Seasonal Pattern of Wheat Premium: Evidence for Germany

J.-P Loy *, T. Holm *, T. Glauben ** and C. Steinhagen *

Contribution: The purpose of this paper is to estimate the magnitude of the seasonal pattern of the price premium during the marketing season and to explore the marketing opportunities that follow from it from a farmer’s perspective. We thereby contribute to the literature on optimal grain marketing and on estimating wheat (quality) price premiums. To our knowledge, this paper presents the first attempt to adding a seasonal perspective of the price premium to the problem. Methodologically, we employ a multivariate approach that considers the specific time series properties of the processes under study.

Theory: After harvest feed wheat - in particular in years with bad harvest conditions - is in excess supply and bread wheat is in short supply. Thus, bread wheat prices are closer to the CIF and feed wheat prices are closer to the FOB price. At the end of the marketing season the situation is reverse and bread (feed) wheat prices are closer to the FOB (CIF) price.

Results: We use weekly farm prices for bread and feed wheat in Northern Germany to estimate the price premium and its quality determinants. Quality is measured by the average falling number and the protein content of harvest wheat. The long term relationship is modeled by a VECM framework. Additionally a multivariate GARCH model is used to consider the conditional heteroscedasticity of the error terms. Estimations show that quality parameters significantly affect the price relationship between bread and feed wheat prices. A higher protein content and a lower value for the falling number reduce the margin. The margin shows a seasonal trend, in particular in years with a high percentage of wheat that does not meet the falling number threshold of bread wheat.

Summary and Conclusions: Seasonal variations of the price premium between bread and feed wheat indicate opportunities to profitably adjusting the grain marketing strategy of farmers that harvest (and store) both qualities. In this paper, we estimate the seasonal pattern of wheat price premiums on the German market by a vector error correction (VECM) approach, which accounts for multivariate autoregressive conditional heteroscedasticity of the error terms. Results indicate a significant downward trend for the premium during the marketing season. The trend’s magnitude depends on the average quality of harvested wheat. If farmers have facilities to separately store bread and feed wheat, they should tend to postpone (move forward) their sales of feed (bread) wheat towards the end (beginning) of the season, particularly in years of low wheat quality. The volatility of the price premium significantly decreases over the season indicating higher risks at the beginning.
Seasonal Quality Premiums for Wheat

J.-P Loy *, T. Holm *, T. Glauben ** and C. Steinhagen *

Jens-Peter Loy (Corresponding Author) is Professor for Market Analysis, Thore Holm and Crasten Steinhagen are research associates at the Department of Agricultural Economics at the Christian-Albrechts-University in Kiel, Germany; Thomas Glauben is Professor for Market Analysis at the Leibniz Institute of Agricultural Development in Central and Eastern Europe in Halle an der Saale, Germany

Abstract

Seasonal variations of the price premium between bread and feed wheat indicate opportunities to profitably adjusting the grain marketing strategy of farmers that harvest (and store) both qualities. In this paper, we estimate the seasonal pattern of wheat price premiums on the German market by a vector error correction (VECM) approach, which accounts for multivariate autoregressive conditional heteroscedasticity of the error terms. Results indicate a significant downward trend for the premium during the marketing season. The trend’s magnitude depends on the average quality of harvested wheat. If farmers have facilities to separately store bread and feed wheat, they should tend to postpone (move forward) their sales of feed (bread) wheat towards the end (beginning) of the season, particularly in years of low average wheat qualities. The volatility of the price premium significantly decreases over the season indicating higher risks at the beginning.


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