

THE INTERSECTION OF RURAL CRIMINOLOGY AND FOOD SECURITY: THE IMPACT OF ORGANISED CRIMINAL GROUPS IN THE RURAL SPACE

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Farming feeds the population, but the escalating victimisation of farmers globally by organised criminal groups is leading to impacts across a range of UN Sustainable Development Goals having a significant effect on farmers and the wider population. Organised criminals are targeting critical physical equipment such as tractors, tools, and other machinery. As criminal entrepreneurs, they are able to identify business opportunities such as the counterfeiting of agrochemicals and disruption of food chain security, and the provision of forced labour for agricultural work. As organised criminals find their way into the rural space, there are potential implications on the aspirations set out in the 2030 Agenda for Sustainable Development, leading to additional issues affecting poverty, zero hunger, health and wellbeing, decent working conditions, and peace and justice. This chapter provides an exploratory commentary on how organised criminality impacts agriculture, farming, and food security globally in light of the Sustainable Development Goals.

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PRESEK RURALNE KRIMINOLOGIJE IN VARNOSTI HRANE: VPLIV ORGANIZIRANIH KRIMINALNIH ZDRUŽB NA PODEŽELJU

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Kmetovanje hrani prebivalstvo, vendar naraščajoča viktimizacija kmetov po vsem svetu v rokah organiziranih kriminalnih združb negativno vpliva na vrsto ciljev trajnostnega razvoja Združenih narodov, ki pomembno vplivajo na kmete in širše prebivalstvo. Člani organiziranih kriminalnih združb ciljajo na kritično fizično opremo, kot so traktorji, orodja in drugi stroji. Kot kriminalni podjetniki lahko prepoznajo poslovne priložnosti, kot so ponarejanje agrokemikalij in prekinitev varnosti prehranjevalne verige ter zagotavljanje prisilnega dela za kmetijska dela. Ne glede na to, kako se organizirana kriminaliteta znajde na podeželju, ima potencialne posledice, na cilje določene v Agendi za trajnostni razvoj do leta 2030, ki vodijo do dodatnih problemov, ki vplivajo na revščino, lakoto, zdravje in dobro počutje, dostojne delovne razmere ter mir in pravičnost. To poglavje ponuja razlago o tem, kako organizirana kriminaliteta vpliva na kmetijstvo, kmetovanje in prehransko varnost po vsem svetu v luči ciljev trajnostnega razvoja.



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1 Introduction

“As the world faces cascading and interlinked global crises and conflicts, the aspirations set out in the 2030 Agenda for Sustainable Development are in jeopardy.” (Antonio Guterres, Secretary-General of the United Nations cited in United Nations, 2022, p. 2)

The factors that Mr. Guterres refers to in the Sustainable Development Goals Report (United Nations, 2022) are highly relevant to the underlying issues affecting global food security. To begin with, the COVID-19 pandemic created significant problems in the production and processing of food, particularly in the horticultural sector, due to the inability of skilled workers to travel for picking seasons throughout Europe and beyond (United Nations, 2020). Furthermore, the climate change emergency is creating challenges within agriculture due to increased occurrences of extreme weather events affecting crop growers and animal farmers alike, from flood to extreme, prolonged drought (EPA, 2023). Additionally, the presence of conflict creates instability within affected countries and beyond. The Ukraine war is currently having a direct impact on the European agri-food sector through increased feed and food prices, fuel prices, and fertiliser costs (Bodnar & Schuler, 2022). The rise in input costs – fuel and fertiliser – affects farmers across Europe and beyond, leading to increased expenses. Despite the rise in food prices, these increases have likely not been passed on to farmers, meaning output prices have not risen in line with input prices, thus creating a deficit in farming income. Lastly, and linked to many of these aspects, is the impact of global economic inflation and the global cost of living crisis on farming communities. This leads to inflationary costs being pushed back onto producers by retailers and the erosion of wages within the agricultural sector.

These factors are interlinked in the effect they have on farmers globally. Furthermore, they present opportunities for Organised Criminal Groups (hereinafter OCGs) to capitalise on their ‘business’ skills, regardless of the commodity being traded. Moreover, the activity of OCGs in the rural space worldwide exacerbates the existing stressors that farmers face daily.

The multitude of stressors compounded by criminality arguably creates challenges to food security not experienced since post-World War II, and these challenges, in turn, lead to unforeseen negative implications for achieving the United Nations

Sustainable Development Goals (hereinafter SDGs) by 2030. The 2023 SDG Report has already indicated that progress towards these goals is weak and insufficient (United Nations, 2023). It is now crucial to focus on rural criminality, the impact of OCGs in rural areas, and the broader implications this has across various SDGs. This chapter provides commentary on how OCG activities affect agriculture and global food security, exploring the potential impact of criminality on achieving goals relating to poverty, hunger, gender equality, and reduced inequalities among others.

2 Rural Criminology and Food Security

Crime in the rural space, particularly within agriculture, is often overlooked or perceived as less problematic compared to urban crime. This perception is largely driven by the persistent myth of the ‘rural idyll’, the belief that rural areas are safe and devoid of crime – a concept rooted in the idea of *gemeinschaft* (Smith & Byrne, 2018; Tönnies, 1887/1955). In the United Kingdom (UK), rural areas are often romanticised as places of green rolling hills, peaceful pastures, and a slower pace of life (Mingay, 1989). While this may hold true for some rural areas, rural life can be challenging, isolated, and demanding. With inadequate service provision, limited transport infrastructure, and few recreational opportunities, rural life diverges significantly from the idealised portrayals seen in media and entertainment (Glendinning et al., 2003; Pateman, 2011).

2.1 Defining Rural Crime

While crime is deeply entrenched within rural areas in the UK and globally (Qi, 2022; Smith, 2019), defining rural crime proves surprisingly challenging. In the UK, there is no nationally agreed-upon definition of rural crime, which complicates the interpretation and analysis of any generated data. A National Rural Crime Unit was established in April 2023 in the UK (Bovingdon, 2023), however, its impact on the definition and policing of rural crime will require time to assess. The absence of a clear definition of rural crime contributes to a lack of coordination and cooperation in policing across different police forces, and even within individual forces where frontline officers may define rural crime differently from the overarching force strategy (Smith, 2018).

Furthermore, similar issues arise when considering the non-police data available in the UK, where many rely on a geographic definition – crime occurring in rural areas – rather than defining it by crime type. Two examples are the National Rural Crime Survey (National Rural Crime Network, 2015, 2018) and the NFU Mutual Annual Rural Crime Report (NFU Mutual, 2023). The National Rural Crime Survey, conducted by the National Rural Crime Network (NRCN), was administered nationally to rural residents and workers in 2015 and repeated in 2018. While these surveys indicated that crime in rural areas costs up to £800 million (National Rural Crime Network, 2015), they included offences such as speeding, littering, and drunk driving-arguably not exclusively rural crimes.

