

# Non-native Invasive Plants and Real Estate Values: The Search for New Opportunities to Address Invasive Species Problems

by Matt Nespeca



*Water hyacinth infesting a lake.*

Invasive plants are not often considered by the same people who study real estate values. But what may sound like an odd combination of topics might actually be of benefit to both groups.

As professionals that deal with forests, grasslands, and wetlands, it is easier for many of us to understand the ecological landscape than it is to understand the societal fabric that drives the private land ownership in our respective neighborhoods. In a region like the Southeastern US, where over 80% of the land is privately owned, many of our natural areas and preserves are inholdings within a fragmented and sometimes changing complex of residential development, industrial forestland, investment tracts and family owners. The threat of economic, aesthetic and ecological damage due to invasive plants is not understood by many who control private lands in the Southeast, but the potential for losses on these properties (whether realized or unrealized) is severe.

There have been many situations where invasive plants have been shown to damage real estate values. In the western plains, leafy spurge infestations were found to reduce the property value of rangelands by as much as 83% (Weiser, 1997). In lake communities in the Southeast, extreme hydrilla infestations have been found to reduce lakefront property values (Bell, 2004; Driscoll, 1994). In southeastern for-

estlands, the cost of controlling kudzu often exceeds the land value (Britton, 2002), making kudzu control uneconomical for forest investment owners. Few studies have been done to analyze the real estate value losses associated with terrestrial invasive plants in the Southeast, but there is a general consensus among those who deal with invasive plants that property value losses due to invasive plants can be very real.

From 2002 to 2007, 27.4 million acres of forests in the US were sold in major forestland transactions, worth an estimated \$30 billion in land value (Bliss et al, 2008). In addition to the enormous transactions occurring within forest industry, smaller land parcels continue to be bought and sold within the rural urban interface and rural areas of the Southeast. These transactions almost always raise anxiety among conservation organizations and government agencies, mainly due to the continued threat of residential and commercial development as well as forest fragmentation within important ecoregions. The increased rate of land transactions does not always lead to land conversion; in fact, most of the large forestland transactions only represent changes in ownership, with the current land uses (such as forest production) being maintained by new and different ownership groups. Extensive land sales in the past 5 years have also led to important land conservation transactions, such as the International Paper land disposition in 2006, where conservation organizations

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such as The Nature Conservancy and The Conservation Fund were able to partner with state and federal agencies to protect 218,000 acres of important conservation targets throughout the Southeastern US.

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Several types of professionals are involved in real estate transactions, including but not limited to land appraisers, real estate agents, loan officers, land planners and environmental consultants. When a piece of land is put under contract by a potential buyer, there is usually a due diligence period where the buyer can hire professionals to determine if the property is suitable for the desired future use of the property, and if the property is worth the contract price.

With the residential home market, it is common for problem pests like Formosan termites to exist, and a buyer identifies the problem during the due diligence process. There are standardized procedures in the residential home market such as wood destroying organism reports, roof inspections, and home inspections that protect buyers and lenders. As with many residential home purchases, there are plenty of reasons that buyers and sellers of land would want to be informed about potential impacts to value.

Below are several scenarios that describe how destructive non-native invasive plants could be identified and addressed during the real estate due diligence process. Not all invasive plants are destructive from a utilization or an aesthetic viewpoint, so only the most obvious and damaging invasives may be addressed during real estate transactions.

### Land Appraisal Example

For most large real estate transactions, the buyer as well as the lender will require a land appraisal to validate the land investment. The following is an example of how a land appraiser could add value to a real estate transaction if they had knowledge of the impacts of invasives:

A potential buyer puts a 1000 acre tract of forestland under contract with a seller for \$2,000,000 (or \$2000/acre) with plans to own the property as a long-term investment.

In the purchase agreement, the buyer is given 60 days of due diligence to review the property before he must fully commit to the purchase.

The buyer contracts with a land appraiser to determine the value of the land to insure that he is getting the property for a fair market price.

The land appraiser does a comparable sales approach appraisal (one method to valuing land), and finds three comparable properties of similar size, proximity and features.

When reviewing the tract, the appraiser finds that 50 acres of the property is infested with kudzu. The three comparable properties do not have any kudzu infestations. Because the appraiser is aware of the major problems that kudzu can cause, she contacts a local invasive plant control contractor to determine what it would cost to rid the property of kudzu. The contractor determines that the 50 acre kudzu patch will take four years to control, and cost a total of \$75,000.

In her appraisal report, the appraiser provides all of the relevant information on the tract, including the support information on the location of the kudzu infestation and the potential costs associated with controlling it.

The potential buyer realizes that the property has a \$75,000 problem on it, and re-negotiates the contract with the seller to adjust the price of the property down by this amount, and can now use the savings to control the kudzu.

Appraisers collect a lot of different information to determine the value of a property. An appraiser does not have to be an invasive plant expert, but if he/she is able to recognize the signs of a serious invasive plant infestation, experts in invasive plant control can be brought in to evaluate the problem. The buyer can be protected more fully and have a more accurate assessment of the land value.

