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LIU, XING, PIETOLA, KYÖSTI, Forward hedging under price and production risk of wheat

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Abstract

This paper estimates optimal hedging ratios for a Finnish spring wheat producer under price and yield uncertainty. The contract available for hedging fixes the price and quantity at the time of sowing for a delivery at harvest. Autoregressive models are used to obtain point forecasts for the conditional mean price and price volatility at harvest. Expected yield and yield volatility are estimated from the field experiment data. A range of coefficients of absolute risk aversion are used in the computations. The results suggest that yield volatility is large and it dominates the price volatility in the optimal hedging decisions of the Finnish wheat producers. The point estimate for the price and yield correlation is negative and has a large magnitude. Thus, a negative correlation between the price and the yield, as signalled by the point estimate, will decrease the optimal hedging ratio since the Finnish farmers do not have access to selling put options when they enter in a forward contract.

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