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Fall 2023 Wheat Planting Decision

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Corn harvest is now underway and Kentucky grain farmers will soon decide if and how much wheat they will plant this fall. Compared to last year there are significant decreases in wheat and soybean prices, but also significant decreases in fertilizer and fuel prices. The following analysis quantifies these relative changes to estimate the profitability for crops harvested in 2024. The analysis includes estimated returns comparing double-cropped wheat/soybeans with full-season soybeans for the 2024 crop, and the likely implications for Kentucky grain farmers.

Additional costs associated with double-cropping are accounted for, including fuel, fertilizer, herbicides, machinery repairs and depreciation [1], labor, hauling, etc. The analysis assumes a blended mix of selling directly from the field and selling from storage for both wheat and soybeans, as well as expected basis for each crop with those scenarios. This results in 2024 crop blended prices of \$6.15/bu for wheat and \$12.35/bu for soybeans given Future's prices at the close of 9/22/23.

Two regions with different agronomic characteristics are evaluated. The first region is along the southwest tier of counties roughly between I-24 and I-65, which traditionally does a lot of double-cropping. The second region is the northwest tier of Kentucky counties (Ohio Valley region) that has some of the best yields for corn and soybeans, but traditionally plants less wheat. Cash rent is assumed to be \$200/acre for both these regions for the average ground and \$250/acre on the best ground (*note: this will vary substantially, but is done here for illustrative purposes only*). Other major assumptions are: \$3.75/gallon fuel, 50 mile one-way grain hauling, \$.50/unit N, \$.55/unit P, and \$.43/unit K.

Southwest Tier Assumptions (Average Ground):

- 72 bu wheat
- 42 bu double-cropped soybeans
- 50 bu full-season soybeans

Resulting net profits:

- +\$36 double-crop
- +\$67 full-season soybeans

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This results in a \$31 difference in favor of full-season soybeans. The double-cropped soybean yield would have to increase to 45 bu before the double-crop was as profitable. This would equate to a 10% yield loss of double-cropped soybeans compared to full-season soybeans.

Southwest Tier Assumptions (Best Ground):

90 bu wheat

51 bu double-cropped soybeans

60 bu full-season soybeans

Resulting net profits:

+\$196 double-crop

+\$136 full-season soybeans

This results in a \$60 difference in favor of the wheat-soybean double-crop. The double-cropped soybean yield could drop down to 46 bu before full-season soybeans were as profitable. This would equate to a 23% yield loss of double-cropped soybeans compared to full-season soybeans.

Northwest Tier Assumptions (Average Ground):

65 bu wheat

42 bu double-cropped soybeans

50 bu full-season soybeans

Resulting net profits:

- \$5 double-crop

+\$67 full-season soybeans

This results in a \$72 difference in favor of full-season soybeans. The double-cropped soybean yield would have to increase to 48 bu in this case before the double-crop was as profitable. This would equate to a 4% yield loss of double-cropped soybeans compared to full-season soybeans.

Northwest Tier Assumptions (Best Ground):

- 75 bu wheat
- 51 bu double-cropped soybeans
- 60 bu full-season soybeans

Resulting net profits:

+\$109 double-crop

+\$136 full-season soybeans

This results in a \$27 difference in favor of full-season soybeans. The double-cropped soybean yield would have to increase to 53 bu in this case before the double-crop was as profitable. This would equate to a 12% yield loss of double-cropped soybeans compared to full-season soybeans.

Summary-Recommendations

Given the current expected market conditions (9/22/23), planting wheat looks attractive this fall only on the best ground in the Southwest Tier. On average ground in the Southwest Tier and the best ground in the Northwest Tier there was a slight advantage to full-season soybeans. On average ground in the Northwest Tier there was a clear advantage for full-season soybeans. These results are in stark contrast to last fall when the double-crop showed a clear advantage in all situations evaluated.

This analysis does not account for potential payments from Farm Bill programs. However, these programs would pay on base acre crop allocation and not planted acres, so there would be no effect on the planting decision. This analysis does not also account for potentially harvesting straw, which is typically more common in Central Kentucky.

To change the assumptions above to your specific conditions and evaluate your expected profitability, go to the grain budget site at: <u>http://agecon.ca.uky.edu/budgets</u>

The Corn-Soybean Budgets and Wheat Budgets can be downloaded or opened directly from this page.

[1] \$20/acre was deducted from the double-crop scenario to account for fixed depreciation on the wheat enterprise that should not factor into the wheat planting decision.

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