Similar issues exist in the NFU Mutual Rural Crime Report (2023), which illustrates the costs of rural crime in the UK over several years (see Figure 1). While these costs are significant, they do not provide a comprehensive picture. The costs presented by NFU Mutual relate specifically to insurance claims. However, research indicates that many farmers (60%) do not report crimes to their insurers (Smith & Byrne, 2017). Given that NFU Mutual insures approximately 75% of farmers across the UK, it becomes evident how these figures can inflate the costs presented.

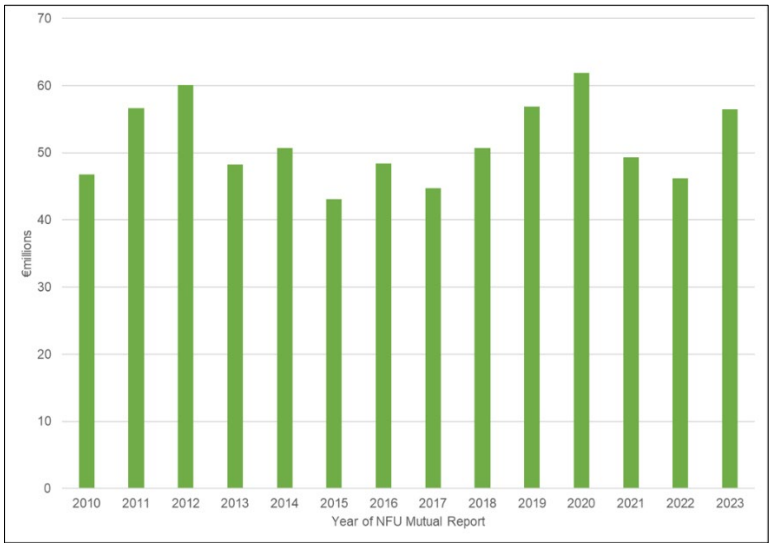


Figure 1: Insurance Claims Costs Due to Rural Crime as Reported by NFU Mutual, 2010–2023

Source: NFU Mutual (2010–2023).

In this chapter, we adopt a focused definition of rural crime, specifically exploring agricultural crime- incidents that impact the functionality of pastoral, agricultural, and aquaculture industries (IREC, 2019). A wide range of crimes directly affects the agricultural sector, each with implications for the viability and continuity of the farming business (Smith, 2014).

Figure 2 provides an overview of crimes affecting the agricultural sector, thereby influencing the potential food security of the UK and beyond. These crimes encompass traditional rural crimes such as livestock and tractor theft (Victim Support, n.d). However, the UK agricultural sector is increasingly targeted by various other criminal activities, including fraud, cybercrime, labour exploitation, and threats or acts of violence (Bernik et al., 2022; Byrne & Smith, 2016; Cross, 2020; Smith, 2020).



Figure 2: Agricultural Crimes that Affect Food Security

Despite the rural space being perceived as a crime-free idyll, criminals have identified these areas as easy targets due to low levels of crime prevention, poor guardianship, low police presence, and high-value targets. These conditions make rural areas

attractive to criminals, as illustrated through routine activity theory (Cohen & Felson, 1979).

2.2 Implications of Agricultural Crime

Farmers in the UK are increasingly facing agricultural crime and its first-order consequences (see Figure 3). In addition to balancing other stressors identified in past research – such as weather, finance, government bureaucracy, lack of time, and machinery breakdown (Kearney et al., 2014; Olson & Schellenberg, 1986; Walker et al., 1986) – UK farmers are also grappling with the aftermath of the UK leaving the European Union. This includes the end of the free movement of people, increased trade barriers, and the conclusion of Common Agricultural Policy subsidies (Hubbard et al., 2018). Brexit may have contributed to a reduction in the number of farms from 217,000 in June 2017 to 191,000 holdings in June 2022, and a decrease of 0.7% in the agricultural workforce, despite a 3.4% increase in productivity in the farming sector (Department for Environment, Food & Rural Affairs, 2023a), a balance that cannot be sustained indefinitely. When agricultural crime is added to the mix of stressors in the rural space, the resilience of the farming community is likely pushed to its limits. This issue is further exacerbated by global crises such as the Ukraine War, global inflation, and the associated cost of living crisis, which pose significant challenges for farmers while simultaneously creating opportunities for criminal activity.

As noted, farmers contend with a wide array of daily stressors, many of which are routine and ongoing aspects of farming that become normalised within the farming community – such as weather, finance, and time pressures. These factors contribute to the ontological security of farmers; the ability to balance competing pressures to maintain a stable mental state due to the predictability of life events (Giddens, 1991). This sense of ontological security enables farmers to sustain business continuity despite these challenges. However, introducing an unexpected and acute stressor like crime can upset this balance of ontological security, potentially leading to unforeseen impacts on business continuity. Studies by Smith (2020, 2022) have consistently shown that agricultural crime significantly affects farmers' mental health. Given this, the mental health implications of crime for farmers can have far-reaching effects on food security.

Victimisation has a much broader impact on farmers and productivity than the initial act of criminality and its immediate repercussions (Smith, 2020). As depicted in Figure 3, the second and third-order effects of crime for farmers extend beyond the immediate consequences, causing both short-term and long-term issues. These subsequent effects create an environment where farmers struggle to manage their work, make decisions, and fulfil contracts. While victimisation itself is traumatic, it is the actions and their consequences in the months following (i.e., long-term) that can severely affect farming businesses to the extent that farmers contemplate leaving the sector altogether.

As a result of victimisation, farmers experience issues directly related to their mental health: lack of sleep, flashbacks of the incident, change in alcohol use, paranoia, and suicidal tendencies (Smith, 2020). The consequences of such an assault on mental health can lead to broader issues that directly affect farm business continuity and, therefore, food security. These effects may include poor decision-making regarding crime prevention, contract compliance, and health and safety. If farmers do not seek help or guidance on crime prevention, they could be re-victimised, multiplying the effects of the initial criminal experience. Neglecting the issues arising from victimisation exacerbates challenges to farmers' ontological security, significantly impacting their mental equilibrium and potentially prompting them to leave the sector or, in extreme cases, leading to suicide (Booth et al., 2000; Jones et al., 2018). The direct impact of victimisation on farmers can greatly reduce the agricultural workforce, thereby jeopardising the UK farming community's ability to produce sufficient food to maintain food security.

Furthermore, the policing of crime in rural areas in the UK is not strategically uniform across the country (Farming Online, 2019). Many rural police forces simply lack the funding to adequately resource policing in rural areas compared to urban areas, despite national organisations calling on the UK Government to provide equitable funding for forces dealing with rural demands (National Rural Crime Network, 2016). This directly impacts the level of confidence rural communities have in the police's ability to address rural crime, thereby affecting the likelihood of crimes being reported. This sets off a vicious cycle where underreporting prevents police awareness of issues in rural communities, leading to inadequate allocation of resources (Smith, 2019).

