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**A Spatial Analysis of Conservation Reserve Program Participants:  
The Impact of Absenteeism on Participation Decisions**

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## **A Spatial Analysis of Conservation Reserve Program Participants: The Impact of Absenteeism on Participation Decisions**

Given that approximately half of all U.S. farmland is leased, absentee (non-operator) landowners have a significant role in agriculture. Because decisions about how to use farmland can be affected by ownership status, tenure can have far reaching implications for the production of food and fiber, as well as the extent to which environmentally sensitive farmland is cropped or is put into a conservation use. In order to better understand whether conservation participation decisions, and potential responses to factors such as commodity prices, may vary by tenure status, we exploit a unique dataset that identifies where participants associated with Conservation Reserve Program contracts live relative to the land enrolled. These data provide improved spatial information on tenure status relative to previous sources. This study seeks to improve our understanding of the extent and characteristics of absentee landowners in CRP. These findings can help improve policy by recognizing how the heterogeneity across landowners may lead participants to respond differently to changes in market or policy incentives.

## Introduction

Given that approximately half of all farmland in the U.S. is leased, absentee landowners have a significant role in U.S. agriculture (ERS, 2003). Landlords contribute more than 30 percent of all farm assets, which are almost exclusively in land and buildings (USDA-NASS 2001). While data from previous surveys showed that much of this land was owned by retired farmers that continued to live near the farm, it is increasingly likely that more and more land is being passed on to family members, sold to other operators, or is bought by other entities that view farmland purchases strictly as an investment (like investment funds). Because decisions about how to use farmland can be affected by ownership status, tenure can have far reaching implications for not just the production of food and fiber in the U.S., but also the extent to which environmentally sensitive farmland is cropped or is put into a conservation use. For example, understanding how tenure affects conservation behavior is becoming increasingly important due to growing interest in agriculture's ability to sequester carbon through investment and adoption of practices under long-term commitments.

This paper considers the relationship between tenure and participation in the Conservation Reserve Program (CRP). The CRP provides the opportunity for owners of environmentally sensitive land to receive payment for taking their land out of production under 10-15 year contracts. This paper's contribution is to look more closely at the tenure characteristics of landowners with land enrolled in CRP to consider differences between them that may affect their land use decisions. CRP participation has become a significant concern because a relatively large amount of land – nearly 15.7 million acres – were enrolled under

contracts set to expire in 2007. This timing coincided with a steep rise in prices for corn, wheat, soybeans, and other agricultural commodities. Increasing commodity prices increase the profitability of bringing land back into production and increase the opportunity cost of re-enrolling land in the CRP. To maintain enrollment levels, USDA recently offered short-term (2-5 year) contract extensions and a re-enrollment option for expiring contracts. Eighty-five percent of acres in expiring contracts were extended or re-enrolled (USDA-FSA 2008).<sup>1</sup> Even so, from June 2007 to June 2008, total acres enrolled in CRP decreased by 2 million acres.

One implicit assumption is that all owners of farmland that participate in CRP would respond equally to policy levers and market signals, such as higher output prices. This overlooks the significant heterogeneity in the characteristics of the landowners in the program. Some are large scale operators that farm land adjacent to enrolled land, while others are absentee landowners that live in cities or suburbs far away from the farm. Decisions about conservation participation and practices are likely to involve different costs and potential benefits for these two archetypal landowners. For example, when absentee landowners live in metropolitan areas and enroll (retire) relatively small pieces of land in a conservation program, bringing land back into production after their conservation contract(s) expires and re-negotiating production contracts may require effort that represents a significant opportunity cost of time. In such cases, absentee landowners may have a lower response to increases in output prices relative to owner-operators. Though studies typically have not considered tenure status, such differences between landowners may help explain why land retirement policies may have impacts that endure beyond the enrollment period (Roberts and Lubowski

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<sup>1</sup> 10.9 million acres remained in the CRP under short-term extended contracts and 2.5 million acres were re-enrolled under 10-15 year contracts.

2007, Cooper and Osborn 1998, Johnson et al. 1997, Skaggs et al. 1994, Heimlich and Kula 1990). Different responses between absentee and non-absentee landowners to policy factors such as different payments could also have implications for the share of conservation program dollars remaining in rural areas where participating farms are located (Sullivan et al. 2004).

