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Abbreviations:

MDAR: Massachusetts Department of Agricultural Resources; VLT: Vermont Land Trust; MFT: Maine Farmland Trust; PCCFT: Puget Consumer Cooperative Farmland Trust; OPAV: Option to Purchase at Agricultural Value; CBP: Conservation Buyer Program; BPS: Buy, Protect, Sell; ACT: Acquire, Conserve, Transfer

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Cultivating opportunity: do land transfer tools improve land access for beginning farmers?

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Abstract

A vast amount of agricultural land in the USA will change hands in the coming years as established farmers age and transition out of farm ownership. As a result, beginning farmers are likely to continue to face numerous obstacles as they try to find and purchase the property. Two of the greatest barriers include the high price that farm property usually commands and the steady conversion of farmland to non-agricultural uses (e.g., suburban development). Non-profit organizations and government agencies have used conservation easements extensively to protect against conversion of agricultural land, but, too often, that does not ensure affordability for beginning farmers. Accordingly, advocates have developed supplemental land transfer tools intended to enhance conservation easements and help beginning farmers gain access to land. In this exploratory research, we look at two of these novel tools, namely Conservation Buyer Programs (CBPs) and the option to purchase at agricultural value (OPAV). Specifically, we present case studies about two entities that use OPAV and two that use CBPs in order to understand how these tools function and whether they improve land access for beginning farmers. Interviews with professionals and beginning farmers who have worked with these tools in four states inform our analysis and add depth to previous scholarship. We found that OPAV and CBPs can improve access to agricultural land for beginning farmers under certain circumstances. These tools, however, are not panaceas to the challenge land affordability presents, nor are they the only tools used by the entities we studied. CBPs alone have rarely been used to help new farmers; yet, they have been paired effectively with a conservation easement and OPAV. Additionally, we found a similar tool, the simultaneous sale, has been quite effective when paired with OPAV, and less costly than the traditional conservation buyer approach. All of these tools expand the land access toolbox in important ways, but given the paucity of existing scholarship on this topic, additional research is needed. Practitioners and researchers must think critically about whether these tools are the most effective instruments to employ in the effort to get beginning farmers on the land.

Introduction

One of the most profound challenges facing agriculture in the USA is the generational transition of farm property looming on the horizon. The average age of principal farm operators in the USA is 58 years old (USDA/NASS, 2014). Thus, in the next 20 years, around 25% of the nation's farmers will retire, and 70% of the private agricultural land will likely change hands (Parsons *et al.*, 2010). Despite this expected transition, over two-thirds of existing farmers have not identified successors for their businesses; and 90% of farm owners neither have a specific exit strategy, nor knowledge of how to develop one, as they look toward retirement (Parsons *et al.*, 2010). Given the aging population of farmers today, and the expected transfer of agricultural land to new landowners, ensuring that beginning farmers have access to agricultural land constitutes one of the most pressing challenges for the renewal of food systems. Accordingly, the purpose of this study is to describe and analyze innovative strategies intended to support land access for working farmers at the beginning of their careers.

Access, in this context, refers to beginning farmers' ability to find and purchase agricultural land at a price that is not severely inflated beyond its value for commercial agricultural production by non-farming, market forces (Wagner and Ruhf, 2013). Securing land tenure through property ownership or enabling stable access through a long-term lease are important if farmers aim to root themselves in a place, invest in permanent infrastructure, expend resources on soil fertility, and develop a farm business. Two of the greatest barriers impeding beginning farmers' access to property are the high price that agricultural land often commands and the steady conversion of this land to other uses, problems that are exacerbated near urban areas where many new farmers seek to take advantage of local markets (Johnson, 2008; Ahearn and Newton, 2009; Gillespie and Johnson, 2010; Shute *et al.*, 2011; Beckett and Galt, 2014; Schwartz *et al.*, 2013; Wagner and Ruhf, 2013).

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Agricultural land values have grown substantially in the past two decades. Following a precipitous rise during the 1990s and 2000s (Nickerson et al., 2012), the price of agricultural land doubled between 2000 and 2010 (Shute et al., 2011). Land values vary across regions, however, and are greatly influenced by many factors, like existing improvements, crop prices and proximity to growing population centers. Furthermore, purchasing property requires considerable capital and sufficient credit. Beginning farmers generally lack an extensive financial history, and have a low net worth and few assets; they also do not make significant cash returns from their farm business and often do not have a business plan (Ruhf and Immerman, 2002; Ahearn, 2011). For these reasons, beginning farmers usually find it difficult to obtain loans and are often not well prepared to make the investments property ownership requires (Kauffman, 2013). In addition to the challenges that high land values present, the continued conversion of agricultural land to other uses means opportunities for beginning farmers to buy land diminish with each acre lost, putting the future of farming at risk (Olson and Lyson, 1999).

