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Facing Boldly the Scourge of Praedial Larceny on Food Production in the Caribbean

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Abstract

Agricultural crimes or farm theft, commonly referred to as praedial larceny throughout the Caribbean, impacts significantly on food security through high levels of economic loss. This paper provides an overview of praedial larceny worldwide, losses in the Caribbean region and some evidence from Trinidad and Tobago where the situation is prevalent. The study was guided by the routine activities theory; identifying the types of criminal acts perpetrated, the level of risks posed to farmers and a special emphasis on the concept of guardianship. Data from group discussions and interviews conducted among farmers in two major areas in Trinidad representing different terrain (flat and hilly areas) and an acknowledged 'hot spot' area. The findings show that praedial larceny is no respecter of farmers, farming communities, type of crops, location or farmers' economic circumstances. Finally, the paper reports on initiatives around the region and suggests other mechanisms which can be introduced to reduce the impact of praedial larceny on food security.

Keywords: Praedial larceny, Food security, Routine Activity Theory, Caribbean.

Introduction

"So sad ...know the feeling thieves came into our garden about 3 weeks ago and stole all our plantains. Almost \$4000 worth and stole from all the neighbors too...going to the police was a waste of time...how do u mark your produce? Farmers work too hard to help feed this country and in the end have no redress in these situations." (A distraught farmer, Camille Hardy from the Loop News, 2017).

Farm theft or praedial larceny refers to the theft of agricultural produce such as crops, livestock, and fisheries. This term also covers the theft of agricultural equipment such as spray cans, brush cutters, water pumps and other irrigation equipment. It can also be extended to the theft of agriculture inputs and secondary products such as feed and fodder. Praedial larceny threatens simultaneously the quality of life of a productive social class of citizens and the entire economic fabric of a society working towards food security and import substitution. It is often traumatizing and heart-breaking to the farmer who wakes up in the morning and discovers that their agricultural produce, equipment or livestock has been plundered and vandalized by thieves during the night. Moreover, there have been instances in which farmers have been brutally attacked, threatened, even killed by these unscrupulous predators while protecting the fruits of their financial investment.

Praedial larceny has been recognized by the highest level of leadership in the Caribbean as one of the most significant constraints to sustainable agricultural development in the region (Little 2011). The dimensions of praedial larceny can be classified under the categories of financial, physical, prevention and solutions (Little 2011). According to a 2010 survey carried out among Caribbean-region stakeholders, more than 90% agreed that praedial larceny

was the single most discouraging aspect of agriculture and has become a disincentive to investment in the sector and a threat to livelihoods in farming and fishing communities (Little 2011). The report further indicated that on average, 82% of farmers and fisherfolk affected are commercial or semi-commercial producers. The report also revealed, that regionally 18% of the value of farm output is taken by thieves, resulting in the loss of over USD \$321 million annually (CARICOM 2011). These losses may be small compared to developed countries; but nevertheless extremely worrisome. Worldwide losses are estimated as high as USD \$5 billion on an annual basis (Swanson et al. 2000) and in some countries in Europe, the loss is between 6 and 18% of agricultural output.

A Caribbean Community study, CARICOM (2011), revealed the following estimated country losses: Trinidad and Tobago- losses of USD \$22.6 million annually; Jamaica- losses in excess of USD \$55 million annually; Belize- losses in excess of USD \$300,000 annually; St. Vincent and the Grenadines- losses of USD \$2.3 million annually and Bahamas losses to its marine fish industry of USD \$16 million annually.

Because so much of this type of criminal activity remains unsolved and unpunished within the criminal justice system, agriculture on the whole has become a hazardous undertaking, woefully discouraging to both practising as well as aspiring farmers. Often overnight, several acres of high-priced commodities can be trucked away to be sold to middlemen, or directly to salesmen engaged in the retail business with no traceability (Isaac, Ganpat and Joseph 2017). Some farmers have even abandoned their entire enterprise due to heavy losses and the high cost paid for security. Such unscrupulous practices bring enormous profit to those engaged in this

sordid underworld of agricultural criminality, even as it spells economic ruin to the practising farmer; loss of livelihood and consequent inability to repay banks or credit unions.