In order to better understand whether conservation participation decisions (and potential responses to factors such as commodity prices) vary by tenure status, we exploit a unique dataset that identifies where participants live relative to the location of CRP contracts. The dataset, referred to as FSA 1614 data, was constructed by the Farm Service Agency by order of the Congress to attribute all farm commodity and conservation payments to individuals (the final recipient). This payment information was previously only attributable to entities in many cases.

While there is a significant body of research on CRP, most of it relates to the land and how it has achieved conservation goals, provided environmental amenities, or affected agricultural production (Wu 2000, Roberts and Bucholtz 2005, Ribaud et al. 2001). One study that did consider the role of tenure in CRP decisions used survey data from a nationally representative sample of farms. That study found that farmers with higher levels of ownership (higher percentages of owned to operated acres) enroll more land in CRP and they adopt more practices, but the evidence was not strong (Lambert et al. 2006). While FSA 1614 provides little information on the land, the detailed data on payment recipients provides information that is useful for understanding the incentives and decision-making of participants and how they vary by tenure status.

# 1 Absentee Landowners in Agriculture

While technology has reduced the importance of physical distance in many economic activities, it remains a key characteristic of agriculture. Operators can only farm fields so far apart, and the bulkiness and weight of grains make them costly to transport. Distance also plays an important role in the relationship between landowner and farm. Though share contracts have traditionally been the most common form of lease arrangement, distance can induce landowners to choose cash over share contracts when observing operator behavior is difficult.<sup>2</sup> CRP participation is an interesting decision to consider for landowners as it reduces landowners' management costs even further because land is taken out of production.

The extent of absenteeism is also important for asking questions about the health of rural economies in agriculturally intensive regions, and who stands to gain from government policies. Twenty percent of non-metro counties are classified as dependent on agriculture (McGranahan and Sullivan, 2005). When farm payments accrue to landowners who live away from the farm, the payments may not benefit the local rural economy. Rural economic growth has lagged behind the national trend for some time (Henderson and Akers, 2007). A number of other studies have considered whether farm payments, particularly after the introduction of decoupled or lump-sum payments in 1996, have been capitalized into land values where they are captured by landowners as opposed to operators (Morehart, et al. 2001; Barnard, et al. 1997; ERS 2003). Taheripour and Tyner (2007) show that the bigger the ethanol market becomes and the more corn that is used to produce it, the more that the ethanol subsidy will be captured by landlords.

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<sup>2</sup> Share contracts are less detailed arrangements that typically split costs, revenues and risk between landowner and operator and often landowners are more involved in production decisions.

Improving our understanding of the geographic distribution of landlords is also important because they participate in land markets in different ways. For example, data from the 1999 Agriculture and Economics Land Ownership Survey (AELOS) reveals that on average, owner-operators tended to sell higher valued land for farm and ranching purposes compared to non-operator owners (\$1,150/acre and \$826/acre, respectively). Owner-operators also sold lower valued land for non-farm purposes (\$3,062/acre and \$3,911/acre, respectively) (USDA-NASS 2001).

Each of these issues is also becoming increasingly important because of the trend in the age distribution of farmland ownership. According to an ERS analysis using AELOS data, nonoperator landlords owned 221 of the 434 million acres of U.S. cropland in 1999 (ERS, 2003). At that time, many nonoperator landlords lived within 50 miles of the farm, and consisted largely of retired farmers (their average age was 63 years). Over time, much of this land is likely to be sold or passed down within families to children that do not intend to farm and are more likely to live further away. Indeed, nonoperator landlords sold about 800,000 more acres than owner-operators in 1999, and a greater proportion of nonoperators who sold land were over 60 years old (USDA-NASS 2001). The AELOS survey data from 1988 and 1999 reveal the total farm acres owned by non-operator landlords in the 70+ category was by far the largest (Figure 1). While the younger age classes do contain smaller age bounds, the total land owned by the oldest age bracket is larger than the combination of the 55 to 69 age classes. Also, the acreage owned by landlords in the 70+ category increased by 40 million acres from 1988 to 1998, which is larger than the total for any of the other 5 year age classes.



The total land owned by non-operator landlords was also larger in 1998 than 1988. This is likely due in part to the retirement or passing on of land from former operators.