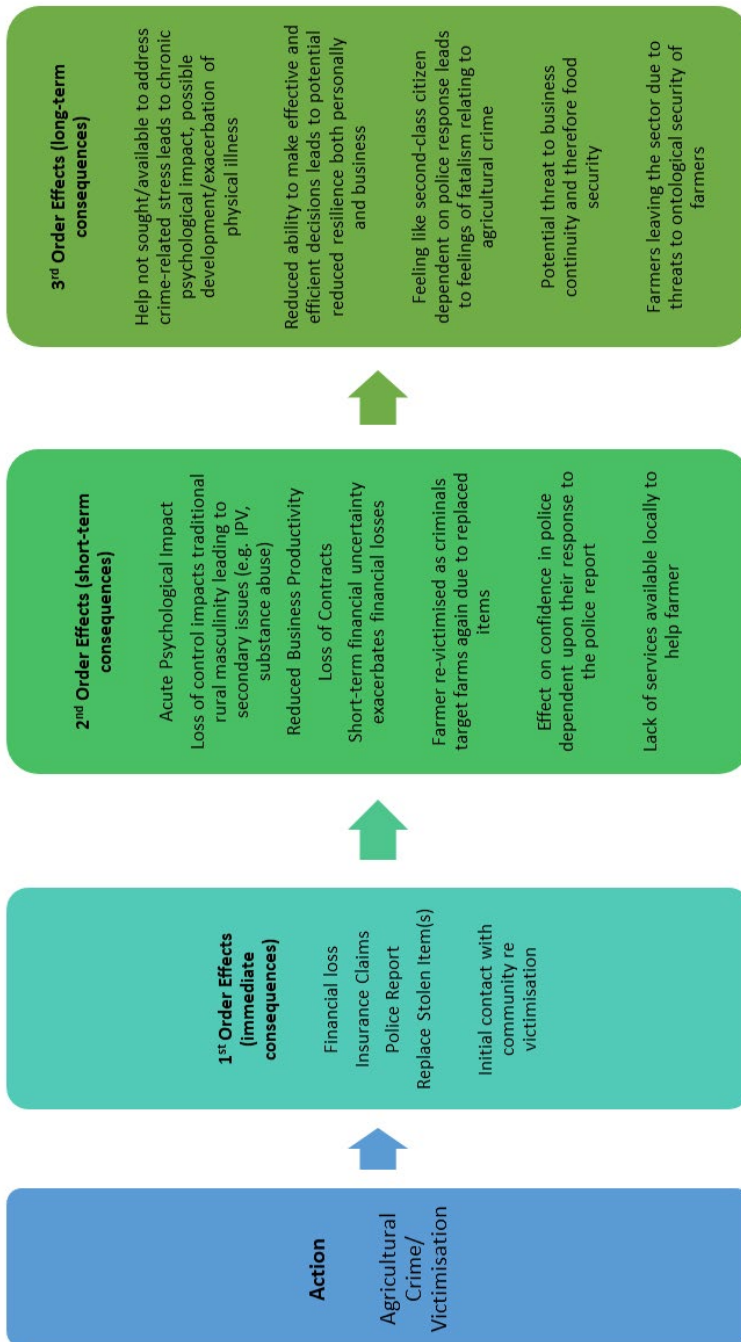


Figure 3: Second- and Third-Order Effects of Agricultural Crime

3 Organised Criminal Groups, Rural Space, and Food Security

As demonstrated in the previous section, the impact of crime on the farming community is significant. However, this potential crisis is further exacerbated by the incursion of various criminal elements into rural areas. Historically, crimes affecting farming have been opportunistic (Main, 2001; Quinn, 2015). However, contemporary rural crime is increasingly orchestrated and perpetrated by OCGs, who are determined to achieve their goals at almost any cost.

When people think of organised criminals, they typically envision images of the mafia and their exploits. However, it was through agriculture that the mafia initially established their enterprises (Lerner & Past, 2020). According to the United Nations (2023) Sustainable Development Goals Report, global financial markets often impose interest rates on Global South countries that are up to eight times higher than those countries in the Global North. This disparity may facilitate the expansion of OCGs into the agricultural sector, enabling them to control food production and distribution. This mirrors the historical emergence of the Sicilian mafia in regional Italy during the 1870s. At that time, substantial profits from citrus fruits, coupled with weak governance in Italian principalities, widespread local poverty, and low levels of trust, led producers to hire the mafia for private protection and as intermediaries between suppliers, exporters, and buyers (Dimico et al., 2017). From these origins, the “Agromafie” have entrenched themselves in the broader farm-to-fork supply chain in Italy, as noted by Eurispes (2019), illustrating how criminal enterprises can effectively integrate into the food industry.

This situation extends far beyond the origins of the mafia and now spans globally, with many OCGs operating within the food chain sector (Rizzuti, 2022). OCGs are increasingly penetrating the rural space, identifying business opportunities across the countryside. No longer limited to racketeering, they are expanding their operations internationally into the supply of new and used tractors and tractor parts, machinery and tools, livestock or meat, agrochemicals, rural cybercrime, and labour exploitation in the farming sector (Bernik et al., 2022; Byrne & Smith, 2016; Cross, 2020; Smith, 2020). Essentially, if there is a market gap, they exploit it due to the agile nature of their operations and their adaptability (Wilson, 2020), becoming the ‘invisible hand’ (Mittermaier, 2020) of criminal enterprise, thriving on the dynamic changes in global supply and demand to maximise their collective utility.

These criminals are acutely aware of the impact that global events can have on commodity prices. The war in Ukraine has created challenges for global food security, including the cessation of Ukrainian exports, labour shortages in the agricultural sector, restrictions on fertilisers, and uncertainty about future harvests (Hassen & El Bilali, 2022). While cooperation between Russian and Ukrainian OCGs has become strained due to the war (Global Initiative against Transnational Organized Crime, 2023), it is arguable that this situation has opened up new opportunities for other criminal enterprises to capitalise on the vacuum left behind.

While organised crime has long been present in the agri-food chain at a global level through food adulteration, mislabelling of goods, and exploitation of labour (Rizzuti, 2022), the impact of their activities can be felt much wider, particularly at the farm level. The actions of these criminals affect farmers both directly and indirectly across their entire business. Directly, farmers become the victim of criminality through these offenders targeting their farms for tractors, livestock, machinery and tools – anything that there is a market for elsewhere. It is sometimes the case that those on the ground will be provided with a ‘shopping list’ of items that are in demand from the ‘customers’ that exist elsewhere in the world (Cann, 2014).

