Policing Farm Crime in the United States: A Research Note

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Abstract

Though research on farm-related offending and victimization still lags behind most other crime-related topics, recent years have seen an increase in scholarly attention to the topic. These studies have provided insight into the prevalence of victimization and the impact of various security measures on it. However, virtually all of these studies have relied upon data collected from farm operators. While beneficial, it is also imperative to explore the experiences and perceptions of those tasked with investigating these crimes. The current study sought to fill this gap in the literature through qualitative interviews with agricultural crime investigators in the United States. Specifically, interviewees were asked to elaborate on topics such as the referral of cases, how they are typically processed, and perceptions regarding the prevalence of victimization and characteristics of both victims and offenders. Themes emerging from their responses are discussed. In addition, both policy implications and potential directions for future research are highlighted.

Keywords: agricultural crime; farm crime; rural policing; agricultural investigations; rural policing

Introduction

Crimes committed against agricultural operations, a form of offending unique to rural communities, can have far-reaching consequences. Most directly impacted are farmers who might experience crimes such as arson, vandalism, dumping of waste and theft. However, effects can also be felt by the public in the form of community conflict (Morris et al., 2020), higher food prices (Chalfin et al., 2007), and/or the loss of agricultural jobs. In 2020, the United States Department of Agriculture (USDA) reported that agriculture and its related industries contributed over one trillion dollars to the United States (US) gross domestic product (GDP) and provided nearly 20 million jobs. Farming directly provided 2.6 million jobs and contributed 1.4 percent of all US employment (USDA, 2020). It is clear that agriculture is a crucial industry for the US economy, and it is thus important to understand the nature of, and response to, crimes committed against agricultural operations within this country.

Unfortunately, there has been a scarcity of prior research dedicated to the topic (Donnermeyer, 2018). The research that is available is largely descriptive in nature, limited to small geographic areas (e.g., states or regions within them) and focused primarily on the prevalence of victimization and how farm/farmer characteristics may influence it (Cleland, 1990; Dunkelberger et al., 1992; McIntyre et al., 2017; Mears et al., 2007a). The current study shifts the focus to the law enforcement officers who are tasked with investigating these crimes, specifically those employed by agricultural crime units across the US. This study allows for a better understanding of the prevalence of victimization, victim and offender characteristics, and the nature of referrals and investigations involving agricultural crimes.

Review of the Literature

Agricultural victimization appears to be relatively common in rural communities (Barclay & Donnermeyer, 2011; Donnermeyer, 2018). For example, McIntyre et al. (2017) found that over a third of farmers in the state of Georgia in the US had experienced theft in the 12 months prior to survey administration. Further, they found that approximately 30 percent of farmers had experienced illegal dumping, 27.5 percent had been victims of poaching, and 44 percent had experienced trespassing. The findings of this study are in line with previous research, which has also found a high prevalence of victimization among farm operators in the US (Cleland, 1990; Dunkelberger et al., 1992, Mears et al., 2007a). The financial consequences of this victimization can be significant. For example, data from the National Incident-Based Reporting System (NIBRS) suggests that the average loss associated with equipment theft in the US is $3,744 USD, with higher estimates for both livestock ($7,000 USD) and crop theft (over $29,000 USD per incident) (Osborne et al., 2019).

In light of this financial impact, some researchers have attempted to identify the factors that work to influence a farm's risk of victimization. One of the most consistent predictors has been the farm's size, with larger farms being more at risk of certain forms of crime (Barclay & Donnermeyer, 2011; Dunkelberger et al., 1992; McIntyre et al., 2017;

Osborne & Swartz, 2021). Other identified predictors include farm terrain, proximity to towns and roadways, and visibility of farm buildings (Barclay & Donnermeyer, 2001; Barclay et al., 2001; Barclay & Donnermeyer 2011; Mears et al., 2007b; Osborne & Swartz, 2021), though their impact appears to vary based upon location and offense type. Prior research has also evaluated the effectiveness of various security measures (e.g., gates, locks, floodlights, CCTV) or advocated for their implementation (Mears et al., 2007a; Smith, 2019). Findings associated with these studies lack consistency, as some work suggests the deployment of security is associated with higher rates of victimization. Barclay et al. (2001), seeking to rationalize these findings, suggested that this association might be due to increased security measures being taken as a response to previous victimizations and not the inability of security to deter potential offenders.