## 2 A Model of Landowner Conservation Behavior

This paper focuses on the role of tenure in conservation program participation. Research on factors affecting landowner decisions to participate in the CRP and re-enroll acres upon contract expiration reveal that economic factors and policy factors – such as net returns to agricultural production and government payments – are important considerations (Lambert et al. 2006; Roberts and Lubowski 2007; Cooper and Osborn 1998). This suggests that the value of the conservation payments and the value of production that would be foregone on enrolled acres will matter. Our particular interest is whether absenteeism affects conservation participation decisions.

In general, a landowner may choose to own farmland but not operate it if they derive utility from holding the land, which may derive from tradition (the land has remained in the family for a long time) or because it provides recreational value to the landowner. These influences can also be important in decisions to participate in the CRP, particularly because some CRP practices can improve long-term land productivity and increase personal enjoyment from wildlife viewing and hunting opportunities. To allow for these influences on conservation decisions, we assume a landowner chooses to participate in the CRP when the utility from doing so exceeds the utility from not participating:

$$(1) \quad U(V^C, F^C) > U(V^A, F^A),$$

where  $V^C$  is the net returns from enrolling land in the CRP,  $F^C$  is the non-production value the landowner derives from owning land, and  $V^A$  and  $F^A$  are the net returns and non-production values from keeping the land in a productive use, respectively. The net returns a landowner earns from enrolling land in the CRP will be a function of the rental and incentive payments that he could receive for the practices he chooses to implement. When a landowner installs a single practice, returns are represented as:

$$(2) \quad V^C = \sum_{t=0}^d R(x, t)\delta^t + S(x) + PIP(x, t)\delta^t + SIP(x) - K(x)$$

where  $R$  is the annual rental payment to be received for retiring land,  $S$  is the cost-share payment received to offset part of the cost of installing a structural practice,  $PIP$  and  $SIP$  are, respectively, the annual practice and one-time structural incentive payments received for installing qualifying practices and  $K$  is the landowner's share of practice adoption costs. Practice payments and adoption costs are also functions of a vector of parcel characteristics  $x$ .

We are particularly interested in identifying the factors affecting a landowner's choice to adopt practices that qualify for additional incentive payments. Landowner decisions to enroll and adopt particular practices are inherently linked, because practices qualifying for additional incentives are enrolled through the CRP 'continuous' signup mechanism. Government agencies can affect participation decisions in voluntary conservation programs through a limited number of avenues – namely, through prices or by affecting the constraints a landowner faces. We focus on practices qualifying for incentive payments to determine if landowners may be responding differently to this policy lever based on their status as an

owner-operator or absentee landowner. A landowner will adopt a particular practice based on which yields the most utility:

$$(3) \quad \max[U(V^{C*}, F^{C*})],$$

where the \* represents the optimal type of practice.

### 3 Data and Analysis

The largest Federal conservation program in both land and cost is the CRP. The CRP was enacted in 1985 under the Farm Security and Rural Investment Act to retire environmentally sensitive land. Between 2002 and 2007 the CRP was authorized to enroll up to about 39 million acres under 10-15 year contracts, although actual enrollments have approximated 34 million acres. In 2005 and 2006, only 437,000 and 195,000 acres had expiring contracts, respectively. The number jumped dramatically to about 15.7 million acres in 2007. About 28 million acres are set to expire between 2007 and 2010 (USDA-FSA 2008). This large increase in the amount of land reaching contract expiration coincides with dramatic increases in agricultural commodity prices that escalated in 2006 and 2007.

CRP contracts are enrolled through two mechanisms. The General Signup allows those with eligible land to compete nationally to enroll land, and land expected to provide the most benefits at least cost is enrolled. Continuous Sign-Up allows land that meets a high priority conservation need to be enrolled at any time. About 30 of the 34 million acres in CRP were enrolled through General Sign-ups, although an increasing amount has been enrolled through Continuous Sign-Ups.

The FSA 1614 dataset was constructed by order of Congress in the 2002 Farm Bill (the Farm Security and Rural Investment Act) to attribute all farm program payments to individuals. These data provide more detailed information on program payment recipients, because they also identify individuals who received payments through organizations such as corporations or co-ops (previously, only the organization was identified). The FSA 1614 data contain records for more than 2.3 million entities or individuals, with information on 64 million payments to individuals over the years 2003 to 2006. The data identifies, for all Title I (commodity) and Title II (conservation) payments, the county of the farm, the address where the farm payment was sent, detailed information on the amount of each payment and what program generated the payment.

