Kansas Wheat Yield Outlook for 2026

Week 18 - (5/4/26)

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May 4, 2026

0.1 This week's prediction

Kansas wheat estimate for week 18 (May 4, 2026)
Yield range from 36.6 to 41.2
Predicted yield of 38.9
Acreage range from 5,998 to 6,224 (1,000 acres)
Predicted acres of 6,111 (1,000 acres)
Production range from 220 to 257 million bu
Predicted production of 238 million bu

0.2 Introduction

The USDA collects weekly crop condition data throughout the growing season. Crops are rated on a scale from very poor to excellent. For winter wheat, these estimates are reported during a few weeks in late fall and then resume in the spring. In this publication, Ibendahl estimates Kansas wheat yields, harvested acres, and total wheat production based on the crop condition report from NASS for week 18 (May 4, 2026).

As of week 18 in Kansas, the winter wheat crop was rated as follows: 17% very poor, 27% poor, 34% fair, 20% good, and 2% excellent. Although it is still early in the wheat season, this paper explains the modeling process and projects possible yields, harvested acres, and total production. This analysis is part of a weekly estimate of wheat yields for 2026 in Kansas.

0.3 Background

The USDA has historical data on state wheat yields dating back to 1866. Figure 1 presents this data as a line graph. Notably, the graph shows that wheat yields remained relatively

flat until 1950, after which they have steadily increased. A regression analysis of the last 30 years (shown by the blue line in Figure 1) indicates an average annual increase of 0.20 bushels per acre. Additionally, the lowest yield recorded since 1970 is 25% higher than the highest yield before 1950.

Figure 1 also illustrates that the state-average wheat yield exhibits significant variability. For example, yields were only 28 bushels per acre in 2014, while in 2016, yields reached 57 bushels per acre.

0.4 Estimate of Crop Condition

The weekly Crop Progress and Condition Report issued by the USDA National Agricultural Statistics Service provides information on temperature, precipitation, and the progress of crop planting, development, and harvesting. This report is released weekly, except during the winter months when it is published monthly. While it offers a snapshot of current crop conditions, it does not make any yield projections for wheat. Predicting wheat yields can be challenging, as the crop often performs better than it may appear in the field and can quickly improve with timely rainfall.

Some research has attempted to correlate crop condition reports with yields. Bain and Fortenbery (2013) explored this relationship in their paper, "Impacts of Crop Conditions Reports on National and Local Wheat Markets," presented at the NCCC-134 Conference on Applied Commodity Price Analysis, Forecasting, and Market Risk Management in St. Louis, MO. Their study used an index derived from the crop condition report to estimate crop yields. This methodology is applied in this paper to illustrate the connection between crop conditions and wheat yields.

