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Features

Cost Accounting: Why Do We Do It This Way?

| *Dr. Charlie Hall*

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Much has been written about cost accounting applied to green industry businesses over the last three decades. If fact, I can remember reading trade journal articles in graduate school addressing this subject, as well as throughout my 29-year tenure in academia, and it's still one of the most sought-after topics I'm asked to address for presentations and articles today.

There's a plethora of really good articles (that I've included in an abbreviated resource section in the sidebar) that talk about costing principles, so I'm going to forego duplicating these articles and instead talk about the overall approach to cost accounting that I think will prove fruitful for owners and operators of greenhouse firms today.

Methods of cost accounting

Different industries follow different costing methods to establish the cost of their products or services. This varies by the nature and specifics of each business. There are different principles and procedures for performing the costing; however, the basic principles and procedures of costing remain the same. Some of the most common methods are mentioned below:

• **Unit costing:** This method is also known as "single output costing." This method of costing is used for products that can be expressed in identical quantitative units. Unit costing is suitable for products that are manufactured by continuous manufacturing activity—for example, brick making, mining, cement manufacturing, dairy operations or flour mills. Costs are ascertained for convenient units of output.

• **Job costing:** Under this method, costs are ascertained for each work order separately as each job has its own specifications and scope. Job costing is used, for example, in painting, car repair, decoration and building repair.

• **Batch costing:** This method of costing is used where units produced in a batch are uniform in nature and design. For the purpose of costing, each batch is treated as an individual job or separate unit. Industries like bakeries and pharmaceuticals usually use the batch costing method.

• **Contract costing:** Contract costing is performed for big jobs involving heavy expenditure, long periods of time and often different work sites. Each contract is treated as a separate unit for costing. This is also known as terminal costing. Projects requiring contract costing include construction of bridges, roads and buildings.

• **Operating costing or service costing:** Operating or service costing is used to ascertain the cost of particular service-oriented units, such as nursing homes, busses or railways. Each particular service is treated as a separate unit in operating costing. In the case of a nursing home, a unit is treated as the cost of a bed per day, while, for buses, operating cost for a kilometer is treated as a unit.

• **Process costing:** This kind of costing is used for products that go through different processes. For example, the manufacturing of clothes involves several processes. The first process is spinning. The output of that spinning process—yarn—is a finished product, which can either be sold on the market to weavers or used as a raw material for a weaving process in the same manufacturing unit. To find out the cost of the yarn, one needs to determine the cost of the spinning process.

In the second step, the output of the weaving process—cloth—can also can be sold as a finished product in the market. In this case, the cost of cloth needs to be evaluated.

The third process is converting the cloth to a finished product—for example a shirt or a pair of trousers. Each process that can result in either a finished good or a raw material for the next process must be evaluated separately. In such multi-process industries, process costing is used to ascertain the cost at each stage of production.

• **Multiple costing or composite costing:** When the output is comprised of many assembled parts or components—as with televisions, motor cars or electronic gadgets—costs have to be ascertained for each component, as well as with the finished product. Such costing may involve different methods of costing for different components. Therefore, this type of costing is known as composite costing or multiple costing.

• **Uniform costing:** This isn't a separate method of costing, per se, but rather a system in which a number of firms in the same industry use the same method of costing, using agreed-on principles and standard accounting practices. This helps in setting the price of the product and in inter-firm comparisons.

Which one do we use?

I wish I could point to one of these costing systems and say

that it's the definitive method we use in this industry to do our costing. But, in reality, the green industry has combined elements of several of these costing systems to develop a hybridized system.

Direct (or variable) costs such as containers, shuttle trays, media, labels/stickers, crop protection products, fertilizers and plugs/cuttings/liners are the usual line items in figuring your direct costs. These are allocable costs in the sense that they can easily be attributed on a per-unit basis.

Labor is also a direct cost, but much more difficult to allocate to a specific activity and, likewise, to a specific crop or unit, but it should be. I'll venture a guess that this is where most growers find costing most difficult.

The only other direct costs I should mention are the costs of operating machinery and equipment. They too can be difficult to allocate, so they're often lumped into the overhead category and allocated that way.

Speaking of which, it's really overhead that poses the biggest challenge when costing. For decades, overhead has been allocated in non-green-industry manufacturing and service business by either allocating it according to the number of direct labor hours or by the number of machine hours used to make the product or provide the services. Yet, in the greenhouse industry, many growers have historically had difficulty in determining exactly how many labor hours were used for a specific crop and there was no one specific machine used throughout the entire production process, so using direct labor hours or machine hours was out of the question.

Landscape businesses, on the other hand, generally have a pretty good idea of their annual billable field hours, so allocating overhead using this method is rather straightforward and it works for them. Greenhouses, however, had to resort to using the next constrained (but definable) resource—the number of square feet of bench space—and it's here that the often-used allocation method of overhead cost per square foot per week was born.

Nurseries had the same issues with the direct labor or machinery hour methods of overhead allocation, but since their land was not as constrained as greenhouse bench space was for the greenhouse grower, many resorted to an equivalent unit basis of inventory valuation and costing. Using this method, a common unit (e.g., 1-gal. container) was used as a means of allocating overhead to different-sized crops in the nursery. Some, however, have continued to use a cost-per-square foot method (or similar measure) and have been successful in doing so.

The bottom line is that a good cost management system should provide financial and operating managers with prompt and correct information for analysis of their production efficiencies in their operations. And they should serve as an early warning of potential problems related to variances between planned and actual expenditures, including those related to overhead. **GT**

Suggested resources on greenhouse cost accounting:

- "Profitability: The New Economics of Growing" by Bill Swanekamp from November 2008 *GrowerTalks*: http://tinyurl.com/economicsofgrowing
- "Cost Accounting: Enterprise Modeling" by Bill Swanekamp from July 2013 *GrowerTalks*: http://tinyurl.com/enterprisemodeling
- "Cost Accounting: Shrinkage" by Bill Swanekamp from March 2013 *GrowerTalks*: http://tinyurl.com/costaccountingshrink
- "Cost Accounting: Seasonality" by Bill Swanekamp from November 2012 *GrowerTalks*: http://tinyurl.com/costaccountingseasonality
- "Use It or Lose It!" by Bill Swanekamp from March 2012 *GrowerTalks*: http://tinyurl.com/costaccountnguseit
- "Are Your Crops Making Money?" by Paul Fisher, Charlie Hall & Bruce MacKay from May 2015 *GrowerTalks*: http://tinyurl.com/cropsmakingmoney

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Dr. Charlie Hall is Ellison Chair in International Floriculture for Texas A&M University in College Station, Texas. He can be reached at chall@tamu.edu.