Over the years 2003 to 2006 covered in the current version of the dataset, Iowa received the largest total value of CRP payments averaging about \$219 million per year. Texas was a distant second at \$141 million followed by Montana, Illinois, North Dakota, Kansas, Minnesota, and Missouri all receiving more than \$100 million per year.

We use the FSA 1614 data on CRP payments to explore three questions: i) how prevalent are absentee landowners in CRP, ii) what characterizes absentee landowners that can be revealed from their residence and their distance to the farm, and iii) do absentee landowners make conservation practice decisions that differ from nonabsentee owners when enrolling in CRP. The motivation for asking these questions is to shed light on the factors that can inform whether absentee landowners are likely to be more or less responsive to policy and market factors that affect prices. When absentee landowners live in metropolitan areas

and enroll relatively small pieces of land, bringing land back into production requires effort that represents a significant opportunity cost of time – suggesting a lower response to increases in output prices. Owner operators on the other hand are likely to be very responsive to higher output prices because it requires less effort to start farming a piece of land again and farm-based production is their primary source of income.

### *3.1 Trends in CRP Payments*

CRP contract data reveals the average payment per acre is approximately \$50 (USDA 2007). Figure 2 shows the distribution of all CRP payments by payment size. CRP payments include annual rental payments that are the centerpiece of the program and that constitute close to 85% of the value of all payments. Most payments are less than \$1,000. The average annual payment per recipient was \$2,243. Assuming an average per acre payment of \$50 implies that the mean acreage enrolled per recipient was around 50 acres. Most of the remaining 15 percent of payments apply to Cost-Share, Practice Incentive Payments, or Signing Incentive Payments (PIPs and SIPs). Cost-Share payments reimburse CRP participants for establishing a conservation based land cover for up to 50 percent of the costs of doing so. PIPs and SIPs are similar in that they provide a financial incentive to adopt particular conservation practices. PIPs provide an additional 40 percent cost-share, and SIPs are one-time upfront payments of \$100-\$150 per acre. Not all participants respond to these additional incentives by adopting practices eligible for payments. To determine whether tenure may influence the adoption decision, we empirically model the influence of absentee status on the adoption decision. Because these incentives are offered for most practices on land enrolled through continuous signups in CRP, our findings also inform on landowner

decisions about participating via the continuous signup option versus CRP's general signup option.

### *3.2 Identifying Absentee Landowners*

FSA 1614 does not explicitly identify whether CRP payment recipients are owner operators or absentee landowners, but information on farm and recipient location allows us to identify the payment recipients that are likely to be absentee landowners. Because landowners are more likely to be absentee when living further from the farm and when their residence is located in urbanized areas, we characterize payment recipients based on these measures. The process we used to identify absenteeism involved first geocoding the payment recipients to a point using their mailing address. In GIS, these recipient points were overlaid with urban area and urban cluster boundaries to characterize the degree of urbanization of the residence and the likely income of the recipient. The farmland that generated the source of the payments is identified by county.<sup>3</sup>

Using this identification scheme Table 1 shows the allocation of payments according to the spatial relationship between the recipient and the land. We measure absenteeism based on the location of payment recipients relative to the farmland enrolled in CRP. If a recipient's address is either in the same county as the farm or in an adjacent county, we refer to them as *local* recipients. Many operators own and farm multiple parcels of land, some of which can be in adjacent counties, so we treat local recipients as non-absentee owners. Consistently across the four years in our study period, about 70% of CRP payments are sent to local

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<sup>3</sup> It may be possible to integrate in FSA 1614 with other data sources to locate the land to a finer scale but that is beyond the scope of this paper.

recipients while 30% are non-local (absentee). State level analysis suggests that absenteeism varies by region, at least by the measure used here. Among western states with a sizeable amount of CRP activity, more payments were paid to non-local recipients; in Wyoming and Colorado nearly 40% of payments went to non-local recipients.<sup>4</sup> The proportions of payments to non-local recipients were the lowest for the eastern agriculture states including Ohio, Pennsylvania, and Michigan. To account for variation in county size we also compare the amount of payments sent to recipients out-of-state versus in-state to provide a more conservative estimate of absenteeism. Nationally, about 12% of payments are sent out of state. Iowa and Illinois both had less than 10% of payments sent out of state. The proportion of out-of-state payments was relatively high at about 25% for Colorado and Wyoming, and it exceeded 20% in Kansas and Washington. While this measure of absenteeism may still include non-absentee landowners with farms near state borders, the number of these cases relative to the total is likely to be low. Eliminating farms in counties on state borders would eliminate a large portion of the sample in the West where counties are very large, and would skew the sample relative to the East.

