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The Bioenergy Farm Lease Part 2: Invasion Concerns

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As the bioenergy industry in the United States expands to meet increased demands for transportation fuel under the Renewable Fuel Standard and electrical power under state Renewable Portfolio Standards, farmers will seek the ability to grow dedicated, high yielding energy crops of a perennial nature on leased property. This is the second in a series of short articles intended to address a range of legal issues raised in a bioenergy farm lease. Our first article addressed the necessity of long-term leasing provisions. In this article, we address leasing provisions related to the potential invasiveness concerns associated with some bioenergy crops. Our third article will address leasing provisions related to the possibility of rhizome reclamation as an added element of perennial biomass production.

Introduction

Increasing energy demands, a desire to reduce reliance on fossil fuels, and a greater awareness of climate change have led both state and federal governments to pursue alternative energy sources.[1] Although biomass-derived energy has been researched in the United States and Europe for decades, recently renewed public and political interest has sparked explosive growth in the biofuel industry.[2] The current interest in biofuels has our nation's scientists looking for plant species capable of increased biomass production and exhibiting traits such as rapid growth, the ability to outcompete local vegetation, prolific seed production, increased tolerance to a variety of soils and climatic conditions, a strong resistance to plant pests and diseases, and the lack of predators in the recipient ecosystem.[3] These are traits shared by many invasive plant species[4], a fact that has some concerned about the risk of these crops becoming invasive within their targeted ecosystems.[5] The question is: how can the economic benefits of growing nonnative crops for bio-based energy be balanced by the concern of cultivating the next noxious weed or invasive plant?[6]

Discussions for resolving this quandary typically revolve around large-scale policy reforms.[7] Noticeably absent in the literature, however, is a consideration of the ability of landowners to protect their property from the risk of invasive species spread through private contracting. One such contract is the farm lease, which can be tailored to minimize the risk of an invasion; as approximately 40% of agricultural land in the U.S. is farmed by someone other than owner, the bioenergy farm lease is an important tool in the protection of agricultural landscapes.[8]

One may argue that if landowners are concerned about the spread of invasive species onto their property, they simply should not rent to tenants who intend to grow potentially invasive perennial energy crops. However, the benefits of such a relationship—including a long lease tenure[9]—may be too high for landowners to ignore. Implementation of carefully drafted written agreements can lower the risk of invasion, answering the question, at least for landowners, as to how to strike a proper balance between the economic benefits of growing crops for bio-based energy and the risk of cultivating a novel and potentially invasive plant species. Landowners should take care to negotiate leases that establish how to determine if an invasion has occurred, specify agronomic practices which reduce the risk of such an invasion, and articulate the responsibilities of the parties to remedy any invasive plants.

Model Lease Provisions

Establishing that an invasion has occurred : Bioenergy farm leases should include a term that stipulates when invasive species spread is considered to have occurred. A proper analysis of this issue will cover: who will determine whether invasion has occurred, when the determination will take place, and what parameters will determine whether or not an invasion has occurred.

In an ideal situation, a neutral third party will determine whether or not an invasion has occurred because other factors could incentivize a party to either ignore invasive species spread or to be too eager to find an invasion. Consider, for instance, a contract that requires a farmer to eradicate the entirety of his crop or engage in other costly control measures should invasion be found to have occurred. A farmer in this position would be hesitant to acknowledge such an invasion. On the other hand, a landowner seeking to terminate the lease for other reasons might have a similar bias. Accordingly, the contract should require that a third-party determine whether an invasion has occurred. This third party could be another local farmer or landowner, an extension agent, or, should farm leases of this type become widespread, a consulting agency could be created to make these determinations. The contract also should specify who will pay for the evaluation.

The contract should further determine when these evaluations will be made. As these leases will be multiyear agreements,[10] the lease could require that an invasion inspection be made on the date the lease is renewed each year. The date of the inspection could also relate to the agronomic properties of a specific plant; for instance, if the tenant farmer is growing *Miscanthus*, which develops shoots each spring[11] the inspection date could occur at a specified time in May.

The contract should also identify precisely what constitutes an invasion. Specificity is necessary because of the lack of consensus over terminological concepts within the field of invasion ecology[12] - the parties are unlikely to have a common conception of what constitutes an invasion, as even the scientific community struggles to agree.

Private contracting can override semantic disputes. The contract could define an invasion as an unapproved plant appearing outside of a specified area, or, rather, as the bioenergy crop appearing within a defined radius. The contract should also contain a temporal element -for instance, the farmer's responsibilities under the contract could terminate at the end of the lease term, or the farmer could have duties to the landowner which extend beyond the lease. The contract should clearly state what constitutes an invasion because the measures taken to avoid an invasion and the responsibilities of the parties once an invasion has occurred are dependent upon that conclusion.