Since World War II, development patterns in the USA have been characterized by urban sprawl. Driven by the demand for development in low-density areas or for 'countryside' living, the 'suburban juggernaut' has swallowed immense tracts of agricultural land, leaving shopping malls and office parks in its wake (Daniels and Bowers, 1997; Heimlich and Anderson, 2001; Oberholtzer *et al.*, 2010). The USA lost over 72 million acres of agricultural land between 1982 and 2012 (USDA/NASS, 1984, 2014). Once the agricultural land is paved over, returning it to productive agricultural use is improbable and extremely expensive (Olson and Lyson, 1999).

Conservation easements are one strategy used extensively to protect agricultural land. These incentive-based instruments are typically voluntary, perpetual deed restrictions that strictly limit future development and enforce maintenance of various conservation values (Raymond and Fairfax, 2002). As of 2015, a total of nearly 17,000,000 acres of land were encumbered by conservation easements in the USA (Chang, 2016). A variety of scholars and practitioners have raised critical questions about the use of conservation easements as a strategy to not only protect the land, but to also help beginning farmers access that land. As a result, some land trusts and other agencies are using two land transfer tools - the option to purchase at agricultural value (OPAV) and the Conservation Buyer Program (CBP) - which are meant to enhance conservation easements so that the encumbered land may be more accessible to young, working farmers (Plotkin, 2015). Scholars and practitioners have given little attention to these particular tools, with some exceptions (Johnson, 2008; Beckett and Galt, 2014; Schwartz et al., 2013; Wagner and Ruhf, 2013). To extend that previous work, we asked what successes and challenges the organizations, agencies and farmers who are using these tools have observed. We report here on case studies conducted in four states, looking at two entities that regularly use OPAV and two that use CBP. Below, we first detail how these tools are meant to work in practice, and review existing literature. Then, we present the case studies and evaluate the effectiveness of these tools.

Literature review

Conservation easements and agricultural land protection

Conservation easements perpetually restrict the exercise of certain rights, often called development rights, which include the right to

subdivide property or extract oil and gas, although the terms of each easement vary (Merenlender et al., 2004; Rissman and Merenlender, 2008). Third party entities-like government agencies and non-profit organizations, most notably land trusts-often facilitate and hold these deed restrictions. The parties holding easements are responsible for monitoring and enforcing the restrictions in perpetuity, even as the land transfers ownership. Landowners may: (1) donate a conservation easement in exchange for a federal income tax deduction; (2) sell a conservation easement for a cash return; or (3) collect some combination of the two types of financial compensation. The amount of compensation the landowner receives for a conservation easement is determined by an appraiser who assesses the value of the rights being restricted in perpetuity. After an easement is placed on a property, the restrictions theoretically reduce the price that the property will command in the future.

Conservation easements are most often employed to achieve permanent land protection and scholars and practitioners have given considerable attention to the use of these tools. Some observers maintain that conservation easements are vital given the failure of federal, state and local regulations to adequately protect private land (Cheever, 1996). These advocates contend that private landowners have come to despise regulations and to see them as an overreach of government authority, and that, as a result, landowners are more likely to protect their land through conservation easements, which are voluntary, negotiated on an individual basis, and are supported with financial incentives (Wright and Czerniak, 2000).

In contrast, previous scholarship has raised important critiques about conservation easements. First, conservation easements are not nearly as private as advocates profess, given that public agencies at various levels are active in funding (either through the purchase of development rights and/or through tax deductions), and in enforcing the terms of these restrictions (Merenlender *et al.*, 2004). Secondly, researchers have also questioned the long-standing assumption that conservation easements alone lower the price and maintain its agricultural value into the future (see Lynch, Gray, and Geoghegan, 2007; Nickerson and Lynch, 2001). Lastly, conservation easements are not always voluntary (Raymond and Fairfax, 2002; Morris, 2008).

Considering the role that public funds and agencies play in supporting the perpetuation of conservation easements on private land, some scholars call for much greater accountability and transparency (Merenlender et al., 2004; King and Fairfax, 2006; Morris, 2008; Pocewicz et al., 2011). Specifically, while deeds are public record, the terms of conservation easements are stored and maintained alongside all other unrelated recorded real estate activity (e.g. titles, easements of access), which makes compiling relevant information about conservation easements a monumental task. Moreover, critics highlight the lack of comprehensive and publicly accessible data on the impact these restrictions have had on land conservation. Several studies have sought to address this dearth of data, including an analysis of a localized protected lands database (Rissman and Merenlender, 2008), assessments of the impact of conservation easements on development patterns and ecosystems (Byrd, Rissman, and Merenlender, 2009; Pocewicz et al., 2011), and an exploration of how social relations impact the design and outcome of conservation easements (Rissman and Sayre, 2012). There still remains, however, a paucity of research that evaluates the extent and efficacy of conservation easements, especially with respect to the next generation of farmers.

New approaches to land protection and access

In shifting conservation easements from a focus solely on protection to one that also addresses land access, users of tools such as the OPAV and CBPs are radically reimagining the use of these restrictive covenants.