While the issue of praedial larceny has not been studied to any large extent in the Caribbean, there is a growing body of academic studies conducted in America, Australia, Britain and Scotland which relate specifically to this rural crime. Such studies examined the changing ecology of agricultural crime, criminality and policing (Sugden 1999; Barclay 2001; Donnermeyer and Barclay 2005; Yarwood & Gardener 2005; Jones 2008; Spore 2009; Smith 2010; Little 2011; Donnermeyer & Scott 2013; Smith et al. 2013; Smith & McElwee 2013). These studies all show that farm theft is regarded as one of the major deterrents to agricultural production.

National and regional food security is at risk when farmers decide to leave the sector. Moreover, it is disastrous for farmers when high quality genetic breeds of livestock and crop varieties are stolen from breeding stations and agriculture research facilities and sold as food (FAO 2013). Stolen produce tainted with pesticides also have serious consequences for health.

Theoretical framework

As stated, little attention has been paid to the various factors influencing agricultural crimes in the Caribbean. However, other extra-regional studies have identified several factors that may contribute to, and encourage the growing spread of this crime. Cohen and Felson (1979) proposed the routine activity theory, one of the main theories of environmental criminology, and which is derived from an earlier work; Hawley (1950) theory of human ecology. The routine activity theory focuses on the temporal aspects of human behaviour in community environments. It includes

perspectives such as situational crime prevention, and crime prevention through environmental re-design and it includes Newman's (1972) notion of defensible space. This theory suggests that criminal offences are directly related to patterns of daily social interaction of both victims and offenders in time and space, which define in part the situation or context under which crime occurs (Cohen & Felson 1979). Tittle (2000); Felson (2002); Brantingham & Brantingham (1995) and Barclay et al. (2001), all describe the concept of place to the study of crime. They posit that in order for a crime to occur, three elements must converge; a motivated offender, the absence of a capable guardian, and the presence of a suitable target. Guardianship, a key component of this theory, includes anyone or any object (that is, forms of physical security) which can limit the chances of an offender committing a crime. As the authors explain, guardianship involves proactive environmental techniques such as target hardening, controlled access and effective surveillance in an attempt to dissuade offenders and reduce the opportunistic potential for the crime have praedial larceny. The routine activity theory holds that offenders are motivated to make their decisions based on the characteristics of the target. The choice of the target is based on its value, accessibility, visibility, concealability, removability and disposability (Bunei et al. 2013). Bursick and Grasmik (1993) discussed the work of Cohen & Felson (1979) and referred to guardianship as both a human (human presence or physical guardianship) and a non-human (for example, locks, alarms) phenomenon. Guardianship, in this regard revolves around is the availability of others who may prevent crimes by their mere presence or by offering assistance to ward off an attack. These can include neighbours, friends, relatives, dogs, passers-by, plus

physical measures for example locks, alarms, and remote cameras; all of which can act as substantial obstacles to offenders (Clarke & Felson 1993; Clarke 1995).

The routine activity theory stresses the importance of the exposure due to the isolation of property as a key ingredient in assessing vulnerability. Guardianship on a large farm where a great deal of the property is far from the location where the owner lives, therefore tends to be minimal and is not effective in reducing the vulnerability of property (Mears et al. 2007b). Agricultural crimes occur at specific places on agricultural operations and these places reflect the level of visibility of the property from a road by other people (opportunistic) as well as from the place where the farmer lives (guardianship).