Though previous studies show some disagreement in terms of the impact of farm characteristics and the effectiveness of security measures, one persistent problem identified within the research literature has been the reluctance of farmers to report agricultural crime to law enforcement (Barclay, 2016; Dunkelberger et al, 1992; McIntyre et al., 2017). Agricultural crime presents unique challenges that might discourage farmers from reporting their victimization to the police. For example, some farmers believe that the police lack an understanding of farming and the agricultural industry (Barclay, 2001; Barclay & Donnermeyer, 2001). Additionally, farmers might have difficulty in providing proof that a crime actually occurred. After all, it can be difficult to distinguish between losing livestock to a crime or natural causes. Yet another reason relates to the time that might pass between the crime and its discovery by the farmers, a problem especially prevalent among large farms.

Regardless of reason, underreporting constitutes a significant problem and prohibits the effective investigation and deterrence of agricultural offenses. The investigation of these offenses may also be impacted by other factors, including the availability of police resources, the priorities of the respective department and the willingness of farmers and/or witnesses to work with officers (Donnermeyer et al., 2010). Though no known study has directly assessed policing agricultural crime within the US, some research has explored the topic globally. For example, Donnermeyer and Barclay (2005) interviewed a sample of rural police officers in New South Wales, Australia, regarding their perceptions of farm victimization and the problems that they faced in investigating incidents. Officers reported that most offenses appeared to be the product of extensive planning and organized criminal groups. They also indicated that they did not have the time and/or resources needed to effectively investigate these offenses. Further, many of those interviewed felt that poor farm management, a lack of security measures, underreporting and a lack of training inhibited their ability to assist victimized farmers. Of interest, several indicated that dedicated agricultural crime units and/or investigators were needed to better address the problem of agricultural offending (Donnermeyer & Barclay, 2005).

Smith and Byrne (2017) revealed that farmers in England and Wales typically had low levels of confidence in the ability of officers to investigate crimes committed against them, compounding the problems that they faced. Morris et al. (2020), surveying a separate

sample of farmers in rural Wales, reached somewhat similar conclusions. While they found that satisfaction in the police was generally high among participants, most suggested that officers should take farm-related crime more seriously. Further, and in line with the findings of Donnermeyer and Barclay (2005), they felt that dedicated agricultural crime units would constitute a significant improvement over the current system (i.e., generalist detectives working on cases).

Though the investigation of agricultural offenses was historically the domain of county sheriff's departments within the US, recent decades have seen the emergence of dedicated agricultural crime units (in line with those proposed by the above studies) at the state level. To date, 11 states (Alabama, California, Florida, Louisiana, Kansas, Mississippi, Missouri, Nevada, Oklahoma, Tennessee and Texas) have developed these units with the hopes that their specialized knowledge might facilitate increased reporting of farm crime and an overall improved response to such incidents. Though we have some (largely anecdotal) knowledge of these units and their activities, no known study to date has attempted to explore the perceptions of the investigators that they employ.

Purpose of the Current Study

Because agricultural investigators are in a unique position to provide additional insight into the problem, it is imperative that researchers seek to understand their perceptions and experiences. Specifically, much can be learned about the manner in which they learn about and process cases, as well as their perceptions of prevalence, offenders and victims. The current study sought to provide the foundation for this area of research by exploring three research questions:

R1: How are cases referred to agricultural investigators, and what factors influence those referrals?

R2: How are cases processed? What factors influence investigations?

R3: How do investigators perceive the extent of agricultural crime and characteristics of both offenders and victims?