0.5 Procedure

Bain and Fortenbery construct an index of weekly crop conditions:

```
CCIndex =
          (% acreage Excellent) * 1    +
          (% acreage Good)      * 0.75 +
          (% acreage Fair)      * 0.50 +
          (% acreage Poor)      * 0.25 +
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(% acreage Very poor) * 0
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Weekly crop condition reports from the National Agricultural Statistics Service (NASS) have been available since 1988. In Kansas, the start of the weekly wheat report can vary, but for all years since 1988, a weekly crop report is either available in the last week of March or the first week of April. Additionally, there is a series of crop reports in the fall before a break occurs. Figure 2 shows the wheat crop condition for week 18 over the last 30 years in Kansas.

Figure 3 illustrates the current crop conditions for each week of the ongoing growing season. This series begins in week 13 (the last week of March or the first week of April), as the USDA does not consistently collect weekly data before this period.

In this analysis, the crop condition reports for May 4, 2026 (week 18) are utilized to construct a Crop Condition Index (CCI) for the last 30 years. These CCI indexes are then employed in a regression analysis to estimate wheat yield per acre, where yield is a function of the CCI index. To account for yield trends, the model estimates deviations from the trend based on the CCI index. The regression equation also provides a confidence interval for the expected yield.

To predict harvested acres, the last 30 years of harvested acreage percentages relative to planted acres are calculated. These harvest percentages are used in a regression analysis along with the percentage of wheat categorized as very poor for the given week over the last 30 years. The rationale behind this acreage model is that farmers are more likely to abandon their poorest wheat. When the USDA estimates harvested acres, these estimates will replace the modeled estimated acres in the wheat production calculation. The modeled acres calculation typically has a lower R-squared value later in the season, whereas the USDA's estimate of harvested acres tends to align closely with the final harvested acreage once available.

Total wheat production is calculated by multiplying the expected yield by the expected acres. The production range is determined by multiplying the low-yield estimate by the low-acre estimate, and similarly for the high end.