Furthermore, farmers are impacted by the theft and counterfeiting of agrochemicals, including fertilisers influenced by OCG activity, alongside the current issue of GPS theft occurring in the UK (NFU Mutual, 2023). All these criminal activities have indirect impacts on farmers beyond the initial act. As depicted in Figure 3, crime significantly influences farmers in terms of their mental health and how they manage victimisation. This, in turn, affects the way that farmers make decisions about their business. Studies by FeldmanHall et al. (2015) and Porcelli and Delgado (2017) demonstrate that decision-making under stress reduces effectiveness and increases risk-taking. When a farmer's ontological security is challenged by acute shocks such as crime, their ability to make efficient and effective decisions about their business can be compromised. This can have devastating effects on the wider farming community, leading to farm businesses failing, farmers leaving the sector, and even suicides, especially at a time when food security is a key priority for the UK government. Therefore, the disruption caused by OCG activity in rural areas to domestic food production and its impact on food security cannot be underestimated.

It is essential to globally recognise the inextricable link between farming, food security, and organised criminality, and to provide support to farmers from key stakeholders such as governments, police, the legal system, insurers, and mental health service providers to ensure the sector's future. Without this support, progress towards achieving the United Nations Sustainable Development Goals could be delayed or even entirely undermined by the direct actions of OCGs in rural areas.

4 Organised Criminal Groups and the Challenge to Sustainable Development Goals

Until the mid-1980s, many political leaders and public opinion across Europe, with the exception of Italy, felt that they did not have a problem with organised criminal activity (Paoli & Fijnaut, 2006). Gottschalk (2010) argued that OCGs should be considered in the same way as other non-criminal organisations and that their influence has been growing over the past few decades, as has their influence on legal enterprises (Bell, 1999). Indeed, as far back as 1975, it was recognised that organised crime was: “the extension of legitimate market activities into areas normally...beyond existing limits of law – for the pursuit of profit in response to a latent illicit demand” (Smith, 1975).

This quote reflects the business model of current organised criminal groups, as they operate effectively within the traditional economic paradigm of supply and demand (Gale, 1955). If there is a shortage of a particular commodity and sufficient demand for it, the price will increase. This is often where OCGs come into play, providing a marketplace for the commodity in demand, whether it be agrochemicals, animal feed, vegetables, or even people. Given the challenges posed by climate change, this illegal entrepreneurship could extend to the supply of items such as solar panels, wildfire protection, standing timber, and even water. Considering this, the nexus between organised agricultural crime, food security, and SDGs becomes clear when one considers the impact OCGs can have on food production and farm continuity through market control and direct criminal activities (Figure 4).

Much of the focus on farming, food security, and the SDGs tends to centre around SDG2 (Zero Hunger) (Giller et al., 2021; United Nations, n.d.). However, it is arguable that the impact of OCGs on farming and food security extends beyond consideration of zero hunger. Undoubtedly, commodity price rises threaten to push

people into hunger and poverty (Hassen & El Bilali, 2022). This global issue also creates increased opportunities for OCGs to expand their operations into rural areas. Of the seventeen SDGs established by the United Nations, there is an argument that OCGs may impact at least nine through their criminal activities within the agricultural sector (Figure 5).

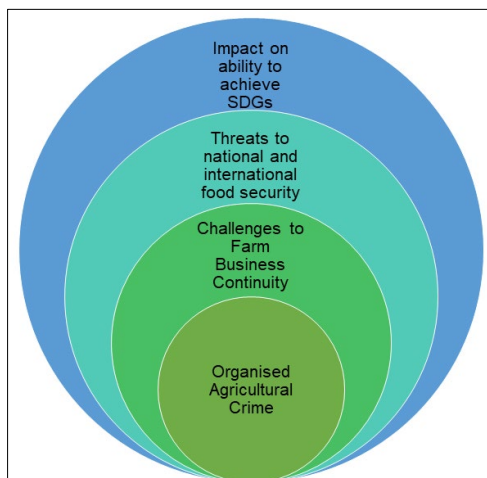


Figure 4: Organised Agricultural Crime-Food Security – SDG Challenge

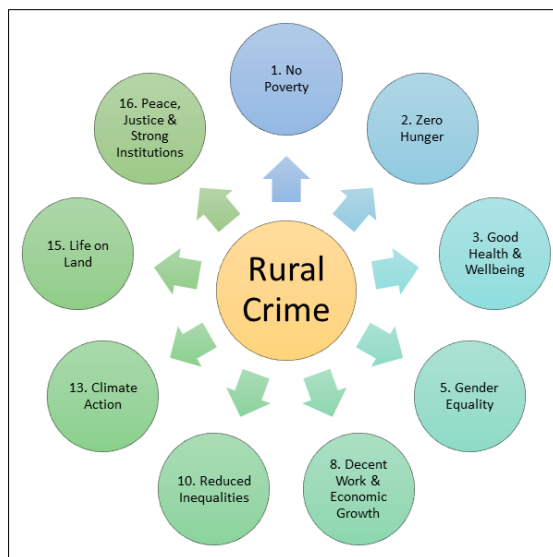


Figure 5: SDGs Impacted by Rural Crime

Whether it's through controlling the supply of agricultural commodities, stealing tractors, livestock, agrochemicals, exploiting labour, or other critical assets, the impact of organised crime on the farming community is profound. To illustrate the effects on the SDGs as noted in Figure 5 above, the following scenarios highlight the often overlapping impacts that OCGs can have on the agricultural sector, global food security, and the ability to achieve the SDGs.

4.1 Sustainable Development Goal 1: No Poverty

Being a victim of crime often forces farmers to spend money they may not have readily available to replace damaged or stolen items, thereby reducing their business income. This financial strain is exacerbated by the global decline in prices of commodities such as rice and maize, further diminishing farmers' incomes and potentially compelling them to leave the sector (van den Ban, 2002). Additionally, OCG activities influence the prices of agricultural inputs, leading to increased costs for essential items like agrochemicals and animal feed, adding to financial pressures.

While increasing productivity is recognised to alleviate poverty (Hussain & Hanjra, 2004), the theft of key assets critical to agricultural productivity poses a significant hurdle for victimised farmers in achieving this goal in the short term. Moreover, the longer-term repercussions of such criminal activity, as depicted in Figure 3, may diminish farmers' resilience to boost productivity even after replacing stolen assets. Furthermore, prolonged productivity losses could adversely affect farm labourers, potentially leading to job losses and increasing rural poverty among agricultural workers in the area. Rural poverty is not solely confined to the Global South; it is also a stark reality in the UK, as recently underscored by Shucksmith et al. (2023).

When considering SDG1, it is evident that crime can lead to farmers being unable to maintain their land tenure, forcing them to relinquish their property. This financial strain on UK farmers is compounded by changes in government subsidies. Following the UK's departure from the European Union (EU), the offer of government payments of up to £100,000 (€116,523) to assist farmers seeking to exit the industry may be appealing to those struggling to recover after victimisation (UK Government, 2022).