**What would happen if this kudzu patch was not addressed during the real estate transaction? How would this affect the buyer?**

If the buyer was left unaware of the kudzu problem, the losses over time could be extreme. The assumptions above state that the buyer was interested in “long-term investment” for this piece of land, and kudzu is capable of capturing acreage very quickly. For example, a kudzu vine can grow up to 60 feet a year. If a 50 acre kudzu patch was circular in shape, it would have a radius of 833 feet. If the kudzu patch is expanding by 60 feet in radius every year, this would mean that the 50 acre kudzu patch could potentially become a 148 acre patch in as few as ten years (assuming that there were no obstacles like rivers or closed canopy forests to slow it down). At the time of purchase, the kudzu patch

was assumed to have a control cost of \$75,000 (or \$1500 per acre). At the same per acre rate, ten years later, the 148 acre patch would have a control cost of \$222,000, which amounts to over 10% of the original purchase price! In addition to having an expensive kudzu problem, the property could also lose a significant amount of timber and timber growing capacity, as well as large impacts to the beauty and integrity of the land.

### Environmental Assessment Example

Using the same potential buyer, tract and price from the Land Appraisal example, let us consider the role of an environmental consultant. In many large land transactions, a buyer and lender will hire an environmental consultant to perform a Phase 1 Environmental Assessment. The purpose of this assessment is to determine if the property has specific environmental hazards on or near the property, like underground fuel storage tanks, dump sites, and dangerous materials that could impact the health of the property. In most large commercial real estate transactions, Phase 1 Environmental Assessments are required by the lender. Basically, when a bank backs a major land investment, they do not want any environmental surprises that could negatively affect the value of the property.

After putting the 1000 acre tract of land under contract, the buyer contracts with an environmental consultant to perform a Phase 1 Environmental Assessment.

The environmental consultant reviews courthouse records, property data, and data on the surrounding properties, and finds no records of environmental hazards.

The environmental consultant does a site inspection of the property. The 50 acre kudzu infestation is identified, and the patch is so dense that access is impossible.

The environmental consultant makes note of the large inaccessible kudzu infestation in the site inspection report.

In the report, the consultant could provide information on the detrimental effect that kudzu has on property. Currently, Phase 1 Environmental Assessments do not include invasive plants as environmental hazards, but it is easy to understand that large infestations of vines can hide environmental hazards. In fact, a pickup truck was lost for five nights after the driver swerved off an 18' embankment and landed 100' below in a deep ravine covered with kudzu. Although hundreds of people searched for five days, the noxious vine obscured the vehicle (*Wildland Weeds*, Winter 2008).

### What do we know about kudzu patches?

Kudzu was introduced to the US in the late 19<sup>th</sup> Century. In the 1930s, it was utilized extensively to reduce soil erosion in gullies and washed out areas. Back in the days before farmers and ranchers understood the importance of watershed protection, gullies were a common place for dumping waste, including old cars, tires, debris, etc. So now we must ask: "What is under that kudzu patch?" Not only are kudzu infestations difficult to access, they are also likely to be in areas where dumping may have occurred in past years.



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*Kudzu infestation.*

### A Need To Explore and Educate

As with any problem that exists within our environment, it is impossible to make headway until the persons most affected by the problem become aware and educated. In the above examples, kudzu is used as an example of a problem that could impact the value of a property. Many other invasive plants that we are battling (such as cogongrass, Japanese climbing fern, and phragmites) can have similar impacts on the existing and future value of land. Examples of land appraisers and environmental consultants were used above, but other real estate professionals such as bank officers, real estate agents, land planners, and land developers could also become more engaged in the process. As a professional invasive plant control community, what are some of the tactics that we can use to build awareness of invasive plants during the real estate due diligence process?

Work with land appraisers and forest management professionals to develop models that account for the negative potential impacts of invasive plants, including the estimated control costs, land use losses as well as the growth pattern of specific invasive species. We know that kudzu can grow 60 feet per year, but we would need to incorporate many other biological, environmental and economic factors into a modeling effort to capture the dynamics of kudzu encroachment. Models such as this could be used by appraisers to inform buyers during the due diligence process.

Engage the banking community to insure they are aware of the negative impacts of invasive species on future land uses. If a property is a high risk for invasive plant infestations, lenders should be concerned about the success of any major land investment. Standardized due diligence processes for invasive plants could be developed as optional add-ons to environmental assessments or appraisals to insure that a tract of land is a sound investment.

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Educate the land investment community on the problems with invasive plants. Current owners can become informed on the potential for devaluation of existing land investments when invasive plants are not addressed, and buyers can understand how to recognize major infestations that may require major control expenditures.

Work with invasive plant control contractors to develop methods for them to build their market presence with real estate professionals. Would contractors be willing to provide cost-effective inspections and quotes to potential land buyers in the same way that pest control operators provide termite treatment quotes for home purchasers?

As people who are concerned with invasive plants, we need to find methods to reach outside of our current professional circles to build new ways to address the problem. The one certainty about private land in our country is that it will transfer hands over time. Let's not ignore these opportunities to address invasive plant problems during the process.

*Matt Nespeca, Regional Sales and Technical Service Manager, Nufarm Americas,  
matt.nespeca@us.nufarm.com*

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