OPAV is a provision that can be placed in a conservation easement in order to permanently restrict the resale price of a property to its value for use in commercial agriculture. It requires that the property be 'sold at a price that reflects its agricultural value, rather than a price that may be influenced by any non-farming market demand, for example for rural estates' (Wagner and Ruhf, 2013). An appraiser must determine the property's value for commercial agriculture and the land must be sold to a qualified buyer, that is, a working farmer or a member of the seller's family. The administrating entity determines whether a buyer is qualified through an application review process. Landowners of a property encumbered by a conservation easement with an OPAV provision must notify the administering entity holding the conservation easement (e.g., a land trust) when the landowner enters into a purchase and sale agreement with a buyer. When a buyer is determined to be qualified, the administering entity can waive its own right to purchase the property. If the buyer is deemed unqualified, or if the landowner attempts to sell the property at a price beyond its agricultural value, the administering entity can either assign a qualified buyer the right to purchase the property at its agricultural value, or the administering entity can purchase the property itself at agricultural value.

Given that OPAV significantly reduces the price of property when sold, scholars and practitioners often consider this tool to be the strongest approach to making land more affordable for beginning farmers (Johnson, 2008; Equity Trust, 2012; Schwartz *et al.*, 2013). Use of OPAV has been somewhat limited geographically, however. While several entities occasionally use OPAV or similar provisions, only the Vermont Land Trust (VLT) and Massachusetts Department of Agricultural Resources (MDAR) are known to include OPAV in *all* conservation easements on agricultural land, as we explore in the case studies below.

CBPs, on the other hand, are more widely used and take various forms. A survey of 223 entities that facilitate conservation easements in the USA found that 62% of respondents work with conservation buyers (Schwartz *et al.*, 2013). A conservation buyer is an individual dedicated to a property's stewardship and invested in its conservation values, which may include stream frontage or prime farmland, among other attributes. Agricultural properties available for sale through a CBP are usually listed online through publicly accessible databases that provide information about a property's outbuildings, cropping history, and other agriculturally relevant information.

Although research that explores the use of these land transfer tools in practice and considers their effectiveness in supporting land access for beginning farmers is limited, several relevant studies provide a foundation upon which to build our understanding. Beckett and Galt (2014) examine tensions that emerge when working or beginning farmers in California lease land from land trusts. The conflicts stem from how the land trusts define agricultural use, whether they view agricultural use as compatible or incompatible with conservation, and to whom the land trusts lease land. Johnson (2008) discusses the challenge of using conservation easements on farms in California to conserve working land, and highlights three tools employed in an effort to keep agricultural land affordable for working farmers. While one of the tools highlighted is OPAV, Johnson (2008) does not evaluate the use of that tool in practice. Schwartz *et al.* (2013) conducted a study for National Young Farmers Coalition, a beginning farmer advocacy organization, and provide an extensive discussion of the structure and function of several land transfer tools. The authors examine the role land trusts can play in supporting access and offer a host of recommendations for policymakers and users of these tools. While that study provides an excellent overview of land transfer tools and their use today, it offers little insight into the tools' efficacy and use in practice.

Wagner and Ruhf (2013), however, do offer a comprehensive analysis of a land transfer tool's efficacy. The authors consider a review of sales data of OPAV-encumbered properties (through conservation easements facilitated by VLT and MDAR. They discuss whether OPAV ensures protected land is accessible to working and beginning farmers upon an OPAV-encumbered property's sale, and determine that the tool 'cannot ensure access to this [encumbered] land by new and beginning farmers who typically cannot compete against well-established farmers.'

Contributions

Given the generational transfer of agricultural property underway, we seek to contribute to the literature in two ways. First, we expand scholarship on the use and effectiveness of conservation easements as a specific strategy for protecting the working agricultural land. Local and state level actors are using this strategy extensively (Raymond, and Fairfax, 2002; Merenlender et al., 2004; King and Fairfax, 2006; Rissman and Merenlender, 2008; Morris, 2008; Pocewicz et al., 2011). This voluntary approach is used instead of or in addition to regulatory mechanisms, such as agricultural zoning and ordinances, to mitigate the impact of subdivisions and development on the agricultural land loss. We focus here on conservation easements because their (predominantly) voluntary and perpetual nature distinguishes the strategy significantly from regulatory approaches. (While our findings may be relevant to situations where agricultural land is protected through regulation, that question is beyond our scope.)

Secondly, our research contributes to the nascent literature that explores how the renewal of regional agriculture and food systems in the USA depends considerably on the successful and stable transition of land to the next generation of farmers. Given that conservation easements are typically perpetual and that public funds are often used as incentives, it seems to us especially prudent to address questions of access and affordability for new (and working) farmers around the same time a landowner agrees to a conservation easement on a property, as in the cases we studied. Before researchers and practitioners promote the use of land transfer tools discussed here, we need to more fully explore the successes and challenges associated with their use, and determine whether these tools achieve their intended results. Accordingly, our research extends previous work by drawing on the reported experiences of beginning farmers and practitioners who have worked with these tools in the places where they have been most frequently used.