0.6 Results

The models predicting wheat yields will never work as well as the models predicting corn and soybeans yields. Wheat can often look poor in the field but yield surprising well. Thus, the model R-square value, a measure of how well the model fits the data, tends to be lower for wheat models. However, the R-square value does ususally improve week by week. Based on scores from week 18, the model estimates wheat yields with an R-squared value of 0.64. The estimation of acres has an R-squared value of 0.7.

As of week 18 in 2026, the trend line yield is 44.2 bu/ac. The Crop Condition Index (CCI) calculation indicates that the model predicts a yield of 5.3 bu/ac below trend. Therefore, the estimated yield for May 4, 2026 is 38.9 bu/ac, with a range from 36.6 to 41.2 bu/ac. With 17% of Kansas wheat classified as very poor, the estimated harvested acres are 6,111 (1,000 ac), ranging from 5,998 to 6,224 (1,000 ac). Consequently, the estimated hard red winter wheat production for Kansas is 238 million bushels, within a range from 220 to 257 million bushels. A yield of 238 million bushels would signify a 31% decline in wheat production for 2026. This estimate for May 4, 2026 is identical to last week.

0.7 Comments for This Week

This week's estimated crop yield for Kansas is 0.2 bu/ac lower than last week. The harvested acre estimate was slightly higher this week. The two small changes cancel each other out so the estimated production is identical to last week. Over the last two weeks, the estimated yield estimate has started to stabilize around the 39 bu/acre range. At this point in the season, the forecast is unlikely to change much. Keep in mind though, the wheat yield forecast using crop conditions is much less accurate than for corn and soybeans. Readers should keep track of the wide range for estimated yield.

0.8 Contact

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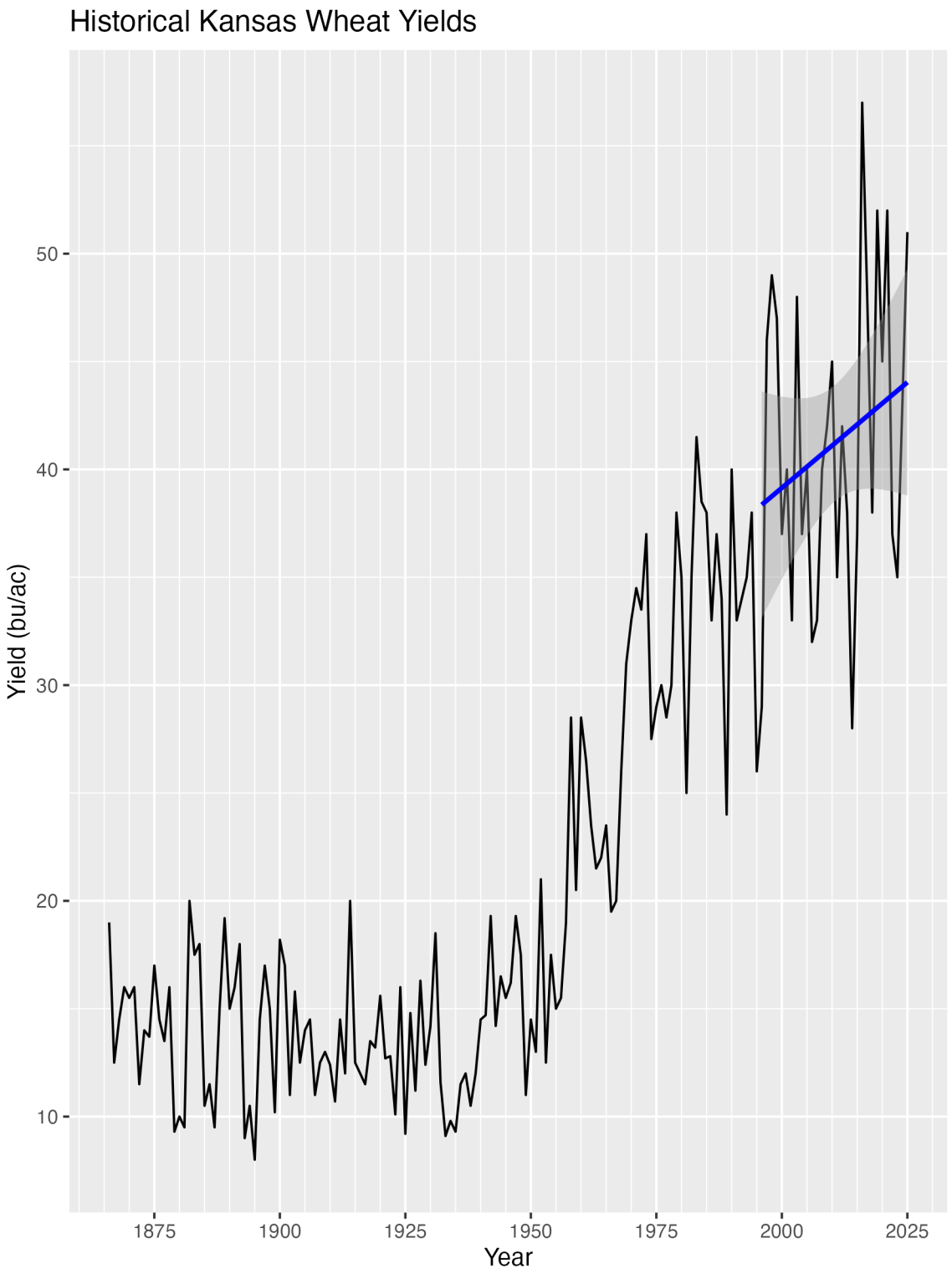

Figure 1: Historical State Wheat Yields from Kansas

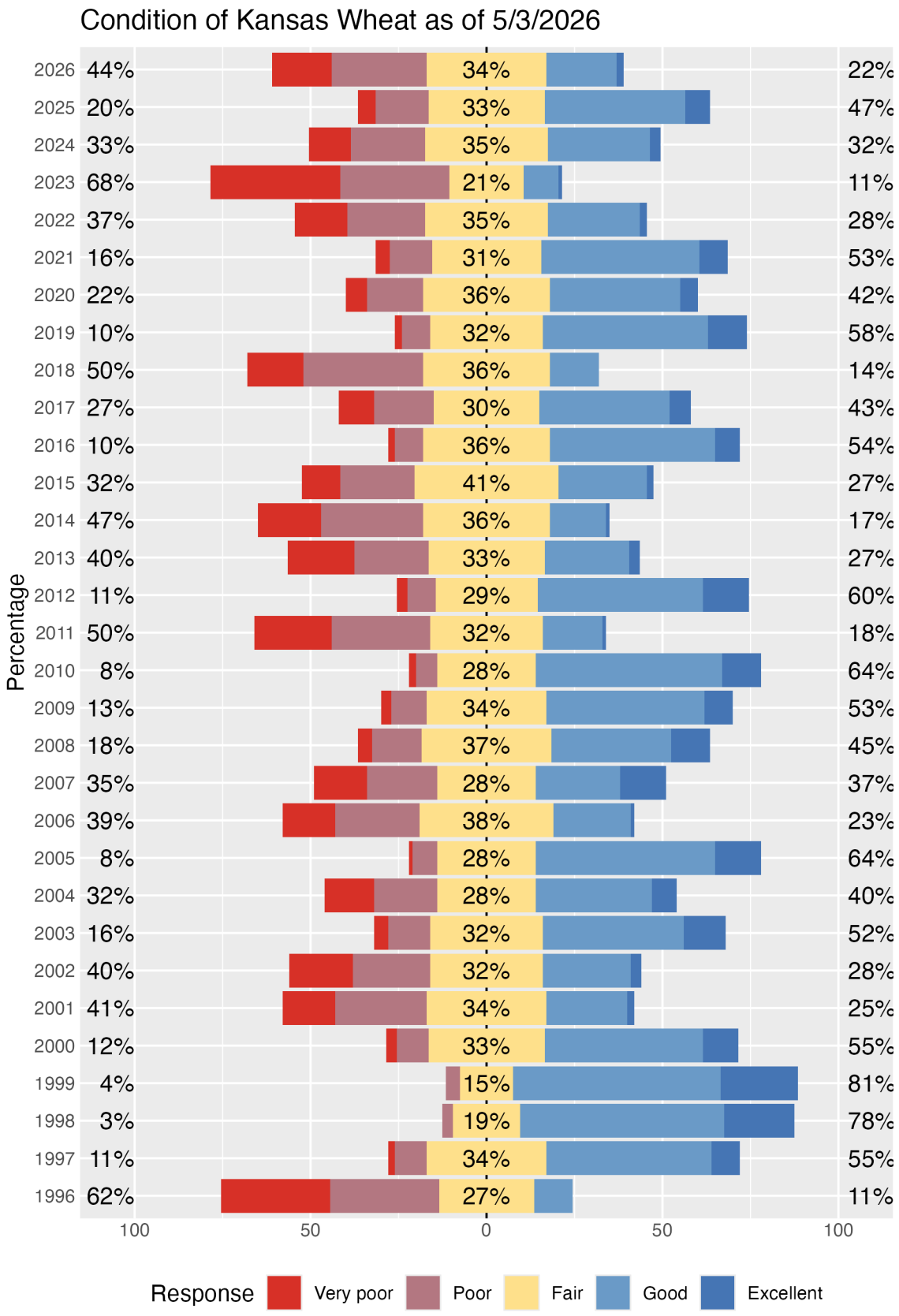

Figure 2: Historical Crop Conditions for Wheat in Kansas for Specific Week

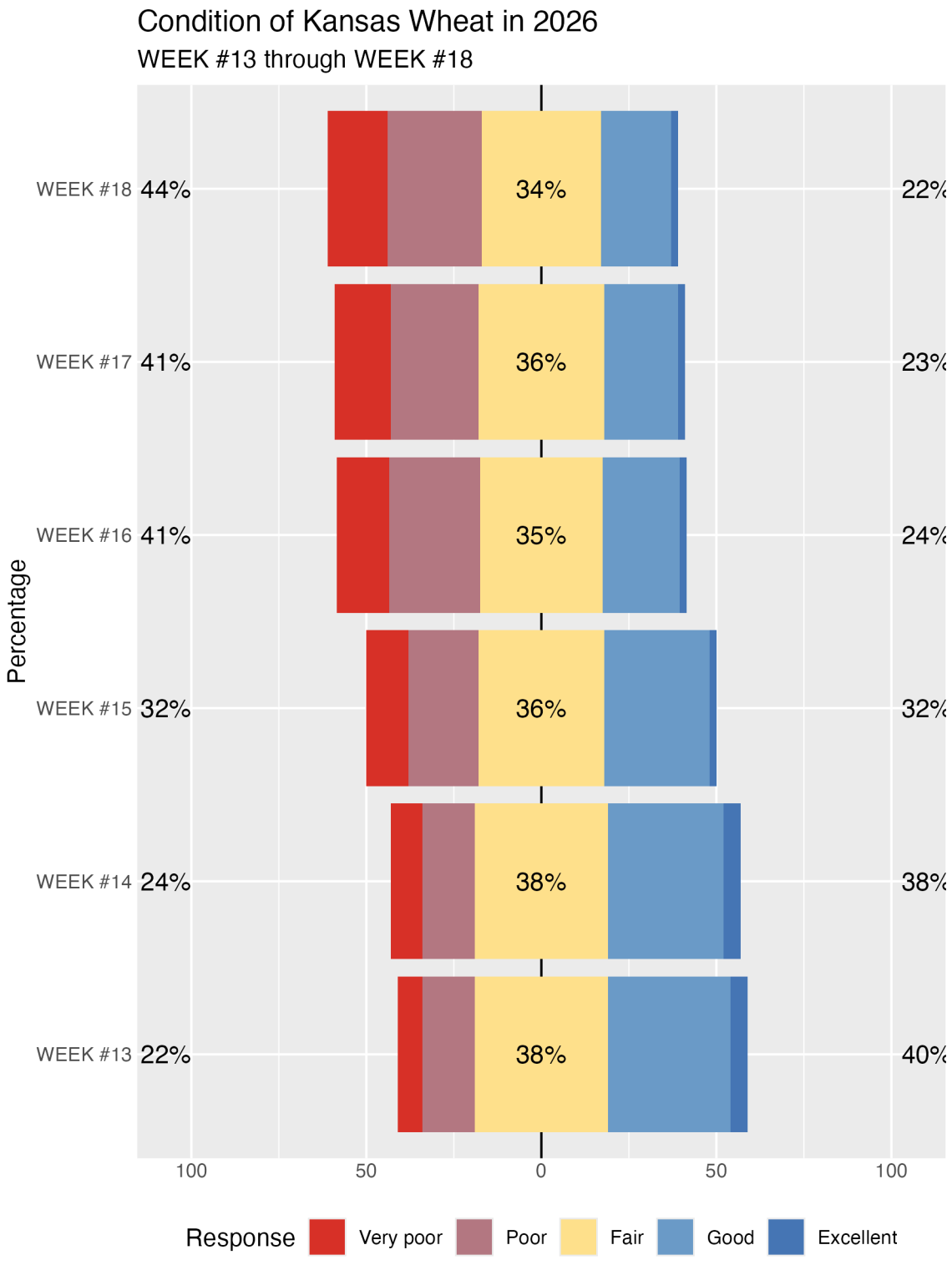

Figure 3: Wheat Crop Conditions for Kansas for Current Year

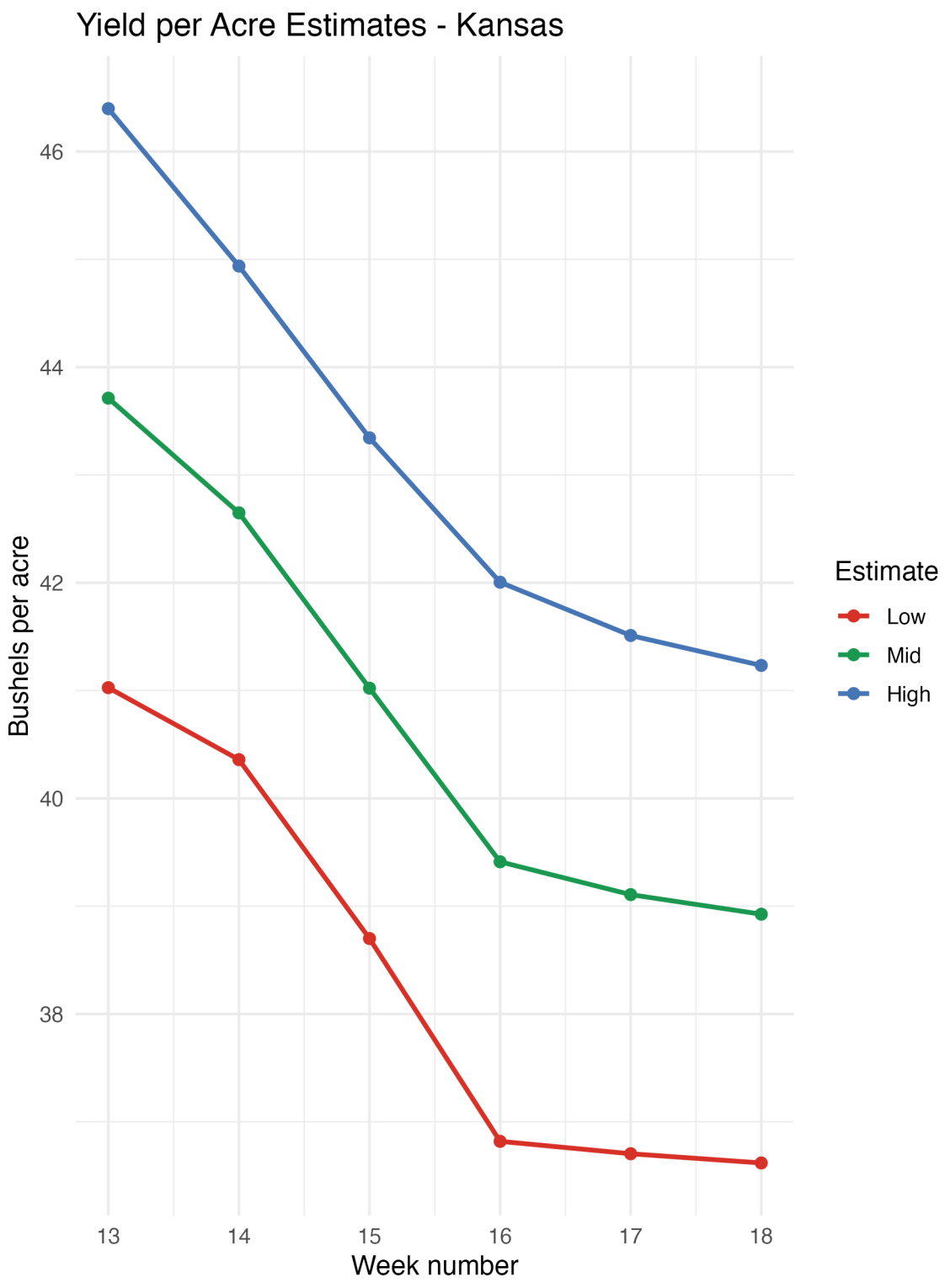

Figure 4: Forecast Yields for Kansas at Estimated Week

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Facebook: https://www.facebook.com/farmingecon