Methodology

Data for the current study were collected through qualitative interviews with state-level agricultural crime investigators in June and July of 2020. These interviews were arranged through a snowball sampling approach, relying initially on an individual employed in the field that was known to the research team. This individual provided contact information for others who were interested in the project, ultimately resulting in the participation of eleven active investigators (N=11) employed by six separate agencies: the Florida Agricultural Crimes Intelligence Unit; the Mississippi Agriculture & Livestock Theft Bureau; the Missouri Highway Patrol Rural Crimes Investigative Unit; the Oklahoma

Department of Agriculture Investigative Services Unit; the Tennessee Agricultural Crime Unit; and the Texas and Southwestern Cattle Raisers Association Special Rangers. Approximately 100 individuals are employed in these roles nationwide. As such, the current sample represents around 10 percent of all agricultural crime investigators in the US.

All but one of the interviewees identified as male, with an average age of 47 years. Though most (N=10) had some college education, only five had completed their degree. The majority (N=9) had previously worked in law enforcement (e.g. sheriff's deputy, municipal officer). Further, most reported over 20 years of experience in the criminal justice field (N=8). Several had been employed as agricultural investigators for over 15 years (N=5), while four had between three and eight years of experience. The two remaining officers each reported working in the field for slightly over one year. Of interest, all but one of the interviewees (N=10) stated that they had a background in agriculture, either as a farmer or working on other farms in their community.

Participants reported being tasked with investigating a range of crimes. Theft appeared to be the most common, with cases typically involving livestock (e.g. cattle, horses) and equipment (e.g. tractors, implements, and hand tools). However, a range of other examples were also discussed. These included the illegal dumping of waste on farm property, arson (of both buildings and fields), vandalism, animal abuse and trespassing.

Participants were asked to take part in a one-on-one conversation (all of which were conducted via telephone) that lasted approximately one hour in length and made use of a semi-structured interview guide containing a series of open-ended questions relating to their background, experience, activities and perceptions. Probes and other interviewing tactics were utilized as follow-ups to the initial questions. As a result, the information obtained provided detailed data on the topics covered. Analysis of the interview data involved a content analysis of the transcriptions by the research team, with the goal of identifying relevant themes and commonalities in responses.

Findings

Referral of Cases

The initial research question sought to explore how investigators typically become aware of offenses. As expected, two primary ways were discussed by the interviewees: (i) referrals from other law enforcement agencies, such as county sheriff's offices or municipal departments, and (ii) direct contact from victimized farmers. Of interest, most indicated that both methods were relatively common, as exemplified by Investigator 3, who stated that:

> … it's probably about half and half… a lot of the times the victim will call me direct, but often you know the sheriff's department will call and say hey we had a cow theft or timber theft or something along those lines.

Direct contact by farmers was thought by many of the interviewees to relate to the trust that they have in agricultural investigators. This level of trust appears to prompt many farmers to discuss the availability and expertise of agricultural investigators with their peers. Put differently, they learn about the investigators through word of mouth and readily contact them when needed. As Investigator 10 noted, "They more or less pass our numbers around and they'll call us directly". Investigator 1 echoed this sentiment, while also elaborating on the trust that farmers appear to have in these specialists: "I get calls, like when you help somebody and they find out about you… they tell a friend who tells a friend, and so word of mouth is a big one".

Referrals from other law enforcement agencies, while common, appear to be dependent on both the agency and seriousness of the offense. For example, Investigator 8 discussed how they perceived certain counties to be more open to contacting agricultural investigators than others: "It goes county to county… if it's something small some will usually take it themselves, or some of them just forward everything on to us, so it's just a mixture". Investigator 11 elaborated on this process, positing that some agencies are hesitant to cooperate with outsiders, whereas others are more than willing to seek assistance:

> It's just a county by county basis… there are some sheriff's offices that really prefer to do everything on their own and they don't want an outside agency coming in to help them, and then there are others that, we would call pawn it off as quick as they can because they don't wanna work it, and then there are others that want to work it with you and want to learn something… it all depends on how that sheriff's office is ran more or less.

In line with this idea, most of the interviewees indicated that the seriousness of the offence oftentimes dictated whether they would be asked to provide assistance or take over a particular case. Investigator 3 suggested that "where it's a cut and dry case, they [the sheriff's office] take care of it for sure", while Investigator 2 stated that "… some of the more complex investigations they'll ask me to look into or assist them with." Investigator 9 agreed with this sentiment, saying that "… if something major is going on many of them do contact us and get us involved in the investigation".

