renewing an Agriculture of the Middle*. MIT Press, Cambridge, MA, pp. 119–143.
- Suppan, S., 2014. *Unconditional Surrender: the US-Brazil Deal to End WTO Authorized Retaliation*. Institute for Agriculture and Trade Policy. <http://www.iatp.org/blog/201410/unconditional-surrender-the-us-brazil-deal-to-end-wto-authorized-retaliation>.
- Taylor, C.C. *The Farmers' Movement, 1620-1920, 1953*, Greenwood Press:Westport, CT.
- Troughton, M., 1989. The role of marketing boards in the industrialization of the Canadian agricultural system. *J. Rural Stud.* 5 (4), 367–383.
- Tweeten, L., Zulauf, C., 1997. Public policy for agriculture after commodity programs. *Rev. Agric. Econ.* 19 (2), 263–280.
- TWN (Third World Network), 2006. *Globalisation, Liberalisation, Protectionism: Impacts on Poor Rural Producers in Developing Countries*. <http://www.ruralpovertyportal.org/documents/654016/100542/DLFE-1614.pdf>.
- Wallerstein, I., 2009. Protection networks and commodity chains in the capitalist world-economy. In: Bair, J. (Ed.), *Frontiers in Commodity Chain Research*. Stanford University Press, Stanford, CA, pp. 83–89.
- Weis, T., 2007. *The Global Food Economy: the Battle for the Future of Farming*. Zed Books, London.
- Wilkinson, R., 2015. Changing power relations in the WTO: why the India-US trade agreement should make us worry more, rather than less. *Geoforum* 61, 13–16.
- Wilson, B., 2016. *Family Farm Justice: Blogs*. <https://familyfarmjustice.me>.
- Winders, B., 2009. *The Politics of Food Supply: U.S. Agricultural Policy in the World Economy*. Yale University, New Haven.
- Wise, T. ND. *Who pays for agricultural dumping? Farmers in developing countries*. *Hunger Notes*. <http://www.worldhunger.org/articles/10/global/wise.htm>.
- Wise, T., 2004. *The Paradox of Agricultural Subsidies: Measurement Issues, Agricultural Dumping, and Policy Reform*. Global Development and Environment Institute, pp. 1–34. Working Paper No. 04-02.
- Zulauf, C., Coppess, J., Paulson, N., Schnitkey, G., 2015. *ARC-CO and PLC Payment Indicators for 2015 Crop Year, October WASDE*. farmdoc daily (5):197. Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign. October 23.