4.2 Sustainable Development Goal 2: Zero Hunger

Achieving SDG2 relies heavily on ensuring food security and improved nutrition through sustainable agriculture. However, OCGs targeting the farming community directly challenge this goal by disrupting food production and continuity through theft of essential equipment or agricultural inputs. The impact of criminality, compounded by second- and third-order effects of victimisation (Figure 3), may force farmers to alter their operation, struggling with psychological repercussions, or even leave the farming sector entirely. Consequently, there could be fewer farmers, potentially replaced by larger operators reducing competition and consumer choice. This scenario arguably diminishes sectoral resilience and often leads to price increases, contributing to food insecurity as people may struggle to afford produce.

All of this contributes to a decrease in food production and unfulfilled contracts. If criminal activities drive either a reduction in farm outputs or a decrease in the number of farmers, it results in a shortfall of fresh, nutritious food available for national and international distribution. This reduction in the production of fruits, vegetables, cereals, grains, and meat has multifaceted implications for dietary nutrition. It ranges from a lack of availability of nutritious food globally to an increased dependence on ultra-processed foods that lack the essential nutritional quality needed for a healthy diet.

4.3 Sustainable Development Goal 3: Good Health and Wellbeing

The reduction in food availability from farmers leads to worsening global dietary outcomes, impacting SDG2. Additionally, there are broader health implications for the global population indirectly affected by the actions of OCGs in the rural space. A decrease in the global farming community diminishes the availability of high-quality, nutritious, fresh food. Given that good food is essential to good health (Centers for Disease Control and Prevention, 2022; James et al., 1997), and good health is crucial for sustainable development (United Nations Development Programme, n.d.), any disruption in the availability of nutritious food due to lower agricultural outputs challenges the goal of promoting good health.

Furthermore, the impact of crime on farmers' mental health has been well-documented (Smith, 2020, 2022). While SDG 3.4 aims to promote mental health and well-being, achieving this goal becomes challenging when farmers are repeatedly targeted by OCGs. Arguably, the increasing victimisation of farming communities by OCGs could lead more farmers to leave the sector due to the adverse impact on farmer's mental health and well-being. Without seeking help, the potential for chronic poor mental health to develop among these farmers is compounded.

The link between poor mental health and physical health has long been recognised (Aarons et al., 2008; Vaillant, 1979). This suggests that farmers struggling with crime-related mental health issues may experience additional physical symptoms if they do not seek help. Furthermore, research indicates that chronic mental and physical ill-health can render households more vulnerable to food insecurity (Tarasuk et al., 2013), implying that farming families may face a direct risk of food insecurity due to the indirect effects of criminal activity.

4.4 Sustainable Development Goal 5: Gender Equality

Globally, women farmers are more likely to be subsistence farmers (those farming crops or animals for their own use) or smallholders (small-scale farmers), carrying out their household roles in addition to their farming responsibilities. Criminal victimisation leaves them unable to feed their families due to the inability to harvest crops or the theft of livestock. These women farmers have reduced access to finances and markets to recover from victimisation, are less likely to own land or livestock, and less likely to access extension advice (Odiwuor, 2022). These factors combine to make female farmers less likely to recover from criminal activity.

This situation affects female farmers in both the Global South and the Global North (Duckett, n.d.), but it is magnified in the Global South, where almost 80 per cent of food produced in Asia and Africa comes from smallholder farms (Odiwuor, 2022). For example, Smith (2020) reported that women farmers in the UK are more likely than their male counterparts to experience mental health issues following victimisation, such as feelings of being watched, flashbacks, loss of confidence, and nightmares.

4.5 Sustainable Development Goal 8: Decent Work and Economic Growth

Human trafficking and labour exploitation within the agricultural sector are widespread and pervasive issues, recognised not only in the Global South but also in the Global North, including Europe (Byrne & Smith, 2016, 2023; Howard & Forin, 2019; Scaturro, 2021). In fact, some researchers state that slavery and forced labour are more prevalent today than at any point in the past (Shilling et al., 2021).

The reliance of the agricultural sector in Europe on seasonal workers has enabled OCGs to focus much of their criminal activity on providing labour within the European agri-horticultural sector. Those exploited are often vulnerable with no alternative options or may be duped into working in agriculture under the promise of different employment (Byrne & Smith, 2016).

4.6 Sustainable Development Goal 10: Reduced Inequalities

Victimisation leaves some farmers, especially smallholders, unable to recover from the crime event due to a lack of access to financing or insufficient support from advisors. As noted above with SDG5, these barriers to farming can also be barriers to recovery. This situation tends to create further inequalities in communities between the poor and wealthy, particularly in the Global South, where many farms may be subsistence-based only (Debere, 2023). In addition, criminality in rural locations can exacerbate existing issues of social and geographic isolation within rural spaces because of the wider impacts that these criminal groups have on their victims.

4.7 Sustainable Development Goal 13: Climate Action

Due to the economic implications of victimisation, farmers with reduced access to financial support may have to replace stolen tractor with older, more affordable vehicles. While this approach aligns with the replace and reuse ideal, such older tractors may well be less environmentally friendly due to their emissions and may lack the equipment for precision farming without additional costly systems (Higgins et al., 2023). This would impact the efficient targeting of inputs, increasing surface run-off, erosion, and potential watercourse contamination (Soane & van Ouwerkerk,

1995). Criminality may also lead some farmers to change the way they work where possible (Neubacher et al., 2024). For example, they may reduce lone working or keep all equipment in one place to better guard their property or due to the effects of crime on mental health and feelings of being watched (Smith, 2020).

4.8 Sustainable Development Goal 15: Life on Land

Farmers are the custodians of the land (Wilson et al., 2013), and they aim to leave it in a better state than they initially received it. The effects of criminality are wide-reaching and can significantly impact this key tenet of farming. As noted, stress affects effective and efficient decision-making (FeldmanHall, et al., 2015; Porcelli & Delgado, 2017), with crime being recognised as a key stressor both in the short-term and the long-term. Considering the impact that crime can have on farmers' ontological security and their capacity to manage various daily stressors and acute shocks, the ability of farmers to make quality decisions related to environmental land management may be reduced through victimisation.

This is despite the best efforts of national governments to encourage and support farmers to engage with various environmental schemes. For example, in the UK, the Environmental Land Management schemes developed by the Department for Environment, Food & Rural Affairs (2023b) encourage sustainable farming and biodiverse habitat creation. Without farmers making effective decisions on the management of their land and the biodiversity it supports, ecosystems and biodiversity globally will be severely reduced. This may also lead to a change in the rural landscape through land-use change from farming towards increased rewilding, tree-planting, or development.

4.9 Sustainable Development Goal 16: Peace, Justice and Strong Institutions

The effect of crime, particularly that of OCGs, significantly impacts access to justice within the farming community. Confidence in the police is consistently low in rural areas, affecting the likelihood of future crimes being reported (Smith, 2019). Farmers often feel like second-class citizens regarding how the police address crime in rural areas (Smith, 2018).