In a later publication, Barclay & Donnermeyer (2011) noted that improvements in roads, the increasing cost of farm machinery and farm inputs, increasing reliance on transient or seasonal workers, and encroachment of urbanization into formerly rural and remote areas, have increased visibility, attractiveness and accessibility of farm properties. A study conducted in Kenya, found farm theft to be associated with high market integration and market availability (Omiti 2007). This phenomenon somehow resembles the situation in many Caribbean countries. From the perspective of routine activity theory, this represents an increase in the attractiveness of the target. Often, there are times when little or no interest in the legitimacy of the source of the produce based on market availability and as a result, there is an imbalance in their daily demand and supply of fresh food and the buyer is often clueless. According to the FAO (2013), one of the major drivers for farm theft in the Caribbean lies in maintaining the supplier/producer relationship, in which, reliability of supplies, freshness, smaller

amounts not requiring storage and an acceptable price necessitates what can be referred to as an organized trade. Praedial larcenys' most readily identified business feature is, therefore, the ability of the supplier to combine large volumes, timely delivery and a level of determination to ensure his delivery, that does not rule out the use of violence (FAO 2013). Hence, sometimes overnight, a farmer's entire crop can be harvested to maintain this supplier/buyer relationship. Residing near major transportation routes would also increase a farmer's vulnerability to farm theft because potential offenders can easily navigate between urban and rural areas.

Objectives of paper

The objectives of this study are to (i) discuss the impact of praedial larceny on farming in the Caribbean, (ii) present some evidence from one of the more affected countries and to recommend strategies to mitigate the scourge of praedial larceny in the region.

Methodology

While the discussion of this paper focusses on the Caribbean, evidence from studies done in Trinidad is presented to support discussions. Trinidad is used as the example because of the high impact of praedial larceny and for convenience; researchers' inability to conduct studies in other major countries due to limited time and limited financial resources. To get a true assessment, as well as the emotional impact of praedial larceny on farmers, a personal and contextual approach was taken. A traditional group discussion method was used. This allowed for free, unrestricted opinions, perceptions and comments by the farmers. Three main discussion areas were explored: the extent of praedial larceny; the impact on farmers and recommendations to minimise its impact. The discussions were taped with the permission of the

participants. This was followed by the completion of a structured questionnaire, which comprised both closed-ended and open-ended questions.

The study was done in two contrasting farming communities. The Orange Grove estate which has over two hundred (200) new farming plots distributed to farmers in 2013, and is a well organised community of 5-50 acre plots of flat lands with good vehicular access and infrastructure. The other community is located in Maracas, St Joseph and farmers operate over a widely dispersed area on predominantly hilly terrain with little or no infrastructure, poor vehicular access, but very good access to smaller type agricultural thieves. 80 farmers were included in the study (Orange Grove = 50; Maracas =30).

Descriptive results are presented as and verbatim statements are provided to support findings.

Results

General description of communities

At the Orange Grove location farmers cultivated a variety of mixed vegetables such as pumpkin, cabbage, tomatoes, melongene, bodi, corn and hot peppers on 8-18 acres on open fields, and no livestock were reared. Half of the farmers had store rooms or sheds built on the farm where some of the farm chemicals and equipment are kept. All of them however, admitted to keeping some sort of equipment or tools in the field; hidden in the drains or covered in a disguise of discarded roof sheets or empty fertilizer bags. There were two main reasons for which this was done. Firstly, in their opinion, it is simply not practical to move and replace equipment such as irrigation tubes and in some instances water pumps, depending on how far the water source is located. Secondly,

they believe that when the thieves see a shed on the land, they automatically think there is something of value being protected within. From their practical experience, simply leaving small tools like hoes, spades and forks lying flat in the drains of the open field is most times more successful.

Farmers from the other farming community, Maracas, on the other hand cultivated mainly tree crops such as cocoa and citrus and food crops such as banana and plantain and root crops such as cassava and mixed vegetables such as string beans, pigeon peas and sweet peppers on a smaller scale; on acreages ranging from 3-5 acres in mainly open field production systems. Some of them even kept bees for honey production.

