

## Cabbige: A Price Optimization Tool for Small Farms

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Cabbige

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The complexity of farm businesses demand the development and use of technologies that manage inventory, monitor market trends, inform pricing, and identify crop profitability to assist in crop-planning. Tracking the day-to-day details for 50+ crops and varieties in a way that is searchable, allows for meaningful analysis, and is actionable is nearly impossible using pen and paper, and only slightly less so using programs like Excel and Google Docs.

Bio-diverse farms need software that is designed specifically for their business that simplifies the manual tracking of data and, at the same time, delivers actionable analysis and insights that farms can use to continually improve their business. Cabbige was developed with these objectives in mind – to be the comprehensive business management tool designed for bio-diverse growers.

Cabbige began simply as a pricing tool – a bit of software designed to find the optimal price for a crop throughout the season by monitoring and measuring yield production and sales performance. The pricing tool is nothing more than a machine that is doing a lot of math behind the scenes, the same amount that would take most people hours, in a matter of seconds. And, the benefit of optimized pricing is clear: farms that piloted Cabbige in 2014 saw an average 9.6% increase in revenue. Identifying crops, markets, and points in time that would benefit from a price adjustment can have a demonstrable impact on a farm's overall revenue and profits.

The key to identifying the optimal price for crops is determining and monitoring a crop's sell-through rate – the percentage sold relative to the harvested inventory. For example, if 500 bunches of carrots have been harvested and 400 are sold, the current sell-through rate is 80%.

$$400 \text{ bunches sold} / 500 \text{ bunches harvested} = 80\% \text{ sell-through rate}$$

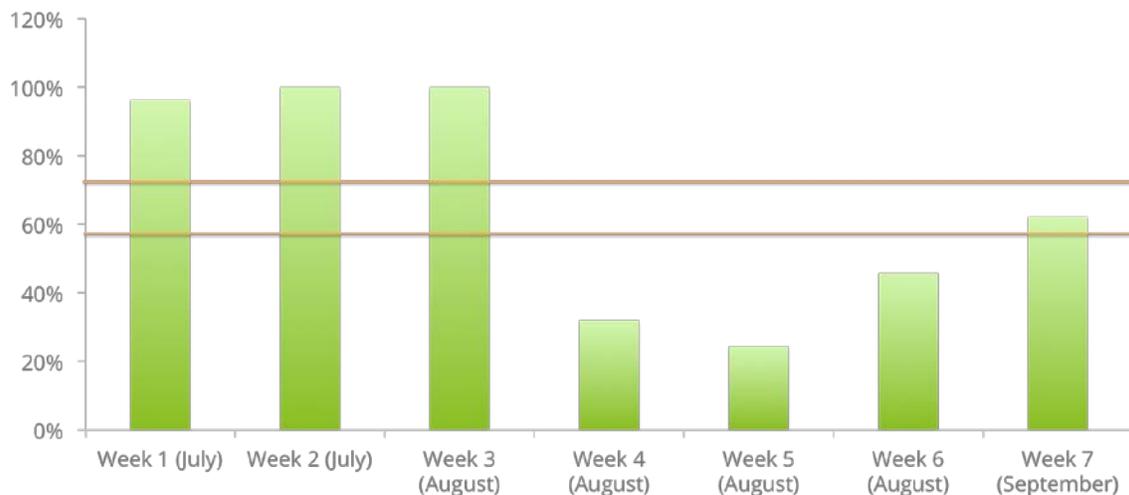
From there, we want to determine the *eRPU* or *effective Revenue per Unit*, which takes the price, amount sold, and volume harvested into consideration. If the carrot bunches sell for \$3.00/bunch, the total revenue is \$1200.00 and the *eRPU* is \$2.40.

$$\$1200 \text{ Revenue} / 500 \text{ bunches harvested} = \$2.40 \text{ per unit revenue}$$

The next step is to determine if dropping the price to \$2.75 would yield more than \$1200 revenue – would the farm be able to sell more than 436 bunches, the amount needed to exceed the \$1200 revenue benchmark. Or, would the farm earn more revenue by raising the price to \$3.25, in which case, only 369 units would need to be sold? Or, should the price remain constant at \$3.00? Cabbige analyzes past sales performance to inform the final price recommendation, which is updated daily, in a way that growers would do, if they had many hours to dedicate to these exercises.

A real world example of the need to optimize prices throughout the season is slicing tomatoes. In this case, we tracked the sell-through rate of slicing tomatoes from the start of the season in July through September.

## Sell-through Rate of Slicing Tomatoes



The market dynamics are quite clear: consumer demand is high at the start of the season and would support a premium price; as inventory increases and consumer demand wanes, the sell-through rate falls dramatically and begins to recover towards the end of the season. This is an ideal use case for price optimization, to ensure that revenue is maximized, even as market conditions change. Cabbige does the monitoring and calculations in seconds, allowing farms to benefit from the analysis without the manual calculations.

The salient point to remember, and what will be discussed in further detail during the session, is that software has the ability to dramatically improve farm businesses by taking on the burden of these calculations and analysis, executing in seconds what would take

many hours of manual calculation. Leveraging software tools will be the key to building the next generation of farm businesses.