

Accepted Manuscript

Title: Spatial-Dynamic Externalities and Coordination in Invasive Species Control

Author: Yanxu Liu Charles Sims

PII: S0928-7655(16)00002-6
DOI: <http://dx.doi.org/doi:10.1016/j.reseneeco.2016.01.001>
Reference: RESEN 965

To appear in: *Resource and Energy Economics*

Received date: 5-8-2014
Revised date: 21-12-2015
Accepted date: 3-1-2016

Please cite this article as: Liu, Y., Sims, C., Spatial-Dynamic Externalities and Coordination in Invasive Species Control, *Resource and Energy Economics* (2016), <http://dx.doi.org/10.1016/j.reseneeco.2016.01.001>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Spatial-Dynamic Externalities and Coordination in Invasive Species Control

Yanxu Liu (yliu@bethelks.edu), an assistant professor in Business and Economics Department at Bethel College, 300 East 27th Street, North Newton, KS 67117.

Charles Sims (cbsims@utk.edu), Faculty Fellow at the Howard H. Baker Jr. Center for Public Policy and an assistant professor in the Department of Economics at the University of Tennessee, 1640 Cumberland Ave, Knoxville, TN 37920.

Abstract. This paper investigates the coordination problem in transboundary species invasions. When invasions impact commodity markets and control decisions are made by many producers, a spatial externality arises due to market-level impacts and delaying the invasion on neighboring parcels. We illustrate how the intrinsic spread rate and the spatial configuration of producers interact to determine the public benefits of private control decisions and the ultimate outcome of species invasions on private property. To coordinate responses to invasions at the market level, a corrective mechanism is suggested in which invaded producers are compensated by all other producers for control actions that alleviate impacts to other producers.

Keywords: spatial-dynamic modeling; agricultural pests; phytosanitary standards; trade restrictions; agricultural cooperatives

JEL Codes: Q57, Q2, D78

Download English Version:

<https://daneshyari.com/en/article/7387464>

Download Persian Version:

<https://daneshyari.com/article/7387464>

[Daneshyari.com](https://daneshyari.com)