All of the farmers selected have store rooms or sheds built on the farm where some of the farm chemicals and equipment are kept. Because of the remoteness of some of the farms, it was quite difficult to transport the tools and equipment on a daily basis by foot, which is the only method of farm access by most of the farmers selected. All farms employed family labour and on rare occasions hired workers for odd jobs.

Existing farm security at both farming communities

Farmers in the Orange Grove farming community indicated that there was no existing farm security implemented since they were not convinced that traditional measures such as fences were effective. When asked about having watchmen in the field at night, it was the general consensus that in most instances, the watchmen are actually the main culprits. They indicated however that the praedial larceny squad, which occasionally patrolled the area at night in the Orange Grove area were in their opinion not always as effective as one would

think, since, it is possible for the thieves to simply hide in the field when they are alerted by the bright flashing lights of the passing patrol vehicles. Some farmers were also of the opinion that some of the security officers are possibly involved as well. Praedial larceny occurs in Orange Grove in a very unique manner. It is the firm view of the farmers that some of the main culprits are in fact actual farmers who cunningly steal produce and markets it as their own. The ingenuity and skill with which this crime is conducted perhaps is on par with white-collar crime. Traceability is almost impossible since it is difficult to prove to whom the produce belongs and the perpetrators, because they are 'farmers', have ease of access- even through the security gates.

Farmers in Maracas also did not believe that the praedial larceny squad was effective, as most of their farms were not easily accessible from the major roadways and even fences were impractical because of the hilly terrain. None of them employed watchmen but one farmer pointed out that the presence of bee hives on his farm served as a strong deterrent to thieves. Although the efficacy is unknown, one farmer suggested the use of foot patrols as a more practical option.

The incidence of praedial larceny at both farming communities

The praedial larceny problem in Orange Grove was described by the farmers as 'serious'. The frequency for each farmer is at least once per year and all of the farmers have been affected in the past; losing produce, machinery, tools, equipment and even vehicles. Such was the case of one of the farmers present. One farmer in particular appeared clearly distraught as he related the incident: "*Last year I lost my vehicle, a brand new 4x4 Ford Ranger. They*

came during the day, held me up at gunpoint, tied me up and stole the vehicle".

The farmers stated that praedial larceny has always been a major problem and it occurs throughout the year, usually late evening or early morning. The general view of the group was that praedial larceny has in fact increased over the years. The reasons given to justify this notable increase was that "*now there are more farmers, so there are more things to thief*." "*The last known incident of praedial larceny occurred just last night*", lamented one farmer. "*I lost approximately three thousand (3000) ochros*", he continued. Prior to this, was the loss of twelve (12) bags of papaya approximately three (3) months ago by another farmer. In this case however, the farmer actually caught the thieves and took them to the police station in his private vehicle. One farmer indicated that around harvest time they usually work until midnight on their field and return around 5 am in the morning. One morning, upon arrival to his field he realised that his entire crop was gone, "*them thief and them does mark we and as soon as we leave they does come and steal we crop, I loss a whole crop of corn worth more than \$30,000TTD in only a few hours*"; *I feel is them other farmers in the area*".

In terms of crop type vulnerability, the farmers are of the opinion that there is no significant difference and that all crops are equally at risk.

It was recorded that numerous reports have previously been made to the police on praedial larceny. The farmers' opinion however is that making police reports is a waste of their time. In the case of the twelve (12) bags of pawpaw mentioned before, the farmer stated that he was not convinced that any action would have been taken, had he not taken the thieves to the police station himself, in his own vehicle. He stated also that it was a risk

that he took and many farmers would not have taken that risk. The farmers claim also that when they go to make a report at the police station, they themselves are treated as criminals.