Methodology

Two entities that use the OPAV and two that use the CBP constitute the units of analysis in the case studies that follow. All four of the groups we studied work statewide, respectively. We chose to examine Maine Farmland Trust (MFT) and Puget Consumer Cooperative Farmland Trust (PCCFT), in the state of Washington, for consideration of CBP because both groups have promoted their work with beginning farmers. Examination of these two land trusts also allowed us to compare and contrast their approaches to protecting land and promoting access through similar programs operating within different regional characteristics and constraints. Case studies about OPAV were necessarily limited to the two entities that are known to regularly use an OPAV provision in all conservation easements on agricultural land: MDAR and VLT. During the course of our research, however, we found that VLT not only uses OPAV, but also the land trust has facilitated conservation easements with OPAV through its CBP. This finding adds an additional layer of complexity to the analysis below.

We relied on two approaches to selecting interviewees for our research. We made initial contact with one individual at each organization or agency. In each instance, we chose potential interviewees purposively based on their direct involvement in the facilitation of conservation easements and their administration of the land transfer tools of particular interest (Hesse-Biber and Leavy, 2006). Next, we asked these initial contacts to recommend beginning farmers who have worked with either OPAV or CBP. The first author conducted 13 interviews with 17 people – six staff members and 11 beginning farmers. Twelve interviews were conducted in person and one was conducted over the phone (Plotkin, 2015). Names of interviewees and their farms have been changed to ensure privacy. While all farmers interviewed purchased land with the help of one of the entities, the strategies in each instance varied, as we explain below.

The collection and review of documents supplemented in-depth interviews. Documents gathered in support of research on CBP included listings of properties in an entity's online database, as well as requests for proposals for available properties and documents outlining processes for determining if a property qualified for a conservation easement. Documents reviewed also included publicly accessible conservation easement deeds with OPAV provisions for the farms included in the case studies, internal reports on OPAV's use (e.g., Ramsay, 2014), and outreach materials.

Interviews were recorded, transcribed, and, along with relevant documents, later coded for thematic analysis using standard qualitative techniques (Hesse-Biber and Leavy, 2006). Emergent themes informed our comparison of various tools, highlighting strengths and weaknesses for the purpose of determining whether they improved land access for beginning farmers.

Our observations here are also informed by our own practical experiences working in this arena (although not in the states studied here). The first author works for a conservation land trust as their farm programs manager, a position he has held for 2 years. The second author is a food systems scholar, who engages with land use issues and serves on a city-county planning board in her community.

Findings

The OPAV

Program to integrate the use of OPAV with other ways of connecting beginning farmers with available property and supporting them. In contrast, supporting beginning farmers' purchase of property through the use of OPAV is not as high a priority of MDAR's, although the agency clearly has the capacity to do so.

VLT and MDAR began including OPAV in conservation easements in 1994 and 2004, respectively, in order to make land more affordable for, and keep it in the hands of, working farmers. Yet, supporting land access for beginning farmers was not the original intent behind OPAV; rather, the focus was on ensuring access for working farmers at a price that was not inflated by non-farming, market forces. In fact, MDAR staff suggested its process is stacked against beginning farmers because the application favors the most experienced farmers. While VLT staff did not report such a bias, the land trust recognized nearly a decade ago that OPAV did not do enough on its own to help beginning farmers navigate land access barriers, and developed the Farmland Access Program in 2009 to address this shortcoming.

VLT takes an active role in getting beginning farmers on the land with one of seven different strategies it employs through its Farmland Access Program. Forty beginning farmers have either purchased land or obtained long-term leases through the program since its founding. Through its most successful strategy, VLT purchased property, identified a qualified buyer through a call for applications, protected the property with a conservation easement with an OPAV provision, and then sold that property to the beginning farmer. For VLT, this approach of combining OPAV with its CBP has been particularly effective-leading to 15 transactions with beginning farmers between 2009 and 2015. Additionally, in a review of the sale of 87 properties privately owned by third parties that VLT had protected with conservation easements and OPAV, Wagner and Ruhf (2013) found that beginning farmers purchased five properties independent of the Farmland Access Program and the land trust's facilitation. In these situations, beginning farmers found a property encumbered by a conservation easement with OPAV that was for sale, and worked independently with that property's owner to purchase it directly after VLT determined the buyers were qualified. As of 2014, the VLT had exercised its right (option) to purchase in several instances where a property owner had tried to sell to an unqualified buyer or at a price beyond its agricultural value.

In contrast to Vermont, the staff at MDAR reported in interviews that they had not yet seen a beginning farmer purchase a property encumbered by a conservation easement and OPAV. MDAR has no equivalent to the Farmland Access Program and Department staff acknowledged that their agency should be doing more to address the needs of beginning farmers. One remarked in an interview that, 'in Massachusetts, we've seen an increase and uptick in beginning farmers' interest and we've got to pay attention to it.' Curiously, Wagner and Ruhf (2013) reviewed the sale of 98 properties MDAR had protected with a conservation easement and OPAV, and found that four of those property transfers went to beginning farmers. Reasons for this discrepancy are unclear, but, regardless, we did not locate these farmers for interviews.