Several interviewees felt that other factors, outside of case seriousness, may also play a role in the decision-making of other agencies. Workload and manpower limitations were primarily cited, as investigators felt that many agencies simply do not have the time or resources necessary to investigate agricultural crimes. For example, Investigator 4 offered that: "A lot of times they have, they are inundated with so many other cases like your meth cases, your alcohol cases, your rapes… so these agricultural crimes come in and they're like we just don't really have time to get to these". Investigator 9 expressed similar thoughts, stating that: "Anyone working the county as a detective or investigator or just patrol, they're just overwhelmed. There are just so many cases they deal with each and every day".

A few interviewees also felt that the focus on other crimes by these agencies related simply to their lack of knowledge about agricultural offenses and investigations. Investigator 6, in discussing this possibility, stated that "… there are deputies throughout the state that are passionate about 'ag', but they don't have the knowledge of the livestock laws to back it up". Investigator 10 believed that this lack of knowledge made it difficult for agencies to be invested in agricultural crimes, offering that "… it's kind of hard to be passionate about something like that and it's no fault of theirs, they just don't know". The majority of investigators stressed that any oversight of agricultural crimes was not necessarily the fault of these agencies, but rather the result of this lack of knowledge combined with large and pressing workloads.

Processing of Cases

The second research question explored how cases are handled by investigators once a referral has been made. Several specific aspects of cases were addressed within the interview guide, ranging from recovery of stolen items to cooperation with farmers, other agencies and witnesses. All interviewees suggested that their ability to successfully investigate a case differed by the type of victimization. The majority indicated that theft of property was the most difficult type to investigate, with livestock theft being particularly problematic, as evidenced by Investigator 3's statement that "… cattle are more easily moved and easily hid [than tractors or other forms of equipment]". Investigator 11 further suggested that the ease of hiding stolen cattle relates to the difficulty of identification, as "it's really difficult to recover cattle, and that's because they can almost hide in plain sight. I mean a black cow is a black cow if it's not branded".

One aspect that adds to the challenge of investigating property theft appears to be the impact of time, as several interviewees discussed how any lapse between the offense and initiation of the investigation significantly hindered their ability to locate the stolen goods. For example, Investigator 5 stressed that "… time is key, because a piece of property, you know somebody's going to get spooked and want to get rid of it. They're going to chop it or you know try to destroy it more or put it in a location, and it's just going to sit". Similar thoughts emerged when discussing the investigation of livestock theft (Investigator 3):

> If somebody calls me today and says somebody took my cattle last night, there is a good chance that I might recover those… you have to understand, that cattle that is bought or stolen today can be in Nebraska or South Dakota tomorrow… so you've gotta get on cattle very quickly if you're actually gonna make that recovery for the most part.

Investigators were also asked to elaborate on the factors (outside of form of victimization) that impact their success rates. Several themes emerged from their responses, with the primary finding being that a range of factors were thought to be important. For example, Investigator 2 stated that "… every case is different and unique… it just depends on the case and how it is. Some are solved by physical evidence, some are solved by

circumstantial evidence with witness statements… others are solved by confessions of the suspect or suspects". With that said, it appears that (similar to traditional police investigations) the presence of witnesses is the single most important predictor of successful case closure based on interviewee feedback. Nearly all touched on this topic. Investigator 3, echoing virtually identical sentiments to their peers, indicated that "….in my opinion, the people who solve the crimes, for the most part, it's the witnesses".

Another factor perceived as important among the interviewees, and mentioned by all, was the cooperation of farmers who had been victimized. Investigator 8 felt that "… it's very important. It's probably one of the most important aspects of the job", while Investigator 4 stated "… without them, we don't have a case". Of interest, however, was the finding that interviewee perceptions differed in terms of how well farmers cooperated. Approximately half of the sample perceived most farmers to be cooperative, though the remainder felt that it depended upon the personality of the individual. For example, Investigator 10 offered that "… you got a lot of people who are super cooperative… but you have a few that are really anti-government, uh, anti-police… it's their business and nobody else's".

