Agribusiness / Volume 23, Issue 2 / pp. 245-261

Research Article

Feasibility of a cash forward contract: An application to the French and Spanish potato sectors

María Bielza, Alberto Garrido, José M. Sumpsi

First published: 16 April 2007

https://doi.org/10.1002/agr.20118

PDF

Abstract

This study examines a cash forward contract (CFC) that a growers' cooperative or association may offer producers to lock in a fixed price for their output. To cover the forward contract's risks, the cooperative would set up a stabilization fund, and as an option, may hedge with futures contracts. The authors evaluate both strategies' costs, which would be charged to the growers signing in the CFC in the form of a fee. By comparing this fee with farmers' willingness to pay, it is determined whether growers' would be interested in the forward contract. The scheme is tested on a selection of Spanish and French potato varieties, with reference to the “April” futures contracts traded on the Amsterdam exchange. The authors conclude that hedging with futures may help to reduce the cooperative's exposure to financial risk, but, on average, the stabilization fund alone is more effective without hedging. Risk-averse growers may be interested in CFCs to reduce their revenue instability. [JEL Classifications: Q13, Q14, G13] © 2007 Wiley Periodicals, Inc. Agribusiness 23: 245–261, 2007.

REFERENCES

Bielza, M. (2004). Instrumentos de Gestión del Riesgo de Mercado. Aplicación al Sector de la Patata [Market Risk Management Instruments. An Application to the Potato Sector]. Unpublished doctoral dissertation, Polytechnic University of Madrid, Madrid, Spain.

Coyle, B.T. (1999). Risk aversion and yield uncertainty in duality models of production: A mean-variance approach. *American Journal of Agricultural Economics*, **81**, 553–567.

Web of Science® | Google Scholar

Ederington, L.H. (1979). The hedging performance of the new futures markets. *The Journal of Finance*, **34**, 157–170.

Web of Science® | Google Scholar

Elam, E. (1992). Cash forward contracting versus hedging of fed cattle, and the impact of cash contracting on cash prices. *Journal of Agricultural and Resource Economics*, **17**, 205–217.

Web of Science® | Google Scholar

Ennew, C.T., Morgan, C.W., & Rayner, A.J. (1992). Objective and subjective influences on the decision to trade on the London potato futures market. *Journal of Agricultural Economics*, **43**, 160–174.

Web of Science® | Google Scholar

European Commission. (2005, February). *Communication from the Commission to the Council on risk and crisis management in agriculture*. Brussels: Author.

Google Scholar

Frechette, D.L. (2000). The demand for hedging and the value of hedging opportunities. *American Journal of Agricultural Economics*, **82**, 897–907.

Web of Science® | Google Scholar

Freund, R.J. (1956). The introduction of risk into a programming model. *Econométrica*, **24**, 253–263.

Web of Science® | Google Scholar

Harwood, J., Heifner, R., Coble, K., Perry, J., & Somwaru, A. (1999). *Managing risk in farming: Concepts, research, and analysis (Agricultural Economic Report 774)*. Washington DC: U.S. Department of Agriculture.

Google Scholar

Helmberger, P.G., & Chavas, J.-P. (1996). *The economics of agricultural prices*. Englewood Cliffs, NJ: Prentice Hall.

Google Scholar

Hirshleifer, D. (1988). Risk, futures pricing, and the organization of production in commodity markets. *Journal of Political Economy*, **96**, 1206–1220.

Web of Science® Google Scholar

Hueth, B., & Hennessy, D.A. (2002). *Contracts and risk in agriculture: Conceptual and empirical foundations (Staff General Research Papers 5324)*. Ames, IA: Iowa State University, Department of Economics.

Web of Science® Google Scholar

Johnson, L.L. (1960). The theory of hedging and speculation in commodity futures. *Review of Economic Studies*, **27**, 139–151.

Web of Science® Google Scholar

Kahl, K.H., & Tomek, W.G. (1982). Effectiveness of Hedging in Potato Futures. *The Journal of Futures Markets*, **2**, 9–18.

Web of Science® Google Scholar

Key, N., & MacDonald, J. (2006). Agricultural Contracting. Trading Autonomy for Risk Reduction. *Amber Waves*,

Meulenberg, M.T.G., & Pennings, J.M.E. (2002). A marketing approach to commodity futures exchanges: A case study of the Dutch hog industry. *Journal of Agricultural Economics*, **53**, 51–64.

Web of Science® | Google Scholar

Meyer, J. (1987). Two-moment decision models and expected utility maximization. *American Economic Review*, **77**, 421–430.

Web of Science® | Google Scholar

Ministerio de Agricultura, Pesca y Alimentación—MAPA. (2002). Encuestas de precios de la tierra [Survey of farm land prices]. Madrid.

Google Scholar

Moschini, G., & Lapan, H. (1995). The hedging role of options and futures under joint price, basis and production risk. *International Economic Review*, **36**, 1025–1049.

Web of Science® | Google Scholar

Pennings, J.M.E., & Leuthold, R.M. (2000). The role of farmers' behavioral attitudes and heterogeneity in futures contracts usage. *American Journal of Agricultural Economics*, **82**, 908–919.

Web of Science® | Google Scholar

Perry, J., Morehart, M., Banker, D., & Johnson, J. (1997). Contracting—A business option for many farmers. *Agricultural Outlook*, **AO–240** (May), 2–5.

Google Scholar

Powers, N.J. (1994). *Marketing practices for vegetables (AIB-702)*. Washington, DC: U.S. Department of Agriculture, Economic Research Service.

Google Scholar

Stein, C. (1973). Estimation of the mean of a multivariate normal distribution. In J. Hajek (Ed.), *Proceedings of the Prague Symposium on Asymptotic Statistics*. (pp. 345–381) Prague: University of Karlova.

Web of Science® | Google Scholar

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk Uncertainty*, **5**, 297–323.

Web of Science® | Google Scholar

Williams, J.C. (2001). Commodity futures and options. In B. Garder & G. Rausser (Eds.), *Handbook of agricultural economics* (Vol. **1**, pp. 746–815). Amsterdam: Elsevier.

Google Scholar

Citing Literature

Download PDF