MDAR has facilitated the transfer of one agricultural property to a beginning farmer by exercising its Right of First Refusal, a provision the agency included in conservation easements prior to adopting OPAV. The Right of First Refusal requires that owners of affected land notify the Department when the owner enters into a purchase and sale agreement with a buyer. The agency verifies whether or not the buyer is qualified, and either waives its

The MDAR and the VLT have pioneered the use of conservation easements with the OPAV. As we shall see, both entities have welldeveloped approaches to land protection and robust funding mechanisms. VLT has made land access for beginning farmers a focus of its work, and developed its Farmland Access Right of First Refusal or finds a qualified buyer to whom it can assign the right to purchase. Unlike OPAV, however, this process does not allow the Department to restrict the sale price to agricultural value. In the one instance MDAR exercised its Right of First Refusal and issued a call for applications to purchase Sunset Farm, the Department identified only one applicant who was both qualified and had sufficient financial capacity to purchase the property under MDAR's existing application and purchase deadlines. MDAR elected to sell to this particular buyer, Jerry, who happened to be a beginning farmer. While the property's fair market value was well beyond Jerry's reach, the conservation easement with Right of First Refusal brought the value of the farm down to US\$250,000, a price Jerry could afford. He purchased Sunset Farm after taking out a home equity line of credit. Jerry, though, is a middle-aged individual with a full-time, non-farming job who is looking to agriculture as a second career and retirement plan. That does not characterize the type of beginning farmer one would assume entities concerned with the aging farmer demographic would prioritize for assistance.

Organizations using OPAV find the provision costly. The inclusion of OPAV can increase the value of a conservation easement between 10 and 40% more per acre over a standard conservation easement's value (Johnson, 2008). Therefore, VLT and MDAR have necessarily developed reliable funding strategies to deal with the additional financial cost of the tool. Both entities rely on federal grants from a program of United States Department of Agriculture's (USDA) Natural Resource Conservation Service called the Agricultural Conservation Easement Program. In Massachusetts, the state government has allocated funds, and MDAR has also sought contributions at the local level and from landowners. In Vermont, the land trust obtains funds from the state's Housing and Conservation Board, and it relies heavily on private donors, raising over US\$5,500,000 to support the purchase of conservation easements with OPAV in recent years. The land trust has also obtained private loans, including some from philanthropists who provide them interest-free. OPAV requires bountiful sources of funding, and VLT's burden is greater than MDAR's given that the land trust also purchases property in fee through its CBP, which is discussed below.

Despite the reduction in value that a conservation easement with OPAV conveys, beginning farmers still reported that the value of encumbered land can be prohibitively expensive. Wagner and Ruhf (2013) confirm this finding, showing that while OPAV does reduce land values, the tool still does not ensure agricultural land is affordable for beginning farmers. In other words, the agricultural value may not be synonymous with affordable value. Yet, two beginning farm families interviewed for this study—Betsy and Arthur of Red Oak Farm and Sara and Matt of Full Moon Farm—purchased their properties through the Farmland Access Program using both an OPAV provision and a CBP.

All four of these interviewees said they faced two central barriers when looking for property to purchase: finding viable agricultural land for sale and affording the price that land commanded. They explained that competition from established farmers can be fierce and the best land may not even make it to the open market. According to Arthur, '[Farms] never go on the market...basically, access to the prime soils is almost nonexistent now. It's all kind of passed between families or friends.' It is especially difficult for farmers who do not come from agricultural backgrounds—as was the case for all four of these farmers because they often do not have relationships in the farming community to aid their search. Still, connections proved important.

Just as valuable to these farmers was the substantial reduction in price that a conservation easement with OPAV conveyed. The 87-acre Full Moon Farm's value was reduced from US\$315,000 to 150,000, which made all the difference for Sara and Matt. Before they worked with VLT, the couple said nothing compared in size, quality of the residence, and price that they got with the encumbered Full Moon Farm. Sara explained, 'We really lucked out in terms of price...We couldn't have done it [without OPAV].' Sara and Matt purchased Full Moon Farm with a mortgage obtained through a private lender, although they were still nearly broke after covering their down payment. On the other hand, Arthur and Betsy were fortunate to have an inheritance they could put toward the purchase of Red Oak Farm. Without the farm's reduced price, though, their purchase still would not have been possible. The value of their 89 acres went down from US\$500,000 to 240,000 because of the easement with OPAV. In 2006, the year they bought Red Oak Farm, Arthur said, 'you couldn't get a four-bedroom ranch [house] and a half an acre for that price in a decent area.' Clearly, what constituted affordability for each couple was different. But in both cases, the opportunity to purchase the land at agricultural value reduced the sale price by more than half, making all the difference.