In spite of this difference, the majority of participants thought that farmers cooperated more willingly with agricultural investigators than other agencies, such as sheriff's offices or municipal police departments. Investigator 6 suggested that this was the case because:

> There's a rapport that's there because of the bond in agriculture… we're all 'ag' based individuals ourselves. I have cows and horses and I've been around them my entire life. We're all, we can speak their language, we understand what they're saying. It makes them more willing to talk to us than a regular officer that doesn't have a clue or care what they're talking about.

In addition to the shared background, a few interviewees posited that their appearance helped to facilitate a connection with farmers and promote their cooperation. For example, Investigator 5 stated that "I really do think so because of the way we dress… we don't have a uniform per say… we're identified by our badge and our hats and our clothing. We dress like rangers". Investigator 3 offered a similar sentiment:

> I do think they communicate with us better… we're wearing the hat, we got the boots and jeans. And yea, we got the badge and gun on… they see us as authority but not as the guy that's writing that ticket… that's enforcing the seat belt law… I think there's a relationship there built in because they perceive us as being a lot like them.

In addition to the cooperation of farmers, interviewees were asked about the level of assistance that they received from other agencies when conducting investigations. The majority felt that the level of cooperation depended upon the circumstances and agency in question. For example, Investigator 1 reported that "… there are some counties that love us and there are some counties that don't", while

Investigator 11 stated "they're all different… some of them want to learn and want to be next to you… but that's not always the case". With that said, even those who at times questioned the assistance from other agencies felt that most were helpful when called upon, as evidenced in the following quotes:

> …we always generally get, for the most part, pretty good cooperation form the sheriff's department. (Investigator 4)

> … they offer great help. Even if they give us the whole case and ask us to work the case, they're always there for us and they always have a detective there to help out with anything we need. (Investigator 9)

Perceived cooperation by the court system, alternatively, was a point of contention for many of the interviewees. As a group, they felt that agricultural crimes were not always viewed as a priority by prosecutors or judges. Investigator 1 had this to say on the topic:

> I've had half a dozen cases in the last six months thrown out that were righteous cases, everything was done right, but the courts sometimes don't think… if there's not physical bodily harm, because these are non-violent type crimes when it comes to hurting people… they've got so many priorities that they feel is more important than that. Unless it's a real habitual case and the public gets upset about it. I've had a lot of cases thrown out when they get to court because it's a waste of the court's time they think.

A few of the investigators were understanding of the position of the courtroom workgroup, however, noting that they were oftentimes overworked and forced to pick and choose cases. A few went so far as to offer advice on how to better interact with them, with the following quote from Investigator 11 serving as an example: "… understand this, he's [the District Attorney] got lots of cases that comes across his desk. He's got murders and all kinds of stuff, so when you lay him an 'ag' crime case and you say I'd sure like to have this prosecuted, the simpler and the most basic you can make that understandable, you're gonna get him on your side right off the bat".

Perceptions of Prevalence, Victims and Offenders

Finally, interviewees were asked about the extent of agricultural crime and the characteristics of offenders and victims. Most reported that agricultural crime was prominent within their respective jurisdictions. For example, Investigator 4 suggested that "… it's very prevalent. And it is a growing industry, to be quite honest with you", while Investigator 2 noted "I'd say if you're… expanding the 'ag' crime to include, you know, trailers, equipment… it's very prevalent". Those who disagreed with this sentiment still suggested that agricultural crime was deserving of dedicated enforcement, with a few even noting that their perceptions may be impacted by underreporting. For example, Investigator 11 felt that

"I can't necessarily say we have a lot of them because I think a lot of them go unreported. I don't think the victims report them and we do find that happens a lot".

