

# AN ALTERNATIVE TO CURRENT SUPPLY CHAIN PROCESSES IN THE BANANA VALUE CHAIN

Our ability to eliminate single-use packaging in the banana value chain can save \$188,000,000 annually in the banana sector of Costa Rica alone as the following numbers from [Earth University](#) indicate:

## Banana Cost Structure for Costa Rica

### Bananas Main Data

Description	Quantity	Unit
Production Area	44,000	ha
Production Volume	110	Million Boxes
1 box bananas	18.86	kg green fruit
1 container	20	wooden pallets
1 wooden pallet	54	boxes
1 container	20368.8	kg green fruit
1 container	1080	carton boxes
1 pallet	5.5	plastic corner posts
1 container	110	plastic corner posts
1 box	1	bag
1 container	1080	bags

Banana Cost Structure:	Producer			Materials	Value/box	% of Cost
Productivity	2600	boxes/ha/year		Others	\$0.10	N/A
				Carton Box	\$1.35	17.87%
Fixed Costs	\$10,200.00	ha/year		Bag	\$0.09	1.19%
Variable Costs				Corner Posts	\$0.07	0.93%
Harvesting Labor + Mat	\$0.57	per box		Wooden Pallet	\$0.19	2.52%
Packing Labor	\$0.85	per box		Plastic Wrap	\$0.01	0.13%
<b>Materials</b>	<b>\$1.81</b>	per box		<b>Total Materials</b>	<b>\$1.81</b>	<b>22.64%</b>
Transport + Port Costs	\$0.40	per box				
Total Variable Costs	\$3.63	per box		<b>Value of Eliminated Materials</b>		
Fixed Cost per box	\$3.92	per box		Description	Value	
Total Cost per box	\$7.55	per box		Carton Box		\$148,500,000.00
				Bag		\$9,900,000.00
				Corner Posts		\$7,700,000.00
				Wooden Pallet		\$20,900,000.00
				Plastic Wrap		\$1,100,000.00
				<b>TOTAL</b>		<b>\$188,100,000.00</b>

This is a scalable system that will work for any value chain in any country and these savings could be used to help provide a living wage for many workers. By allowing deliveries and pickups simultaneously along any leg of the supply or reverse chains, empty backhauls and partial loads can be eliminated along with most transport packaging as we begin the actual development of a circular economy. A reusable, modular, end-to-end supply chain system that can eliminate 90% of the aisles in your DC and is totally complimentary to existing operations. For more information please visit our website at [www.circularsupplychains.com](http://www.circularsupplychains.com), send us an email to [info@circularsupplychains.com](mailto:info@circularsupplychains.com) or contact us directly at 1-403-606-6647.