### *3.3 Characterizing Absentee Landowner participation in CRP*

The data reveal that the characteristics of payments to local and non-local recipients differ by the size of the payments received. The distributions of payments are heavily skewed right and the hypothesis that payment amounts are normally distributed is rejected. Thus, using the Wilcoxon rank sum test we find that the payment amount of local recipients is larger than non-local recipients at a 99% confidence level. This makes sense if local recipients of

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<sup>4</sup> In a study that examined net flows of CRP payments from 2001, Sullivan et al. found that one-third of counties with at least 5,000 enrolled acres had net outflows averaging 37 percent of the funds earned on CRP acreage.

CRP payments are farm operators that own more land or tend to enroll their entire farm in CRP while non-local recipients are absentee landowners tending to own smaller farmers or enroll only parts of the farm. The difference in the median for the two samples was approximately \$50. The location of the in-state and out-of-state payment amounts was also significantly different but the difference in medians was more marked. The median in-state payment amount was \$853 and the out-of-state payment was \$745. This is likely in part a result of differences across states. More payments are sent out of state in the west where per acre rents are lower, so it would make sense that out-of-state payments are lower. Therefore, it involves a combination of regional variation and differences in holdings of local and absentee landowners.

Non-local and out-of-state recipients of CRP payments are also distinguished by the extent to which they live in an urban area. We identify nonlocal-urban recipients as those residing in a census tract with at least 3,000 individuals that are not in the same or adjacent county of the farm. Census tracts are subdivisions of counties delineated primarily for metropolitan areas or other densely populated locales and contain from 2,500 to 6,000 people. Identifying non-local recipients by urban status further refines the set of recipients considered absentee owners, because it would exclude operators who receive payments and live in small towns near some portion of their farm. There is very little difference across years over the 2003 to 2006 period so for purposes of this discussion, we include all four years together. Table 2 breaks down payments along urban related characteristics of the recipients' residence together with the distance measures used in Table 1. The first thing to notice is that the non-urban portion of the non-local and out of state recipients is small. This suggests there are few



absentee landowners, according to these two definitions, that live in rural areas. Table 2 also shows that urban recipients receive smaller payments, particularly for those out of state. The difference in payment size by urban status is statistically significant, using a Wilcoxon rank sum test, for both definitions of absenteeism.

### 3.4 Practice Adoption Decisions and Landowner Characteristics

In trying to assess how landowner characteristics, such as income and distance away from the farm, affect their land use decisions we exploit data on which contracts qualified for financial incentives (and, thus, were enrolled through a continuous sign-up). This price response can be used to assess whether landowners respond differently to policy signals based on tenure.

We assume a variable  $y_{ij}^*$  exists, which is the net expected utility from choosing the  $j^{th}$  practice. The net expected utility will not be directly observable to the researcher. To the extent that payment sizes are correlated with returns, they can provide information that helps define  $V$ . However, payments reveal little about preferences for owning farmland  $F$ . Studies suggest that wildlife hunting is correlated with personal income, but other factors are also likely to matter (U.S. Fish and Wildlife Service and U.S. Bureau of the Census, 1997). To account for these and other unobservable preferences, the net expected utility from choosing practice  $j$  is specified as having a systematic portion which is assumed to be linear in parameters  $w_i\alpha_j$ , and a random portion,  $u$  where  $u$  includes these idiosyncratic preferences:

$$(4) \quad y_{ij}^* = w_i\alpha_j + u_{ij},$$

where  $i$  denotes the  $i^{th}$  landowner ( $i=1...N$ ),  $w_i$  is the vector of arguments and  $\alpha_j$  is an associated vector of parameters. The variable  $y_{ij}^*$  is not observed, but its sign  $y_{ij}$  is observed where

$$(5) \quad y_{ij} = 1 \text{ if } y_{ij}^* > 0, \\ y_{ij} = 0 \text{ if } y_{ij}^* \leq 0.$$