Although VLT and MDAR maintain similar positions on OPAV's purpose, each has used the tool differently. Both entities began using OPAV out of concern for protecting agricultural land and keeping it in the hands of working farmers. The land trust, however, recognized there was a need to offer beginning farmers a hand up, which gave rise to its multi-pronged Farmland Access Program. While MDAR staff acknowledged in interviews that beginning farmers need additional support to buy farm property, the Department continues to focus on protecting agricultural land and prioritizing qualified buyers regardless of age. At the time of this study, the agency did not have plans to prioritize access for beginning farmers.

The CBP

The MFT and the PCCFT in Washington State each developed CBPs for the primary purpose of protecting agricultural land. Maine's program—known as Buy, Protect, Sell (BPS)—grew out of a perceived need to protect particularly vulnerable farms whose conversion to non-agricultural use would have had cascading impacts on the surrounding community. Similarly, PCCFT established its program—called Acquire, Conserve, Transfer (ACT)—because of the expectation that a great amount of land would change hands in coming years due to generational transition, and because aging landowners tended to have much more interest in selling their land rather than donating or selling conservation easements.

Both organizations claim to want to use their program to help beginning farmers access the land secured through CBP. Only PCCFT has successfully done so, however, and only in a single instance—Green Meadow Farms. In that case, the farmland trust worked with Pierce County, just south of Seattle, to buy and subdivide a 100-acre farm into three properties, which were all protected with conservation easements and sold to working farmers, including a farm family just starting out. Unfortunately, we were unable to reach those beginning farmers for an interview about their experience.

Given the poor success of these programs as originally conceived, the farmland trusts have instead used a similar, less costly approach called the simultaneous sale. With this strategy, the organization purchases the development rights on a property, while a qualified buyer concurrently purchases the land at agricultural value. Unlike CBP, the organization never takes fee simple ownership of the affected property and instead only holds the conservation easement. The beginning farmers we interviewed purchased their farms through this strategy. In Maine, these farmers were Phil of the 87-acre Good Harbor Farm, and Nancy and Chris of the 40-acre Sleeping Bear Farm. In Washington, Monica purchased the 95-acre Platte Creek Farm through a simultaneous sale.

As we learned, one major advantage of the simultaneous sale approach is that the transaction is less expensive for the organization. With CBP, the organization not only incurs the costs of purchasing a property, but it is also burdened by costs associated with owning land over time, such as property taxes and land management. Simultaneous sales generally do not involve a call for applications or a formal vetting process to determine whether a buyer is qualified, avoiding the associated time and financial costs, which are required with the standard conservation buyer approach.

MFT is uniquely impacted by one difference between the simultaneous sale and conservation buyer approaches because of the funding sources the group relies on. Legally, MFT cannot purchase a conservation easement on the property that it owns in fee simple using available public conservation easement funding sources. As a result, it instead enters into 2-year purchase and sale agreements with buyers. In this scenario, buyers agree to purchase the property at fair market value from MFT and the farmland trust commits to buying a conservation easement on the property, either with its own financial resources or with public funds, within two years after the initial sale. On top of the purchase conditions, the farmland trust adds the carrying costs it incurs to the fair market value of the property owned by the buyer. Consequently, Maine's BPS transactions are more expensive for both MFT and buyers that are simultaneous sales. This added expense of BPS transactions makes them unfeasible for many beginning farmers, and, in certain cases, unfeasible for the farmland trust. This helps to explain why MFT has not used its CBP to help new farmers access to land.

Indeed, establishing a reliable funding model is critical to the successful use of a CBP. Both organizations we studied rely on an array of funding sources, including federal, state, and local grants, charitable contributions, and loans. The organizations each also have access to the federal Agricultural Conservation Easement Program, although the interviewees indicated that is generally not a viable resource due to inadequate funding allocated to their respective states. The farmland trusts both rely heavily on public funding from their state governments and local municipalities, as well as on major donor fundraising, to support the purchase of conservation easements. Only PCCFT is able, however, to use public funds from the state and local level for the fee simple purchase of the property. Both groups rely on loans from banks and philanthropists to support fee purchases as well.

All three farm families interviewed reported that the simultaneous sale transactions MFT and PCCFT used to facilitate the farmers' purchase of land helped mitigate the two greatest barriers they faced—that is, finding and affording the cost of agricultural land. Each of these farmers wanted property in close proximity to urban hubs, but they found it very difficult to find land for sale. As Phil discussed at length, looking for land as an outsider without social connections to the agricultural community magnified the challenge. Likewise, the other farmers interviewed did not come from farm families, and they mentioned facing similar challenges.