In Maracas, St. Joseph the farmers also described the problem as 'serious'. The frequency was also at least once per year for each farmer and all of the farmers have been affected in the past, losing produce, machinery, tools and equipment. This group stated that there was no relationship between frequency or time of occurrence and market prices since there is a ready market for stolen agricultural produce. One farmer related a case in which he lost two (2) bags of sweet peppers. He immediately went to the culprit who he had suspected was responsible and was able to catch them in the process of packing out the sweet peppers for sale. He confronted the individual and then reported the matter to the police. The general view of the group is that praedial larceny has in fact increased over years. The reasons given to justify this observed increase was that there are now more thieves. One farmer indicated that not only do the perpetrators steal the produce, but now they are taking the entire plant. After establishing a field of citrus plants, he returned to meet only empty planting holes.

In addition to the usual thieves, the group also cited hunters as notable culprits, and perhaps the ones responsible for thieving the plants as well.

In terms of crop vulnerability, the farmers suggested bananas, both green and ripe are most susceptible, due to the fact that there is a ready market, and they are easy to sell since they are always in demand.

It was recorded that numerous reports have previously been made to the police on praedial larceny. The farmers' opinion however is that making police reports is a waste of their time. There is seldom any response and if they do respond,

the lack of traceability associated with agricultural crops means there is no evidence.

Farmers' recommendations

Praedial larceny therefore, has potentially high, though undetermined, social costs to welfare in farming communities, livelihoods, and household food security. Farmers in both communities made the following recommendations; stiffer penalties for the crime, the praedial larceny squad should be more active, more frequent patrols at random times, more prayer, implement a wireless, battery operated camera systems and motion sensors for farmers at a subsidized price, formation of a farmers watch group, government to make incentive for security equipment available to all farmers regardless of tenancy status, make loans for purchase of security systems easier to access, implement modern technology including the creation of a photo database of the perpetrators so that they can be identified by both the police as well as farmers, GPS mapping of farmers plots for faster response by praedial larceny squad, solar powered camera systems and motion sensors be made available to farmers at a subsidised price, farmers to be encouraged to look out for each other more frequently, set up a camera system at the entrance gate to monitor vehicles entering and leaving the area.

Discussion

It seems evident that once the practice of praedial larceny can be engaged with impunity and offer rich rewards at the end, it will continue unabated for the foreseeable future across the Caribbean. The measures for a final solution must firstly come from national government interventions; legislating effective and realistic laws to address the problem and creating the mechanisms and agencies

needed to effect a cure to this social ill. Technologies are actually available for adequate surveillance and intervention, and can be adapted to the needs and circumstances of a small Caribbean society and its small farm sector. The cost of such technologies will be regarded as prohibitive to the extent that government's developmental policy disregards agriculture as an important revenue earner and fundamental to economic diversification. The modernization of farming must extend beyond tractors and harvesters, to proper fencing, electrification, cameras and armed guards. Small farms can hardly generate the resources to provide such equipment. Governmental agencies and government-sponsored regional co-operatives will be expected to furnish this needed technology as well as the management expertise for successful implementation.

There is a role for extension in praedial larceny. No programs have been identified across the region that provide advice to farmers and other constituents on how to deal with this issue. This is needed and with a special focus on guardianship. Farmers should be trained to review their operation from a thief's viewpoint and ask; what would be the easiest method to enter and steal items? Farmers should be encouraged to at all times be cognizant of potential targets and conceal them as thieves have many strategies when identifying potential targets. Altering daily routines can act as a deterrent, making movements unpredictable to thieves. Asking for the credentials of any unknown or unexpected visitors, although risky, is also important.

They must also be advised that precaution must be taken when leaving large equipment such as tractors in the fields by removing keys, locking doors if possible and never leaving equipment within easy access to roads. Use of a lockable fuel cap is also

recommended as reports have been made of fuel theft from parked farm vehicles.

In 2007 at The Public Consultation on Food Prices held in Trinidad, the Association of Professional Agricultural Scientists of Trinidad and Tobago (APASTT) presented a novel proposal designed primarily to secure food production and also mitigate praedial larceny (Isaac, Ganpat & Joseph 2017). The proposal included the establishment of Designated Agricultural Zones. These zones would be provided with the necessary physical infrastructure: roads, electricity, and water. There would be controlled access to these zones.

