

Smart Farming: Using data to make decisions

Sell or Store? (IV.A.)

Is it more profitable to store seed or sell after harvest?

Once harvest is over (or as it is going on), all of the resulting beans need to be stored or sold. The question seems simple, but many factors play into the decision. Some farmers have grain bins on their property, but some do not. A grain bin is helpful especially if the harvested crop is not dry enough to be sold. Beans should be between 13 and 15% moisture when harvested. Cooperatives are farmer-owned groups that help with services for farmers (provide seed, fertilizer, herbicides, insecticides and the equipment to plant/apply) and storage or marketing for their crops. Here is one example for the cost of storage from one co-op:

Soybeans: (Effective 10/1/17) 7 days free, then 6 cents per bushel per month through 9/15/18.

However, if the beans are above 13.5% moisture, there will be additional charges for drying starting at \$.03/bushel and an additional \$.03 is added for every .5% moisture.

If beans will be stored on a farmer's property, s/he will also have to pay extra electricity costs to dry them. It is best if the moisture content is low for the harvest.

If the crop does not need to be stored because it is being sold right away, transportation of the beans can be an issue. For example, if a field produces 2200 bushels, that will take 3 semi tractor loads to get to market. You can see how to calculate costs for transporting crops by using a calculator like this one: <https://ag.tennessee.edu/arec/Lists/DecisionAids/DispForm.aspx?ID=4>. It includes truck costs, labor costs, fuel costs and calculates a cost per bushel for hauling.

- 1) Input the number of bushels from the field you farmed on the grain hauling calculator to see how much it will cost to haul to a selling point. Assume the selling point is the cooperative closest to your location. Enter the miles to that location to calculate the cost.
- 2) Subtract that amount from the market price.
- 3) Compare that amount to the cost of storing at a grain facility or co-operative. Assume your beans have a 14% moisture content, so it will cost an additional \$.06/bushel. (Also, the beans have to be trucked there, so find the closest grain cooperative to your location, then calculate the trucking cost as in number 1.)
- 4) The biggest gamble involves the market price. If all soybeans are sold to the market upon harvesting, what will happen to the price? Because there is a large supply, prices may fall. If a farmer holds on to the crop and sells at a later time, the price may rise, or not. It is a bit of a gamble to count on a price in the future, but many farmers do. This is not a lesson on the Futures market, but farmers need to be savvy about spot pricing and make decisions based on the market.

As you can see, it can be expensive to transport or store grain. It is part of the decision making every farmer must make.

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Harvester



300 bushels

The following are available for harvest, transportation and storage.

A harvester is used to collect the crop from the field. Advancement in technology has created the ability for harvesters to carry more crops on board. Normal ranges can be anywhere from 250 to 400+ bushels in one load.

Calculate the number of **harvester loads** it would take to carry your harvest

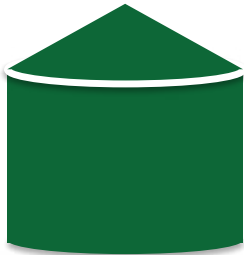
Semi



950 bu

Calculate the number of **semi-trailer loads** it would take to carry your harvest

Farm Grain Bin

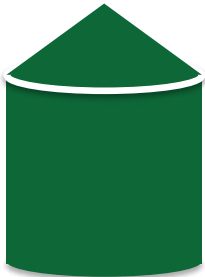


2,850 bushels

Calculate the number of **farm grain bins** it would take to store your harvest

Calculate the number of **commercial grain bins** it would take to store your harvest

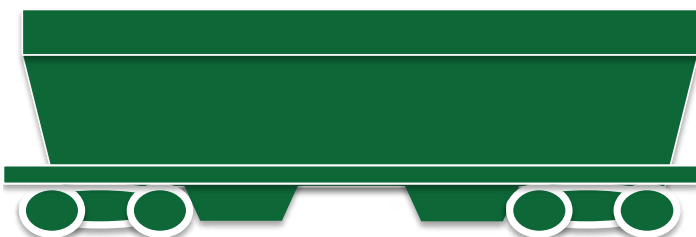
Commercial Grain Bin



750,000 bushels

Calculate the number of **railroad cars** it would take to carry your harvest

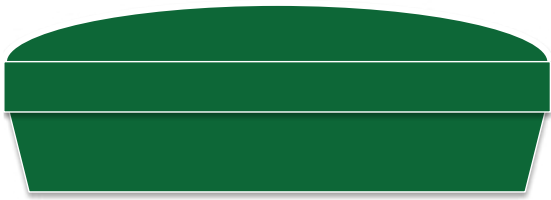
Railroad



3,600 bushels

110 car unit
396,000 bushels

River Barge

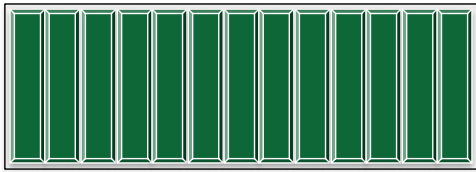


45,000 bushels

15 barge tow
675,000 bu

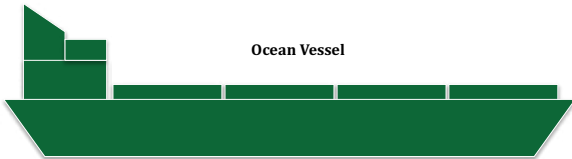
Calculate the number of **river barges** it would take to carry your harvest

Cargo Container



900 bushels

Calculate the number of **cargo containers** it would take to carry your harvest



Ocean Vessel

2,000,000 bushels

Calculate the number of **ocean vessels** it would take to carry your harvest

Have students fill in the following chart to determine the weight of each crop hauled.

Equipment	Volume (bushels)	lbs of soybeans (60 lbs/bushel)
Harvester	300	
Semi-trailer	950	
Farm grain bin	2,850	
Commercial grain bin	750,000	
Railroad car	45,000	
Cargo container	900	
River barge	3,600	
Ocean vessel	2,000,000	