Before working with the farmland trusts to purchase property through simultaneous sales, each of the beginning farmers tried finding land through other programs the organizations provided. For instance, MFT offers FarmLink, an online database that serves as a forum for connecting farm buyers and sellers. After much effort, neither Nancy and Chris nor Phil, however, were successfully working through FarmLink. Monica, in her own attempt to find property, responded to a request for proposals and applied unsuccessfully for a farm PCCFT sold through ACT. Despite these fruitless attempts to find land, all of the farmers looked back on their initial efforts working through the farmland trusts' programs as important for building relationships with the organizations' staff. These relationships later paid off. They felt that their attempts demonstrated to the trusts that they were serious about buying property and that it alerted the groups to the kinds of properties the new farmers sought. Ultimately, it was the farmland trusts who approached the farmers about land which they later purchased through simultaneous sales.

While conservation easements facilitated through simultaneous sales reduced land values to prices these beginning farmers could manage, MFT and PCCFT staff agreed that conventional conservation easements alone do not necessarily make agricultural land affordable for most new farmers. As a staff member at PCCFT explained, 'even with an easement, farmland is still freaking expensive.' Accordingly, PCCFT has explored using three other land transfer tools, in addition to its CBP, including the Option to Purchase at Agricultural Value, Right of First Refusal, and a Home Size Restriction. PCCFT found that OPAV would not be a viable tool in Washington because the provision may violate the state's rule against perpetuities, a law against future interests in property that do not vest within a predetermined period of time. As a result, PCCFT is including Right of First Refusal in some of its conservation easements, and used a Home Size Restriction for the first time on Monica's Platte Creek Farm. The restriction limits the size of home that can be built on an encumbered property, preventing the construction of the large, expensive homes that often drive up agricultural land values. On Platte Creek Farm, the residence is limited to 2000 ft². Since this provision is also an additional limitation on land use, it increases the value of a conservation easement. A conservation easement with the Home Size Restriction on Platte Creek Farm, Monica said, reduced her property's value from well over US\$1,000,000 down to US\$600,000. Although both organizations agreed that conservation easements alone do not usually make land affordable, the staff at MFT maintained that the cost of land is often not the greatest land access challenge beginning farmers face. Rather, the greatest barrier is the farmers' ability to obtain necessary financing.

Despite MFT's concern, all of the farmers interviewed faced, but ultimately overcame, challenges to financing their purchases by obtaining private loans. These farmers each initially approached the federal Farm Service Agency for a loan, but found the long and uncertain waiting period impractical given time constraints they were working under. Phil's spouse works off-farm as an attorney; therefore, they qualified for a conventional mortgage given their combined on-farm and off-farm income. Nancy and Chris—with the combination of their on-farm income and additional income earned as traveling musicians—are financing the purchase of their farm with a mortgage that another family member co-signed (because they could not qualify). Monica also considered obtaining a loan through the Farm Service Agency, but a competing offer for Platte Creek Farm led her to forgo pursuit of a loan altogether in order to expedite her transaction. Fortunately, Monica's spouse, Drew, was able to obtain funds from his family, which allowed the couple to avoid debt financing and purchase their farm outright.

These case studies did not demonstrate the great effectiveness of CBP to address land access for beginning farmers. Although PCCFT and MFT consider land access to be a secondary, yet important, goal underpinning their use of conservation buyers, only PCCFT has successfully used the tool to get beginning farmers on the land. As we have seen, the trusts have been more successful working through simultaneous sale transactions, with good reason given the cost savings. That said, while a conservation easement alone made a purchase possible for Phil, as well as for Nancy and Chris, the addition of a Home Size Restriction to enhance the value of the conservation easement on Monica's Platte Creek Farm was necessary to bring the price down to one she could afford. This disparity makes clear that, while what constitutes affordability is different for each buyer, conservation easements alone do not make land affordable in every instance used.

Discussion

The future of food production and the shape of rural communities in the USA will be determined, in part, by whether or not society finds effective strategies for overcoming the barriers that beginning farmers face in accessing agricultural land through purchase. Although land protection advocates have used conservation easements extensively, the particular organizations highlighted in this research have, to varying degrees, grappled with how they can help bridge what Schwartz et al. (2013) call, 'the affordability gap.' That gap—the difference between the fair market value of the property and what a farmer can afford to pay for that land affects all farmers. It is especially problematic when it comes to the next generation.

As summarized in Table 1, we found that the OPAV and CBPs can enhance the land protection provided by traditional conservation easements and improve access to agricultural land for beginning farmers. All four entities we studied have other tools in their toolboxes, however (e.g., Right of First Refusal, Home Size Restrictions). Simultaneous sales-placing a conservation easement on the land with an OPAV provision at the same time the beginning farmer purchases the property at a reduced valueseem especially promising. Three of the four cases we studied have used these simultaneous transactions in part because they are considerably less costly than the conservation buyer approach. Indeed, each tool carries different funding burdens. And some tools may not be feasible in certain cases due to existing state law. In short, none of these tools alone is a cure-all, but practitioners are clearly trying to find the appropriate mix of strategies given specific geographic circumstances, funding availability and organizational theories of change.

