

## Estimated economy-wide impact of CBB for the crop years 2011/12 and 2012/13

PingSun Leung, Andrea Kawabata, and Stuart T. Nakamoto  
University of Hawaii, College of Tropical Agriculture and Human Resources  
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The purpose of this short brief is to provide an estimate of the economy-wide impact of the Coffee Berry Borer, CBB, in terms of loss in total output (sales), income (household earnings), tax revenues and jobs. The economy-wide impact is estimated using the State of Hawaii Input-Output Economic Model for the year 2007, the latest year available from the Hawaii Department of Business, Economic Development and Tourism (DBEDT). The crop data is for statewide coffee production, as reported by the USDA National Agricultural Statistics Service (NASS/USDA). No breakdown is available for only the CBB infested areas.

### *Projected crop loss due to CBB*

Crop year	Marketings <sup>1</sup> <i>1,000 pounds</i> (1)	Farm price <i>\$/pound</i> (2)	Value of sales <i>\$/1,000</i> (3)=(1)x(2)	Loss from 2010/11 <i>1,000 pounds</i> (4)=8,800-(1)	Loss valued at current prices <i>\$/1,000</i> (5)=(4)*(2)
2010/11	8,800	3.80	33,440		
2011/12	7,600	4.15	31,540	1,200	4,980
2012/13	7,200	4.80	34,560	1,600	7,680

Source: NASS/USDA

<sup>1</sup>Expressed in parchment equivalent pounds

### Assumptions:

1. Loss in volume of marketings is due entirely to CBB relative to crop year 2010/11 which is treated as the normal year before CBB.
2. Value of loss is imputed using the respective farm price received in the crop year. This can be considered as the upper bound estimate of the loss value since prices might not have gone up as much if there were no supply reduction due to CBB.

*Annual Economy-wide impact due to CBB*

Crop year	Loss in crop value	Loss in economic output	Loss in household earnings	Loss in state taxes	Loss in jobs
	-----1,000 \$-----			number	
2011/12	4,980	10,116	3,005	370	153
2012/13	7,680	15,601	4,634	571	232

Assumptions:

1. Economy-wide impact is calculated using the Type 2 final demand multipliers based on the sector “Macadamia nuts, coffee, and other fruits” in the 2007 State of Hawaii Input-Output Table (DBEDT, 2013).
2. The respective multipliers used are 2.031 for output (sales), 0.603 for household earnings, 0.074 for state taxes, and 30.77 jobs per million \$ of final demand for crop year 2011/12 and 30.19 for crop year 2012/13.

References:

NASS, *Hawaii Farm Facts*, National Agricultural Statistics Service, U.S. Department of Agriculture, February 2013, page 5.

DBEDT, *The Hawaii State Input-Output Study: 2007 Benchmark Report*, Research and Economic Analysis Division, Department of Business, Economic Development, and Tourism, State of Hawaii, Revised December 2013.