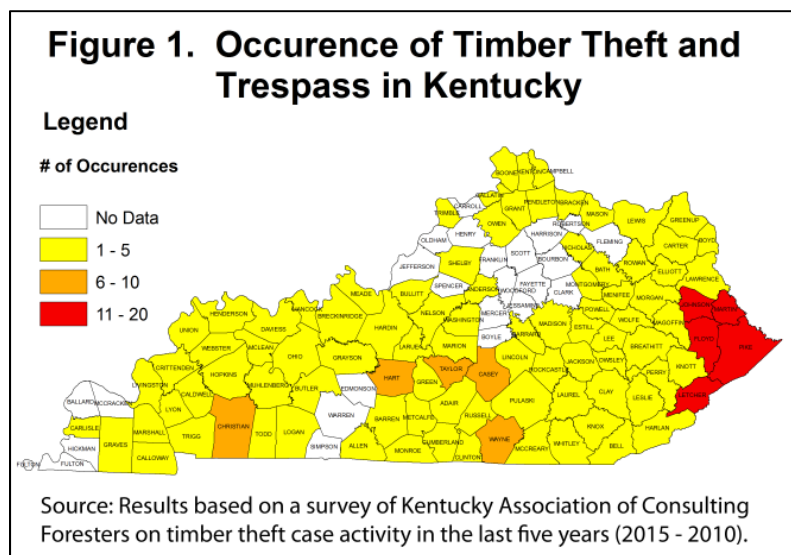


2016 Report on Timber Theft and Trespass in Kentucky¹

This report was developed to provide up-to-date, credible, and verifiable information on timber theft and trespass issues in Kentucky. Specifically this report provides information on the occurrence and characteristics of the unauthorized harvesting of timber in Kentucky. Survey information from Kentucky’s consulting foresters was used to provide quantifiable information on individual cases of unauthorized cutting. Timber theft research by Virginia Tech University and U.S. Forest Service data was used to determine the overall magnitude of the problem relative to total timber supplies. Analysis indicates that there is regional variability in unauthorized harvesting across the state with an elevated level of occurrence in far eastern Kentucky (Floyd, Johnson, Letcher, Martin, and Pike counties). Statewide, the total amount of unauthorized harvesting relative to the total volume of timber harvested is relatively low, our analysis indicating less than 1 percent (0.35 percent) of the total volume harvested. This overall impact does not diminish the monetary loss by individuals who are victims of timber theft on their property. Based on data from Kentucky’s consulting foresters the typical case of unauthorized timber cutting averages 74 trees on 11 acres, comprising nearly 14,000 board feet of timber worth approximately \$4,500. However, the data also indicates a wide range of unauthorized harvesting from 1 to 5,000 trees, with a reported maximum of 250 acres. The size of unauthorized harvests varied across the state over the last five years with individual cases being more severe in eastern Kentucky. The majority of the time (62 percent), the unauthorized cutting occurred where boundaries were not clearly marked or where boundaries were misrepresented by landowners or their representatives. The remaining 38 percent resulted from a clear case of theft and boundary violation. It is rare for timber theft cases to result in criminal prosecutions in Kentucky. Of the cases where outcomes are known, 78 percent were resolved, either outside of court or through civil litigation. Sixty percent of the time the rightful owner of the timber received two or three times the damages including the value of the timber and fees for expert witnesses and legal representation.

Distribution of Unauthorized Cutting Cases

Figure 1 shows the relative occurrence of unauthorized harvesting as determined from cases worked by Kentucky’s consulting foresters. These data clearly show that unauthorized cutting has the potential to occur throughout Kentucky with several eastern counties subject to a higher frequency of unauthorized cutting. This is consistent with anecdotal reporting of a higher than normal occurrence of unauthorized harvesting in the Appalachians (ex. Radspinner, B. 2002. Timber theft on the increase in the Appalachian region. Forest Operations Review. Security Alert 02-Q-2. Winter: 57-8.).



¹ This report authored by Dr. Jeff Stringer, Mr. Chad Niman, and Mr. Billy Thomas, Univ. of Kentucky, Department of Forestry, was requested by the Kentucky Division of Forestry and Kentucky Forest Industries Association. Assistance was provided by the Kentucky Association of Consulting Foresters.

It is important to note that these data cannot be used to determine the total amount of unauthorized harvesting, as consulting foresters are not involved in all cases. Other methods must be used to estimate this (see “Magnitude of Unauthorized Harvest” section below).