Reducing the risk of invasion: Bioenergy farm leases should contain provisions intended to reduce the risk of invasion, such as an improved good husbandry clause or variety selection clauses. Standard form leases often contain language creating a duty for tenants to farm leased land in a manner consistent with a general standard of good husbandry. The precise words used to establish this standard often vary, as does the context in which the standard is created.[13] Alone, these common law conventions do not sufficiently protect landowners' interests. While tenants who allowed noxious weeds to grow on leased property have been found to have breached the covenant of good husbandry,[14] in finding tenants liable, the courts rely on the state and federal noxious weed lists.[15] Recent research suggests that invasive species are not well managed in the U.S. under existing noxious weed regimes[16]—thus to rely on a good husbandry clause to protect against invasive species spread is to rely on a faulty regulatory scheme. To protect their property, landowners would be better served by privately contracting their expectations regarding invasive species spread rather than resulting on a vague good husbandry clause and noxious weed regulations.

An improved good husbandry clause requiring specific conservation standards or methods better protects landowner interests by moving beyond common law convention. To this end, landowners should use

good husbandry clauses to establish the expectations they have regarding the possibility of and expected treatment for invasion. For instance, a clause could read:

> *The tenant will farm in accordance with the highest standards of good husbandry and will take all first-class farmer-like steps to ensure the conservation of the natural resources and the long-term productivity of the farm. This includes taking measures to protect against the possibility of invasion by the energy crop and pledging to take measures to eradicate the plant should such an invasion take place*.

As a starting point, clauses should incorporate the U.S. Department of Agriculture's recommendations regarding the prevention of invasion. For instance, the Natural Resources Conservation Service has put forth a set of guidelines for establishing *Miscanthus* stands so as to prevent unintentional spread[17] These recommendations include establishing and maintaining a minimum 25-foot setback or border around a Miscanthus stand to allow for monitoring and management of any spread, covering or otherwise containing vegetative planting material during transportation, and disposing of excess live planting material at the edges of fields, in field borders, in farm trash piles, or in landfills. Similar species specific recommendations should be incorporated into bioenergy farm leases to protect the landowner's interests and to clarify the tenant farmer's duties. Towards that end, the lease may also include a variety selection clause specifying the species and, if appropriate, the variety. For instance, should the tenant wish to grow *Miscanthus*, the contract could stipulate the farmer is only to grow the so-called Illinois clone on the property.

Responsibilities should an invasion occur: Just as a contract should define what constitutes invasion, a comprehensive lease should also define what constitutes eradication. While eradication is commonly understood to mean complete annihilation of a species within a given area[18] and is used by lawmakers in this way[19] for a species like *Miscanthus*, which develops elaborate, nutrient-rich root systems, complete annihilation may be neither feasible nor advisable. Studies have found, for instance, that, after one or two sequential herbicide treatments, *Miscanthus* plants, while not completely eradicated, did not reduce yields for glyphosate-resistant soybeans.[20] This data suggests two additional definitions of eradication that could be used in a bioenergy farm lease: first, a procedure-based definition, which defines eradication as a series of accepted protocols, and, second, a results-based definition, which would hold the farmer liable for further eradication procedures or damages should the field not be returned to a healthy, productive state (as distinct from a state of zero residual rhizomes) at the end of the lease tenure.

Once eradication is defined, bioenergy farm leases should articulate who will be responsible for seeing it through. There are a number of options available to landowners and farmers in this regard. The contract could stipulate that the tenant farmer must return the farm to the same condition as when they took possession. Or, the landowner and farmer could stipulate that the farmer will pay the landowner for the cost of eradication. Other alternatives include: placing the financial and physical responsibilities of eradication on the farmer entirely; an agreement among the parties to share the costs of eradication; or creation of an escrow account which the farmer pays into or surety bond to cover eradication and restoration costs.

The contract should also stipulate what is to happen after the eradication is complete. For instance, the lease could end at that time or the terms of the lease could be renegotiated. The options are several, but the take-away is singular: the parties to a farmland lease involving dedicated bioenergy crops should include an action plan in the event of invasion.

Conclusion

Landowners through more careful lease construction can take important steps to protect their property from potential invasive species spread and restoration costs. Because of the large amount of farmland in the U.S. that is leased, more detailed bioenergy farm leases could be a particularly powerful tool in

protecting agricultural landscapes. In order to effectively protect their interests, landowners should take care to include lease terms that establish a definition for invasion, outline a monitoring program to identify potential escaped plant populations at an early stage, and clearly articulate the responsibilities of the parties in the event of an invasion.

References

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[13] Cox, supra note 8.
[14]Keller v. Bolding, 678 N.W.2d 578 (N.D. 2004).
[15] Id.
[16] McCubbins et al., *supra* note 3.
[17]M. J. Williams and Joel Douglas, *Planting and Managing Giant Miscanthus as a Biomass Energy Crop*, prepared by the United States Department of Agriculture and the Natural Resources Conservation Service (July 2011).
[18] Merriam-Webster defines "eradicate" as "to do away with as completely as if by pulling up by the roots." MERRIAM-WEBSTER ONLINE DICTIONARY, http://www.merriam-webster.com/eradicate (last visited June 27, 2013).
[19]See, e.g., C.R.S. 35-5.5-103 (defining eradication as "reducing the reproductive success of a noxious weed species or specified noxious weed population in largely uninfested regions to zero and permanently eliminating the species or population within a specified period of time").
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