Police forces in the UK have made some efforts to address this issue by creating Rural Crime Teams (Lee, 2023). However, these teams do not exist in every police force with rural areas within their jurisdiction, and their staffing is often insufficient to police large rural areas effectively. This inadequacy is primarily due to issues related to the allocation of police funding from the central government, with rural forces fighting for a fair share (Dorset Police & Crime Commissioner David Sidwick, n.d.). The response farmers receive when reporting crimes often leads them to feel they have limited access to justice (Finnerty, 2017). Moreover, farmers experience ongoing inequality in how crime is considered, tackled, and acknowledged across the wider legal system between rural and urban communities.

5 Conclusion

This exploration of the impact that OCGs have on farming and food security highlights some of the key issues faced by the global farming community, particularly the ease with which OCGs infiltrate rural spaces. Farmers manage their daily occupational stressors to grow the food required both nationally and internationally, making strides towards achieving SDG2: Zero Hunger.

However, the actions of these criminal groups can have far-reaching and devastating effects on farmers worldwide. These impacts go beyond what is initially apparent, challenging the viability of farm businesses and threatening national and international food security, thereby hindering the achievement of the SDGs. This chapter argues that the influence of OCGs on the agricultural sector extends across many more SDGs than initially thought, affecting gender equality, climate action, good health and well-being, access to justice, and more.

This work highlights the essential need for the United Nations and national governments globally to address the actions of OCGs within the agricultural sector. This should be achieved by undermining their business strategies through ensuring that rural spaces are adequately policed, that police forces recognise the increasingly organised nature of agricultural and rural crime, and that organised criminal activities are disrupted through effective intelligence sharing. Additionally, a participatory approach should be taken to tackle the impact of OCGs on food security through increased engagement with farming communities, academia, and policymakers. Such an approach would enable parties at all levels to have a clear understanding of the

crime affecting rural areas, its impact on farm business viability, and the danger it poses to global food security.

References

- Aarons, G. A., Monn, A. R., Leslie, L. K., Garland, A., Lugo, L., Hough, R. L., & Brown, S. A. (2009). The association of mental and physical health problems in high-risk adolescents: A longitudinal study. *Journal of Adolescent Health, 43*(3), 260–267. doi:10.1016/j.jadohealth.2008.01.013
- Bell, R. E. (1999). Prosecuting the money launderers who act for organised crime. *Journal of Money Laundering Control, 3*(2), 104–112. doi:10.1108/eb027218
- Bernik, I., Prisljan, K., & Mihelič, A. (2022). Country life in the digital era: Comparison of technology use and cybercrime victimization between residents of rural and urban environments in Slovenia. *Sustainability, 14*(21), 14487. doi:10.3390/su142114487
- Bodnar, K., & Schuler, T. (2022). The surge in euro area food inflation and the impact of the Russia-Ukraine war. *European Central Bank Economic Bulletin, 4*. https://www.ecb.europa.eu/press/economic-bulletin/focus/2022/html/ecb.ebbox202204_06~4e32074619.en.html
- Booth, N., Briscoe, M., & Powell, R. (2000). Suicide in the farming community: Methods used and contact with health services. *Occupational Environmental Medicine, 57*(9), 642–644. doi:10.1136/oem.57-9-642
- Bovingdon, M. (3. 8. 2023). New national unit leads fightback against farm thefts. *Farmers Weekly*. <https://www.fwi.co.uk/news/crime/new-national-unit-leads-fightback-against-farm-thefts>
- Byrne, R., & Smith, K. (2016). Modern slavery and agriculture. In J. F. Donnermeyer (Ed.), *The Routledge international handbook of rural criminology* (pp. 147–165). Routledge.
- Byrne, R., & Smith, K. (2023). Modern slavery in agrarian settings. In R. Hale, & A. Harkness (Eds.), *Rural victims of crime: Representations, realities and responses* (pp. 117–131). Routledge.
- Cann, R. (2014). Round ‘em up. *Police Monthly*. http://www.police.nsw.gov.au/_data/assets/pdf_file/0004/318685/PM_Nov14_p16-17.pdf
- Centers for Disease Control and Prevention. (2022). *Poor Nutrition*. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/nutrition.htm>
- Cohen, L., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review, 44*(4), 588–608. doi:10.2307/2094589
- Cross, C. (2020). Preventing fraud victimisation in rural areas. In A. Harkness (Ed.) *Rural crime prevention: Theory, tactics and techniques* (pp. 165–178). Routledge.
- Debere, S. (2023). *The urgent need for new development models in the agrarian South: Five key take-outs from the ODS Lecture 2023*. Oxford Department of International Development. <https://www.qeh.ox.ac.uk/blog/urgent-need-new-development-models-agrarian-south-five-key-take-outs-ods-lecture-2023#:~:text=Subsistence%20farming%20remains%20central%20to,and%20society%20depend%20on%20it.&text=Models%20of%20capitalist%20development%20depend%20on%20gendered%20inequality>
- Department for Environment, Food & Rural Affairs. (2023a). *Agriculture in the United Kingdom 2022*. <https://www.gov.uk/government/statistics/agriculture-in-the-united-kingdom-2022>
- Department for Environment, Food & Rural Affairs. (2023b). *Government to pay more to farmers who protect and enhance the environment*. Available at: <https://www.gov.uk/government/news/government-to-pay-more-to-farmers-who-protect-and-enhance-the-environment>

