

WHEAT IN 15-INCH AND 7.5-INCH ROWS, YEAR 2

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Farmers who do not plant wheat every year are interested in using 15-inch soybean planters for wheat. This study was conducted to determine the yield loss, if any, from wheat planted in 15-inch rows relative to wheat planted in 7.5-inch rows. Three varieties or cultivars with tillering phenotypes (also called prolific phenotypes) were selected for this study: Beck's 122, AgriPro Branson and Pembroke.

Seed from each variety was planted with a small-plot research drill, targeting 35 seeds per square foot (except for one treatment in 15-inch rows that targeted 25 seeds per square foot). Study sites received fertilizer based on soil testing and University of Kentucky recommendations. Nitrogen was delivered in the form of liquid urea ammonium nitrate at two applications. Herbicides, insecticides and fungicides were applied according to University of Kentucky recommendations.

Yields were excellent, ranging from 70 to just over 120 bushels per acre (Table 1). In two of the environments, there were no differences in yield between 15-inch and

7.5-inch rows. In the other two environments, yields in 15-inch rows were about 8.5% less than yields in 7.5-inch rows. Pembroke yielded better than or similar to the other varieties in 3 out of 4 comparisons.

So, if half of the time yields in 15-inch rows is 8.5% less than yield in 7.5-inch rows and futures prices are \$7.10 per bushel, then the gross return for 7.5-inch rows is about \$60 per acre (Table 2). When that advantage is calculated over 500 acres the gross return favors 7.5-inch rows by about \$30,000 (Table 3). Harvesting, trucking and storage have not been included in these returns, recognizing that having more yield will cost more in harvest, storage and trucking.

Growers may still decide to convert a 15-inch planter to wheat, but contracting with another producer who has a no-till drill may be cost effective as well.

The producers have asked that we focus more on the ultra-narrow rows of 3.75 inches for the next year.

Table 1. Wheat Yields Combined Across Beck's 122, Branson And Pembroke Varieties In Different Row Widths And Combined Across Row Widths For Each Variety In Princeton And Lexington, Kentucky.

Site	Row Width (inches)	Yield, bu/A		Variety	Yield, bu/A
Lexington 2009	15(35) ¹	90.4		Beck's 122	94.2
	7.5	93.9		Branson	96.1
				Pembroke	86.2
Princeton 2009	15(35)	89.6		Beck's 122	98.8
	7.5	100.6		Branson	86.4
				Pembroke	100.1
Lexington 2010	15(25)	71.0		Beck's 122	71.5
	15(35)	74.0		Branson	73.7
	7.5	78.5		Pembroke	83.0
	3.75	80.8			
Princeton 2010	15(25)	121.0		Beck's 122	120.0
	15(35)	122.9		Branson	119.2
	7.5	121.5		Pembroke	121.7
	3.75	115.7			

¹ 15(35) and 15(25) refer to wheat in 15-inch rows and 35 or 25 seeds/ft², respectively.

Table 2. Calculated Gross Returns For Wheat Yields In 7.5- And 15-Inch Rows, Assuming A Yield Loss Of 8.5% In 15-Inch Rows. The Yield Loss Was Calculated As The Average Yield Loss From The Two Scenarios Where Yield Losses Occurred In Table 1.

Rows	Yield, bu/A	Price, \$/bu ¹	Gross Return, \$/A
7.5	100.0	7.10	710.00
15	91.5	7.10	649.65
		difference	60.35

¹ July 2011 Kansas City Board of Trade Price, checked 31 July 2010.

Table 3. Difference In Gross Return Between 7.5- And 15-Inch Rows Calculated Over Different Size Of Operations.

Gross Return Difference, \$/A	Wheat Acres	Gross Return Difference, \$
60.35	250	15,087.50
	500	30,175.00
	1000	60,350.00