The probability that  $y_{ij} = 1$  is equal to

$$(6) \quad P_{ij} = P(w_i \alpha_j + u_{ij} > 0) = P(u_{ij} > -w_i \alpha_j).$$

If the probability distribution is symmetric, then

$$(7) \quad P_{ij} = 1 - F(-w_i \alpha_j) = F(w_i \alpha_j) \quad \text{and} \\ P_{iK} = 1 - F(w_i \alpha_j),$$

where  $F$  is the cumulative distribution function for  $u$  and  $K$  denotes not having chosen the  $j^{th}$  practice.

Using the a logistic regression the estimated equation is

$$(8) \quad Y = \beta_0 \text{Const.} + \beta \text{Inc} + \beta \text{Amt} + \beta \text{Abs} + \varepsilon$$

where  $Y = 1$  if the CRP participant received an incentive payment and 0 if they did not.  $Inc$  is the median income for the census tract of the recipient's residence,  $Amt$  is the payment amount received through the General Sign-Up, and  $Abs$  is a dummy variable equal to 1 if the recipient is considered to be an absentee landowner.<sup>5</sup> An attractive feature of the incentive payments is that they should be unrelated to characteristics of the farm related to agricultural production because the decision was made to put land into CRP.  $Amt$  provides a control for the size of the land holdings in CRP.

Both measures of absenteeism are considered (payments to non-adjacent counties and payments going out-of-state). Distance can increase the cost of allocating time to farm management so recipients further away from the farm may be less likely to adopt practices that increase per acre payments from the CRP when they involve more time. This would be supported by a negative coefficient estimate for  $Abs$ . A positive sign on the coefficient estimate for  $Inc$  would support the notion that landowners living in areas with higher incomes have stronger preferences for the amenity values associated with retired farmland, or they have stronger environmental preferences, which can influence the types of practices implemented. Alternatively, higher incomes could signal that the opportunity costs for those landowners is higher, particularly if the practice qualifying for incentive payments requires more involvement on their part.

Results from the estimation of (8) are shown in Table 3. Marginal effects are reported rather than coefficient estimates. The equation is estimated using the less conservative non-

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<sup>5</sup> The income of each recipient is not known directly so the median income for the census tract is used as an approximation.

local measure of absenteeism in addition to the more conservative measure isolating out of state recipients. The sample size for 2004 is 587,062. Estimates for all three variables are statistically significant, but the marginal effects for payment amount and median income are very small relative to the magnitude of the variables.<sup>6</sup> For example, results imply that the probability of receiving an incentive payment increases only 1% with a \$10,000 increase in income. We find evidence that absentee landlords are less likely to adopt practices that qualify for incentive payments. Interestingly, the marginal effect of being absentee varies based on distance from the farm. The probability a landowner received an incentive payment decreased 55% if the landowner was out-of-state measure, but the probability decreased only 11% if the landowner was identified as non-local (not in a county adjacent to the farm). The small magnitude of the effect of income on the practice adoption decision could reflect offsetting effects of landowner amenity and environmental preferences or increased costs of associated with additional practice management requirements. It could also reflect the fact that the income of the recipient relies on using the median income for the census tract of their residence rather than their actual income. This coarseness in measurement could dilute the relationship.

## 4 Discussion

Agriculture is currently undergoing significant changes in the U.S., particularly with respect to land ownership resulting from demographic trends. This has the potential to impact agricultural production, rural economies, and also provides a link between the rural and metropolitan population. In this paper we consider the role of tenure in landowner decisions

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<sup>6</sup> Statistical significance may be due in part to the effect of the large sample size on the standard error estimates.

to enroll farmland in land retirement programs like the Conservation Reserve Program. Our interest in the role of tenure in conservation programs is motivated by demographic shifts suggesting agricultural land is increasingly being leased, and increasing policy interest in agriculture's role in adopting long-term conservation practices that sequester carbon and protect the environment.