- Dimico, A., Isopi, A., & Olsson, O. (2017). Origins of the Sicilian Mafia: The market for lemons. *The Journal of Economic History*, 77(4), 1083–1115. doi:10.1017/S002205071700078X
- Dorset Police & Crime Commissioner David Sidwick. (n.d.). *Fight to get a fair share of the police funding formula*. https://www.dorset.pcc.police.uk/delivering-the-police-and-crime-plan/2017-2021-police-and-crime-plan/transforming-for-the-future/*-fight-for-dorset-to-get-a-fair-share-of-the-police-funding-formula/
- Duckett, M. E. (n.d.). Empowering female farmers to feed the world. *National Geographic*. <https://www.nationalgeographic.com/culture/article/partner-content-empowering-female-farmers>
- EPA. (2023). *Climate change impacts on agriculture and food supply*. Environmental Protection Agency. <https://www.epa.gov/climateimpacts/climate-change-impacts-agriculture-and-food-supply>
- Eurispes. (2019). *Agromafie. 6th Report on agro-food crimes in Italy*. <https://eurispes.eu/en/report-research/agromafie-6th-report-on-agro-food-crimes-in-italy-2019/>
- Farming Online. (2019). *A third of rural police forces lack a dedicated strategy to combat £45m rural crime*. <https://farming.co.uk/news/a-third-of-rural-police-forces-lack-a-dedicated-strategy-to-combat-45m-rural-crime>
- FeldmanHall, O., Raio, C. M., Kubota, J. T., Seiler, M. G., & Phelps, E. A. (2015). The effects of social context and acute stress on decision making under uncertainty. *Psychological Science*, 26(12), 1918–1926. doi:10.1177/0956797615605807
- Finnerty, C. (14.8.2017) Farm organisation calls for tougher sentences for criminals. *Agriland*. <https://www.agriland.co.uk/farming-news/farm-organisation-calls-for-tougher-sentences-for-criminals/>
- Gale, D. (1955). The law of supply and demand. *Mathematica Scandinavica*, 3, 155–169. doi:10.7146/math.scand.a-10436
- Giddens, A. (1991). *Modernity and self-identity: self and society in the late modern age*. Stanford University Press.
- Giller, K. E., Delaune, T., Silva, J. V., Descheemaeker, K., van de Ven, G., Schut, A. G. T., van Wijk, M., Hammond, J., Hochman, Z., Taulya, G., Chikowo, R., Narayanan, S., Kishore, A., Bresciani, F., Teixeira, H. M., Andersson, J. A., & van Ittersum, M. K. (2021). The future of farming: Who will produce our food? *Food Security*, 13(5), 1073–1099. doi:10.1007/s12571-021-01184-6
- Glendinning, A., Nuttall, M., Hendry, L., Kloep, M., & Wood, S. (2003). Rural communities and well-being: a good place to grow up? *The Sociological Review*, 51(1), 129–156. doi:10.1111/1467-954X.00411
- Global Initiative against Transnational Organized Crime. (2023). *New front lines: Organized criminal economies in Ukraine in 2022*. <https://globalinitiative.net/analysis/organized-criminal-economies-ukraine-2022/#:~:text=With%20the%20war%2C%20collaboration%20between,contested%20and%20dynamic%20front%20line>
- Gottschalk, P. (2010). Entrepreneurship in organised crime. *International Journal of Entrepreneurship and Small Business*, 9(3), 293–307. doi:10.1504/IJESB.2010.031923
- Hassen, T. B., & El Bilali, H. (2022). Impacts of the Russia-Ukraine war on global food security: towards more sustainable and resilient food systems? *Foods*, 11(15), 2301. doi:10.3390/foods11152301
- Higgins, V., van der Velden, D., Bechtet, N., Bryant, M., Battersby, J., Belle, M., & Klerk, L. (2023). Deliberative assembling: Tinkering and farmer agency in precision agriculture implementation. *Journal of Rural Studies*, 100, 103023. doi:10.1016/j.jrurstud.2023.103023
- Howard, N., & Forin, R. (2019). Migrant workers, ‘modern slavery’ and the politics of representation in Italian tomato production. *Economy and Society*, 48(4), 579–601. doi:10.1080/03085147.2019.1672426

- Hubbard, C., Davis, J., Feng, S., Harvey, D., Liddon, A., Moxey, A., Ojo, M., Patton, M., Philipiddis, G., Scott, C., Shrestha, S., & Wallace, M. (2018). Brexit: How will United Kingdom agriculture fare? *EuroChoices*, 17(2), 19-26. doi:10.1111/1746-692X.12199
- Hussain, I., & Hanjra, M.A. (2004). Irrigation and poverty alleviation: A review of the empirical evidence. *Irrigation and Drainage*, 53(1), 1-15. doi:10.1002/ird.114
- IREC. (2019). *Reducing the impact of rural crime in NSW*. https://irec.org.au/wp-content/uploads/FN202_48_ReducingTheImpact.pdf
- James, W. P. T., Nelson, M., Ralph, A., & Leather, S. (1997). Socioeconomic determinants of health: The contribution of nutrition to inequalities in health. *British Medical Journal*, 1997, 314. doi:10.1136/bmj.314.7093.1545
- Jones, M. S., Reed, D. B., & Hunt, M. L. (2018). Suicide: An unrecognized epidemic among farmers. *Workplace Health & Safety*, 66(9), 464. doi:10.1177/2165079918784055
- Kearney, G. D., Rafferty, A. P., Hendricks, L. R., Allen, D. L., & Tutor-Marcom, R. (2014). A cross-sectional study of stressors among farmers in eastern North Carolina. *North Carolina Medical Journal*, 75(6), 384-392. doi:10.18043/ncm.75.6.384
- Lee, S. (4.9.2023). National rural crime action week is back! *Countryside Alliance*. <https://www.countryside-alliance.org/resources/news/national-rural-crime-action-week-is-back>
- Lerner, G. F., & Past, E. (2020). Toxi fruits: tomatoes, migration, and the new Italian slavery. *Journal of Modern Italian Studies*, 25(5), 592-619. doi:10.1080/1354571X.2020.1800264
- Main, G. L. (2001). *Peoples of a spacious land: Families and cultures in colonial New England*. Harvard University Press.
- Mingay, G. E. (1989). *The rural idyll*. Routledge.
- Mittermaier, K. (2020). *The hand behind the invisible hand: Dogmatic and pragmatic views on free markets and the state of economic theory*. Bristol University Press
- National Rural Crime Network. (2015). *National rural crime survey: The true cost of crime in rural areas*. <http://www.nationalruralcrimenetwork.net/research/internal/national-rural-crimes-survey-2015/>
- National Rural Crime Network. (2016). *Fair funding for rural policing*. <https://www.nationalruralcrimenetwork.net/content/uploads/2016/07/Fair-Funding-for-Rural-Policing.pdf>
- National Rural Crime Network. (2018). *National rural crime survey: Living on the edge*. <https://www.nationalruralcrimenetwork.net/research/internal/2018survey/>
- Neubacher, F., Kissoly, L. D., Faße, A., & Grote, U. (2024) "You sleep with your eyes open": Understanding rural crime and its implications for community wellbeing. *Journal of Rural Studies*, 106, 103213. doi:10.1016/j.jrurstud.2024.103213
- NFU Mutual. (2010). *Rural crime report 2010*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2011). *Rural crime report 2011*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2012). *Rural crime report 2012*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2013). *Rural crime report 2013*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2014). *Rural crime report 2014*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2015). *Rural crime report 2015*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2016). *Rural crime report 2016*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2017). *Rural crime report 2017*. The National Farmers Union Mutual Insurance Society Limited.

