

Marketing management can be defined as selecting the correct pig or group of pigs that best meets a packer's specifications of weight and body composition. Marketing pigs is both an art and science that requires the combination of population statistics and the skillful selection of the correct pigs from a group. Improper marketing management leaves money on the table, therefore the goal should be to increase the number of pigs that meet the specifications of a particular packer.

## Population Statistics

The following section will give some insight and explanation of the population statistics needed to estimate individual pig weight and marketing metrics. In order to fully understand population statistics one must be familiar with the following terms:

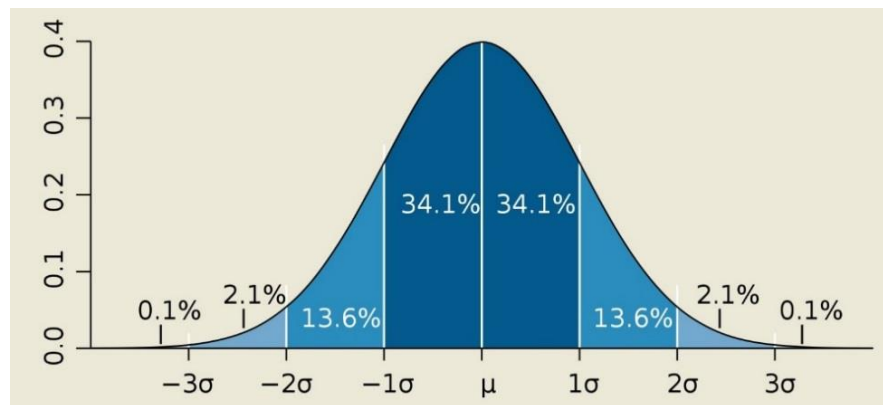
**Mean:** the average of a group of numbers (i.e pig weights)

**Standard deviation:** a measure of how far data points are from the mean

**Normalized bell curve:** depicts the distribution of numbers within a data set using the mean and standard deviation.

For example, the mean (average,  $\mu$ ) weight of a group of pigs is 240 lbs, and the standard deviation is 22 lbs. This means that 68.2% of the pigs in the group weigh between 218 lbs and 262 lbs or within one standard deviation ( $\sigma$ ) ( $\pm 22$  lbs) of the average weight of 240 lbs. Therefore of the remaining pigs, half will weigh more than 262 lbs (15.1%) and half (15.1%) will weigh less than 218 lbs.

The chart on the right shows a typical bell curve or population distribution. The dark blue area represents the pigs that fall within one standard deviation of the group. The lighter blue areas represent pigs that are more than one standard deviation from the average.



## Packer Matrixes

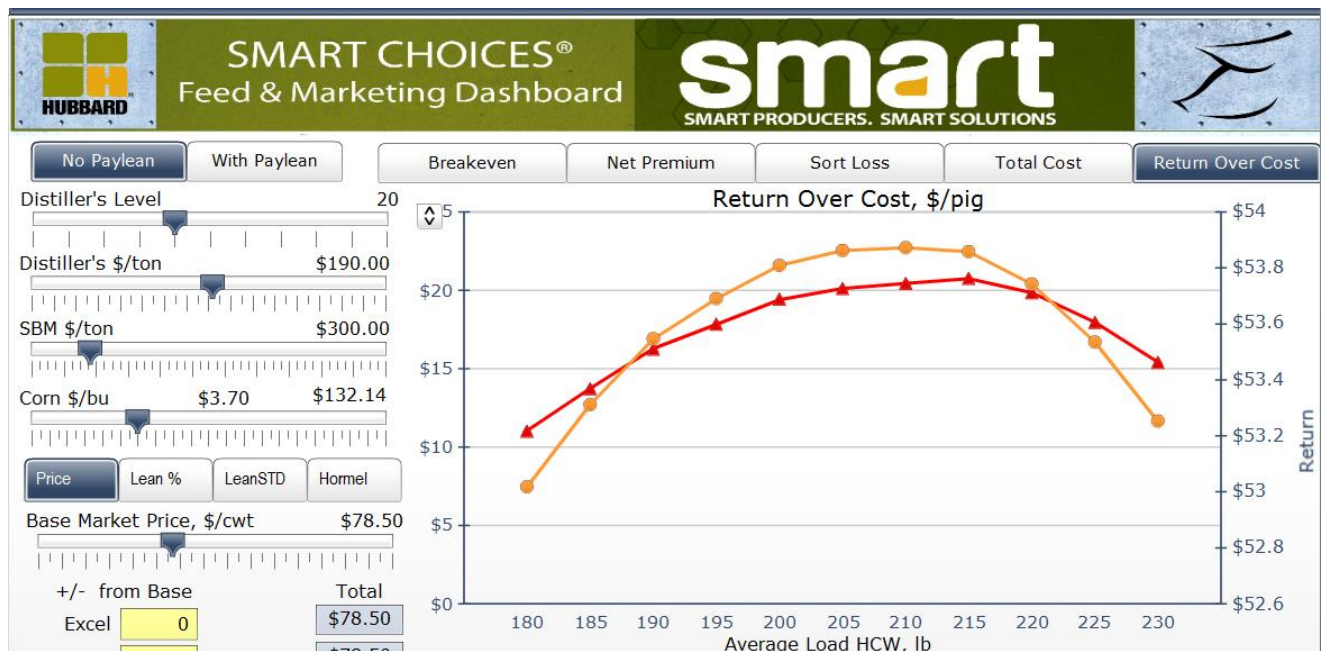
Every packer matrix is unique. It is important to have a thorough understanding of the matrix of the packer or packers to which your pigs will be sold. Most packers use a combination of carcass weight and percent lean to derive a premium payment and a sort loss discount. The producer's goal should be to obtain the highest net return for a selected group of pigs when sold to the packer. There are many factors to consider when selecting pigs and which packer they will be sold to. For example, if your pigs have a low percent lean it would be more advantageous to sell them into a packer's matrix that doesn't use percent lean in their sort loss calculation.