Most interviewees indicated that theft (e.g. equipment, livestock) was the most common form of victimization within their jurisdiction. However, all reported a good deal of variation in terms of the cases that they handled, ranging from arson to vandalism to animal abuse. Of interest, several indicated that the form of offending oftentimes differed according to geography. For example, Investigator 5 discussed how "There's more cattle theft down here [the southern portion of the state] than there would be up there. So they don't have the cattle crime that we have down here… but I don't have the equipment that they do up there". Similarly, Investigator 11 stated that "… the Western part of the state is more of the, more of your ranching area and out there [the agents] will primarily work a lot of cattle theft investigations… I probably get more, investigate property crime more than anything".

Interviewees were also asked to share their thoughts on offenders, and whether they featured similar characteristics. Though responses varied, one consistent theme emerged within these discussions: that many (if not most) offenders had some form of background in agriculture. Investigator 9, in a statement summarizing this perception, offered that "I believe it's usually someone with some agricultural knowledge… that herd of cattle out there is worth thousands of dollars and a lot of people don't realize that. And they [the offenders] have that much knowledge to know what this is worth". Further, interviewees pointed to the tools required for offending, and how these were most commonly owned by those with a connection to agriculture. Investigator 3 suggested that:

> Not only that, they have to have the equipment to do it. They have to have a truck, they have to have a trailer. So 'ag' related crime I'm gonna say, gosh, it's a very high percentage, it's in the high nineties that when you have an agriculture related crime that person has connection to agriculture.

It was also noted by several interviewees that connections with the victimized party were commonly found when cases resulted in arrest and/or recovery. Put differently, they perceived that many offenders had some knowledge of the specific farming operation or operators. This oftentimes related to their employment on the operation. Investigator 1 discussed how "… most of our farm crime with equipment being stolen are usually inside jobs… I don't mean any disrespect to any of [them], but typically the people that are getting hired that I've seen in these rural communities are people that can't go get a job elsewhere… and eventually they wind up stealing from each other".

Several topics were discussed when interviewees were asked about the perceived motivations for these offenders, ranging from revenge to financial strain. However, the majority of interviewees agreed that many agricultural crimes were committed in order to support a drug habit. Their experience led them to believe that offenders with agricultural knowledge could easily commit thefts in order to finance these habits, as evidenced in the following quotes:

> …I would say, and I think all of our guys would agree with this, probably once we get in and work a crime and get to the bottom of it and interview the offender, I think we'll find probably 80% of those are related to methamphetamine. (Investigator 11)

> I'm gonna say 90% of them is based around dope, the drug trade. (Investigator 5)

> … addicted to drugs…in my opinion that is the number one motive. (Investigator 3)

A good deal of disagreement existed in relation to whether crimes were primarily driven by opportunity or planning. Most agreed that not every case fits a particular mold and that both scenarios were common. For example, Investigator 7 stated "… it's a little bit of both", while Investigator 1 thought that it was "about fifty-fifty planned and opportunity". With that said, approximately half of the interviewees felt that the majority of crimes related to spur-of-the moment responses to perceived opportunities, highlighted in quotes such as "… it's just more of a crime of opportunity…" (Investigator 8), and "They just take advantage of opportunities" (Investigator 10). Those who disagreed suggested that some planning was involved more often than not. For example, Investigator 9 insisted that "… they always have a plan".

Finally, interviewees were asked to discuss their perceptions of farm operators and how their actions (or inaction) could influence likelihood of victimization. Nearly all suggested that farmers do a satisfactory job of taking simple steps, such as locking gates and using floodlights to illuminate buildings. However, only a few of the investigators felt that most farmers did an adequate job of implementing other security measures. The majority indicated that those who do not carry some blame when it comes to victimization. Investigator 3, in discussing this perception, stated that "… no, they don't take enough precautions. They don't, they really don't". Similar thoughts were echoed by Investigator 6, who suggested farmers "….still have that good neighbor mentality and they don't, they don't think about ways of protecting themselves like they should". Most investigators also noted that farm operators only begin to take initiative once they or someone they knew had been victimized. As discussed by Investigator 11, "….it's [taking measures] because their neighbors have been targeted or they've had something stolen. It's like they had to have an awakening before you know, they'll take the next step measure".

