

### Throughput Accounting

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For the third time in 15 minutes, Scott checked the time on the bottom right corner of his computer screen. He only had an hour left until he had to turn in his decision on an early fall kalanchoe crop for a new customer. Sales had the opportunity to sell 10,000 6-in. kalanchoes for a back-to-school promotion.

"We have plenty of room to grow them—that's not the issue," Scott thought with a shrug. "But how do I tell if we will actually make money off of this?" Most of the greenhouse would be empty, so how would he allocate overhead? The sales manager was pushing hard to get the product, but his boss Alan wasn't convinced yet. Now it was up to Scott to show whether the crop was worth growing.

The kalanchoes would only take up 25% of the available space in the greenhouse, and almost no other crops were scheduled for those weeks. According to Alan, that meant almost the entire overhead for those weeks would have to be figured into the cost of growing the kalanchoes. The overhead figure for those weeks came out to \$15,980, which included the cost of the greenhouse manager, insurance, and even the entire irrigation system, shade cloth and HID lights.

What would you do if you were in Scott's position?

#### What can you allocate?

The problem with "allocating" overhead is that no matter how you look at it, these costs are not actually allocable. The tricky part comes when we attempt to split these fixed costs out "per plant." Don't fool yourself into thinking that these can be analyzed on a "per plant" basis!

By "allocating" overhead, you're actually allocating a fixed, sunk cost. How much less will your insurance, management/grower labor, and office expenses cost if the company grows 10,000 fewer plants? There will be no difference in total overhead, because these costs are fixed and non-variable.

You can skew the numbers however you want—used space, total space, etc. Either way it's just a numbers game—not a helpful number in determining profitability.

A different way of looking at these costs is to use a concept called "throughput accounting." Basically, you take Total Sales less Total Variable Costs. No overhead is included in the variable costs. This gives you the "Throughput Contribution" for that item (or for the whole company).

$$(TS - TVC = TC)$$

For the 6-in. kalanchoe example above, let's assume the following:

Total Sales (TS)	\$40,000
Less: Total Variable Costs (TVC)	\$25,000

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Throughput Contribution (TC)	\$15,000
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This Throughput Contribution figure will be what you use to compare different options. Note that at this point you are completely ignoring overhead costs. If you were allocating out overhead per pot, you would probably not have chosen to grow the kalanchoes. However, if you don't include the overhead in your cost calculation, it still makes sense to grow them. The thing is that you will still spend the money on your fixed overhead costs whether you grow the extra crop or not. Thus, your overhead costs should not play a role in this "to grow or not to grow" decision.

However, these overhead costs are "real" costs, not theoretical dollars. So where do we account for overhead if we cannot allocate it per plant?

Later, you can take out the "Operating Expenses" (which include overhead), but only when looking at the company as a whole. Now you have your "Net Profit." The Throughput Contribution goes towards covering your operating expenses. Ideally, you have more Throughput Contribution than operating expenses.

$$(TC - OE = NP)$$

If you are interested in learning more about throughput accounting, check out the book "The Goal" by Eliyahu Goldratt or "Throughput Accounting"

by Thomas Corbett. **GT**

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