

HITTING THE TARGET ON YOUR GRID

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ABSTRACT

Marketing of pigs can be considered a challenge and/or an opportunity to maximize the returns for a production system. Matching a marketing grid to a production system's goals, analyzing production and packer information, weighing techniques, and using auto sorters are some of the key items being considered as opportunities to maximize returns.

BACKGROUND

The market weight of hogs is initially determined when the production system is planned. It takes into account the pig genotype, the feeding program, the packer requirements and the expected profitability of the production system.

Each packer operates a buying schedule which is designed to ensure that a large proportion of the market hogs supplied to the plant are of the right quality and weight to meet the retailer specifications who purchase their pork products. The schedule covers a fairly wide weight range of carcasses. For example, 40 kilograms which is then further divided into smaller weight bands of 5 kilograms. The packer may set a different price for each weight band and design the settlement schedule so that carcasses which fall in a much tighter preferred weight band (the Core) receive a premium or are not discounted. Carcasses which are heavier than the Core (over weights) or lighter than the Core (under weights) are devalued according to the usefulness of the carcass to the packer.

The schedule is then further complicated as the packer also prefers carcasses with a particular level of backfat or lean meat percentage. Again carcasses which are less desirable to the packer are discounted. The two sets of bands (i.e. weight and fat or lean meat percentage) are set at right angles to form a grid where each cell of the grid has an index. When pigs are slaughtered, carcass data is automatically collected and used to generate a settlement sheet. It will show the weights and grades of all the pigs superimposed onto the settlement grid. It provides information on weight and grade of pigs, backfat or lean meat percent, yield percentage, condemnations, sort loss and finally premiums, discounts and lost opportunity. The settlement sheet may be used by management to determine the suitability of the pigs to

the particular packer contract. At farm level the sheet is particularly useful to ensure the pigs are falling within the most profitable section of the Core. The devaluing of carcasses which fall outside the preferred weight and backfat or lean meat percentage bands is termed as the “sort loss” and when averaged over all the pigs marketed may amount to several dollars per pig.

ANALYSIS

Special analyses that can measure income improvement for heavier hogs without shipping outside of the Core are valuable. In a Core window there can be a \$10.00 improvement in income over feed if we could get to the ideal weight without going over the maximum weight for that Core cell. This would be the perfect world! But, not knowing the loss or gain from precision weighing, will not serve to motivate us to continually improve the process of weighing pigs effectively. An example is provided in Table 1 based on the Ontario Heavy Market Hog grid.

Table 1. Opportunity dollars per pig.

Live Weight, kg	Dressed Weight, kg	Extra Feed Cost	Feed Conversion	Weight Class	Yield Class			
					1	2	3	4
97	77.45			4	-\$43	-\$41	-\$39	-\$38
103	82.45	\$3.01	2.87	5	-\$16	-\$15	-\$16	-\$17
109	87.45	\$3.09	2.94	6	-\$9	-\$8	-\$8	-\$8
116	92.45	\$3.22	3.07	7	-\$4	-\$4	-\$4	-\$4
122	97.45	\$3.40	3.24	8	\$150	\$147	\$146	\$145
128	102.45	\$3.68	3.50	9	-\$2	-\$2	-\$2	\$0
134	107.45	\$3.83	3.65	10	-\$27	-\$27	-\$30	-\$35

- The Core area cells for the Ontario Heavy grid are identified as Weight Classes 6, 7, and 8 and Lean Yield Classes 1, 2, 3, and 4.
- Within the Core area, the target would be weight class 8. Using the average dressed weight of 97.45 kilograms for weight class 8, index values for each yield class 1 through 4, and a market hog price of \$135 per hundred kilograms at 100 index, the gross market hog values have been calculated.
- Using feed conversion numbers from a feed curve, a feed cost per tonne of \$210 (last finishing feed); the extra feed cost (marginal cost) is calculated. This is the cost of the extra feed to move from one weight class to the next. The cost to add the extra 5

kilograms of dressed weight from weight class 7 to 8 is \$3.40 per pig based on a feed conversion of 3.24.

- The numbers shown under the yield classes 1 through 4 for the weight classes 4 to 7 and 9 and 10, are the opportunity dollars lost compared to the average market hog value in weight class 8. For example, a pig in weight class 6 and yield class 2 is leaving \$8 behind. This is the difference in the market hog values between weight class 6 and 8 adjusted for the difference in feed consumed.
- It is very clear that falling into weight class 5 or below and going into weight class 10 or above that there are a lot of opportunity dollars being lost. The challenge is trying to maximize your dollars within the Core. The important thing to remember is that the calculations are going to be different for every production system because of the variables that are involved.