How Timber Theft and Trespass Occurs

Unauthorized cutting of timber occurs either intentionally (timber theft) or unintentionally, referred to as timber trespass (see FOR-109 referenced below). Timber theft occurs when a boundary line is knowingly crossed to steal timber. This can occur on a large scale covering acres where all valuable trees are cut or on a limited scale where only a few trees near a boundary line are removed. Timber trespass, on the other hand, typically occurs through one of two circumstances. The first is when boundaries are not marked and/or are unclear, leading to an unintentional cutting. The second is when the boundary is misrepresented or unknown by the landowner or their representative leading to unintentional cutting of adjacent timber by the logger. Data from consulting foresters in Table 1 provides the distribution of unauthorized cutting among these different types of occurrence.

Occurrence Type	Percentage
Property Line Unknown or Disputed	41
Landowner Misrepresents Boundary	21
Logger Intentionally Crosses Boundary	29
Logger Harvests Entire Absentee Landowner Property	10

The table shows that 62 percent of the unauthorized cutting over the last several years occurred because the boundary was not clear or the boundary was misrepresented. For example, there can be surveys or deeds that are contradictory, boundaries that have been incorrectly marked or designated, or an unmarked boundary that is difficult to follow. This indicates that generating documentation for a harvest or even marking boundaries may not prevent all cases of unauthorized cutting. The remaining 39 percent are clearly timber theft with intent to steal, 10 percent being the most blatant where a logger sets up to specifically steal an entire tract of timber. The data in Table 1 indicates that there can be a number of reasons for unauthorized harvesting and both landowners and loggers can be at fault.

Magnitude of Unauthorized Harvest

Because there is no formal reporting mechanism for timber theft or trespass, determining the magnitude of these problems is difficult. Anecdotal information varies widely. Some individuals from industry indicate that there is little problem with stolen timber while reports from others indicate that timber theft is a substantial problem. To provide unbiased insight into this issue we used data from a Virginia Tech University study on timber theft from a 20 county Appalachian area involving West Virginia, Virginia, Tennessee and four counties in Kentucky. We used information from this study in combination with U.S. Forest Service Timber Product Output data from this area to estimate the percentage of the total timber supply that was contaminated with wood from unauthorized harvesting (see “Information Sources” section).

Virginia Tech’s analysis indicated an estimated delivered log value in the 20 counties of approximately \$107 million dollars annually. It further indicated a total value of unauthorized harvest at \$300,000 equivalent to 0.28 percent of the delivered timber value in the 20 counties studied. The four counties in Kentucky were estimated to have an unauthorized harvesting rate of 0.35 percent, corresponding to an approximate \$60,000 annual dollar loss in those counties. Tennessee had the highest unauthorized harvesting rate, averaging 0.86 percent, followed by Virginia (0.63 percent), and West Virginia (0.17 percent). Table 2 summarizes the Appalachian and Kentucky estimates for total annual timber volume harvested, value of stolen timber, and percent of the total timber supply from unauthorized sources.

Table 2. Percent timber value associated with stolen timber for 20 counties in Appalachia.	
Total annual delivered value of timber produced in all twenty counties included in the Baker study	\$107,323,905
Annual estimated timber value lost to timber theft from All Twenty Counties included in the Baker study	\$300,000
% of the timber value lost to timber theft	0.28 percent
KENTUCKY	
Total annual delivered value of timber produced in the four Kentucky counties included in the Baker study	\$17,135,429
Annual estimated timber value lost to timber theft from the four Kentucky counties included in the Baker study	\$60,000
% of the timber value lost to timber theft	0.35 percent
Other States - % of timber value composed of unauthorized harvest	
Tennessee	0.86 percent
Virginia	0.63 percent
West Virginia	0.17 percent

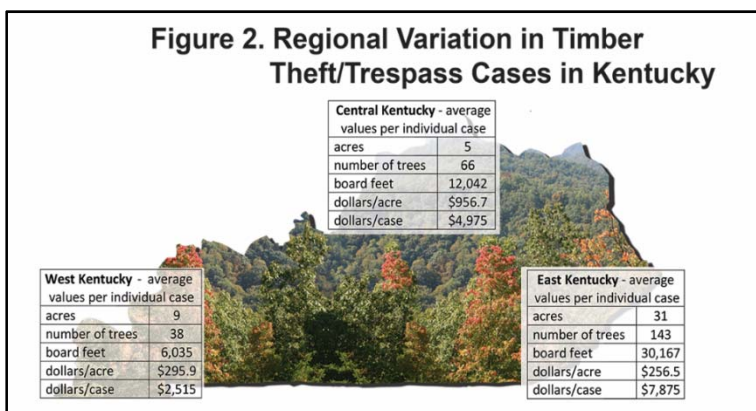
It is important to note that the estimate of unauthorized cutting found in the far eastern counties should not be assumed to be occurring throughout Kentucky, as this study shows that eastern Kentucky experiences higher rates of unauthorized cutting compared to other counties in Kentucky. Regardless, while the overall percent of stolen timber in the overall timber supply is low, the impact of unauthorized cutting for the landowners (particularly in the egregious cases) can be significant.

