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How Should Farm Business Income be Divided?

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If everyone in the farm business owned a similar amount of business assets, worked the same number of hours, and provided management expertise, the answer to the question in the title would be very straightforward. In this unlikely scenario, business income could be split equally. Unfortunately, asset ownership, hours worked, and management responsibilities vary across managers, operators, and owners of the business. This increases the importance of coming up with a conceptual framework to divide farm business income. This article describes a model that can be used to divide farm business income, and provides an illustration of how this model can be used in practice.

Contributions Model

Hofstrand (2016) describes two methods that can be used to divide business income between parties in the business in an equitable manner. These two methods are the contributions model and the 50/50 model. With the contributions model, which is the focus of this article, an annual contribution is computed and allocated to each party before splitting net income. Annual contributions are computed using the relative value of each party's contribution of resources to the farm business. The discussion below will focus on farm resources that need to be included in the contributions model and possible ways to value these resources.

Resources that need to be included in the contributions model include land, buildings, machinery and equipment, breeding livestock, working capital, and labor and management. Here, we are focusing on resources that are owned by each party. Owned resources are typically valued at their opportunity cost. For example, if we have two generations, and the older generation owns 500 acres and the younger generation does not own any acres, the older generation should receive compensation for their owned acres. The easiest way to compensate the older generation for the owned acres would be to use a current rental rate for the area. The annual value of buildings, and machinery and equipment can be estimated using a rental rate or the cost of ownership. The opportunity cost approach is often used to compute the cost of ownership. This approach typically uses economic depreciation (estimated useful life and straight-line depreciation are often used as proxies) and an opportunity interest charge, which is computed regardless of whether there are debt obligations pertaining to specific assets. Buildings include machine sheds, general storage buildings, office space, and grain storage. Assuming that the owner of the buildings covers insurance and repairs, economic depreciation and the opportunity interest charge could be used to value the annual contributions for the buildings. For example, if the buildings have a 20-year useful life, the total annual value of the buildings owned by each party could be multiplied by 10%

(5% for economic depreciation and 5% for the opportunity interest charge). A similar approach could be used for machinery and equipment. If the owner of the machinery and equipment pays for insurance and repairs, the value of the machinery and equipment could be multiplied by 15%. This assumes an average machine life of 10 years, use of straight-line economic depreciation, and a 5% opportunity charge for interest. Breeding livestock could be valued at its current sale value. Working capital; which includes cash, accounts receivable, purchased inputs, grain inventories, and market livestock inventories; contributed by each party to cover the cash flow needs of the business can be valued using the rate of return that would have been received from alternative investments. Investing in production agriculture is certainly not risk-free so I recommend using an opportunity charge for working capital of at least 5%. Note that annual contributions for buildings, machinery and equipment, and working capital can be computed using balance sheet values for these items at the beginning of the year, the end of the year, or the average of the beginning and end of year values. Labor and management can be valued using typical wages for performing comparable work or the opportunity cost associated with other employment opportunities. For example, if one of the parties could work for a local agribusiness for a salary with benefits of $50,000, this figure could be used to estimate their labor and management contribution. The annual value of the contributions for each party are computed by adding up their opportunity costs for land, buildings, machinery and equipment, breeding livestock, working capital, and labor and management. The annual value of each party's contribution is paid before net income is split between the parties. Net income can be split using a corporate, a partnership, or some other type of agreement.

The above conceptual framework works well when there is sufficient income to pay all of the resources. U.S. net farm income is expected to be relatively low again in 2017. How should income be divided in years when income is very low? This is not an easy question to answer, which means that it is important to plan for this event. In years with low income, it would make sense to have a hierarchy with regard to which resources are going to be covered first, second, third, etc. This hierarchy would likely vary among farms. However, it would make sense for labor and management to be the first resource covered. Any resources that are not fully compensated could receive extra compensation in later years. This is similar to how sweat equity is often treated (see Langemeier, 2017).

Case Farm Illustration

Table 1 contains an illustration of how the contributions model can be used to divide business income. This illustration assumes that there are two parties involved, a younger and an older generation. In this illustration, the older generation owns the vast majority of the land, buildings, machinery and equipment, and working capital. The farm operates 2000 acres, of which 500 acres are owned by the older generation. The annual contribution for land is computed using current cash rent values, the annual building contribution is computed by multiplying building investment by 10%, the annual machinery and equipment contribution is computed by multiplying machinery and equipment investment by 15%, and the annual working capital contribution is computed by multiplying working capital investment by 5%. The investments in buildings, machinery and equipment, and working capital were obtained by averaging the beginning and end of the year balance sheet values. In this example, the owner of each asset is covering insurance and repairs on the portion of the buildings, and machinery and equipment they own. If this is not the case, the percentages used for buildings, and machinery and equipment above may need to be modified. The opportunity cost associated with labor and management is assumed the same for both parties. The lower contribution for the older generation reflects the fact that this individual is working a fraction of the year. It is important to note that the annual contributions reported in table 1 are distributed before net income is split between the parties.

The annual value of the contributions will need to be updated every year to account for changes in owned acres, building values, machinery and equipment values, and working capital. When dealing with a younger generation and an older generation, what typically happens is the annual contribution of the younger generation increases over time while the annual contribution of the older generation decreases over time. If assets were purchased together, the ownership shares would need to be divided accordingly. It is also important to note that if assets are disposed of the sales amount needs to be divided using the ownership percentages.

Table 1. Annual Value of Contributions for Case Farm, Year 1

Item	Younger Generation	Older Generation
Land	$0	$125,000
Buildings	$0	$50,000
Machinery and Equipment	$15,000	$135,000
Breeding Livestock	$0	$0
Working Capital	$5,000	$25,000
Labor and Management	$60,000	$45,000
Sub-Total	$80,000	$380,000

Concluding Comments

This article described a model that can be used to divide farm business income and provided an illustration of how this model could be used in practice. The illustration involved only two parties. However, the conceptual framework presented could be used with three or more parties.

References

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