The base price for hogs and the cost of feed are important considerations when looking at grids to ship your pigs on. Also, the ability for pigs to gain and convert feed are very important when considering different grids or attempting to strategically hit a specific spot on a grid. Gathering actual data on a group of pigs over a few weeks to check feed intake, average daily gain, feed conversion and weight distribution is an opportunity to verify your assumptions and fine tune the decision making process.

WEIGHING OF PIGS

A critical factor in hitting the core on your grid is obtaining the weight of the pigs in a timely and efficient matter that minimizes the stress for both the operator and the pig. Here are some points to consider:

- Individual weighing of pigs is a time consuming process but when organized correctly is probably the most cost effective way of maximizing the value of the market hog.
- Large finishing barns with more than 1200 hogs will take more time to weigh pigs as there are large numbers to put through a scale on a weekly basis.
- Proper maintenance and calibration of the scales need to take place prior to weighing pigs.
- Most weighing will be done in the aisle way. All pigs in a group are weighed and marked or grouped according to size.
- The best procedure is to weigh pigs one week ahead of the date when the pigs will be dispatched from the barn for market. These pigs are grouped together and the minimum weight is established so that at the time of dispatch pigs will be in the center of the Core.
- Determination is needed to know the exact date pigs are shipped and the average daily gain the pigs will grow for the week.
- Good communications with the processor and trucker is vital to loading pigs within a proper time frame of weighing in order for the weighing to be effective.
- Pigs can be weighed two or three weeks ahead of schedule to determine how many hogs will go to market for projection purposes. However, there is less stress on man and pigs if we can separate these pigs. These groups should be rechecked the week prior to shipping to keep the hogs in the Core. Lighter hogs can go to a week later group and heavy hogs can be shipped in the current week to avoid heavy hogs.

- More hogs are now housed in large groups of 50 or more. This makes it easier at weighing time to make groups by weight with little aggression. Hogs that are housed in groups of less than 50 will have more aggression. If mixing these pigs after weighing is done then there will be reduced gains, injuries and increased mortality.
- Barns with individual pens with small groups less than 50 should be weighed with pigs returning to their original pen and boarded out at the time of shipping. If an empty pen is available and all pigs going into this pen are strangers then there is less aggression.
- Check the settlement sheet for accuracy of weighing. Most processors can send this to the producer within two days after shipping. It is important to have this information prior to weighing pigs again for the following week.
- If it is practical, shipping pigs two times a week can be effective in getting pigs into the Core.
- It is common that a load of pigs will have an average weight within the Core. There will always be value added in a Core to place pigs as heavy as possible within the Core. This is where increased frequency of shipping per week and/or weighing pigs again prior to being loaded is needed for extreme accuracy.

AUTO SORTERS

The introduction of auto sorter technology has created opportunities and challenges to weigh and sort market hogs. Here are some observations to consider:



- Auto Sorters when managed properly have been very beneficial in reducing operator fatigue versus manual weighing.
- With large group housing, the auto sorter can go hand in hand to improve weighing results but certain procedures need to be followed.

- In an aisle way barn design, pigs need to become familiar with walking in the aisle and going through the auto sorter. Many farms allow pigs to walk into the passage and return to the pen for two to four weeks prior to weighing. They also place an old scale or the actual auto sorter in the aisle way for the pigs to walk through. At weighing time the pigs are housed so the pigs can leave their pen area, go into the passageway, through the auto sorter to be weighed, and sorted upon exit. The last 25 percent of the group may need to be encouraged into the scale in order to complete the weighing process.
- The auto sorters weighing parameters are set for the desired market weight ranges. The group that is being shipped can be run through the sorter again in order to check for pigs that have not gained the desired weight and be placed in the next week's shipping group.
- During the first weeks of weighing there is added stress to the pigs in order to make room for the selected pigs to be shipped to market. Once the barn has more square footage per pig, pigs respond well to the extra room that has been created. Care should be taken not to leave pigs crowded over a great length of time.
- Pigs should always have access to feed and water during the weighing process to reduce stress.

CONCLUSIONS

Hog marketing continues to be a challenging and evolving process. Using the tools and technology currently available, continuing to explore new technology and information as it becomes available, and using a disciplined marketing procedure assists in maximizing returns and/or minimizing opportunity losses.

REFERENCES

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