Individual Cases - Volume, Value and Characteristics

The survey of Kentucky’s consulting foresters provided statistics relative to the size of individual cases of unauthorized harvesting (Table 3). These data indicate a significant range in the size of individual unauthorized harvest cases, from 1 to 5,000 trees and a corresponding 0.01 acres to 250 acres. The statewide average size of an individual case was 74 trees on 11 acres. This average resulted in a board foot volume of 13,939 worth \$4,904 in stumpage. Stumpage is typically the value received by landowners when they sell timber. It’s generally 30 to 50 percent of the delivered mill price for logs, and reflects timber harvesting costs and logger profit.

Table 3. Number of trees and acres of individual cases of unauthorized harvest.			
	Average	Low	High
Number of Tree per Case	74	1	5,000
Acres per Case	11	0.01	250
Board Feet	13,939		
Value of Stumpage	\$4,904		

Figure 2 shows the average value by region across Kentucky. The figure provides average values per case of unauthorized harvesting. The highest loss occurs in eastern Kentucky with the average unauthorized cut occurring on 31 acres with 143 trees harvested. These 143 trees yielded 30,167 board feet of timber with a stumpage value of \$7,875, equivalent to a loss of \$256 per acre). Other regions experienced less acreage, trees, and value per case with western Kentucky having the smallest dollar loss, \$2,515 per case. Kentucky’s timber trespass law (KRS 364.130) indicates a potential



compensation of three times the stumpage value and damages. Three times the stumpage associated with Figure 2 indicates that landowners on average in eastern Kentucky could receive \$23,625 dollars per case just for timber damages, compared to approximately \$7,500 in western Kentucky due to the greater size (# of trees) of unauthorized harvest occurring in the eastern third of Kentucky. The potential dollar recovery by rightful owners for timber damages discussed above represents the average for each region. It is important to understand that there are cases that greatly exceed the average. For example, the individual case with the greatest acreage was in eastern Kentucky involving 250 acres. At \$265.50 dollars per acre of timber removed on average in an unauthorized harvest in that region, the total timber value in that case was \$66,375. Damages other than timber including professional fees can increase the total value of each case.

Consultation with Commonwealth and County attorneys indicates a significant problem in collecting evidence and successfully prosecuting felony timber theft. As a result, landowners are in adverse positions; they must seek compensation through their own means, including paying for expert witnesses (ex. surveyors, foresters) and legal fees as needed. The relatively low average stumpage value associated with many cases of unauthorized harvesting indicates that landowners may not find it palatable to pursue compensation. With larger cases of theft or trespass the monetary loss can be significant, warranting pursuit of compensation. However, in these cases it is not guaranteed that the victim of timber theft will recover the total compensation outlined in KRS 364.130.

According to information obtained from consulting foresters, on average 51 percent of landowners used a lawyer and 45 percent used a surveyor. It is important to note that landowners trespassed upon, landowners accused of trespassing, loggers and timber buyers all use the professional services of consultants, lawyers and surveyors to varying degrees. From the survey, consultants are hired by the landowner that has been trespassed upon approximately 84 percent of the time and by the accused trespasser 16 percent of the time. In some instances of unauthorized cutting the main concern of the rightful owner may not be timber value. Research data from U.S. Forest Service surveys of Kentucky woodland owners indicates that for many, the primary reason for woodland ownership is not timber. Recreation, aesthetics, and wildlife are weighted more heavily than timber, indicating that there are both tangible and intangible losses associated with unauthorized harvesting, particularly in cases of significant timber theft, that need to be considered when discussing this issue. Victims of unauthorized cutting represent credible sources of information on these factors (ex. www.timbertheft.org), which we fully recognize should be considered in deliberations on this issue, but are not documented in this report.

Outcomes of Unauthorized Harvest Cases - When looking at the legal and financial outcomes from trespass cases, the results vary. Due to the arm length relationship between the client and the consultant forester, the foresters do not always know the outcome of all the cases they work on. In general they are aware of the outcomes of approximately 50 percent of the cases and the data from these known cases is provided below in Table 4. Table 4 shows the legal outcomes of those cases, with the majority, 58 percent, being settled outside of court. Twenty-three percent of cases remain unresolved, including cases where no resolution will occur and those involving a lengthy time before a resolution can finally be met.