We examine empirically some factors that can influence CRP participation decisions by using the Farm Service Agency 1614 data on conservation payments and spatially detailed information on the payment recipients' location and the farm. Using two different measures of absenteeism we estimate that between 12 and 30% of CRP payments are sent to individuals that are likely to be absentee landowners. We also found that absentee landowners were less likely to adopt practices that earn additional incentive payments on land enrolled through a continuous sign-up. This may suggest absentee landowners have lower reservation prices and are more likely to enroll through CRP's general signup compared to owner operators. Distance from the farm also matters: landowners living in a different state than the farm were least likely to adopt practices providing incentive payments. This provides some preliminary evidence that tenure status plays a role in landowner conservation practice decisions. We also found evidence that practice decisions are sensitive to the income of the landowner, but the effect is not strong.

These findings provide a first step in understanding whether tenure status may impact landowner responses to conservation policy and market signals. However, further research is necessary to better understand these relationships. Most importantly, it may be possible to locate the recipients farm to a finer spatial location. This would reduce the coarseness in the measure of absenteeism we use here.

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## 6 Tables

Table 1. Summary of Payments by Location of Recipient Relative to Land.

Year	2003	2004	2005	2006
<b>All CRP Payments</b>				
Value (\$)	1,776,231,414	1,804,170,134	1,757,589,097	1,725,744,016
# of Payments	808,249	848,340	837,000	817,186
Mean Payment Value	2,198	2,127	2,100	2,112
<b>Same or Adjacent County as Farm</b>				
Value (\$)	1,251,692,294	1,269,700,567	1,244,698,835	1,222,596,005
(% of Total)	70%	70%	71%	71%
# of Payments	568,134	595,887	592,394	579,621
(% of Total)	70%	70%	71%	71%
Mean Payment Value	2,203	2,131	2,101	2,109
<b>Non-Adjacent County as Farm</b>				
Value (\$)	524,537,591	534,469,174	512,871,824	503,127,905
(% of Total)	30%	30%	29%	29%
# of Payments	240,113	252,452	244,603	237,553
(% of Total)	30%	30%	29%	29%
Mean Payment Value	2,185	2,117	2,097	2,118
<b>Different State than Farm</b>				
Total Value	205,188,232	208,979,251	200,231,651	195,712,629
(% of Total)	12%	12%	11%	11%
# of Payments	96,624	101,077	98,117	94,422
(% of Total)	12%	12%	12%	12%
Mean Payment Value	2,124	2,068	2,041	2,073
<b>Same State as Farm</b>				
Total Value	1,571,043,182	1,595,190,883	1,557,357,446	1,530,031,387
(% of Total)	88%	88%	89%	89%
# of Payments	711,625	747,263	738,883	722,764
(% of Total)	88%	88%	88%	88%
Mean Payment Value	2,208	2,135	2,108	2,117
<b>Recipients w/o Location Information</b>	146,357,539 (2.1%)			
<b>Recipients Outside the U.S.</b>	3,356,904			

Source: ERS analysis of USDA-FSA 1614 data



Table 2. Allocation of Payments Using Two Measures of Absentee Landownership.				
	Recipient Residence	% of Total	Mean Payment Value	Median Payment Value
Local		70	2289	859
Non-local	Non-Urban	3.8	2585	882
	Urban	26.7	2205	783
Same State		87.7	2290	853
Different State	Non-Urban	1.4	3097	1188
	Urban	10.9	2109	797
Notes: Non-local includes all payment recipients not in the same or adjacent county of the farm. Different state recipients are payment recipients residing in a different state than the farm.				
Source: ERS analysis of USDA-FSA 1614 data.				

Table 3. Marginal Effects from Logistic Regression Where Y=1 if Receive Voluntary Management Payment.

	<u>Non-local</u>	<u>State</u>
Median Income ( <i>Inc</i> in \$10,000)	0.012 (0.00041)	0.0008 (0.0004)
Payment Amount ( <i>Amt</i> )	-2.35e(-7) (0)	-1.16e(-6) (0)
Non-local (binary=1)	-0.11 (0.0012)	
Different State (binary=1)		-0.55 (0.01)
N = 587,062		
Notes: Standard errors are in parentheses.		