- NFU Mutual. (2018). *Rural crime report 2018*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2019). *Rural crime report 2019*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2020). *Rural crime report 2020*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2021). *Rural crime report 2021*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2022). *Rural crime report 2022*. The National Farmers Union Mutual Insurance Society Limited.
- NFU Mutual. (2023). *Rural crime report 2023*. The National Farmers Union Mutual Insurance Society Limited.
- Odiwuor, F. (2022). *Women smallholder farmers: What is the missing link for the food system in Africa?* <https://www.wilsoncenter.org/blog-post/women-smallholder-farmers>
- Olson, K. R., & Schellenberg, R. P. (1986). Farm stressors. *American Journal of Community Psychology*, *14*, 555–569. doi:10.1007/BF00935358
- Paoli, L., & Fijnaut, C. (2006). Organised crime and its control policies. *European Journal of Crime, Criminal Law and Criminal Justice*, *14*(3), 307–327. doi:10.1163/157181706778526496
- Pateman, T. (2011). Rural and urban areas: comparing lives using rural/urban classifications. *Regional Trends*, *43*(1), 11–86. doi:10.1057/rt.2011.2
- Porcelli, A. J., & Delgado, M. R. (2017). Stress and decision making: effects on valuation, learning, and risk-taking. *Current Opinion in Behavioural Sciences*, *14*, 33–39. doi:10.1016/j.cobeha.2016.11.015
- Qi, Z. (2022) Going global: The challenges of studying rural crime worldwide. In R.A. Weisheit, J. Peterson, & A. Pytlarz (Eds.), *Research methods for rural criminologists* (pp. 207–220). Routledge.
- Quinn, T. (2015). *Shooting's strangest days: Extraordinary but true stories from 200 years of shooting*. Portico.
- Rizzuti, A. (2022). Organised food crime: an analysis of the involvements of organised crime groups in the food sector in England and Italy. *Crime, Law and Social Change*, *78*(5), 463–482. doi:10.1007/s10611-021-09975-w
- Scaturro, R. (2021). Modern slavery made in Italy – Causes and consequences of labour exploitation in the Italian agricultural sector. *Journal of Illicit Economies and Development*, *3*(2), 181–189. doi:10.31389/jied.95
- Shilling, H.-J., Wiedmann, T., & Malik, A. (2021). Modern slavery footprints in global supply chains. *Journal of Industrial Ecology*, *25*(6), 1518–1528. doi:10.1111/jiec.13169
- Shucksmith, M., Glass, J., Chapman, P., & Atterton, J. (2023). *Rural poverty today: Experiences of social exclusion in rural Britain*. Bristol University Press.
- Smith, D. C. (1975). *The Mafia mystique*. Basic Books.
- Smith, K. (2014). Crime prevention as part of the business plan for rural start-ups. In *Proceedings of the 12th Rural entrepreneurship conference rural entrepreneurship: Farm, Festival, Food or Fibre Optics?* Harper Adams University. http://cdn.harper-adams.ac.uk/document/page/153_Kreseda-Smith---Rural-Crime-Prevention.pdf
- Smith, K. (2018). *Behavioural science and farm crime prevention decision making: understanding the behavioural culture of farmers in England and Wales* (Doctoral thesis). Harper Adams University.
- Smith, K. (2019). The emergence of ungoverned space in the British countryside. *International Journal of Rural Law and Policy*, *9*(2), 6555. doi:10.5130/ijrlp.2.2019.6555
- Smith, K. (2020). Desolation in the countryside: How agricultural crime impacts the mental health of British farmers. *Journal of Rural Studies*, *80*, 522–531. doi:10.1016/j.jrurstud.2020.10.037
- Smith, K. (2022). Piling on the pressure: crime and stress in British farming. *International Journal of Rural Criminology*, *6*(2), 197–222. doi:10.18061/ijrc.v6i2.8754
- Smith, K., & Byrne, R. (2017). Farm crime in England and Wales: A preliminary scoping study examining farmer attitudes. *International Journal of Rural Criminology*, *3*(2), 191–223. doi:10.18061/1811/81047

- Smith, K., & Byrne, R. (2018). Reimagining rural crime in England: A historical perspective. *International Journal of Rural Criminology*, 4(1), 66–85. doi:10.18061/1811/86152
- Soane, B. D., & van Ouwerkerk, C. (1995). Implications of soil compaction in crop production for the quality of the environment. *Soil and Tillage Research*, 35(1-2), 5–22. doi:10.1016/0167-1987(95)00475-8
- Tarasuk, V., Mitchell, A., McLaren, L., & McIntyre, L. (2013). Chronic physical and mental health conditions among adults may increase vulnerability to household food insecurity. *The Journal of Nutrition*, 143(11), 1785–1793. doi:10.3945/jn.113.178483
- Tönnies, F. (1887/1955). *Gemeinschaft und Gesellschaft* [Community and society]. Michigan State University Press.
- UK Government. (2022). *Government commits to support farmers who wish to leave the industry*. <https://www.gov.uk/government/news/government-commits-to-support-farmers-who-wish-to-leave-the-industry>
- United Nations. (2020). *Policy brief: The impact of COVID-19 on food security and nutrition*. <https://unsdg.un.org/sites/default/files/2020-06/SG-Policy-Brief-on-COVID-Impact-on-Food-Security.pdf>
- United Nations. (2022). *The Sustainable Development Goals report 2022*. <https://unstats.un.org/sdgs/report/2022/>
- United Nations. (2023). *The Sustainable Development Goals report 2023: Special edition*. <https://unstats.un.org/sdgs/report/2023/>
- United Nations. (n.d.). *Food security and nutrition and sustainable agriculture*. <https://sdgs.un.org/topics/food-security-and-nutrition-and-sustainable-agriculture>
- United Nations Development Programme. (n.d.). *Goal 3: Good health and well-being*. https://www.undp.org/sustainable-development-goals/good-health?gclid=Cj0KCQjwi7GnBhDXARIsAFLvH4kQlKafzsjx_5hjafMP4LuJ-d6rcyVyMBj59WW8Hvhx3BtEqb2tzkaAkk5EALw_wcB
- Vaillant, G. E. (1979). Natural history of male psychological health – Effects of mental health on physical health. *The New England Journal of Medicine*, 301(23), 1249–1254. doi:10.1056/NEJM197912063012302
- Van den Ban, A. W. (2002). Poverty alleviation among farmers: the role of knowledge. In C. Leeuwis, & R. Pyburn (Eds.), *W/heelbarrows full of frogs: social learning in rural resource management: international research and reflections* (pp. 183–196). Koninklijke Van Gorcum.
- Victim Support (n.d.). *Rural crime*. <https://www.victimsupport.org.uk/crime-info/types-crime/rural-crime/#:~:text=Instead%2C%20rural%20crime%20is%20a,Fuel%20theft>
- Walker, J. L., Walker, L. S., & MacLennan, P. M. (1986). An informal look at farm stress. *Psychological Reports*, 59(2), 427–430. doi:10.2307/584486
- Wilson, K. (2020). *The evolution of serious and organised crime: The diversifying nature of criminal operations in the digital age*. <https://shoc.rusi.org/blog/the-evolution-of-serious-and-organised-crime-the-diversifying-nature-of-criminal-operations-in-the-digital-age/>
- Wilson, P., Harper, N., & Darling, R. (2013). Explaining variation in farm and farm business performance in respect to farmer behavioural segmentation analysis: Implications for land use policies. *Land Use Policy*, 30(1), 147–156. doi:10.1016/j.landusepol.2012.03.006