When evaluating a packer matrix it is important to evaluate the sort loss and premium payments based on a group of pigs rather than an individual pig because it is practically impossible to deliver a perfectly uniform group of pigs due to normal group variation. Understanding to what extent sort loss is applied to the light and heavy pigs in a marketed group can

greatly affect the financial returns to the farm. There are a number of tools available to help producers analyze information from their packer and determine how many pigs are not being marketed at the ideal market weight. These spreadsheets often give a financial projection on the impact of reducing sort loss and selling more pigs in the ideal carcass weight range.

## Determining a Target Market Weight

Base market price, cost per pound of gain and group variability should all be considered when determining the target market weight for a particular packer matrix. For example if the base market price increases but the cost per pound of gain decreases, it would make sense to increase the average market weight as long as the increase in profit offsets any additional sort loss. Because the calculations required to determine which target market weight gives the highest return are lengthy and complex; Hubbard Feeds has developed the Smart Choices® Feed and Marketing Dashboard to help producers make this determination quickly as market conditions change. A screenshot of the SC Feed & Marketing Dashboard is shown below. It indicates the optimal selling weight based on return over costs at two different packers.



## Measuring to Improve Profits

Selling more pigs in the highest paid category will increase net profit per pig. Since selection variation affects the number of pigs in a given category, reducing the standard deviation will reduce the variation. The lower the standard deviation of the load and closer the average weight of the load is to the optimal marketing weight, the greater the return will be on a per pig basis. An excellent carcass weight standard deviation of a load is approximately 13 pounds. This means that 68.2% of the pigs in the load are within 13 lbs of the average load weight. Conversely, a standard deviation of 19 lbs is poor. As a history of marketing performance is compiled, techniques to reduce marketing variation can be implemented to decrease load variation.

## Tips to improve hitting the optimal marketing weight and reduce standard deviation

- Consistently measuring load standard deviation and making goals to improve.
- Use feed consumption and the feed budget to guide when the first cut should be made. Feed consumption is the best predictor of weight.
- Build enough time into a flow of pigs so pigs are not forced out of the barn before they can reach their target market weight.

## Marketing Management FAQ

- **How much net revenue can be gained per pig by improving my load standard deviation?**
  - Reducing the carcass standard deviation of a load from 19 to 13 pounds can increase revenue up to \$3.50 per pig.
- **Why is feed consumption the best predictor of weight?**
  - In general, feed is the best predictor because gain is directly related to feed intake. A health challenged group of pigs will have reduced feed intake and gain. Conversely, a high health group will have an increased feed intake and gain weight faster
- **Does it ever make sense to take the first cut of pigs out of the barn at a lower target market weight to make room in a barn?**
  - At times it makes sense to take the first cut of pigs out of the barn at a lighter weight if the barn is overstocked. Removing pigs out of the barn sooner will increase the growth rate of the remaining pigs in the barn. The increase in performance of the remaining pigs in the barn can offset the lost profit from selling the first cut at a lighter weight. In addition, selling the first cut at a lower target weight helps prevent getting behind on marketings and being forced to sell later groups at weights that are too heavy for the best premium.