From the outset, the zones must be established with inputs from the Police Service regarding security concerns; there must be close collaboration between the entities in the zone and the Police Service. Other key suggestions included: all vehicles transporting produce out of the zones must have the appropriate signage; all produce leaving the zones must be labeled; each zone must be mapped along with all relevant data to produce Geographical Information Systems (GIS). This system should be made available to the Police Service; the officers of the praedial larceny Squad would be provided with hand-held devices linked to the GIS. This would facilitate verification of information during stop and search exercises.

The Jamaican Government addressed the problem of praedial larceny by establishing a receipt book system which was used by farmers and agricultural traders to demonstrate legal proof of sale or purchase of agricultural products (Isaac, Ganpat & Joseph 2017). They also initiated a Praedial Larceny Public Education Program and Praedial Larceny Prevention Unit (PLPU) which aimed at increasing awareness about the unacceptable levels of praedial larceny and more recently the National Animal

Identification and Traceability System (NAITS). In addition, all persons involved in agricultural transactions have to register with the Rural Agricultural Development Authority (RADA) and Island Special Constabulary Force (ISCF) officers would be assigned to various parishes to preside over the implementation of the praedial larceny program. Further, there are plans to tag animals using biometric tags and RFID biometric markers and also the use of drone technology to track down perpetrators..

In St. Lucia, the Agriculture Ministry attempted to address the praedial larceny problem by implementing a “four-pronged strategy”. The first arm of this strategy involved the enactment of stronger legislation to deal with praedial larceny and to regulate the sale of agricultural produce. The second arm aimed at a national identification program and licensing of bona fide farmers and traders. Thirdly, the government set upon working with Local Government and sought funding through the European Union Social Recovery Program to re-introduce the Rural Constabulary. Finally, the government embarked on an intensive public sensitization program to educate the public on the seriousness of praedial larceny.

In Antigua and Barbuda where “the agriculture sector continues to lose millions of dollars through the effects of praedial larceny” (Hilson Baptiste, Minister of Agriculture, Lands, Housing and the Environment, Antigua/Barbuda, 2009), similar strategies were employed. The Government also introduced an agricultural receipt book system and farmers were encouraged to register their business or form cooperatives. A public education program was also established to increase awareness of praedial larceny and to educate farmers to use prompt action in detecting and reporting praedial larceny.

Conclusion

Praedial larceny is a scourge for food producers. It is a very complex and serious problem affecting the agricultural sector in the Caribbean. It encompasses a wide range of agricultural produce and equipment and the complexity lies in the fact that it is very difficult to prove that a crime has been committed. In the past, the problem of praedial larceny was not given the attention it deserved, but as the global problem of food availability and food security comes to the forefront, more attention is being paid to this problem. In the Caribbean, the issue is rising to the fore because of the serious impact on the livelihood of farmers; especially small farmers who make up the vast majority of the farming population. Farmers are now being shown more respect and their voices are being heard- they are saying that they are fed up with this problem, and some national governments are implementing initiatives. Steps are currently being made to mitigate this serious crime; evidenced by the various programs being set up by some governments in the region to reduce the prevalence of praedial larceny.

In developing countries, food producers generally struggle to keep afloat; producing food under disadvantageous conditions and with limited or no support from the government, trade barriers and unfair regulations. Most farmers barely make ends meet, far less generate profits which can be reinvested to move them further along the continuum to full commercial operation and better standards of living. It is in these circumstances that any theft of farm produce or equipment becomes a serious blow to farmers. Often what is lost could well have represented the profits of the enterprise. If it is a regular occurrence, it has the effect of causing the farmer to become impoverished; unable to feed his family, frustrates movement away from subsistence to commercial farming and

make more profits to have a better standard of living.

Praedial larcenists do an injustice to farmers. While farmers can do somethings at the farm level to restrict the level of praedial larceny, actions at the higher governmental level can be more effective.

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