Settled Outside of Court	Settled in Court or via Arbitration	Trespass is Unresolved
58.4%	18.5%	23.0%

KRS 364.130, also known as the Kentucky timber trespass law, states that if trespass is determined, and no proper prior notification was given, the rightful owner of the timber shall receive 3 times the damages incurred. Damages include the stumpage value of the timber removed and fees for professional assistance if needed, typically consulting forester and surveying fees, and potentially fees for legal representation. Settlements and payments of damages vary.

Based on survey data from consulting foresters, Table 5 shows that triple damages were paid most often (48.9%) as stipulated in KRS 364.190, followed by single damages (31.9%) and double damages (17 percent).

Trespasser Paid Single Damages	Trespasser Paid Double Damages	Trespasser Paid Triple Damages	Trespasser Paid More Than Triple Damages
31.9%	17.0%	48.9%	0.02%

As stipulated in KRS 364.130 the landowner is also entitled to recovery of legal costs incurred as a result of the trespass. Table 6 summarizes the legal fee payment. These data on damage and legal fee payment indicate a wide range of outcomes. This variation can be expected given that the majority of cases are settled out of court and given the high degree of variability and fault associated with unauthorized cutting.

Trespasser Paid All Legal Fees For Landowner	Trespasser Paid Some Legal Fees For Landowner	Trespasser Paid No Legal Fees For Landowner
45.5%	31.8%	22.8%

Changes in the Occurrence of Timber Theft and Trespass in Kentucky – The data collected for this report do not allow for a direct determination of the rate of change in unauthorized cutting over a period of time. However, we did survey the consulting foresters for their expert opinion on perceived changes. The majority indicated that there had not been a significant change in the amount of timber/theft occurring today as compared to 10 years ago.

Conclusion - Opinion

This report indicates timber theft and trespass is occurring at some level throughout Kentucky. Our survey data shows that fault varies significantly from case to case. Fault can lay both with those responsible for harvesting timber as well as with landowners and their representatives who sell timber. While the total amount of unauthorized harvest is small compared to the overall timber supply, landowners subject to timber theft or trespass cannot expect significant assistance from law enforcement and the vast majority of cases require pursuit of damages through civil action. The victims of larger timber thefts can certainly have an interest in seeking compensation, though the upfront expenses can be significant.

In summary, unauthorized harvesting is a product of a number of different variables. Detailed analysis and understanding of timber theft and trespass would be required to generate effective and efficient mechanisms to reduce the incidences of unauthorized cutting. While many unauthorized harvests are not necessarily intentional, it is clear that criminal timber theft does occur and there are mechanisms that can be used to diminish these egregious acts, some of which have been enacted in other states. Moving forward, it will be important to develop solutions that do not impede legitimate logging operations and/or increase the cost of buying timber that can lead to a reduction in the viability of Kentucky’s forest industry. It would also reduce the value of standing timber and erode landowner’s timber value. Neither is a palatable outcome for the commonwealth and its citizens.

Information Sources

There are many anecdotal and observational accounts of timber loss however, credible and verifiable information is difficult to come by. This report was developed from the best quantifiable, objective economic data available including: industry survey research work conducted by Virginia Tech for a portion of the Appalachian region including counties in eastern Kentucky (An Analysis of Timber Trespass and Theft Issues in the Southern Appalachian Region, S. Baker, Virginia Tech University,

Master of Science, Forestry, 2003). We used this information along with U.S. Forest Service Timber Product Output data to determine the percentage of the total timber supply that is obtained from unauthorized harvests. Further we conducted a detailed survey of unauthorized timber cutting from members of the Kentucky Chapter of the Association of Consulting Foresters (www.kacf.org). We appreciate their interest and response to the survey which made this report possible. Our survey indicated that our forestry consultants in total handle an average of 60 cases over the entire state annually. The majority of the cases they work are for landowners that believe they have experienced an unauthorized cutting (84 percent). However, they also work for those that are accused of an unauthorized harvest. On this basis we believe that our forestry consultants represent an impartial and well-informed source of information on the topic. We believe that these sources of information and the data and inferences we provide in this report reasonably represent the economic aspects of the current timber theft and trespass situation. It is important to note that there are aspects of unauthorized cutting (as indicated previously) that extend beyond economics and are not included in this analysis.

Sources of Information from the University of Kentucky on Timber Trespass and Theft in Kentucky.

Timber Trespass and Theft. University of Kentucky, College of Agriculture, Food and Environment, Cooperative Extension Publication, FOR-109. www.ukforestry.org

Timber Trespass and Theft – Quick Review. University of Kentucky, College of Agriculture, Food and Environment, Cooperative Extension Publication, FORFS 08-03. www.ukforestry.org

Timber Trespass in Kentucky. Kentucky Woodlands Magazine 3(1). www.ukforestry.org