

# To Store Or Not To Store This Year's Soft Red Wheat Crop

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Each year producers decide whether to store or sell their Soft Red Wheat (SRW) crop. Producers typically choose the latter and sell their crop off of the combine. This year the Chicago wheat (SRW) futures contract is offering a large storage incentive. The relationship between July 2011 Chicago wheat futures and March 2012 Chicago wheat futures is a plus \$1.04/bu (March = \$8.63, July = \$7.59). Meaning putting grain in storage AND selling a March 2012 futures contract will gain you an additional \$1.04/bu. However, there are other costs and risk associated with doing this. Storage decisions should be made based upon the carry offered in the futures market, storage constraints (coming from other crops), harvest constraints, storage costs, opportunity costs of money,

cent moisture at about 0.5, 2.3 and 3.3 cents per bushel for each point of moisture removed with unheated air drying, bin drying, and high temperature drying, respectively. Drying costs will vary with the price of energy, labor and equipment, but consider this a cost effective way to control insect and mold activity. Moreover, drying costs are generally much less than other methods that may need to be taken if these problems occur during storage, as shown in Table 2. More information on drying and storing wheat is provided in Chapter 10 of ID-125 (<http://www.bae.uky.edu/Publications/IDs/ID-125.pdf>).

Though storing wheat can result in some economic advantages to the producer, it requires good insect pest management. The presence of insects or insect damage can defeat the entire advantage of holding the wheat past harvest time. We have developed a "16-Point Checklist for Controlling In-

Table 1. Equilibrium moisture content (EMC) of soft red winter wheat at different temperature and relative humidity levels. (Source: ASAE Standard D245.4)

| Temperature<br>°F | Relative Humidity (%)                  |      |      |      |      |      |      |
|-------------------|--|------|------|------|------|------|------|
|                   | 30                                     | 40   | 50   | 60   | 70   | 80   | 90   |
|                   | Equilibrium Grain Moisture Content (%) |      |      |      |      |      |      |
| 50                | 9.6                                    | 10.7 | 11.8 | 12.9 | 13.4 | 14.1 | 15.5 |
| 60                | 9.3                                    | 10.4 | 11.4 | 12.5 | 13.1 | 13.7 | 15.1 |
| 70                | 9.0                                    | 10.1 | 11.1 | 12.2 | 12.8 | 13.4 | 14.8 |
| 80                | 8.7                                    | 9.8  | 10.8 | 11.9 | 12.5 | 13.1 | 14.5 |
| 90                | 8.5                                    | 9.6  | 10.6 | 11.6 | 12.2 | 12.8 | 14.2 |

Table 2. Comparison of wheat marketing opportunities.

|               | Now     | 3/bu            | Carry             |
|---------------|---------|-----------------|-------------------|
| Jul-11        | \$ 7.59 | Mar-12          | \$ 8.63           |
|               |         |                 | \$ 1.04           |
|               |         | Prep            | \$ 0.05           |
|               |         | Drying 4 pts    | \$ 0.10           |
|               |         | Insecticides    | \$ 0.05           |
|               |         | Fumigation      | \$ 0.10           |
|               |         | Insurance       | \$ 0.02           |
|               |         | Interest (5.0%) | \$ 0.25           |
| Sub-<br>total |         | \$ 0.57         | Return after Cost |
| Total         | \$ 7.59 | \$ 8.06         | \$ 0.47           |

and other costs.

The largest direct cost is the opportunity cost of obtaining cash (money). Foregoing money and holding grain in storage will cost you the interest gained from paying back outstanding loans or putting money in an interest bearing account. As an example, say you have an interest bearing account which pays 5 percent annually. Putting grain in storage in late June and delivering in February on a March futures contract adds up to 8 months. The interest foregone in storing grain adds up to \$0.25 (\$7.59/bu\*.05\*(8 months / 12 months)).

Basis is the other source of price risk. Improvements in basis between now and delivery return more money to the producer. A weakening of basis costs the producer money. Producers should monitor basis regularly and take advantage of strong basis offers by signing a basis contract (which would be for February delivery if selling on the March futures contract).

Storing wheat in Kentucky during the summer presents several physical challenges that can impact profit margins. Freshly harvested wheat should be dried as soon as possible to prevent sprouting and suppress insect activity. Keeping the storage environment dry (relative humidity of air space between wheat kernels below 65 percent) is the most cost effective way of controlling mold growth and the mycotoxins they can produce. With average day-night temperatures in July and August approaching 80 degrees or higher, the recommended wheat moisture that meets this condition is 12.5 percent or lower (Table 1). Figure the cost to dry wheat below the base/market level of 13.5 per-

cents in Stored Wheat", which is attached to this article. The producer should understand that insect pest management in stored wheat is by-in-large a preventative effort. Additionally, many of the most important techniques occur before and during harvest, and are non-chemical. Though pesticides may be added to wheat that is being binned, due to the heat of the grain and temperatures in the bin, they will not last long. Of even greater concern is the lack of a control option as the grain is being removed for delivery. This usually occurs late in the winter when it is too cold to fumigate. So, preplan and proactively: reduce the initial insect population, slow insect growth when possible, and monitor the grain to detect developing problems early.

In summary, wheat storage can be profitable when the futures market is offering a large carry and the producer follows wheat storage guidelines. The market can incentivize storage through offering a price in the future that is greater than the cost of storing grain to that time. Storing grain requires following guidelines; see 16 point checklist, to minimize the chance of insect and moisture issues. Benefits from storage continuously change and should be watched closely when deciding to take advantage of returns to storage through a storage hedge. Δ

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