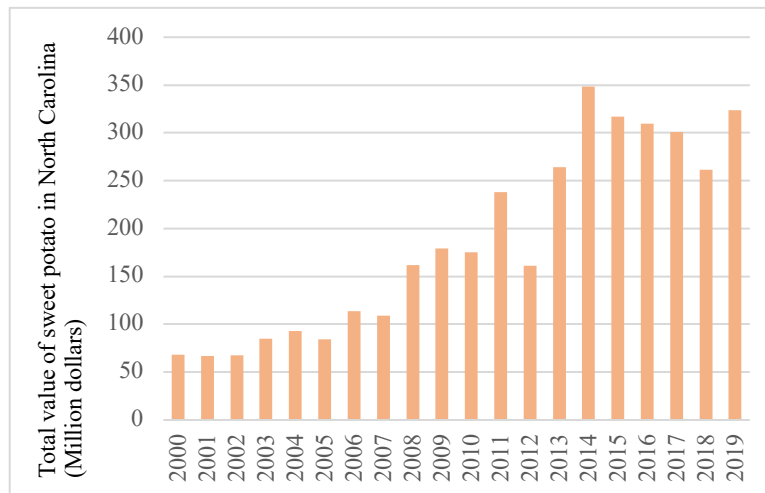


Potential *M.e.* impact on sweet potatoes in North Carolina

University of Florida, Gulf Coast Research and Education Center

Previous research found that root-knot nematode would cause losses of crops by 10%-30% (Overstreet 2009; Koenning et al. 1999; Ploeg 2019; Tateishi 1998; Akers and McCrystal, 2014; Akers 2014; Jones et al. 2013). Although there are very limited studies that examined the yield-reducing impact of *M. enterolobii* on sweet potatoes, results from other crops suggest that severe damage could occur to sweet potato growers. *M. enterolobii* is found to be causing more damages than other root-knot nematode species. In a microplot experiment, tomato yield losses of up to 65% have been observed (Cetintas et al., 2007). In two greenhouses in Switzerland, yield losses of up to 50% and severe stunting of tomato rootstocks and cucumbers were observed (Kiewnick et al. 2009). Silva et al. (2019) found that the yield damage caused by *M. enterolobii* in okra can be as high as 37.3%. Carneiro et al. (2007) suggested a reduction of more than 70% in guava production due to *M. enterolobii* infestation.



Total production value of NC sweet potatoes

In 2019, the total annual farm value of sweet potatoes in North Carolina was roughly \$323 million. An estimate of 98,000 acres of sweet potatoes was grown in 2019, representing more than half of the sweet potato production in the United States (National Agricultural Statistics Service 2020). However, based on the estimates of previous studies of *M. enterolobii*, the total economic loss for sweet potato production in North Carolina could be more than \$150 million if *M. enterolobii* is established and could cause a 50% yield loss in the state.

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