

High Impact Publication Selected for Special Recognition in 2020

Unit: Food and Resource Economics **PDF Download(s):** [Publication](#)

Publication Full Citation: Singerman, Ariel, and Pilar Useche. 2019. "The Role of Strategic Uncertainty in Area-wide Pest Management Decisions of Florida Citrus Growers." *American Journal of Agricultural Economics* 101(4):991-1011.

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Publication Impact: Singerman and Useche's (S&U) article "The Role of Strategic Uncertainty in Area-Wide Pest Management Decisions of Florida Citrus Growers" was published in 2019 in the *American Journal of Agricultural Economics*. This journal has an acceptance rate of only 10% and is the top outlet of the Agricultural and Applied Economics Association, which is the leading association of agricultural economists in the US. In addition, S&U's publication was selected by the editors of the journal as the leading article of the July 2019 issue because of its relevance to the agricultural and applied economics field. Such honor also means that the article was commented by an accomplished scholar in the field with a subsequent reply of the authors. All of which are published as part of a discussion within the same journal's issue, giving high prominence to the publication. In his comments, the expert included the following statement: "[S&U]'s combination of experimental economics, paired with primary data-based econometrics represents an important contribution to the economics of area-wide pest and disease control" and further added "their emphasis on strategic uncertainty and coordination requirements has implications for a broad array of emerging pest and disease control issues, which will hopefully stimulate needed research to design effective area-wide pest and disease control programs". S&U's publication is a theoretical and empirical contribution to address the collective management of citrus greening (Huanglongbing, HLB), an incurable disease that affects citrus trees, and which is regarded as the most devastating citrus disease worldwide. In Florida, citrus production has decreased by 74% since the disease was found and growers have (on average) been facing losses. According to the USDA, the number of citrus growers in Florida decreased from 7,389 in 2002 to 2,775 in 2017. S&U's publication sheds light on important conditions for successful area-wide pest management coordination to control the disease, and found that growers' beliefs about their neighbor's lack of coordination conspired against the success of the program. S&U's research highlights that the analysis of invasive species is an interdisciplinary problem that involves both biology and economics. Without the appropriate incentives, public policies, and development of institutions, growers perceive coordination with their fellow growers to be too risky. The voluntary area-wide management program for psyllid control in Florida was found not only to be useful to mitigate the impact of HLB but also profitable. The estimated net differential benefit that the program provided a grower was \$2,184 per acre. After showing growers the results of such management approach, 30% of them positively changed their responses regarding how likely they are to coordinate insecticide sprays. Thus, the potential economic benefit resulting from higher participation in an area-wide psyllid management program driven only by that 30% of growers (whose combined managed area was 153,000 acres) change of behavior can be estimated at 100 million dollars.