All interviewees suggested that taking additional measures would help to alleviate the problems experienced within their jurisdictions. For example, Investigator 3 stated that "Well, you never want to rely on one particular security measure", while Investigator 8 similarly noted "… it's important to take multiple security measures and not rely on one". Of interest, as a group the investigators also posited that certain operations should be more focused on these measures than others should. Most commonly discussed were farms located near major roadways. Investigator 2 suggested that "… if your equipment's parked within sight of a roadway, it's gonna make it where it's more likely to be stolen just because criminals will see it…", while Investigator 5 offered "…one thing that I see the most…

people will put, say loading pens right next to the roadway because it's convenient for them… if it's convenient for you, it's convenient for a thief". Leased land was also a topic of conversation, since many farmers now operate tracts of land separate from their primary operation. This was perceived to create increased risk of victimization, as farm operators are less able to provide surveillance over property that is positioned away from their place of residence. Investigator 3 had the following to say in support of this perception: "If its lease ground for cattle of your equipment gets stolen from a lease ground, that's the reason, because it's a lease… lease ground is vulnerable".

Finally, several interviewees suggested that the patterns of farm operators may play a role. Investigator 2 explained that "If they [offenders] are watching you and watching what you're doing everyday they can develop your pattern… when you're there and when you're not there… they may be able to get there when you're not around". Similarly, Investigator 11 stated that "They can tell you what time he [the farmer] goes out here to feed his cattle then he leaves… they know that after that they can get into his property". It is worth noting that many felt that not changing up routines was due to complacency since farmers do not perceive their risk of victimization to be high. As discussed by Investigator 3, "… complacency, you know… complacency is the number one reason people get their stuff stolen". The impact of social media was even mentioned by one interviewee, with Investigator 8 indicating that: "… you can turn around and go to Facebook right now and start browsing and you'll see that people have their pictures… and they're in a pasture field and there's a bunch of cattle all around them. So it don't take a genius to figure out… so now you know where he's at and they'll steal his cattle."

Discussion

The results of this study contribute to the field of agricultural crime research in four important ways. First, they establish how state-level investigations of agricultural crimes are initiated. Because no previous research has explored these specialized units in a US context, it was important to understand how these agencies are contacted and what types of investigations fall within their jurisdiction. Our study found that law enforcement referrals and direct contact by farmers were both common ways for investigators to learn about a case. Interviewees noted that local law enforcement agencies differed in their willingness to refer cases to agricultural investigators, but that factors such as the seriousness of the offense and the referring agency's workload influenced these decisions to seek assistance. The investigators also indicated that the farmers who contact them directly have learned about the investigator through word of mouth with peers, resulting in a trust that the agricultural investigator will have the expertise to handle the case.

The current study also explored the operations of these units. No previous research has directly addressed this topic, so it was necessary for the fundamentals of their processes to be explained, as well as the factors that could contribute to their success. The results of this study showed that the cooperation of both witnesses and farmers was pivotal to investigations and suggests that the most important part of this relationship is the individual's perception

that agricultural crime investigators are part of the agricultural community and not just law enforcement officers. This perception seems to be furthered by investigators wearing civilian clothes rather than a standard uniform, which suggests that agricultural crime units whose investigators wear uniforms may be better received in the community by switching to civilian clothes.

The third insight offered by this study was an explanation of agricultural crime from the view of those who investigate it. By capitalizing on the experience of agricultural crime investigators, this study was able to explore aspects related to the offense and offenders, such as their characteristics, motivations, and strategies. Other research has hypothesized about offenders (Barclay, 2001; Mears et al., 2007b), but this has largely been theoretical due to the lack of available data. One exception is the work of Osborne and colleagues (2019), who presented basic demographic profiles based upon NIBRS data. The current findings build upon that work and should set the stage for programs focused on possible preventative measures. Past research has typically considered the motivations of offenders to be related to financial gain. The investigators interviewed for this study agreed, while adding that the predominate driving force behind this financial motivation seemed to supporting a drug habit. This was an interesting finding that has been unexplored in previous research. The investigators also suggested that most offenders had a farming background, pointing to the knowledge and equipment necessary to commit such offenses.