## Figures

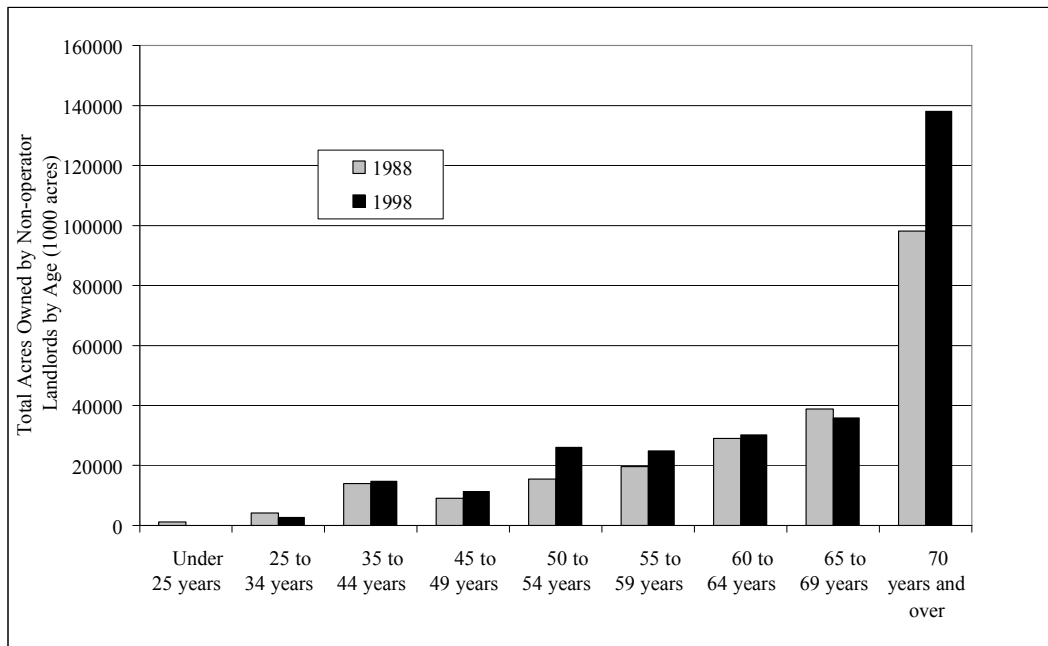


Figure 1. Amount of Farmland Owned by Non-operator Landlords by Age Class (Source: Agriculture Economics and Land Ownership Survey, 1988 and 1998, USDA NASS).

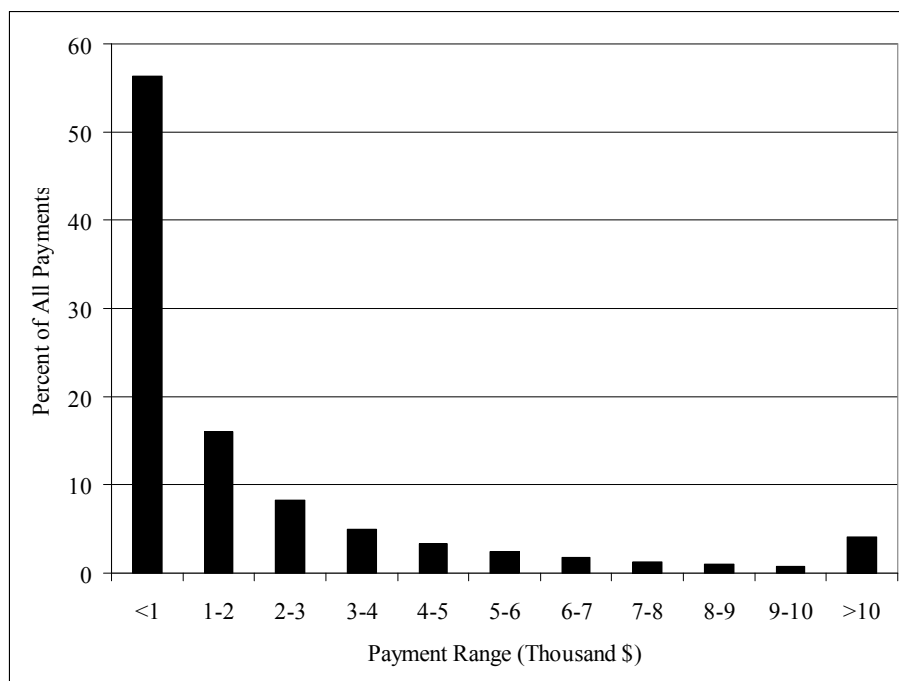


Figure 2. Distribution of CRP Payment Amounts.

Source: ERS analysis of USDA-FSA 1614 data.