Staff and farmers interviewed agreed on the vital importance of land transfer tools for identifying land that might be available for beginning farmers. All transactions detailed in this paper transpired when an organization or agency brought a property to the attention of the new farmer, whether by way of an online call for applications or through an existing relationship, which was particularly important for new farmers without deep social networks in agricultural communities. Finding land is a key step in this process.

Being able to 'afford' that land, once found, is relative to an individual or family's resources. Each farmer interviewed said, however, that the reduction in value that resulted from the tools used in their particular case made a significant difference for them. An OPAV provision in a conservation easement, undoubtedly, led to the greatest proportionate reduction in

Table 1. Summary of Key Findings: Use of land transfer tools and conservation easements in the case studies

Organization or entity holding cons. easement	Farm ^a	Land area (acres)	Approx. price prior to cons. easement	Approx. price after cons. easement	Land transfer tool(s) used	Source of funding for farmer(s)
Puget Consumer Coop. Farmland Trust	Platte Creek	95	US\$2.1 M	US\$600K	Simultaneous sale; home size restriction	Family investment
Massachusetts. Department of Agricultural Resources	Sunset	92	N/A	US\$250K	Right of first refusal	Home equity line of credit
Vermont Land Trust	Red Oak	89	US\$500K	US\$240K	Conservation buyer program; Option to purchase at Ag. value	Family investment
Vermont Land Trust	Full Moon	87	US\$315K	US\$150K	Conservation buyer program; Option to purchase at Ag. value	Private loan
Maine Farmland Trust	Sleeping Bear	40	N/A	N/A	Simultaneous sale	Family co-signed private loan
Maine Farmland Trust	Good Harbor	75	N/A	N/A	Simultaneous sale	Private loan

^aFarm names are pseudonyms.

N/A, data not available or provided.

Data provided by the organizations or individual farmers.

price for the new farmer, sometimes lowering the price more than half of what it would have been otherwise. Still, the success of a tool in each of these cases was predicated on a beginning farmer's ability to obtain capital, either through a loan or inheritance, and the capacity for a conservation easement to bridge the affordability gap. On-farm incomes alone are often not sufficient to cover the cost of purchasing property or to qualify for private lending. None of the tools featured in this paper will make agricultural land affordable for beginning farmers *in every instance*, as Wagner and Ruhf (2013) noted specifically about OPAV.

Even as these tools lower the costs for the new farmer, they increase costs for the organizations involved, which may make them inaccessible to some entities hoping to use the tools elsewhere. All four entities featured in this paper developed funding strategies that include a mix of public sources, philanthropy, and loans. Continued use of land transfer tools depends on substantial and stable funding, which may not be reliable.

Of the four cases, VLT demonstrated the most success in assisting beginning farmers. By pairing conservation easements with OPAV provisions and their CBP, VLT addressed both ends of the land access challenge, connecting beginning farmers with available property for purchase, while also bringing the value of that property down to a more affordable price. We posit, however, that entities looking to replicate VLT's approach may consider a simultaneous sale approach. In this way, the entity would avoid the financial and administrative burden of owning and managing a property, while still playing a key role in facilitating a conservation easement with OPAV and the transfer of a property into the hands of a beginning farmer.

Conclusion

While this qualitative research adds depth to previous research (Schwartz *et al.*, 2013; Wagner and Ruhf, 2013), there are, of course, limitations to the study design. For instance, there are likely other organizations that now use OPAV because organizations like the National Young Farmers Coalition have been actively promoting the concept recently (Rippon-Butler *et al.*, 2015). Likewise, we only studied two groups using CBPs to assist beginning farmers; yet, many more CBPs exist across the country, some of which may target beginning farmers. In one case, the Washington-based PCCFT successfully used its CBP to assist beginning farmers, but we were unable to reach them for an interview. Thus, this preliminary report research should be considered exploratory, given our small sample sizes both for the number of organizations and the number of farmers.

Our observations from these case studies, as well as from our professional lives, raised a variety of ripe policy and research questions. At bottom, these arrangements to fill the affordability gap shift major costs from the farmer setting out, to the entities and their public and private supporters. How sustainable is such an arrangement? Are these resources equitably distributed and targeted at the most important agricultural soils, and at the most promising young farmers? What might a longitudinal study of farmers who have benefitted from these programs show in terms of their success rates and experiences? Does owning land with artificially deflated prices impact the farm operation? In what ways do these land transfer tools only address symptoms of larger problems within land markets bent on ever-increasing prices? How do these land transfer tools compare with other strategies, such as long-term leases and land use regulations? Lastly, following Beckett and Galt (2014), the most fundamental question may be: can conservation and commercial, sustainable agriculture co-exist?

To us, answering these kinds of questions seems essential. Researchers and practitioners must continue working together to determine if land transfer tools are producing desired results and how they are impacting generational land transfer. We all must tread cautiously, but affirmatively, toward a conservation ethic and practice that both protect the land and cultivates opportunities for future generations of agarians.

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