This study was also able to explore investigator's perceptions of the strategies of offenders; namely, how many crimes were planned as opposed to how many were purely opportunistic. The investigators' perceptions that many crimes were planned emphasizes the importance for farmers to be more vigilant, as it may make them appear less desirable as a target for offenders who are searching one out. Some investigators in this study mentioned (in passing) the existence of organized agricultural crime. Although the presence of such organized groups has been discussed in international research (e.g. Donnermeyer & Barclay, 2005; Morris et al., 2020), this is the first known mention of organized agricultural crime in the United States. A possible explanation would be that the focus of previous US studies has been the victim, who might not be aware of the presence of such groups to the same extent as those who investigate agricultural crimes on a daily basis.

Finally, this study offered a chance to explore additional factors related to the potential for victimization not previously discussed in the literature. The current work found that one of the most important factors identified by investigators was keeping cattle penned by the road. Investigators noted that it was a very common practice and was equated with increased thefts. The solution to this is rather simple and calls for farmers to hold their cattle in more secure locations. For this to be implemented, it is important to make farmers aware that such practices do, in fact, result in thefts. Smith (2019) suggested that farmers should adopt a 'fortress farm' mentality to prevent farm-related crime, and the investigators interviewed for this study were unanimous in suggesting that farmers taking additional security measures could reduce victimization. For example, options ranging from basic physical security (e.g. locks, chains) to surveillance (e.g. CCTV paired with sufficient

lighting) may be beneficial, as would more recent technological developments such as microchipping (for both livestock and equipment) and forensic property marking liquids (e.g. SmartWater CSI) designed to make identification and recovery more likely (Smith, 2019).

As mentioned previously, these crimes are sometimes committed by hired hands. In that event, such precautions would be ineffective. This can be managed in other ways, though. Some investigators in the current study noted that farmers often give little thought to who they hire, which frequently results in a theft. Logically, this should be improved by farmers being somewhat more careful about who they hire.

Conclusion

While the current study did offer a novel exploration of agricultural crime units across several states, some important limitations should be noted. The primary limitation was the sample size (N=11). These interviews were conducted over a limited time span and depended on the availability of the agricultural crime investigators during this period. Several units did not respond to the request for participation. Other investigators were not allowed to participate owing to public relations policies of their organizations. Additionally, it should be noted that this study relied on snowball sampling, which can limit the pool of possible participants. It is also possible that the participants shared certain viewpoints or experiences, which made them more likely to take part in the interviews. Finally, and as mentioned within the review of the literature, underreporting of farm-related victimization is a significant concern. The fact that many of these incidents are never relayed to agricultural crime units means that the officers they employ may not have a complete understanding of the extent and characteristics of agricultural crime within their respective communities.

In spite of these limitations, the study constituted the first attempt to develop an understanding of agricultural crime units. As such, it has created a strong foundation on which further research should build upon. Several concepts were introduced during the interviews which could prove to be important to pursue. For example, some investigators mentioned that they tried to raise awareness of certain issues with farmers to improve their security. It is unclear if these were organizational-level efforts or if the individual investigators took this initiative. It could be useful to explore whether units host seminars or other campaigns in an effort to reduce victimization. Another subject of interest was the participation of federal agencies in the US such as the Federal Bureau of Investigation (FBI) in some agricultural investigations. One of the participants was a member of a state agricultural crime unit, while also commissioned as a federal agent as a member of a task force. Aside from working cases assigned to him by the state-level unit, he also worked federal cases in the area which dealt with agriculture. There is little, if anything, known about how agricultural crimes are handled on the federal level or the stance of the FBI on these crimes. In addition, it is also important to discover how agricultural crimes are viewed by the court system. The investigators in the current study noted that agricultural cases were sometimes disregarded in order to make time for other types of crimes. The frequency that agricultural cases proceed to court may also influence the amount of confidence farmers have

in the system, and by extension, agricultural crime investigators. One final concept that warrants further attention is the concept of organized agricultural crime. If such organizations exist in more than isolated areas, the overall view of agricultural crime could be impacted.

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